U.S. Department of Transportation
Federal Highway Administration

Memorandum

Subject: **ACTION:** South Carolina, I-85 at I-385 Interchange Modification Report, Greenville County.

Date: October 2, 2012

From: Jeffrey F. Paniati
Executive Director

In Reply Refer To:
HIPA-20

To: Mr. Robert L. Lee
Division Administrator
Columbia, South Carolina

We have reviewed the Interchange Modification Report (IMR) submitted on September 24 to modify the system interchange on I-85 at I-385 east of Greenville. The modifications proposed for this interchange will address several deficiencies with the current interchange configuration by reconstructing two ramps, constructing collector-distributor roads, and increasing capacity on I-385. These modifications will improve the safety and flow of traffic on this interchange and the adjoining freeways.

Based on our review, the proposed modification of this system interchange is acceptable. An Environmental Assessment has been conducted for this project and a Finding of No Significant Impact is expected in December of 2012. Final approval may be given provided that the scope and design of this proposed project is consistent with the design that is included in the September 24 IMR and the approved environmental document. This approval is subject to reevaluation if significant changes occur in the final design or if the construction is delayed (as specified in 23 CFR 771.129).

Should you have any questions, please contact Michael Matzke at (202) 366-4658.

EXECUTIVE SUMMARY

This Interstate 85 (I-85) at Interstate 385 (I-385) Interchange Modification Report (IMR) was developed by the South Carolina Department of Transportation (SCDOT) to obtain approval from the Federal Highway Administration (FHWA) to modify the subject interchange. The I-85 at I-385 Interchange is located in Greenville County, South Carolina, within the City Limits of Greenville. Greenville is located in northwestern South Carolina, approximately one hundred fifty (150) miles northeast of Atlanta, Georgia, and one hundred (100) miles southwest of Charlotte, North Carolina. The purpose of the project is to improve operational efficiency and safety of the existing I-85 at I-385 Interchange to accommodate existing and projected traffic volumes. The project need is based upon the existing and projected operating conditions associated with the current interchange facility. This interchange is an important component in the existing transportation system, connecting I-385 with I-85. Interstate 85 is the primary link between the Cities of Atlanta, Greenville, and Charlotte. Interstate 385 is the primary link between the City of Greenville and Interstate 26 (I-26), which leads into the City of Columbia, South Carolina in the south and the City of Asheville, North Carolina in the north.

A No-Build and two Build Alternatives, Alternate 2D and Alternate 4A, are currently under consideration for this project. Alternate 4A is SCDOT's preferred alternative. Alternate 2D will construct a new direct-connect ramp from I-85 southbound to I-385 southbound; improve the radius on the loop from I-385 northbound to I-85 southbound; construct a new collector-distributor roadway on I-385 between Woodruff Road and I-85 in both directions; remove the I-85 southbound collector-distributor roadway between I-385 and Woodruff Road; and remove access from I-385 southbound to the I-85/Woodruff Road interchange. Alternate 4A will construct new direct-connect ramps from I-85 southbound to I-385 southbound and I-385 northbound to I-85 southbound; construct a new collector-distributor roadway on I-385 between Woodruff Road and I-85 in both directions; remove the I-85 southbound collector-distributor roadway between I-385 and Woodruff Road; and remove access from I-385 to the I-85/Woodruff Road interchange. There are no known plans to modify the existing land use zoning of the surrounding area. The proposed improvements included in the alternatives are minor and are not anticipated to promote additional development in the surrounding area. The estimated construction cost of the Preferred Build Alternative is $238 million.

This study analyzes the engineering feasibility and defines the required improvements best suited to meet the current and future regional needs for Greenville County, South Carolina. This report will be submitted by the South Carolina Department of Transportation for a determination of Engineering and Operational Acceptability. Receipt of this determination does not guarantee approval of any new access or changes to current access. Final approval of the Interchange Modification Report will be requested once all NEPA requirements have been met and a determination that this document and any potential changes from the National Environmental Policy Act (NEPA) process have been addressed, and that the project is in the appropriate Local Regional Transportation Plan (LRTP), Transportation Improvement Plan (TIP), or Statewide Transportation Improvement Plan (STIP).

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1.0 INTRODUCTION

1.1 BACKGROUND

This Interstate 85 (I-85) at Interstate 385 (I-385) Interchange Modification Report (IMR) was developed by the South Carolina Department of Transportation (SCDOT) to obtain approval from the Federal Highway Administration (FHWA) to modify the subject interchange. The purpose of the project is to improve operational efficiency and safety of the existing I-85 at I-385 Interchange to accommodate existing and projected traffic volumes. The project need is based upon the existing and projected operating conditions associated with the current interchange facility. Multiple alternatives were studied with Alternate 4A being SCDOT's preferred alternative. A No-Build Alternative is also studied in this IMR. The Alternatives are discussed in more detail in Chapter 4.

Under 23 U.S.C. 111, as delegated in 49 CFR 1.48(b)(10), FHWA has retained all approval rights to the control of access to the interstate system. This is necessary to protect the integrity of these systems and the extensive investment associated with them.

FHWA issued an informational memorandum on January 28, 2008, explaining the relationship between certain Transportation Planning and Air Quality Conformity regulations and the timing of a final National Environmental Policy Act (NEPA) decision (Record of Decision (ROD), Finding of No Significant Impact (FONSI), or Categorical Exclusion (CE)). In response to the questions, FHWA issued another document dated February 9, 2011, clarifying and simplifying information on what transportation planning requirements must be addressed before FHWA can make a final NEPA decision. Below is the extract from the document:

"A project must meet various planning and NEPA requirements. The procedures of the different requirements, direct the project sponsors to meet all the following:

- *All Projects requiring Federal action or that are to be implemented with Federal-aid must come from a fiscally constrained Metropolitan Transportation Plan (MTP) and Transportation Improvement Program (TIP) or from a fiscally constrained Statewide Transportation Planning Program (STIP) [23 CFR Part 450].*
- *The TIP shall include a Project, or an identified phase of a Project, only if full funding can reasonably be anticipated to be available for the Project or the identified phase within the time period contemplated for completion of the Project or the identified phase. [23 U.S.C. § 134(j)(3)(D)].*
- *The STIP shall include a Project, or an identified phase of a Project, only if full funding can reasonably be anticipated to be available for the Project within the time period contemplated for completion of the Project. [23 U.S.C. § 135(g)(4)(E)].*
- *NEPA project approval can only be given when the NEPA documents meet all applicable environmental laws and Executive Orders or reasonable assurances of compliance are provided in accordance with 23 CFR § 771.133.*

- *In air quality nonattainment and maintenance areas, additional Clean Air Act and EPA requirements apply. [42 U.S.C. § 7506(c) and 40 CFR Part 93]. See Questions 25-27 for more information."*

As noted in the FHWA *Interstate System Access Information Guide*, "It should be noted that approval of an access request does not constitute approval of the design exceptions associated with the proposal, and vice versa."

1.2 PROJECT LOCATION

The I-85 at I-385 Interchange is located in Greenville County, South Carolina, within the City Limits of Greenville. Greenville is located in northwestern South Carolina, approximately one hundred fifty (150) miles northeast of Atlanta, Georgia, and one hundred (100) miles southwest of Charlotte, North Carolina. The I-85 at I-385 Interchange is located about seven (7) miles to the southeast of Greenville's Central Business District. Figure 1.1 shows the project's relative location within the region. Figure 1.2 shows the project's relative location within the study area.

FIGURE 1.1: PROJECT VICINITY MAP

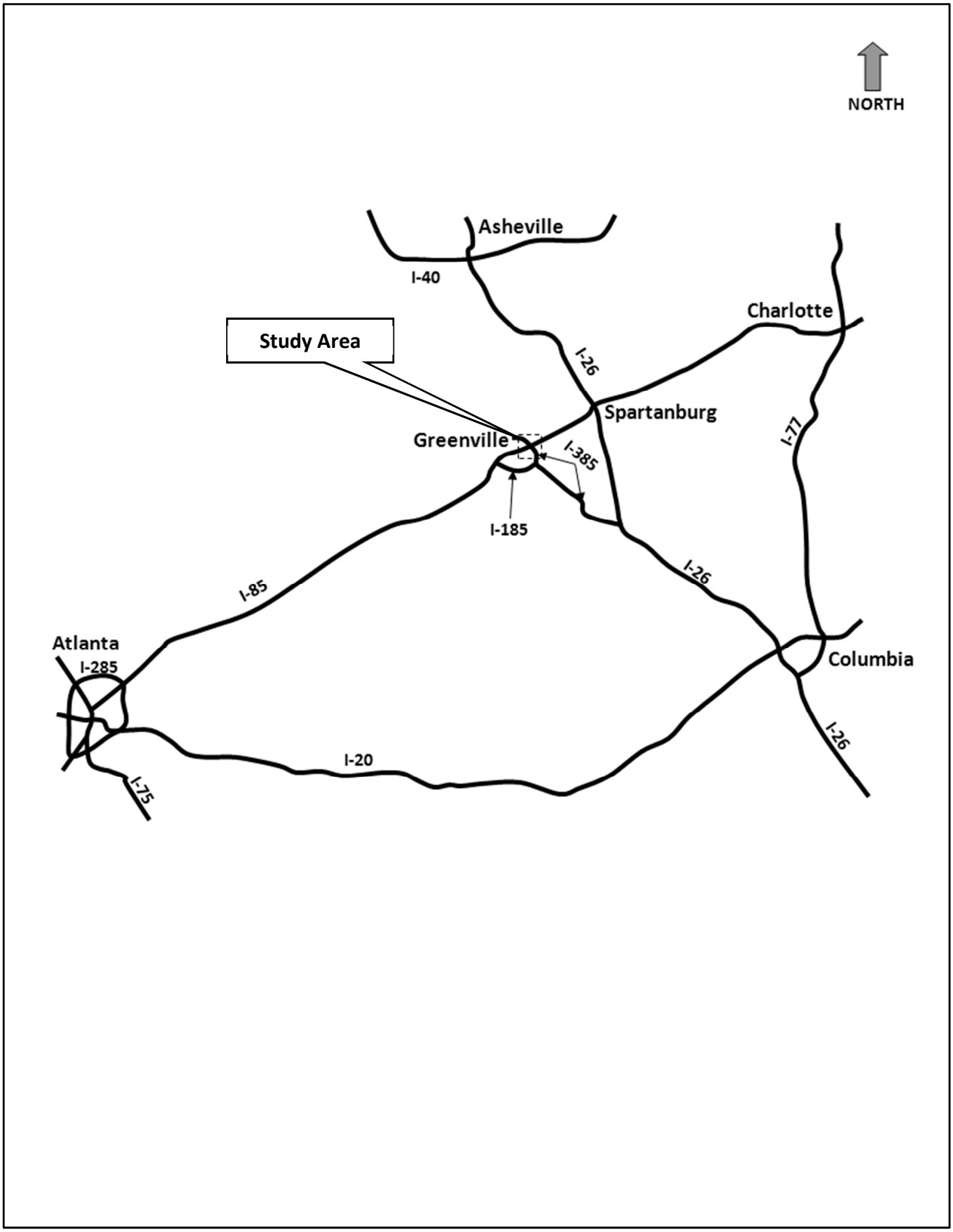
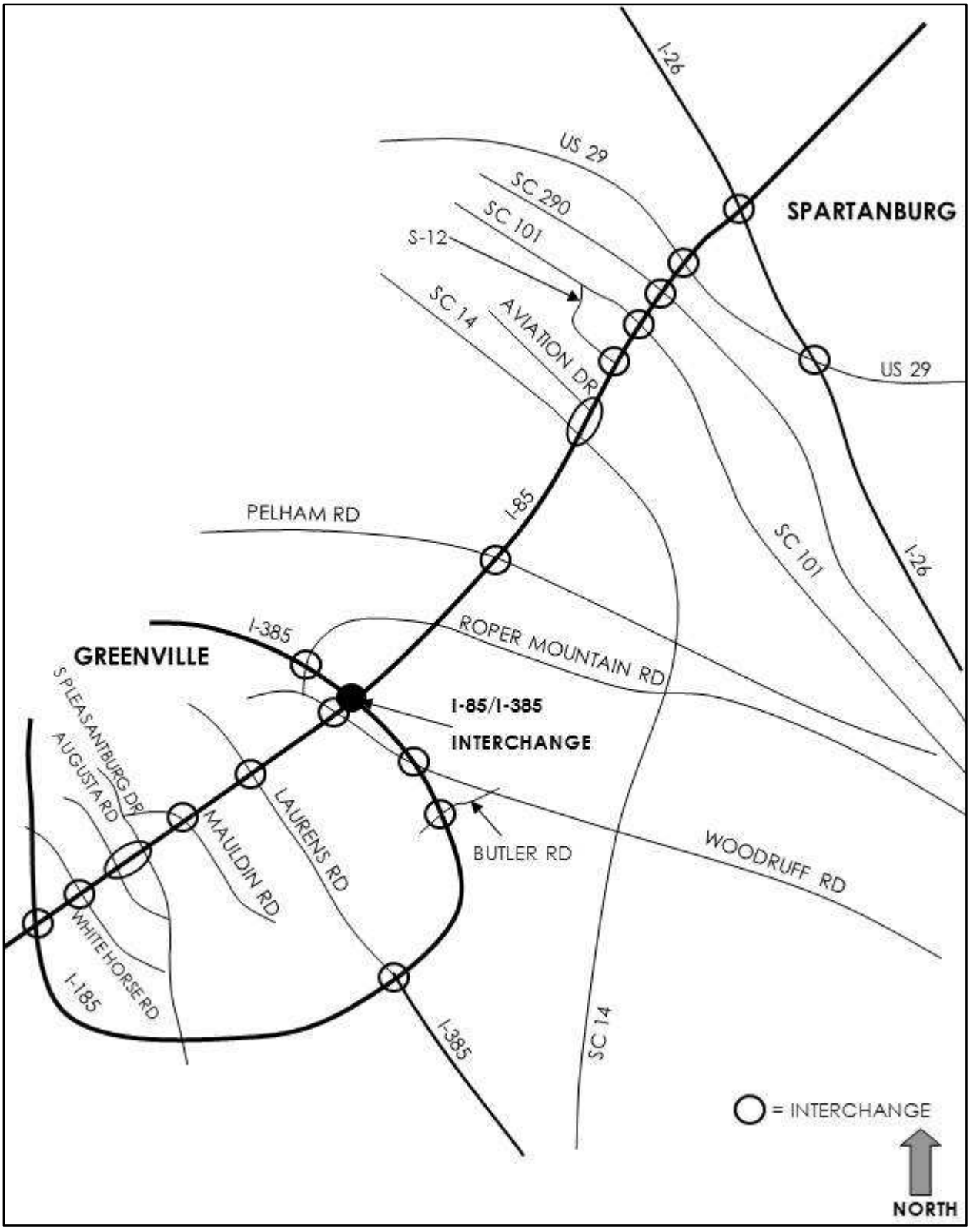


FIGURE 1.2: PROJECT LOCATION MAP



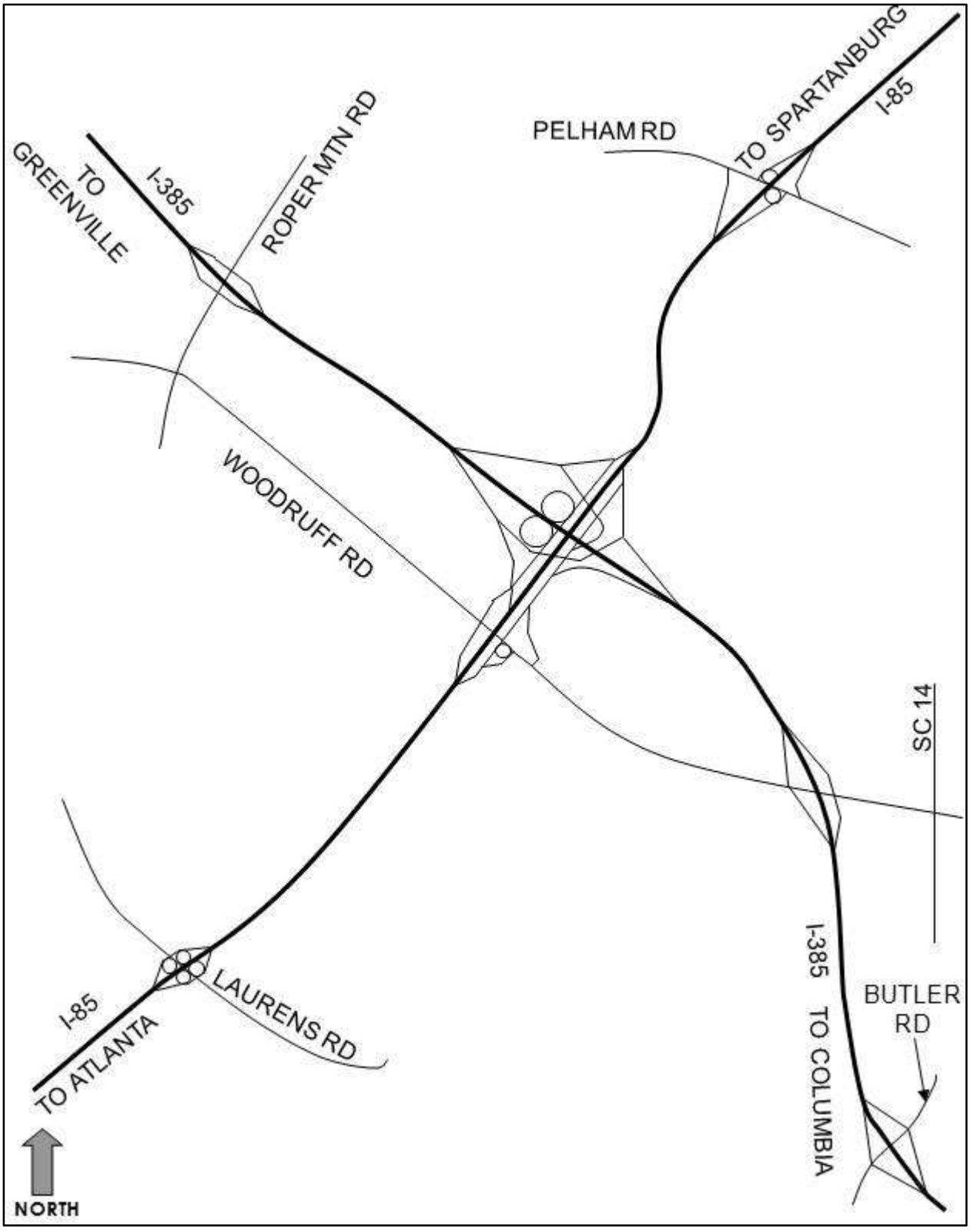
1.3 STUDY BOUNDARY

Along I-85, the study boundary contains the freeway segments and ramp junctions from just south of the US-276 interchange, which is about three (3) miles south of the I-85 at I-385 Interchange, to just north of the Pelham Road interchange, which is about three (3) miles north of the I-85 at I-385 Interchange. Along I-385, the study boundary contains the freeway segments and ramp junctions from just south of the Butler Road interchange, which is about two (2) miles south of the I-85 at I-385 Interchange, to just north of the Roper Mountain Road interchange, which is about one (1) mile north of the I-85 at I-385 Interchange.

The two (2) alternatives under consideration include a No-Build Alternative and the Build Alternative, Alternate 4A. The No-Build Alternative does not geometrically alter the I-85 at I-385 Interchange. Alternate 4A will construct new direct-connect ramps from I-85 southbound to I-385 southbound and I-385 northbound to I-85 southbound; construct a new collector-distributor roadway on I-385 between Woodruff Road and I-85 in both directions; remove the I-85 southbound collector-distributor roadway between I-385 and Woodruff Road; and remove access from I-385 to the I-85/Woodruff Road interchange. Alternate 4A will widen I-385 to six lanes throughout the project in order to provide connection between the existing six lane segment of I-385 to the north and the six lane segment currently under construction of I-385 to the south. Alternate 4A will extend auxillary lanes along I-85 from the I-385 ramps north up to the Pelham Road Interchange and create a two lane exit from I-85 northbound to Pelham Road. An appropriately scaled study boundary has been selected to coincide with the improvements being investigated. Figure 1.3 shows the study boundary.

No traffic reassignment or change in traffic patterns along I-85 or I-385 is anticipated with the proposed No-Build Alternative. However, for Alternative 4A, some traffic reassignment is expected. In Alternate 4A, I-385 northbound and southbound traffic approaching the I-85 at I-385 Interchange will no longer have access to the I-85 at Woodruff Road interchange. Traffic is expected to reassign to either the I-385 at Roper Mountain Road interchange or the I-385 at Woodruff Road interchange.

FIGURE 1.3: IMR STUDY AREA



1.4 EXISTING TRANSPORTATION PLANS

In addition to the proposed improvements to the I-85 at I-385 Interchange, the widening to six lanes of I-385 is a programmed improvement in the study area.

This Study takes into account the six lanes along I-385 as a No-Build improvement to be completed by 2015. In addition, the *Woodruff Road Corridor Study* dated 2007 prepared for the City of Greenville recommended several improvements along Woodruff Road including access management strategies and interchange improvements. Two improvements on Woodruff Road, one at the intersection with the I-85 northbound off-ramp and the other at the intersection with Garlington Road have been included as No-Build improvements to be completed by 2015.

South Carolina Department of Transportation (SCDOT) is also undertaking the *I-85 Corridor Analysis Study* which involves the evaluation of the I-85 corridor between US 25 in Greenville County and SC 129 in Spartanburg County. The purpose of this study will be to identify strategies to relieve congestion and improve capacity on I-85.

1.5 PURPOSE AND NEED

The purpose of the project is to improve operational efficiency and safety of the existing I-85 at I-385 Interchange to accommodate existing and projected traffic volumes.

The project need is based upon the existing and projected operating conditions associated with the current interchange facility. Specifically, the traffic volumes and existing configuration of the interchange result in unacceptable operating conditions and deficiencies along the various ramps and multiple merge and weave movements. These deficiencies create safety concerns due to undesirable movements and vehicular conflicts.

2.0 EXISTING CONDITIONS

2.1 EXISTING ROADWAY NETWORK

The existing I-85 at I-385 Interchange configuration is a partial cloverleaf with directional ramps in all four quadrants, one loop ramp each in the northeast quadrant and northwest quadrant, direct-connect ramps from I-385 southbound to I-85 northbound and from I-85 northbound to I-385 northbound, and a collector-distributor roadway on each side of the I-85 mainline. The loop ramps' radii are approximately 250 feet each. The two loops are three centered curves with minimum radii of 170 feet (I-385 northbound to I-85 southbound loop) and 180 feet (I-85 southbound to I-385 southbound loop). Both of these radii give a maximum design speed of 25 miles per hour. Radii of 250 feet allow for a design speed of 30 miles per hour. The loop ramp in the northeast quadrant provides access from I-385 northbound to I-85 southbound via the collector-distributor roadway, and is signed 35 miles per hour with an advisory of 20 miles per hour. The loop ramp in the northwest quadrant provides access from the I-85 southbound collector-distributor roadway to I-385 southbound, and is signed 35 miles per hour with an advisory of 25 miles per hour. The existing I-85 at I-385 Interchange provides for all traffic movements. Figure 2.1 shows the existing interchange layout.

I-85 is a six-lane divided interstate with 12 feet travel lanes. The total median width is 12 feet, and there is a 4'-9" paved shoulder. I-85 has a posted 60 miles per hour speed limit. The outside shoulders are 12 feet wide; 10 feet are paved, and the remaining 2 feet are dirt. I-85 passes under I-385 at the Interchange.

I-385 is a four-lane divided interstate with 12 feet travel lanes within the project limits. Between I-85 and Roper Mountain Road, I-385 is a six-lane divided interstate with a median width of 36 feet and a 12 foot paved shoulder. Between Butler Road and Smith Hines Road, I-385 is being constructed as a six-lane interstate with a median width of 24 feet and a 10 foot paved shoulder. Between Smith Hines Road and I-85, I-385 has a total median width of about 50 feet, and there is a 4 foot paved shoulder. I-385 has a posted 55 miles per hour speed limit. The outside shoulders are 12 feet wide; 10 feet are paved, and the remaining 2 feet are dirt. I-385 passes over I-85 at the Interchange.

Woodruff Road is a five-lane arterial highway with a center turn lane and has 12 feet travel lanes in the study area. The center turn lane is present throughout the entire Woodruff Road corridor in the study area. Woodruff Road has posted speed limits varying between 35 miles per hour and 45 miles per hour. Sidewalks are located either side of Woodruff Road from the interchange with I-385 to the intersection with SC 14.

FIGURE 2.1: I-85 AT I-385 INTERCHANGE



2.1.1 Adjacent Interchanges

The following is a description of the adjacent interchanges in the study area:

- **I-85 at US 276 (Laurens Road), Exit 48** - The I-85 at US 276 interchange is located approximately three (3) miles to the south of the I-85 at I-385 Interchange. The I-85 at US 276 interchange is a full cloverleaf interchange configuration. The I-85 at US 276 interchange, in addition to the two surface streets closest to the interchange on either side, is included in the study boundary and in the traffic analysis.

- **I-85 at Woodruff Road, Exit 51A** - The I-85 at Woodruff Road interchange is located south of the I-85 at I-385 Interchange. From center to center, the interchanges are only separated by one half of a mile. The I-85 at Woodruff Road interchange is a general diamond configuration with a loop ramp from the surface street to the I-85 northbound collector-distributor roadway in the southeast quadrant of the interchange. It is currently possible to access the I-385 at Woodruff Road interchange from I-385 northbound or southbound through the I-85 at I-385 Interchange. The I-85 at Woodruff Road interchange, in addition to the Woodruff Road corridor spanning from the intersection with Roper Mountain Road in the west to the intersection with SC 14 in the east, is included in the study boundary and in the traffic analysis.

- **I-85 at Pelham Road, Exit 54** - The I-85 at Pelham Road interchange is located approximately three (3) miles to the north of the I-85 at I-385 Interchange. The I-85 at Pelham Road interchange is a partial cloverleaf configuration, with loop ramps from the surface street to the I-85 mainline in the northwest and southeast quadrants of the interchange. The I-85 at Pelham Road interchange, in addition to the two surface streets closest to the interchange on either side, is included in the study boundary and in the traffic analysis.

- **I-385 at Butler Road, Exit 34** - The I-385 at Butler Road interchange is located approximately two (2) miles to the south of the I-85 at I-385 Interchange. The I-385 at Butler Road interchange is a typical diamond configuration. The I-385 at Butler Road interchange, in addition to the two surface streets closest to the interchange on either side, is included in the study boundary and in the traffic analysis.

- **I-385 at Woodruff Road, Exit 35** - The I-385 at Woodruff Road interchange is located approximately one (1) mile to the south of the I-85 at I-385 Interchange. The I-385 at Woodruff Road interchange is a typical diamond configuration. It is currently possible to access the I-85 at Woodruff Road interchange from the I-385 at Woodruff Road interchange through the I-85 at I-385 Interchange. The I-385 at Woodruff Road interchange, in addition to the Woodruff Road corridor spanning from the intersection with Roper Mountain Road in the west to the intersection with SC 14 in the east, is included in the study boundary and in the traffic analysis.

- **I-385 at Roper Mountain Road, Exit 37** - The I-385 at Roper Mountain Road interchange is located approximately one (1) mile to the north of the I-85 at I-385 Interchange. The I-385 at Roper Mountain Road interchange is a typical diamond configuration. The I-385 at Roper Mountain Road interchange, in addition to the Roper Mountain Road corridor spanning from the intersection with Frontage Road in the northeast to the intersection with Woodruff Road in the southwest, is included in the study boundary and in the traffic analysis.

2.1.2 Spacing Between Ramps

The study boundary contains the freeway segments and ramp junctions along I-85 from just south of the I-85 at US 276 interchange to just north of the I-85 at Pelham Road interchange. Along I-385, the study boundary contains the freeway segments and ramp junctions from just south of the I-385 at Butler Road interchange to just north of the I-385 at Roper Mountain Road interchange.

The existing spacing between interchanges within the study boundary meets current American Association of State Highway and Transportation Officials (AASHTO) design recommendations for the following segments:

- I-85 between US 276 and the I-385/Woodruff Road collector-distributor roadway;
- I-85 between I-385 and Pelham Road;
- I-385 between Butler Road and Woodruff Road; and
- I-385 between I-85 and Roper Mountain Road.

The section of I-85 between Woodruff Road and I-385 is not considered to be a violation as the traffic movements involving the ramps occur on the collector-distributor roadway instead of the freeway mainline.

The existing spacing between interchanges within the study boundary does not meet current AASHTO design recommendations for the I-385 segment between Woodruff Road and I-85.

2.1.3 Lane Continuity and Balance

Lane continuity and balance exists along I-85 throughout the study boundary. I-85 has three lanes in each direction throughout the study area. There are no lane drops on I-85 at the I-85 at I-385 Interchange. I-385 lacks lane continuity within the study boundary. There is a current construction project that is widening I-385 from two-lanes to three-lanes in each direction from south of the study boundary up to the Smith Hines underpass. From Smith Hines to I-85, I-385 has two lanes in each direction. From just north of I-85, I-385 has three lanes in each direction.

2.1.4 Pedestrian and Bicyclists Accommodations

Sidewalks are present on both sides along Woodruff Road in the study area. No bicycle lanes are present within the study boundary along Woodruff Road.

2.1.5 Sight Distance

There are no known stopping sight distance deficiencies within the study boundary.

2.1.6 Access Control

Access control is maintained throughout the functional area of the I-85 at I-385 Interchange.

2.2 CRASH HISTORY AND ANALYSIS

Historical crash data was collected for incidents occurring within the study area for a one (1) year period, the year 2010. Due to the significant number of crashes in the study area and in discussions with SCDOT, it was agreed to analyze historical crash data for the following interchanges: I-85 at I-385; I-85 at Woodruff Road; and I-385 at Woodruff Road for a one year period only. The year 2010 crash data records were provided by SCDOT and are contained in Appendix A. The types of crashes, severity of crashes, and number of crashes were attained and plotted to determine recurring safety issues and their location. Table 2.1 shows the crash rate, and Figures 2.2, 2.3, and 2.4 show the location and specifics of each crash.

TABLE 2.1: CRASH RATES FOR STUDY AREA

Location	ADT	Segment Length (miles)	Total		Injury		Fatal	
			No. of Crashes*	Crash Rate per MVM	No. of Crashes*	Crash Rate per MVM	No. of Crashes*	Crash Rate per MVM
I-85 mainline & CD thru I-85/I-385 Int.**	87,600	1.1	86	2.45	19	0.54	0	0.00
I-385 mainline thru I-85/I-385 Int.**	74,700	1.2	28	0.86	5	0.15	0	0.00
I-85/I-385 Int. ramps	n/a	n/a	9	n/a	2	n/a	0	n/a
I-85 at Woodruff Rd Int.	37,900	0.2	34	12.29	4	1.45	0	0.00
I-85 mainline & CD thru Woodruff Rd Int.	87,600	0.8	18	0.70	4	0.16	0	0.00
I-385 at Woodruff Rd Int.	35,900	0.2	37	14.12	4	1.53	0	0.00
I-385 mainline thru Woodruff Rd Int.	89,500	0.9	52	1.77	3	0.10	0	0.00

* - crash data from 1/1/2010 to 12/31/2010
** - does not include ramps

FIGURE 2.2: CRASH DIAGRAM AT THE I-85 AT I-385 INTERCHANGE

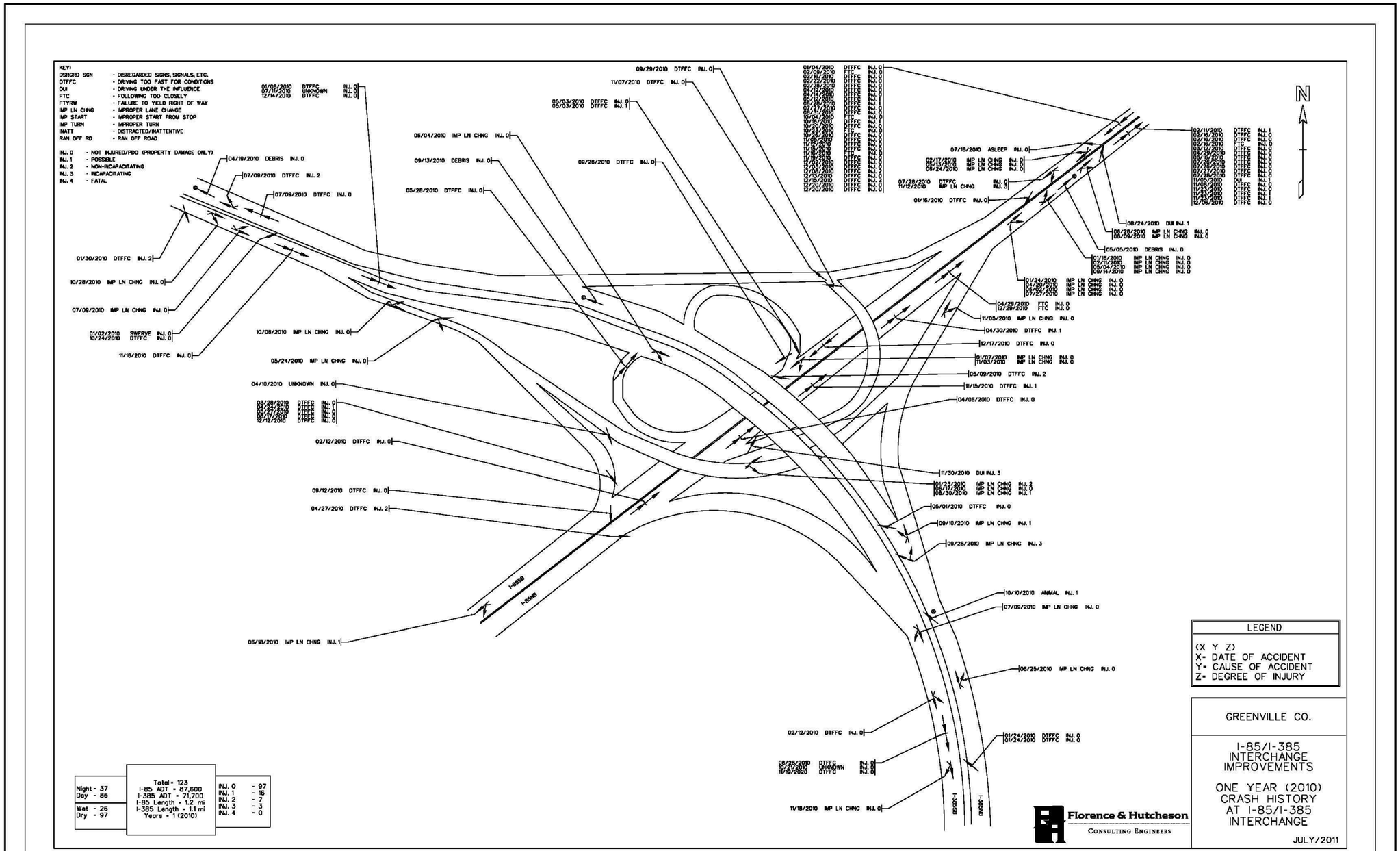


FIGURE 2.3: CRASH DIAGRAM AT THE I-85 AT WOODRUFF ROAD INTERCHANGE

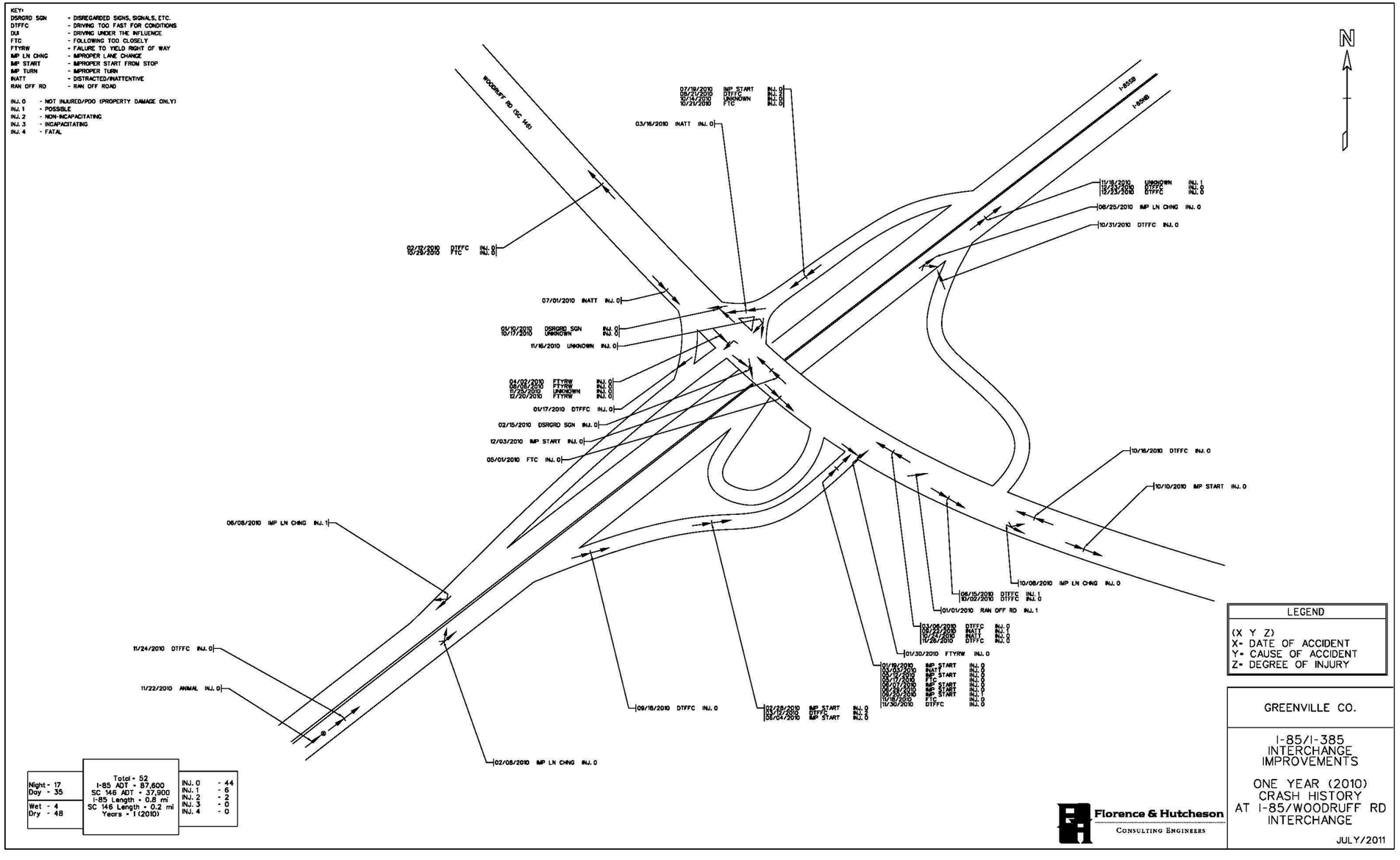
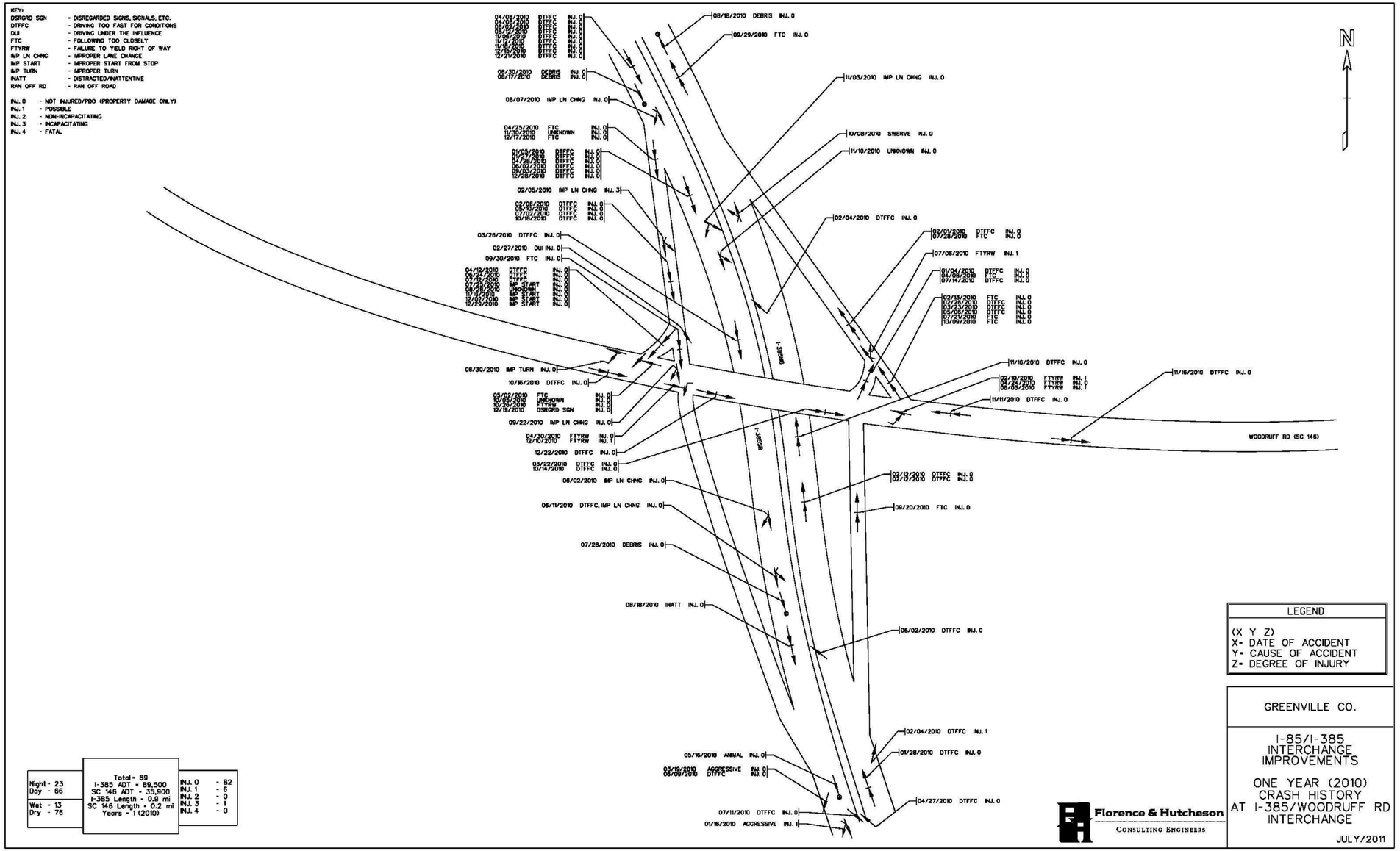


FIGURE 2.4: CRASH DIAGRAM AT THE I-385 AT WOODRUFF ROAD INTERCHANGE



At the I-85 at I-385 Interchange, the crash rate on I-85 is 2.45 crashes per million vehicle miles (MVM) and the crash rate on I-385 is 0.86 crashes per MVM. In 2010, there were 123 crashes with 26 injury crashes and none involving fatalities as follows:

- 86 crashes occurred on I-85:
    - 52 crashes were rear end collisions;
    - 18 crashes were sideswipes;
    - 15 crashes involved vehicles running off the road;
    - 1 crash involved debris.
- 28 crashes occurred on I-385:
    - 9 crashes were rear end collisions;
    - 9 crashes were sideswipes;
    - 8 crashes involved vehicles running off the road;
    - 2 crashes involved debris.
- 9 crashes occurred on the ramps.

At the I-85 at Woodruff Road interchange, the crash rate on I-85 is 0.70 crashes per MVM and the crash rate on Woodruff Road is 12.29 crashes per MVM. In 2010, there were 52 crashes with 8 injury crashes and none involving fatalities as follows:

- 18 crashes occurred on I-85:
    - 12 crashes were rear end collisions;
    - 3 crashes were sideswipes;
    - 2 crashes involved vehicles running off the road;
    - 1 crash involved debris.
- 34 crashes occurred on Woodruff Road:
    - 22 crashes were rear end collisions;
    - 8 crashes were angle collisions;
    - 3 crashes were sideswipes;
    - 1 crash involved a vehicle running off the road.

At the I-385 at Woodruff Road interchange, the crash rate on I-385 is 1.77 crashes per MVM and the crash rate on Woodruff Road is 14.12 crashes per MVM. In 2010, there were 89 crashes with 7 injury crashes and none involving fatalities as follows:

- 52 crashes occurred on I-385:
    - 32 crashes were rear end collisions;
    - 7 crashes were sideswipes;
    - 8 crashes involved vehicles running off the road;
    - 5 crashes involved either debris or an animal.
- 37 crashes occurred on Woodruff Road:
    - 24 crashes were rear end collisions;
    - 10 crashes were angle collisions;
    - 2 crashes were sideswipes;
    - 1 crash involved a vehicle running off the road.

The 2010 crash data has also been used by SCDOT to compare the interstate interchanges, and rank them according to a EPDO(Estimated Property Damage Only) weighted scale. The scale weights the crashes such that a PDO (property damage only) crash is counted as 1, Injury crashes are weighted as 3 PDO's, and Fatal crashes are weighted as 12 PDO's. Table 2.2 shows that among the 10 Interstate-to-Interstate Interchanges within South Carolina, the I-85/I-385 interchange is ranked third with a weighted scale of 115. Additionally, the average crash rate of 1.34 per MVM that is higher than the Statewide Interstate average of 0.78 MVM.

TABLE 2.2: 2010 SOUTH CAROLINA INTERSTATE INTERCHANGES

RANK	ROUTE #1	ROUTE #2	Total Crashes	Fatal Crashes	Injury Crashes	Rate	Weighted Scale
1	I-20	I-26	133	0	29	1.81	191
2	I-26	I-526	95	0	16	1.37	127
3	**I-85**	**I-385**	**85**	**0**	**15**	**1.34**	**115**
4	I-20	I-77	43	0	7	0.85	57
5	I-26	I-85	30	0	9	0.75	48
6	I-26	I-95	23	1	5	0.88	44
7	I-26	I-77	26	1	3	0.57	43
8	I-85	I-185	23	0	6	0.69	33
9	I-20	I-95	18	0	6	0.75	30
10	I-26	I-126	9	0	1	0.14	11

2.3 GEOMETRIC DEFICIENCIES

Field observations of the I-85 at I-385 Interchange and traffic conditions were taken during the weekday AM and PM peak periods. Eight key deficiencies were identified that would need to be addressed in the development of any recommended improvements for the I-85 at I-385 Interchange. Subsequent traffic analysis validated that seven of the deficiencies are related to the existing operation of the Interchange, with one (Deficiency 8) attributed to an adjacent interchange.

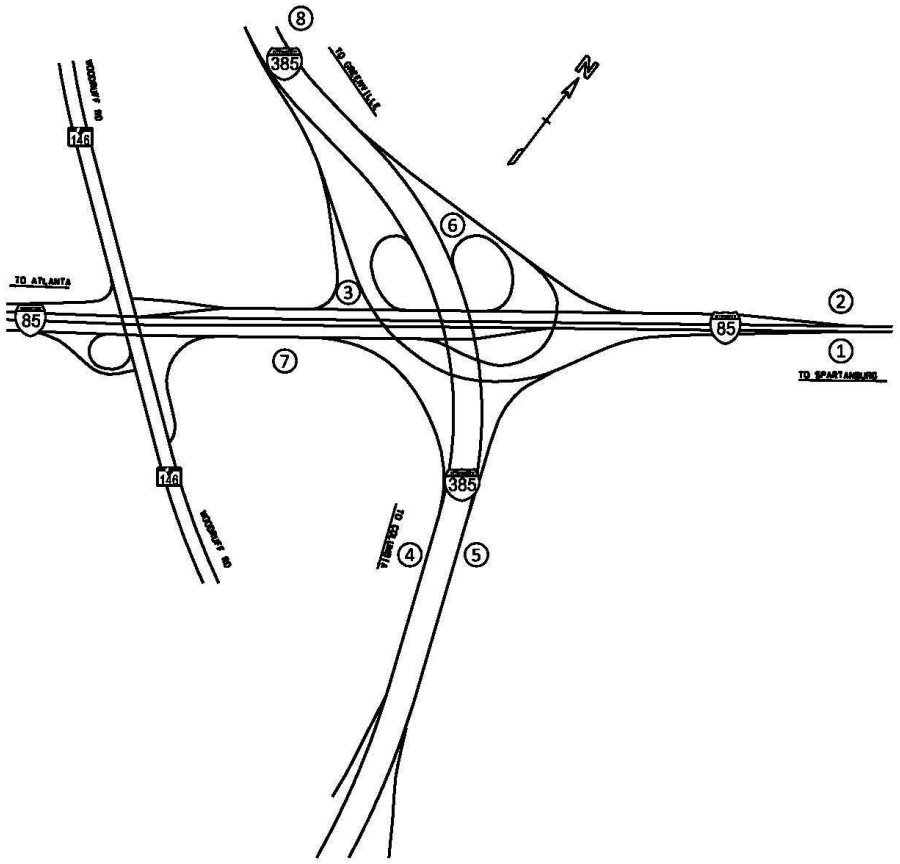
- **Deficiency 1**: I-385 southbound PM peak hour back-up going to I-85 northbound;
- **Deficiency 2:** I-85 southbound AM peak hour back-up at I-385 northbound off-ramp;
- **Deficiency 3:** Weave area along I-85 southbound collector-distributor between I-385 and Woodruff Road;
- **Deficiency 4:** Weave area along I-385 southbound between I-85 and Woodruff Road;
- **Deficiency 5:** Weave area along I-385 northbound between Woodruff Road and I-85;
- **Deficiency 6:** Safety issue on I-385 northbound loop off-ramp to I-85 southbound;
- **Deficiency 7:** Weave area along I-85 northbound collector-distributor between Woodruff Road and I-385; and
- **Deficiency 8:** Weave area along I-385 northbound between I-85 and Roper Mountain Road due to back-up on Roper Mountain Road off-ramp during the AM peak hour.

The eight deficiencies shown are not listed in order of priority. However, Deficiencies 1 to 4 are considered equal in priority to be addressed as part of this IMR. As discussed above, improvements are to be developed to address Deficiencies 1 through 7 for the purposes of this IMR. Figure 2.5 shows the location of the identified deficiencies.

A review of the deficiencies in conjunction with the crash history shows some correlation between the two. The significant number of rear end crashes on I-85 southbound and northbound just north of the Interchange corresponds to Deficiencies 1 and 2, respectively, due to high traffic volumes and capacity constraints. Similarly, the significant number of crashes on I-385 southbound and northbound between I-85 and Woodruff Road correspond to Deficiencies 4 and 5, respectively.

The recommended improvements for the I-85 at I-385 Interchange take into consideration these deficiencies as well as the crash history. Chapter 4 provides a more detailed description of the improvements developed for each Alternate. Providing more ramp capacity for the I-85 southbound off-ramp and I-85 northbound on-ramp is anticipated to address Deficiencies 1 and 2 and the associated crashes. Elimination of the I-85 southbound collector-distributor roadway is anticipated to address Deficiency 3. Deficiencies 4 and 5 and the associated crashes are anticipated to be addressed by constructing collector-distributor roadways on I-385 between I-85 and Woodruff Road and moving the conflicting traffic movements onto the collector-distributor roadways. Deficiency 6 is anticipated to be addressed by providing a direct connect ramp or by improving the radii of the loop.

FIGURE 2.5: LOCATION OF THE IDENTIFIED DEFICIENCIES



Locations:

1) I-385 SB to I-85 NB
2) I-85 SB to I-385 NB Off-Ramp
3) I-85 SB C-D between I-385 and Woodruff Rd
4) I-385 SB between I-85 and Woodruff Rd
5) I-385 NB between Woodruff Rd and I-85
6) I-385 NB Exit (loop) to I-85 SB
7) I-85 NB C-D between Woodruff Rd and I-385
8) I-385 NB between I-85 and Roper Mountain Rd

Due to the roadway constraints in the southwest quadrant of the Interchange, it is not feasible to address Deficiency 7. Also, Deficiency 8 is attributed to an adjacent interchange and, therefore, improvements are not proposed as part of this IMR.

The two improvements on Woodruff Road, one at the intersection with the I-85 northbound off-ramp and the other at the intersection with Garlington Road are also expected to address the crashes occurring at the I-85 and I-385 ramp intersections, respectively. Providing additional turn lanes, queuing space, and free flow movements is anticipated to reduce the number of rear end crashes. Also, the high number of crashes at the I-385 at Woodruff Road northbound on-ramp is anticipated to be addressed by improving both the alignment of the on-ramp and the signage.

2.4 EXISTING TRAFFIC

The existing year (2010) Design Hourly Volumes (DHV) for the study area were developed in coordination with the *I-85 Corridor Analysis Study* team. The coordination consisted of a review of the historical count data provided by South Carolina Department of Transportation (SCDOT), projected traffic forecasts from the Greenville-Pickens Area Transportation Study (GPATS) regional travel demand model as well as the previously developed traffic projections from the previous *I-85/I-385 Interchange Improvements Traffic Study* and the *I-85 Corridor Analysis Study.* A technical memo was prepared dated March 11, 2011, documenting the coordinated traffic volumes for the following I-85 interchanges: Laurens Road (US 276 – Exit 48); Woodruff Road (SC-146 – Exit 50); I-385; and Pelham Road (S-492 – Exit 54).

The traffic volumes in the study area at the two interchanges on I-385 at Woodruff Road (SC-146 – Exit 35) and at Roper Mountain Road (S-183 – Exit 37) as well as along Woodruff Road were adjusted to match the coordinated traffic volumes.

The study area was extended to include the I-385 interchange with Butler Road (S-107 – Exit 34). Weekday peak period turning movement counts were collected at the following locations on Tuesday, March 29, 2011:

- Butler Road at Gateway Boulevard
- Butler Road at Rothwell Drive
- Butler Road at I-385 SB ramps
- Butler Road at I-385 NB ramps
- Butler Road at New Commerce Court
- Butler Road at Brookfield Parkway

Also, additional twenty-four hour bi-directional counts were collected on Tuesday, March 29, 2011 at the following locations:

- Butler Road between Gateway Boulevard and Rothwell Drive*
- Butler Road between I-85 NB ramps and New Commerce Court*

- I-385 at Butler Road SB off-ramp*
- I-385 at Butler Road NB on-ramp*

* denotes count with vehicle classification

Utilizing the above collected data, the existing year DHV's for the I-385 interchange with Butler Road were developed and this interchange was incorporated into the study area. The technical memo and the year 2011 traffic count data are included in Appendix A.

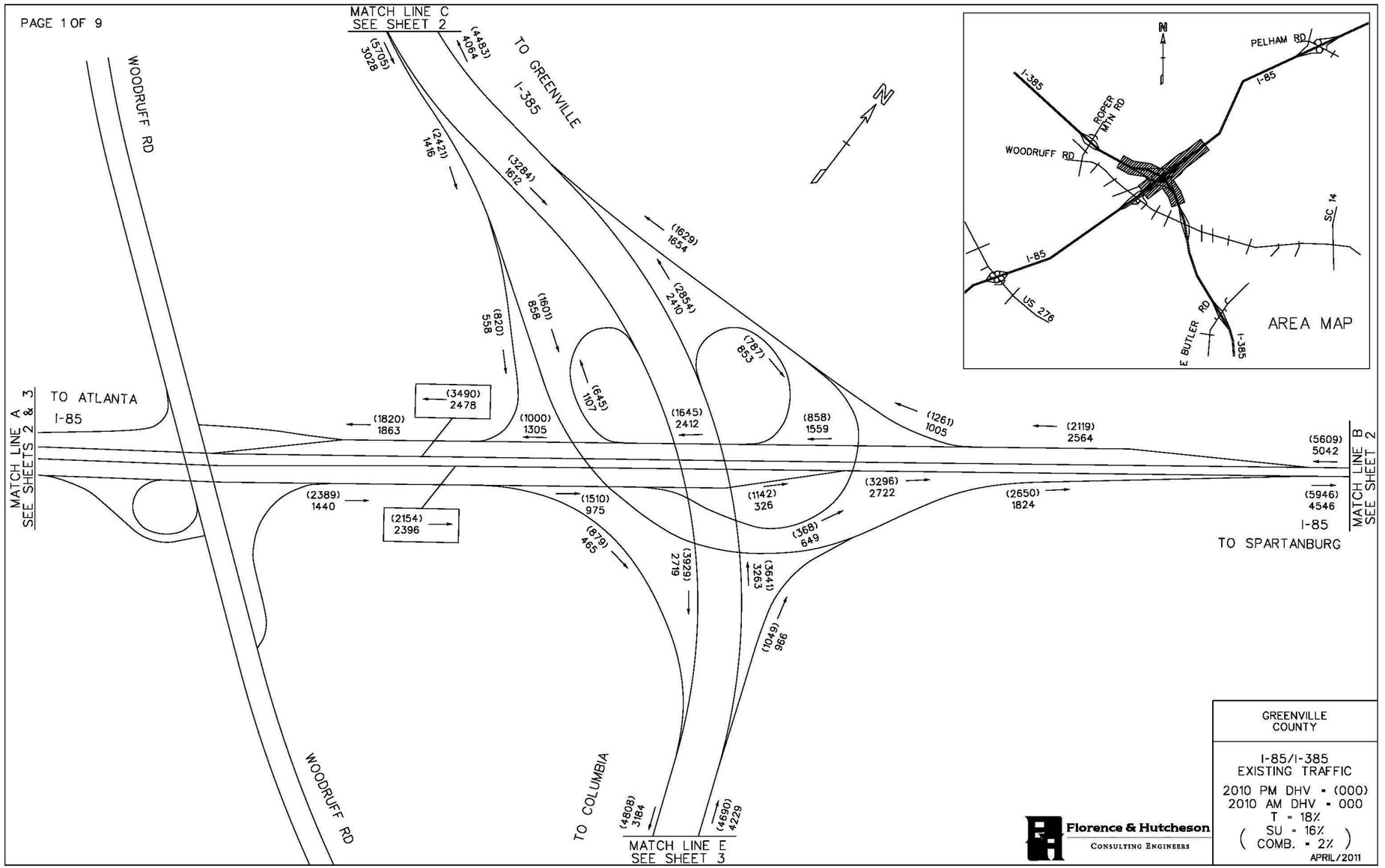
The existing year DHV traffic data was projected for the years of 2015 and 2035 for the AM and PM peak hours for the No-Build and Alternate 4A scenarios. The year 2015 is the date construction improvements could reasonably be anticipated to be completed, and is considered the "opening year" traffic. The year 2035 is twenty (20) years from the projected "opening year" of 2015 and is considered the "design year" of the improvements. The existing year DHVs are provided in Figure 2.6 and the results of the traffic operational analysis are provided in Chapter 5.

The existing Average Daily Traffic (ADT) volumes on the interstate segments in the study area are shown in Table 2.3.

TABLE 2.3: EXISTING AVERAGE DAILY TRAFFIC (ADT) VOLUMES

Roadway Segment	Average Daily Traffic (ADT) volumes
I-85 between Laurens Rd and Woodruff Rd	91,500
I-85 between Woodruff Rd and I-385	87,600
I-85 between I-385 and Pelham Rd	107,200
I-385 between Butler Rd and Woodruff Rd	78,300
I-385 between Woodruff Rd and I-85	89,500
I-385 between I-85 and Roper Mountain Rd	95,100

FIGURE 2.6: EXISTING YEAR 2010 DESIGN HOURLY VOLUME



2.5 DEMOGRAPHICS

The study area is located in Greenville County, South Carolina, within the City of Greenville City Limits. The I-85 at I-385 Interchange provides primary access to the following cities: Greenville (metropolitan population 636,986); Spartanburg, South Carolina (metropolitan population 284,307); Charlotte, North Carolina (metropolitan population 1,758,038); Columbia, South Carolina (metropolitan population 767,598); Atlanta, Georgia (metropolitan population 5,268,860); and Asheville, North Carolina (metropolitan population 424,858).

Spartanburg is located approximately 30 miles to the northeast via I-85; Charlotte is located approximately 100 miles to the northeast via I-85; Columbia is located approximately 100 miles to the southeast via I-385 and I-26; Atlanta is located approximately 150 miles to the southwest via I-85; and Asheville is located approximately 65 miles to the north via US-25 and I-26.

The 2010 population of Greenville County was 451,225. This is an 18.9% increase over the 2000 population of 379,616*. The population of the City of Greenville is shown to be higher than that of Greenville County. This is due to the combined statistical area considered for the population of the City of Greenville including the Cities of Mauldin, Easley, Spartanburg, and Anderson. This combined statistical area includes portions of the following surrounding counties: Pickens, Anderson, Laurens, and Spartanburg.
*Source: US Census Bureau

Select demographics of Greenville County are provided in Table 2.4. Equivalent demographics of South Carolina and the United States are provided for comparative purposes. As can be seen in the table, Greenville County is less diverse, more affluent, and has a younger population compared to South Carolina, but is more diverse, less affluent, and has a slightly older population compared to the United States.

TABLE 2.4: PROJECT LOCATION DEMOGRAPHICS

Characteristic	Greenville County	South Carolina	U.S.
Unemployment	9.1%*	11.1%	9.1%
Minority Population	26.2%	33.8%	25.5%
Median Household Income	$46,671	$43,572	$51,425
Families Below Poverty Level	10.4%	11.9%	9.9%
Median Age	36.7	37.9	36.5

Sources: U.S. Census American FactFinder Tables, 2005-2009 Estimates & US Census Bureau
U.S. Department of Labor
Google.com's Public Data
*As of July 2011. All other values as of August 2011

2.6 EXISTING LAND USE

The land uses surrounding the I-85 at I-385 Interchange include commercial, educational, and residential. Figure 2.7 shows the existing land uses surrounding the subject interchange.

2.6.1 Northwest Quadrant

The northwest quadrant of the interchange consists of commercial/retail use. The Greenville Mall Shopping Center is located in this area. Restaurants, a movie theater, and retail outlets are prominent in this area. Gas stations and lodging establishments are present more toward the northwestern tip of the area, near Roper Mountain Road.

2.6.2 Northeast Quadrant

The northeast quadrant of the interchange contains commercial developments and consists mainly of office complexes and smaller businesses with some residential development and an educational facility.

2.6.3 Southwest Quadrant

The southwest portion of the I-85 at I-385 Interchange consists of commercial/retail developments. East of Woodruff Road between I-85 and I-385, there are retail outlets, restaurants, grocery stores, and lodging establishments on either side of the roadway. There is an office complex on the north side of Woodruff Road. There is some residential development in this quadrant.

2.6.4 Southeast Quadrant

The southeastern portion of the interchange consists of commercial/retail developments along Woodruff Road. There are several department stores and a Wal-Mart supercenter complex. Further to the east end along Woodruff Road, residential developments are more prominent. Industrial and office complexes are also located in this quadrant.

FIGURE 2.7: EXISTING LAND USES



2.7 PRELIMINARY ENVIRONMENTAL CONSTRAINTS

An Environmental Planning Document (EPD) was prepared for the proposed project during early project development in an effort to identify any known environmental constraints within the project area, and to address potential environmental impacts associated with the preliminary alternatives. Data was collected utilizing various methods, including review of available mapping, photography, agency resources, and field review. Specifically, the resources utilized during this review included but was not limited to: U.S. Geological Survey Topographic Mapping *(Mauldin*, *Pelham*, *Taylors*); aerial photography; FEMA flood maps (45045C0408D); National Wetland Inventory; Natural Resource Conservation Service Soil Survey; various federal/state hazardous material regulatory databases; South Carolina Institute of Archaeology and Anthropology (SCIAA); local comprehensive plans; and various local and State GIS databases. The project study area was developed based upon the potential improvements and includes the existing I-85 at I-385 Interchange, along with the adjacent interchanges in each direction along I-85 and I-385.

The proposed improvements are expected to have minimal impact on the natural environment, which includes, water quality, floodplains, farmland, and cultural resources, as much of the area has been previously disturbed and developed. The project area does include potential jurisdictional wetlands and streams that may be impacted by the improvements. However, impacts to these areas have been avoided and minimized where practicable by project design and location. Figures 2.8a-b provide the locations of the potential environmental impacts.

As a result of the developed nature of the study area, multiple potential hazardous waste material sites have been identified within the immediate vicinity of the project area. Therefore the project is considered to have a moderate to high potential to impact hazardous waste material sites, and may require further evaluation throughout project development.

The project is expected to result in long-term beneficial impacts to the human environment along the study area by improving the efficiency and safety of the surrounding transportation facilities. However, the project would require additional right-of-way which may result in impacts to existing developments, including access. In addition, the project would likely result in temporary travel delays and access delays during construction.

2.7.1 Air Quality

The project was evaluated with regard to the Clean Air Act Amendments of 1990. These amendments identify six criteria pollutants (ozone, particulate matter, carbon monoxide, sulfur dioxide, nitrogen oxides, and lead), along with the National Ambient Air Quality Standards (NAAQS) for each pollutant. The Environmental Protection Agency (EPA) designates geographical areas that have pollutant concentrations below the NAAQS as these pollutants vary, but automotive vehicles are considered a source for four (ozone, particulate matter, nitrogen oxides, and carbon monoxide) of the criteria pollutants. A review of current air quality

data determined that the EPA has designated Greenville County 'in attainment' for the criteria pollutants, and comply with the NAAQS.[1]

The proposed project is not expected to require any additional transportation control strategies to maintain the County's current attainment status, and the project is anticipated to be consistent with the State Air Quality Implementation Plan (SIP). However, the proposed project will be continually evaluated throughout project development to ensure compliance with the most current air quality regulations and attainment status.

[1] U.S. EPA website. http://www.epa.gov/air/oaqps/greenbk/ancl.html (accessed June 2, 2009).

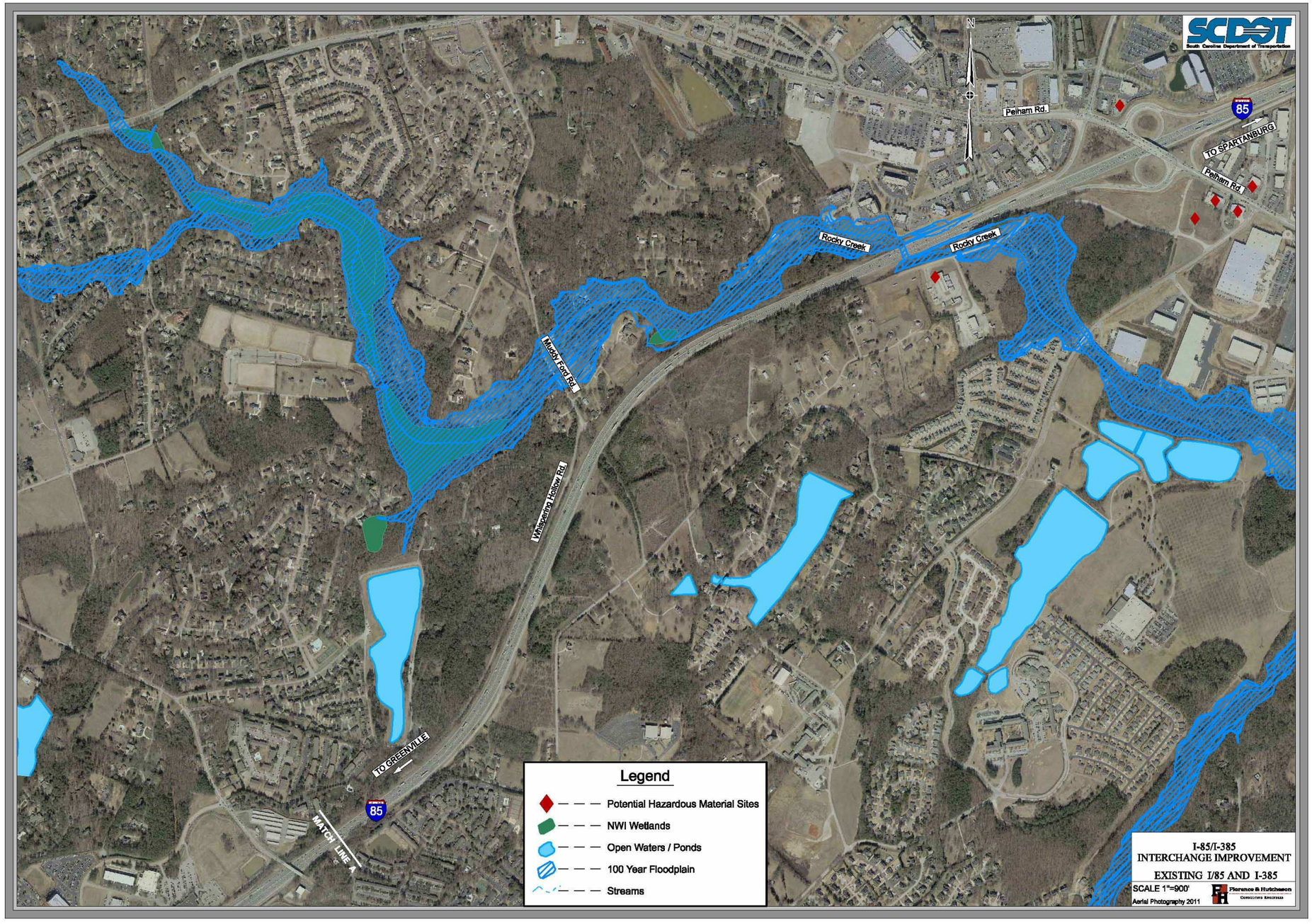
2.8 ALTERNATIVE TRAVEL MODES

A public transportation system called GreenLink is provided by the City of Greenville to serve the metro area. Twelve fixed routes are provided throughout Greenville County. All of the buses, or "trolleys", are wheelchair accessible and are equipped with bike racks. A complimentary ADA service called Greenville Area Paratransit (GAP) is also provided via GreenLink. It is offered specifically for individuals that cannot use GreenLink because of their physical disability. Typical destinations for GreenLink users include medical appointments, work, school and personal travel.
Source: http://www.greenvillesc.gov/RideGreenlink/

FIGURE 2.8A: LOCATION OF POTENTIAL ENVIRONMENTAL IMPACTS – I-85 AT I-385 INTERCHANGE AREA



FIGURE 2.8B: LOCATION OF POTENTIAL ENVIRONMENTAL IMPACTS – I-85 SEGMENT AREA



3.0 FUTURE CONDITIONS

3.1 PROPOSED LAND USE

There are two known major planned developments that will modify the existing land use zoning within the study area. These are the Verdae development along Verdae Boulevard on the westside of I-85 between Laurens Road and Woodruff Road, and the Clemson University International Center for Automotive Research (CU-ICAR) development on the eastside of I-85 between Laurens Road and Woodruff Road. These two proposed developments, together with other minor developments, are included in the development of the future traffic forecasts for the study area.

3.2 FUTURE TRAFFIC VOLUMES

Traffic projections were created to assist with determining the needed improvements. Chapter 2 documents the development of the traffic projections utilized in the traffic operations analysis. The existing year Design Hourly Volume (DHV) traffic data was projected for the years of 2015 and 2035 for the AM and PM peak hours for the No-Build and Alternate 4A scenarios. The year 2035 is twenty (20) years from the projected "opening year" of 2015 and is considered the "design year" traffic. The design year traffic is also generally considered the design life of the improvements. The future year 2015 and 2035 DHVs for the No-Build Alternative and Alternate 4A are provided in Figures 3.1 through 3.4. The traffic flow diagrams are provided in Appendix B, along with the existing and proposed lane geometry for the surface streets.

The future year 2015 and 2035 No-Build Average Daily Traffic (ADT) volumes on the roadway segments in the study area are shown in Table 3.1.

TABLE 3.1: FUTURE YEARS 2015 AND 2035 NO-BUILD AVERAGE DAILY TRAFFIC (ADT) VOLUMES

Roadway Segment	Average Daily Traffic (ADT) volumes	
	2015	2035
I-85 between Laurens Rd and Woodruff Rd	99,800	141,500
I-85 between Woodruff Rd and I-385	96,100	139,000
I-85 between I-385 and Pelham Rd	118,200	174,700
I-385 between Butler Rd and Woodruff Rd	90,800	141,000
I-385 between Woodruff Rd and I-85	100,700	161,500
I-385 between I-85 and Roper Mountain Rd	107,200	172,500

FIGURE 3.1: NO-BUILD OPENING YEAR 2015 DESIGN HOURLY VOLUME

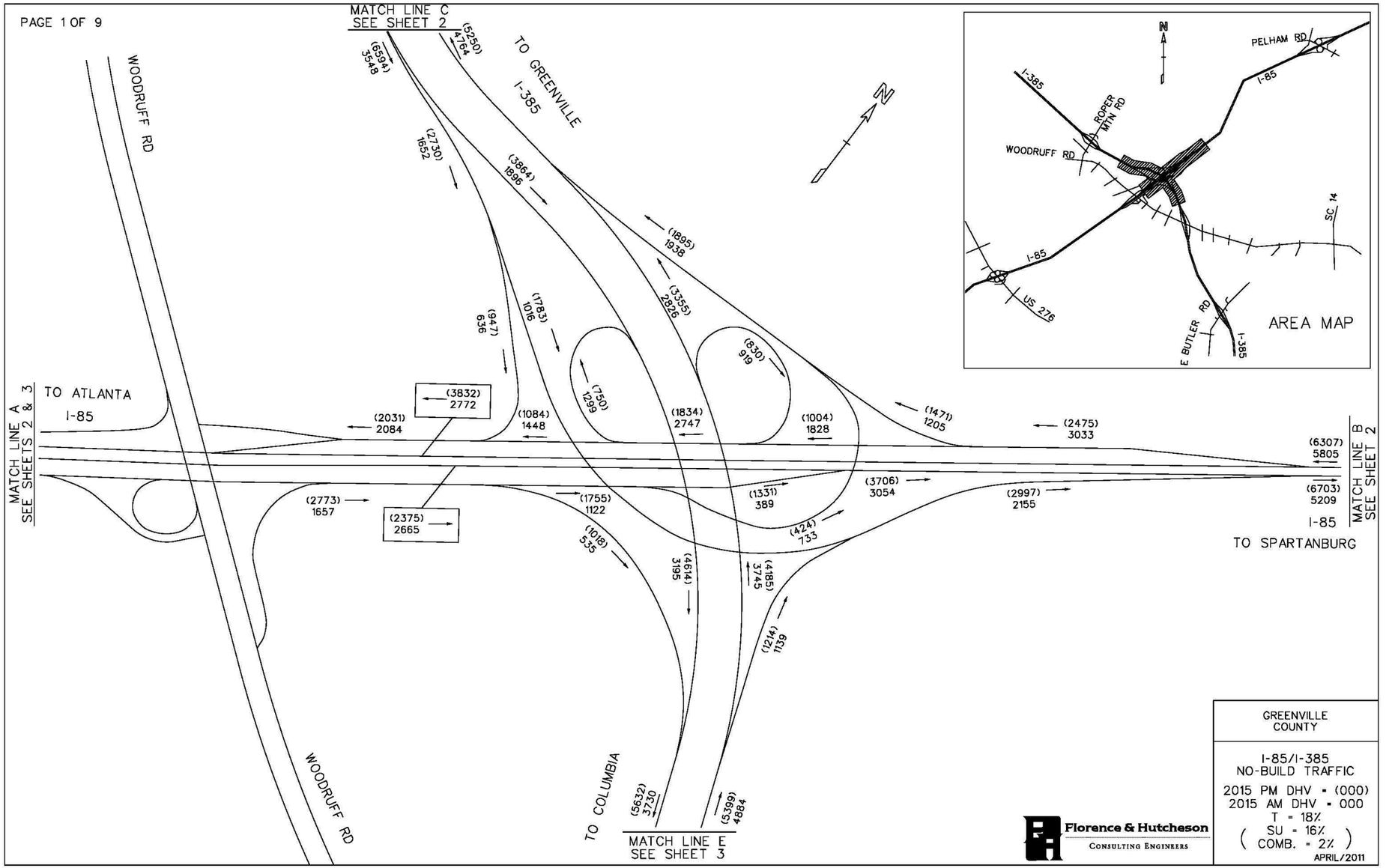


FIGURE 3.2: ALTERNATE 4A OPENING YEAR 2015 DESIGN HOURLY VOLUME

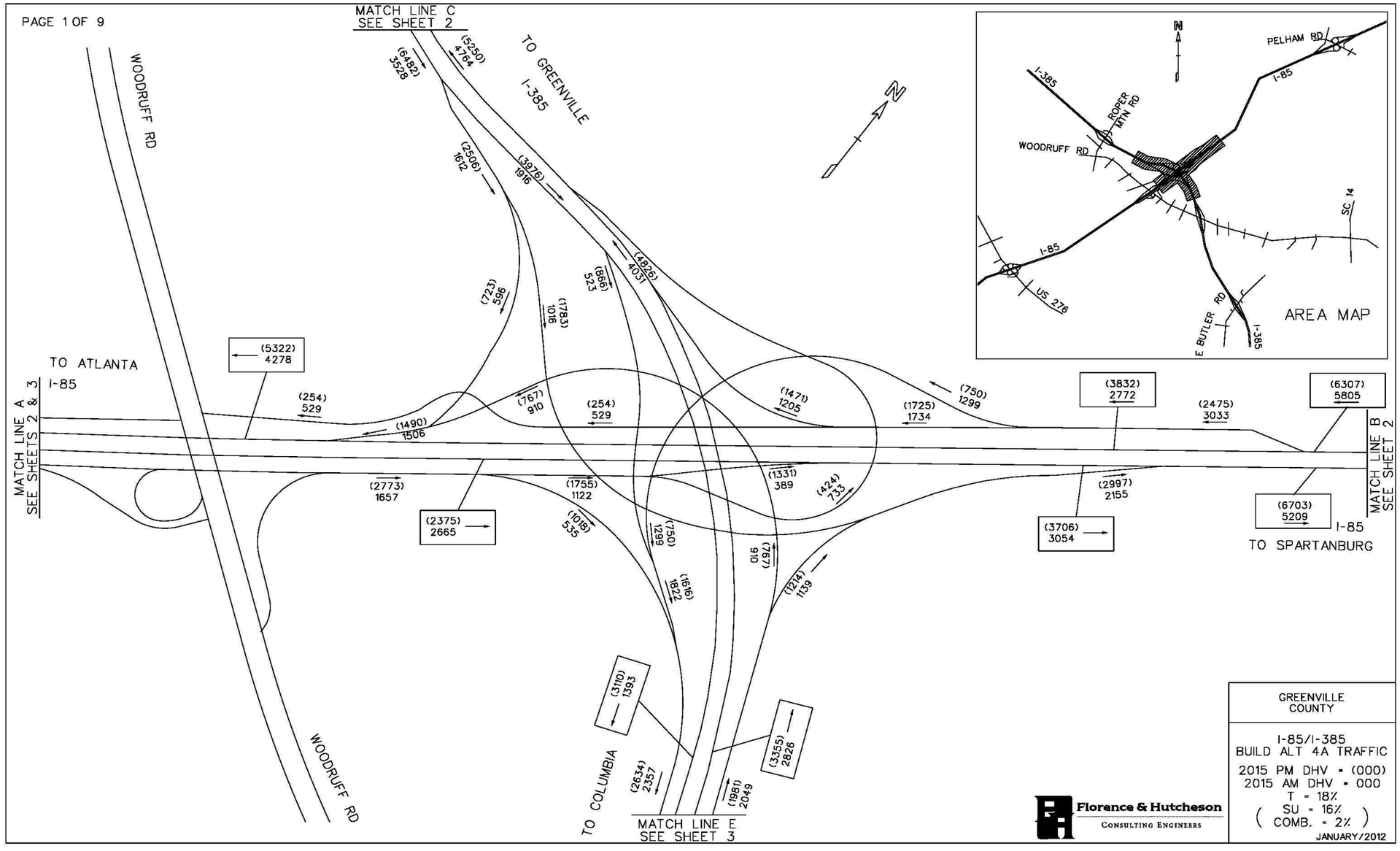


FIGURE 3.3: NO-BUILD DESIGN YEAR 2035 DESIGN HOURLY VOLUME

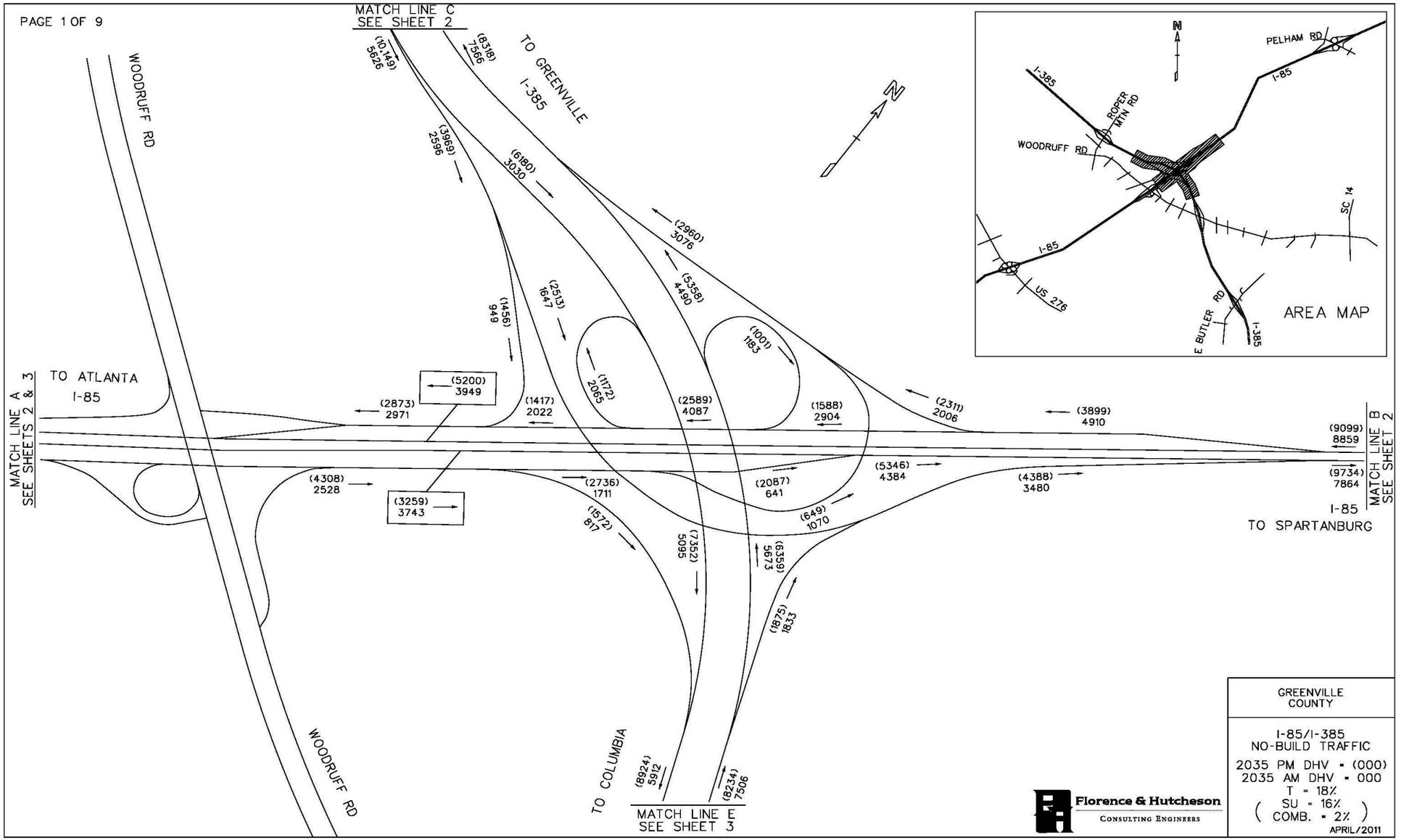
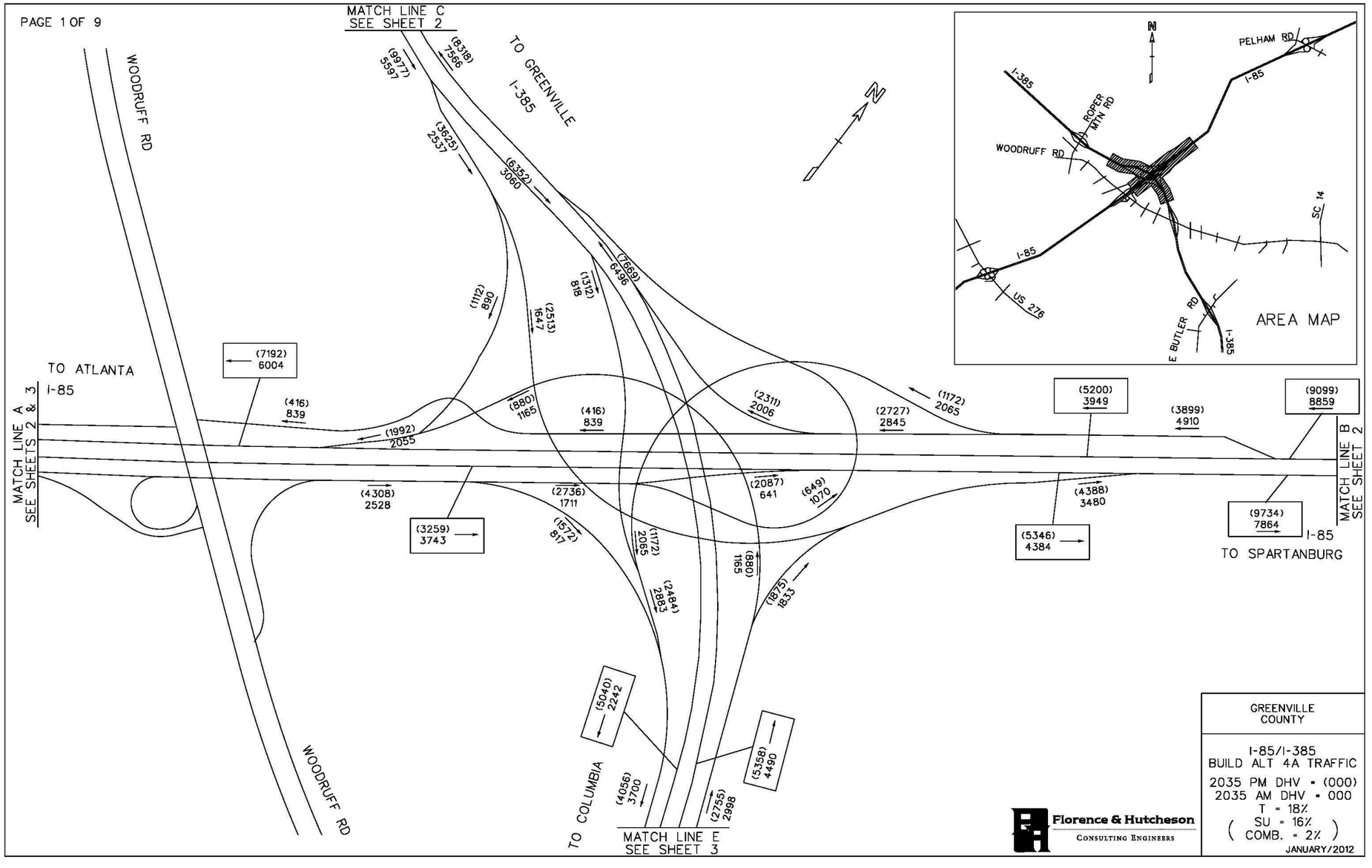


FIGURE 3.4: ALTERNATE 4A DESIGN YEAR 2035 DESIGN HOURLY VOLUME



The future year 2015 and 2035 Alternate 4A Average Daily Traffic (ADT) volumes on the roadway segments in the study area are shown in Table 3.2.

TABLE 3.2: FUTURE YEARS 2015 AND 2035 ALTERNATE 4A AVERAGE DAILY TRAFFIC (ADT) VOLUMES

Roadway Segment	Average Daily Traffic (ADT) volumes	
	2015	2035
I-85 between Laurens Rd and Woodruff Rd	99,800	141,500
I-85 between Woodruff Rd and I-385	96,100	139,000
I-85 between I-385 and Pelham Rd	118,200	174,700
I-385 between Butler Rd and Woodruff Rd	90,800	141,000
I-385 between Woodruff Rd and I-85	101,000	161,800
I-385 between I-85 and Roper Mountain Rd	106,500	171,400

4.0 CONCEPTUAL ALTERNATIVES

The No-Build and Alternate 4A are alternatives currently under consideration for this project and are discussed in Sections 4.1, and 4.2, respectively. Alternate 4A is the preferred alternative of the South Carolina Department of Transportation (SCDOT). The eliminated alternatives and the reason for their elimination are summarized in Section 4.3.

4.1 NO-BUILD ALTERNATIVE

The No-Build Alternative makes no improvements to the I-85 at I-385 Interchange other than the programmed improvements of widening I-385 to six lanes, and the intersection improvements on Woodruff Road. Chapter 1, Section 1.4 and Chapter 2, Section 2.1 provide a description of the existing conditions and the programmed improvements.

4.2 ALTERNATE 4A

Alternative 4A would provide new direct-connect ramps from I-85 southbound to I-385 southbound and from I-385 northbound to I-85 southbound; a new C-D roadway in both directions along I-385 between Woodruff Road and I-85; improvement of the I-85/Woodruff Road interchange by replacing the bridge and modifying the I-85 northbound exit ramp; elimination of the I-385 north- and southbound C-D roadway between I-385 and Woodruff Road; and elimination of the access from I-385 northbound and southbound to I-85/Woodruff Road interchange. As part of interchange enhancement, this alternative will add a third

through lane on I-385 NB and SB which will also provide lane continuity between the existing six-laning construction project to the south and the existing six-lane section to the north. This alternative would also extend the I-85 ramps to the Pelham Road interchange and construct a two-lane exit for I-85 NB to Pelham Road to further improve and facilitate the operation of the interchange and proposed improvements.

The design of the proposed improvements is sensitive to the significant commercial development in the vicinity of the I-85 at I-385 Interchange in that the design minimizes the need for additional Right-of-Way.

Alternate 4A does not require improvements to the two adjacent interchanges on Woodruff Road other than the already programmed improvements on Woodruff Road. There are no anticipated issues with signing the proposed modifications in accordance with the guidance provided in the Manual on Uniform Traffic Control Devices, 2009 Edition.

4.2.1 Spacing Between Ramps

Build Alternate 4A will add a new collector-distributor roadway on I-385 between Woodruff Road and I-85 in both directions and remove the I-85 southbound collector-distributor roadway between I-385 and Woodruff Road.

The spacing between interchanges within the study boundary will continue to meet the current AASHTO design recommendations for the following segments:

- I-85 between US 276 and the I-385 at Woodruff Road collector-distributor roadway;
- I-85 between I-385 and Pelham Road;
- I-385 between Butler Road and the I-85 at Woodruff Road collector-distributor roadway; and
- I-385 between I-85 and Roper Mountain Road.

The segment of I-85 northbound between Woodruff Road and I-385 would still be considered not a violation as the traffic movements involving the ramps occur on the collector-distributor roadway instead of the freeway mainline. The I-85 southbound collector-distributor roadway between I-385 and Woodruff Road is removed, and the permitted movements will reassign onto direct-connect ramps or loop ramps. Therefore, this segment of I-85 southbound between I-385 and Woodruff Road is not in violation.

Currently for the No-Build Alternative, the spacing between interchanges for the I-385 segment between Woodruff Road and I-85 does not meet current AASHTO design recommendations. However, with the construction of the collector-distributor roadway between I-85 and Woodruff Road in both directions, traffic movements involving the ramps occur on the collector-distributor roadway and, therefore, the spacing between interchanges would not be considered a violation.

In summary, with the construction of Alternate 4A, the proposed spacing between interchanges will meet or exceed current AASHTO design recommendations within the study boundary.

4.2.2 Lane Continuity and Balance

Lane continuity and balance along I-85 and I-385 will be maintained throughout the study boundary with Alternate 4A.

In Opening Year 2015, I-85 will continue to have three lanes in each direction throughout the study area. There will be no lane drops on I-85 at the I-85 at I-385 Interchange. I-385 will have three lanes in each direction throughout the study area. There will be no lane drops on I-385 at the I-85 at I-385 Interchange.

In Design Year 2035, I-85 will continue to have only three lanes in each direction throughout the study area. There will be no lane drops on I-85 at the I-85 at I-385 Interchange. I-385 will continue to have three lanes in each direction throughout the study area. There will be no lane drops on I-385 at the I-85 at I-385 Interchange.

4.2.3 Pedestrian and Bicyclists Accommodations

Pedestrian and bicyclists accommodations will be unchanged from the No Build Alternative. Sidewalks are present on both sides along Woodruff Road in the study area. No bicycle lanes are present within the study boundary along Woodruff Road.

4.2.4 Sight Distance

Adequate stopping sight distance will be maintained within the study boundary except as noted in Section 4.2.6.

4.2.5 Access Control

Access control will be maintained throughout the functional area of the I-85 at I-385 Interchange.

4.2.6 Design Exception Discussion

Build Alternate 4A will require several design exceptions due to matching and/or retaining existing facilities in an effort to construct the project within the programmed funding. All design exceptions were taken into account during the analysis process. The design exceptions are as follows:

- **I-85** – The design for the I-85 mainline alignment contains ten (10) and eleven (11) vertical curves in the northbound and southbound directions, respectively, that do not meet stopping sight distance requirements for the design speed of 70 mph. The curve data are summarized in Tables 4.1 and 4.2. The existing I-85 alignment also exceeds the desired maximum longitudinal grade of 4% for 420 feet in the northbound direction and for 250 feet in the southbound direction. The existing inside shoulder along I-85 is 4’9”

wide, which does not meet the design standard of 10 feet. These design exceptions result from matching the existing vertical and horizontal alignment. Any remedies would involve substantial redesign and reconstruction.

TABLE 4.1: ALTERNATE 4A - I-85 NORTHBOUND MAINLINE DESIGN EXCEPTIONS

I-85 Northbound													
Proposed Vertical Curves							*Existing Vertical Curves (From SCDOT File No. 23.996)*						
VPI Sta.	Type	Grade In (%)	Grade Out (%)	Length (ft)	K-value	Design Speed	VPI Sta.	Type	Grade In (%)	Grade Out (%)	Length (ft)	K-value	Design Speed
258+25.00	Crest	0.79	-0.25	250	240.38	69.4	258+25.00	Crest	0.80	-0.27	250	233.64	68.7
261+60.00	Crest	-0.25	-0.88	100	158.73	60.9	261+60.00	Crest	-0.27	-0.90	100	158.73	60.9
305+50.00	Crest	-1.23	-2.67	300	208.33	66.4	305+25.00	Crest	-1.20	-2.54	300	223.88	67.9
320+50.00	Sag	-4.35	-3.65	100	142.86	61.6	320+50.00	Sag	-4.37	-3.78	100	169.49	67.6
327+25.00	Sag	-3.19	2.99	675	109.22	53.5	327+50.00	Sag	-3.14	3.39	720	110.26	53.8
340+50.00	Crest	2.84	1.70	100	87.72	50.6	340+50.00	Crest	2.80	1.70	100	90.91	51.2
342+50.00	Crest	1.70	1.00	100	142.86	58.9	342+50.00	Crest	1.70	1.04	100	151.52	60.1
345+00.00	Crest	1.00	-1.04	350	171.57	62.5	345+00.00	Crest	1.04	-1.04	350	168.27	62.1
349+00.00	Crest	-1.36	-2.28	100	108.70	54.1	349+00.00	Crest	-1.36	-2.28	100	108.70	54.1
420+45.00	Sag	0.44	1.18	100	135.14	64.8	420+45.00	Sag	0.44	1.18	100	135.14	64.8

TABLE 4.2: ALTERNATE 4A - I-85 SOUTHBOUND MAINLINE DESIGN EXCEPTIONS

I-85 Southbound													
Proposed Vertical Curves							*Existing Vertical Curves (From SCDOT File No. 23.996)*						
VPI Sta.	Type	Grade In (%)	Grade Out (%)	Length (ft)	K-value	Design Speed	VPI Sta.	Type	Grade In (%)	Grade Out (%)	Length (ft)	K-value	Design Speed
303+50.00	Crest	-1.07	-1.58	100	196.08	65.3	303+50.00	Crest	-1.06	-1.54	100	208.33	66.4
306+00.00	Crest	-1.58	-2.88	300	230.77	68.5	306+00.00	Crest	-1.54	-2.90	300	220.59	67.6
324+00.00	Sag	-3.67	-2.31	150	110.29	53.8	324+00.00	Sag	-3.65	-2.40	150	120.00	56.2
327+50.00	Sag	-2.31	2.53	525	108.47	53.3	327+50.00	Sag	-2.40	2.66	525	103.75	51.8
330+50.00	Sag	2.53	3.24	75	105.63	52.5	330+50.00	Sag	2.66	3.26	75	125.00	57.4
340+00.00	Crest	3.12	1.95	200	170.94	62.4	340+00.00	Crest	3.12	2.00	200	178.57	63.2
342+00.00	Crest	1.95	1.14	150	185.19	64.1	342+00.00	Crest	2.00	1.12	150	170.45	62.3
344+00.00	Crest	1.14	0.00	200	175.44	62.9	344+00.00	Crest	1.12	0.00	200	178.57	63.2
346+00.00	Crest	0.00	-0.95	200	210.53	66.6	346+00.00	Crest	0.00	-0.95	200	210.53	66.6
374+50.00	Crest	-1.21	-1.78	100	175.44	62.9	374+50.00	Crest	-1.16	-1.77	100	163.93	61.5
387+75.00	Sag	-1.09	-0.24	150	176.47	69.1	387+75.00	Sag	-1.10	-0.22	150	170.45	67.8

- **I-385** – The design for the I-385 mainline alignment contains three (3) and four (4) curves in the northbound and southbound directions, respectively, that do not meet stopping sight distance requirements for the design speed of 65 mph. The curve data are summarized in Tables 4.3 and 4.4. The vertical alignment exceeds the desired longitudinal grade of 4% for 930 feet in the northbound direction and for 920 feet in the southbound direction. These design exceptions result from matching the existing vertical alignment, and are required to allow existing bridges to be retained.

TABLE 4.3: ALTERNATE 4A - I-385 NORTHBOUND MAINLINE DESIGN EXCEPTIONS

I-385 Northbound													
Proposed Vertical Curves							*Existing Vertical Curves (From SCDOT File No. 23.673)*						
VPI Sta.	Type	Grade In (%)	Grade Out (%)	Length (ft)	K-value	Design Speed	VPI Sta.	Type	Grade In (%)	Grade Out (%)	Length (ft)	K-value	Design Speed
360+70.00	Sag	0.37	4.97	570	123.91	57.1	301+25.00	Sag	0.50	5.00	500	111.11	54.0
375+65.00	Crest	4.97	-1.67	1100	165.66	61.7	316+91.20	Crest	5.00	-2.51	1150	153.13	60.3
385+30.00	Sag	-1.67	3.91	700	125.45	57.5	325+51.8	Sag	-2.51	4.00	571.2	87.74	47.6

TABLE 4.4: ALTERNATE 4A - I-385 SOUTHBOUND MAINLINE DESIGN EXCEPTIONS

I-385 Southbound													
Proposed Vertical Curves							*Existing Vertical Curves (From SCDOT File No. 23.673)*						
VPI Sta.	Type	Grade In (%)	Grade Out (%)	Length (ft)	K-value	Design Speed	VPI Sta.	Type	Grade In (%)	Grade Out (%)	Length (ft)	K-value	Design Speed
361+00.00	Sag	0.52	5.04	685	151.55	63.6	301+25.00	Sag	0.50	5.00	500	111.11	54.0
375+70.00	Crest	5.04	-1.64	1040	155.69	60.6	316+91.20	Crest	5.00	-2.51	1150	153.13	60.3
385+30.00	Sag	-1.64	3.81	800	146.79	62.5	325+51.8	Sag	-2.51	4.00	571.2	87.74	47.6
405+90.00	Sag	-3.36	1.86	700	134.10	59.6	345+53.4	Sag	-4.00	1.00	556.8	111.36	54.0

- **I-385 Northbound Collector-Distributor Roadway** – The proposed grade exceeds the desired maximum longitudinal grade of 4% for 1,420 feet. This grade is required in order to utilize the existing Woodruff Road underpass and obtain minimum vertical clearance over the railroad track at Garlington Road. The travel lanes will also be locally reduced to 11 feet with 2 feet wide inside shoulders and 6 feet wide outside shoulders in order to fit within the modified end span of the existing Woodruff Road underpass bridge. Resolution of these design exceptions would require replacing the Woodruff Road overpass over I-385 and raising the vertical alignment of Woodruff Road in this area.

- **I-385 Southbound Collector-Distributor Roadway** – The proposed grade exceeds the desired maximum longitudinal grade of 4% for 980 feet. This grade is required in order to utilize the existing Woodruff Road underpass and obtain minimum vertical clearance over the railroad track at Garlington Road. The travel lanes will also be locally reduced to 11 feet with 2 feet wide inside shoulders and 6 feet wide outside shoulders in order to fit within the modified end span of the existing Woodruff Road underpass bridge. Resolution of these design exceptions would require replacing the Woodruff Road overpass over I-385 and raising the vertical alignment of Woodruff Road in this area.

- **I-85 Southbound to I-385 Northbound Ramp** – The design for this ramp contains a grade which exceeds the maximum grade of 5% for 1,000 feet in order to match the adjacent I-85 southbound to I-385 southbound ramp grade.

- **I-85 Southbound to I-385 Southbound Ramp** – The design for this ramp contains a grade which exceeds the maximum grade of 5% for 2,550 feet in order to reach the fourth level of the interchange and obtain minimum vertical clearance over the I-385 southbound to I-85 southbound ramp. Addressing this design exception would require

extending the ramp an additional 5,000 feet to tie into I-85. The design for this ramp does not meet the design standards for stopping sight distance at the desired design speed of 50 mph within the bridge area. Correction of this issue would require further violation of the maximum grade requirement or realignment of the ramp to feature a larger horizontal curve. This would result in additional impacts to surrounding businesses and require acquisition of additional right-of-way.

- **I-385 Southbound to I-85 Northbound Ramp** – The design for this ramp does not meet the design standards for stopping sight distance at the desired design speed of 50 mph within the bridge area. Several vertical alignment constraints contribute to this issue. Prior to reaching the bridge, minimum vertical clearance is required under the I-385 northbound to I-85 southbound ramp. After crossing the bridge, minimum vertical clearance is required under the existing I-385 bridges over I-85. These two restrictions, combined with achieving minimum vertical clearance on the bridge over I-85, do not allow for manipulation of the vertical alignment to provide greater sight distance.

- **I-385 Northbound to I-85 Southbound Ramp** – The design for this ramp contains a grade which exceeds the maximum grade of 5% for 500 feet in order to descend from the third level of the interchange and to tie into I-85 prior to the Woodruff Road overpass. Reduction of this grade to meet the maximum would push the merge point with I-85 further south. This would force the I-85 southbound to Woodruff Road ramp further out, impacting additional properties, and would require replacing the existing Woodruff Road bridge over I-85. The design for this ramp does not meet the design standards for stopping sight distance at the desired design speed of 50 mph within the bridge area. Correction of this issue would require flattening the crest vertical curve on this bridge. This would result in raising the bridge for the I-85 southbound to I-385 southbound ramp (fourth level of the interchange). Raising that bridge would further violate the maximum grade of 5% on that ramp. The issue could also be corrected by utilizing a larger horizontal curve on this ramp. This would result in additional impacts to surrounding businesses and require acquisition of additional right-of-way.

- **I-385 Southbound Collector-Distributor to Woodruff Road Ramp** – The design for this ramp contains a grade which exceeds the maximum grade of 5% for 350 feet in order to obtain minimum vertical clearance over the Garlington Road railroad and then tie into the existing Woodruff Road ramp terminus. The final vertical curve for this alignment does not meet the design speed of 40 mph. This curve is within 120 feet of the intersection with Woodruff Road.

- **Woodruff Road to I-385 Southbound Collector-Distributor Ramp** – The design for this ramp contains a grade which exceeds the maximum grade of 5% for 300 feet in order to make the grade from the existing terminus on Woodruff Road to the merge point with the I-385 southbound collector-distributor roadway. Reduction of this grade to meet the maximum would force the merge point with the collector-distributor roadway further south and result in additional impacts to adjacent properties.

4.2.7 Estimated Cost

The estimated construction cost of Build Alternate 4A is approximately $238 million. The estimated cost includes costs associated with Right-of-Way acquisition and utility relocation. The cost estimate calculations are provided in Appendix C.

4.3 ALTERNATIVES PREVIOUSLY CONSIDERED BUT ELIMINATED

In addition to the No-Build Alternative and Build Alternative 4A, other Build Alternatives were considered for this project. The other Build Alternatives included improvements to the I-85 at I-385 Interchange as well as modifications to adjacent interchanges. However, these other Build Alternatives were determined to not be feasible. These Build Alternatives either did not meet the Purpose and Need of the project or were eliminated due to public comments, environmental impacts, or costs. Therefore, they were either not carried forward in this document, or they were modified and/or merged to develop the Build Alternative documented in this report.

5.0 TRAFFIC ANALYSIS

5.1 METHODOLOGY

The traffic operational analyses in this study were based upon the methodology contained in the Highway Capacity Manual. The analysis was developed with Highway Capacity Software (HCS) Version 6.1 and Synchro, Version 7. HCS was utilized for the freeway, ramp junction, and weave area analyses and Synchro 7 was utilized for the signalized and unsignalized intersection analyses. The output of the Synchro analyses is provided in Appendices D and E, and the HCS analysis is provided in Appendices F to H.

Level of Service (LOS) is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. LOS range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Each LOS represents a range of operating conditions and the driver's perception to those conditions. Table 5.1 provides a description for each of the LOS criteria.

TABLE 5.1: LEVELS OF SERVICE DESCRIPTION

LOS	Description
A	Free flow operations. Vehicles are almost completely unimpeded in their ability to maneuver with the traffic stream. The general level of physical and psychological comfort provided to the driver is high.
B	Reasonable free flow operations. The ability to maneuver within the traffic stream is only slightly restricted and the general level of physical and psychological comfort provided to the driver remains high.
C	Flow with speeds at or near free flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted and lane changes require more vigilance on the part of the driver. The driver notices an increase in tension.
D	Speeds decline with increasing traffic. Freedom to maneuver within the traffic system stream is more noticeably limited. The driver experiences reduced physical and psychological comfort levels.
E	At lower boundary, the facility is at capacity. Operations are volatile because there are virtually no gaps in the traffic stream. There is little room to maneuver. The driver experiences poor levels of physical and psychological comfort.
F	Breakdowns in traffic flow. The number of vehicles entering the highway section exceeds the capacity or ability of the highway to accommodate that number of vehicles. There is little room to maneuver. The driver experiences poor levels of physical and psychological comfort.

The LOS analysis included the following:

- Along I-85 and I-385:
  - Basic freeway segments,
  - Ramp merge and diverge segments, and
  - Weave areas

- Along Laurens Road, Woodruff Road, Butler Road, Roper Mountain Road and Pelham Road:
  - Signalized intersection analysis; and
  - Unsignalized intersection analysis.

A basic freeway segment can be characterized by three performance measures: density in passenger cars per mile per lane (pc/mi/ln), space mean speed in miles per hour (mi/h), and the ratio of demand flow rate to capacity (v/c). Each of these measures is an indication of how well traffic is being accommodated by the basic freeway segment. Since speed is constant through a broad range of flows and the v/c ratio is not directly discernible to road users (except at capacity), the service measure for basic freeway segments is density. Table 5.2 shows the criteria.

TABLE 5.2: HCM LOS CRITERIA FOR BASIC FREEWAY SEGMENTS

LOS	Density (pc/mi/ln)
A	≤11
B	>11-18
C	>18-26
D	>26-35
E	>35-45
F	Demand exceeds capacity >45

Merge/diverge segment LOS is defined in terms of density for all cases of stable operation (LOS A-E). LOS F exists when the freeway demand exceeds the capacity of the upstream (diverges) or downstream (merges) freeway segment, or where the off-ramp demand exceeds the off-ramp capacity. Table 5.3 shows the criteria.

TABLE 5.3: HCM LOS CRITERIA FOR RAMP MERGE AND DIVERGE SEGMENTS

LOS	Density (pc/mi/ln)	Comments
A	≤10	Unrestricted operations
B	>10-20	Merging and diverging maneuvers noticeable to drivers
C	>20-28	Influence area speeds begin to decline
D	>28-35	Influence area turbulence becomes intrusive
E	>35	Turbulence felt by virtually all drivers
F	Demand exceeds capacity	Ramp and freeway queues form

The LOS in a weaving segment, as in all freeway analysis, is related to the density in the segment. Table 5.4 provides the LOS criteria for weaving segments on freeways, collector-distributor (C-D) roadways, and multilane highways. This methodology was developed for freeway weaving segments, although an isolated C-D roadway was included in its development.

TABLE 5.4: HCM LOS CRITERIA FOR WEAVING SEGMENTS

LOS	Density (pc/mi/ln)	
	Freeway Weaving Segments	Weaving Segments on Multilane Highways or C-D Roadways
A	0-10	0-12
B	>10-20	>12-24
C	>20-28	>24-32
D	>28-35	>32-36
E	>35	>36
F	Demand exceeds capacity	Demand exceeds capacity

All of the unsignalized intersections in the study area are two-way stop-controlled (TWSC) intersections. The primary typical configuration is a four-leg intersection, where one street, the major street, is uncontrolled, while the other street, the minor street, is controlled by stop signs. The other typical configuration is a three-leg intersection, where the single minor-street approach is controlled by a stop sign.

LOS for a TWSC intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turn movements by using criteria given in Table 5.5. LOS is not defined for the intersection as a whole or for major-street approaches for the following reasons:

- Major-street through vehicles are assumed to experience zero delay;
- The disproportionate number of major-street through vehicles at a typical TWSC intersection skews the weighted average of all movements, resulting in a very low overall average delay for all vehicles; and
- The resulting low delay can mask important LOS deficiencies for minor movements.

TABLE 5.5: HCM LOS CRITERIA FOR UNSIGNALIZED TWSC INTERSECTIONS

Control Delay (s/vehicle)	LOS
0-10	A
>10-15	B
>15-25	C
>25-35	D
>35-50	E
>50	F

LOS for a signalized intersection can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for the entire intersection or an approach. Delay quantifies the increase in travel time due to traffic signal control. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group. Table 5.6 shows the LOS criteria for a signalized intersection.

TABLE 5.6: HCM LOS CRITERIA FOR SIGNALIZED INTERSECTIONS

Control Delay (s/vehicle)	LOS
≤10	A
>10-20	B
>20-35	C
>35-55	D
>55-80	E
>80	F

The results of the traffic operational analysis are summarized in Sections 5.2 through 5.6, Figures 5.1 through 5.5, and Tables 5.7 through 5.30. The intersection capacity analysis and HCS analysis printouts are included in Appendices D through H. During the analysis, it was observed that travel lanes in addition to the existing six lanes for I-85 and programmed six lanes for I-385 would be required along I-385 and I-85 to accommodate the projected traffic volumes for the 2035 design year. Without the additional travel lanes, many of the freeway segments along I-85 and along I-385 are expected to operate at LOS F prior to the 2035 design year. The systematic widening of I-85 and I-385 beyond the programmed lanes is outside the scope of recommended improvements proposed in this report.

5.2 EXISTING

5.2.1 Freeway, Ramp, and Weaving Segment Analysis

As seen in Figure 5.1, Tables 5.7, 5.8a-b and 5.9, several of the freeway segments, ramp diverge/merge junctions and weave areas are currently operating at LOS E or F during at least one of the AM and PM peak hours. As indicated, some ramps are shown to operate at Levels of Service F although the density, or capacity, is shown to be for Levels of Service E or better. This results from the ramp-freeway junction area of influence having high traffic volumes while the ramp itself will have lower operating volumes.

5.2.2 Intersection Analysis

As seen in Tables 5.10a-c, the majority of the study intersections are currently operating at overall Levels of Service D or better during at least one of the study peak hours.

5.3 NO-BUILD ALTERNATIVE

5.3.1 Freeway, Ramp, and Weaving Segment Analysis

As seen in Figure 5.2, Tables 5.11, 5.12a-b and 5.13 for the opening year, many more of the freeway segments, ramp diverge/merge junctions and weave areas are expected to operate with LOS E or F during at least one of the AM and PM peak hours. As indicated, some ramps are shown to operate at Levels of Service F although the density, or capacity, is shown to be for Levels of Service E or better. This results from the ramp-freeway junction area of influence having high traffic volumes while the ramp itself will be operating acceptably.

As seen in Figure 5.4, Tables 5.19, 5.20a-b and 5.21 for the design year, nearly all of the freeway segments, ramp diverge/merge junctions and weave areas are expected to operate at LOS F during at least one of the AM and PM peak hours. As indicated, some ramps are shown to operate at Levels of Service F although the density, or capacity, is shown to be for Levels of Service E or better.

5.3.2 Intersection Analysis

As seen in Tables 5.14a-c for the opening year, most of the study intersections are expected to continue to operate at LOS D or better during at least one of the peak hours.

As seen in Tables 5.22a-c for the design year, nearly all of the study intersections are expected to operate at LOS F during at least one of the peak hours.

5.4 ALTERNATE 4A

5.4.1 Freeway, Ramp, and Weaving Segment Analysis

As seen in Figure 5.3 and Tables 5.15, 5.16a-b, and 5.17 for opening year, nearly all of the freeway segments, ramp merge/diverge junctions and weave areas are expected to operate at LOS D or better during at least one of the peak hours. In and around the I-85 at I-385 Interchange, the following are expected to operate at LOS E or F during at least one of the peak hours:

- I-85 northbound mainline between I-85 and Pelham Road;
- I-85 southbound mainline between I-85 and Laurens Road;
- I-385 northbound mainline between Butler Road and Woodruff Road;
- I-385 southbound mainline between Roper Mountain Road and I-85;
- I-385 southbound mainline between Woodruff Road and Butler Road; and
- I-85 southbound on-ramp merge from Woodruff Road.

These freeway and ramp merge/diverge junctions are expected to operate at LOS E or F due to insufficient capacity on the freeway mainline.

Similarly, some of the ramp merge/diverge junctions at the adjacent interchanges are expected to operate at LOS E or F during one or both peak hours. However, these areas operate with the same LOS as in the respective No-Build Alternative condition and, therefore, do not worsen due to the construction of Alternate 4A.

As seen in Figure 5.5 and Tables 5.23, 5.24a-b, and 5.25 for the design year, seven more freeway segments, ramp merge/diverge junctions and weave areas are expected to operate at LOS F during at least one of the peak hours when compared to the opening year as follows:

- I-385 northbound mainline between I-85 southbound on-ramp and I-85 northbound on-ramp;
- I-385 northbound on-ramp merge from I-85 southbound;
- I-385 northbound on-ramp merge from I-85 northbound;
- I-385 southbound mainline between I-85 off-ramps and C-D off-ramp;
- I-385 southbound off-ramp diverge to I-85;
- I-385 southbound off-ramp diverge to Woodruff Road C-D; and
- I-85 northbound C-D weave area between Woodruff Road and I-385.

These freeway, ramp merge/diverge junctions, and weave areas are expected to operate at LOS F due to insufficient capacity on the freeway mainline. This is considered to be acceptable for this interchange improvement since additional mainline widening is beyond the scope of the

project to address. Also, the I-85 northbound weave area is expected to operate at LOS F, as this area is not being improved due to geometric and right-of-way constraints.

It should be noted that the I-85 northbound mainline between I-385 and Pelham Road worsens to LOS F by the design year. Additional analysis performed for the segment shows that this change from LOS E to F occurs in year 2034, just one year before the design year. As a 6 lane section, I-85 in the No-Build scenario fails Northbound by 2020 (except for the section between Woodruff and I-385), and Southbound by 2025.

Again, some of the ramp merge/diverge junctions at the adjacent interchanges are expected to operate at LOS F during at least one of the peak hours. However, these areas operate with the same LOS as in the respective No-Build Alternative condition and, therefore, do not worsen due to the construction of Alternate 4A.

5.4.2 Intersection Analysis

As seen in Tables 5.18a-c for the opening year, most of the study intersections are expected to continue to operate at LOS D or better during at least one of the peak hours.

As seen in Tables 5.26a-c for the design year, nearly all of the study intersections are expected to operate at LOS F during at least one of the peak hours.

Traffic operations along the surface streets would not be impacted with the proposed I-85 at I385 Interchange modifications as the study intersections are expected to continue to operate with the same LOS as under the respective No-Build condition.

5.5 TRAFFIC ANALYSIS SUMMARY

As shown in the summary tables: Tables 5.27, 5.28a-b, 5.29 for freeway segments, ramp merge/diverge junctions and weave areas, respectively; and Tables 5.30a-c for surface street intersections, the Build Alternate 4A does not have an adverse impact to traffic operations along I-85, I-385 and the surface streets when compared to the No Build Alternative.

FIGURE 5.1: EXISTING YEAR 2010 LOS

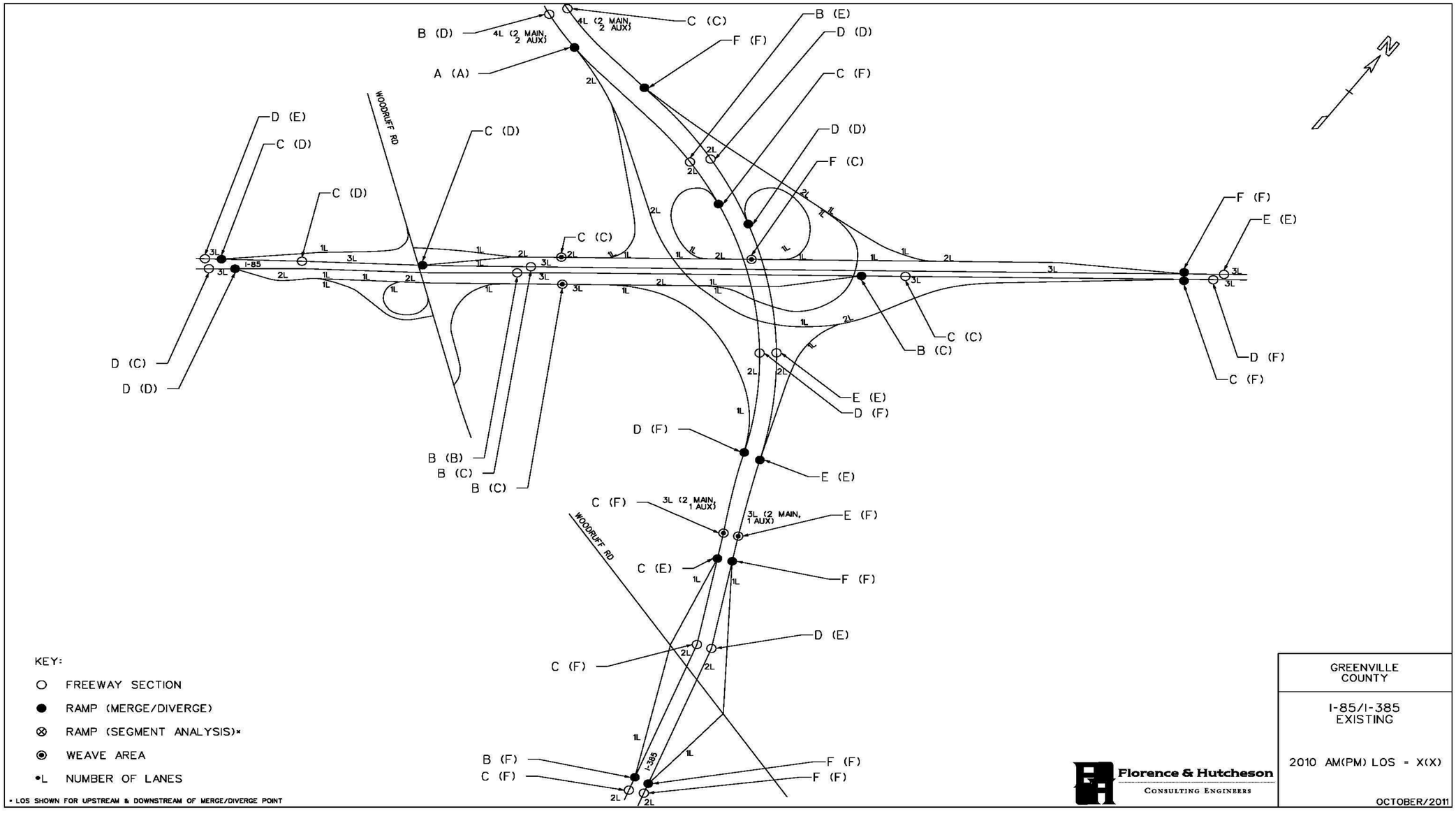


FIGURE 5.2: NO-BUILD OPENING YEAR 2015 LOS

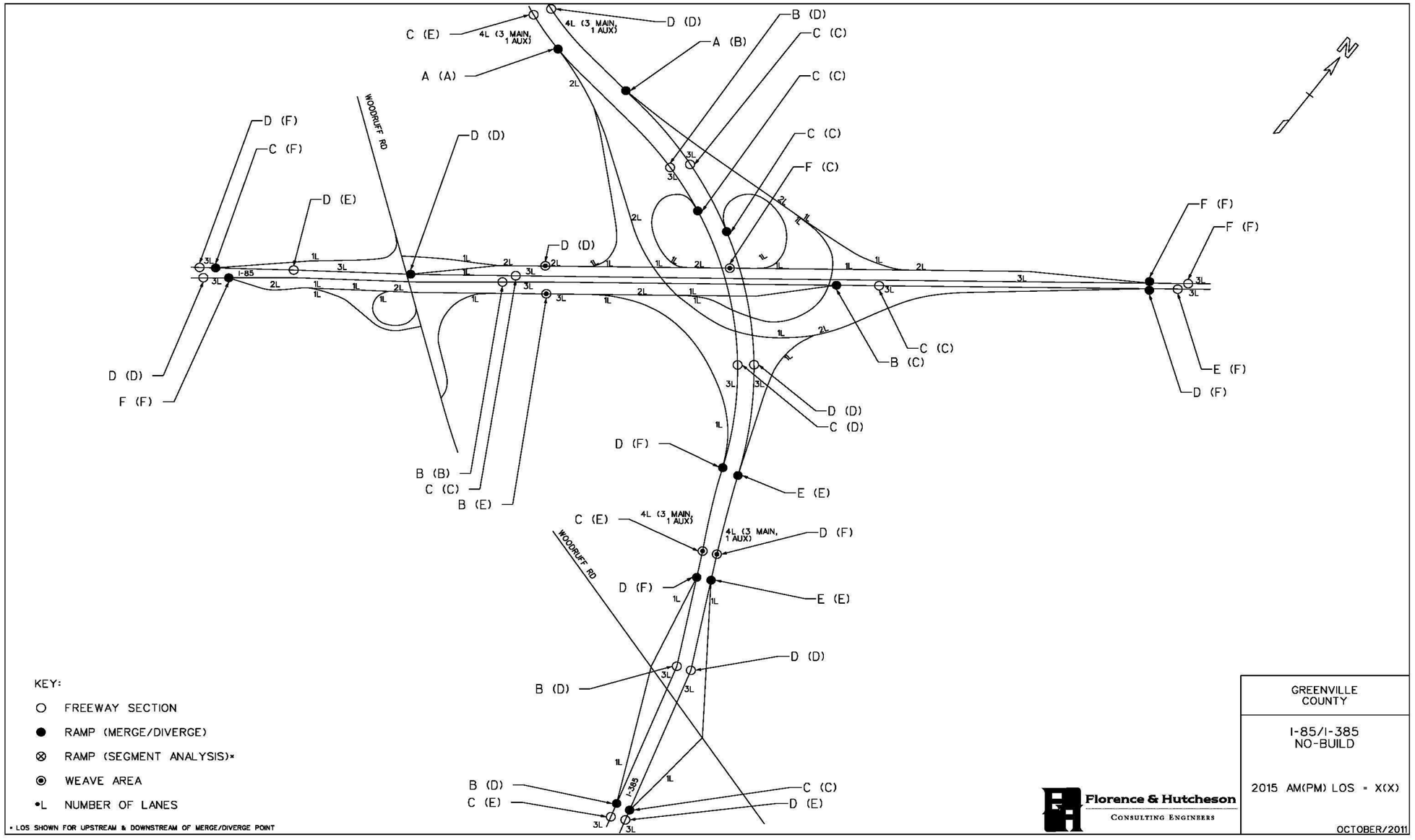


FIGURE 5.3: ALTERNATE 4A OPENING YEAR 2015 LOS

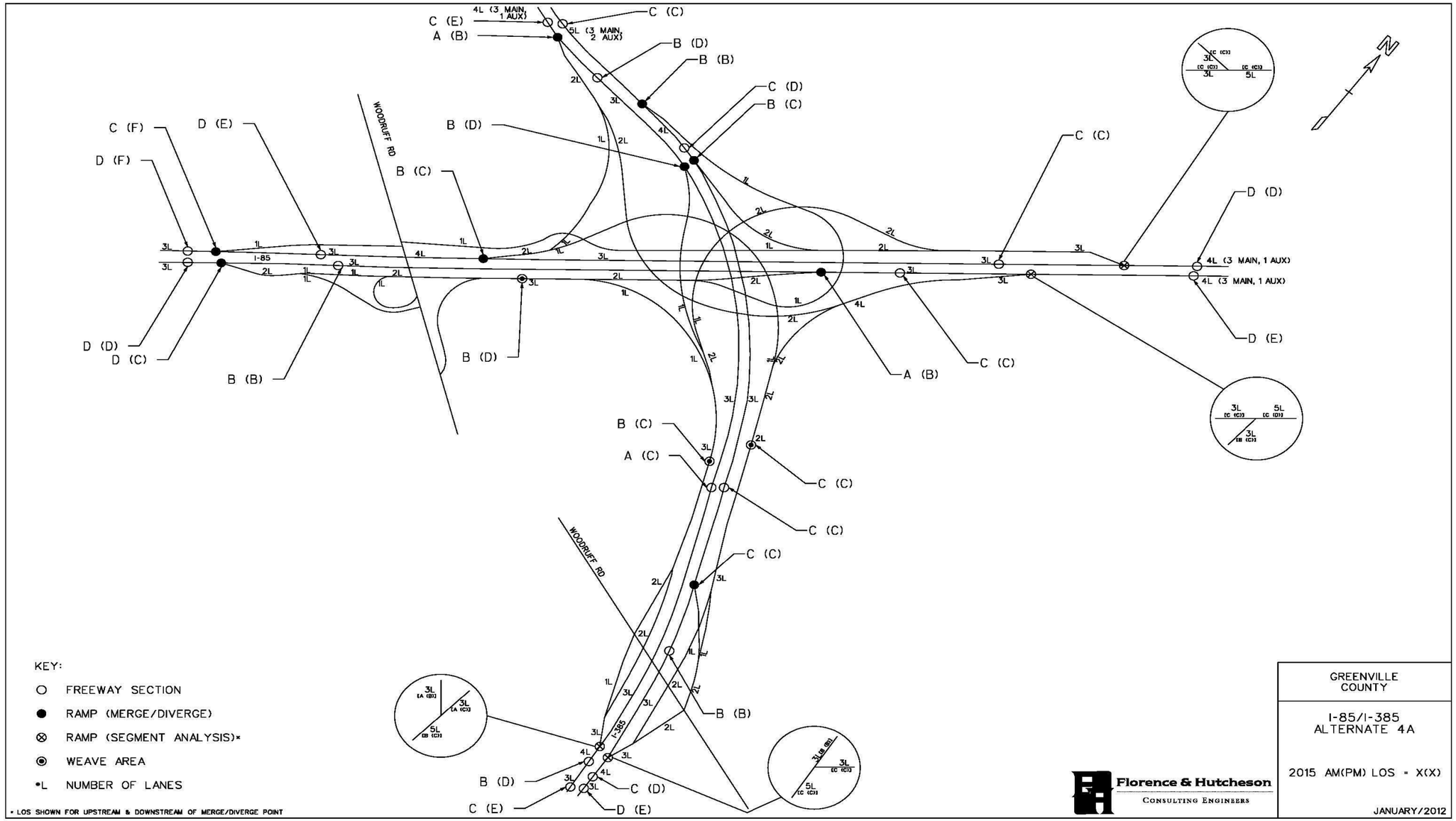


FIGURE 5.4: NO-BUILD DESIGN YEAR 2035 LOS

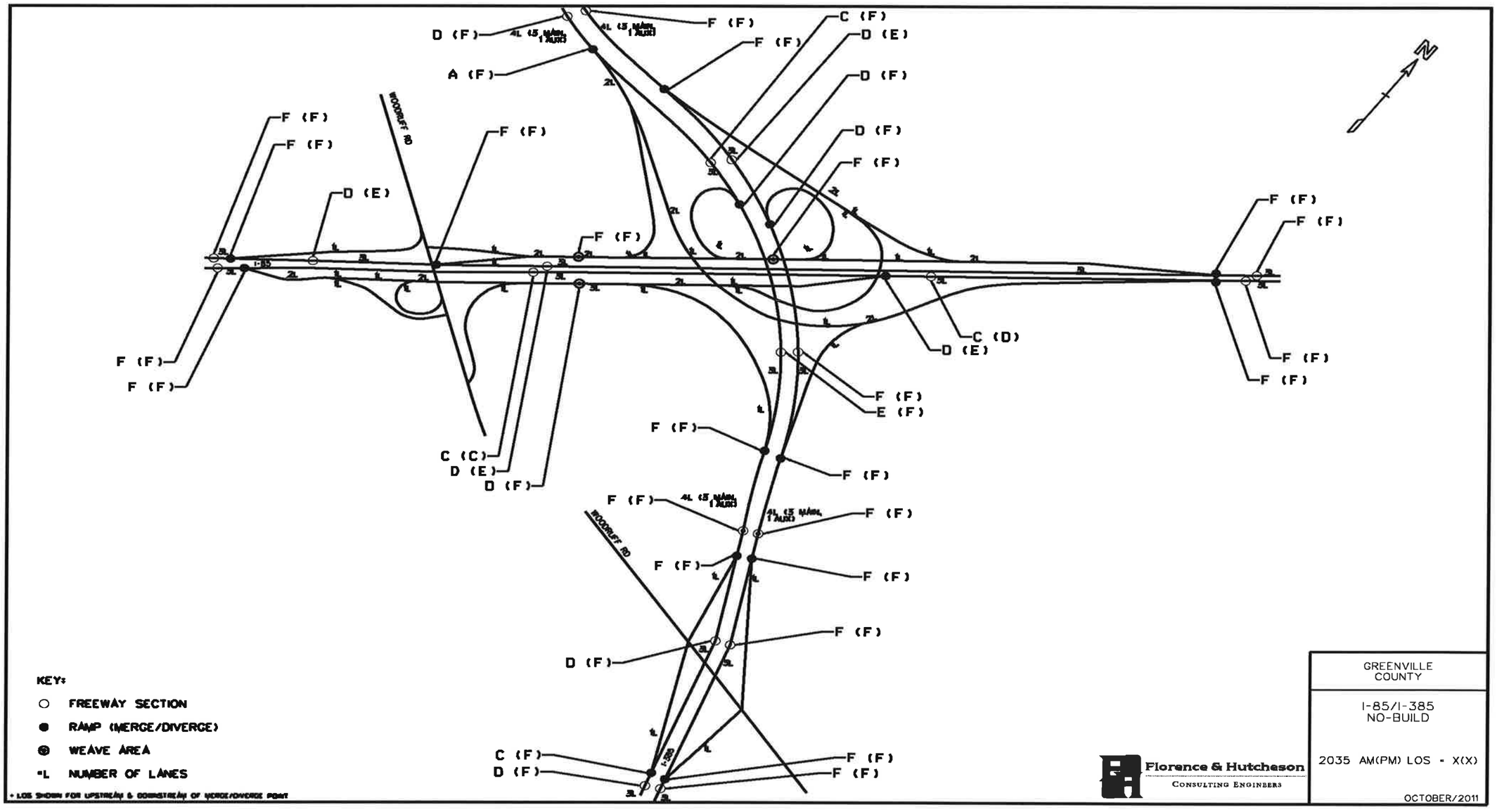


FIGURE 5.5: ALTERNATE 4A DESIGN YEAR 2035 LOS

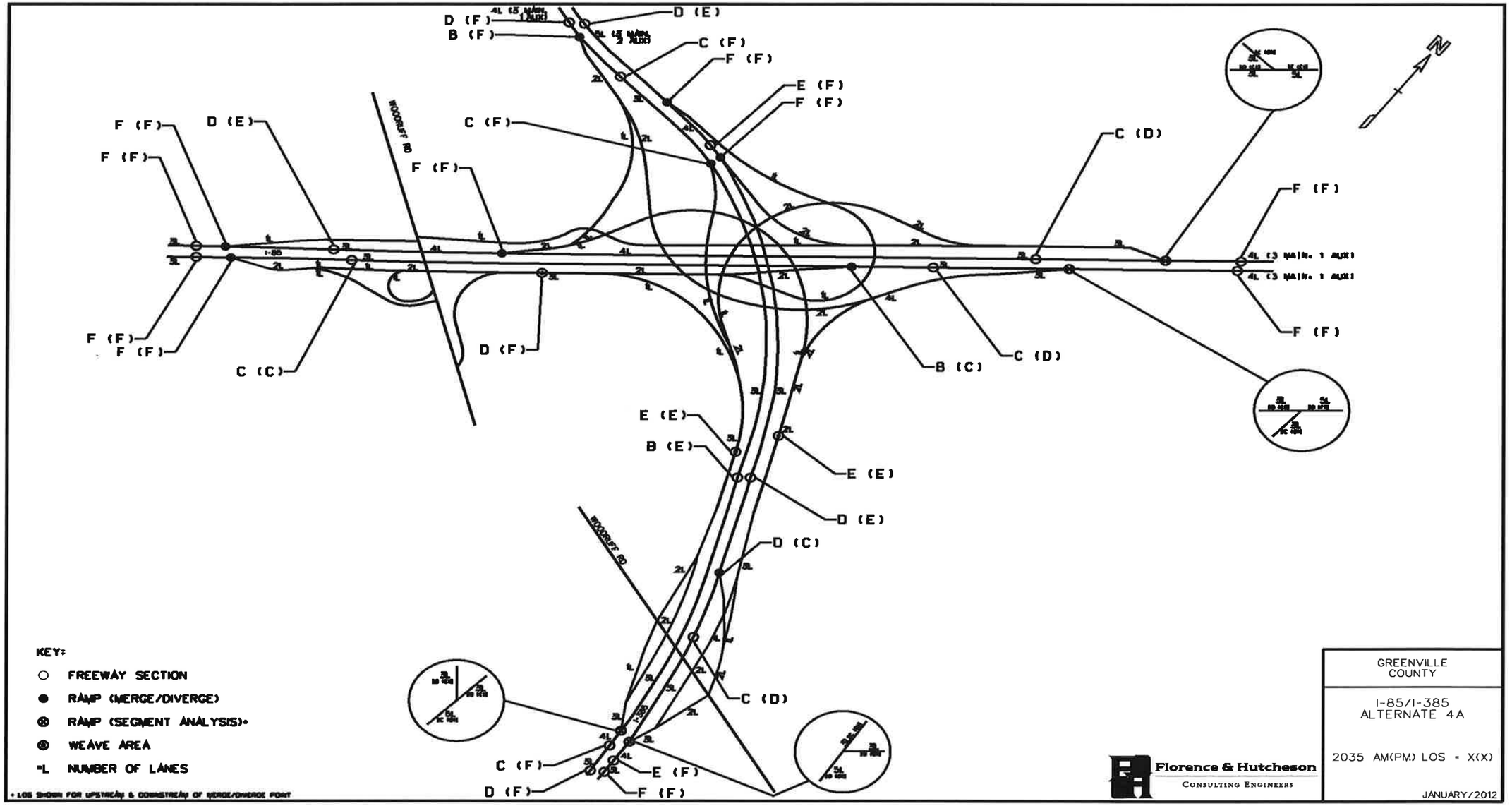


TABLE 5.7: EXISTING YEAR 2010 FREEWAY SEGMENT ANALYSIS

Freeway Section	Direction	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 between Laurens Rd and Woodruff Rd	NB	D	26.9	C	25.3
	SB	D	29.3	E	44.3
I-85 between Woodruff Rd and I-385	NB	B	16.1	B	14.5
	SB	B	16.7	C	23.5
I-85 between I-385 and Pelham Rd	NB	D	31.1	F	>45.0
	SB	E	36.0	E	43.5
I-385 between Butler Rd and Woodruff Rd	NB	F	>45.0	F	>45.0
	SB	C	24.1	F	>45.0
I-385 between Woodruff Rd and I-85	NB	D	31.0	D	34.6
	SB	C	23.4	E	35.6
I-385 between I-85 and Roper Mountain Rd	NB	C	22.4	C	24.7
	SB	B	16.7	D	31.4

TABLE 5.8A: EXISTING YEAR 2010 RAMP MERGE AND DIVERGE ANALYSIS – I-85/I-385 INTERCHANGE

Freeway Ramp	Merge/ Diverge	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB off-ramp to I-385/ Woodruff Rd	Diverge	D	31.5	D	30.2
I-85 NB on-ramp from Woodruff Rd	Merge	B	17.7	C	23.5
I-85 NB on-ramp from I-385	Merge	C	28.0	F*	38.6
I-85 SB off-ramp to I-385/ Woodruff Rd	Diverge	F*	37.4	F*	38.0
I-85 SB on-ramp from I-385/ Woodruff Rd	Merge	C	25.9	D	31.7
I-385 NB off-ramp to I-85 NB	Diverge	E	39.3	E	44.1
I-385 NB off-ramp to I-85 SB/ Woodruff Rd	Diverge	D	29.8	D	33.7
I-385 NB on-ramp from I-85/ Woodruff Rd	Merge	F*	14.7	F*	18.7
I-385 SB off-ramp to I-85/ Woodruff Rd	Diverge	A	<10.0	A	<10.0
I-385 SB on-ramp from I-85 SB	Merge	C	23.6	F*	35.3
I-385 SB on-ramp from I-85 NB/ Woodruff Rd	Merge	D	29.5	F*	44.6

* - LOS is F for ramp-freeway junction

TABLE 5.8B: EXISTING YEAR 2010 RAMP MERGE AND DIVERGE ANALYSIS – OTHER INTERCHANGES

Freeway Ramp	Merge/ Diverge	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB on-ramp from Laurens Rd EB	Merge	E	40.6	D	30.4
I-85 NB on-ramp from Laurens Rd WB	Merge	E	39.1	C	24.9
I-85 SB off-ramp to Laurens Rd WB	Diverge	C	27.4	D	34.1
I-85 SB off-ramp to Laurens Rd EB	Diverge	E	51.9	F	61.8
I-85 NB off-ramp to Pelham Rd	Diverge	F*	32.0	F*	38.3
I-85 SB on-ramp from Pelham Rd WB	Merge	C	23.8	D	29.3
I-85 SB on-ramp from Pelham Rd EB	Merge	D	29.6	D	32.1
I-385 NB on-ramp from Butler Rd	Merge	F*	34.4	F*	39.6
I-385 SB off-ramp to Butler Rd	Diverge	B	18.0	F*	41.5
I-385 NB off-ramp to Woodruff Rd	Diverge	F*	30.8	F*	36.5
I-385 NB on-ramp from Woodruff Rd	Merge	F*	37.9	F*	42.3
I-385 SB off-ramp to Woodruff Rd	Diverge	C	27.2	E	45.3
I-385 SB on-ramp from Woodruff Rd	Merge	B	16.6	F*	37.7
I-385 NB off-ramp to Roper Mountain Rd	Diverge	A	<10.0	A	<10.0
I-385 NB on-ramp from Roper Mountain Rd	Merge	B	15.3	C	23.3
I-385 SB off-ramp to Roper Mountain Rd	Diverge	B	16.6	C	26.3
I-385 SB on-ramp from Roper Mountain Rd	Merge	B	19.9	F*	48.4

* - LOS is F for ramp-freeway junction

TABLE 5.9: EXISTING YEAR 2010 WEAVE SEGMENT ANALYSIS

Weave Section	Direction	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 C-D between Woodruff Rd and I-385	NB	B	13.5	C	23.4
	SB	C	27.4	C	26.6
I-385 between Woodruff Rd and I-85	NB	E	35.8	F	>50.0
	SB	C	25.8	F	>50.0

TABLE 5.10A: EXISTING YEAR 2010 INTERSECTION ANALYSIS – WOODRUFF ROAD

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
1	Woodruff Rd at Roper Mountain Rd	Signal	Overall	C	34.0	0.87	C	29.2	0.66
2	Woodruff Rd at Ketron Ct	Signal	Overall	A	5.2	0.25	B	11.7	0.47
3	Woodruff Rd at Green Heron Rd	Signal	Overall	A	2.7	0.26	A	5.8	0.43
4	Woodruff Rd at Woodruff Industrial Ln	Signal	Overall	A	8.6	0.34	C	30.8	0.83
5	I-85 SB ramps at Woodruff Rd	Signal	Overall	B	14.3	0.62	D	36.5	0.98
6	I-85 NB ramps at Woodruff Rd	Signal	Overall	C	22.9	0.64	F	103.0	0.69
7	Woodruff Rd at Carolina Point Pkwy	Signal	Overall	B	10.5	0.40	A	6.1	0.69
8	Woodruff Rd at Market Point Dr	Signal	Overall	B	18.1	0.56	C	26.8	0.78
9	Woodruff Rd at Garlington Rd	Signal	Overall	D	36.9	0.89	D	53.3	0.94
10	I-385 SB ramps at Woodruff Rd	Signal	Overall	C	21.8	0.75	C	24.3	0.82
11	I-385 NB ramps at Woodruff Rd	Signal	Overall	D	40.7	0.96	D	39.4	0.96
12	Woodruff Rd at commercial drwy	Signal	Overall	A	9.4	0.56	B	19.9	0.72
13	Woodruff Rd at Smith Hines Rd	Signal	Overall	A	5.2	0.49	B	10.9	0.60
14	Woodruff Rd at Walmart dr	Signal	Overall	F	122.1	1.26	E	67.9	1.19
15	Woodruff Rd at Verdin Rd	Signal	Overall	E	59.0	1.05	D	50.3	1.00
16	Woodruff Rd at Butler Rd	Signal	Overall	B	18.8	0.82	F	129.0	1.66
17	Woodruff Rd at Bell Rd	Signal	Overall	C	21.9	1.00	B	14.1	0.96
18	Woodruff Rd at SC 14	Signal	Overall	E	73.7	1.06	C	32.5	0.89

TABLE 5.10B: EXISTING YEAR 2010 INTERSECTION ANALYSIS – LAURENS AND PELHAM ROADS

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
19	Laurens Rd at Verdae Blvd	Signal	Overall	C	23.8	0.52	C	22.8	0.58
20	Laurens Rd at Duvall Dr	Signal	Overall	B	13.0	0.75	C	30.4	1.13
21	Laurens Rd at Frontage Rd	Stop Control	WB LR	F	>50.0	>2.00	F	>50.0	>2.00
			SBL	C	21.9	0.26	C	15.8	0.10
22	Laurens Rd at St Josephs Dr	Stop Control	EB LR	F	>50.0	>2.00	F	>50.0	>2.00
			NBL	E	41.4	0.76	C	17.4	0.38
23	Laurens Rd at Millennium Blvd	Signal	Overall	B	19.8	0.66	B	18.3	0.76
24	Pelham Rd at The Parkway/I-85 SB on-ramp	Signal	Overall	D	35.9	0.98	C	24.2	0.73
25	I-85 SB ramps at Pelham Rd	Signal	Overall	C	34.7	0.88	C	22.4	0.71
26	I-85 NB ramps at Pelham Rd	Signal	Overall	D	44.1	1.04	C	24.6	0.71
27	Pelham Rd at Garlington Rd	Signal	Overall	D	53.7	1.08	C	26.3	0.83

TABLE 5.10C: EXISTING YEAR 2010 INTERSECTION ANALYSIS – BUTLER AND ROPER MOUNTAIN ROADS

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
28	Butler Rd at Forsythia Dr	Signal	Overall	B	11.4	0.51	B	11.6	0.55
29	Butler Rd at Rothwell Dr	Stop Control	EB LR	B	13.4	0.01	C	15.9	0.07
			NBL	A	9.6	0.01	B	10.3	0.00
30	I-385 SB ramps at Butler Rd	Signal	Overall	C	32.8	0.86	C	28.0	0.79
31	I-385 NB ramps at Butler Rd	Signal	Overall	C	20.3	0.68	B	12.8	0.54
32	Butler Rd at New Commerce Ct	Stop Control	WB LR	F	>50.0	1.63	F	>50.0	1.40
			SBL	B	13.3	0.08	B	11.0	0.09
33	Butler Rd at Brookfield Pkwy	Stop Control	NBL	B	14.1	0.20	B	14.3	0.04
			SBL	A	1.0	0.03	A	0.1	0.00
			EB LT	F	>50.0	0.06	F	>50.0	0.09
			EBR	B	14.6	0.03	D	29.7	0.58
			WB LT	F	>50.0	1.26	F	>50.0	1.62
			WBR	B	11.4	0.02	B	12.9	0.01
34	Roper Mountain Rd at Independence Blvd	Signal	Overall	C	30.4	0.83	D	40.8	0.84
35	I-385 NB ramps at Roper Mountain Rd	Signal	Overall	C	23.2	0.75	C	20.9	0.74
36	I-385 SB ramps at Roper Mountain Rd	Signal	Overall	B	15.2	0.81	E	71.4	1.25
37	Roper Mountain Rd at Congaree Rd	Signal	Overall	B	15.8	0.59	D	38.4	0.81

TABLE 5.11: NO-BUILD OPENING YEAR 2015 FREEWAY SEGMENT ANALYSIS

Freeway Section	Direction	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 between Laurens Rd and Woodruff Rd	NB	D	30.5	D	28.3
	SB	D	33.7	F	>45.0
I-85 between Woodruff Rd and I-385	NB	B	17.9	B	16.0
	SB	C	18.6	C	25.8
I-85 between I-385 and Pelham Rd	NB	E	38.0	F	>45.0
	SB	F	>45.0	F	>45.0
I-385 between Butler Rd and Woodruff Rd	NB	D	32.6	E	38.1
	SB	C	19.2	E	39.0
I-385 between Woodruff Rd and I-85	NB	E	36.3	E	42.4
	SB	D	27.4	F	>45.0
I-385 between I-85 and Roper Mountain Rd	NB	D	26.2	D	28.9
	SB	C	19.5	E	37.0

TABLE 5.12A: NO-BUILD OPENING YEAR 2015 RAMP MERGE AND DIVERGE ANALYSIS – I-85/I-385 INTERCHANGE

Freeway Ramp	Merge/ Diverge	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB off-ramp to I-385/ Woodruff Rd	Diverge	F*	34.4	F*	33.1
I-85 NB on-ramp from Woodruff Rd	Merge	B	19.9	D	34.1
I-85 NB on-ramp from I-385	Merge	D	33.1	F*	44.4
I-85 SB off-ramp to I-385/ Woodruff Rd	Diverge	F*	42.4	F*	41.8
I-85 SB on-ramp from I-385/ Woodruff Rd	Merge	D	29.0	D	34.9
I-385 NB off-ramp to I-85 NB	Diverge	E	46.1	E	51.5
I-385 NB off-ramp to I-85 SB/ Woodruff Rd	Diverge	C	22.9	C	25.0
I-385 NB on-ramp from I-85/ Woodruff Rd	Merge	A	<10.0	B	12.2
I-385 SB off-ramp to I-85/ Woodruff Rd	Diverge	A	<10.0	A	<10.0
I-385 SB on-ramp from I-85 SB	Merge	C	21.0	C	27.4
I-385 SB on-ramp from I-85 NB/ Woodruff Rd	Merge	D	34.6	F*	49.5

* - LOS is F for ramp-freeway junction

TABLE 5.12B: NO-BUILD OPENING YEAR 2015 RAMP MERGE AND DIVERGE ANALYSIS – OTHER INTERCHANGES

Freeway Ramp	Merge/ Diverge	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB on-ramp from Laurens Rd EB	Merge	E	43.6	D	34.5
I-85 NB on-ramp from Laurens Rd WB	Merge	D	28.6	C	27.5
I-85 SB off-ramp to Laurens Rd WB	Diverge	D	30.0	F*	40.2
I-85 SB off-ramp to Laurens Rd EB	Diverge	E	57.6	F	68.1
I-85 NB off-ramp to Pelham Rd	Diverge	F*	35.4	F*	45.2
I-85 SB on-ramp from Pelham Rd WB	Merge	C	27.5	D	32.9
I-85 SB on-ramp from Pelham Rd EB	Merge	F*	34.5	F*	36.5
I-385 NB on-ramp from Butler Rd	Merge	C	27.0	D	30.9
I-385 SB off-ramp to Butler Rd	Diverge	B	15.6	D	28.9
I-385 NB off-ramp to Woodruff Rd	Diverge	C	21.1	C	24.0
I-385 NB on-ramp from Woodruff Rd	Merge	E	38.5	E	43.3
I-385 SB off-ramp to Woodruff Rd	Diverge	D	33.4	F	53.9
I-385 SB on-ramp from Woodruff Rd	Merge	B	12.0	D	28.0
I-385 NB off-ramp to Roper Mountain Rd	Diverge	A	<10.0	A	<10.0
I-385 NB on-ramp from Roper Mountain Rd	Merge	B	18.6	D	28.9
I-385 SB off-ramp to Roper Mountain Rd	Diverge	B	19.8	D	29.8
I-385 SB on-ramp from Roper Mountain Rd	Merge	C	25.1	F	57.4

* - LOS is F for ramp-freeway junction

TABLE 5.13: NO-BUILD OPENING YEAR 2015 WEAVE SEGMENT ANALYSIS

Weave Section	Direction	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 C-D between Woodruff Rd and I-385	NB	B	15.7	C	27.4
	SB	D	30.9	D	29.8
I-385 between Woodruff Rd and I-85	NB	D	30.5	F	>50.0
	SB	C	22.5	E	36.2

TABLE 5.14A: NO-BUILD OPENING YEAR 2015 INTERSECTION ANALYSIS – WOODRUFF ROAD

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
1	Woodruff Rd at Roper Mountain Rd	Signal	Overall	E	59.6	1.02	C	34.8	0.91
2	Woodruff Rd at Ketron Ct	Signal	Overall	A	3.9	0.33	B	10.7	0.71
3	Woodruff Rd at Green Heron Rd	Signal	Overall	A	1.9	0.33	A	5.5	0.55
4	Woodruff Rd at Woodruff Industrial Ln	Signal	Overall	A	8.1	0.38	D	48.9	0.96
5	I-85 SB ramps at Woodruff Rd	Signal	Overall	B	18.5	0.71	E	63.3	1.14
6	I-85 NB ramps at Woodruff Rd	Signal	Overall	C	26.8	0.48	F	84.7	0.72
7	Woodruff Rd at Carolina Point Pkwy	Signal	Overall	A	4.8	0.56	A	9.4	0.81
8	Woodruff Rd at Market Point Dr	Signal	Overall	B	11.2	0.69	D	48.9	1.00
9	Woodruff Rd at Garlington Rd	Signal	Overall	C	29.0	0.78	D	43.1	0.99
10	I-385 SB ramps at Woodruff Rd	Signal	Overall	C	20.1	0.75	C	27.4	0.84
11	I-385 NB ramps at Woodruff Rd	Signal	Overall	E	60.9	1.05	E	59.2	1.08
12	Woodruff Rd at commercial drwy	Signal	Overall	B	15.5	0.78	C	31.7	0.83
13	Woodruff Rd at Smith Hines Rd	Signal	Overall	A	6.6	0.60	B	13.7	0.74
14	Woodruff Rd at Walmart dr	Signal	Overall	F	160.4	1.36	F	100.4	1.30
15	Woodruff Rd at Verdin Rd	Signal	Overall	F	87.3	1.16	E	66.6	1.31
16	Woodruff Rd at Butler Rd	Signal	Overall	C	21.0	0.89	F	190.0	1.92
17	Woodruff Rd at Bell Rd	Signal	Overall	D	51.7	1.12	D	39.9	1.08
18	Woodruff Rd at SC 14	Signal	Overall	F	102.2	1.22	D	41.0	0.97

TABLE 5.14B: NO-BUILD OPENING YEAR 2015 INTERSECTION ANALYSIS – LAURENS AND PELHAM ROADS

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
19	Laurens Rd at Verdae Blvd	Signal	Overall	B	19.9	0.65	C	22.0	0.69
20	Laurens Rd at Duvall Dr	Signal	Overall	B	13.7	0.92	C	21.4	0.96
21	Laurens Rd at Frontage Rd	Stop Control	WB LR	F	>50.0	>2.00	F	>50.0	>2.00
			SBL	D	28.3	0.35	C	17.8	0.13
22	Laurens Rd at St Josephs Dr	Stop Control	EB LR	F	>50.0	>2.00	F	>50.0	>2.00
			NBL	F	>50.0	0.96	D	29.9	0.49
23	Laurens Rd at Millennium Blvd	Signal	Overall	C	28.2	0.78	C	24.7	0.88
24	Pelham Rd at The Parkway/I-85 SB on-ramp	Signal	Overall	D	53.7	1.09	C	23.6	0.82
25	I-85 SB ramps at Pelham Rd	Signal	Overall	D	43.9	0.98	C	23.3	0.80
26	I-85 NB ramps at Pelham Rd	Signal	Overall	E	63.5	1.16	C	22.9	0.79
27	Pelham Rd at Garlington Rd	Signal	Overall	F	93.9	1.21	C	31.0	0.90

TABLE 5.14C: NO-BUILD OPENING YEAR 2015 INTERSECTION ANALYSIS – BUTLER AND ROPER MOUNTAIN ROADS

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
28	Butler Rd at Forsythia Dr	Signal	Overall	A	7.6	0.50	A	5.4	0.42
29	Butler Rd at Rothwell Dr	Stop Control	EB LR	B	14.7	0.02	C	17.9	0.09
			NBL	B	10.1	0.01	B	10.9	0.00
30	I-385 SB ramps at Butler Rd	Signal	Overall	D	47.6	0.97	C	33.0	0.90
31	I-385 NB ramps at Butler Rd	Signal	Overall	C	22.2	0.85	B	14.4	0.65
32	Butler Rd at New Commerce Ct	Stop Control	WB LR	F	>50.0	>2.00	F	>50.0	>2.00
			SBL	B	15.0	0.10	B	11.8	0.11
33	Butler Rd at Brookfield Pkwy	Stop Control	NBL	C	16.2	0.25	C	16.1	0.05
			SBL	A	1.4	0.04	A	0.1	0.00
			EB LT	F	>50.0	0.12	F	>50.0	0.14
			EBR	C	15.9	0.04	E	45.2	0.73
			WB LT	F	>50.0	>2.00	F	>50.0	>2.00
			WBR	B	11.4	0.02	B	12.6	0.01
34	Roper Mountain Rd at Independence Blvd	Signal	Overall	D	45.3	0.99	E	62.5	0.99
35	I-385 NB ramps at Roper Mountain Rd	Signal	Overall	C	25.1	0.93	C	25.1	0.85
36	I-385 SB ramps at Roper Mountain Rd	Signal	Overall	C	24.2	0.94	F	122.4	1.52
37	Roper Mountain Rd at Congaree Rd	Signal	Overall	B	17.4	0.76	D	45.7	0.94

TABLE 5.15: ALTERNATE 4A OPENING YEAR 2015 FREEWAY SEGMENT ANALYSIS

Freeway Section	Direction	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 between Laurens Rd and Woodruff Rd	NB	D	30.5	D	28.3
	SB	D	33.7	F	>45.0
I-85 between Woodruff Rd and I-385	NB	B	17.9	B	16.0
	SB	C	18.6	C	25.8
I-85 between I-385 and Pelham Rd	NB	D	26.3	E	35.8
	SB	D	29.5	D	32.8
I-385 between Butler Rd and Woodruff Rd	NB	D	32.6	E	38.1
	SB	C	19.2	E	39.0
I-385 between Woodruff Rd and I-85	NB	C	20.7	C	24.6
	SB	B	14.1	D	29.2
I-385 between I-85 and Roper Mountain Rd	NB	C	21.0	C	23.1
	SB	C	19.4	E	36.1

TABLE 5.16A: ALTERNATE 4A OPENING YEAR 2015 RAMP MERGE AND DIVERGE ANALYSIS – I-85/I-385 INTERCHANGE

Freeway Ramp	Merge/ Diverge		AM Peak Hour		PM Peak Hour	
			LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB off-ramp to I-385/ Woodruff Rd	Diverge		D	29.1	C	27.8
I-85 NB on-ramp from Woodruff Rd	Merge		A	<10.0	B	10.2
I-85 NB on-ramp from I-385**	Merge	up fwy	C	20.5	C	24.9
		up ramp	B	15.8	C	22.0
		dn fwy	C	21.0	D	27.1
I-85 SB off-ramp to I-385/ Woodruff Rd**	Diverge	up fwy	C	23.4	C	25.5
		dn fwy	C	18.6	C	25.8
		dn ramp	C	22.3	C	18.2
I-85 SB on-ramp from I-385	Merge	Merge	B	15.0	C	20.6
I-85 SB on-ramp from Woodruff Rd	Merge	Merge	C	26.0	F*	35.4
I-385 NB off-ramp to I-85/ Woodruff Rd**	Diverge	up fwy	C	19.6	C	22.3
		dn fwy	B	13.5	B	18.0
		dn ramp	C	19.1	C	19.1
I-385 NB on-ramp from Woodruff Rd	Merge		B	19.4	B	18.7
I-385 NB on-ramp from I-85 SB	Merge		B	15.1	C	20.4
I-385 NB on-ramp from I-85 NB/ Woodruff Rd	Merge		B	17.8	B	18.1
I-385 SB off-ramp to I-85	Diverge		A	<10.0	B	14.1
I-385 SB off-ramp to Woodruff Rd	Diverge		B	19.5	D	32.4
I-385 SB on-ramp from I-85/ Woodruff Rd**	Merge	up fwy	A	10.2	C	22.8
		up ramp	A	<10.0	B	14.9
		dn fwy	B	11.5	C	22.6

* - LOS is F for ramp-freeway junction

** - analyzed as freeway segment: up - upstream, dn - downstream, fwy - freeway, ramp - ramp

TABLE 5.16B: ALTERNATE 4A OPENING YEAR 2015 RAMP MERGE AND DIVERGE ANALYSIS – OTHER INTERCHANGES

Freeway Ramp	Merge/ Diverge	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB on-ramp from Laurens Rd EB	Merge	E	43.6	D	34.5
I-85 NB on-ramp from Laurens Rd WB	Merge	D	28.6	C	27.5
I-85 SB off-ramp to Laurens Rd WB	Diverge	D	30.0	F*	40.2
I-85 SB off-ramp to Laurens Rd EB	Diverge	E	57.6	F	68.1
I-85 NB off-ramp to Pelham Rd	Diverge	F*	27.5	F*	37.3
I-85 SB on-ramp from Pelham Rd WB	Merge	C	27.5	D	32.9
I-85 SB on-ramp from Pelham Rd EB	Merge	F*	34.5	F*	36.5
I-385 NB on-ramp from Butler Rd	Merge	C	27.0	D	30.9
I-385 SB off-ramp to Butler Rd	Diverge	B	15.6	D	28.9
I-385 NB off-ramp to Roper Mountain Rd	Diverge	A	<10.0	A	<10.0
I-385 NB on-ramp from Roper Mountain Rd	Merge	B	18.4	C	27.5
I-385 SB off-ramp to Roper Mountain Rd	Diverge	B	19.8	D	30.0
I-385 SB on-ramp from Roper Mountain Rd	Merge	C	24.8	F	56.2

* - LOS is F for ramp-freeway junction

TABLE 5.17: ALTERNATE 4A OPENING YEAR 2015 WEAVE SEGMENT ANALYSIS

Weave Section	Direction	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 C-D between Woodruff Rd and I-385	NB	B	18.6	D	35.9
	SB	n/a	n/a	n/a	n/a
I-385 C-D between Woodruff Rd and I-85	NB	C	25.5	C	25.8
	SB	B	23.0	C	26.4

TABLE 5.18A: ALTERNATE 4A OPENING YEAR 2015 INTERSECTION ANALYSIS – WOODRUFF ROAD

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
1	Roper Mountain Rd at Woodruff Rd	Signal	Overall	E	60.1	1.26	D	36.3	0.83
2	Woodruff Rd at Ketron Ct	Signal	Overall	A	5.7	0.33	B	15.9	0.65
3	Woodruff Rd at Green Heron Rd	Signal	Overall	A	3.0	0.32	A	5.7	0.54
4	Woodruff Rd at Woodruff Industrial Ln	Signal	Overall	B	12.1	0.37	D	49.1	0.91
5	I-85 SB ramps at Woodruff Rd	Signal	Overall	C	20.2	0.71	D	50.0	1.08
6	I-85 NB ramps at Woodruff Rd	Signal	Overall	C	29.7	0.48	F	108.3	0.72
7	Woodruff Rd at Carolina Point Pkwy	Signal	Overall	A	5.1	0.56	B	12.3	0.83
8	Woodruff Rd at Market Point Dr	Signal	Overall	B	11.6	0.68	D	53.0	1.03
9	Woodruff Rd at Garlington Rd	Signal	Overall	C	30.4	0.77	D	47.8	0.95
10	I-385 SB ramps at Woodruff Rd	Signal	Overall	C	20.7	0.74	C	27.4	0.88
11	I-385 NB ramps at Woodruff Rd	Signal	Overall	E	67.0	1.03	E	70.3	1.13
12	Woodruff Rd at commercial drwy	Signal	Overall	B	14.1	0.75	C	31.5	0.82
13	Woodruff Rd at Smith Hines Rd	Signal	Overall	A	7.5	0.60	B	13.7	0.73
14	Woodruff Rd at Walmart dr	Signal	Overall	F	152.5	1.35	F	98.4	1.28
15	Woodruff Rd at Verdin Rd	Signal	Overall	F	88.7	1.14	E	68.5	1.46
16	Woodruff Rd at Butler Rd	Signal	Overall	C	21.4	0.89	F	187.9	1.88
17	Woodruff Rd at Bell Rd	Signal	Overall	D	52.0	1.12	D	36.9	1.07
18	Woodruff Rd at SC 14	Signal	Overall	F	101.0	1.20	D	48.6	0.96

TABLE 5.18B: ALTERNATE 4A OPENING YEAR 2015 INTERSECTION ANALYSIS – LAURENS AND PELHAM ROADS

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
19	Laurens Rd at Verdae Blvd	Signal	Overall	B	19.9	0.65	C	22.0	0.69
20	Laurens Rd at Duvall Dr	Signal	Overall	B	13.7	0.92	C	21.4	0.96
21	Laurens Rd at Frontage Rd	Stop Control	WB LR	F	>50.0	>2.00	F	>50.0	>2.00
			SBL	D	28.3	0.35	C	17.8	0.13
22	Laurens Rd at St Josephs Dr	Stop Control	EB LR	F	>50.0	>2.00	F	>50.0	>2.00
			NBL	F	>50.0	0.96	D	29.9	0.49
23	Laurens Rd at Millennium Blvd	Signal	Overall	C	22.5	0.86	C	23.3	0.77
24	Pelham Rd at The Parkway/I-85 SB on-ramp	Signal	Overall	D	53.7	1.09	C	23.6	0.82
25	I-85 SB ramps at Pelham Rd	Signal	Overall	D	43.9	0.98	C	23.3	0.80
26	I-85 NB ramps at Pelham Rd	Signal	Overall	E	63.5	1.16	C	22.9	0.79
27	Pelham Rd at Garlington Rd	Signal	Overall	F	93.9	1.21	C	31.0	0.90

TABLE 5.18C: ALTERNATE 4A OPENING YEAR 2015 INTERSECTION ANALYSIS – BUTLER AND ROPER MOUNTAIN ROADS

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
28	Butler Rd at Forsythia Dr	Signal	Overall	A	6.5	0.46	A	5.4	0.42
29	Butler Rd at Rothwell Dr	Stop Control	EB LR	B	14.7	0.02	C	17.9	0.09
			NBL	B	10.1	0.01	B	10.9	0.00
30	I-385 SB ramps at Butler Rd	Signal	Overall	D	47.1	0.95	C	33.2	0.90
31	I-385 NB ramps at Butler Rd	Signal	Overall	C	24.8	0.83	B	14.7	0.66
32	Butler Rd at New Commerce Ct	Stop Control	WB LR	F	>50.0	>2.00	F	>50.0	>2.00
			SBL	C	15.1	0.10	B	11.8	0.11
33	Butler Rd at Brookfield Pkwy	Stop Control	NBL	C	16.2	0.25	C	16.1	0.05
			SBL	A	1.4	0.04	A	0.1	0.00
			EB LT	F	>50.0	0.12	F	>50.0	0.14
			EBR	C	15.9	0.04	E	45.2	0.73
			WB LT	F	>50.0	>2.00	F	>50.0	>2.00
			WBR	B	11.6	0.02	B	11.9	0.01
34	Roper Mountain Rd at Independence Blvd	Signal	Overall	D	49.3	1.02	E	62.6	0.99
35	I-385 NB ramps at Roper Mountain Rd	Signal	Overall	C	25.7	0.97	C	25.2	0.85
36	I-385 SB ramps at Roper Mountain Rd	Signal	Overall	C	27.5	1.01	F	119.7	1.52
37	Roper Mountain Rd at Congaree Rd	Signal	Overall	B	17.1	0.79	D	47.7	0.92

TABLE 5.19: NO-BUILD DESIGN YEAR 2035 FREEWAY SEGMENT ANALYSIS

Freeway Section	Direction	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 between Laurens Rd and Woodruff Rd	NB	F	>45.0	F	>45.0
	SB	F	>45.0	F	>45.0
I-85 between Woodruff Rd and I-385	NB	C	25.2	C	21.9
	SB	D	26.6	E	37.8
I-85 between I-385 and Pelham Rd	NB	F	>45.0	F	>45.0
	SB	F	>45.0	F	>45.0
I-385 between Butler Rd and Woodruff Rd	NB	F	>45.0	F	>45.0
	SB	D	31.7	F	>45.0
I-385 between Woodruff Rd and I-85	NB	F	>45.0	F	>45.0
	SB	F	>45.0	F	>45.0
I-385 between I-85 and Roper Mountain Rd	NB	F	>45.0	F	>45.0
	SB	D	31.0	F	>45.0

TABLE 5.20A: NO-BUILD DESIGN YEAR 2035 RAMP MERGE AND DIVERGE ANALYSIS – I-85/I-385 INTERCHANGE

Freeway Ramp	Merge/ Diverge	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB off-ramp to I-385/ Woodruff Rd	Diverge	F*	44.6	F*	43.6
I-85 NB on-ramp from Woodruff Rd	Merge	D	28.2	E	38.3
I-85 NB on-ramp from I-385	Merge	F	52.7	F	66.4
I-85 SB off-ramp to I-385/ Woodruff Rd	Diverge	F	67.9	F	70.4
I-85 SB on-ramp from I-385/ Woodruff Rd	Merge	F*	40.6	F*	47.2
I-385 NB off-ramp to I-85 NB	Diverge	F	73.4	F	81.0
I-385 NB off-ramp to I-85 SB/ Woodruff Rd	Diverge	D	32.5	F*	38.8
I-385 NB on-ramp from I-85/ Woodruff Rd	Merge	F*	28.8	F*	32.5
I-385 SB off-ramp to I-85/ Woodruff Rd	Diverge	A	<10.0	F*	23.0
I-385 SB on-ramp from I-85 SB	Merge	D	34.3	F*	46.3
I-385 SB on-ramp from I-85 NB/ Woodruff Rd	Merge	F	55.1	F	83.1

* - LOS is F for ramp-freeway junction

TABLE 5.20B: NO-BUILD DESIGN YEAR 2035 RAMP MERGE AND DIVERGE ANALYSIS – OTHER INTERCHANGES

Freeway Ramp	Merge/ Diverge	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB on-ramp from Laurens Rd EB	Merge	F	63.0	E	51.8
I-85 NB on-ramp from Laurens Rd WB	Merge	F*	40.5	F*	37.1
I-85 SB off-ramp to Laurens Rd WB	Diverge	F*	46.4	F	64.9
I-85 SB off-ramp to Laurens Rd EB	Diverge	F	57.1	F	69.9
I-85 NB off-ramp to Pelham Rd	Diverge	F	57.3	F	76.8
I-85 SB on-ramp from Pelham Rd WB	Merge	F*	46.0	F	52.1
I-85 SB on-ramp from Pelham Rd EB	Merge	F	57.6	F	60.1
I-385 NB on-ramp from Butler Rd	Merge	F*	42.0	F*	49.5
I-385 SB off-ramp to Butler Rd	Diverge	C	25.9	F	54.2
I-385 NB off-ramp to Woodruff Rd	Diverge	F*	38.8	F*	47.8
I-385 NB on-ramp from Woodruff Rd	Merge	F	68.5	F	75.4
I-385 SB off-ramp to Woodruff Rd	Diverge	F	56.8	F	88.2
I-385 SB on-ramp from Woodruff Rd	Merge	C	22.3	F*	49.1
I-385 NB off-ramp to Roper Mountain Rd	Diverge	A	<10.0	F*	3.9
I-385 NB on-ramp from Roper Mountain Rd	Merge	F*	29.8	F	51.8
I-385 SB off-ramp to Roper Mountain Rd	Diverge	D	30.8	F	59.6
I-385 SB on-ramp from Roper Mountain Rd	Merge	E	48.5	F	90.3

* - LOS is F for ramp-freeway junction

TABLE 5.21: NO-BUILD DESIGN YEAR 2035 WEAVE SEGMENT ANALYSIS

Weave Section	Direction	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 C-D between Woodruff Rd and I-385	NB	D	32.1	F	>50.0
	SB	F	>50.0	F	>50.0
I-385 between Woodruff Rd and I-85	NB	F	>50.0	F	>50.0
	SB	F	>50.0	F	>50.0

TABLE 5.22A: NO-BUILD DESIGN YEAR 2035 INTERSECTION ANALYSIS – WOODRUFF ROAD

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
1	Roper Mountain Rd at Woodruff Rd	Signal	Overall	F	>200.0	>2.00	F	114.1	1.24
2	Woodruff Rd at Ketron Ct	Signal	Overall	A	6.7	0.52	E	79.0	1.55
3	Woodruff Rd at Green Heron Rd	Signal	Overall	A	4.1	0.49	B	16.3	0.95
4	Woodruff Rd at Woodruff Industrial Ln	Signal	Overall	B	13.7	0.59	F	>200.0	1.63
5	I-85 SB ramps at Woodruff Rd	Signal	Overall	D	45.0	1.01	F	>200.0	1.80
6	I-85 NB ramps at Woodruff Rd	Signal	Overall	E	62.1	0.82	F	109.1	1.32
7	Woodruff Rd at Carolina Point Pkwy	Signal	Overall	B	19.3	1.43	F	101.9	1.31
8	Woodruff Rd at Market Point Dr	Signal	Overall	E	56.9	1.14	F	>200.0	1.79
9	Woodruff Rd at Garlington Rd	Signal	Overall	E	57.4	1.11	F	180.2	1.51
10	I-385 SB ramps at Woodruff Rd	Signal	Overall	D	43.0	1.01	F	124.6	1.28
11	I-385 NB ramps at Woodruff Rd	Signal	Overall	F	176.5	1.60	F	181.8	1.78
12	Woodruff Rd at commercial drwy	Signal	Overall	C	20.0	0.88	F	112.3	1.25
13	Woodruff Rd at Smith Hines Rd	Signal	Overall	C	30.3	1.34	D	54.8	1.40
14	Woodruff Rd at Walmart dr	Signal	Overall	F	>200.0	1.93	F	>200.0	1.87
15	Woodruff Rd at Verdin Rd	Signal	Overall	F	>200.0	1.65	F	>200.0	>2.00
16	Woodruff Rd at Butler Rd	Signal	Overall	F	121.6	1.44	F	>200.0	>2.00
17	Woodruff Rd at Bell Rd	Signal	Overall	F	>200.0	1.62	F	199.0	1.85
18	Woodruff Rd at SC 14	Signal	Overall	F	>200.0	1.76	F	157.1	1.41

TABLE 5.22B: NO-BUILD DESIGN YEAR 2035 INTERSECTION ANALYSIS – LAURENS AND PELHAM ROADS

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
19	Laurens Rd at Verdae Blvd	Signal	Overall	C	25.1	0.69	C	30.7	0.84
20	Laurens Rd at Duvall Dr	Signal	Overall	C	25.1	1.01	E	58.3	1.52
21	Laurens Rd at Frontage Rd	Stop Control	WB LR	F	>50.0	>2.00	F	>50.0	>2.00
			SBL	F	>50.0	>2.00	F	>50.0	0.42
22	Laurens Rd at St Josephs Dr	Stop Control	EB LR	F	>50.0	>2.00	F	>50.0	>2.00
			NBL	F	>50.0	>2.00	F	>50.0	1.36
23	Laurens Rd at Millennium Blvd	Signal	Overall	D	45.3	0.94	D	40.6	1.02
24	Pelham Rd at The Parkway/I-85 SB on-ramp	Signal	Overall	F	145.8	1.45	F	84.1	1.25
25	I-85 SB ramps at Pelham Rd	Signal	Overall	F	184.4	1.39	F	83.1	1.26
26	I-85 NB ramps at Pelham Rd	Signal	Overall	F	166.6	1.54	E	71.1	1.18
27	Pelham Rd at Garlington Rd	Signal	Overall	F	>200.0	1.62	F	106.2	1.23

TABLE 5.22C: NO-BUILD DESIGN YEAR 2035 INTERSECTION ANALYSIS – BUTLER AND ROPER MOUNTAIN ROADS

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
28	Butler Rd at Forsythia Dr	Signal	Overall	A	9.4	0.67	A	8.8	0.63
29	Butler Rd at Rothwell Dr	Stop Control	EB LR	C	19.4	0.04	D	31.3	0.23
			NBL	B	12.4	0.01	B	14.5	0.01
30	I-385 SB ramps at Butler Rd	Signal	Overall	F	134.8	1.30	F	116.4	1.20
31	I-385 NB ramps at Butler Rd	Signal	Overall	F	82.4	1.18	E	58.4	1.08
32	Butler Rd at New Commerce Ct	Stop Control	WB LR	F	>50.0	>2.00	F	>50.0	>2.00
			SBL	D	33.9	0.31	C	17.7	0.24
33	Butler Rd at Brookfield Pkwy	Stop Control	NBL	E	40.0	0.61	D	28.3	0.14
			SBL	A	8.3	0.12	A	0.4	0.01
			EB LT	F	>50.0	>2.00	F	>50.0	1.89
			EBR	C	23.4	0.10	F	>50.0	1.78
			WB LT	F	>50.0	>2.00	F	>50.0	>2.00
			WBR	B	10.9	0.03	B	13.4	0.02
34	Roper Mountain Rd at Independence Blvd	Signal	Overall	F	162.5	1.68	F	>200.0	1.67
35	I-385 NB ramps at Roper Mountain Rd	Signal	Overall	F	124.0	1.41	F	138.9	1.38
36	I-385 SB ramps at Roper Mountain Rd	Signal	Overall	F	97.3	1.39	F	>200.0	>2.00
37	Roper Mountain Rd at Congaree Rd	Signal	Overall	E	67.0	1.28	F	131.0	1.61

TABLE 5.23: ALTERNATE 4A DESIGN YEAR 2035 FREEWAY SEGMENT ANALYSIS

Freeway Section	Direction	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 between Laurens Rd and Woodruff Rd	NB	F	>45.0	F	>45.0
	SB	F	>45.0	F	>45.0
I-85 between Woodruff Rd and I-385	NB	C	25.2	C	21.9
	SB	D	26.6	E	37.8
I-85 between I-385 and Pelham Rd	NB	F	>45.0	F	>45.0
	SB	F	>45.0	F	>45.0
I-385 between Butler Rd and Woodruff Rd	NB	F	>45.0	F	>45.0
	SB	D	31.7	F	>45.0
I-385 between Woodruff Rd and I-85	NB	D	33.0	E	41.8
	SB	C	22.5	F	>45.0
I-385 between I-85 and Roper Mountain Rd	NB	D	33.3	E	37.4
	SB	D	30.8	F	>45.0

TABLE 5.24A: ALTERNATE 4A DESIGN YEAR 2035 RAMP MERGE AND DIVERGE ANALYSIS – I-85/I-385 INTERCHANGE

Freeway Ramp	Merge/ Diverge		AM Peak Hour		PM Peak Hour	
			LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB off-ramp to I-385/ Woodruff Rd	Diverge		F*	42.4	F*	40.8
I-85 NB on-ramp from Woodruff Rd	Merge		B	11.4	C	21.6
I-85 NB on-ramp from I-385**	Merge	up fwy	D	29.8	E	39.7
		up ramp	C	25.5	D	32.2
		dn fwy	D	32.7	F*	47.6
I-85 SB off-ramp to I-385/ Woodruff Rd**	Diverge	up fwy	E	39.3	E	41.3
		dn fwy	D	26.6	E	37.8
		dn ramp	E	36.6	D	28.6
I-85 SB on-ramp from I-385	Merge	Merge	F*	26.3	F*	32.4
I-85 SB on-ramp from Woodruff Rd	Merge	Merge	F*	39.2	F	55.6
I-385 NB off-ramp to I-85/ Woodruff Rd**	Diverge	up fwy	D	30.1	D	34.0
		dn fwy	C	22.5	D	29.7
		dn ramp	D	27.7	D	26.9
I-385 NB on-ramp from Woodruff Rd	Merge		D	28.3	C	26.0
I-385 NB on-ramp from I-85 SB	Merge		F*	31.2	F*	38.6
I-385 NB on-ramp from I-85 NB/ Woodruff Rd	Merge		F*	30.1	F*	30.8
I-385 SB off-ramp to I-85	Diverge		B	12.0	F*	34.7
I-385 SB off-ramp to Woodruff Rd	Diverge		C	27.3	F*	47.2
I-385 SB on-ramp from I-85/ Woodruff Rd**	Merge	up fwy	B	16.5	E	37.9
		up ramp	B	15.3	C	20.9
		dn fwy	C	19.1	D	35.0

* - LOS is F for ramp-freeway junction

** - analyzed as freeway segment: up - upstream, dn - downstream, fwy - freeway, ramp - ramp

TABLE 5.24B: ALTERNATE 4A DESIGN YEAR 2035 RAMP MERGE AND DIVERGE ANALYSIS – OTHER INTERCHANGES

Freeway Ramp	Merge/ Diverge	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB on-ramp from Laurens Rd EB	Merge	F	63.0	E	51.8
I-85 NB on-ramp from Laurens Rd WB	Merge	F*	40.5	F*	37.1
I-85 SB off-ramp to Laurens Rd WB	Diverge	F*	46.4	F	64.9
I-85 SB off-ramp to Laurens Rd EB	Diverge	F	57.1	F	69.9
I-85 NB off-ramp to Pelham Rd	Diverge	F*	49.4	F	68.9
I-85 SB on-ramp from Pelham Rd WB	Merge	F*	46.0	F	52.1
I-85 SB on-ramp from Pelham Rd EB	Merge	F	57.6	F	60.1
I-385 NB on-ramp from Butler Rd	Merge	F*	42.0	F*	49.5
I-385 SB off-ramp to Butler Rd	Diverge	C	25.9	F	54.2
I-385 NB off-ramp to Roper Mountain Rd	Diverge	A	<10.0	A	<10.0
I-385 NB on-ramp from Roper Mountain Rd	Merge	F*	29.8	F	51.8
I-385 SB off-ramp to Roper Mountain Rd	Diverge	D	30.9	F	59.6
I-385 SB on-ramp from Roper Mountain Rd	Merge	F*	48.2	F	88.7

* - LOS is F for ramp-freeway junction

TABLE 5.25: ALTERNATE 4A DESIGN YEAR 2035 WEAVE SEGMENT ANALYSIS

Weave Section	Direction	AM Peak Hour		PM Peak Hour	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 C-D between Woodruff Rd and I-385	NB	D	32.1	F	>50.0
	SB	n/a	n/a	n/a	n/a
I-385 C-D between Woodruff Rd and I-85	NB	E	39.3	E	36.5
	SB	E	42.8	E	49.8

TABLE 5.26A: ALTERNATE 4A DESIGN YEAR 2035 INTERSECTION ANALYSIS – WOODRUFF ROAD

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
1	Roper Mountain Rd at Woodruff Rd	Signal	Overall	F	>200.0	>2.00	F	139.3	1.26
2	Woodruff Rd at Ketron Ct	Signal	Overall	A	7.5	0.53	F	89.1	>2.00
3	Woodruff Rd at Green Heron Rd	Signal	Overall	A	4.0	0.48	B	14.3	0.90
4	Woodruff Rd at Woodruff Industrial Ln	Signal	Overall	B	16.0	0.57	F	>200.0	1.63
5	I-85 SB ramps at Woodruff Rd	Signal	Overall	D	46.1	1.01	F	>200.0	1.73
6	I-85 NB ramps at Woodruff Rd	Signal	Overall	E	64.6	0.82	F	112.2	1.33
7	Woodruff Rd at Carolina Point Pkwy	Signal	Overall	C	21.1	1.45	F	118.7	1.36
8	Woodruff Rd at Market Point Dr	Signal	Overall	E	56.5	1.15	F	>200.0	1.86
9	Woodruff Rd at Garlington Rd	Signal	Overall	E	58.4	1.12	F	>200.0	1.59
10	I-385 SB ramps at Woodruff Rd	Signal	Overall	D	42.5	1.01	F	128.5	1.29
11	I-385 NB ramps at Woodruff Rd	Signal	Overall	F	178.7	1.63	F	>200.0	1.87
12	Woodruff Rd at commercial drwy	Signal	Overall	C	26.8	0.88	F	112.3	1.25
13	Woodruff Rd at Smith Hines Rd	Signal	Overall	C	32.2	1.34	D	54.8	1.40
14	Woodruff Rd at Walmart dr	Signal	Overall	F	>200.0	1.78	F	>200.0	1.87
15	Woodruff Rd at Verdin Rd	Signal	Overall	F	>200.0	1.65	F	>200.0	>2.00
16	Woodruff Rd at Butler Rd	Signal	Overall	F	120.5	1.44	F	>200.0	>2.00
17	Woodruff Rd at Bell Rd	Signal	Overall	F	>200.0	1.62	F	199.0	1.85
18	Woodruff Rd at SC 14	Signal	Overall	F	>200.0	1.76	F	157.1	1.41

TABLE 5.26B: ALTERNATE 4A DESIGN YEAR 2035 INTERSECTION ANALYSIS – LAURENS AND PELHAM ROADS

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
19	Laurens Rd at Verdae Blvd	Signal	Overall	C	25.1	0.69	C	30.7	0.84
20	Laurens Rd at Duvall Dr	Signal	Overall	C	25.1	1.01	E	58.3	1.52
21	Laurens Rd at Frontage Rd	Stop Control	WB LR	F	>50.0	>2.00	F	>50.0	>2.00
			SBL	F	>50.0	>2.00	F	>50.0	0.42
22	Laurens Rd at St Josephs Dr	Stop Control	EB LR	F	>50.0	>2.00	F	>50.0	>2.00
			NBL	F	>50.0	>2.00	F	>50.0	1.36
23	Laurens Rd at Millennium Blvd	Signal	Overall	D	37.3	0.99	D	40.6	1.02
24	Pelham Rd at The Parkway/I-85 SB on-ramp	Signal	Overall	F	145.3	1.43	F	84.1	1.25
25	I-85 SB ramps at Pelham Rd	Signal	Overall	F	183.0	1.37	F	83.1	1.26
26	I-85 NB ramps at Pelham Rd	Signal	Overall	F	169.3	1.52	E	71.1	1.18
27	Pelham Rd at Garlington Rd	Signal	Overall	F	>200.0	1.59	F	106.3	1.23

TABLE 5.26C: ALTERNATE 4A DESIGN YEAR 2035 INTERSECTION ANALYSIS – BUTLER AND ROPER MOUNTAIN ROADS

Intersection		Control	Movement	AM Peak Hour			PM Peak Hour		
#	Name			LOS	Delay (sec)	v/c	LOS	Delay (sec)	v/c
28	Butler Rd at Forsythia Dr	Signal	Overall	A	9.7	0.67	A	8.4	0.63
29	Butler Rd at Rothwell Dr	Stop Control	EB LR	C	19.4	0.04	D	31.3	0.23
			NBL	B	12.4	0.01	B	14.5	0.01
30	I-385 SB ramps at Butler Rd	Signal	Overall	F	134.6	1.30	F	115.6	1.20
31	I-385 NB ramps at Butler Rd	Signal	Overall	F	80.8	1.20	E	58.3	1.08
32	Butler Rd at New Commerce Ct	Stop Control	WB LR	F	>50.0	>2.00	F	>50.0	>2.00
			SBL	D	33.9	0.31	C	17.7	0.24
33	Butler Rd at Brookfield Pkwy	Stop Control	NBL	E	40.0	0.61	D	28.3	0.14
			SBL	A	8.4	0.12	A	0.4	0.01
			EB LT	F	>50.0	>2.00	F	>50.0	1.88
			EBR	C	23.4	0.10	F	>50.0	1.78
			WB LT	F	>50.0	>2.00	F	>50.0	>2.00
			WBR	B	10.8	0.02	B	13.4	0.02
34	Roper Mountain Rd at Independence Blvd	Signal	Overall	F	161.3	1.63	F	>200.0	1.67
35	I-385 NB ramps at Roper Mountain Rd	Signal	Overall	F	124.3	1.40	F	138.9	1.38
36	I-385 SB ramps at Roper Mountain Rd	Signal	Overall	F	98.5	1.35	F	>200.0	>2.00
37	Roper Mountain Rd at Congaree Rd	Signal	Overall	E	70.4	1.26	F	142.0	1.61

TABLE 5.27: FREEWAY SEGMENT ANALYSIS SUMMARY

Freeway Section	Direction	No-Build				Alt 4A			
		2015		2035		2015		2035	
		AM	PM	AM	PM	AM	PM	AM	PM
I-85 between Laurens Rd and Woodruff Rd	NB	D	D	F	F	D	D	F	F
	SB	D	F	F	F	D	F	F	F
I-85 between Woodruff Rd and I-385	NB	B	B	C	C	B	B	C	C
	SB	C	C	D	E	C	C	D	E
I-85 between I-385 and Pelham Rd	NB	E	F	F	F	D	E	F	F
	SB	F	F	F	F	D	D	F	F
I-385 between Butler Rd and Woodruff Rd	NB	D	E	F	F	D	E	F	F
	SB	C	E	D	F	C	E	D	F
I-385 between Woodruff Rd and I-85	NB	E	E	F	F	C	C	D	E
	SB	D	F	F	F	B	D	C	F
I-385 between I-85 and Roper Mountain Rd	NB	D	D	F	F	C	C	D	E
	SB	C	E	D	F	C	E	D	F

TABLE 5.28A: RAMP MERGE AND DIVERGE ANALYSIS SUMMARY – I-85/I-385 INTERCHANGE

Freeway Ramp	Merge/ Diverge		No-Build				Alt 4A			
			2015		2035		2015		2035	
			AM	PM	AM	PM	AM	PM	AM	PM
I-85 NB off-ramp to I-385/ Woodruff Rd	Diverge		F*	F*	F*	F*	D	C	F*	F*
I-85 NB on-ramp from Woodruff Rd	Merge		B	D	D	E	A	B	B	C
I-85 NB on-ramp from I-385	Merge		D	F*	F	F	-	-	-	-
I-85 NB on-ramp from I-385**	Merge	up fwy	-	-	-	-	C	C	D	E
		up ramp	-	-	-	-	B	C	C	D
		dn fwy	-	-	-	-	C	D	D	F*
I-85 SB off-ramp to I-385/ Woodruff Rd	Diverge		F*	F*	F	F	-	-	-	-
I-85 SB off-ramp to I-385/ Woodruff Rd**	Diverge	up fwy	-	-	-	-	C	C	E	E
		up ramp	-	-	-	-	C	C	D	E
		dn fwy	-	-	-	-	C	C	E	D
I-85 SB on-ramp from I-385/ Woodruff Rd	Merge		D	D	F*	F*	B	C	F*	F*
I-385 NB off-ramp to I-85 NB***	Diverge		E	E	F	F	-	-	-	-
I-385 NB off-ramp to I-85 SB/ Woodruff Rd	Diverge		C	C	D	F*	-	-	-	-
I-385 NB off-ramp to I-85/Woodruff Rd**	Diverge	up fwy	-	-	-	-	C	C	D	D
		up ramp	-	-	-	-	B	B	C	D
		dn fwy	-	-	-	-	C	C	D	D
I-385 NB on-ramp from I-85/ Woodruff Rd	Merge		A	B	F*	F*	B	B	F*	F*
I-385 SB off-ramp to I-85/ Woodruff Rd	Diverge		A	A	A	F*	A	B	B	F*
I-385 SB on-ramp from I-85 SB	Merge		C	C	D	F*	-	-	-	-
I-385 SB on-ramp from I-85 NB/ Woodruff Rd	Merge		D	F*	F	F	-	-	-	-
I-385 SB on-ramp from I-85 NB/ Woodruff Rd**	Merge	up fwy	-	-	-	-	A	C	B	E
		up ramp	-	-	-	-	A	B	B	C
		dn fwy	-	-	-	-	B	C	C	D

* - LOS is F for ramp-freeway junction

** - analyzed as freeway segment: up - upstream; dn - downstream; fwy - freeway; ramp - ramp

TABLE 5.28B: RAMP MERGE AND DIVERGE ANALYSIS SUMMARY – OTHER INTERCHANGES

Freeway Ramp	Merge/ Diverge	No-Build				Alt 4A			
		2015		2035		2015		2035	
		AM	PM	AM	PM	AM	PM	AM	PM
I-85 NB on-ramp from Laurens Rd EB	Merge	E	D	F	E	E	D	F	E
I-85 NB on-ramp from Laurens Rd WB	Merge	D	C	F*	F*	D	C	F*	F*
I-85 SB off-ramp to Laurens Rd WB	Diverge	D	F*	F*	F	D	F*	F*	F
I-85 SB off-ramp to Laurens Rd EB	Diverge	E	F	F	F	E	F	F	F
I-85 NB off-ramp to Pelham Rd	Diverge	F*	F*	F	F	F*	F*	F*	F
I-85 SB on-ramp from Pelham Rd WB	Merge	C	D	F*	F	C	D	F*	F
I-85 SB on-ramp from Pelham Rd EB	Merge	F*	F*	F	F	F*	F*	F	F
I-385 NB on-ramp from Butler Rd	Merge	C	D	F*	F*	C	D	F*	F*
I-385 SB off-ramp to Butler Rd	Diverge	B	D	C	F	B	D	C	F
I-385 NB off-ramp to Woodruff Rd	Diverge	C	C	F*	F*	-	-	-	-
I-385 NB on-ramp from Woodruff Rd	Merge	E	E	F	F	-	-	-	-
I-385 SB off-ramp to Woodruff Rd	Diverge	D	F	F	F	-	-	-	-
I-385 SB on-ramp from Woodruff Rd	Merge	B	D	C	F*	-	-	-	-
I-385 NB off-ramp to Roper Mountain Rd	Diverge	A	A	A	F*	A	A	A	A
I-385 NB on-ramp from Roper Mountain Rd	Merge	B	D	F*	F	B	C	F*	F
I-385 SB off-ramp to Roper Mountain Rd	Diverge	B	D	D	F	B	D	D	F
I-385 SB on-ramp from Roper Mountain Rd	Merge	C	F	E	F	C	F	F*	F

* - LOS is F for ramp-freeway junction

TABLE 5.29: WEAVE SEGMENT ANALYSIS SUMMARY

Weave Section	Direction	No-Build				Alt 4A			
		2015		2035		2015		2035	
		AM	PM	AM	PM	AM	PM	AM	PM
I-85 C-D between Woodruff Rd and I-385	NB	B	C	D	F	B	D	D	F
	SB	D	D	F	F	-	-	-	-
I-385 between Woodruff Rd and I-85	NB	D	F	F	F	-	-	-	-
	SB	C	E	F	F	-	-	-	-
I-385 CD between Woodruff Rd and I-85	NB	-	-	-	-	C	C	E	E
	SB	-	-	-	-	B	C	E	E

TABLE 5.30A: INTERSECTION ANALYSIS SUMMARY – WOODRUFF ROAD

Intersection		No-Build				Alt 4A			
#	Name	2015		2035		2015		2035	
		AM	PM	AM	PM	AM	PM	AM	PM
1	Woodruff Rd at Roper Mountain Rd	E	C	F	F	E	D	F	F
2	Woodruff Rd at Ketron Ct	A	B	A	E	A	B	A	F
3	Woodruff Rd at Green Heron Rd	A	A	A	B	A	A	A	B
4	Woodruff Rd at Woodruff Industrial Ln	A	D	B	F	B	D	B	F
5	I-85 SB ramps at Woodruff Rd	B	E	D	F	C	D	D	F
6	I-85 NB ramps at Woodruff Rd	C	F	E	F	C	F	E	F
7	Woodruff Rd at Carolina Point Pkwy	A	A	B	F	A	B	C	F
8	Woodruff Rd at Market Point Dr	B	D	E	F	B	D	E	F
9	Woodruff Rd at Garlington Rd	C	D	E	F	C	D	E	F
10	I-385 SB ramps at Woodruff Rd	C	C	D	F	C	C	D	F
11	I-385 NB ramps at Woodruff Rd	E	E	F	F	E	E	F	F
12	Woodruff Rd at commercial drwy	B	C	C	F	B	C	C	F
13	Woodruff Rd at Smith Hines Rd	A	B	C	D	A	B	C	D
14	Woodruff Rd at Walmart dr	F	F	F	F	F	F	F	F
15	Woodruff Rd at Verdin Rd	F	E	F	F	F	E	F	F
16	Woodruff Rd at Butler Rd	C	F	F	F	C	F	F	F
17	Woodruff Rd at Bell Rd	D	D	F	F	D	D	F	F
18	Woodruff Rd at SC 14	F	D	F	F	F	D	F	F

TABLE 5.30B: INTERSECTION ANALYSIS SUMMARY – LAURENS AND PELHAM ROADS

Intersection		No-Build				Alt 4A			
#	Name	2015		2035		2015		2035	
		AM	PM	AM	PM	AM	PM	AM	PM
19	Laurens Rd at Verdae Blvd	B	C	C	C	B	C	C	C
20	Laurens Rd at Duvall Dr	B	C	C	E	B	C	C	E
21	Laurens Rd at Frontage Rd	F	F	F	F	F	F	F	F
22	Laurens Rd at St Josephs Dr	F	F	F	F	D	C	F	F
23	Laurens Rd at Millennium Blvd	C	C	D	D	F	F	F	F
24	Pelham Rd at The Parkway/I-85 SB on-ramp	D	C	F	F	F	D	F	F
25	I-85 SB ramps at Pelham Rd	D	C	F	F	C	C	D	D
26	I-85 NB ramps at Pelham Rd	E	C	F	E	D	C	F	F
27	Pelham Rd at Garlington Rd	F	C	F	F	D	C	F	F

TABLE 5.30C: INTERSECTION ANALYSIS SUMMARY – BUTLER AND ROPER MOUNTAIN ROADS

Intersection		No-Build				Alt 4A			
#	Name	2015		2035		2015		2035	
		AM	PM	AM	PM	AM	PM	AM	PM
28	Butler Rd at Forsythia Dr	A	A	A	A	A	A	A	A
29	Butler Rd at Rothwell Dr	B	C	C	D	B	C	C	D
30	I-385 SB ramps at Butler Rd	D	C	F	F	D	C	F	F
31	I-385 NB ramps at Butler Rd	C	B	F	E	C	B	F	E
32	Butler Rd at New Commerce Ct	F	F	F	F	F	F	F	F
33	Butler Rd at Brookfield Pkwy	F	F	F	F	F	F	F	F
34	Roper Mountain Rd at Independence Blvd	D	E	F	F	D	E	F	F
35	I-385 NB ramps at Roper Mountain Rd	C	C	F	F	C	C	F	F
36	I-385 SB ramps at Roper Mountain Rd	C	F	F	F	C	F	F	F
37	Roper Mountain Rd at Congaree Rd	B	D	E	F	B	D	E	F

5.6 CORSIM ANALYSIS

This study also utilizes the TSIS/CORSIM software package to evaluate the operational characteristics of the I-85 at I-385 Interchange improvement options. The purpose of utilizing CORSIM in conjunction with Highway Capacity Software (HCS) is to provide traffic micro-simulation models of the system. Micro-simulation models allow for the evaluation of effects that different elements have on each other. These effects include closely spaced intersections or interchanges, and the effects of bottleneck conditions on the surrounding system.

As metropolitan traffic conditions experience congestion over multiple time periods, the simulation programs allow for the evaluation of the build-up to congested conditions and the

recovery of the system at the end of the period. In this study, a minimum of three hours was modeled for the AM and PM peak hours of congestion. The peak period of congestion is complex and evaluation of solutions under these conditions can only be accomplished using micro-simulation tools such as CORSIM. The following are notes related to the CORSIM model development and analysis:

- AM and PM peak hour traffic conditions were analyzed for the design year 2035 for the No-Build Alternative and the preferred Build Alternate 4A.
- Three hour peak periods, which include the peak hour, were analyzed for both AM (7:00AM to 10:00AM) and PM (4:00PM to 7:00PM) traffic. The three-hour analysis period was chosen since metropolitan traffic conditions experience congestion over multiple time periods. CORSIM allows for the evaluation of the build-up to congested conditions and the recovery of the system at the end of the period.
- The models were run five times and the median results of the five runs were reported. Each model was run multiple times due to the random number seeds that are utilized to load traffic into the network.
- An Erlang Distribution was utilized for traffic loading. Because of these factors, each model will give slightly different results. Therefore, multiple runs of each model are recommended and were performed for this analysis.

It should be noted that CORSIM only reports quantitative results along model links. The quantitative result utilized for the purposes of this report was density. Qualitative results, including the Highway Capacity Manual's (HCM) Level of Service (LOS), are not reported by CORSIM. Therefore, quantitative results of CORSIM are equated to the HCM's LOS criteria. The comparison of the HCS analysis with the CORSIM analysis is shown in Tables 5.31, 5.32 and 5.33 for the No-Build Alternative comparison for the freeway segments, ramps merge/diverge junctions, and the weave areas, respectively. The CORSIM analysis printouts are included in Appendix I.

TABLE 5.31: HCS AND CORSIM COMPARISON – NO-BUILD ALTERNATE FREEWAY SEGMENTS

Freeway Section	Direction	AM Peak Hour				PM Peak Hour			
		HCS		CORSIM		HCS		CORSIM	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 between Laurens Rd & Woodruff Rd	NB	F	>45.0	E	42.6	F	>45.0	F	172.1
	SB	F	>45.0	C	23.7	F	>45.0	C	19.3
I-85 between Woodruff Rd & I-385	NB	C	25.2	C	20.7	C	21.9	B	11.1
	SB	D	26.6	B	12.4	E	37.8	A	7.6
I-85 between I-385 & Pelham Rd	NB	F	>45.0	F	46.1	F	>45.0	E	41.0
	SB	F	>45.0	F	153.2	F	>45.0	F	192.1
I-385 between Butler Rd & Woodruff Rd	NB	F	>45.0	F	96.6	F	>45.0	F	117.1
	SB	D	31.7	C	20.1	F	>45.0	E	41.7
I-385 between Woodruff Rd & I-85	NB	F	>45.0	C	25.7	F	>45.0	C	22.7
	SB	F	>45.0	C	24.4	F	>45.0	F	87.6
I-385 between I-85 & Roper Mountain Rd	NB	F	>45.0	C	19.5	F	>45.0	B	16.4
	SB	D	31.0	C	27.1	F	>45.0	F*	89.0

TABLE 5.32: HCS AND CORSIM COMPARISON – NO-BUILD ALTERNATE RAMP MERGE/DIVERGE JUNCTIONS

Freeway Ramp	Merge/Diverge	AM Peak Hour				PM Peak Hour			
		HCS		CORSIM		HCS		CORSIM	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB off-ramp to I-385/Woodruff Rd	Diverge	F*	44.6	E	43.2	F*	43.6	F*	76.7
I-85 NB on-ramp from Woodruff Rd	Merge	D	28.2	C	23.5	E	38.3	B	20.0
I-85 NB on-ramp from I-385	Merge	F	52.7	E	65.5	F	66.4	E	57.7
I-85 SB off-ramp to I-385/Woodruff Rd	Diverge	F	67.9	F*	63.2	F	70.4	F*	73.1
I-85 SB on-ramp from I-385/Woodruff Rd	Merge	F*	40.6	B	17.4	F*	47.2	B	11.7
I-385 NB off-ramp to I-85 NB	Diverge	F	73.4	C	25.7	F	81.0	C	22.7
I-385 NB off-ramp to I-85 SB/Woodruff Rd	Diverge	D	32.5	B	15.9	F*	38.8	C	27.0
I-385 NB on-ramp from I-85/Woodruff Rd	Merge	F*	28.8	B	16.1	F*	32.5	B	12.9
I-385 SB off-ramp to I-85/Woodruff Rd	Diverge	A	<10.0	C	26.9	F*	23.0	F*	73.9
I-385 SB on-ramp from I-85 SB	Merge	D	34.3	C	21.7	F*	46.3	F*	128.1
I-385 SB on-ramp from I-85 NB/Woodruff Rd	Merge	F	55.1	C	24.4	F	83.1	F*	87.6

* - LOS is F for ramp-freeway junction

TABLE 5.33: HCS AND CORSIM COMPARISON – NO-BUILD ALTERNATE WEAVE AREAS

Weaving Section	Direction	AM Peak Hour				PM Peak Hour			
		HCS		CORSIM		HCS		CORSIM	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 C-D between Woodruff Rd & I-385	NB	D	32.1	B	14.3	F	>50.0	F	55.1
	SB	F	>50.0	B	17.9	F	>50.0	B	17.8
I-385 between Woodruff Rd & I-85	NB	F	>50.0	C	25.7	F	>50.0	C	22.7
	SB	F	>50.0	C	24.4	F	>50.0	F	87.6

The comparison of the HCS analysis with the CORSIM analysis is shown in Tables 5.34, 5.35 and 5.36 for the preferred Alternate 4A comparison for the freeway segments, ramps merge/diverge junctions, and the weave areas, respectively.

TABLE 5.34: HCS AND CORSIM COMPARISON – ALTERNATE 4A FREEWAY SEGMENTS

Freeway Section	Direction	AM Peak Hour				PM Peak Hour			
		HCS		CORSIM		HCS		CORSIM	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 between Laurens Rd & Woodruff Rd	NB	F	>45.0	F	49.4	F	>45.0	F	101.5
	SB	F	>45.0	D	28.4	F	>45.0	D	29.5
I-85 between Woodruff Rd & I-385	NB	C	25.2	C	18.3	C	21.9	B	17.8
	SB	D	26.6	C	23.5	E	37.8	C	23.2
I-85 between I-385 & Pelham Rd	NB	F	>45.0	D	28.4	F	>45.0	F	70.3
	SB	F	>45.0	D	29.9	F	>45.0	D	28.8
I-385 between Butler Rd & Woodruff Rd	NB	F	>45.0	C	20.4	F	>45.0	C	20.8
	SB	D	31.7	B	15.2	F	>45.0	B	15.3
I-385 between Woodruff Rd & I-85	NB	D	33.0	C	25.5	E	41.8	C	24.3
	SB	C	22.5	B	12.6	F	>45.0	B	11.1
I-385 between I-85 & Roper Mountain Rd	NB	D	33.3	D	28.2	E	37.4	D	33.5
	SB	D	30.8	C	26.0	F	>45.0	F*	128.4

TABLE 5.35: HCS AND CORSIM COMPARISON – ALTERNATE 4A RAMP MERGE/DIVERGE JUNCTIONS

Freeway Ramp	Merge/Diverge		AM Peak Hour				PM Peak Hour			
			HCS		CORSIM		HCS		CORSIM	
			LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 NB off-ramp to I-385/Woodruff Rd	Diverge		F*	42.4	E	43.9	F*	40.8	F*	47.5
I-85 NB on-ramp from Woodruff Rd	Merge		B	11.4	C	20.3	C	21.6	C	21.6
I-85 NB on-ramp from I-385	Merge	up fwy	D	29.8	C	21.8	E	39.7	C	23.2
		up ramp	C	25.5	B	17.3	D	32.2	B	15.6
		dn fwy	D	32.7	C	21.2	F*	47.6	C	20.3
I-85 SB off-ramp to I-385/Woodruff Rd	Diverge	up fwy	E	39.3	C	27.6	E	41.3	C	26.1
		dn fwy	D	26.6	B	15.6	E	37.8	B	15.8
		dn ramp	E	36.6	C	24.5	D	28.6	C	23.4
I-85 SB on-ramp from I-385	Merge		F*	26.3	B	15.0	F*	32.4	B	14.9
I-85 SB on-ramp from Woodruff Rd	Merge		F*	39.2	C	24.9	F	55.6	C	26.2
I-385 NB off-ramp to I-85/Woodruff Rd	Diverge	up fwy	D	30.1	B	19.5	D	34.0	B	19.8
		dn fwy	C	22.5	C	18.7	D	29.7	C	18.6
		dn ramp	D	27.7	B	14.0	D	26.9	B	14.3
I-385 NB on-ramp from Woodruff Rd	Merge		D	28.3	C	20.2	C	26.0	B	19.4
I-385 NB on-ramp from I-85 SB	Merge		F*	31.2	C	21.1	F*	38.6	C	23.0
I-385 NB on-ramp from I-85 NB/Woodruff Rd	Merge		F*	30.1	C	24.5	F*	30.8	D	28.6
I-385 SB off-ramp to I-85	Diverge		B	12.0	C	26.8	F*	34.7	F*	91.0
I-385 SB off-ramp to Woodruff Rd	Diverge		C	27.3	B	16.0	F*	47.2	F*	74.1
I-385 SB on-ramp from I-85/Woodruff Rd	Merge	up fwy	B	16.5	B	12.7	E	37.9	B	11.1
		up ramp	B	15.3	A	8.0	C	20.9	A	9.4
		dn fwy	C	19.1	B	10.8	D	35.0	B	10.8

* - LOS is F for ramp-freeway junction

TABLE 5.36: HCS AND CORSIM COMPARISON – ALTERNATE 4A WEAVE AREAS

Weaving Section	Direction	AM Peak Hour				PM Peak Hour			
		HCS		CORSIM		HCS		CORSIM	
		LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)
I-85 C-D between Woodruff Rd & I-385	NB	D	32.1	B	14.5	F	>50.0	C	21.9
	SB	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
I-385 C-D between Woodruff Rd & I-85	NB	E	39.3	B	14.7	E	36.5	B	15.0
	SB	E	42.8	C	23.2	E	49.8	F	131.8

The comparison between the design year 2035 HCS and CORSIM analysis for both the No-Build Alternate and the preferred Build Alternate 4A indicates that the LOS evaluations are similar or, in most cases, the CORSIM analysis indicates better LOS than the HCS analysis. The reason for this is that the CORSIM analysis meters the amount of traffic entering the I-85 at I-385 Interchange due to congestion elsewhere in the network.

As shown by the CORSIM analyses, the majority of the freeway, ramp merge/diverge junctions, and weave areas for the preferred Build Alternate 4A are expected to operate with better LOS in the design year 2035 when compared to the analysis results for the No-Build Alternate.

6.0 CONSTRUCTION

The proposed modifications included in the proposed Build Alternative are predominantly on the same location and will be constructed in one phase. The programmed modifications included in the No-Build Alternative as well as the proposed Build Alternative involves widening I-385 to six lanes by year 2015, and is expected to be constructed in a separate phase. There are no significant adverse impacts anticipated on traffic operations during construction for Alternative 4A. A Transportation Management Plan will be prepared to maintain all traffic movements during construction.

7.0 SUMMARY

7.1 FHWA POLICY FOR NEW OR IMPROVED ACCESS

This study was undertaken in accordance with the Federal Highway Administration's (FHWA) policy for granting new or modified access. The FHWA policy is described the FHWA docket, "Access to the Interstate System" (Federal Register, Volume 74, Number 165, August 27, 2009) and is included in the FHWA publication, "Interstate System Access Informational Guide", dated August 2010. The eight policy requirements set forth by these documents ensure that reasonable alternatives to a new or modified access point to the Interstate System has been considered and that the new or modified access point proposed will not negatively impact the safety or capacity of travel along the Interstate System. The FHWA policy requirements are provided below in italics along with the responses to each policy requirement.

7.1.1 Policy Point 1

The need being addressed by the request cannot be adequately satisfied by existing interchanges to the Interstate, and/or local roads and streets in the corridor can neither provide the desired access, nor can they be reasonably improved (such as access control along the surface street, improving traffic control, modifying ramp terminals and intersections, adding turn bays or lengthening storage) to satisfactorily accommodate the design-year traffic demands (23 CFR 625.2(a)).

The purpose of the project is to improve operational efficiency and safety of the existing I-85 at I-385 Interchange to accommodate existing and projected traffic volumes. The project need is based upon the existing and projected operating conditions associated with the current interchange facility. The eight key deficiencies that impact the safety and operations of the I-85 at I-385 Interchange are listed below:

- **Deficiency 1**: I-385 southbound PM peak hour back-up going to I-85 northbound;
- **Deficiency 2:** I-85 southbound AM peak hour back-up at I-385 northbound off-ramp;
- **Deficiency 3:** Weave area along I-85 southbound collector-distributor between I-385 and Woodruff Road;
- **Deficiency 4:** Weave area along I-385 southbound between I-85 and Woodruff Road;
- **Deficiency 5:** Weave area along I-385 northbound between Woodruff Road and I-85;
- **Deficiency 6:** Safety issue on I-385 northbound loop off-ramp to I-85 southbound;
- **Deficiency 7:** Weave area along I-85 northbound collector-distributor between Woodruff Road and I-385; and
- **Deficiency 8:** Weave area along I-385 northbound between I-85 and Roper Mountain Road due to back-up on Roper Mountain Road off-ramp during the AM peak hour.

Alternate 4A address Deficiencies 1 through 6. Improvements to the I-85 northbound collector-distributor roadway to address Deficiency 7 are not proposed due to the roadway constraints in the southeast quadrant of the Interchange. Also, Deficiency 8 is attributed to an adjacent

interchange and, therefore, improvements to address this deficiency are not proposed as part of this IMR.

There are no known alternative improvements that can address the purpose of the project as economically, and with less impact, than the preferred Build Alternate 4A documented in this report.

7.1.2 Policy Point 2

The need being addressed by the request cannot be adequately satisfied by reasonable transportation system management (such as ramp metering, mass transit, and HOV facilities), geometric design, and alternative improvements to the Interstate without the proposed change(s) in access (23 CFR 625.2(a)).

The intent of this study is to evaluate the interstate to interstate movements operating conditions of the I-85 at I-385 Interchange as well as the interstate to non-interstate movements. Transportation System Management (TSM) strategies would not provide an acceptable alternative to address the safety and capacity of the interstate to interstate movements. Woodruff Road in the vicinity of the I-85 at I-385 Interchange area already has numerous bus routes and access to other bus routes via transfer points. However, Woodruff Road and other local roadways are near capacity. The future congestion on the local road system is also too severe and would require significant improvements themselves to maintain satisfactory traffic operating conditions. These improvements would not benefit the interstate to interstate movements. Also, it is impractical to provide ramp metering on interstate to interstate movements.

Both the I-85 and I-385 corridors will support mass transit with origins and destinations outside the study area. Many of these origins and destinations are regional in nature, and not feasible to implement at this spot location.

In general, the TSM strategies do not meet the purpose of the proposed action to improve the safety and traffic operations of the I-85 at I-385 Interchange. However, it should be noted that the Build Alternatives under study will not preclude the future utilization of these TSM strategies.

7.1.3 Policy Point 3

An operational and safety analysis has concluded that the proposed change in access does not have a significant adverse impact on the safety and operation of the Interstate facility (which includes mainline lanes, existing, new, or modified ramps, ramp intersections with crossroad) or on the local street network based on both the current and the planned future traffic projections. The analysis shall, particularly in urbanized areas, include at least the first adjacent existing or proposed interchange on either side of the proposed change in access (23 CFR 625.2(a), 655.603(d) and 771.111(f)). The crossroads and the local street network, to at least the first major intersection on either side of the proposed change in access, shall be

included in this analysis to the extent necessary to fully evaluate the safety and operational impacts that the proposed change in access and other transportation improvements may have on the local street network (23 CFR 625.2(a) and 655.603(d)). Requests for a proposed change in access must include a description and assessment of the impacts and ability of the proposed change in access to safely and efficiently collect, distribute and accommodate traffic on the Interstate facility, ramps, intersection of ramps with crossroad, and local street network (23 CFR 625.2(a) and 655.603(d)). Each request must also include a conceptual plan of the type and location of the signs proposed to support each design alternative (23 U.S.C. 109(d) and 23 CFR 655.603(d)).

Operational analyses were performed for existing (2010), opening (2015) and design (2035) years for the I-85 and I-385 mainline segments, the merge and diverge ramp junctions and the weave areas at the I-85 at I-385 Interchange together with analysis for the adjacent interchanges and surface streets intersections. Synchro 7 and HCS version 6.1 software programs were used for the analysis and these programs are based on the methodology outlined in the Highway Capacity Manual. The results of the analyses are documented in Chapter 5 of this report.

The existing year traffic analysis shows that the majority of the mainline, ramps, and weave areas at the I-85 at I-385 Interchange are currently operating at acceptable Levels of Service (LOS) D or better. The areas which are currently operating at LOS E or F are the congested merge/diverge and weave areas which have been identified as areas of deficiencies and are to be improved under Build conditions. Also, the majority of intersections on Woodruff Road and other surface streets at the adjacent I-85 and I-385 interchanges are currently operating at LOS D or better.

The No-Build traffic analysis for years 2015 and 2035 show that more areas of the Interchange will become congested and are expected to operate at LOS F even with the programmed improvements for the I-85 and I-385 corridors. Also, many of the intersections on Woodruff Road and other surface streets at the adjacent I-85 and I-385 interchanges are expected to operate at LOS E or F in years 2015 and 2035.

It should be noted that no reassignment of traffic or change in traffic patterns along I-85 or I-385 is anticipated with the proposed No-Build Alternative. However, for Alternative 4A, some traffic reassignment is expected. In Alternate 4A, I-385 northbound and southbound traffic approaching the I-85 at I-385 Interchange will no longer have access to the I-85 at Woodruff Road interchange. It is anticipated that this traffic will reassign onto either the I-385 at Roper Mountain Road interchange or to the I-385 at Woodruff Road interchange.

The Build traffic analysis for years 2015 and 2035 show that the overall operations at the I-85 at I-385 Interchange would be improved with the proposed improvements when compared to the corresponding No-Build condition. Some freeway and ramp merge/diverge junctions would still operate at LOS F due to insufficient capacity on the freeway mainline, which is beyond the scope of the project to address. Also, the I-85 northbound weave area would be LOS F as this

area is not being improved due to geometric and right-of-way constraints. Traffic operations along the surface streets would not be impacted with the proposed interchange modifications as the study intersections would continue to operate with the same LOS as under the respective No-Build condition.

The conceptual signing plans are included in this document demonstrating that there are no anticipated issues with signing the proposed modifications for Alternative 4A.

7.1.4 Policy Point 4

The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access for managed lanes (e.g., transit, HOVs, HOT lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a)(2), and 655.603(d)).

Alternate 4A will maintain all the interstate to interstate traffic movements at the I-85 at I-385 Interchange.

Alternate 4A will remove access from I-385 northbound and southbound to the I-85 at Woodruff Road interchange. Traffic is expected to reassign onto either the I-385 at Roper Mountain Road interchange or the I-385 at Woodruff Road interchange.

The proposed improvements for both Build Alternatives will be designed to meet or exceed currently adopted American Association of State Highway and Transportation Officials (AASHTO) design recommendations. Adequate stopping and sight distance will be maintained. The length of the ramps' acceleration and deceleration lane(s) and taper lengths, as well as the weave area lengths will be designed to meet current AASHTO design recommendations. Similarly, vertical clearances will be designed to meet or exceed current design recommendations. Some design exceptions are anticipated and these are documented in Chapter 4, Section 4.26.

7.1.5 Policy Point 5

The proposal considers and is consistent with local and regional land use and transportation plans. Prior to receiving final approval, all requests for new or revised access must be included in an adopted Metropolitan Transportation Plan, in the adopted Statewide or Metropolitan Transportation Improvement Program (STIP or TIP), and the Congestion Management Process within transportation management areas, as appropriate, and as specified in 23 CFR part 450, and the transportation conformity requirements of 40 CFR parts 51 and 93.

The project is located within the Greenville-Pickens Area Transportation Study (GPATS) Metropolitan Planning Organization (MPO) Boundary. The I-85 at I-385 Interchange improvements are incorporated in the current GPATS Transportation Improvement Plan and in

the current Statewide Transportation Improvement Plan (STIP). The revised STIP was published on January 3, 2012 and a total of $235M has been allocated from FY 2010 to 2015. This amount is intended only for the I-85 at I-385 Interchange Improvements. Details of the current STIP are contained in Appendix C.

7.1.6 Policy Point 6

In corridors where the potential exists for future multiple interchange additions, a comprehensive corridor or network study must accompany all requests for new or revised access with recommendations that address all of the proposed and desired access changes within the context of a longer-range system or network plan (23 U.S.C. 109(d), 23 CFR 625.2(a), 655.603(d), and 771.111)

Due to the close spacing of the adjacent interchanges, existing development, and the geographic location of the study area outside of a large metropolitan area, no new interchanges are likely to be located within or adjacent to the study boundary.

7.1.7 Policy Point 7

When a new or revised access point is due to a new, expanded, or substantial change in current or planned future development or land use, requests must demonstrate appropriate coordination has occurred between the development and any proposed transportation system improvements (23 CFR 625.2(a) and 655.603(d)). The request must describe the commitments agreed upon to assure adequate collection and dispersion of the traffic resulting from the development with the adjoining local street network and Interstate access point (23 CFR 625.2(a) and 655.603(d)).

The interchange modification is not due to a new, expanded, or substantial change in current or planned future development or land use. The purpose of the project is to improve operational efficiency and safety of the existing I-85 at I-385 interchange to accommodate existing and projected traffic volumes. The project need is based upon the existing and projected operating conditions associated with the current interchange facility.

7.1.8 Policy Point 8

The proposal can be expected to be included as an alternative in the required environmental evaluation, review and processing. The proposal should include supporting information and current status of the environmental processing (23 CFR 771.111).

An Environmental Planning Document (EPD) was prepared for the proposed project during early project development in an effort to identify any known environmental constraints within the project area, and to address potential environmental impacts associated with the preliminary alternatives.

The proposed improvements are expected to have minimal impact on the natural environment, including, water quality, floodplains, farmland, and cultural resources as much of the area has been previously disturbed and developed. The project area does include potential jurisdictional

wetlands and streams that may be impacted by the improvements. However, impacts to these areas are expected to be avoided and minimized where practicable by project design and location. Multiple potential hazardous waste material sites have been identified within the immediate vicinity of the project area. Therefore the project is considered to have a moderate to high potential to impact hazardous waste material sites, and will require further evaluation throughout project development.

The project is expected to result in long-term beneficial impacts to the human environment along the study area by improving the efficiency and safety of the surrounding transportation facilities. However, the project would require additional right-of-way which may result in impacts to existing developments, including access.

Final approval of this IMR can only be given by the FHWA upon successful completion of the NEPA document. This final approval is contingent on consistency of the chosen NEPA alternative with the proposed interchange modifications outlined in this IMR.

7.2 CONCLUSIONS AND RECOMMENDATIONS

Alternate 4A is the South Carolina Department of Transportation's (SCDOT) Preferred Alternative. Alternate 4A will construct new direct-connect ramps from I-85 southbound to I-385 southbound and I-385 northbound to I-85 southbound; construct a new collector-distributor roadway on I-385 between Woodruff Road and I-85 in both directions; remove the I-85 southbound collector-distributor roadway between I-385 and Woodruff Road; and remove access from I-385 to the I-85 at Woodruff Road interchange. The Preferred Build Alternative is not expected to have adverse impacts to traffic operations along I-85 or along I-385 and will improve traffic operations at the I-85 at I-385 Interchange. Also, Alternate 4A addresses six of the eight identified key deficiencies. The estimated construction cost of the Preferred Build Alternative is $238 million.

7.3 NEXT STEPS

Final approval of this IMR can only be given by the FHWA upon successful completion of the NEPA document. This final approval is contingent on consistency of the chosen NEPA alternative with the proposed interchange modifications outlined in this IMR.

8.0 NO-BUILD AND BUILD ALTERNATIVES CONCEPTUAL LAYOUT & CONCEPTUAL SIGNING PLAN

FIGURE 8.1A: NO-BUILD ALTERNATIVE INTERCHANGE CONCEPTUAL LAYOUT



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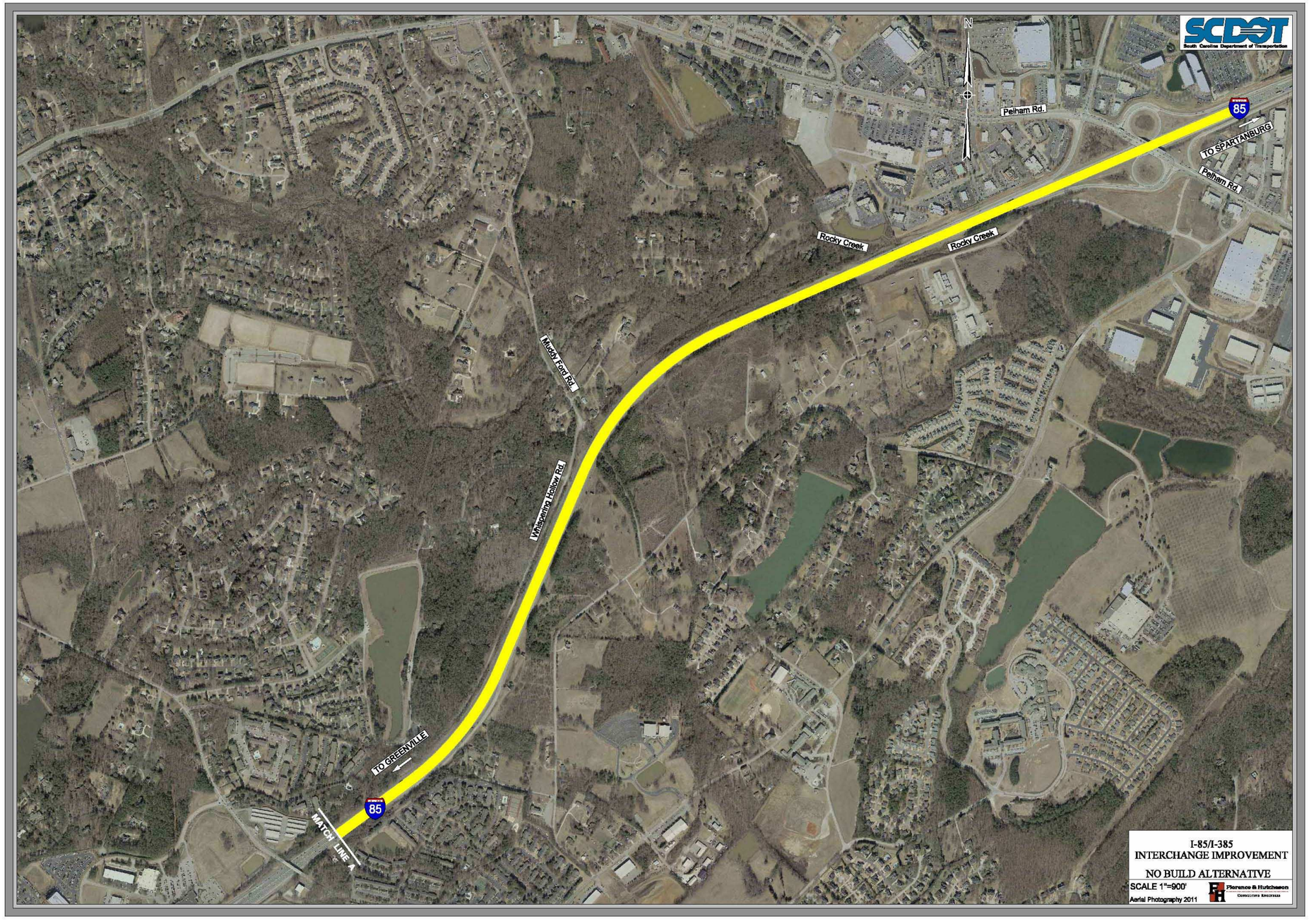
FIGURE 8.1B: NO-BUILD ALTERNATIVE I-85 SEGMENT CONCEPTUAL LAYOUT



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2/10/2012

FIGURE 8.2A: ALTERNATE 4A INTERCHANGE CONCEPTUAL LAYOUT

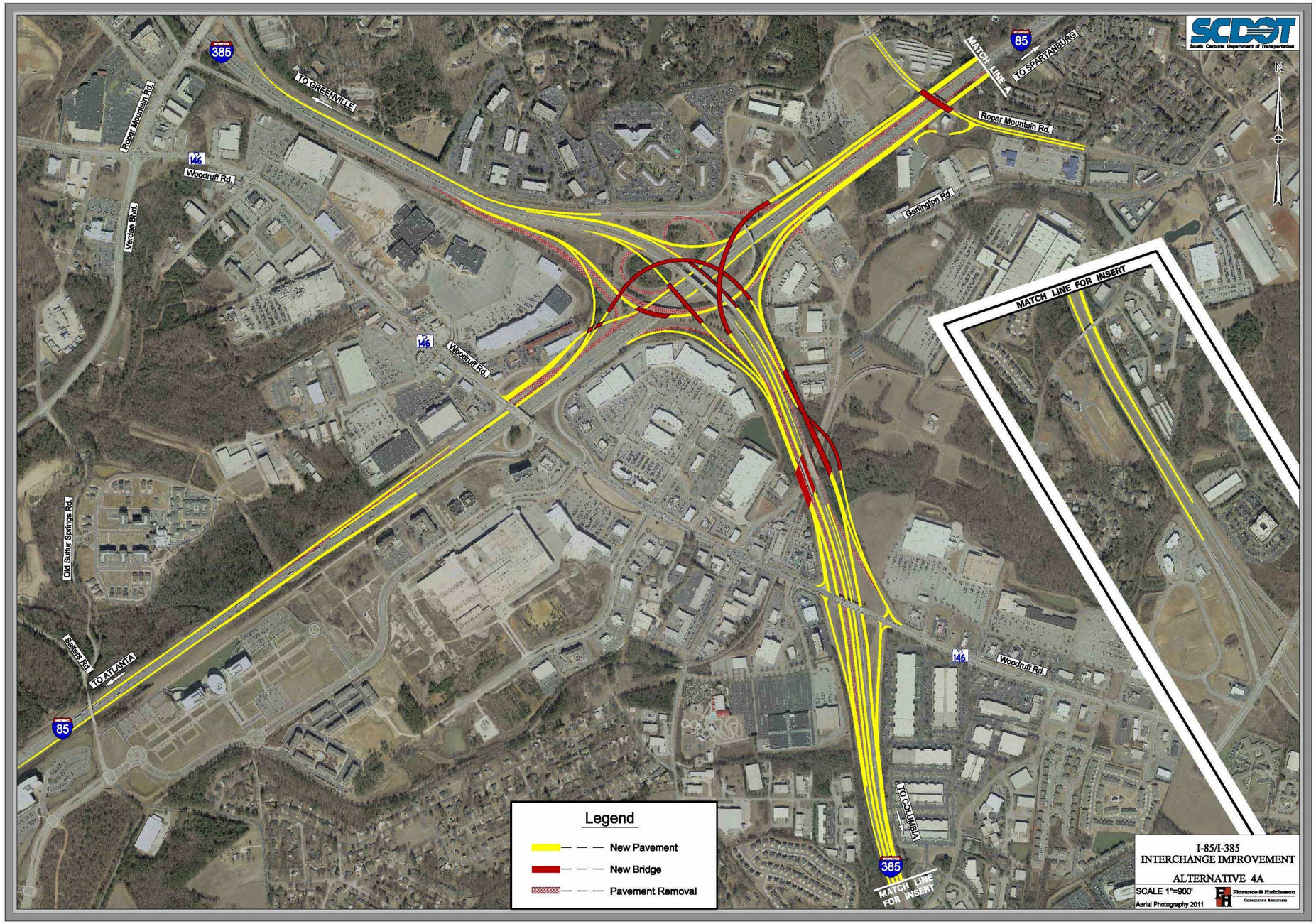

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FIGURE 8.2B: ALTERNATE 4A I-85 SEGMENT CONCEPTUAL LAYOUT

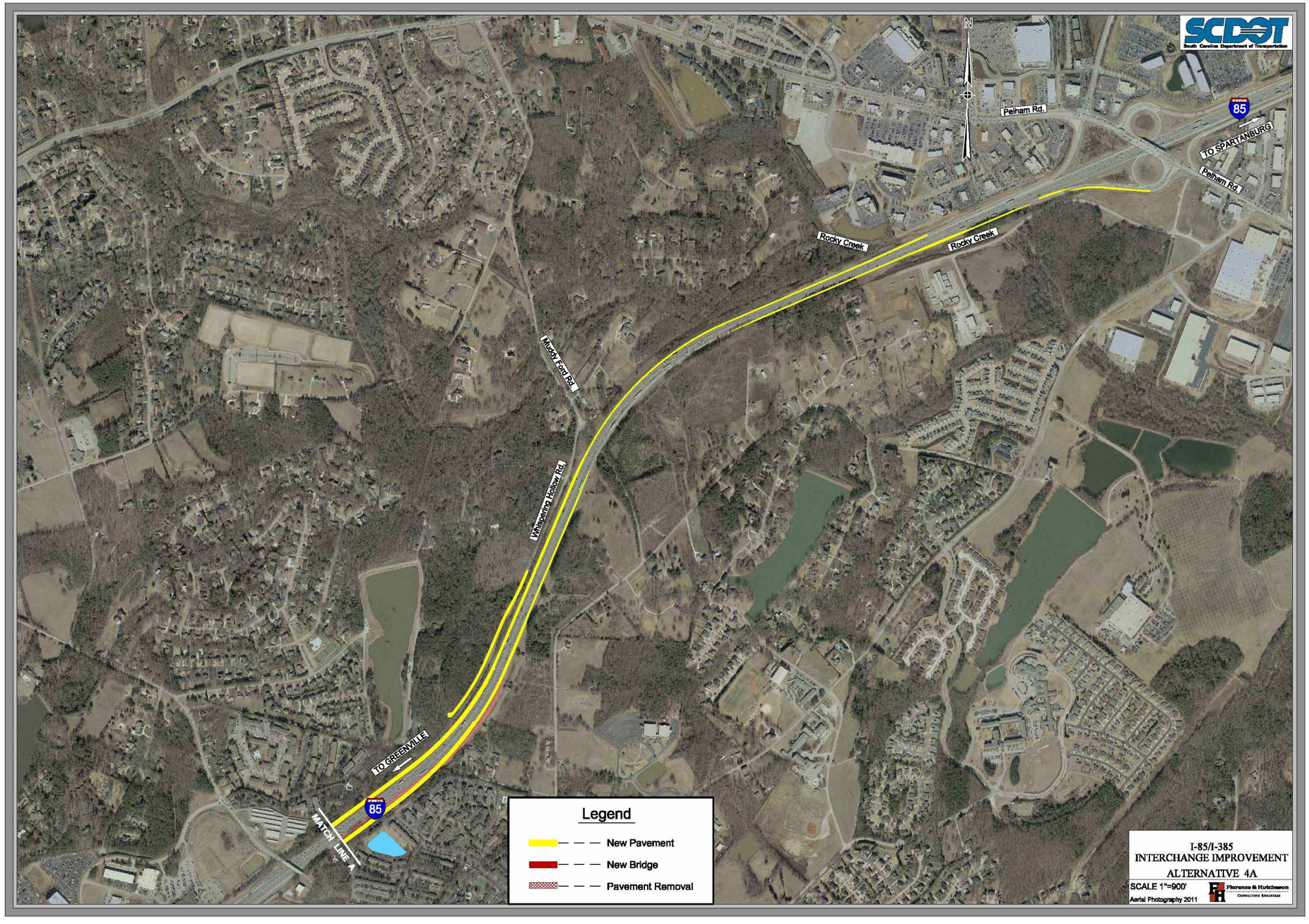


FIGURE 8.3A: ALTERNATE 4A INTERCHANGE CONCEPTUAL SIGNING PLAN (SHEET 1)

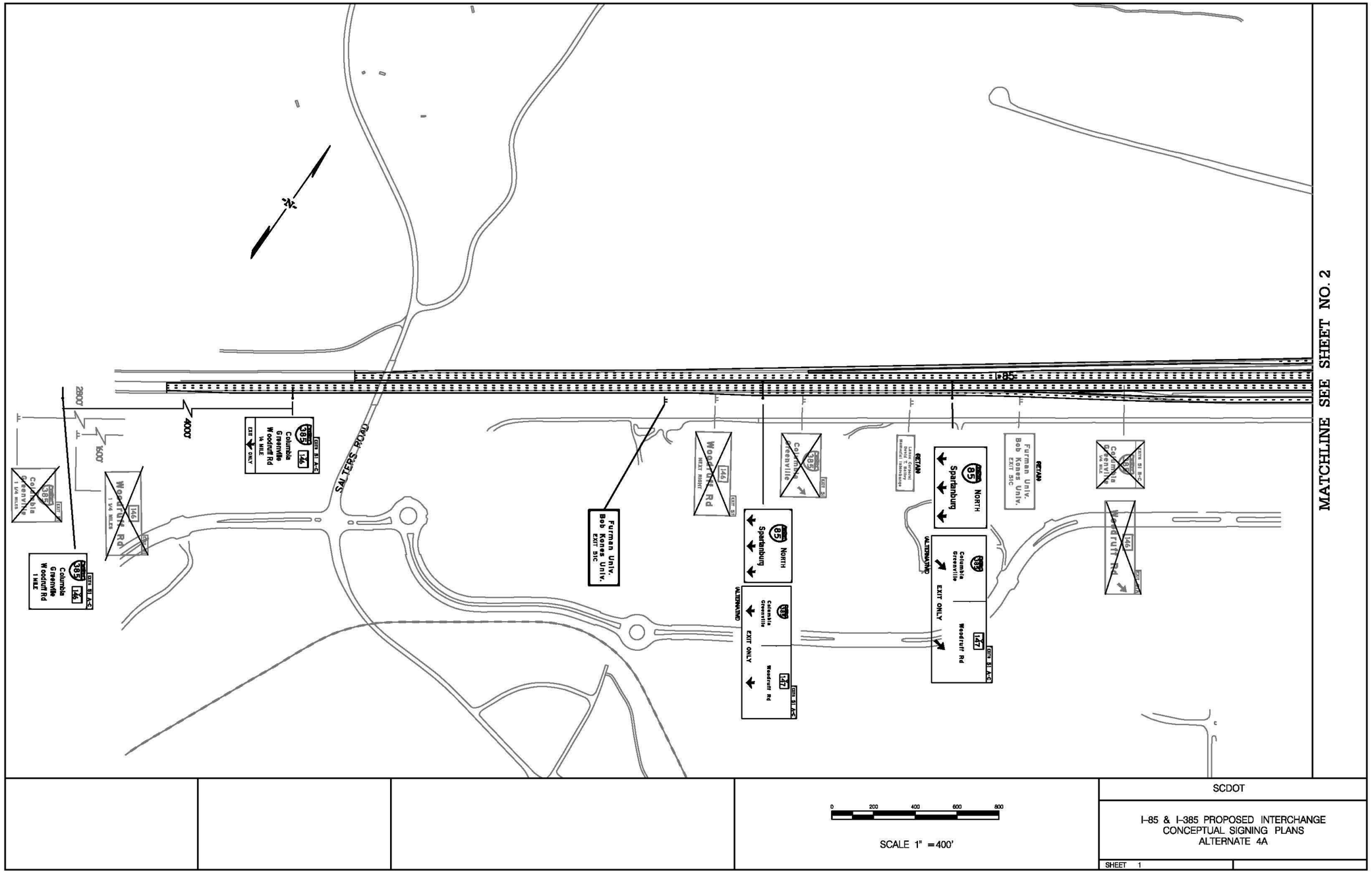


FIGURE 8.3B: ALTERNATE 4A INTERCHANGE CONCEPTUAL SIGNING PLAN (SHEET 2)

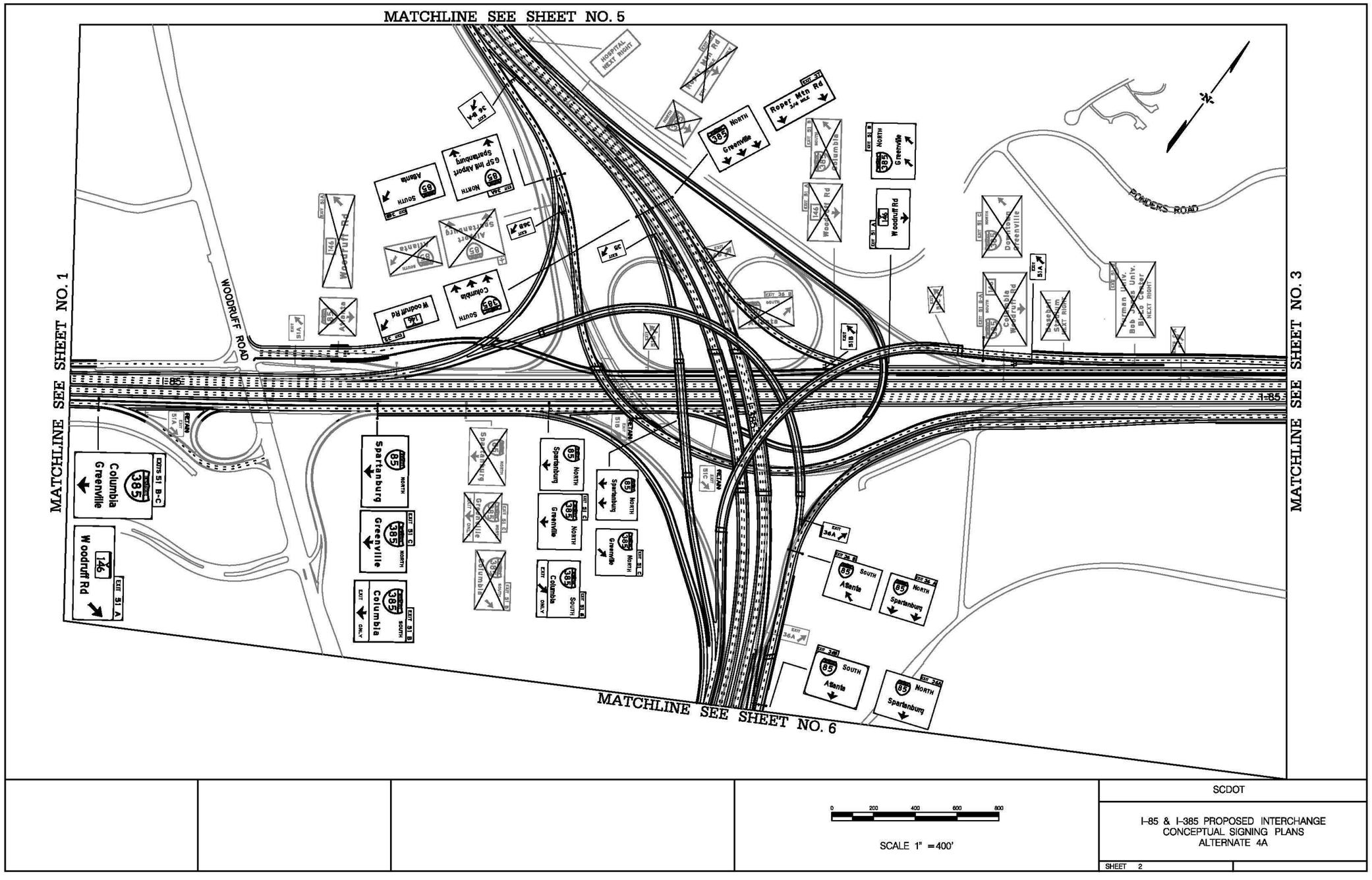


FIGURE 8.3C: ALTERNATE 4A INTERCHANGE CONCEPTUAL SIGNING PLAN (SHEET 3)

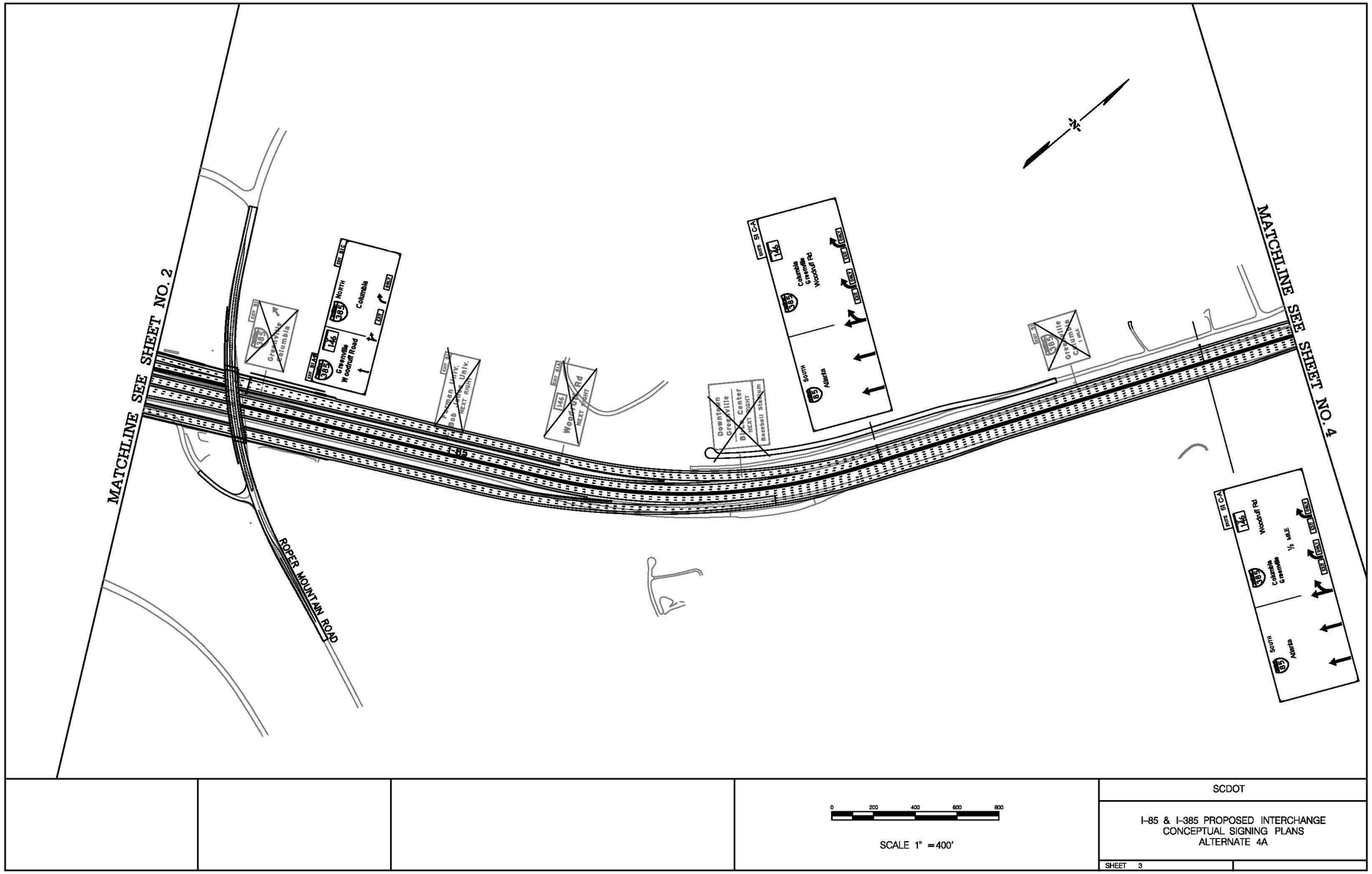


FIGURE 8.3D: ALTERNATE 4A INTERCHANGE CONCEPTUAL SIGNING PLAN (SHEET 4)

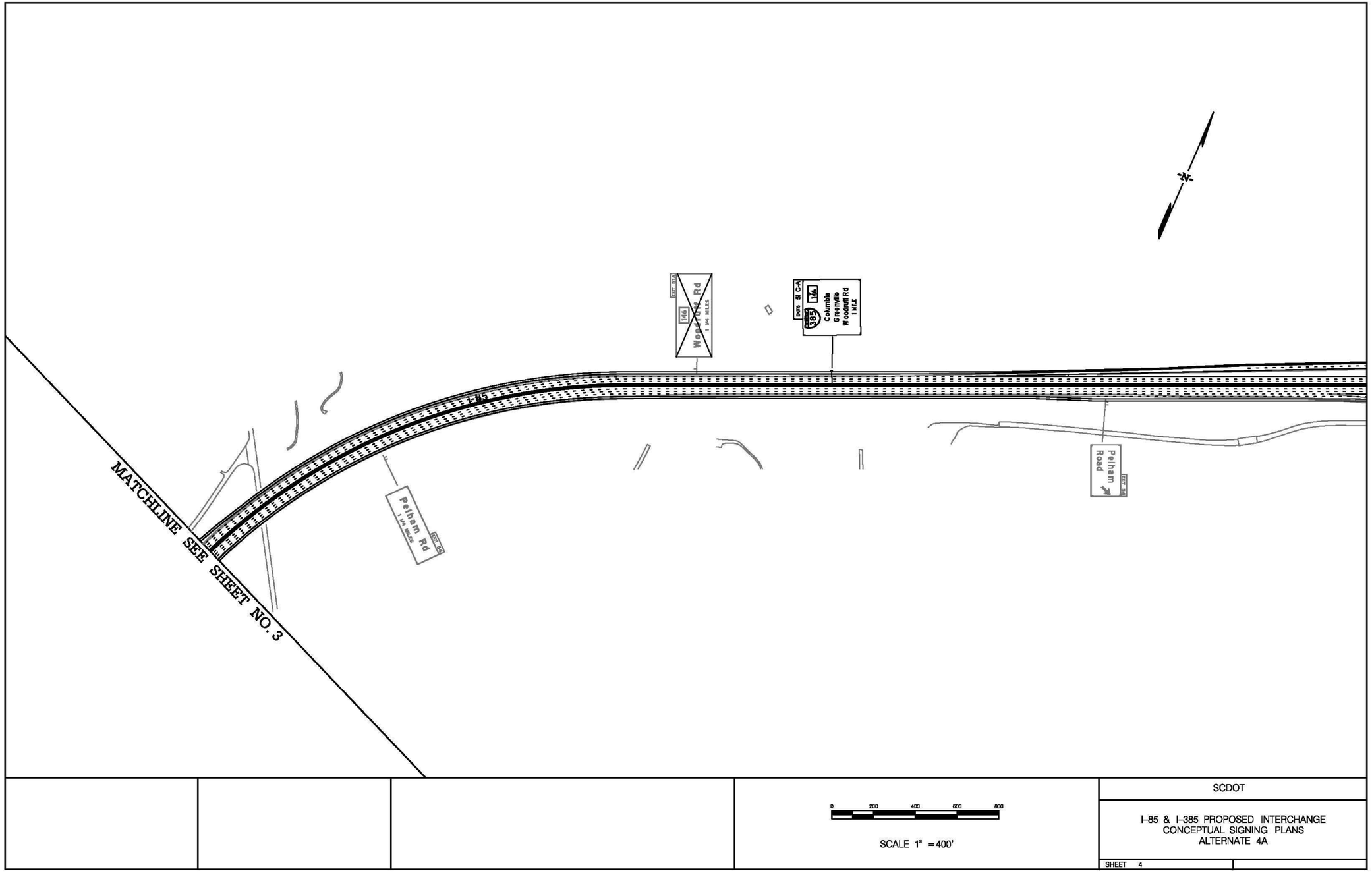


FIGURE 8.3E: ALTERNATE 4A INTERCHANGE CONCEPTUAL SIGNING PLAN (SHEET 5)

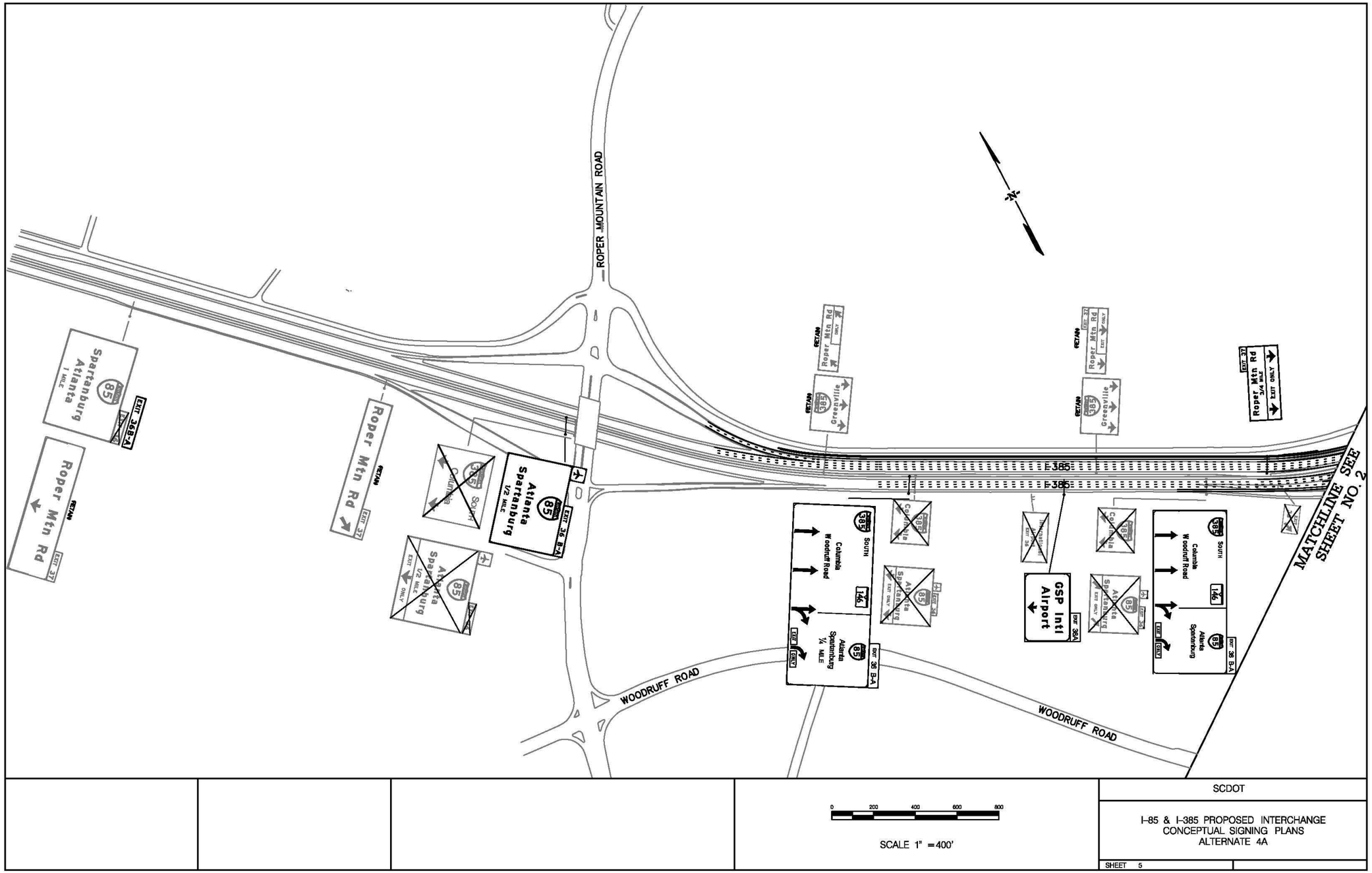


FIGURE 8.3F: ALTERNATE 4A INTERCHANGE CONCEPTUAL SIGNING PLAN (SHEET 6)

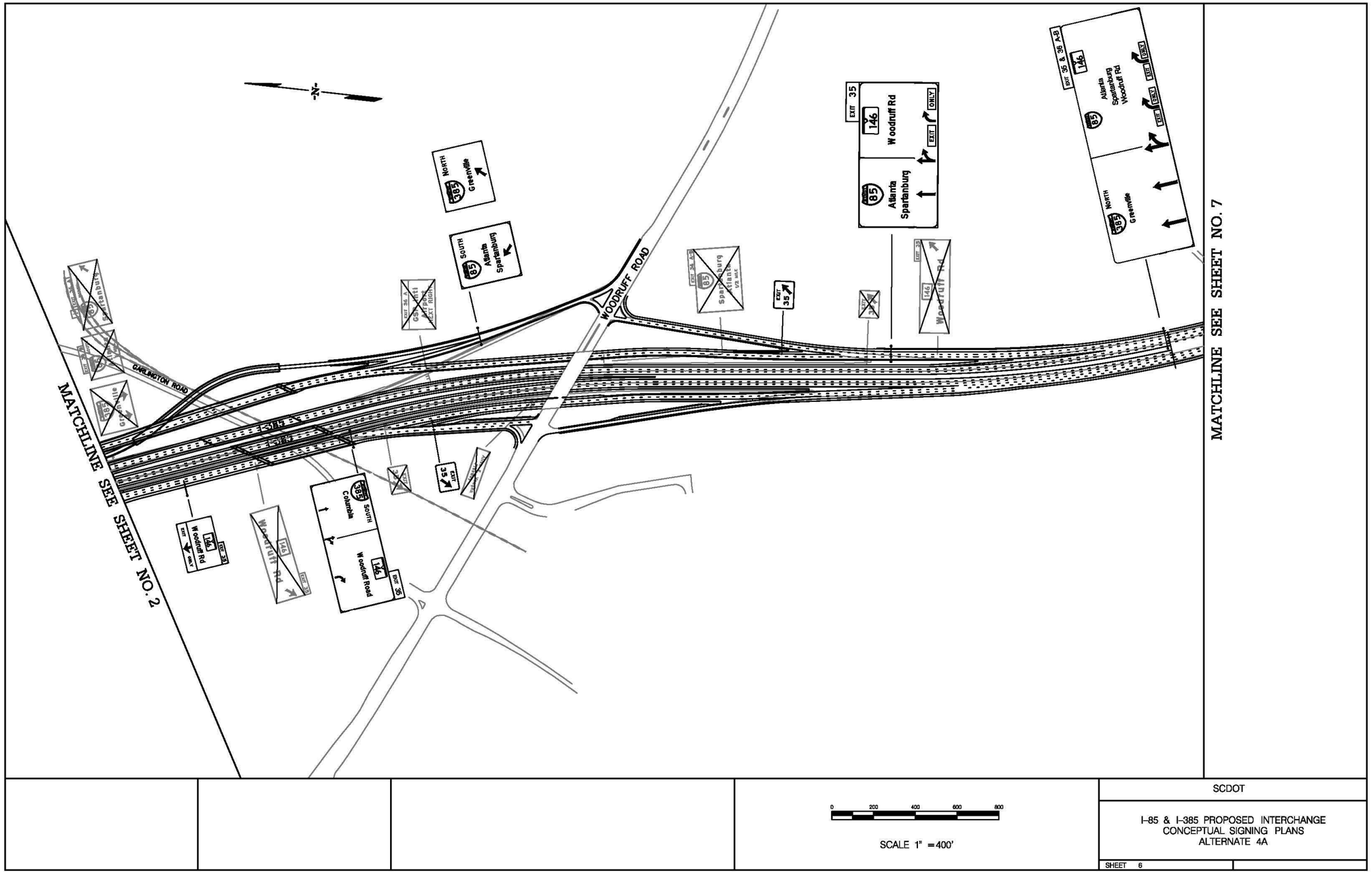
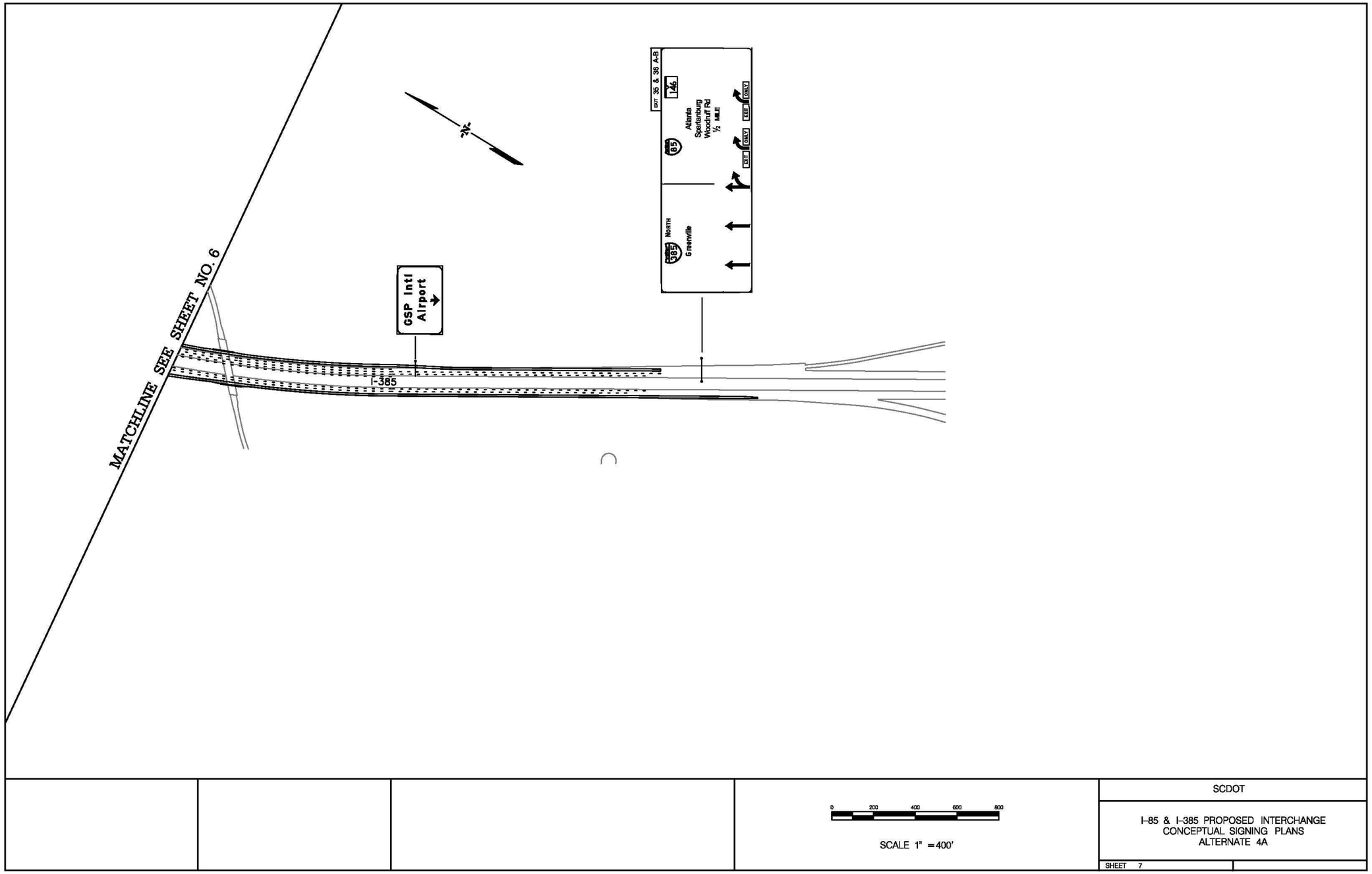


FIGURE 8.3G: ALTERNATE 4A INTERCHANGE CONCEPTUAL SIGNING PLAN (SHEET 7)



TRAFFIC STUDY
FOR
I-85/I-385 INTERCHANGE IMPROVEMENTS

GREENVILLE COUNTY, SOUTH CAROLINA

APPENDIX A

Prepared for:

South Carolina Department of Transportation

Prepared by:

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February 2012

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- Butler Road Turning Movement Counts (TMCs)
- Butler Road 24-Hour Tube Counts

Crash Data

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- I-85 @ Woodruff Rd
- I-385 @ Woodruff Rd
- I-385 between Woodruff Rd & I-85
- I-385 between I-85 & Roper Mountain Rd

TRAFFIC PROJECTIONS (Memo with Stantec)

Memorandum

To:	Dipak Patel, P.E. Michael Dennis, P.E. Tommy Elrod, P.E.	From:	Richard A. Day, P.E., PTOE Naveed Jaffar, P.E., PTOE
Copy To:	Rocque Kneece, P.E. David Beaty, P.E. Richard M. Reiff, P.E., PTOE		
File:	171001065	Date:	March 11, 2011

Reference: Reconciliation of Projected Traffic Volumes for the I-85 Corridor

Stantec and Florence & Hutcheson (F&H) have jointly developed agreed-upon traffic volumes for the shared study interchanges along the I-85 corridor being considered in the *I-85 Corridor Study* currently being conducted by Stantec and the *I-85/I-385 Interchange Improvements Study* currently being conducted by F&H. These agreed-upon traffic volumes supersede the previously documented traffic volumes in Stantec's *I-85 Corridor Study* and F&H's *I-85/I-385 Interchange Improvements Study*.

The four shared study interchanges consist of the I-85 interchanges at Laurens Road (US 276), Woodruff Road (SC 146), I-385, and Pelham Road (S-492). The agreed-upon traffic volumes have been developed for the AM and PM peak hours of the 2010 and 2035 horizon years, and interim-year traffic volumes will be interpolated from this information.

Development of the agreed-upon traffic volumes was based upon consideration of the traffic volume information documented in Stantec's *I-85 Corridor Study,* F&H's *I-85/I-385 Interchange Improvements Study,* available historical traffic growth information in the shared study area, and projected traffic growth based upon data from the Greenville-Pickens Area Transportation Study (GPATS) long-range model.

The 2010 and 2035 AM and PM peak hour volumes have been jointly produced and endorsed by both Stantec and F&H, and are illustrated in Figures 1 through 4 attached to this memorandum. Both firms will use these traffic volumes as a base for all future analyses in the ongoing respective studies.

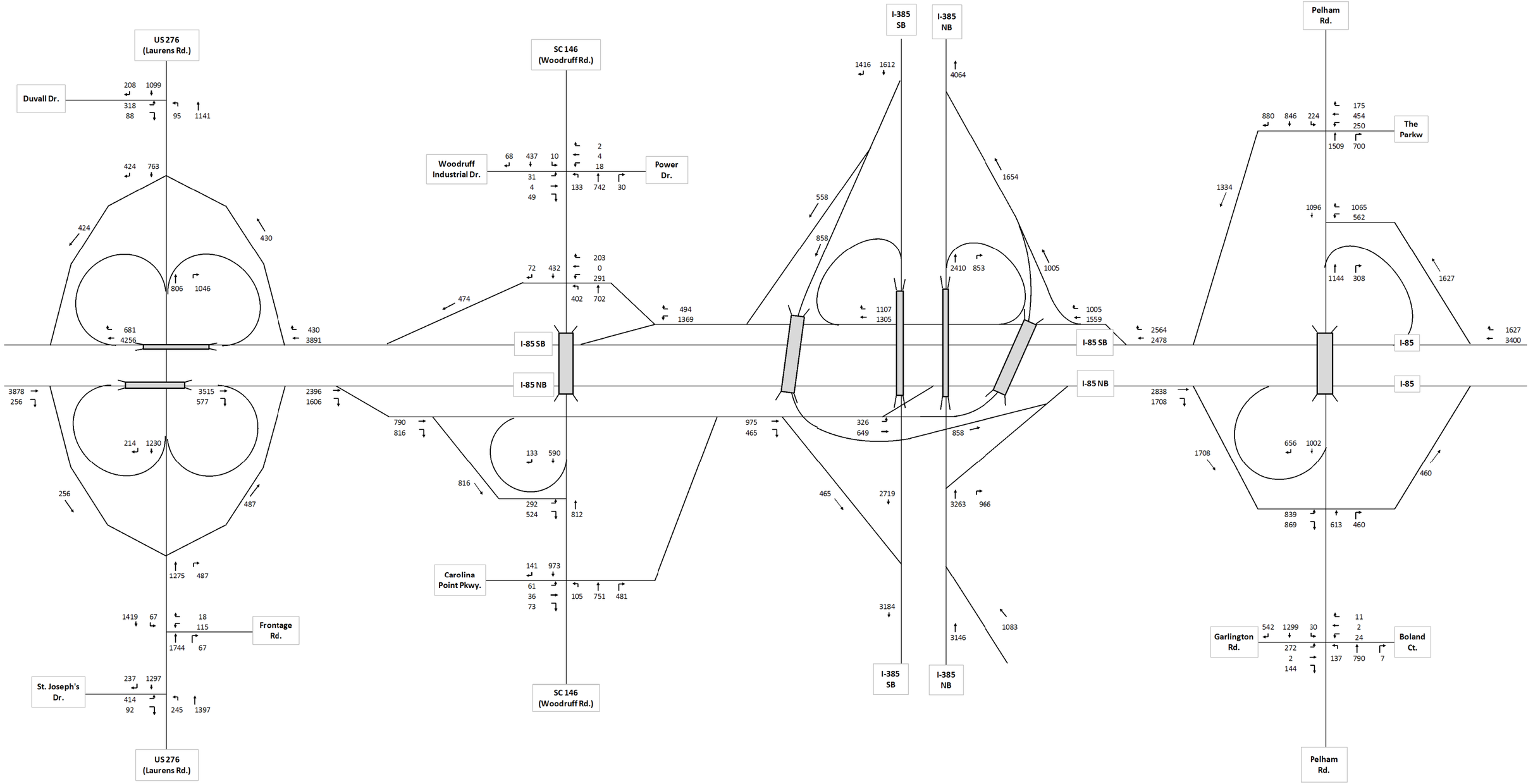
List of Attachments

Figure 1: Existing (2010) AM Peak Hour Traffic Volumes

Figure 2: Existing (2010) PM Peak Hour Traffic Volumes

Figure 3: Future (2035) AM Peak Hour Traffic Volumes

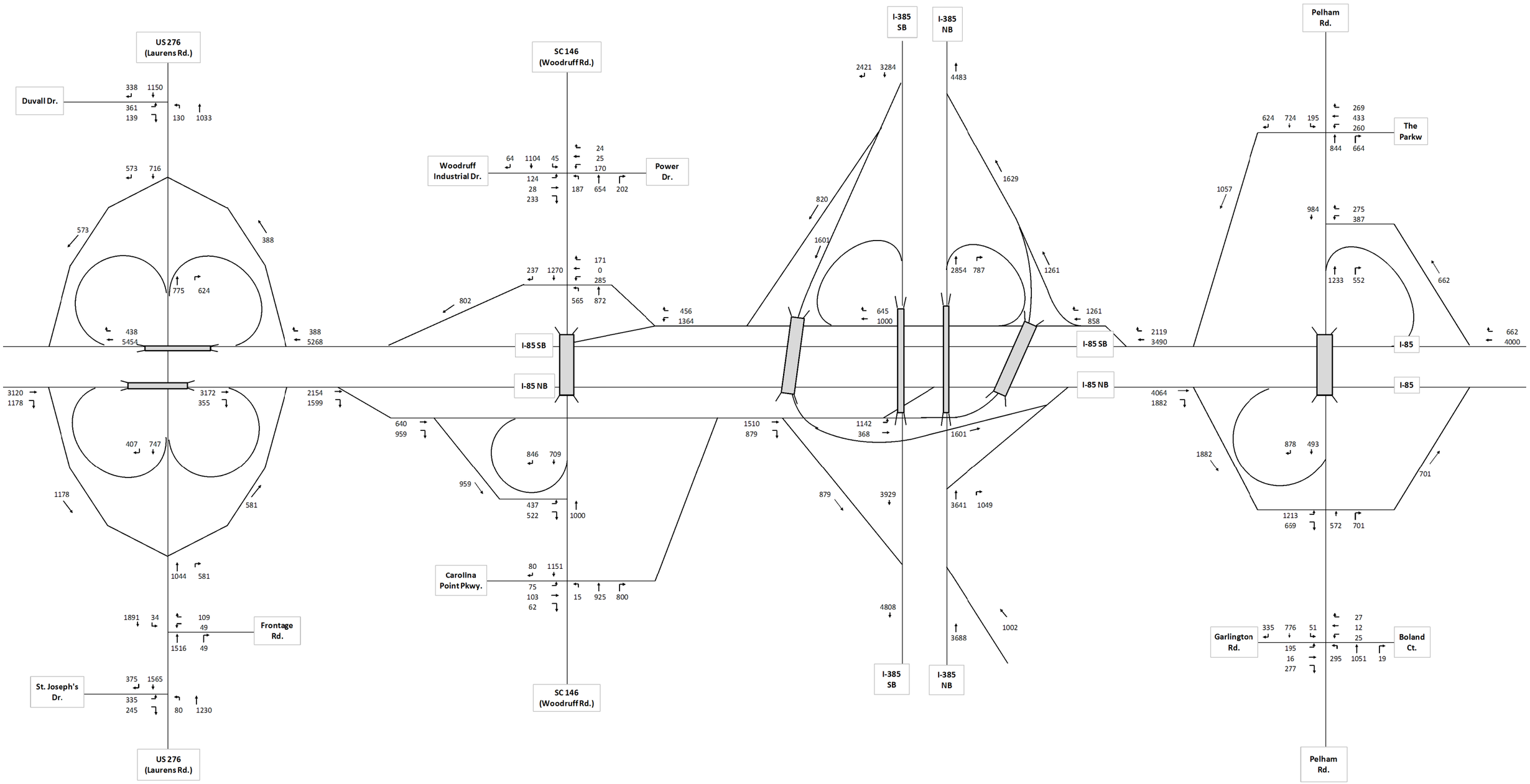
Figure 4: Future (2035) PM Peak Hour Traffic Volumes



Sources:
Stantec
Florence & Hutcheson

March 11, 2011

FIGURE 1: EXISTING (2010) AM PEAK HOUR TRAFFIC VOLUMES



Sources:
Stantec
Florence & Hutcheson

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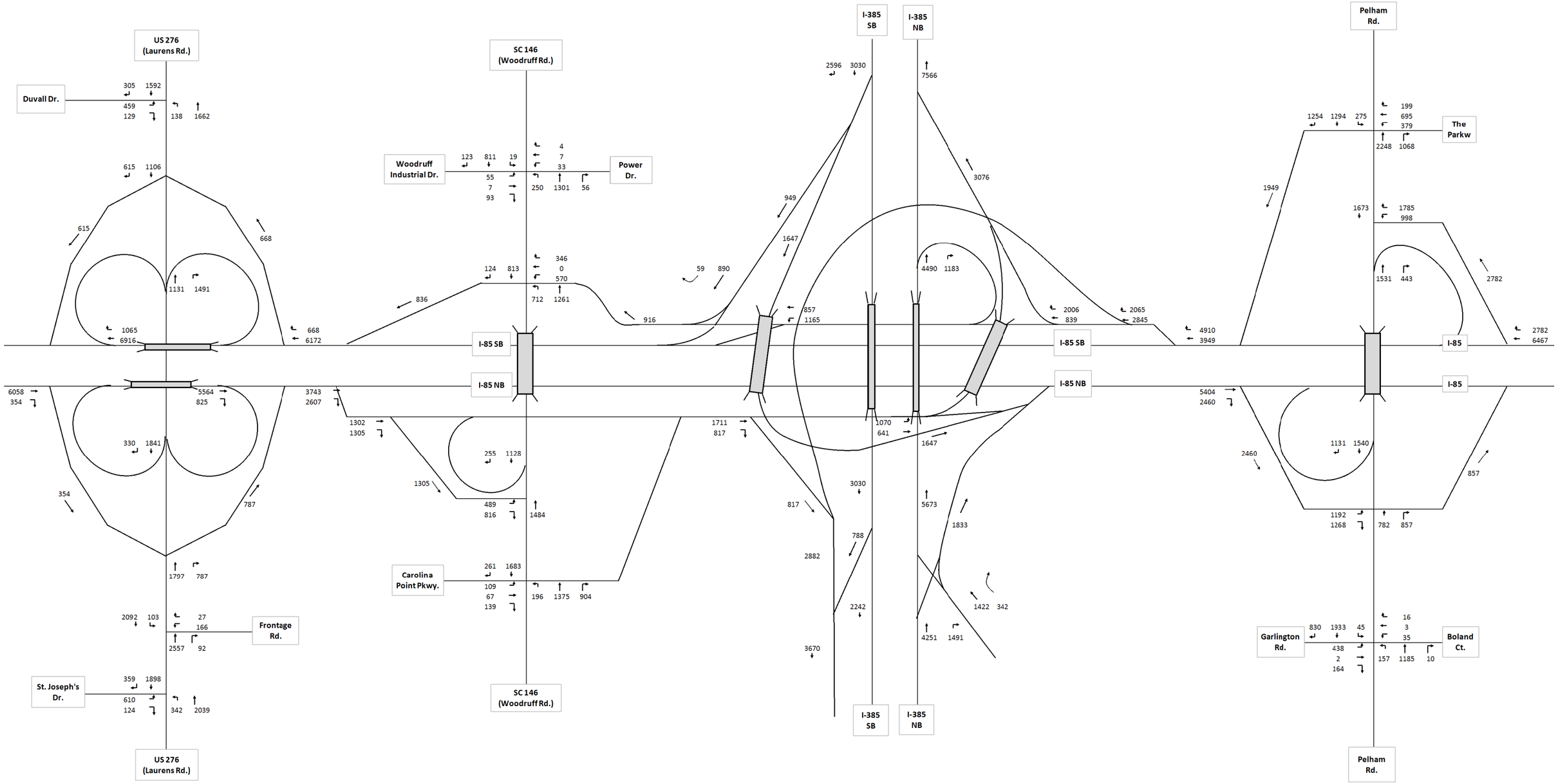
FIGURE 2: EXISTING (2010) PM PEAK HOUR TRAFFIC VOLUMES



Sources:
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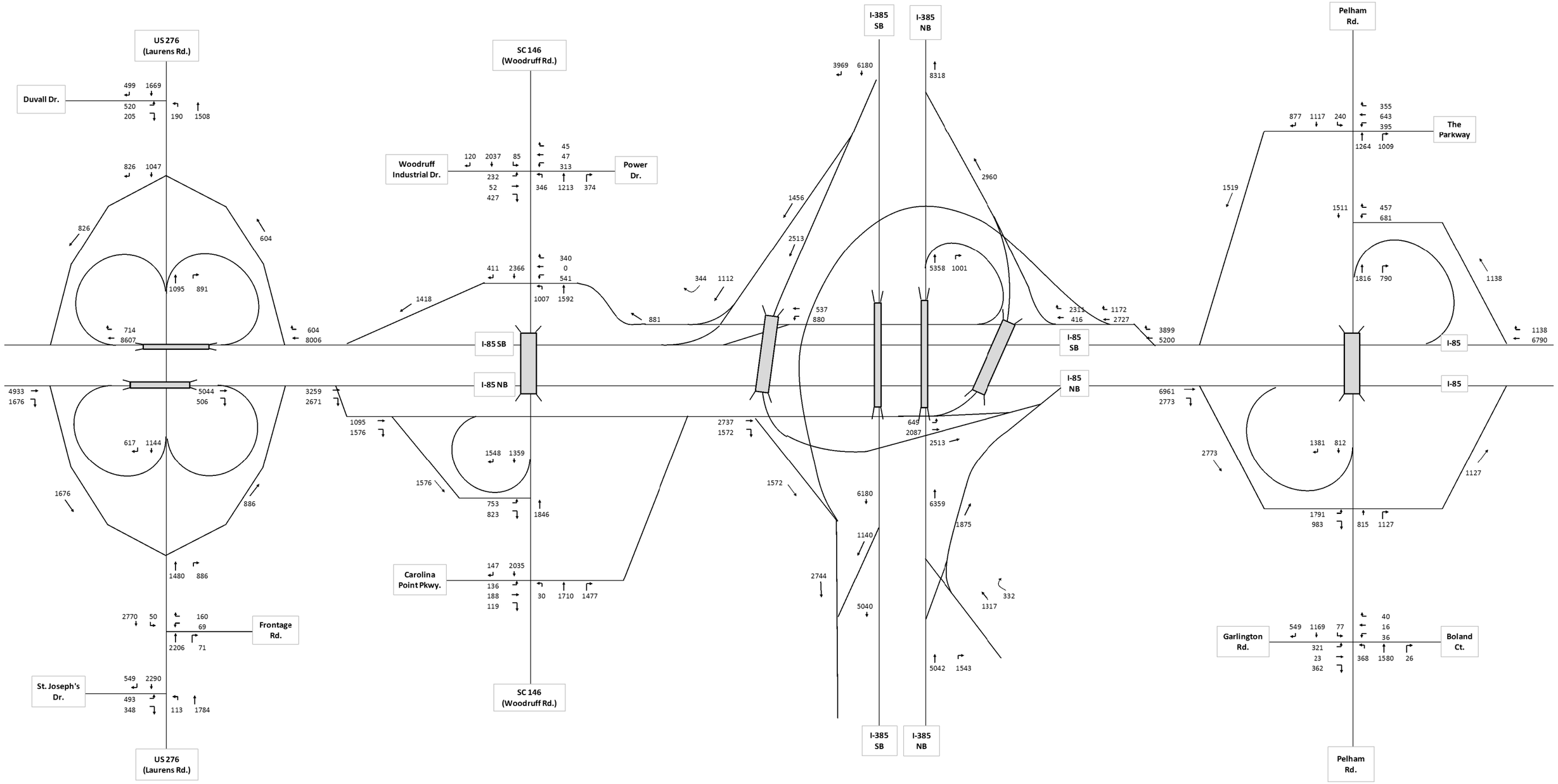
FIGURE 3: FUTURE (2035) AM PEAK HOUR TRAFFIC VOLUMES



Sources:
Stantec
Florence & Hutcheson

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FIGURE 4:
FUTURE (2035)
PM PEAK HOUR
TRAFFIC VOLUMES

TRAFFIC COUNTS – BUTLER RD TURNING MOVEMENT COUNTS (TMCs)

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Groups Printed- Cars, Buses & Trucks

	Gateway Blvd Northbound					Forsythia Blvd Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	1	0	13	0	14	2	0	2	0	4	1	121	2	0	124	11	66	0	0	77	219
07:15 AM	3	0	21	0	24	1	0	3	0	4	1	167	2	0	170	2	88	0	0	90	288
07:30 AM	3	0	38	0	41	4	0	5	0	9	1	186	0	0	187	9	112	0	0	121	358
07:45 AM	6	0	41	0	47	7	0	3	0	10	0	226	5	0	231	8	134	2	0	144	432
Total	13	0	113	0	126	14	0	13	0	27	3	700	9	0	712	30	400	2	0	432	1297
08:00 AM	3	0	30	0	33	4	0	2	0	6	0	297	1	0	298	10	163	2	0	175	512
08:15 AM	2	0	23	0	25	3	0	5	0	8	1	173	4	0	178	9	207	2	0	218	429
08:30 AM	3	0	12	0	15	3	0	4	0	7	1	144	0	0	145	10	185	3	0	198	365
08:45 AM	3	0	10	0	13	6	0	0	0	6	1	142	1	0	144	14	182	1	0	197	360
Total	11	0	75	0	86	16	0	11	0	27	3	756	6	0	765	43	737	8	0	788	1666
*** BREAK ***																					
04:00 PM	1	0	17	0	18	2	0	2	0	4	3	209	5	0	217	8	167	4	0	179	418
04:15 PM	5	0	15	0	20	4	0	1	0	5	3	194	2	0	199	4	162	4	0	170	394
04:30 PM	5	0	13	0	18	2	0	2	0	4	1	176	1	0	178	14	166	5	0	185	385
04:45 PM	3	0	18	0	21	2	0	5	0	7	2	152	3	0	157	17	181	3	0	201	386
Total	14	0	63	0	77	10	0	10	0	20	9	731	11	0	751	43	676	16	0	735	1583
05:00 PM	2	0	15	0	17	2	0	0	0	2	1	159	2	0	162	18	200	4	0	222	403
05:15 PM	12	0	21	0	33	1	0	1	0	2	1	165	7	0	173	17	230	5	0	252	460
05:30 PM	10	0	27	0	37	3	0	2	0	5	3	158	4	0	165	16	207	1	0	224	431
05:45 PM	7	0	26	0	33	5	0	1	0	6	1	126	2	0	129	20	217	5	0	242	410
Total	31	0	89	0	120	11	0	4	0	15	6	608	15	0	629	71	854	15	0	940	1704
Grand Total	69	0	340	0	409	51	0	38	0	89	21	2795	41	0	2857	187	2667	41	0	2895	6250
Apprch %	16.9	0.0	83.1	0.0		57.3	0.0	42.7	0.0		0.7	97.8	1.4	0.0		6.5	92.1	1.4	0.0		
Total %	1.1	0.0	5.4	0.0	6.5	0.8	0.0	0.6	0.0	1.4	0.3	44.7	0.7	0.0	45.7	3.0	42.7	0.7	0.0	46.3	

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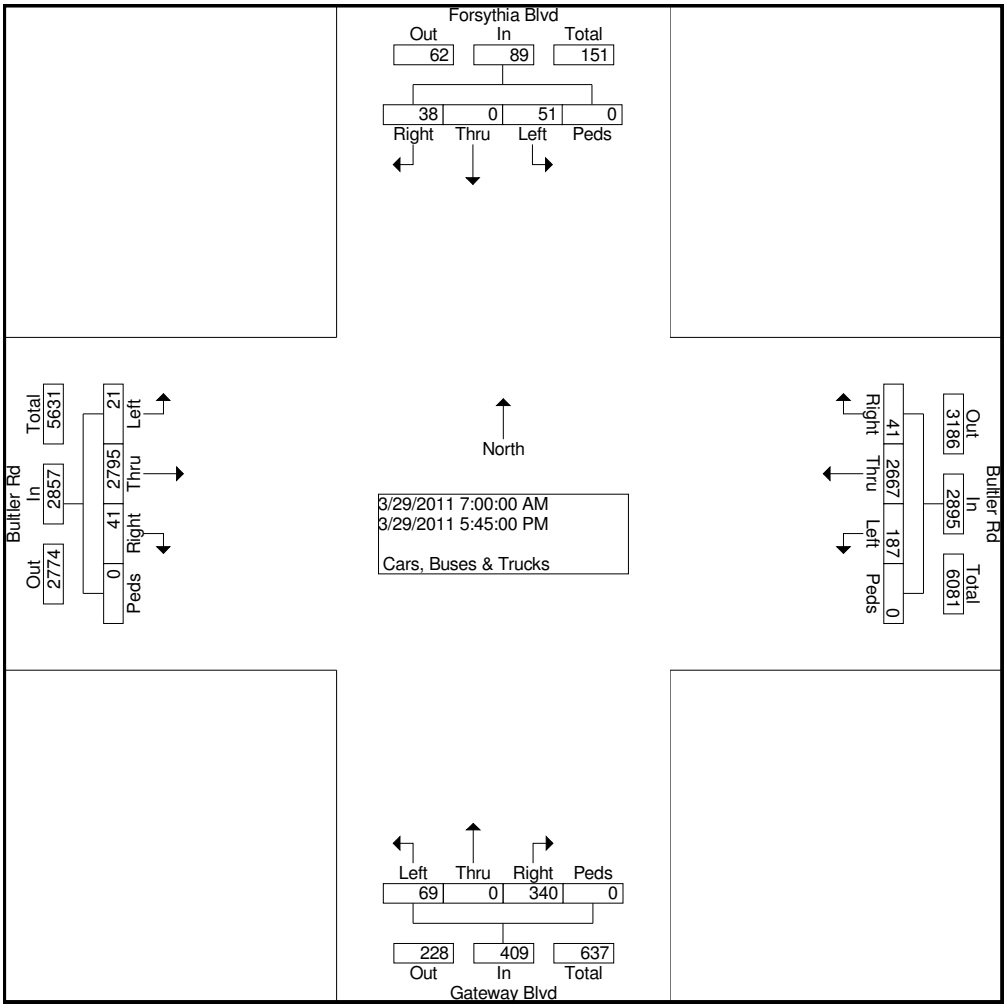

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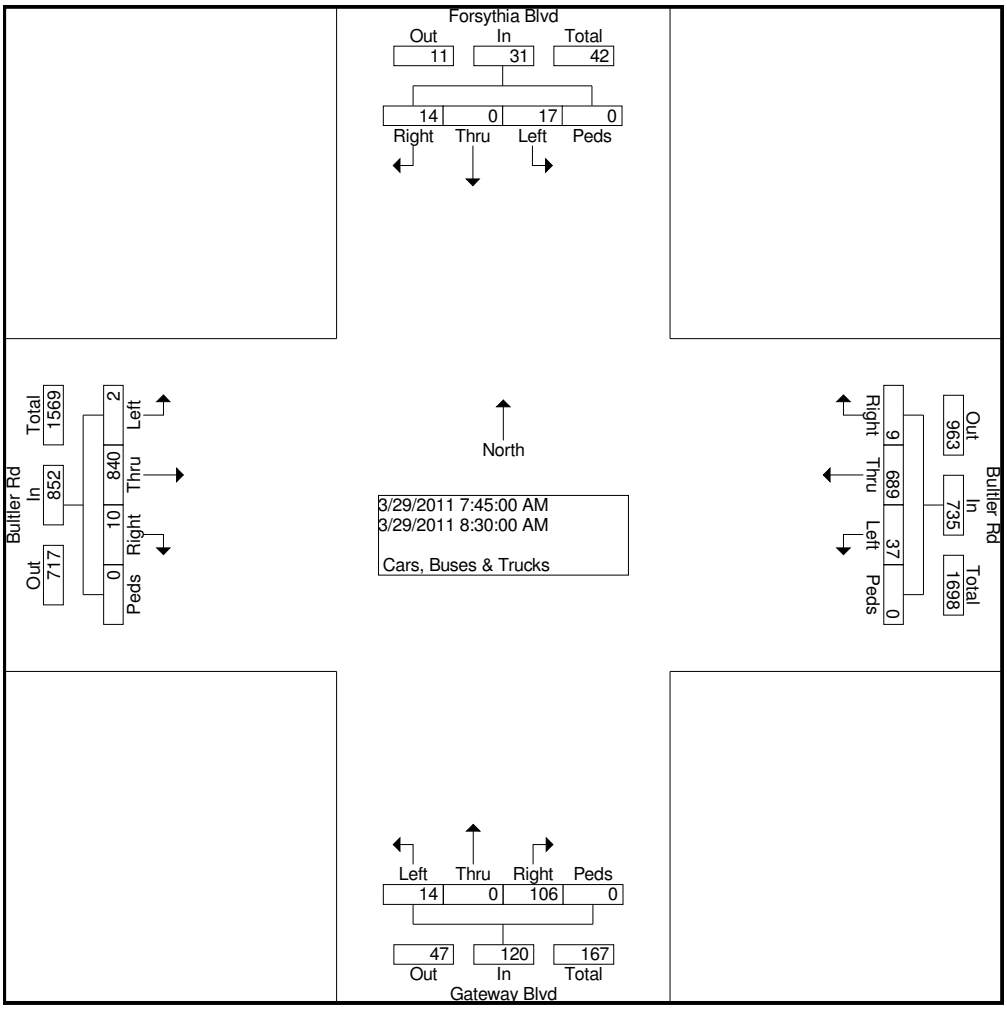
	Gateway Blvd Northbound					Forsythia Blvd Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	14	0	106	0	120	17	0	14	0	31	2	840	10	0	852	37	689	9	0	735	1738
Percent	11.7	0.0	88.3	0.0		54.8	0.0	45.2	0.0		0.2	98.6	1.2	0.0		5.0	93.7	1.2	0.0		
08:00 Volume	3	0	30	0	33	4	0	2	0	6	0	297	1	0	298	10	163	2	0	175	512
Peak Factor																					0.849
High Int.	07:45 AM					07:45 AM					08:00 AM					08:15 AM					
Volume	6	0	41	0	47	7	0	3	0	10	0	297	1	0	298	9	207	2	0	218	
Peak Factor					0.638					0.775					0.715					0.843	



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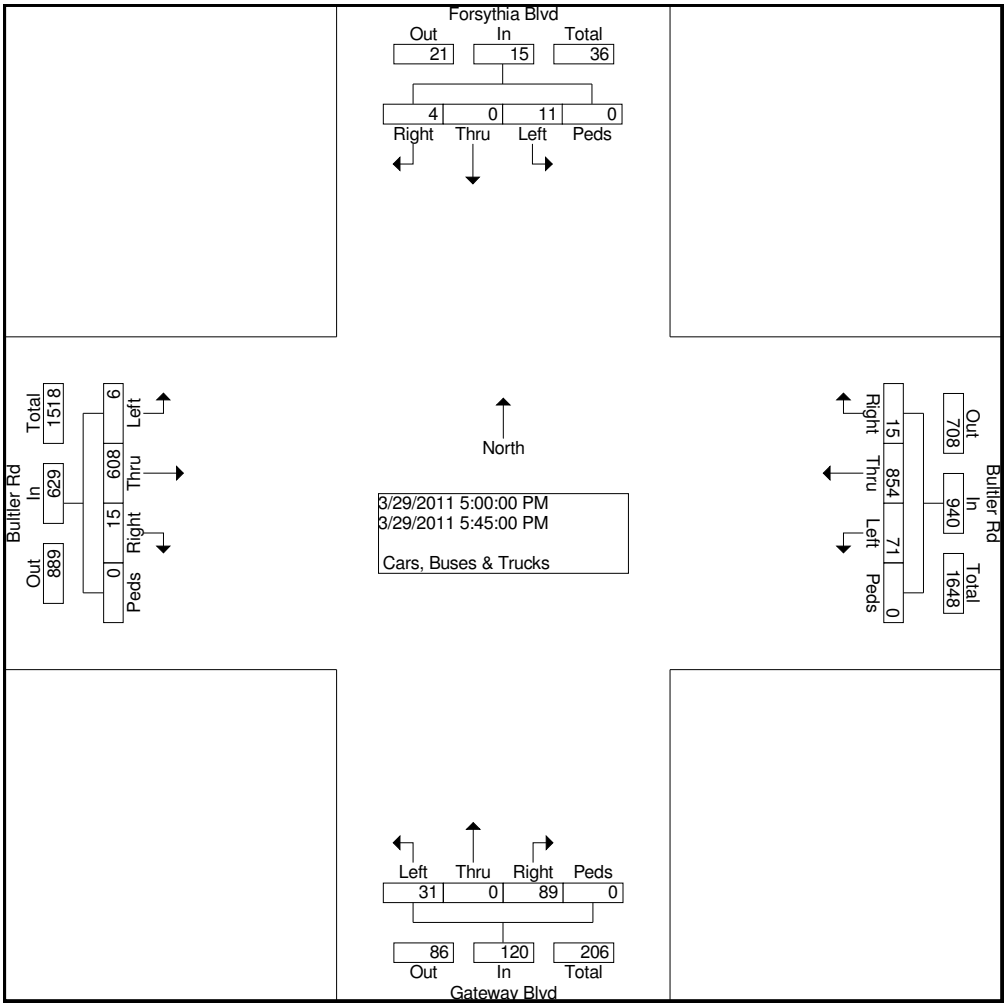
	Gateway Blvd Northbound					Forsythia Blvd Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	31	0	89	0	120	11	0	4	0	15	6	608	15	0	629	71	854	15	0	940	1704
Percent	25.8	0.0	74.2	0.0		73.3	0.0	26.7	0.0		1.0	96.7	2.4	0.0		7.6	90.9	1.6	0.0		
05:15 Volume	12	0	21	0	33	1	0	1	0	2	1	165	7	0	173	17	230	5	0	252	460
Peak Factor																					0.926
High Int.	05:30 PM					05:45 PM					05:15 PM					05:15 PM					
Volume	10	0	27	0	37	5	0	1	0	6	1	165	7	0	173	17	230	5	0	252	
Peak Factor					0.811					0.625					0.909					0.933	



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Groups Printed- Cars, Buses & Trucks

	Northbound					Rothwell Dr Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	0	0	0	0	2	0	0	1	3	0	105	0	0	105	0	84	0	0	84	192
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	202	0	0	202	0	118	1	0	119	321
07:30 AM	0	0	0	0	0	1	0	1	0	2	0	295	0	0	295	0	122	2	0	124	421
07:45 AM	0	0	0	0	0	1	0	0	0	1	0	304	0	0	304	0	153	6	0	159	464
Total	0	0	0	0	0	4	0	1	1	6	0	906	0	0	906	0	477	9	0	486	1398
08:00 AM	0	0	0	0	0	1	0	0	0	1	0	206	0	0	206	0	217	5	0	222	429
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	201	0	0	202	0	252	7	0	259	461
08:30 AM	0	0	0	0	0	3	0	0	0	3	3	171	0	0	174	0	281	6	0	287	464
08:45 AM	0	0	0	0	0	4	0	1	0	5	0	152	0	0	152	0	117	0	0	117	274
Total	0	0	0	0	0	8	0	1	0	9	4	730	0	0	734	0	867	18	0	885	1628
*** BREAK ***																					
04:00 PM	0	0	0	0	0	2	0	1	1	4	0	256	0	0	256	0	138	0	0	138	398
04:15 PM	0	0	0	0	0	1	0	0	0	1	0	206	0	0	206	0	166	4	0	170	377
04:30 PM	0	0	0	0	0	3	0	0	0	3	0	164	0	0	164	0	189	0	0	189	356
04:45 PM	0	0	0	0	0	3	0	0	0	3	1	168	0	0	169	0	194	1	0	195	367
Total	0	0	0	0	0	9	0	1	1	11	1	794	0	0	795	0	687	5	0	692	1498
05:00 PM	0	0	0	0	0	1	0	0	0	1	0	156	0	0	156	0	218	0	0	218	375
05:15 PM	0	0	0	0	0	5	0	1	0	6	0	187	0	0	187	0	252	1	0	253	446
05:30 PM	0	0	0	0	0	10	0	2	0	12	0	188	0	0	188	0	258	0	0	258	458
05:45 PM	0	0	0	0	0	3	0	2	0	5	1	157	0	0	158	0	233	0	0	233	396
Total	0	0	0	0	0	19	0	5	0	24	1	688	0	0	689	0	961	1	0	962	1675
Grand Total	0	0	0	0	0	40	0	8	2	50	6	3118	0	0	3124	0	2992	33	0	3025	6199
Apprch %	0.0	0.0	0.0	0.0		80.0	0.0	16.0	4.0		0.2	99.8	0.0	0.0		0.0	98.9	1.1	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1	0.0	0.8	0.1	50.3	0.0	0.0	50.4	0.0	48.3	0.5	0.0	48.8	

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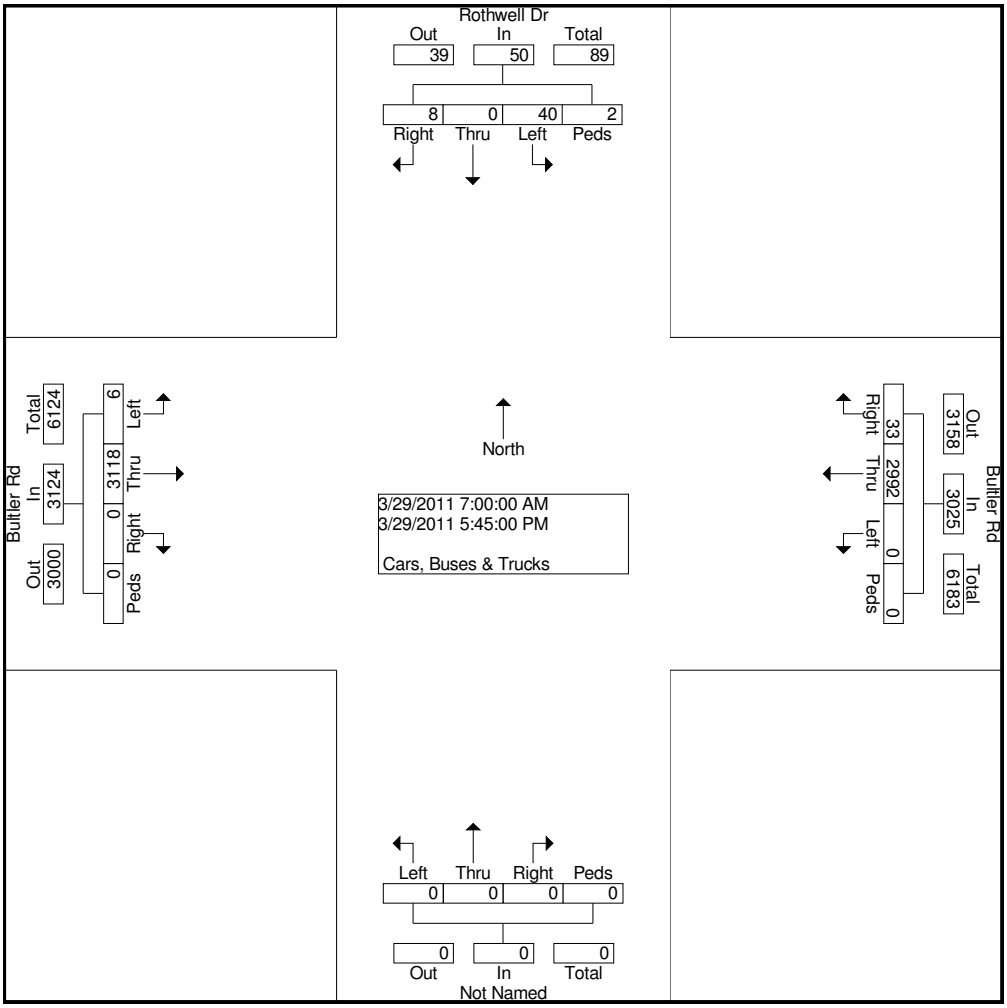

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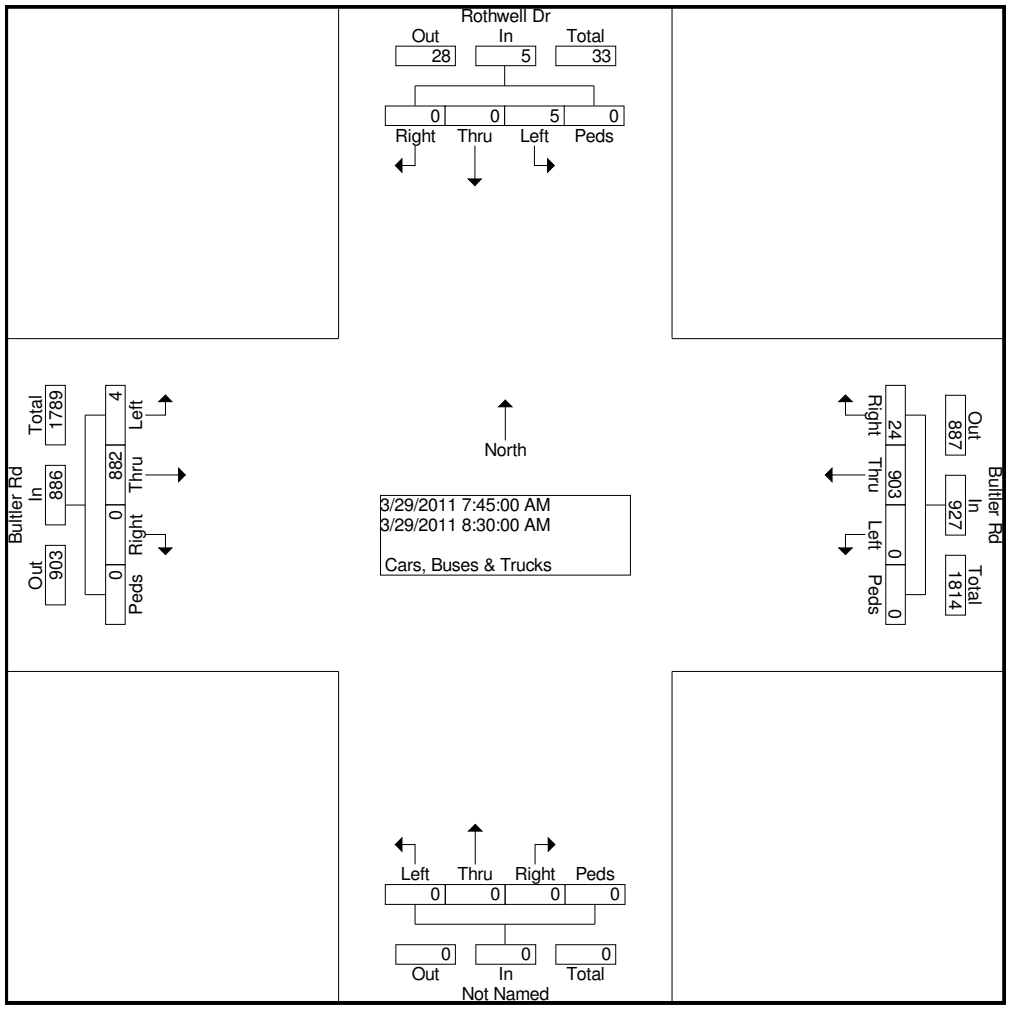
	Northbound					Rothwell Dr Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	0	0	0	0	0	5	0	0	0	5	4	882	0	0	886	0	903	24	0	927	1818
Percent	0.0	0.0	0.0	0.0		100.0	0.0	0.0	0.0		0.5	99.5	0.0	0.0		0.0	97.4	2.6	0.0		
08:30 Volume	0	0	0	0	0	3	0	0	0	3	3	171	0	0	174	0	281	6	0	287	464
Peak Factor																					0.980
High Int.	6:45:00 AM					08:30 AM					07:45 AM					08:30 AM					
Volume	0	0	0	0	0	3	0	0	0	3	0	304	0	0	304	0	281	6	0	287	
Peak Factor										0.417					0.729					0.807	



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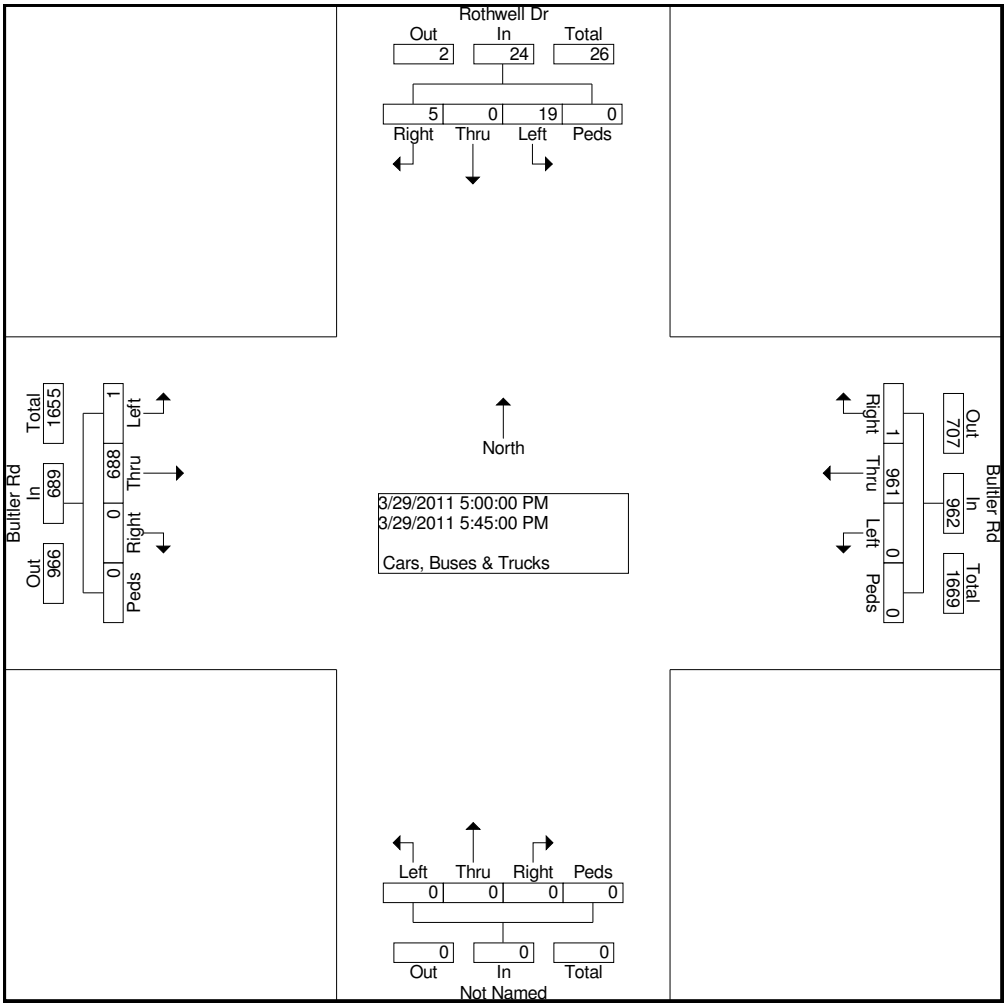
	Northbound					Rothwell Dr Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	0	0	0	0	0	19	0	5	0	24	1	688	0	0	689	0	961	1	0	962	1675
Percent	0.0	0.0	0.0	0.0		79.2	0.0	20.8	0.0		0.1	99.9	0.0	0.0		0.0	99.9	0.1	0.0		
05:30 Volume	0	0	0	0	0	10	0	2	0	12	0	188	0	0	188	0	258	0	0	258	458
Peak Factor																					0.914
High Int.						05:30 PM					05:30 PM					05:30 PM					
Volume	0	0	0	0	0	10	0	2	0	12	0	188	0	0	188	0	258	0	0	258	
Peak Factor										0.500					0.916					0.932	



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Groups Printed- Cars, Buses & Trucks

	Northbound					I-385 SB Off Ramp Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	0	0	0	0	75	0	31	0	106	0	110	8	0	118	25	38	0	0	63	287
07:15 AM	0	0	0	0	0	117	0	48	0	165	0	179	15	0	194	35	86	0	0	121	480
07:30 AM	0	0	0	0	0	137	0	27	0	164	0	275	17	0	292	42	97	0	0	139	595
07:45 AM	0	0	0	0	0	145	0	49	0	194	0	257	21	0	278	47	109	0	0	156	628
Total	0	0	0	0	0	474	0	155	0	629	0	821	61	0	882	149	330	0	0	479	1990
08:00 AM	0	0	0	0	0	113	0	69	0	182	0	219	12	0	231	29	151	0	0	180	593
08:15 AM	0	0	0	0	0	106	0	75	0	181	0	194	8	0	202	43	189	0	0	232	615
08:30 AM	0	0	0	0	0	105	1	55	0	161	0	138	6	0	144	36	231	0	0	267	572
08:45 AM	0	0	0	0	0	80	0	42	0	122	0	173	13	0	186	28	94	0	0	122	430
Total	0	0	0	0	0	404	1	241	0	646	0	724	39	0	763	136	665	0	0	801	2210
*** BREAK ***																					
04:00 PM	0	0	0	0	0	59	0	61	0	120	0	234	17	0	251	44	86	0	0	130	501
04:15 PM	0	0	0	0	0	77	0	75	0	152	0	193	16	0	209	63	98	0	0	161	522
04:30 PM	0	0	0	0	0	74	1	86	0	161	0	156	5	0	161	53	99	0	0	152	474
04:45 PM	0	0	0	0	0	75	0	90	0	165	0	168	9	0	177	82	103	0	0	185	527
Total	0	0	0	0	0	285	1	312	0	598	0	751	47	0	798	242	386	0	0	628	2024
05:00 PM	0	0	0	0	0	89	0	104	0	193	0	148	11	0	159	80	118	0	0	198	550
05:15 PM	0	0	0	0	0	82	0	103	0	185	0	167	16	0	183	98	153	0	0	251	619
05:30 PM	0	0	0	0	0	103	1	81	0	185	0	177	28	0	205	83	177	0	0	260	650
05:45 PM	0	0	0	0	0	96	1	89	0	186	0	165	12	0	177	88	148	0	0	236	599
Total	0	0	0	0	0	370	2	377	0	749	0	657	67	0	724	349	596	0	0	945	2418
Grand Total	0	0	0	0	0	1533	4	1085	0	2622	0	2953	214	0	3167	876	1977	0	0	2853	8642
Apprch %	0.0	0.0	0.0	0.0		58.5	0.2	41.4	0.0		0.0	93.2	6.8	0.0		30.7	69.3	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	17.7	0.0	12.6	0.0	30.3	0.0	34.2	2.5	0.0	36.6	10.1	22.9	0.0	0.0	33.0	

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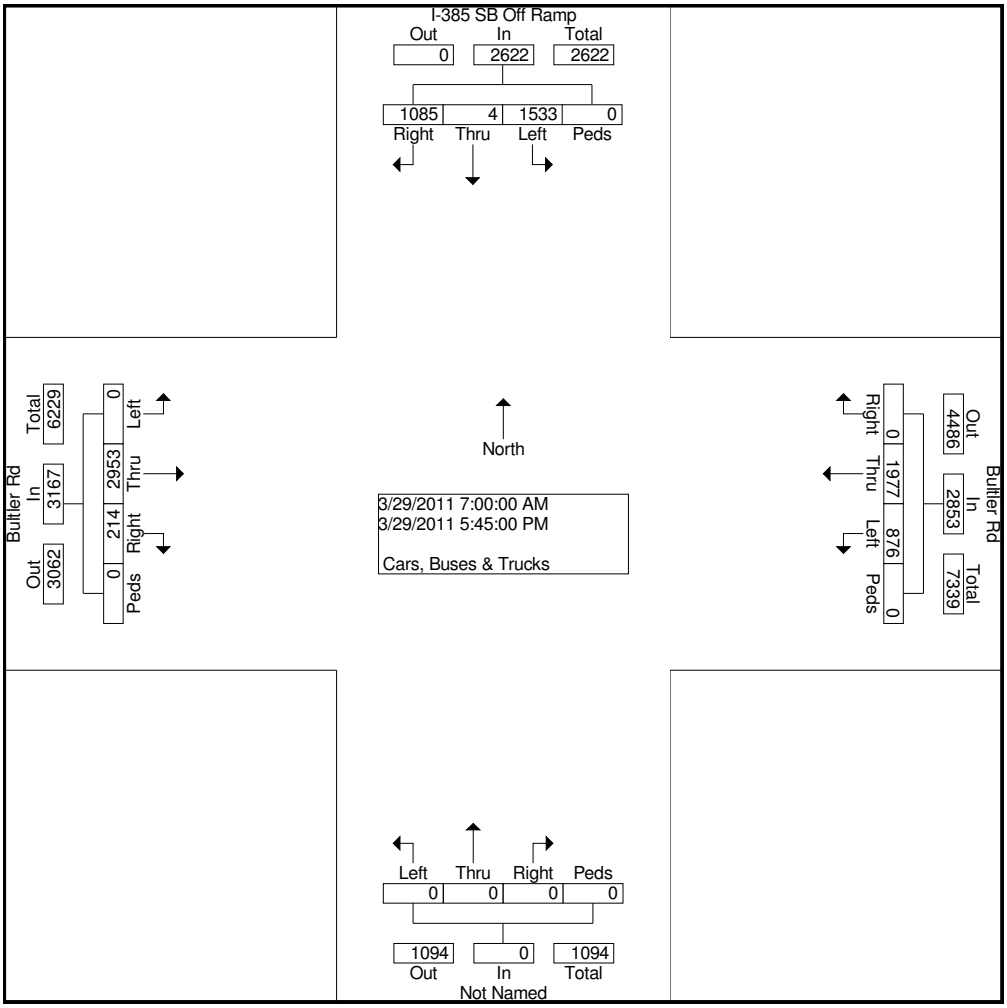

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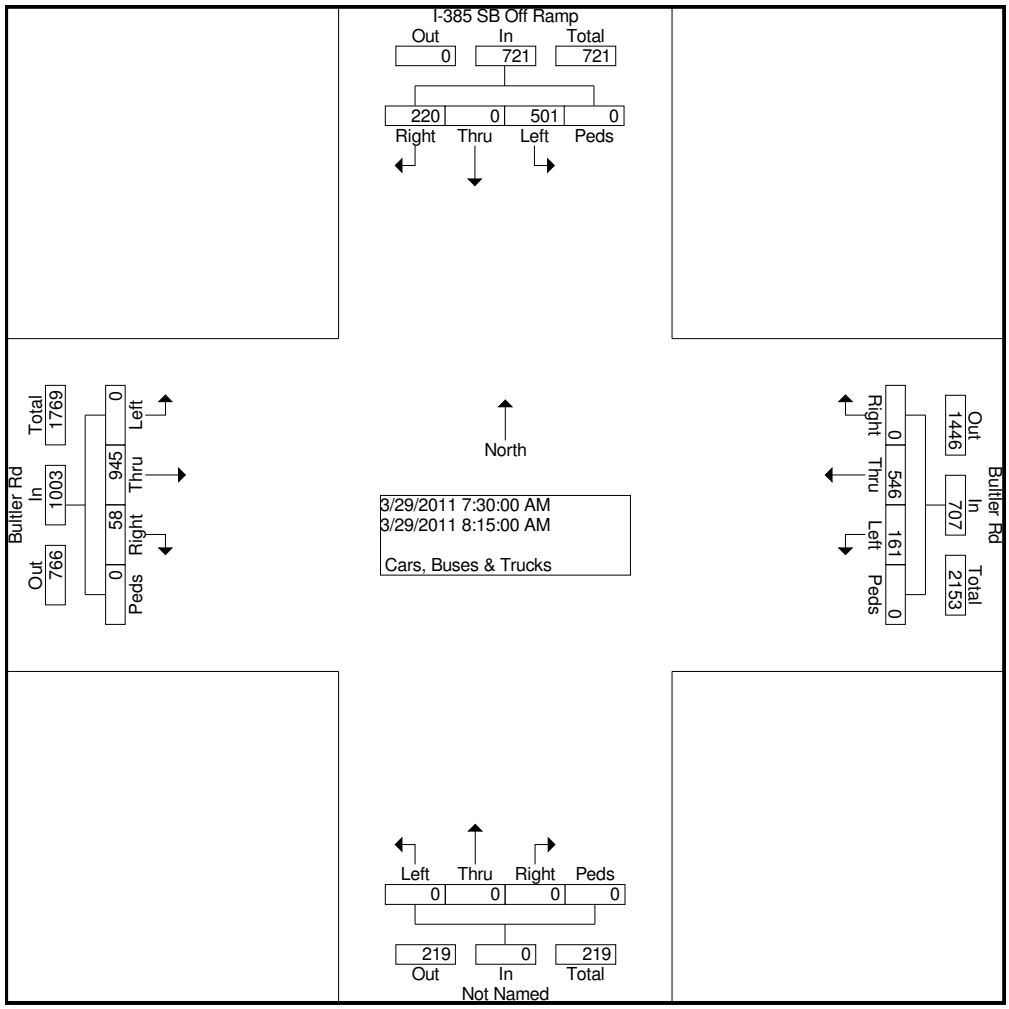
File Name : 25800004-AP
Site Code : 25898004
Start Date : 3/29/2011

	Northbound					I-385 SB Off Ramp Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	0	0	0	0	0	501	0	220	0	721	0	945	58	0	1003	161	546	0	0	707	2431
Percent	0.0	0.0	0.0	0.0		69.5	0.0	30.5	0.0		0.0	94.2	5.8	0.0		22.8	77.2	0.0	0.0		
07:45 Volume	0	0	0	0	0	145	0	49	0	194	0	257	21	0	278	47	109	0	0	156	628
Peak Factor																					0.968
High Int.	6:45:00 AM					07:45 AM					07:30 AM					08:15 AM					
Volume	0	0	0	0	0	145	0	49	0	194	0	275	17	0	292	43	189	0	0	232	
Peak Factor										0.929					0.859					0.762	



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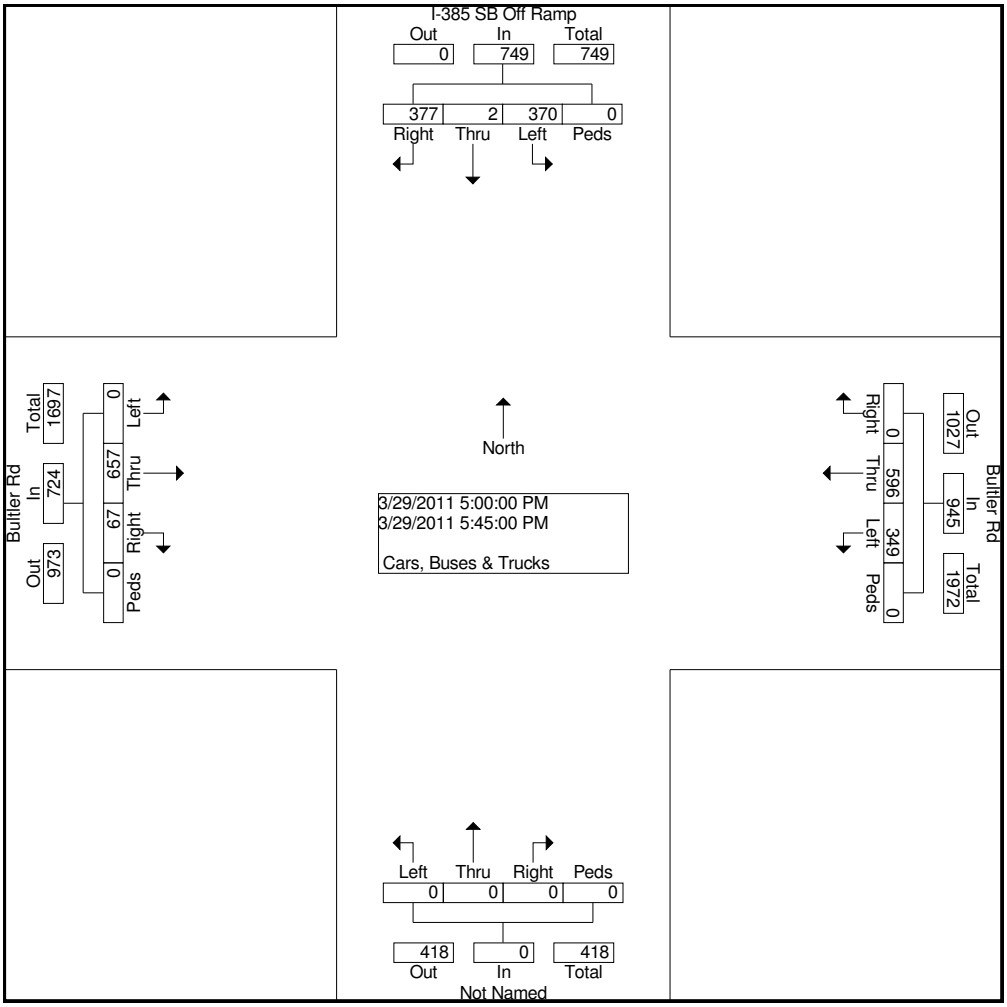
File Name : 25800004-AP
Site Code : 25898004
Start Date : 3/29/2011

	Northbound					I-385 SB Off Ramp Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	0	0	0	0	0	370	2	377	0	749	0	657	67	0	724	349	596	0	0	945	2418
Percent	0.0	0.0	0.0	0.0		49.4	0.3	50.3	0.0		0.0	90.7	9.3	0.0		36.9	63.1	0.0	0.0		
05:30 Volume	0	0	0	0	0	103	1	81	0	185	0	177	28	0	205	83	177	0	0	260	650
Peak Factor																					0.930
High Int.						05:00 PM					05:30 PM					05:30 PM					
Volume	0	0	0	0	0	89	0	104	0	193	0	177	28	0	205	83	177	0	0	260	
Peak Factor										0.970					0.883					0.909	



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File Name : 25800003-AP
Site Code : 25808003
Start Date : 3/29/2011
Page No : 1

Groups Printed- Cars, Buses & Trucks

	I-385 NB Off Ramp Northbound					Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	3	1	60	0	64	0	0	0	1	1	49	121	0	0	170	0	59	49	0	108	343
07:15 AM	3	0	65	0	68	0	0	0	0	0	83	229	0	0	312	0	109	104	0	213	593
07:30 AM	5	0	57	0	62	0	0	0	0	0	129	280	0	0	409	0	145	107	0	252	723
07:45 AM	2	0	61	0	63	0	0	0	0	0	95	313	0	0	408	0	140	124	0	264	735
Total	13	1	243	0	257	0	0	0	1	1	356	943	0	0	1299	0	453	384	0	837	2394
08:00 AM	4	0	70	0	74	0	0	0	0	0	71	254	0	0	325	0	180	124	0	304	703
08:15 AM	5	1	85	0	91	0	0	0	0	0	76	225	0	0	301	0	219	105	0	324	716
08:30 AM	12	0	83	0	95	0	0	0	0	0	56	201	0	0	257	0	271	96	0	367	719
08:45 AM	4	1	76	0	81	0	0	0	0	0	60	179	0	0	239	0	99	70	0	169	489
Total	25	2	314	0	341	0	0	0	0	0	263	859	0	0	1122	0	769	395	0	1164	2627
*** BREAK ***																					
04:00 PM	10	2	54	0	66	0	0	0	1	1	59	219	0	0	278	0	130	96	0	226	571
04:15 PM	7	0	50	0	57	0	0	0	0	0	67	216	0	0	283	0	146	80	0	226	566
04:30 PM	9	0	56	0	65	0	0	0	0	0	47	183	0	0	230	0	153	94	0	247	542
04:45 PM	13	1	65	0	79	0	0	0	0	0	49	183	0	0	232	0	165	90	0	255	566
Total	39	3	225	0	267	0	0	0	1	1	222	801	0	0	1023	0	594	360	0	954	2245
05:00 PM	7	1	45	0	53	0	0	0	0	0	48	190	0	0	238	0	194	167	0	361	652
05:15 PM	10	0	49	0	59	0	0	0	0	0	64	187	0	0	251	0	250	179	0	429	739
05:30 PM	14	0	50	0	64	0	0	0	0	0	67	214	0	0	281	0	237	166	0	403	748
05:45 PM	7	0	54	0	61	0	0	0	0	0	62	195	0	0	257	0	220	168	0	388	706
Total	38	1	198	0	237	0	0	0	0	0	241	786	0	0	1027	0	901	680	0	1581	2845
Grand Total	115	7	980	0	1102	0	0	0	2	2	1082	3389	0	0	4471	0	2717	1819	0	4536	10111
Apprch %	10.4	0.6	88.9	0.0		0.0	0.0	0.0	100.0		24.2	75.8	0.0	0.0		0.0	59.9	40.1	0.0		
Total %	1.1	0.1	9.7	0.0	10.9	0.0	0.0	0.0	0.0	0.0	10.7	33.5	0.0	0.0	44.2	0.0	26.9	18.0	0.0	44.9	

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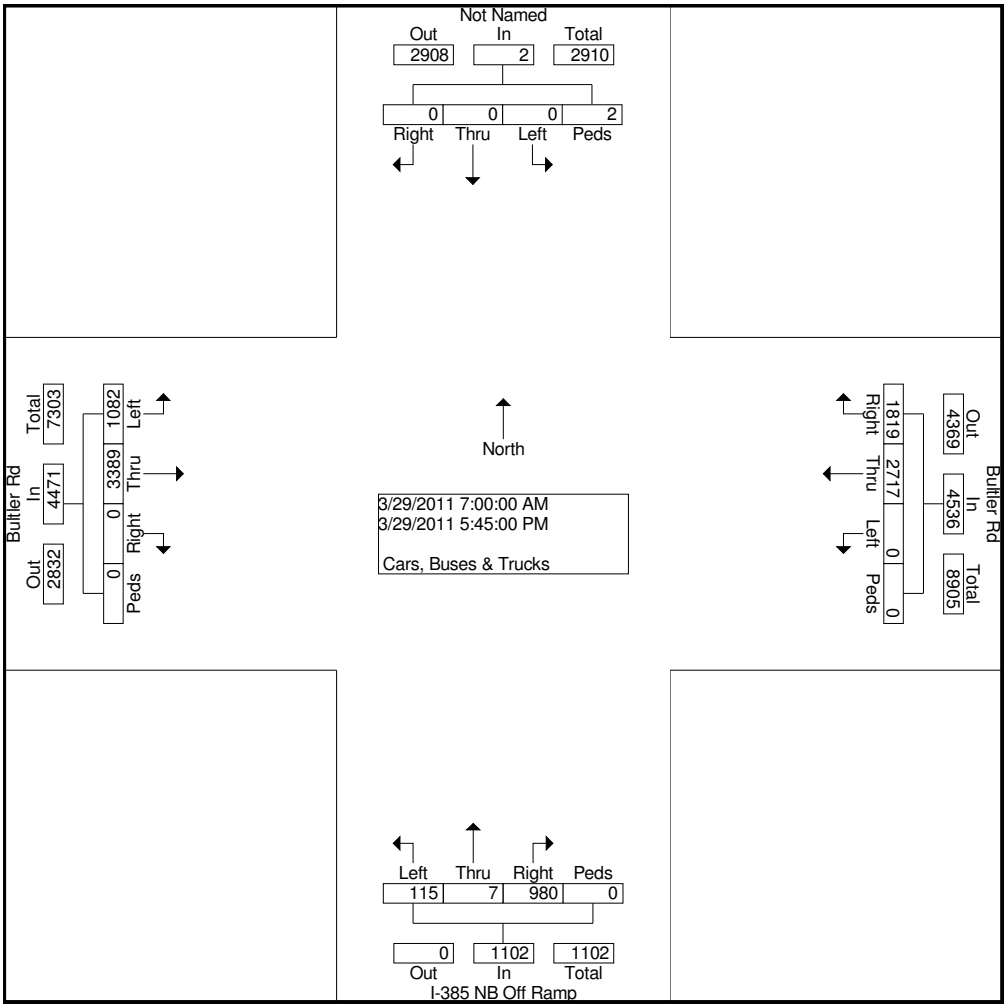

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File Name : 25800003-AP
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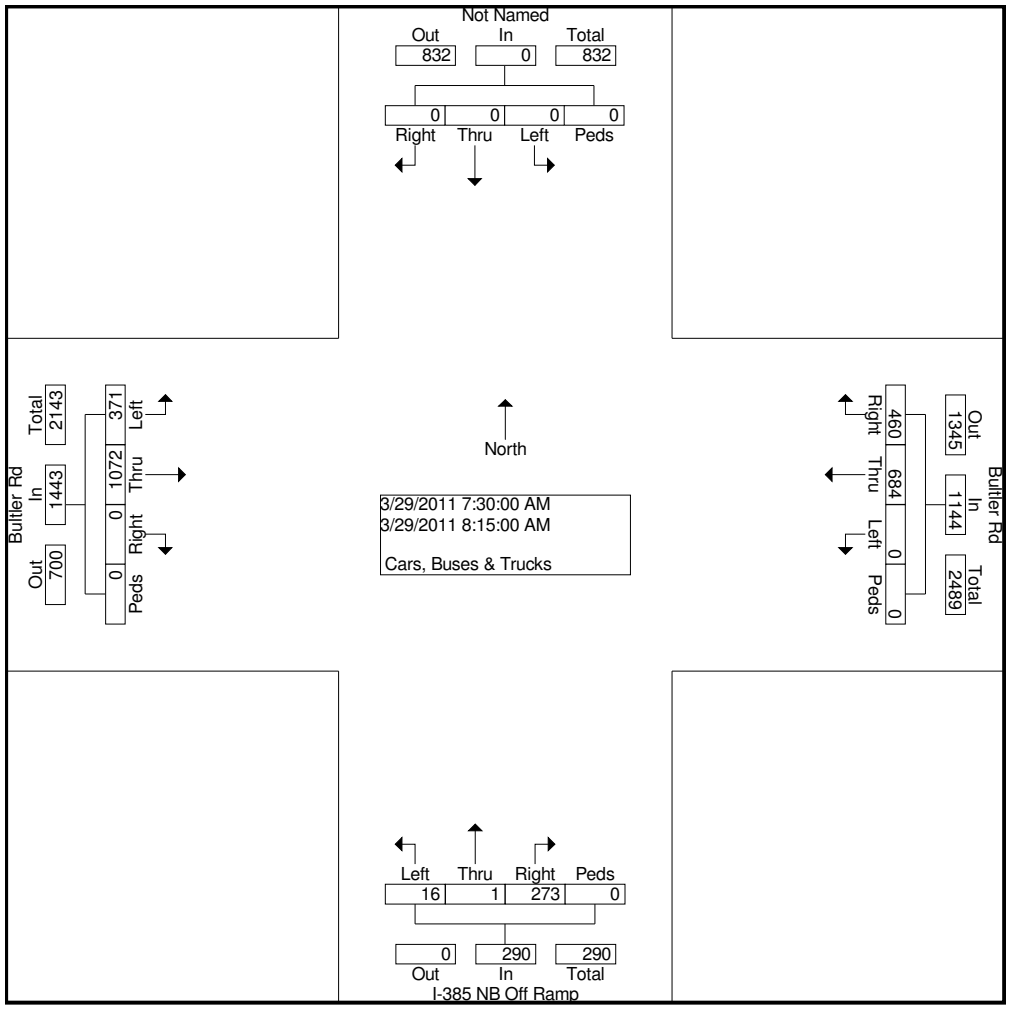
	I-385 NB Off Ramp Northbound					Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	16	1	273	0	290	0	0	0	0	0	371	1072	0	0	1443	0	684	460	0	1144	2877
Percent	5.5	0.3	94.1	0.0		0.0	0.0	0.0	0.0		25.7	74.3	0.0	0.0		0.0	59.8	40.2	0.0		
07:45 Volume	2	0	61	0	63	0	0	0	0	0	95	313	0	0	408	0	140	124	0	264	735
Peak Factor																					0.979
High Int.	08:15 AM					6:45:00 AM					07:30 AM					08:15 AM					
Volume	5	1	85	0	91	0	0	0	0	0	129	280	0	0	409	0	219	105	0	324	
Peak Factor					0.797										0.882					0.883	



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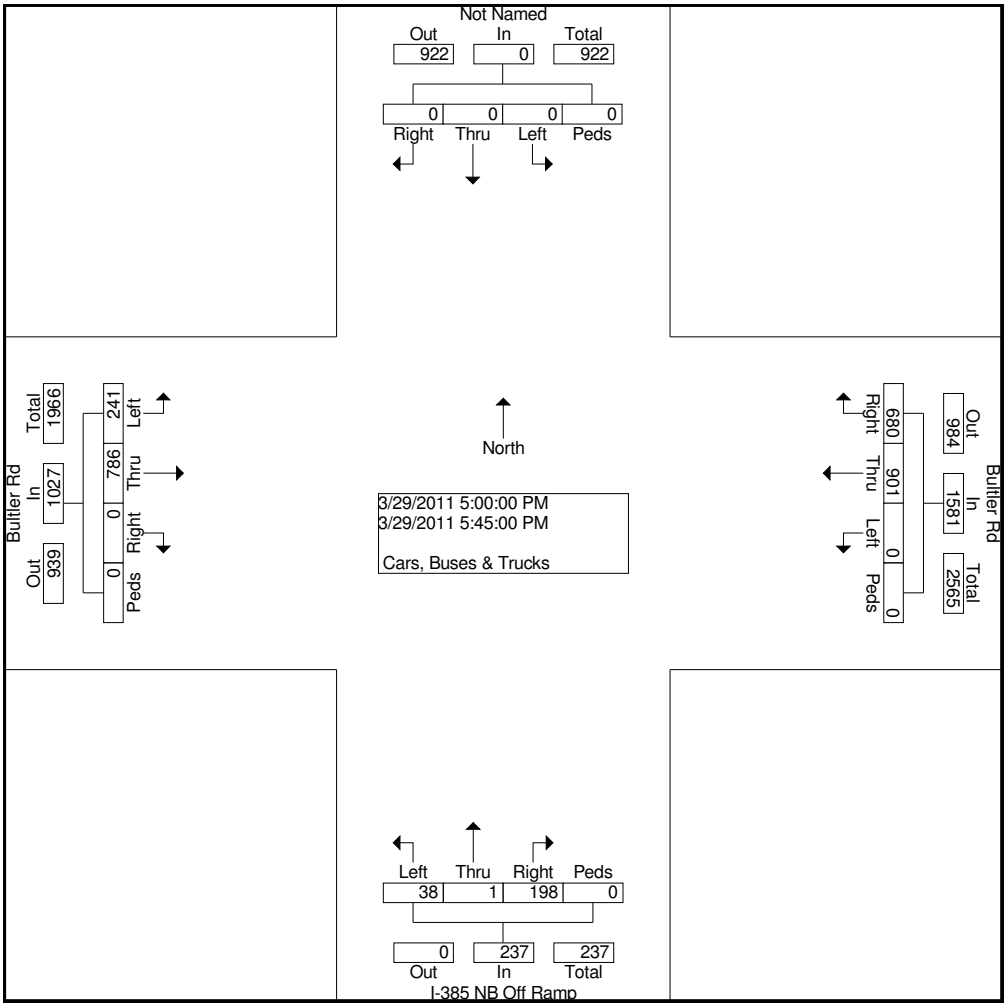
	I-385 NB Off Ramp Northbound					Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection 05:00 PM																					
Volume	38	1	198	0	237	0	0	0	0	0	241	786	0	0	1027	0	901	680	0	1581	2845
Percent	16.0	0.4	83.5	0.0		0.0	0.0	0.0	0.0		23.5	76.5	0.0	0.0		0.0	57.0	43.0	0.0		
05:30 Volume	14	0	50	0	64	0	0	0	0	0	67	214	0	0	281	0	237	166	0	403	748
Peak Factor																					0.951
High Int. 05:30 PM																					
Volume	14	0	50	0	64	0	0	0	0	0	67	214	0	0	281	0	250	179	0	429	
Peak Factor					0.926										0.914					0.921	



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File Name : 25800002-AP
Site Code : 25808002
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Groups Printed- Cars, Buses & Trucks

	New Commerce Ct Northbound					Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	8	0	17	0	25	0	0	0	0	0	0	175	3	0	178	5	105	0	0	110	313
07:15 AM	5	0	11	0	16	0	0	0	0	0	0	297	2	0	299	5	208	0	0	213	528
07:30 AM	7	0	16	0	23	0	0	0	0	0	0	324	1	0	325	14	252	0	0	266	614
07:45 AM	14	0	17	0	31	0	0	0	0	0	0	382	2	0	384	8	249	0	0	257	672
Total	34	0	61	0	95	0	0	0	0	0	0	1178	8	0	1186	32	814	0	0	846	2127
08:00 AM	11	0	8	0	19	0	0	0	0	0	0	319	2	0	321	6	287	0	0	293	633
08:15 AM	8	0	16	0	24	0	0	0	0	0	0	301	8	0	309	9	311	0	0	320	653
08:30 AM	15	0	11	0	26	0	0	0	0	0	0	278	7	0	285	9	352	0	0	361	672
08:45 AM	8	0	19	0	27	0	0	0	0	0	0	247	7	0	254	17	164	0	0	181	462
Total	42	0	54	0	96	0	0	0	0	0	0	1145	24	0	1169	41	1114	0	0	1155	2420
*** BREAK ***																					
04:00 PM	7	0	15	0	22	0	0	0	1	1	0	265	6	0	271	11	219	0	0	230	524
04:15 PM	14	0	10	0	24	0	0	0	0	0	0	261	4	0	265	9	211	0	0	220	509
04:30 PM	10	0	10	0	20	0	0	0	0	0	0	242	3	0	245	10	236	0	0	246	511
04:45 PM	4	0	16	0	20	0	0	0	0	0	0	235	5	0	240	14	251	0	0	265	525
Total	35	0	51	0	86	0	0	0	1	1	0	1003	18	0	1021	44	917	0	0	961	2069
05:00 PM	18	0	17	0	35	0	0	0	0	0	0	241	2	0	243	14	343	0	0	357	635
05:15 PM	11	0	15	0	26	0	0	0	0	0	0	239	2	0	241	15	403	0	0	418	685
05:30 PM	15	0	17	0	32	0	0	0	0	0	0	261	0	0	261	12	401	0	0	413	706
05:45 PM	7	0	9	0	16	0	0	0	0	0	0	248	0	0	248	10	381	0	0	391	655
Total	51	0	58	0	109	0	0	0	0	0	0	989	4	0	993	51	1528	0	0	1579	2681
Grand Total	162	0	224	0	386	0	0	0	1	1	0	4315	54	0	4369	168	4373	0	0	4541	9297
Apprch %	42.0	0.0	58.0	0.0		0.0	0.0	0.0	100.0		0.0	98.8	1.2	0.0		3.7	96.3	0.0	0.0		
Total %	1.7	0.0	2.4	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	46.4	0.6	0.0	47.0	1.8	47.0	0.0	0.0	48.8	

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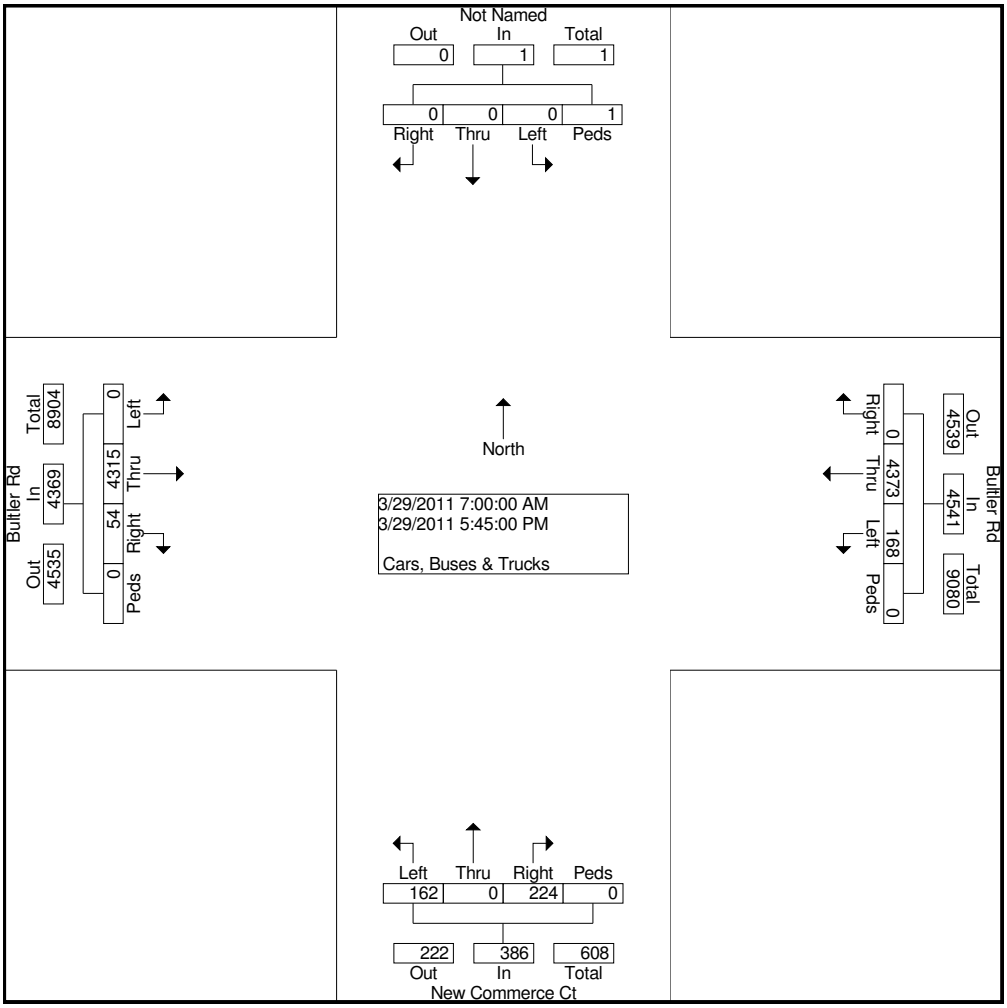

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File Name : 25800002-AP
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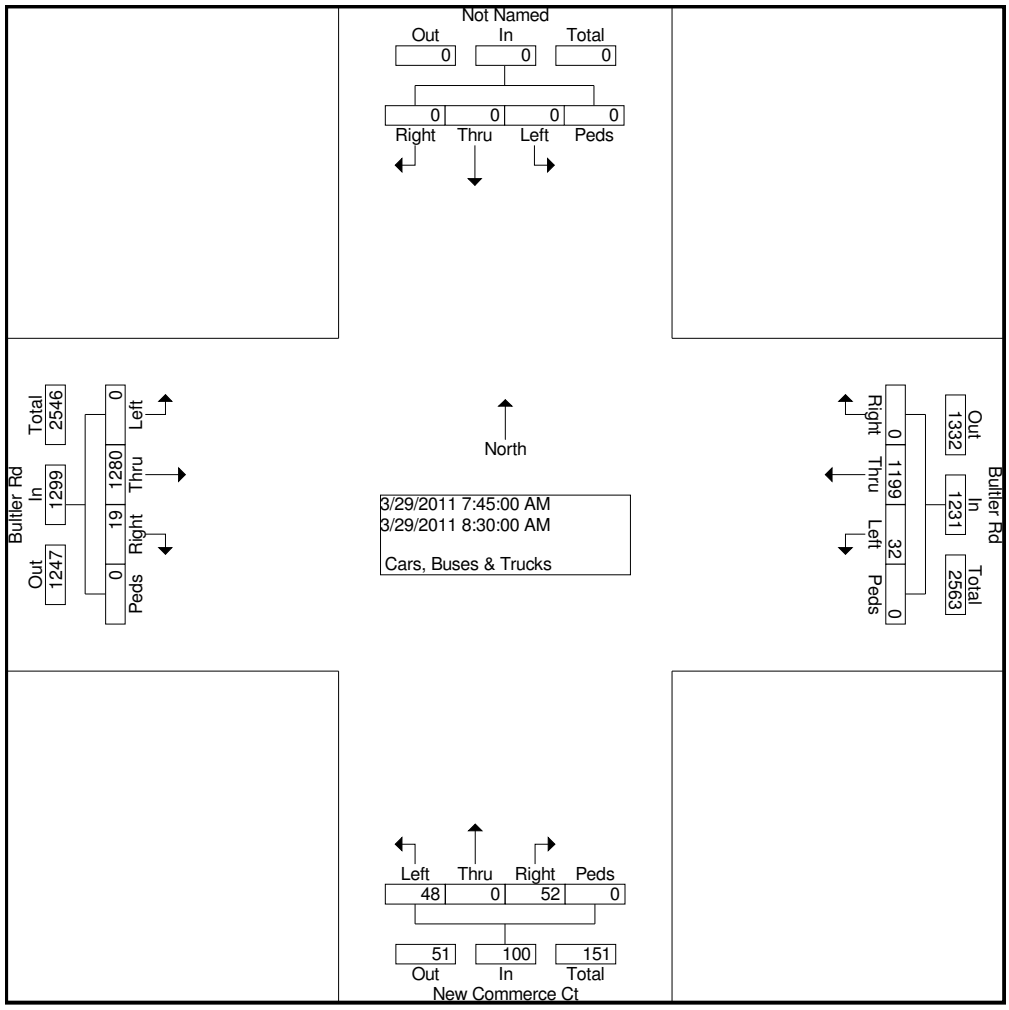
	New Commerce Ct Northbound					Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	48	0	52	0	100	0	0	0	0	0	0	1280	19	0	1299	32	1199	0	0	1231	2630
Percent	48.0	0.0	52.0	0.0		0.0	0.0	0.0	0.0		0.0	98.5	1.5	0.0		2.6	97.4	0.0	0.0		
08:30 Volume	15	0	11	0	26	0	0	0	0	0	0	278	7	0	285	9	352	0	0	361	672
Peak Factor																					0.978
High Int.	07:45 AM					6:45:00 AM					07:45 AM					08:30 AM					
Volume	14	0	17	0	31	0	0	0	0	0	0	382	2	0	384	9	352	0	0	361	
Peak Factor					0.806										0.846					0.852	



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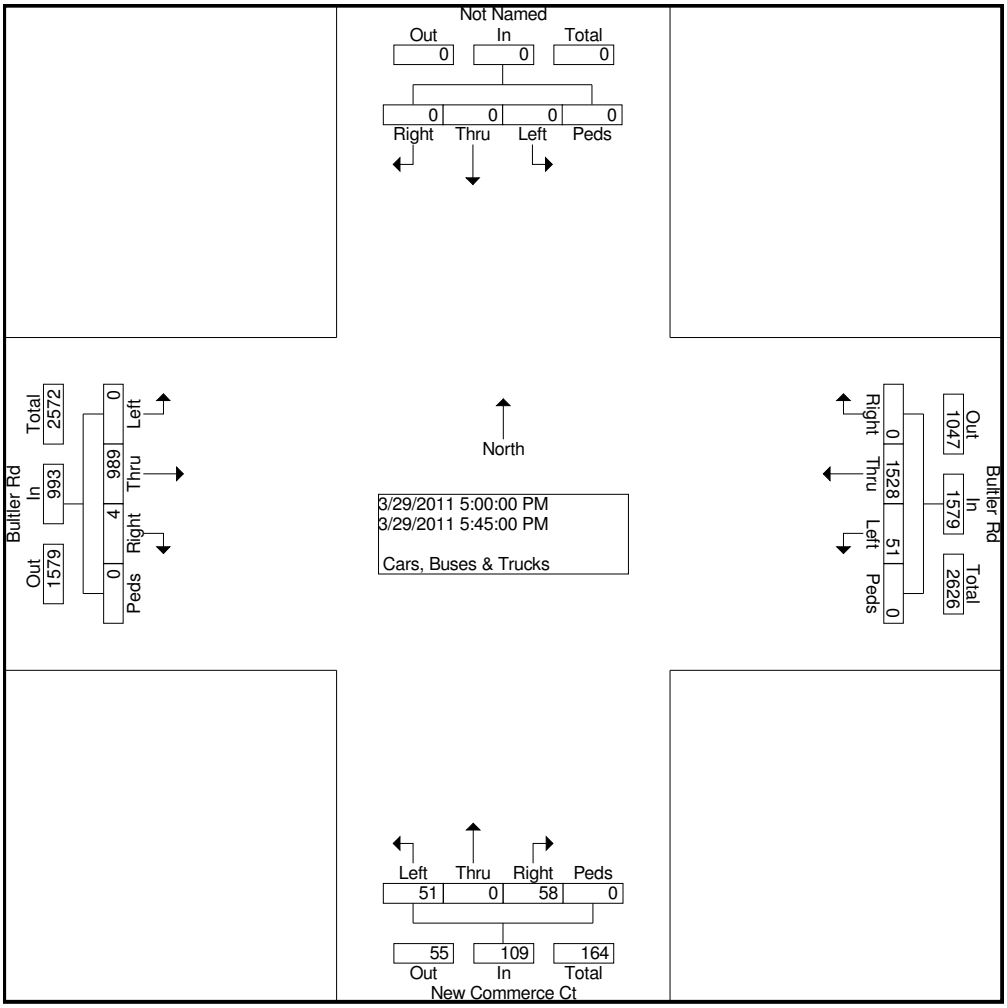
	New Commerce Ct Northbound					Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	51	0	58	0	109	0	0	0	0	0	0	989	4	0	993	51	1528	0	0	1579	2681
Percent	46.8	0.0	53.2	0.0		0.0	0.0	0.0	0.0		0.0	99.6	0.4	0.0		3.2	96.8	0.0	0.0		
05:30 Volume	15	0	17	0	32	0	0	0	0	0	0	261	0	0	261	12	401	0	0	413	706
Peak Factor																					0.949
High Int.	05:00 PM										05:30 PM					05:15 PM					
Volume	18	0	17	0	35	0	0	0	0	0	0	261	0	0	261	15	403	0	0	418	
Peak Factor					0.779										0.951					0.944	



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File Name : 25800001-AP
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Groups Printed- Cars, Buses & Trucks

	Brookfield Oks Drive Northbound					Brookfield Blvd Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	4	0	0	0	4	0	0	1	0	1	12	172	1	0	185	3	128	15	0	146	336
07:15 AM	2	0	0	0	2	0	0	2	0	2	41	275	2	0	318	3	189	14	0	206	528
07:30 AM	5	0	1	0	6	0	0	1	0	1	42	284	9	0	335	1	262	11	0	274	616
07:45 AM	6	0	1	0	7	0	0	2	0	2	51	338	8	0	397	8	251	9	0	268	674
Total	17	0	2	0	19	0	0	6	0	6	146	1069	20	0	1235	15	830	49	0	894	2154
08:00 AM	5	0	2	0	7	0	0	4	0	4	16	307	4	0	327	4	282	2	0	288	626
08:15 AM	4	0	2	0	6	0	0	4	0	4	13	295	6	0	314	1	304	1	0	306	630
08:30 AM	3	0	4	0	7	0	0	2	0	2	6	287	1	0	294	2	338	4	0	344	647
08:45 AM	5	1	0	0	6	0	0	4	0	4	10	248	4	0	262	6	175	7	0	188	460
Total	17	1	8	0	26	0	0	14	0	14	45	1137	15	0	1197	13	1099	14	0	1126	2363
*** BREAK ***																					
04:00 PM	3	0	3	0	6	0	0	11	0	11	6	272	2	0	280	4	217	6	0	227	524
04:15 PM	4	0	0	0	4	0	0	7	0	7	6	264	3	0	273	1	214	3	0	218	502
04:30 PM	3	0	4	0	7	0	0	8	0	8	4	241	3	0	248	0	229	2	0	231	494
04:45 PM	3	0	3	0	6	0	0	9	0	9	2	246	2	0	250	0	256	1	0	257	522
Total	13	0	10	0	23	0	0	35	0	35	18	1023	10	0	1051	5	916	12	0	933	2042
05:00 PM	7	0	2	0	9	1	0	68	0	69	5	241	0	0	246	1	281	3	0	285	609
05:15 PM	3	0	0	0	3	0	0	23	0	23	3	262	0	0	265	0	387	2	0	389	680
05:30 PM	5	0	2	0	7	1	0	53	0	54	4	274	2	0	280	0	355	1	0	356	697
05:45 PM	1	0	0	0	1	0	1	27	0	28	3	251	2	0	256	0	363	3	0	366	651
Total	16	0	4	0	20	2	1	171	0	174	15	1028	4	0	1047	1	1386	9	0	1396	2637
Grand Total	63	1	24	0	88	2	1	226	0	229	224	4257	49	0	4530	34	4231	84	0	4349	9196
Apprch %	71.6	1.1	27.3	0.0		0.9	0.4	98.7	0.0		4.9	94.0	1.1	0.0		0.8	97.3	1.9	0.0		
Total %	0.7	0.0	0.3	0.0	1.0	0.0	0.0	2.5	0.0	2.5	2.4	46.3	0.5	0.0	49.3	0.4	46.0	0.9	0.0	47.3	

Georgia Traffic, Inc.
Professional Traffic Studies
Tel: 770-926-5949
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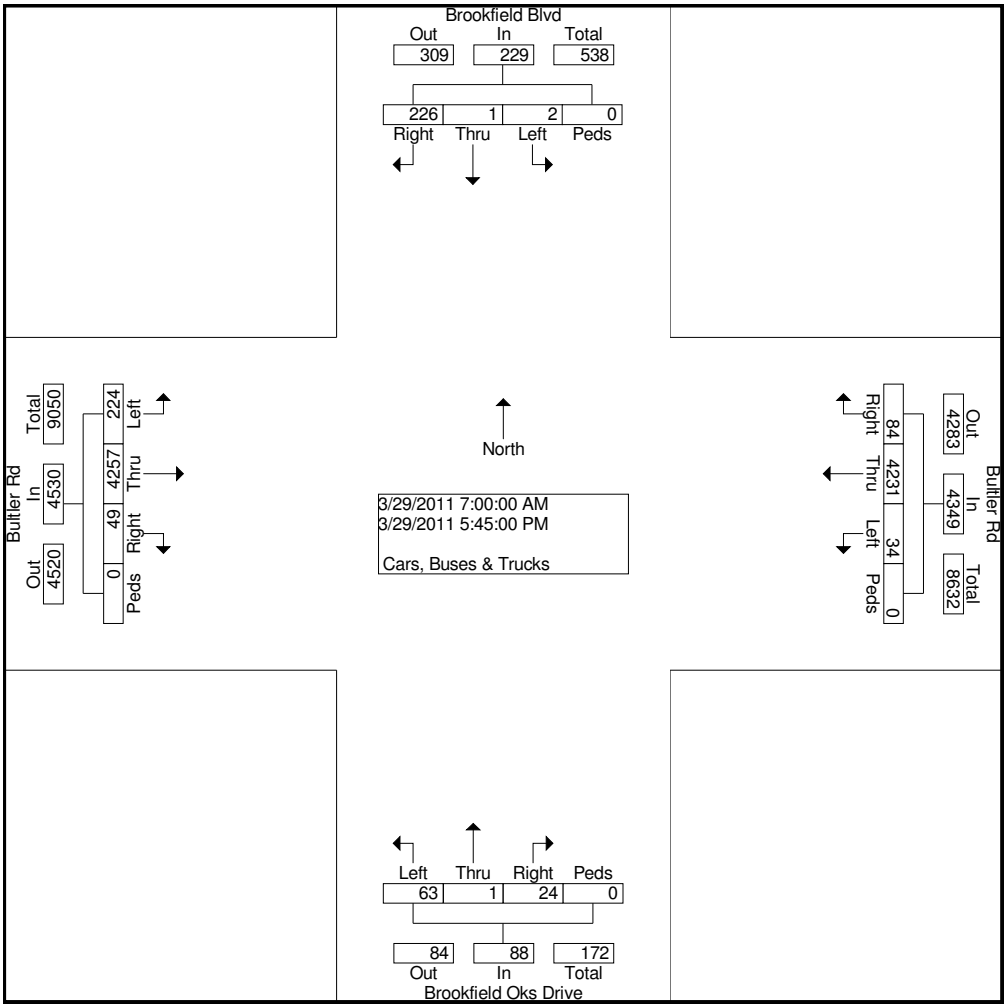
File Name : 25800001-AP
Site Code : 25808001
Start Date : 3/29/2011
Page No : 2



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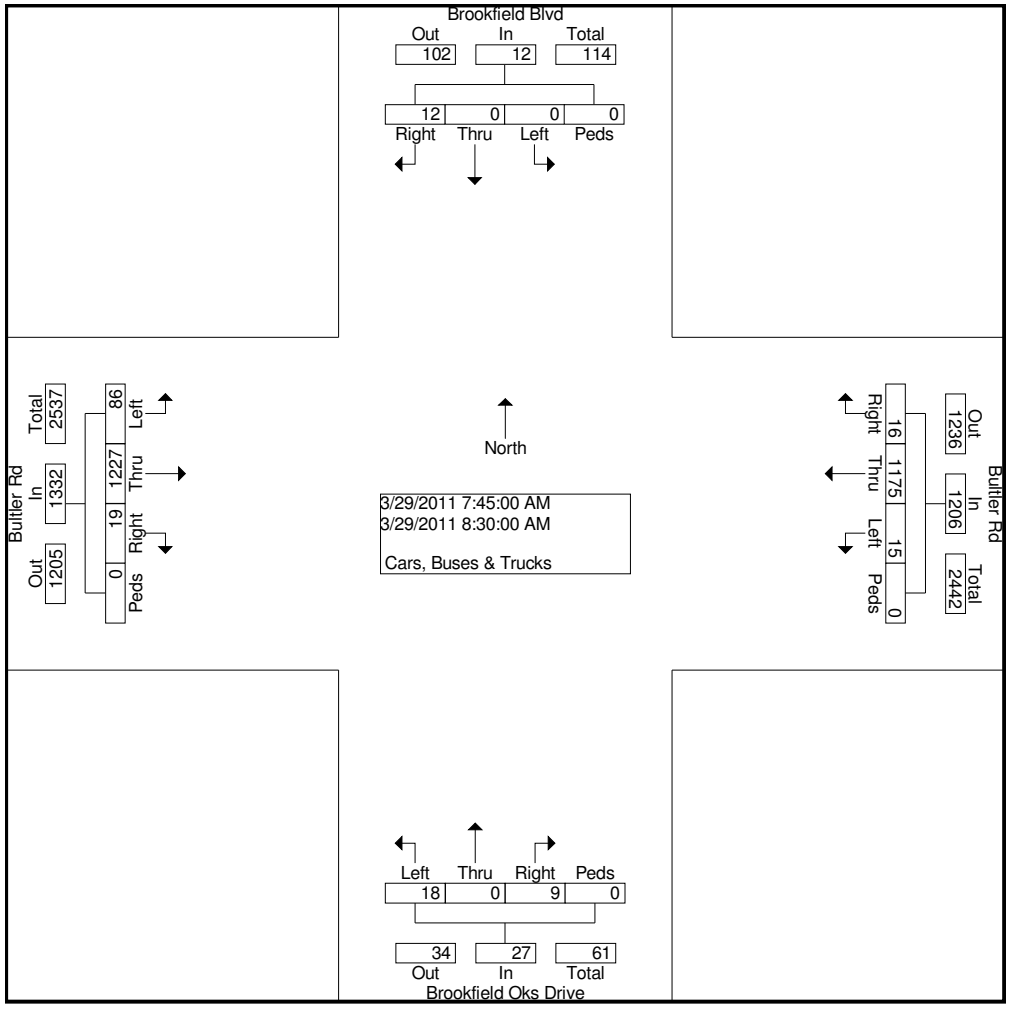
File Name : 25800001-AP
Site Code : 25808001
Start Date : 3/29/2011
Page No : 3

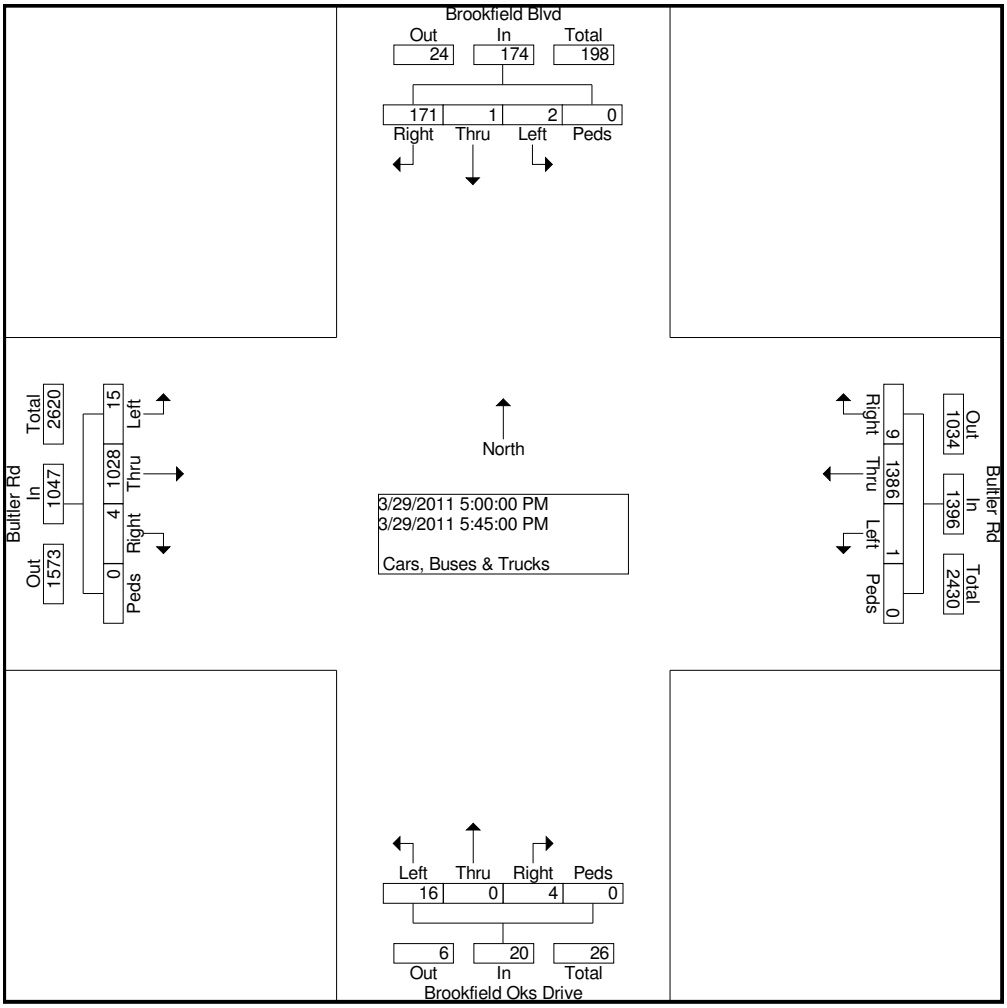
	Brookfield Oks Drive Northbound					Brookfield Blvd Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	18	0	9	0	27	0	0	12	0	12	86	1227	19	0	1332	15	1175	16	0	1206	2577
Percent	66.7	0.0	33.3	0.0		0.0	0.0	100.0	0.0		6.5	92.1	1.4	0.0		1.2	97.4	1.3	0.0		
07:45 Volume	6	0	1	0	7	0	0	2	0	2	51	338	8	0	397	8	251	9	0	268	674
Peak Factor																					0.956
High Int.	07:45 AM					08:00 AM					07:45 AM					08:30 AM					
Volume	6	0	1	0	7	0	0	4	0	4	51	338	8	0	397	2	338	4	0	344	
Peak Factor					0.964					0.750					0.839					0.876	



Georgia Traffic, Inc.
Professional Traffic Studies
Tel: 770-926-5949
www.Georgia-Traffic.com

File Name : 25800001-AP
Site Code : 25808001
Start Date : 3/29/2011
Page No : 4

	Brookfield Oks Drive Northbound					Brookfield Blvd Southbound					Bultler Rd Eastbound					Bultler Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	16	0	4	0	20	2	1	171	0	174	15	1028	4	0	1047	1	1386	9	0	1396	2637
Percent	80.0	0.0	20.0	0.0		1.1	0.6	98.3	0.0		1.4	98.2	0.4	0.0		0.1	99.3	0.6	0.0		
05:30 Volume	5	0	2	0	7	1	0	53	0	54	4	274	2	0	280	0	355	1	0	356	697
Peak Factor																					0.946
High Int.	05:00 PM					05:00 PM					05:30 PM					05:15 PM					
Volume	7	0	2	0	9	1	0	68	0	69	4	274	2	0	280	0	387	2	0	389	
Peak Factor					0.556					0.630					0.935					0.897	



TRAFFIC COUNTS – BUTLER RD 24-HOUR TUBE COUNTS

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 000025808025
Station ID:
E. Butler Rd
West of Rothwell Dr
Latitude: 0' 0.000 Undefined

EB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
03/29/11	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
00:15	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
00:30	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
00:45	0	10	1	0	0	0	0	0	0	0	0	0	0	0	11
	0	35	3	0	0	0	0	0	0	0	0	0	0	0	38
01:00	0	8	2	0	0	0	0	0	0	0	0	0	0	0	10
01:15	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
01:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
01:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	0	20	4	0	0	0	0	0	0	0	0	0	0	0	24
02:00	0	5	0	0	1	0	0	0	0	0	0	0	0	0	6
02:15	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
02:30	0	3	0	0	1	0	0	0	0	0	0	0	0	0	4
02:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
	0	15	0	0	2	0	0	0	0	0	0	0	0	0	17
03:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
03:15	0	5	2	0	0	0	0	0	0	0	0	0	0	0	7
03:30	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
03:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
	0	13	4	0	0	0	0	0	0	0	0	0	0	0	17
04:00	0	6	2	0	1	0	0	0	0	0	0	0	0	0	9
04:15	0	5	0	0	1	0	0	0	0	0	0	0	0	0	6
04:30	0	13	4	0	0	0	0	0	0	0	0	0	0	0	17
04:45	0	16	1	0	0	0	0	0	0	0	0	0	0	0	17
	0	40	7	0	2	0	0	0	0	0	0	0	0	0	49
05:00	0	16	2	0	2	0	0	0	0	0	0	0	0	0	20
05:15	0	30	3	0	2	0	0	0	0	0	0	0	0	0	35
05:30	0	31	3	0	1	0	0	0	0	0	0	0	0	0	35
05:45	0	41	9	0	0	0	0	0	0	0	0	0	0	0	50
	0	118	17	0	5	0	0	0	0	0	0	0	0	0	140
06:00	0	50	6	0	0	0	0	1	0	0	0	0	0	0	57
06:15	0	67	5	0	1	0	0	0	0	0	0	0	0	0	73
06:30	0	60	10	1	3	0	0	0	1	1	0	0	0	0	76
06:45	1	78	8	1	0	1	0	0	0	0	0	1	0	0	90
	1	255	29	2	4	1	0	1	1	1	0	1	0	0	296
07:00	0	155	9	2	3	2	0	0	0	2	0	0	0	0	173
07:15	1	199	29	2	1	3	1	3	0	1	0	0	1	0	241
07:30	1	238	20	3	1	3	2	3	2	4	0	0	4	0	281
07:45	1	186	25	2	1	2	1	0	0	1	0	0	1	0	220
	3	778	83	9	6	10	4	6	2	8	0	0	6	0	915
08:00	1	177	21	1	3	1	0	4	0	1	0	0	0	0	209
08:15	0	166	16	2	4	0	1	1	0	2	0	0	0	0	192
08:30	0	152	18	3	3	0	1	0	0	0	0	0	0	0	177
08:45	0	131	27	2	5	1	2	2	1	3	0	1	0	0	175
	1	626	82	8	15	2	4	7	1	6	0	1	0	0	753
09:00	0	91	15	0	3	0	0	2	0	0	0	0	0	0	111
09:15	0	82	16	0	2	0	0	0	0	0	0	1	0	0	101
09:30	0	84	19	2	5	0	0	0	0	1	0	1	0	0	112
09:45	0	79	13	1	2	0	2	2	0	0	0	0	0	0	99
	0	336	63	3	12	0	2	4	0	1	0	2	0	0	423
10:00	1	84	13	0	4	0	0	1	0	0	0	0	0	0	103
10:15	0	82	13	0	4	0	1	0	2	0	1	0	0	0	103
10:30	0	100	14	0	0	1	0	2	1	0	0	0	0	0	118
10:45	0	94	11	0	5	0	0	2	0	0	0	0	0	0	112
	1	360	51	0	13	1	1	5	3	0	1	0	0	0	436
11:00	0	80	18	1	0	0	2	2	0	0	0	0	0	0	103
11:15	0	109	22	2	3	0	1	3	0	0	0	0	0	0	140
11:30	0	109	11	1	1	0	0	1	0	1	0	0	1	0	125
11:45	0	90	20	0	3	0	0	4	0	1	0	0	0	0	118
	0	388	71	4	7	0	3	10	0	2	0	0	1	0	486
Total	6	2984	414	26	66	14	14	33	7	18	1	4	7	0	3594
Percent	0.2%	83.0%	11.5%	0.7%	1.8%	0.4%	0.4%	0.9%	0.2%	0.5%	0.0%	0.1%	0.2%	0.0%	

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 000025808025
Station ID:
E. Butler Rd
West of Rothwell Dr
Latitude: 0' 0.000 Undefined

EB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	103	17	1	0	0	1	2	0	0	0	0	0	0	124
12:15	0	98	18	2	1	0	0	1	0	1	0	0	1	0	122
12:30	0	108	19	1	2	0	2	2	0	3	0	0	2	0	139
12:45	0	114	17	1	1	0	0	2	0	0	0	1	0	0	136
	0	423	71	5	4	0	3	7	0	4	0	1	3	0	521
13:00	0	119	13	2	1	0	1	3	1	1	0	1	0	0	142
13:15	0	112	17	2	5	0	1	0	0	0	0	0	0	0	137
13:30	1	92	17	2	0	0	1	0	0	0	0	1	0	0	114
13:45	0	142	14	1	1	0	0	3	0	0	0	0	1	0	162
	1	465	61	7	7	0	3	6	1	1	0	2	1	0	555
14:00	0	120	14	1	2	0	0	1	0	1	0	0	0	0	139
14:15	0	112	16	4	1	0	0	1	1	1	0	0	0	0	136
14:30	0	102	16	4	1	0	1	4	0	3	0	0	0	0	131
14:45	0	122	12	1	2	0	1	3	0	2	0	0	0	0	143
	0	456	58	10	6	0	2	9	1	7	0	0	0	0	549
15:00	0	111	17	0	2	1	0	1	0	0	0	0	0	0	132
15:15	0	95	12	2	1	0	1	2	0	0	0	1	0	0	114
15:30	0	129	17	2	3	0	2	1	0	0	0	0	0	0	154
15:45	0	163	22	2	4	1	3	4	0	3	0	0	3	0	205
	0	498	68	6	10	2	6	8	0	3	0	1	3	0	605
16:00	0	174	21	2	2	0	2	3	0	2	0	0	1	0	207
16:15	0	186	14	1	4	0	1	2	0	1	0	1	0	0	210
16:30	0	163	19	1	1	0	1	1	1	0	0	0	0	0	187
16:45	1	182	20	1	1	1	1	1	0	0	0	0	0	0	208
	1	705	74	5	8	1	5	7	1	3	0	1	1	0	812
17:00	0	152	17	2	1	0	1	1	0	0	0	2	0	0	176
17:15	1	156	20	1	1	0	1	1	0	0	0	1	0	0	182
17:30	0	140	18	1	1	0	1	2	0	1	0	0	0	0	164
17:45	0	135	19	1	2	0	1	0	0	0	0	0	0	0	158
	1	583	74	5	5	0	4	4	0	1	0	3	0	0	680
18:00	0	128	21	2	1	1	0	2	0	0	0	0	0	0	155
18:15	0	108	14	0	1	0	2	1	0	1	0	0	1	0	128
18:30	1	126	12	1	0	0	0	2	1	0	0	1	0	0	144
18:45	0	92	8	0	1	0	2	1	0	0	0	0	0	0	104
	1	454	55	3	3	1	4	6	1	1	0	1	1	0	531
19:00	0	94	14	0	0	0	0	2	0	0	0	0	0	0	110
19:15	0	70	7	0	0	0	0	0	0	0	0	0	0	0	77
19:30	0	94	13	0	0	0	0	0	0	1	0	0	0	0	108
19:45	0	58	13	0	2	0	0	1	0	0	0	0	0	0	74
	0	316	47	0	2	0	0	3	0	1	0	0	0	0	369
20:00	0	52	8	0	0	0	0	0	0	0	0	0	0	0	60
20:15	0	56	8	0	0	0	0	1	0	0	0	0	0	0	65
20:30	0	63	7	0	1	0	1	2	0	0	0	0	0	0	74
20:45	0	53	0	0	2	0	0	1	0	0	0	0	0	0	56
	0	224	23	0	3	0	1	4	0	0	0	0	0	0	255
21:00	0	42	6	0	0	0	0	0	0	0	0	0	0	0	48
21:15	0	31	3	0	1	0	0	1	0	0	0	0	0	0	36
21:30	0	38	5	0	0	0	0	0	0	0	0	0	0	0	43
21:45	0	31	4	0	1	0	0	0	0	0	0	0	0	0	36
	0	142	18	0	2	0	0	1	0	0	0	0	0	0	163
22:00	0	56	4	1	1	1	0	0	0	0	0	0	0	0	63
22:15	0	30	3	0	0	0	0	0	0	0	0	0	0	0	33
22:30	0	25	4	0	0	0	0	0	0	0	0	0	0	0	29
22:45	0	25	1	0	0	0	0	0	0	0	0	0	0	0	26
	0	136	12	1	1	1	0	0	0	0	0	0	0	0	151
23:00	0	23	2	0	0	0	0	0	0	0	0	0	0	0	25
23:15	0	16	1	0	0	0	0	0	0	0	0	0	0	0	17
23:30	0	15	1	0	0	0	0	0	0	0	0	0	0	0	16
23:45	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
	0	64	6	0	0	0	0	0	0	0	0	0	0	0	70
Total	4	4466	567	42	51	5	28	55	4	21	0	9	9	0	5261
Percent	0.1%	84.9%	10.8%	0.8%	1.0%	0.1%	0.5%	1.0%	0.1%	0.4%	0.0%	0.2%	0.2%	0.0%	
Grand Total	10	7450	981	68	117	19	42	88	11	39	1	13	16	0	8855
Percent	0.1%	84.1%	11.1%	0.8%	1.3%	0.2%	0.5%	1.0%	0.1%	0.4%	0.0%	0.1%	0.2%	0.0%	

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 000025808026
Station ID:
E. Butler Rd
West of Rothwell Dr
Latitude: 0' 0.000 Undefined

WB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
03/29/11	0	20	0	0	0	0	0	0	0	0	0	0	0	0	20
00:15	0	31	2	0	1	0	0	0	0	0	0	0	0	0	34
00:30	0	18	0	0	0	0	0	0	0	0	0	0	0	0	18
00:45	0	17	0	0	0	0	0	0	0	0	0	0	0	0	17
	0	86	2	0	1	0	0	0	0	0	0	0	0	0	89
01:00	0	12	1	0	0	0	0	0	0	0	0	0	0	0	13
01:15	0	12	0	0	0	0	0	0	0	0	0	0	0	0	12
01:30	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
01:45	0	11	1	0	0	0	0	0	0	0	0	0	0	0	12
	0	42	3	0	0	0	0	0	0	0	0	0	0	0	45
02:00	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
02:15	0	10	0	0	0	0	0	0	0	0	0	0	0	0	10
02:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
02:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
	0	28	1	0	0	0	0	0	0	0	0	0	0	0	29
03:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
03:15	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
03:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:45	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
	0	20	3	0	0	0	0	0	0	0	0	0	0	0	23
04:00	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
04:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:30	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
04:45	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
	0	29	1	0	0	0	0	0	0	0	0	0	0	0	30
05:00	0	4	1	0	1	0	0	0	1	0	0	0	0	0	7
05:15	0	11	2	0	0	0	0	0	0	0	0	0	0	0	13
05:30	0	11	2	0	0	1	1	0	1	0	0	0	0	0	16
05:45	0	13	3	0	1	0	0	1	0	0	0	0	0	0	18
	0	39	8	0	2	1	1	1	2	0	0	0	0	0	54
06:00	0	21	2	0	1	0	0	0	0	0	0	0	0	0	24
06:15	0	40	10	0	3	0	2	0	1	0	0	0	0	0	56
06:30	0	37	9	1	1	0	0	0	0	0	0	0	0	0	48
06:45	1	51	9	1	0	0	0	2	0	0	0	0	0	0	64
	1	149	30	2	5	0	2	2	1	0	0	0	0	0	192
07:00	0	57	7	0	0	0	0	0	0	0	0	0	0	0	64
07:15	0	110	11	1	1	0	0	1	0	2	1	1	0	0	128
07:30	1	119	12	0	1	0	1	0	0	0	0	0	0	0	134
07:45	1	123	18	1	0	0	1	6	0	3	1	0	1	0	155
	2	409	48	2	2	0	2	7	0	5	2	1	1	0	481
08:00	0	176	24	1	0	0	2	0	0	1	0	2	3	0	209
08:15	0	202	26	2	1	1	3	4	1	4	0	1	6	0	251
08:30	3	187	28	3	0	1	3	2	2	6	0	2	7	0	244
08:45	0	158	25	1	1	1	1	1	0	0	0	0	0	0	188
	3	723	103	7	2	3	9	7	3	11	0	5	16	0	892
09:00	0	103	17	1	0	0	0	0	1	1	0	1	0	0	124
09:15	0	89	10	2	1	0	0	0	0	0	0	0	0	0	102
09:30	0	59	13	0	1	0	1	1	0	0	0	0	0	0	75
09:45	0	62	13	0	2	0	0	3	0	0	0	0	0	0	80
	0	313	53	3	4	0	1	4	1	1	0	1	0	0	381
10:00	1	62	10	2	2	0	0	2	0	0	0	0	1	0	80
10:15	1	75	12	0	1	1	1	0	0	1	0	0	0	0	92
10:30	0	84	14	1	3	0	0	0	0	0	0	0	0	0	102
10:45	0	70	17	0	3	0	0	4	0	1	0	0	0	0	95
	2	291	53	3	9	1	1	6	0	2	0	0	1	0	369
11:00	0	95	20	1	0	1	0	1	0	0	0	1	1	0	120
11:15	0	109	14	1	2	0	2	2	0	0	0	0	0	0	130
11:30	0	84	12	0	2	1	0	0	0	1	0	0	2	0	102
11:45	0	119	17	1	2	0	0	2	0	1	0	1	1	0	144
	0	407	63	3	6	2	2	5	0	2	0	2	4	0	496
Total	8	2536	368	20	31	7	18	32	7	21	2	9	22	0	3081
Percent	0.3%	82.3%	11.9%	0.6%	1.0%	0.2%	0.6%	1.0%	0.2%	0.7%	0.1%	0.3%	0.7%	0.0%	

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 000025808026
Station ID:
E. Butler Rd
West of Rothwell Dr
Latitude: 0' 0.000 Undefined

WB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	123	18	1	3	1	1	1	1	0	0	0	0	0	149
12:15	0	95	14	2	4	0	2	1	0	0	0	0	0	0	118
12:30	0	117	14	1	1	1	0	1	0	1	0	0	0	0	136
12:45	0	105	20	1	2	2	0	2	0	2	0	0	3	0	137
	0	440	66	5	10	4	3	5	1	3	0	0	3	0	540
13:00	0	121	20	1	1	0	1	1	1	2	0	1	0	0	149
13:15	1	109	19	2	1	0	0	0	0	0	0	1	0	0	133
13:30	0	108	10	1	1	0	0	6	0	1	0	1	0	0	128
13:45	0	108	29	2	1	0	0	2	0	0	1	0	2	0	145
	1	446	78	6	4	0	1	9	1	3	1	3	2	0	555
14:00	0	113	10	1	3	0	1	2	0	0	0	1	0	0	131
14:15	0	112	14	1	1	1	2	1	1	3	0	0	1	0	137
14:30	0	120	12	2	2	2	0	2	0	1	0	1	0	0	142
14:45	2	110	20	1	3	0	2	0	0	3	1	2	1	0	145
	2	455	56	5	9	3	5	5	1	7	1	4	2	0	555
15:00	0	132	13	1	1	1	1	1	0	0	2	1	1	0	154
15:15	2	132	14	2	2	0	2	1	0	1	0	1	4	0	161
15:30	0	132	21	1	0	0	2	1	0	2	0	2	1	0	162
15:45	0	157	23	2	3	0	0	3	0	1	0	0	0	0	189
	2	553	71	6	6	1	5	6	0	4	2	4	6	0	666
16:00	2	148	24	2	0	0	2	4	0	1	0	0	0	0	183
16:15	1	139	20	1	2	1	0	3	2	1	0	1	1	0	172
16:30	0	131	19	2	4	0	0	3	0	0	0	1	0	0	160
16:45	2	149	22	2	0	2	1	7	2	4	1	0	1	0	193
	5	567	85	7	6	3	3	17	4	6	1	2	2	0	708
17:00	2	194	15	3	0	1	3	4	1	1	0	3	3	0	230
17:15	1	196	25	2	1	1	0	1	0	7	0	4	6	0	244
17:30	0	202	21	2	0	3	1	0	1	6	0	1	2	0	239
17:45	0	194	25	2	0	1	2	8	1	0	0	0	1	0	234
	3	786	86	9	1	6	6	13	3	14	0	8	12	0	947
18:00	0	177	18	2	1	0	0	4	1	7	0	1	3	0	214
18:15	0	172	18	3	1	0	0	3	0	2	0	0	2	0	201
18:30	0	133	24	2	0	0	1	1	0	1	0	1	2	0	165
18:45	0	150	12	2	0	1	1	2	0	0	0	2	0	0	170
	0	632	72	9	2	1	2	10	1	10	0	4	7	0	750
19:00	0	156	19	1	0	0	0	1	0	1	0	1	1	0	180
19:15	1	134	10	1	0	0	1	1	0	2	0	0	1	0	151
19:30	0	123	11	0	0	2	0	2	0	0	0	1	0	0	139
19:45	0	117	13	1	1	0	2	1	1	0	0	0	0	0	136
	1	530	53	3	1	2	3	5	1	3	0	2	2	0	606
20:00	0	119	9	0	1	1	0	1	0	1	0	0	0	0	132
20:15	0	106	4	1	0	1	1	1	0	0	0	0	0	0	114
20:30	3	98	7	0	0	0	1	0	0	0	0	0	0	0	109
20:45	0	86	12	0	0	1	0	0	0	0	0	0	0	0	99
	3	409	32	1	1	3	2	2	0	1	0	0	0	0	454
21:00	1	106	13	0	0	0	1	0	0	0	0	0	0	0	121
21:15	1	68	3	0	0	0	0	0	0	0	0	0	0	0	72
21:30	0	101	6	0	2	2	0	0	0	1	0	0	0	0	112
21:45	0	67	8	0	0	0	0	0	0	0	0	0	0	0	75
	2	342	30	0	2	2	1	0	0	1	0	0	0	0	380
22:00	0	55	7	0	0	0	0	0	0	0	0	0	0	0	62
22:15	0	42	2	0	0	0	1	0	0	0	0	0	0	0	45
22:30	0	51	0	0	0	0	1	0	0	0	0	0	0	0	52
22:45	1	29	7	0	0	0	0	0	0	0	0	0	0	0	37
	1	177	16	0	0	0	2	0	0	0	0	0	0	0	196
23:00	0	40	1	0	0	0	0	0	0	0	0	0	0	0	41
23:15	0	24	1	0	0	0	0	0	0	0	0	0	0	0	25
23:30	0	24	3	0	0	0	0	0	0	0	0	0	0	0	27
23:45	0	19	2	0	0	0	0	0	1	0	0	0	0	0	22
	0	107	7	0	0	0	0	0	1	0	0	0	0	0	115
Total	20	5444	652	51	42	25	33	72	13	52	5	27	36	0	6472
Percent	0.3%	84.1%	10.1%	0.8%	0.6%	0.4%	0.5%	1.1%	0.2%	0.8%	0.1%	0.4%	0.6%	0.0%	
Grand Total	28	7980	1020	71	73	32	51	104	20	73	7	36	58	0	9553
Percent	0.3%	83.5%	10.7%	0.7%	0.8%	0.3%	0.5%	1.1%	0.2%	0.8%	0.1%	0.4%	0.6%	0.0%	

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 000025808024
Station ID:
I-385 SB Off Ramp
At E. Butler Rd
Latitude: 0' 0.000 Undefined

SB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
03/29/11	0	10	1	0	0	0	0	0	2	0	0	0	0	0	13
00:15	0	6	2	0	1	0	0	0	0	0	0	0	0	0	9
00:30	0	10	3	0	0	0	0	0	0	0	0	0	0	0	13
00:45	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
	0	31	7	0	1	0	0	0	2	0	0	0	0	0	41
01:00	0	5	2	0	1	0	0	0	1	0	0	0	0	0	9
01:15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
01:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
01:45	0	4	4	0	0	0	0	0	0	0	0	0	0	0	8
	0	20	7	0	1	0	0	0	1	0	0	0	0	0	29
02:00	0	8	3	0	0	0	0	0	1	0	0	0	0	0	12
02:15	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
02:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
	0	20	5	0	0	0	0	0	1	0	0	0	0	0	26
03:00	0	3	2	0	0	0	0	0	0	0	0	0	0	0	5
03:15	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
03:30	0	3	0	0	0	0	0	0	1	0	0	0	0	0	4
03:45	1	4	1	0	0	0	0	0	0	0	0	0	0	0	6
	1	14	3	0	0	0	0	0	1	0	0	0	0	0	19
04:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
04:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
	0	15	1	0	0	0	0	0	0	0	0	0	0	0	16
05:00	0	4	2	0	1	0	0	0	1	0	0	0	0	0	8
05:15	0	13	3	0	0	0	0	1	0	0	0	0	0	0	17
05:30	0	22	9	0	2	0	0	0	2	0	0	0	0	0	35
05:45	0	41	8	0	0	0	0	2	0	0	0	0	0	0	51
	0	80	22	0	3	0	0	3	3	0	0	0	0	0	111
06:00	1	18	8	0	0	1	0	0	0	0	0	0	0	0	28
06:15	0	46	15	0	0	0	0	0	2	0	0	0	0	0	63
06:30	0	37	10	1	4	0	0	0	0	0	0	0	0	0	52
06:45	0	60	11	0	2	0	0	3	0	0	0	0	0	0	76
	1	161	44	1	6	1	0	3	2	0	0	0	0	0	219
07:00	0	85	26	0	0	1	0	0	0	0	0	0	1	0	113
07:15	0	146	28	1	0	0	1	1	0	0	0	0	0	0	177
07:30	0	136	20	2	2	0	1	2	0	1	0	0	1	0	165
07:45	1	145	18	3	4	1	0	5	0	1	0	0	0	0	178
	1	512	92	6	6	2	2	8	0	2	0	0	2	0	633
08:00	0	148	24	3	4	0	0	4	1	1	0	0	0	0	185
08:15	0	134	21	4	2	1	0	1	0	0	0	0	0	0	163
08:30	0	119	22	1	4	0	0	2	1	0	0	0	0	0	149
08:45	0	107	25	0	3	0	1	1	2	0	0	0	0	0	139
	0	508	92	8	13	1	1	8	4	1	0	0	0	0	636
09:00	0	62	19	2	3	0	0	2	0	0	0	0	0	0	88
09:15	0	52	11	3	3	0	0	2	1	0	0	0	0	0	72
09:30	0	54	10	3	2	0	0	3	0	0	0	0	0	0	72
09:45	0	62	8	1	1	0	1	3	1	0	0	0	0	0	77
	0	230	48	9	9	0	1	10	2	0	0	0	0	0	309
10:00	0	56	12	1	5	0	0	0	2	0	0	0	0	0	76
10:15	0	50	16	0	3	0	0	1	1	0	0	0	0	0	71
10:30	0	62	15	3	3	0	0	0	3	0	0	0	0	0	86
10:45	1	58	22	1	1	0	0	1	0	0	0	0	1	0	85
	1	226	65	5	12	0	0	2	6	0	0	0	1	0	318
11:00	1	61	12	0	0	1	0	4	0	0	0	0	0	0	79
11:15	1	72	14	3	3	2	0	0	0	0	0	0	0	0	95
11:30	0	82	16	2	3	0	0	0	0	0	0	0	0	0	103
11:45	0	71	31	0	4	0	0	1	1	0	0	0	0	0	108
	2	286	73	5	10	3	0	5	1	0	0	0	0	0	385
Total	6	2103	459	34	61	7	4	39	23	3	0	0	3	0	2742
Percent	0.2%	76.7%	16.7%	1.2%	2.2%	0.3%	0.1%	1.4%	0.8%	0.1%	0.0%	0.0%	0.1%	0.0%	

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 000025808024
Station ID:
I-385 SB Off Ramp
At E. Butler Rd
Latitude: 0' 0.000 Undefined

SB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	78	24	0	2	1	0	5	1	0	0	0	0	0	111
12:15	0	104	20	0	0	0	1	0	0	0	0	0	1	0	126
12:30	0	87	22	1	1	0	0	0	2	1	0	0	0	0	114
12:45	1	76	27	4	2	0	1	2	1	0	0	0	0	0	114
	1	345	93	5	5	1	2	7	4	1	0	0	1	0	465
13:00	0	98	25	2	1	0	0	0	1	0	0	0	0	0	127
13:15	1	102	30	0	4	0	0	1	1	0	0	0	0	0	139
13:30	0	70	19	1	1	0	0	1	1	0	0	0	0	0	93
13:45	0	88	18	1	1	0	0	1	1	0	0	0	0	0	110
	1	358	92	4	7	0	0	3	4	0	0	0	0	0	469
14:00	0	78	14	3	2	0	0	0	2	0	0	0	0	0	99
14:15	0	102	18	1	3	0	0	2	1	0	0	0	0	0	127
14:30	0	101	16	1	1	0	0	1	0	0	0	0	0	0	120
14:45	1	114	19	3	4	0	0	4	0	0	0	0	0	0	145
	1	395	67	8	10	0	0	7	3	0	0	0	0	0	491
15:00	0	102	27	2	1	0	0	1	0	0	0	0	0	0	133
15:15	0	104	25	1	0	0	0	1	0	0	0	0	0	0	131
15:30	0	102	28	0	1	1	1	0	1	0	0	0	0	0	134
15:45	0	114	29	5	0	0	0	2	1	0	0	0	0	0	151
	0	422	109	8	2	1	1	4	2	0	0	0	0	0	549
16:00	1	111	26	0	1	0	0	3	0	0	0	0	0	0	142
16:15	0	115	24	2	1	0	0	2	0	0	0	0	0	0	144
16:30	1	117	26	2	6	0	0	1	0	0	0	0	0	0	153
16:45	0	133	33	1	2	0	0	1	0	0	0	0	0	0	170
	2	476	109	5	10	0	0	7	0	0	0	0	0	0	609
17:00	1	146	37	0	1	0	2	3	0	2	1	0	0	0	193
17:15	0	154	37	1	2	1	0	3	1	0	0	1	1	0	201
17:30	0	131	40	2	6	0	1	6	0	0	0	0	0	0	186
17:45	0	135	35	2	2	0	0	3	1	0	0	1	0	0	179
	1	566	149	5	11	1	3	15	2	2	1	2	1	0	759
18:00	0	132	29	0	0	1	0	2	0	0	0	0	0	0	164
18:15	0	126	19	1	5	0	0	2	0	0	0	0	0	0	153
18:30	0	92	19	0	2	0	0	1	3	0	0	0	1	0	118
18:45	1	105	12	0	1	0	1	0	0	0	0	0	0	0	120
	1	455	79	1	8	1	1	5	3	0	0	0	1	0	555
19:00	0	87	18	1	2	0	0	3	0	0	0	0	0	0	111
19:15	0	78	12	0	0	0	0	1	0	0	0	0	0	0	91
19:30	0	96	20	0	0	2	0	1	0	0	0	0	0	0	119
19:45	1	67	14	0	3	0	0	2	0	0	0	0	0	0	87
	1	328	64	1	5	2	0	7	0	0	0	0	0	0	408
20:00	0	64	12	1	0	0	0	1	0	0	0	0	0	0	78
20:15	0	67	12	0	0	0	0	1	0	0	0	0	0	0	80
20:30	2	61	11	0	0	0	0	0	0	0	0	0	0	0	74
20:45	0	55	9	0	0	0	0	0	1	0	0	0	0	0	65
	2	247	44	1	0	0	0	2	1	0	0	0	0	0	297
21:00	0	64	7	0	0	0	0	0	0	0	0	0	0	0	71
21:15	1	56	15	1	0	0	0	0	1	0	0	0	0	0	74
21:30	0	64	20	0	3	0	0	1	0	0	0	0	0	0	88
21:45	0	44	2	0	0	0	0	0	1	0	0	0	0	0	47
	1	228	44	1	3	0	0	1	2	0	0	0	0	0	280
22:00	0	36	9	0	0	0	0	0	0	0	0	0	0	0	45
22:15	0	28	4	0	1	0	0	0	1	0	0	0	0	0	34
22:30	0	33	4	0	0	0	0	0	1	0	0	0	0	0	38
22:45	0	23	6	0	0	0	0	0	0	0	0	0	0	0	29
	0	120	23	0	1	0	0	0	2	0	0	0	0	0	146
23:00	0	23	6	0	0	0	0	0	0	0	0	0	0	0	29
23:15	0	17	3	0	0	0	0	0	0	0	0	0	0	0	20
23:30	0	14	3	1	0	0	0	1	1	0	0	0	0	0	20
23:45	1	13	1	0	0	1	0	0	0	0	0	0	0	0	16
	1	67	13	1	0	1	0	1	1	0	0	0	0	0	85
Total	12	4007	886	40	62	7	7	59	24	3	1	2	3	0	5113
Percent	0.2%	78.4%	17.3%	0.8%	1.2%	0.1%	0.1%	1.2%	0.5%	0.1%	0.0%	0.0%	0.1%	0.0%	
Grand Total	18	6110	1345	74	123	14	11	98	47	6	1	2	6	0	7855
Percent	0.2%	77.8%	17.1%	0.9%	1.6%	0.2%	0.1%	1.2%	0.6%	0.1%	0.0%	0.0%	0.1%	0.0%	

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 000023808023
Station ID:
I-385 NB On Ramp
At E. Butler Rd
Latitude: 0' 0.000 Undefined

NB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
03/29/11	0	36	1	0	1	0	0	0	0	0	0	0	0	0	38
00:15	0	28	3	0	0	0	0	0	0	0	0	0	0	0	31
00:30	0	10	0	1	0	0	0	0	0	0	0	0	0	0	11
00:45	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
	0	79	4	1	1	0	0	0	0	0	0	0	0	0	85
01:00	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
01:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
01:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45	0	2	0	0	0	0	0	0	1	0	0	0	0	0	3
	0	16	1	0	0	0	0	0	1	0	0	0	0	0	18
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
02:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
03:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:45	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
	0	10	1	0	0	0	0	0	1	0	0	0	0	0	12
04:00	0	7	3	0	1	0	0	0	0	0	0	0	0	0	11
04:15	0	6	1	0	0	1	0	0	0	0	0	0	0	0	8
04:30	0	11	1	0	0	0	0	0	0	0	0	0	0	0	12
04:45	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
	0	34	7	0	1	1	0	0	0	0	0	0	0	0	43
05:00	0	7	4	0	0	0	0	0	1	0	0	0	0	0	12
05:15	0	15	3	0	0	0	0	0	0	0	0	0	0	0	18
05:30	0	26	8	0	1	0	0	1	0	0	0	0	0	0	36
05:45	0	21	6	0	0	0	0	0	0	0	0	0	0	0	27
	0	69	21	0	1	0	0	1	1	0	0	0	0	0	93
06:00	0	46	3	0	3	0	0	0	0	0	0	0	0	0	52
06:15	0	44	7	1	1	0	0	0	1	0	0	0	0	0	54
06:30	0	74	10	1	0	0	0	2	0	0	0	0	0	0	87
06:45	0	86	11	2	0	0	0	1	0	0	0	0	0	0	100
	0	250	31	4	4	0	0	3	1	0	0	0	0	0	293
07:00	0	126	10	1	3	0	0	1	1	1	0	0	0	0	143
07:15	0	161	21	1	1	0	0	3	1	3	0	1	1	0	193
07:30	0	196	19	2	0	0	0	0	0	4	0	1	2	0	224
07:45	0	155	22	1	0	0	0	5	0	1	0	1	0	0	185
	0	638	72	5	4	0	0	9	2	9	0	3	3	0	745
08:00	0	165	12	1	2	0	0	4	0	0	0	1	0	0	185
08:15	0	156	14	2	1	0	0	1	1	1	0	2	1	0	179
08:30	0	134	16	3	5	0	0	1	0	1	0	0	0	0	160
08:45	0	111	19	2	2	0	0	0	0	0	0	0	2	0	136
	0	566	61	8	10	0	0	6	1	2	0	3	3	0	660
09:00	0	96	13	1	0	0	0	2	0	0	0	0	1	0	113
09:15	0	81	11	0	3	0	0	2	1	0	0	0	0	0	98
09:30	0	70	8	1	2	1	0	3	0	0	0	0	0	0	85
09:45	0	62	10	0	5	0	0	0	0	0	0	0	1	0	78
	0	309	42	2	10	1	0	7	1	0	0	0	2	0	374
10:00	0	65	10	2	5	0	0	1	2	0	0	0	0	0	85
10:15	0	64	10	0	5	0	0	1	0	0	0	0	0	0	80
10:30	0	79	9	1	1	0	0	1	0	0	0	0	0	0	91
10:45	0	73	9	1	1	0	0	3	1	0	0	1	0	0	89
	0	281	38	4	12	0	0	6	3	0	0	1	0	0	345
11:00	0	82	9	2	2	1	0	0	0	1	0	0	0	0	97
11:15	0	110	18	0	2	0	0	2	0	2	0	0	0	0	134
11:30	0	112	17	1	2	0	0	3	1	2	0	0	0	0	138
11:45	0	106	11	3	3	0	0	2	0	0	0	0	0	0	125
	0	410	55	6	9	1	0	7	1	5	0	0	0	0	494
Total	0	2672	335	30	52	3	0	39	12	16	0	7	8	0	3174
Percent	0.0%	84.2%	10.6%	0.9%	1.6%	0.1%	0.0%	1.2%	0.4%	0.5%	0.0%	0.2%	0.3%	0.0%	

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 000023808023
Station ID:
I-385 NB On Ramp
At E. Butler Rd
Latitude: 0' 0.000 Undefined

NB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	97	15	3	3	1	0	1	1	0	0	0	2	0	123
12:15	0	90	19	0	3	0	0	0	0	1	0	0	0	0	113
12:30	0	118	17	0	2	0	0	4	0	0	0	0	1	0	142
12:45	0	82	15	1	4	0	0	2	0	0	0	0	0	0	104
	0	387	66	4	12	1	0	7	1	1	0	0	3	0	482
13:00	0	83	17	2	1	0	0	3	0	0	0	2	0	0	108
13:15	0	84	21	2	2	0	0	1	0	0	0	0	0	0	110
13:30	0	99	11	2	3	0	0	1	0	0	0	0	0	0	116
13:45	0	84	12	2	5	0	0	1	0	0	0	0	0	0	104
	0	350	61	8	11	0	0	6	0	0	0	2	0	0	438
14:00	0	94	8	2	1	0	0	1	0	0	0	0	0	0	106
14:15	0	87	12	1	1	0	0	2	0	0	0	0	0	0	103
14:30	0	112	15	0	3	0	0	1	0	0	0	0	2	0	133
14:45	0	127	21	0	3	0	0	2	0	0	0	1	0	0	154
	0	420	56	3	8	0	0	6	0	0	0	1	2	0	496
15:00	0	119	19	1	3	1	0	2	0	1	0	0	0	0	146
15:15	0	114	19	1	2	1	0	1	0	1	1	0	0	0	140
15:30	0	108	16	1	0	0	0	1	0	0	0	0	0	0	126
15:45	0	113	23	0	0	0	0	0	0	1	0	0	0	0	137
	0	454	77	3	5	2	0	4	0	3	1	0	0	0	549
16:00	0	115	16	1	1	0	0	3	1	0	0	0	2	0	139
16:15	0	109	19	0	4	0	0	2	1	1	0	0	0	0	136
16:30	0	122	22	1	1	0	0	1	1	0	0	0	0	0	148
16:45	1	133	17	1	1	0	0	4	0	1	0	0	2	0	160
	1	479	74	3	7	0	0	10	3	2	0	0	4	0	583
17:00	0	182	24	1	0	0	0	6	1	1	0	0	0	0	215
17:15	0	207	37	3	0	0	0	6	0	0	0	0	0	0	253
17:30	0	198	30	3	4	0	0	8	0	0	0	1	1	0	245
17:45	0	194	22	1	0	0	0	3	0	1	0	0	0	0	221
	0	781	113	8	4	0	0	23	1	2	0	1	1	0	934
18:00	1	176	18	0	0	0	0	3	0	0	0	2	1	0	201
18:15	0	167	13	0	1	0	0	5	0	1	0	0	0	0	187
18:30	0	116	14	0	0	0	0	1	1	0	0	2	1	0	135
18:45	0	90	24	1	0	0	0	3	0	0	0	0	0	0	118
	1	549	69	1	1	0	0	12	1	1	0	4	2	0	641
19:00	0	80	10	2	0	0	0	2	1	0	0	0	2	0	97
19:15	0	68	9	0	0	0	0	1	0	0	0	0	0	0	78
19:30	0	82	5	0	0	0	0	0	0	0	0	0	0	0	87
19:45	0	46	9	1	2	0	0	0	0	0	0	0	0	0	58
	0	276	33	3	2	0	0	3	1	0	0	0	2	0	320
20:00	0	72	6	0	0	0	0	0	0	0	0	0	0	0	78
20:15	0	53	4	0	1	0	0	0	0	0	0	0	0	0	58
20:30	0	52	10	0	1	0	0	0	0	0	0	0	1	0	64
20:45	0	53	7	0	0	0	0	0	0	0	0	0	0	0	60
	0	230	27	0	2	0	0	0	0	0	0	0	1	0	260
21:00	0	51	4	0	0	0	0	0	0	0	0	0	0	0	55
21:15	0	44	4	0	0	0	0	0	0	0	0	0	0	0	48
21:30	1	69	9	0	1	0	0	1	1	0	0	0	0	0	82
21:45	0	46	2	0	0	0	0	1	0	0	0	0	0	0	49
	1	210	19	0	1	0	0	2	1	0	0	0	0	0	234
22:00	0	62	3	0	0	0	0	0	1	0	0	0	0	0	66
22:15	0	22	3	1	0	0	0	0	0	0	0	0	1	0	27
22:30	0	27	3	0	0	0	0	0	0	0	0	0	0	0	30
22:45	0	33	0	0	0	0	0	0	0	0	0	0	0	0	33
	0	144	9	1	0	0	0	0	1	0	0	0	1	0	156
23:00	0	20	2	0	0	0	0	1	1	0	0	0	0	0	24
23:15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	15
23:30	0	13	2	0	0	0	0	0	1	0	0	0	0	0	16
23:45	0	15	0	0	0	0	0	0	0	0	0	0	0	0	15
	0	63	4	0	0	0	0	1	2	0	0	0	0	0	70
Total	3	4343	608	34	53	3	0	74	11	9	1	8	16	0	5163
Percent	0.1%	84.1%	11.8%	0.7%	1.0%	0.1%	0.0%	1.4%	0.2%	0.2%	0.0%	0.2%	0.3%	0.0%	
Grand Total	3	7015	943	64	105	6	0	113	23	25	1	15	24	0	8337
Percent	0.0%	84.1%	11.3%	0.8%	1.3%	0.1%	0.0%	1.4%	0.3%	0.3%	0.0%	0.2%	0.3%	0.0%	

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 25800021
Station ID:
E. Butler Rd
West of Brookefield Pkwy
Latitude: 0' 0.000 Undefined

EB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
03/29/11	0	5	2	0	0	0	0	0	2	0	0	0	0	0	9
00:15	0	9	3	0	0	0	0	0	0	0	0	0	0	0	12
00:30	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
00:45	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
	0	27	5	0	0	0	0	0	2	0	0	0	0	0	34
01:00	0	4	1	0	0	1	0	0	1	0	0	0	0	0	7
01:15	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
01:30	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
01:45	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
	0	18	2	0	0	1	0	0	1	0	0	0	0	0	22
02:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
02:15	0	2	2	0	0	0	0	0	1	0	0	0	0	0	5
02:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
	0	17	3	0	0	0	0	0	1	0	0	0	0	0	21
03:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
03:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
03:30	0	4	1	0	0	0	0	0	1	0	0	0	0	0	6
03:45	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
	0	11	3	0	0	0	0	0	2	0	0	0	0	0	16
04:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
04:15	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
04:30	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
04:45	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
	0	18	4	0	0	0	0	0	0	0	0	0	0	0	22
05:00	0	13	2	0	0	0	0	0	0	0	0	0	0	0	15
05:15	0	11	4	0	1	0	0	0	0	0	0	0	0	0	16
05:30	0	16	10	0	1	0	0	0	1	0	0	0	0	0	28
05:45	0	24	15	0	0	0	0	0	0	0	0	0	0	0	39
	0	64	31	0	2	0	0	0	1	0	0	0	0	0	98
06:00	1	28	10	0	2	1	0	0	0	0	0	0	0	0	42
06:15	0	40	19	0	2	0	0	0	0	1	0	0	1	0	63
06:30	0	57	26	0	2	0	0	0	0	0	0	0	0	0	85
06:45	0	86	16	2	3	0	0	0	0	0	0	0	0	0	107
	1	211	71	2	9	1	0	0	0	1	0	0	1	0	297
07:00	0	166	38	1	1	3	0	1	0	0	0	0	0	0	210
07:15	1	234	35	3	1	0	0	2	1	1	0	1	0	0	279
07:30	0	262	68	3	3	0	3	2	1	1	0	0	0	0	343
07:45	0	259	56	4	6	1	7	3	1	3	0	0	0	0	340
	1	921	197	11	11	4	10	8	3	5	0	1	0	0	1172
08:00	0	239	65	6	4	1	0	1	0	0	0	0	1	0	317
08:15	0	223	66	5	4	3	0	1	1	1	0	0	0	0	304
08:30	0	203	56	4	7	0	0	0	0	0	0	0	0	0	270
08:45	3	193	62	6	6	0	0	2	0	1	0	0	0	0	273
	3	858	249	21	21	4	0	4	1	2	0	0	1	0	1164
09:00	0	122	28	1	0	0	0	1	0	0	0	0	0	0	152
09:15	0	96	28	7	4	1	1	0	1	0	0	0	0	0	138
09:30	1	81	25	2	2	0	1	1	0	0	0	0	0	0	113
09:45	0	73	20	4	2	0	1	0	1	1	0	0	0	0	102
	1	372	101	14	8	1	3	2	2	1	0	0	0	0	505
10:00	1	72	24	1	5	0	0	0	2	0	0	0	1	0	106
10:15	0	94	31	1	0	0	0	1	2	0	0	0	0	0	129
10:30	0	86	20	4	1	1	0	0	3	0	0	0	0	0	115
10:45	0	88	33	2	1	1	0	1	1	0	0	0	2	0	129
	1	340	108	8	7	2	0	2	8	0	0	0	3	0	479
11:00	0	82	19	4	7	0	0	1	2	0	0	0	0	0	115
11:15	2	90	26	2	1	1	1	0	1	0	0	0	0	0	124
11:30	1	114	40	3	4	1	0	1	3	1	0	0	0	0	168
11:45	0	108	36	1	3	2	1	1	1	0	0	0	0	0	153
	3	394	121	10	15	4	2	3	7	1	0	0	0	0	560
Total	10	3251	895	66	73	17	15	19	28	10	0	1	5	0	4390
Percent	0.2%	74.1%	20.4%	1.5%	1.7%	0.4%	0.3%	0.4%	0.6%	0.2%	0.0%	0.0%	0.1%	0.0%	

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 25800021
Station ID:
E. Butler Rd
West of Brookefield Pkwy
Latitude: 0' 0.000 Undefined

EB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	120	39	1	8	0	0	3	0	1	0	0	1	0	173
12:15	0	120	42	1	1	1	0	1	0	0	0	0	0	0	166
12:30	0	123	33	2	0	0	1	0	1	1	0	2	0	0	163
12:45	3	112	37	3	1	1	0	1	2	0	0	0	0	0	160
	3	475	151	7	10	2	1	5	3	2	0	2	1	0	662
13:00	0	146	32	6	4	1	0	0	1	0	0	0	0	0	190
13:15	0	110	34	2	3	1	1	1	0	0	0	0	0	0	152
13:30	0	93	37	4	3	0	0	2	2	0	0	0	0	0	141
13:45	0	125	36	0	2	0	1	1	0	0	0	0	0	0	165
	0	474	139	12	12	2	2	4	3	0	0	0	0	0	648
14:00	0	122	30	1	3	1	3	1	1	1	0	0	0	0	163
14:15	0	120	38	2	3	0	0	3	1	0	0	0	0	0	167
14:30	0	108	42	2	1	0	1	1	0	0	0	0	0	0	155
14:45	0	120	46	6	4	0	1	1	2	1	0	0	0	0	181
	0	470	156	11	11	1	5	6	4	2	0	0	0	0	666
15:00	0	110	31	0	1	2	0	0	0	2	0	0	2	0	148
15:15	0	112	37	2	2	0	0	1	0	1	0	0	0	0	155
15:30	1	122	35	1	2	2	2	0	1	0	0	0	1	0	167
15:45	0	166	36	4	5	0	1	1	0	3	0	1	0	0	217
	1	510	139	7	10	4	3	2	1	6	0	1	3	0	687
16:00	0	208	42	5	1	1	0	0	2	1	0	0	0	0	260
16:15	0	217	43	7	1	0	0	0	0	0	0	0	0	0	268
16:30	0	192	36	8	1	0	2	0	0	0	0	0	1	0	240
16:45	0	206	42	7	0	0	0	1	0	0	0	0	0	0	256
	0	823	163	27	3	1	2	1	2	1	0	0	1	0	1024
17:00	2	204	42	1	1	2	2	1	0	0	0	0	0	0	255
17:15	0	207	51	2	2	3	0	2	0	0	0	2	1	0	270
17:30	1	202	41	0	2	0	3	1	0	1	0	3	0	0	254
17:45	0	196	43	2	4	1	2	3	0	0	0	0	1	0	252
	3	809	177	5	9	6	7	7	0	1	0	5	2	0	1031
18:00	2	174	47	1	3	1	0	1	0	1	0	0	0	0	230
18:15	2	123	41	1	3	0	0	0	0	2	0	0	0	0	172
18:30	0	108	32	1	0	0	1	1	0	1	0	0	0	0	144
18:45	0	117	28	0	0	0	0	1	1	1	0	0	0	0	148
	4	522	148	3	6	1	1	3	1	5	0	0	0	0	694
19:00	1	88	27	0	1	0	0	0	0	0	0	0	0	0	117
19:15	0	87	24	1	1	0	0	0	0	1	0	0	0	0	114
19:30	0	75	19	0	1	1	0	0	1	0	0	0	0	0	97
19:45	0	70	14	0	2	0	0	0	0	0	0	0	0	0	86
	1	320	84	1	5	1	0	0	1	1	0	0	0	0	414
20:00	0	53	25	0	3	0	1	0	1	0	0	0	0	0	83
20:15	0	60	19	0	0	0	0	0	0	0	0	0	0	0	79
20:30	0	62	18	0	1	0	0	0	0	0	0	0	0	0	81
20:45	0	50	22	0	2	0	0	0	0	0	0	0	1	0	75
	0	225	84	0	6	0	1	0	1	0	0	0	1	0	318
21:00	0	38	11	0	0	0	0	0	0	0	0	0	0	0	49
21:15	0	36	4	0	0	0	0	0	0	0	0	0	0	0	40
21:30	0	42	6	1	0	0	0	0	1	0	0	0	0	0	50
21:45	0	29	6	0	2	0	0	0	0	0	0	0	0	0	37
	0	145	27	1	2	0	0	0	1	0	0	0	0	0	176
22:00	0	43	7	0	1	0	0	0	1	0	0	0	0	0	52
22:15	0	30	4	0	0	0	0	0	0	0	0	0	0	0	34
22:30	0	23	5	0	1	0	0	0	0	0	0	0	0	0	29
22:45	0	19	2	0	0	0	0	0	0	0	0	0	0	0	21
	0	115	18	0	2	0	0	0	1	0	0	0	0	0	136
23:00	0	15	6	0	0	0	0	0	0	0	0	0	0	0	21
23:15	0	12	2	0	0	0	0	0	0	0	0	0	0	0	14
23:30	0	12	3	1	0	0	0	0	2	0	0	0	0	0	18
23:45	0	20	2	0	0	0	0	0	0	0	0	0	0	0	22
	0	59	13	1	0	0	0	0	2	0	0	0	0	0	75
Total	12	4947	1299	75	76	18	22	28	20	18	0	8	8	0	6531
Percent	0.2%	75.7%	19.9%	1.1%	1.2%	0.3%	0.3%	0.4%	0.3%	0.3%	0.0%	0.1%	0.1%	0.0%	
Grand Total	22	8198	2194	141	149	35	37	47	48	28	0	9	13	0	10921
Percent	0.2%	75.1%	20.1%	1.3%	1.4%	0.3%	0.3%	0.4%	0.4%	0.3%	0.0%	0.1%	0.1%	0.0%	

Georgia Traffic, Inc.

Professional Traffic Studies
Tel:770-926-5949
www.Georgia-Traffic.com

Site Code: 25800022
Station ID:
Butler Rd
West of Brookfield Pkwy
Latitude: 0' 0.000 Undefined

WB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
03/29/11	0	14	4	0	0	0	0	0	0	0	0	0	0	0	18
00:15	0	14	3	0	0	0	0	0	0	0	0	0	0	0	17
00:30	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
00:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
	0	37	9	0	0	0	0	0	0	0	0	0	0	0	46
01:00	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
01:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
01:30	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
01:45	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
	0	23	6	0	0	0	0	0	0	0	0	0	0	0	29
02:00	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
02:15	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
02:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	9	2	0	0	0	0	0	0	0	0	0	0	0	11
03:00	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
03:15	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
03:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
	0	15	4	0	0	0	0	0	0	0	0	0	0	0	19
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
04:30	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
04:45	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
	0	24	6	0	0	0	0	0	0	0	0	0	0	0	30
05:00	0	18	4	0	0	0	0	0	0	0	0	0	0	0	22
05:15	0	14	4	0	0	1	0	0	0	0	0	0	0	0	19
05:30	0	23	5	0	0	0	0	0	0	0	0	0	0	0	28
05:45	0	23	5	0	1	0	0	0	0	0	0	0	0	0	29
	0	78	18	0	1	1	0	0	0	0	0	0	0	0	98
06:00	0	35	8	1	0	0	0	0	0	0	0	0	0	0	44
06:15	1	63	12	1	1	0	0	0	0	0	0	0	0	0	78
06:30	2	79	14	1	0	0	1	1	0	0	0	0	0	0	98
06:45	0	86	14	1	0	0	0	1	0	1	0	0	0	0	103
	3	263	48	4	1	0	1	2	0	1	0	0	0	0	323
07:00	1	124	16	0	5	2	1	5	0	1	0	0	0	0	155
07:15	1	156	25	0	4	2	1	11	1	1	0	1	2	0	205
07:30	1	205	26	2	0	0	1	6	1	4	0	1	4	0	251
07:45	0	191	42	3	0	0	0	1	0	0	0	0	2	0	239
	3	676	109	5	9	4	3	23	2	6	0	2	8	0	850
08:00	1	176	44	3	0	0	0	1	1	0	0	0	2	0	228
08:15	1	225	57	5	0	0	0	0	0	0	0	0	0	0	288
08:30	0	271	34	3	1	0	0	0	0	0	0	0	0	0	309
08:45	3	228	20	2	0	0	0	0	1	1	0	0	0	0	255
	5	900	155	13	1	0	0	1	2	1	0	0	2	0	1080
09:00	0	174	20	1	1	0	0	0	0	0	0	0	0	0	196
09:15	0	123	20	2	1	0	0	0	0	0	0	0	0	0	146
09:30	0	91	20	2	1	0	0	0	0	0	0	0	0	0	114
09:45	1	77	18	1	1	0	0	0	0	0	0	0	0	0	98
	1	465	78	6	4	0	0	0	0	0	0	0	0	0	554
10:00	0	102	20	2	0	0	0	0	1	0	0	0	0	0	125
10:15	0	88	21	2	0	1	0	0	0	0	0	0	0	0	112
10:30	0	119	27	2	4	1	1	0	0	3	0	0	0	0	157
10:45	0	94	22	3	2	1	1	0	1	1	0	0	0	2	127
	0	403	90	9	6	3	2	0	2	4	0	0	0	2	521
11:00	0	133	30	2	1	7	0	0	1	2	0	0	0	0	176
11:15	0	140	32	2	2	1	1	1	0	1	0	0	0	0	180
11:30	0	128	29	2	3	4	1	0	1	3	1	0	0	0	172
11:45	0	150	34	3	1	3	2	1	2	1	0	0	0	0	197
	0	551	125	9	7	15	4	2	4	7	1	0	0	0	725
Total	12	3444	650	46	29	23	10	28	10	19	1	2	10	2	4286
Percent	0.3%	80.4%	15.2%	1.1%	0.7%	0.5%	0.2%	0.7%	0.2%	0.4%	0.0%	0.0%	0.2%	0.0%	

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Site Code: 25800022
Station ID:
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Latitude: 0' 0.000 Undefined

WB

Start Time	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Class 14	Total
12 PM	0	133	30	2	1	8	0	0	1	0	1	0	0	1	177
12:15	0	142	32	1	1	1	1	0	1	0	0	0	0	0	179
12:30	0	140	32	2	2	0	0	1	0	1	1	0	2	0	181
12:45	0	154	36	3	3	1	1	0	1	2	0	0	0	0	201
	0	569	130	8	7	10	2	1	3	3	2	0	2	1	738
13:00	0	150	34	3	4	4	1	0	1	1	0	0	0	0	198
13:15	0	144	33	4	2	3	1	1	0	0	0	0	0	0	188
13:30	0	119	27	2	3	3	0	0	1	2	0	0	0	0	157
13:45	0	128	29	2	0	4	0	1	1	0	0	0	0	0	165
	0	541	123	11	9	14	2	2	3	3	0	0	0	0	708
14:00	0	119	27	3	1	3	1	3	1	1	1	0	0	0	160
14:15	0	122	28	2	2	3	0	0	0	1	0	0	0	0	158
14:30	0	158	36	3	2	1	0	1	1	0	0	0	0	0	202
14:45	0	154	36	3	3	4	0	1	1	2	1	0	0	0	205
	0	553	127	11	8	11	1	5	3	4	2	0	0	0	725
15:00	0	168	38	4	0	1	2	0	0	0	2	0	0	2	217
15:15	0	184	42	3	2	2	0	0	1	0	1	0	0	0	235
15:30	0	150	34	3	1	2	2	2	0	1	0	0	0	1	196
15:45	0	140	32	4	4	5	0	1	1	0	3	0	1	0	191
	0	642	146	14	7	10	4	3	2	1	6	0	1	3	839
16:00	0	158	36	3	5	1	1	0	0	2	1	0	0	0	207
16:15	0	164	34	3	2	1	0	0	0	0	0	0	0	0	204
16:30	0	172	32	2	5	1	0	2	0	0	0	0	0	1	215
16:45	0	248	57	4	4	0	0	0	1	0	0	0	0	0	314
	0	742	159	12	16	3	1	2	1	2	1	0	0	1	940
17:00	0	295	68	5	1	1	2	2	1	0	0	0	0	0	375
17:15	0	289	66	5	2	2	3	0	0	0	0	0	2	1	370
17:30	0	271	62	5	0	4	0	3	1	0	1	0	3	0	350
17:45	0	248	56	4	2	3	1	2	1	0	0	0	0	1	318
	0	1103	252	19	5	10	6	7	3	0	1	0	5	2	1413
18:00	0	189	44	3	1	5	1	0	2	0	1	0	0	0	246
18:15	0	138	32	2	1	3	0	0	0	0	2	0	0	0	178
18:30	0	140	32	5	1	0	0	1	1	0	1	0	0	0	181
18:45	0	138	32	2	0	0	0	0	1	1	1	0	0	0	175
	0	605	140	12	3	8	1	1	4	1	5	0	0	0	780
19:00	0	147	34	3	0	1	0	0	0	0	0	0	0	0	185
19:15	0	80	18	1	1	1	0	0	0	0	1	0	0	0	102
19:30	0	110	25	2	0	1	1	0	0	1	0	0	0	0	140
19:45	0	82	19	1	0	2	0	0	0	0	0	0	0	0	104
	0	419	96	7	1	5	1	0	0	1	1	0	0	0	531
20:00	0	91	21	2	0	3	0	1	0	1	0	0	0	0	119
20:15	0	77	18	1	0	0	0	0	0	0	0	0	0	0	96
20:30	0	84	19	2	0	1	0	0	0	0	0	0	0	0	106
20:45	0	93	21	2	0	2	0	0	0	0	0	0	0	1	119
	0	345	79	7	0	6	0	1	0	1	0	0	0	1	440
21:00	0	66	15	1	0	0	0	0	0	0	0	0	0	0	82
21:15	0	42	10	1	0	0	0	0	0	0	0	0	0	0	53
21:30	0	46	10	2	1	0	0	0	0	1	0	0	0	0	60
21:45	0	42	10	1	0	2	0	0	0	0	0	0	0	0	55
	0	196	45	5	1	2	0	0	0	1	0	0	0	0	250
22:00	0	32	7	1	0	0	0	0	0	0	0	0	0	0	40
22:15	0	26	6	0	0	0	0	0	0	0	0	0	0	0	32
22:30	0	32	7	1	0	0	0	0	0	0	0	0	0	0	40
22:45	0	26	6	0	0	0	0	0	0	0	0	0	0	0	32
	0	116	26	2	0	0	0	0	0	0	0	0	0	0	144
23:00	0	18	4	0	0	0	0	0	0	0	0	0	0	0	22
23:15	0	9	2	0	0	0	0	0	0	0	0	0	0	0	11
23:30	0	12	3	0	0	0	0	0	0	0	0	0	0	0	15
23:45	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
	0	46	11	0	0	0	0	0	0	0	0	0	0	0	57
Total	0	5877	1334	108	57	79	18	22	19	17	18	0	8	8	7565
Percent	0.0%	77.7%	17.6%	1.4%	0.8%	1.0%	0.2%	0.3%	0.3%	0.2%	0.2%	0.0%	0.1%	0.1%	
Grand Total	12	9321	1984	154	86	102	28	50	29	36	19	2	18	10	11851
Percent	0.1%	78.7%	16.7%	1.3%	0.7%	0.9%	0.2%	0.4%	0.2%	0.3%	0.2%	0.0%	0.2%	0.1%	

CRASH DATA

I-85 @ I-385 INTERCHANGE & SURROUNDING I-85 MAINLINE

FEB 0 3 2011

ORIGINAL

2010006720

SOUTH CAROLINA DPS/OHS & DMV USE ONLY: 10154904 | Page # 1 Of 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM
TR - 310 (Rev. 7/2010)

Of Units: 01 | Amended - Attach Copy of Original Report | Corrected | Notified: 2325 | Arrived: 2335

Date	Time of Collision	County	Collision Location (Rt. # / Name)	Miles:	Dir.	In (Near) City or Town of:
11-30-2010	2320	23	On 85/	2	N E S W	GREENVILLE

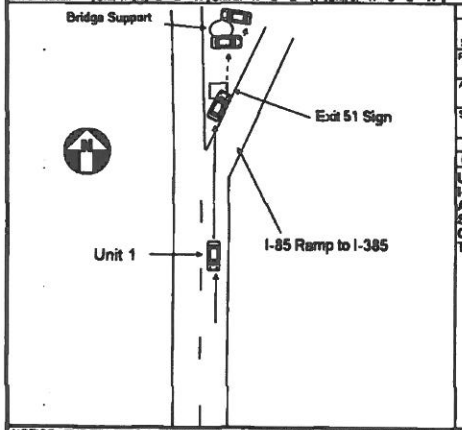
Collision Location: 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-PP | Man 2-Alternate 5-Spur | 6-Connecton 7-Business 9-Other

Lane # / Dir.	Distance Offset	Direction	Base Intersection (Rt # / Name)	GPS COORDINATES 00 00' 00.00"
# N/A Of N E S W	(Make) .10 Feet	N E S W	From 385/	Latitude: 34 40 57.22
R.R. Id.	From: Ramp Only (N E 1 - Entrance S W 2 Exit) To	1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6 - Other	Toward Second Intersection (Rt. # / Name) 146/	Longitude: 82 17 48.83

Man 6-Connecton 7-Business 9-Other | 2-Alternate 5-Spur

Driver/Pedestrian's Full Name	Driver/Pedestrian's Full Name
E-044968 Driver/Pedestrian's Full Name: BRISSIE CHRISTOPHER LOUIS	
Unit # 01 / # Occ 1 — Sex: M — Race: W — Street/R.F.D.: 17 FOWLER CIR APT 4 — Birth Date: 10-28-1991 — City, State, & Zip: GREENVILLE SC 296074949	Unit # / # Occ — Sex — Race — Street/R.F.D. — Birth Date — City, State, & Zip
State: SC — Driver's License #: 007841296 — Class: D — Insurance Company: NONE	State — Driver's License # — Class — Insurance Company
Year: 1999 — Body: 4S — Vehicle Make: FORD — VIN #: 1FAFP53UXXA148328	Year — Body — Vehicle Make — VIN #
State: SC — Year: 2010 — License Plate #: FUA613 — Owner's D.L. #: 007841296	State — Year — License Plate # — Owner's D.L. #
Home Telephone: ( ) — Owner's Full Name: BRISSIE CHRISTOPHER LOUIS	Home Telephone — Owner's Full Name
Bus. Telephone: ( ) — Street/R.F.D.: 17 FOWLER CIR APT 4	Bus. Telephone — Street/R.F.D.
Contributed To Collision: Yes / No — City, State, & Zip: GREENVILLE SC 296074949	Contributed To Collision — City, State, & Zip
Estimated Speed: 45 — Speed Limit: 45 — C.D.L. Req: Yes (No) — T/B S Req: Yes (No) — Alc/Org Info (see back): (Yes) No — Summons #: E752890 — Code: 89 — Summons # — Code — Towed: (Yes) No: NORTH HILLS	Estimated Speed — Speed Limit — C.D.L. Req: Yes No — T/B S Req: Yes No — Alc/Org Info (see back): Yes No — Summons # — Code — Summons # — Code — Towed: Yes No
Driver/Pedestrian's Full Name	
Unit # — Sex — Race — Street/R.F.D. — # Occ — Birth Date — City, State, & Zip	Home Telephone — Owner's Full Name — Bus. Telephone — Street/R.F.D. — Contributed To Collision — City, State, & Zip
State — Driver's License # — Class — Insurance Company	State — Year — License Plate # — Owner's D.L. #
Year — Body — Vehicle Make — VIN #	Estimated Speed — Speed Limit — C.D.L. Req: Yes No — T/B S Req: Yes No — Alc/Org Info (see back): Yes No — Summons # — Code — Summons # — Code — Towed: Yes No

Dir. of Travel: Unit 1: (N) S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 8500	$	$	SIGN $ 1000	$

Property Owner/Witness	Property Owner/Witness
Address — City	SCDOT — 13 SALUDA DAM ROAD GREENVILLE
State — Zip — Phone	State: SC — Zip: 29917 — Phone: 8642411224

Photo: (Y) N — Describe What Happened (Refer to Units by Number)

UNIT #1 WAS NORTH ON I-85 AND WAS EXITING OFF ONTO I-385 NORTH. UNIT #1 WAS UNDER THE INFLUENCE OF ALCOHOL AND DROVE THROUGH THE GRASS MEDIAN AND STRUCK AN EXIT RAMP SIGN. UNIT #1 THEN STRUCK A CONCRETE BRIDGE SUPPORT. NO DAMAGE WAS DONE TO THE SUPPORT.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
EDWARDS - C M	LCPL	T548	HP03	12-21-2010	WESLEY HIOTT	SGT	10GV133782

2010006720

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	Lat.	Trav.	Name	Street Address	Zip Code
01	10-28-1991	M	W	3	01	13	4 0 2	1	1	1 1	BRISSIE CHRISTOPH LOUIS	17 FOWLER CIR APT 4 GREENVILLE SC	296074949

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 1-Not Injured; 2-Non-incapacitating; 3-Incapacitating; 4-Fatal; 9-Unk. | b) 2 or 3 Wheel Motorized Vehicle: Head Injury 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20-Pedestrian 30-Trailing Unit 40-Bus or Van (4th row or Higher) 50-Other Enclosed Area (nonseating) 51-Other Unenclosed Area (nonseating) 60-Sleeper of Cab 70-Riding on Unit Exterior 99-Unk./NA

Restraint/Safety Device: 00-None Used 11-Shoulder belt 12-Lap Belt Only 13-Shoulder & Lap Belt 21-Child Safety Seat 88-Other 99-Unk. | Pedestrian, Motor/Pedalcycle Only: 31-Helmet 41-Protective Pads 51-Reflective Clothing 81-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 7-Not Applicable 9-Deployment Unk. | b) 1-Switch In On Position 2-Switch In Off Position 3-No Switch 9-Unknown

Ejection: 1-Not Ejected 2-Part Ejected 3-Tot. Ejected 7-Not App 9-Unk.

Location After Impact: 1-Not Trapped 2-Extricated (Mechanical Means) 3-Freed (non-mech.) 4-Not Applicable 9-Unknown

Transported to Medical Facility: a) 1-Yes 2-No 3-Unknown | b) By: 1-EMS 2-Police 8-Other 9-Unk.

Sequence of Events

Non-Collision: 01-Cargo/Equip Loss or Shift; 02-Cross Median/Center; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Ran off Road Left; 09-Ran off Road Right; 10-Separation of Units; 11-Spill (Non-Vehicular Unit); 12-Tire Blow-out; 13-Other Non-collision; 14-Unk. Non-collision

Collision, Not Fixed: 20-Animal (Dead Only); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 26-Pedalcycle; 27-Pedestrian; 28-Railway Veh.; 29-Work Zone Maint. Equip.; 30-Other Movable Object

Collision: Fixed Object: 40-Bridge Overhead Structure; 41-Bridge Parapet End; 42-Bridge Pier or Abutment; 43-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Guardrail End; 49-Guardrail Face; 50-Highway Traffic Sign Post; 51-Impact Attenuator/Crash Cushion; 52-Light/Luminaire Support; 53-Work Zone Maint. Equipment; 54-Other Post, Pole, Support; 55-Mail Box; 56-Median Barrier; 57-Overhead Sign Support; 58-Other Fixed Object; 59-Tree; 81-Utility Pole; 99-Unk.

Manner of Collision (Struck Veh.): 00-Not Coll. w/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 41-Angle; 42-Angle; 43-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

1st / Most Deformed Area | 1st Deformed | Most Deformed

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 28-School Bus; 38-Animal Drawn Veh.; 39-Animal (Ridden); 41-Pedestrian; 51-Train; 61-Passenger Bus; 62-Passenger Van; 88-Other; 99-Unk. (Hit and Run Only)

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unavailable; 3-Given - Pending; 4-None; 5-Refused

Special Use Only

Vehicle Use Code: 04-Ambulance; 08-Farm Use; 12-Fire Fighting; 01-Personal; 05-Military; 09-Wrecker or Tow; 13-Logging; 02-Driver Training; 09-Transport Passengers; 10-Police; 18-Other; 03-Construction/Maint.; 07-Transport Property; 11-Government; 41-Pedestrian

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 8-Other | 1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV in Transport; 5-Over-Other Vehicle; 8-None; 9-Unk. | Underride/Override

Vehicle Attachment: 4-Utility Trailer; 1-None; 2-Mobile Home; 3-Semi-Trailer; 5-Farm Trailer; 6-Boat Trailer; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Lowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Drug Results: 0-None/Neither; 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk. | Extent of Deformity

Alc Test Results: A1-; A2-; AS-

Action Prior to Impact (Vehicle): 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other

Action Prior to Impact (Non-motorist): 21-Approaching Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working; 99-Unk.

1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other | Trafficway

A: 1-One 2-Inland 3-Median 4-Roadway 5-Roadway 6-Shoulder 7-Shoulder 8-Outside Trafficway 9-Unk.
B: X-walk; 1-7 2-8 9-U
1st Harmful Event Loc.

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights)

1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest | Road Character

1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Sand, Mud, Dirt, Oil, Gravel; 7-Water (Standing, etc.); 8-Other; 9-Unk. | Road Surface Condition

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk.

01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 88-None; 99-Unk. | Traffic Control Type

1-Yes, Directly; 2-Yes, Indirectly; 3-No; 8-Unk. | School Bus Involved

1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area | 1-Yes 2-No | Work Zone

1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk. | Work Zone Location | Work Zone Type | 1-Yes 2-No | Workers Present

Primary Contributing Factors — Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 11-Operating Defective Equipment; 12-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper lane Usage/Change; 19-Cell Phone; 20-Texting; 28-Other Improper Action; 29-Unk.

Others: 30-Debris; 31-Non-Highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i.e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Roadway | Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W.; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc.; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 65-Under the Influence; 67-Other Person Under Influence

Environmental: 60-Animal in Road; 61-Glare; 62-Obstruction; 63-Weather Cond.; 68-Other; 69-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 99-Unk.

ORIGINAL

O.P.S. USE ONLY 10007336 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 11/2001 | # Of Units 1 | Amended - Attach Copy of Original Report | Corrected | Notified 1752 | Arrived 1759

Date 0124 2010 | Time 1751 | County 23 | Collision Location (Rt. # / Name) 5 I-385 | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | 1-Main 2-Alternate 5-Spur 6-Connection 7-Business | Miles: Dir. N E S W | Near City or Town of: Greenville

Lane # / Dir. 1 4 S W | Distance Offset 1218 Miles | Direction N E S W | Base Intersection (Rt. # / Name) I-85 | From | Toward | Second Intersection (Rt. # / Name) E Wood ruff Rd. | ASRU code | MP/Grid

R.R. Id. NA | From N E S W | Ramp Only 1 - Entrance 2 - Exit | To N E S W | Latitude 34° 31' 47" | Longitude 82° 14' 01"

A-390076 Driver/Pedestrian's Full Name: Gonzalez - Gomez - Gilberto

Unit # 1 | Sex M | Race H | Street 400 Summit Dr. Apt 3C | Birth Date 02/4/1988 | City, State, & Zip Greenville SC 29609

State — | Driver's License # MEX | Insurance Company Progressive Ins.

Year 2002 | Body CN | Vehicle Make Ford | VIN # 1FAFP44Y82F174401

State SC | Year 2010 | License Plate # ABD 664 | Owner's D.L. # Same

Home Telephone 864 517 7530 | Owner's Full Name | Bus. Telephone ( ) | Street | Contributed To Collision No | City, State, & Zip

Estimated Speed 35 | Speed Limit 35 | C.D.L. Req: Yes | T/S S Req: Yes | Alc/Drg info (see back): Yes | Summons # 95756FB | Code 21 | Summons # 95756FB | Code 87 | Towed By Firemore

A-390077 Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | State | Year | License Plate # | Owner's D.L. # | Home Telephone ( ) | Owner's Full Name | Bus. Telephone ( ) | Street | Contributed To Collision Yes | City, State, & Zip

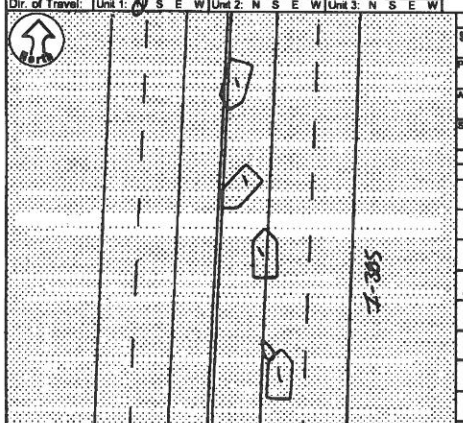
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

A-390078 Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | State | Year | License Plate # | Owner's D.L. # | Home Telephone ( ) | Owner's Full Name FEB 03 2010 | Bus. Telephone ( ) | Street | Contributed To Collision No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 6000	$ NA	$ NA	$ NA	$ NA

Property Owner/Witness: NA | Address: NA | City, State, Zip | Phone

Property Owner/Witness: NA | Address: NA | City, State, Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

Unit #1 was traveling north on I-385 in lane #1. Unit #1 ran into standing water and lost control. Unit #1 entered the grass and spun around striking the protective median wire (cable). No injuries at report time. Diagram not to scale.

NOTICE: THE PURPOSE OF STATE LAW REQUIRING PERSONS INVOLVED IN COLLISIONS TO MAKE REPORTS IS TO PROVIDE INFORMATION FOR USE IN THE ADMINISTRATION OF LAWS DESIGNED TO PROMOTE THE SAFE OPERATION OF MOTOR VEHICLES. THE REPORTS ARE NOT USED TO FIX BLAME FOR COLLISIONS, NOR AS EVIDENCE IN COURTS WHERE DAMAGES ARISING OUT OF COLLISIONS ARE SOUGHT. SECTION 56-5-1270, CODE OF LAWS OF SOUTH CAROLINA, 1976, AS AMENDED.

Investigating Officer's Name T.J. Gibson #265 | Rank CPL | Badge # 121 | Code 23020 | Date 01/24/2010 | Reviewer's Name | Rank Sgt | Internal Agency Code 10-11084

Unit	Date of Birth	Sex	Race	Inj	Seat	R/SD	A.S.D	Eject	LAI	Tran	Name	Street Address	Zip Code
1	02/4/1988	M	H	C	01	13		1	1				

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk; W - Caucasian

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk; 1-Switch in On Position; 2-Switch in Off Position; 3-No Switch; 9-Unknown

Ejection: 1-Not Ejected; 2-Part Ejected; 3-Tot Ejected; 7-Not App; 9-Unk

Inj Status: 0-Not Injured; 1-Possible; 2-Non-incapacitating; 3-Incapacitating; 4-Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown; b) By: 1-EMS 2-Police 8-Other 9-Unk

Restraint/Safety Device: 00-None Used; 11-Shoulder Belt Only; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 88-Other; 99-Unk

Pedestrian, Motor Propelled Cycle Only: 31-Helmet; 32-Reflective Clothing; 41-Protective Pads; 61-Lighting

Sequence of Events

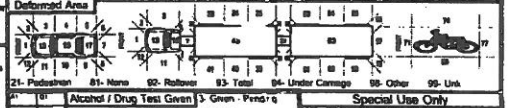
Non-Collision: 04-Equipment Failure; 01-Cargo/Equip Loss or Shift; 05-Fire/Explosion; 06-Overturn/Rollover; 22-Cross Median/Center Line; 23-Immersion; 08-Ran off Road Left; 33-Downhill Runaway; 07-Jackknife; 10-Ran off Road Right

Collision Not Fixed: 27-Pedestrian; 20-Animal (Driver Only); 21-Animal (Any Object); 29-Work Zone Maint Equip; 24-Motor Veh (In Transport); 25-Motor Veh (Other Roadway); 26-Motor Veh (Parked); 39-Unk Moving Object; 25-Pedalcycle

Collision Fixed Object: 40-Bridge Overhead Structure; 41-Bridge Pier or Abutment; 42-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Fence; 49-Guardrail End; 50-Mail Box; 51-Guardrail Face; 52-Highway Traffic Sign Post; 53-Impact Attenuator/Crash Cushion; 54-Light/Luminaire Support; 55-Other Fixed Object; 56-Median Barrier; 57-Overhead Sign Support; 58-Other Post, Pole or Support; 59-Other Wall, Building, Tunnel; 60-Tree; 61-Utility Pole; 62-Work Zone Maint Equipment; 88-Other; 99-Unk

Manner of Collision (Struck Veh.): 00-Not Coll. W/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 40-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

1st / Most Deformed Area: 1st Deformed | Most Deformed



21-Pedestrian; 81-None; 82-Rollover; 83-Total; 84-Under Carriage; 98-Other; 99-Unk

Vehicle Type: 01-Automobile; 12-Pickup Truck; 13-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 28-Animal Drawn Veh; 29-Animal (Ridden); 41-Pedestrian; 31-Train; 81-School Bus; 82-Passenger Bus; 98-Other; 99-Unk (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint; 04-Ambulance; 05-Military; 06-Transport Passengers; 07-Transport Property; 08-Farm Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 41-Pedestrian; 99-Unk

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Lowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Special Use Only

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 5-Other

Undamage/Override

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other

Alc Test Results: A1-; A2-; A3-

Action Prior to Impact (Vehicle): 01-Backing; 02-Changing Lanes; 03-Entering Traffic Lane; 04-Leaving Traffic Lane; 05-Making U-turn; 06-Negotiating a Curve; 07-Overtaking/Passing; 08-Parked; 09-Slowing or Stopping; 10-Turning Left; 11-Turning Right; 12-Proceeding Straight Ahead; 88-Other

(Non-motorist): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 88-Other; 99-Unk; 27-Working

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 89-Unk

Extent of Deformity: 1-None/Minor; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided Barrier; 4-One-Way; 8-Other

1st Harmful Event Loc: 1-Gore; 2-Island; 3-Median; 4-Roadside; 5-Roadway; 6-Shoulder; 7-Sidewalk; 8-Outside Trafficway; 9-Unk; B-Ramp; L-Left Shoulder; R-Right Shoulder

Road Character: 1-Straight - Level; 2-Straight - On Grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On Grade; 6-Curve - Hillcrest

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 03-Stop Sign; 04-Yield Sign; 05-Officer or Flagman; 06-School Zone Sign; 07-School Zone Device; 08-Railroad Crossing; 09-Railroad Flagman; 10-Railroad Gate; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 23-Pavement Markings (only); 41-Stop Sign; 42-School Zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Sign; 51-Flashing Beacon; 98-None; 99-Unk

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Dirt, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights)

School Bus Involved: 1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 06-Shared Use Paths or Trail; 07-T-Intersection; 08-Traffic Circle; 09-Unk; 12-Y-Intersection; 13-Nonjunction

Work Zone: 1-Yes 2-No

Work Zone Location: 1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area

Work Zone Type: 1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk

Workers Present: 1-Yes 2-No

Primary Contributing Factors

Driver: 01-Disregarded Signs, Signals, Etc; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 12-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper Lane Usage/Change; 28-Other Improper Action; 19-Cell Phone; 98-Other; 99-Unk

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (Ice, Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (Inop, Missing); 37-Work Zone (Constr./Maint Activity); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk

Non-Motorist: 50-Inattentive; 51-Lying And/Or Illegally in Roadway; 52-Failure to Yield R. of W; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Under the Influence; 67-Other Person Under Influence; 58-Other; 59-Unk

Environmental: 62-Obstruction; 80-Animal in Road; 81-Glare; 82-Weather Cond; 88-Other; 89-Unk

Others:

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 10/2001)

O.D.S. USE ONLY	Page #	# Of Units	Amended - Attach Copy of Original Report / Corrected	Notified	Arrived
10007338	1 Of 1			2322	2346

Date	Time	County	Collision Location (Rt. # / Name)	Miles:	Dir.	In Near City or Town of:
01/24/2010	2322	23	I 385 N			Greenville

Lane # / Dir.: 1 / 2 / 5 — Distance Offset: 1230 Miles / Feet — Direction: N E S W — Base Intersection (Rt. # / Name): I 85 — ASRU code: — MP/Grid:

R.R. Id. — From: N E S W — Ramp Only: 1 - Entrance 2 - Exit — To: N E S W — Second Intersection (Rt. # / Name): SC 146 Woodruff Rd — Latitude: 109 2902 — Longitude: 161 1471

1 - Interstate 2 - US Primary 3 - SC Primary 4 - Secondary 5 - County 6 - Other — Main / Alternate / Spur / Connection / Business / Other

A- 387328 — Driver/Pedestrian's Full Name: Owens-Danielle Renee

Unit #	Sex	Race	Street	City, State, & Zip
1	F	W	112 Gary Ave	Simpsonville, SC 29681

Birth Date: 05/06/1988 — Driver's License #: 10067803 (SC) — Insurance Company: Esurance Ins Co.

Year	Body	Vehicle Make	VIN #
1998	CP	Ford	3FAKP1139WR170751

State: SC — Year: 2010 — License Plate #: DDH342 — Owner's D.L. #: Same as driver

Home Telephone: (864) 528-7048 — Owner's Full Name: S a m e

Bus. Telephone: (864) 963-1423 — Street: a m e

Contributed To Collision (Yes) No — City, State, & Zip: a m e

Estimated Speed: 55 — Speed Limit: 55 — C.D.L. Req: Yes (No) — T/S S Req: Yes (No) — Alc/Drg info (see back): Yes (No)

Summons #: 85421 PB — Code: 21 — Summons # / Code: N/A — Towed By: N/A

A- 387329 — Driver/Pedestrian's Full Name

Unit #: X — Sex — Race — Street — Birth Date — City, State, & Zip

State — Driver's License # — Insurance Company

Year — Body — Vehicle Make — VIN #

State — Year — License Plate # — Owner's D.L. #

Home Telephone ( ) — Owner's Full Name

Bus. Telephone ( ) — Street

Contributed To Collision: Yes / No — City, State, & Zip

Estimated Speed — Speed Limit — C.D.L. Req: Yes No — T/S S Req: Yes No — Alc/Drg info (see back): Yes No

Summons # — Code — Summons # / Code — Towed By

A- 387330 — Driver/Pedestrian's Full Name

Unit #: X — Sex — Race — Street — Birth Date — City, State, & Zip

State — Driver's License # — Insurance Company

Year — Body — Vehicle Make — VIN #

State — Year — License Plate # — Owner's D.L. #

Home Telephone ( ) — Owner's Full Name: FEB 03 2010

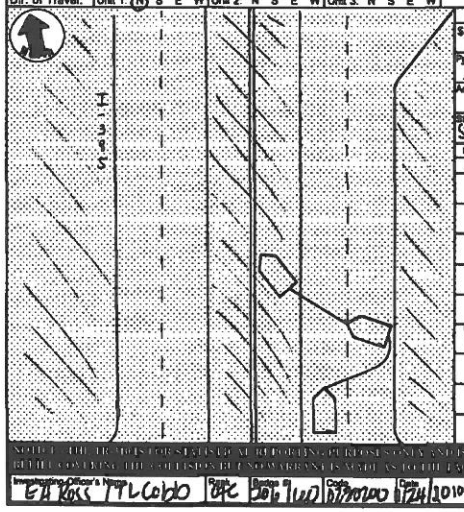
Bus. Telephone ( ) — Street

Contributed To Collision: Yes / No — City, State, & Zip

Estimated Speed — Speed Limit — C.D.L. Req: Yes No — T/S S Req: Yes No — Alc/Drg info (see back): Yes No

Summons # — Code — Summons # / Code — Towed By

Dir. of Travel: Unit 1: N S E W — Unit 2: N S E W — Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$	$	$ 500	$

Property Owner/Witness: Department of Transportation — Address: 13 Saluda Dam Rd — State: SC — Zip: 29611 — Phone: 864-241-1221

Photo: (Y) (N) — Describe What Happened (Refer to Units by Number):

Unit #1 was traveling North on I 385 N. in lane 1. Unit #1 hit standing water in roadway and hydroplaned. She over corrected and struck the guardrail on shoulder of roadway with rear of vehicle. Unit #1 then went off of the roadway toward the median and struck that guardrail with the left front of the vehicle.

NOTICE - THE INFORMATION ON THIS REPORT IS FOR OFFICIAL USE ONLY AND IS NOT TO BE USED FOR ANY PURPOSE OR ACTIVITY NOT STATED IN SECTION 56-5-1270 OF THE 1976 CODE OF LAWS, AS AMENDED. ANY PERSON VIOLATING THE PROVISIONS OF THIS SECTION SHALL BE GUILTY OF A MISDEMEANOR AND UPON CONVICTION SHALL BE PUNISHED AS PROVIDED BY LAW. ALL RIGHTS RESERVED.

Investigating Officer's Name	Rank	Badge #	Date	Reviewer's Name	Rank	Internal Approval Code
E.H. Koss / T.L. Cobb	PFC / PFC	306 / 1140	1/24/2010		Sgt	10-011133

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.D.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	05/06/1988	F	W	3	01	99	49	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 30- Helmet; 51- Reflective Clothing; 86- Other; 99- Unk

Air Bag Deployment / Switch: a) 1-Deployed Front 4-Not Deployed; 2-Deployed Side 7-Not Applicable; 3-Deployed Both 8-Deployment Unk.; 9- Unknown. b) 1- Switch in On Position 3- No Switch; 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian Motor/Pedalcycle Only: 41- Protective Pads 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Jackknife; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Mat.); 13- Other Non-Collision; 19- Unk Non-Collision

Collision Not Fixed: 20- Animal (Other Only); 21- Animal (All Other); 22- Motor Veh (In Transport); 23- Motor Veh (Stopped); 24- Motor Veh (Other Roadway); 25- Motor Veh (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint Equip; 35- Other Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 89- Unk

1st Harmful: 09 — 1st Most Deformed: 7 — Most Deformed: 7

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (←|↑); 41- Angle (→|←); 42- Angle (↗|↖); 43- Angle (↗|↑); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 21- Pedestrian; 81- None; 92- Rollover; 93- Total; 94- Under Carriage; 98- Other; 99- Unk.

Vehicle Type: 01- Automobile; 02- Passenger Bus; 03- Bus; 04- Ambulance; 05- Fire/Explosion; 06- Overturn/Rollover; 07- Jackknife; 08- Farm Use; 09- Wrecker or Tow; 10- Ran off Road Left; 11- Ran off Road Right; 12- Fire Fighting; 13- Logging; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 18- Pickup Truck; 19- Truck Tractor; 20- Other Motorbike; 21- Animal (Other Only); 22- Animal (All Other); 23- Animal (Ridden); 24- Motor Veh (In Transport); 25- Motorcycle; 26- Motor Veh (Stopped); 27- Pedalcycle; 28- Other Non-Motorist; 29- Work Zone Maint Equip; 30- Other Movable Object; 31- Railway Veh; 32- Pedestrian; 33- Separation of Units; 34- Spill (Non-Hazmat Mat.); 35- Train; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 41- Pedestrian; 98- Other; 99- Unk. (Hit and Run Only)

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Air Only); 2- Blood; 3- Urine; 8- Other

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk

Undermide/Overmide

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Auto Carrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 5- Not Applicable; 8- Unk

Extent of Deformity: 2

Alc Test Results: A1- ; A2- ; A3-

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Trafficway: 3 — 1st Harmful Event Loc.: 5

Road Character: 1 — Road Surface Condition: 7 — Traffic Control Type: 18

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Dirt or Snow; 8- Severe Crosswinds; 9- Unk. — 2

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights) — 5

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk — 13

02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 98- None; 99- Unk

School Bus Involved: 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area — Work Zone Location; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk — Work Zone Type; 1- Yes 2- No Workers Present:

Primary: 03 — Others: 33

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Pedalcyclist; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Influence; 67- Other Person Under Influence

Environmental: 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

ORIGINAL

JAN 24 2018

D.P.S. USE ONLY: 10150675 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 11/2011) | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1242 | Arrived 1320

Date 12-17-2010 | Time 1237 | County 23 | Collision Location (Rt. # / Name): 85 | Miles: 6.00 | Dir.: E | Nearest City or Town of: Greenville

Lane # / Dir.: 4 N | Distance Offset: .10 Miles East | Direction: E | From: Base Intersection (Rt. # / Name): 385 | To: Second Intersection (Rt. # / Name): 674 | ASRU code | MP/Grid | Latitude 34°50.02.11 | Longitude 82°17'46.26

R.R. Id.: NA | From: Ramp Only: N | To: Ramp Only: N

Unit 1

Driver/Pedestrian's Full Name: T-235064 Smargola - Kevin John

Unit # 1 | Sex M | Race W | Street/R.F.D.: 116 Creekside Ln.

Birth Date: 11-1-1989 | City, State, & Zip: Boiling Springs, SC 29316

State SC | Driver's License #: 100685163 (D) | Insurance Company: State Farm

Year 1999 | Body 2DS | Vehicle Make: Ford | VIN #: 1FAFP4041XF207073

State SC | Year 2011 | License Plate #: DAS 115 | Owner's D.L. #: NA

Home Telephone: (864) 316-2618 | Owner's Full Name: Smargola - Deborah Ann

Bus. Telephone: (864) 579-1637 | Street/R.F.D.: 116 Creekside Ln.

Contributed To Collision: Yes (D) | City, State, & Zip: Boiling Springs, SC 29316

Estimated Speed 0 | Speed Limit 45 | C.D.L. Req: Yes No | Summons #: NA | Code | T/B S Req: Yes No | Summons # | Code | Alc/Drg info (see back): Yes No | Towed By: Mills Tow

Unit 2

Driver/Pedestrian's Full Name: T-235065 Grice - Charles Robert

Unit # 2 | Sex M | Race W | Street/R.F.D.: 521 Pinecrest Dr.

Birth Date: 12-22-1967 | City, State, & Zip: Bremen, GA 30110

State GA | Driver's License #: 051422576 (A) | Insurance Company: Central Ins.

Year 2010 | Body TK | Vehicle Make: Ford | VIN #: NMOLS7DN6AT003875

State SC | Year 2011 | License Plate #: GTI 861 | Owner's D.L. #: NA

Home Telephone: (803) 413-1204 | Owner's Full Name: Carolina International Trks.

Bus. Telephone: (678) 621-3755 | Street/R.F.D.: 1619 Bluff Rd.

Contributed To Collision: Yes No | City, State, & Zip: Columbia, SC 29201

Estimated Speed 35 | Speed Limit 45 | C.D.L. Req: Yes (No) | Summons #: ET79608 | Code 21 | T/B S Req: Yes (No) | Summons #: NA | Code | Alc/Drg info (see back): Yes No | Towed By: NA

Unit 3

Driver/Pedestrian's Full Name: T-235066

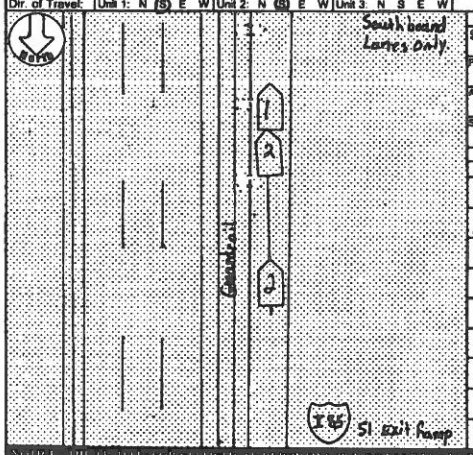
Unit # NA | Sex | Race | Street/R.F.D.:

Birth Date | City, State, & Zip:

State | Driver's License # | Insurance Company:

Year | Body | Vehicle Make | VIN #:

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3500	$ 7500	$	$ NA	$ NA

Property Owner/Witness: NA | Address | City, State, Zip | Phone

Property Owner/Witness: NA | Address | City, State, Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Units #1 and #2 were traveling South on I-85 exit 51 A-C ramp. Unit #1 stopped for traffic. Unit #2, Driving Too Fast for Conditions, struck Unit #1 in the rear.

SOURCE: THE INFORMATION ON THIS STATISTICAL REPORTING FORM IS ONLY AS GOOD AS IS INTENDED BY THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH OF ANY OPINION OR BELIEF.

Investigating Officer's Name: Kesling - 56 | Rank: TFC | Badge #: 319 | Code: HP03 | Date: 12-17-2010 | Reviewer's Name | Rank: Sgt | Internal Agency Code: DGN1700474

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.S.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	11-1-1989	M	W	0	01	13	3	1	1	2			
2	12-22-1967	M	W	0	01	13	3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Restraint/Safety Device: 00- None Used; 01- Child Safety Seat; 02- Shoulder Belt Only; 03- Lap Belt Only; 04- Other; 05- Shoulder & Lap Belt; 99- Unk

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; a) 1- Switch in On Position; 3- No Switch; b) 2- Switch in Off Position; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 08- Overturn/Rollover; 03- Cross Median/Center Line; 06- Immersion; 09- Ran off Road Left; 02- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right

Collision Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 28- Railway Veh; 21- Animal (All Other); 29- Work Zone Maint. Equip; 22- Motor Veh (In Transport); 23- Motor Veh (Stopped); 30- Other Movable Object; 24- Motor Veh (Other Roadway); 11- Separation of Units; 12- Spill (Cargo/Fluids); 26- Other Non-collision; 25- Motor Veh (Parked); 39- Unk. Moveable Object; 99- Unk. Non-collision

Collision Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 48- Equipment; 41- Bridge Pier or Abutment; 49- Fence; 42- Bridge Parapet End; 50- Guardrail End; 43- Bridge Rail; 51- Guardrail Face; 44- Culvert; 52- Highway Traffic Sign Post; 45- Curb; 53- Impact Attenuator/Crash Cushion; 46- Ditch; 54- Light/Luminaire Support

55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 66- Other; 99- Unk

Unit	1st Harmful	2nd Harmful	Most Harmful
1	24		24
2	35		35

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed | Most Deformed

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 26- Motorcycle; 28- Other Motorbike; 27- Pedalcycle; 31- Train; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- School Bus; 52- Passenger Bus; 99- Unk. (Hit and Run Only); 00- Other

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 99- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk; Underride/Override

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Structural Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk

Traffic Way: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 5- Other

1- Curb; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk

Trafficway: 4; X-walk: 1 2 3 4 5 6 7; 1" Hanstat: 5; Event Loc: 19

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk; 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 88- None; 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.; 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights); 1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-intersection; 09- Traffic Circle; 12- Y-intersection; 13- Non-junction; 99- Unk.; 3

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.; 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 2

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other; 9- Unk

Work Zone Type: 1- Yes 2- No Workers Present:

Primary: 03 | Contributing Factors - Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Vehicle in Erratic, Reckless, or Negligent Manner; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction in Road; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

OCT 07 2010

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01/2001)

O.P.S. USE ONLY	Page #	# of Units	Amended - Attach Copy of Original Report	Notified	Arrived
10108422	1 / 1	1	Corrected	0315	0319

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Mile Marker / Near City or Town of:
09-28-2010	0300	23	5 85	4.1	N S	GREENVILLE

Lane # / Dir.: # N/A; Of; N E S W

Distance Offset: Miles .08 Feet; N E S W

Direction: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt. # / Name): From 385

Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other

ASRU code; MP/Grid

Latitude: 34 49 50.80

Longitude: 82 18 03.20

R.R. Id.: N/A

From: Ramp Only N E S W; Entrance 1- Exit

To: N E S W; 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Second Intersection (Rt. # / Name): Toward 146 / WOODRUFF RD

Driver/Pedestrian's Full Name

Unit #	Driver/Pedestrian's Full Name	Sex	Race	Street/R.F.D.	City, State, & Zip	Birth Date
1	B-699715 MORGAN-THOMAS ERIC	M	W	104 PINE CREST DR	GREENVILLE SC 29605	07-15-1972
N/A	B-699716					
N/A	B-699717					

Driver's License #	Insurance Company
SC 004044056 (D)	STATE FARM

Year	Body	Vehicle Make	VIN #
2011	TK	DODG	3D7KR19D3BG825908

State	Year	License Plate #	Owner's D.L. #
SC	2011	EUJ928	004044056 (D)

Home Telephone: 864-884-4232

Owner's Full Name: MORGAN-THOMAS ERIC

Bus. Telephone: 864-694-1231

Street/R.F.D.: 104 PINECREST DR

Contributed To Collision: No

City, State, & Zip: GREENVILLE SC 29605

Estimated Speed	Speed Limit	C.D.L. Req: Yes	T/B S Req: Yes	Alc/Drg info (see back): Yes
55	60			

Summons # / Code: E671732 / 21

Summons # / Code: E671733 / 63

Towed By: KELLETTS (Rec

Unit 1: N S E W; Unit 2: N S E W; Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 5000	$	$	$ 4000	$

Property Owner/Witness: S.C. DEPT OF TRANSPORTATION

Address: 13 SALUDA DAM RD GREENVILLE

State: SC; Zip: 29611; Phone: (864) 241-1224

Property Owner/Witness: BOYKIN-PATRICK

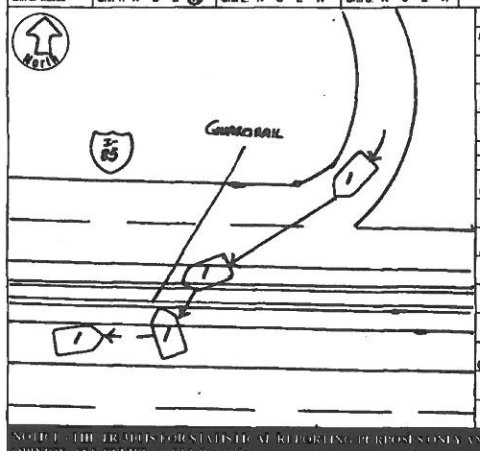
Address: 110 PINECREST RD GREENVILLE

State: SC; Zip: 29611; Phone: (864) 908-2448

Photo: Y

Describe What Happened (Refer to Units by Number)

UNIT #1 WAS ATTEMPTING TO ENTER I-85 SOUTHBOUND FROM I-385 SOUTHBOUND. UNIT #1 WAS DRIVING TOO FAST FOR CONDITIONS. UNIT #1 WENT OUT OF CONTROL AND STRUCK A GUARD RAIL. UNIT #1 WENT OVER THE GUARD RAIL AND CAME TO REST IN THE EMERGENCY LANE. THE DRIVER OF UNIT #1 LEFT THE COLLISION SCENE ON FOOT. THE DRIVER OF UNIT #1 WAS LATER LOCATED AND CHARGED.



NOTICE: THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT IS NOT A WARRANTY IS MADE AS TO THE FACTS OR OPINIONS THEREOF.

Investigating Officer's Name	Rank	Badge #	Cert #	Date	Reviewed By Name	Rank	Internal Agency Code
MOTES-JT	TPR	751	17093	01-08-10		SGT	100

Unit	Date of Birth	Sex	Race	INJ	Seat	MAIS	A.B.S.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	07-15-1972	M	W	0	01	1	N/S	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; 9- Unknown

Motorcycle Only: Helmet: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Transported to Medical Facility: 1- Yes 2- No 3- Unknown; By: 1- EMS 2- Police 8- Other 9-Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 08- Cross Median/Center Line; 09- Immersion; 09- Ran off Road Left; 09- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Mat.); 13- Other Non-Collision; 99- Unk. Non-Collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 28- Motor Veh. in Transport; 22- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle

Collision: Fixed Object: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip; 30- Other Movable Object; 39- Unk. Movable Object; 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 63- Work Zone Maint. Equipment

Event 1	Event 2	Event 3	Event 4	Most Harmful Event	1st Harmful Event
51				51	51

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Head On; 11- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area; 1st Deformed; Most Deformed

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 19- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal (Deer Veh.); 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 08- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Towed Motor Vehicle; 7- Camper Trailer; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 28- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 27- Working

Alc Test Results: 1- Test-way, Not Divided; 2- Test-way, Divided, Unprotected Median; 3- Test-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 3

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk.

Underride/Override: Y

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Extent of Deformity: 3

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 10- Y-Intersection; 13- Nonjunction; 99- Unk.

Roadway: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 8- Other; 9- Unk.

Road Character: 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Yield Sign; 05- School Zone Sign; 06- Railroad Crossbuck; 07- Railroad Flashers; 08- Railroad Gates; 09- Railroad Flagman; 10- Railroad Other; 11- Railroad Multiple; 20- Officer or Flagman; 21- Other; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Other Warning Signs; 43- Railroad Crossing Sign; 44- Railroad Crossing Signal; 45- Railroad Crossing Gate; 99- Unk.

Traffic Control Type: 31

1st Harmful Event Loc.: 1

Work Zone Location: 1- Before 1st Sign; 2- Advancing Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present: 1- Yes 2- No

School Bus Involved: 3

Work Zone: 1- Yes 2- No

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 28- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 66- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Primary: 03

Others: 19

ORIGINAL

JAN 28 2010

D.P.S. USE ONLY: 10068303 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1005 | Arrived 1037

Date	Time	County	Collision Location (Rt. # / Name)	Miles: 4.1	Dir. N E S W	dist/ Near City or Town of:
01-18-2010	1000	23	85		S	GREENVILLE

Lane # / Dir.: 3 / 6 | Of: | N E S W: W | Distance Offset: .03 Miles Feet | Direction: N E S W | Interstate 1- Secondary 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 395 | Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASR/U code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 146 / WOODRUFF RD | Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | Latitude: 34 49 47.60 | Longitude: 82 18 09.10

B-087490

Driver/Pedestrian's Full Name: HAWKINS- JOE BENJAMIN

Unit #: 1 | Sex: M | Race: B | Street/R.F.D.: 433 LEMON GRASS CT | Birth Date: 10-08-1943 | City, State, & Zip: DUNCAN SC 29334

State: SC | Driver's License #: 002204926 (D) | Insurance Company: STATE FARM

Year: 2004 | Body: CN | Vehicle Make: CHEV | VIN #: 1G3EL75R5LW257619

State: SC | Year: 2011 | License Plate #: DEF382 | Owner's D.L. #: 002204926 (D)

Home Telephone: (864) 431-5449 | Owner's Full Name: HAWKINS- JOE BENJAMIN

Bus. Telephone: (864) 431-5449 | Street/R.F.D.: 433 LEMON GRASS CT

Contributed To Collision: Yes | City, State, & Zip: DUNCAN SC 29334

Estimated Speed: 60 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: N/A | Code: | Towed By: DOBSON (GF)

B-087491

Driver/Pedestrian's Full Name: ABBOTT- THOMAS O

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 30 CROWN ROAD 1028 | Birth Date: 03-23-1976 | City, State, & Zip: CULLMAN AL 35057

State: AL | Driver's License #: 7146585 (A) | Insurance Company: FEDERAL HOME CARRIER

Year: 2001 | Body: TR | Vehicle Make: VOLV | VIN #: 4V4NC9GN46N397906

State: TN | Year: 2011 | License Plate #: 098MH2 | Owner's D.L. #: N/A

Home Telephone: 256 338-5497 | Owner's Full Name: AVERITT EXPRESS INC

Bus. Telephone: 256 338-5497 | Street/R.F.D.: 518 OLD KENTUCKY RD

Contributed To Collision: Yes | City, State, & Zip: COOKEVILLE TN 38506

Estimated Speed: 60 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: N/A | Code: | Towed By: N/A

B-087492

Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

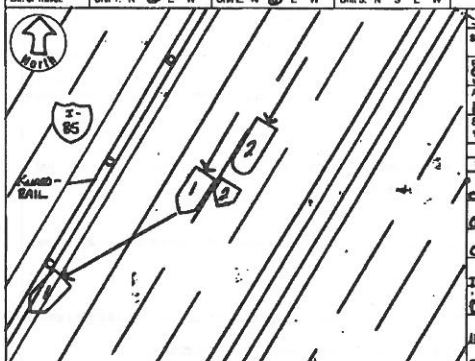
Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes / No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons #: | Code: | Towed By:

Direction of Travel: Unit 1: N E S W | Unit 2: N E S W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 4000	$ 800	$	$ 200	$ NIL

Property Owner/Witness: SC DEPT OF TRANSPORTATION | Property Owner/Witness:

Address: 13 SPALDA DAM RD GREENVILLE | Address:

State: SC | Zip: 29611 | Phone: (864) 241-1814 | State | Zip | Phone

Photo: N | Describe What Happened (Refer to Units by Number):

UNIT #1 AND UNIT #2 WERE TRAVELING SOUTH ON I-85. UNIT #1 DRIVER STATED THAT UNIT #2 CAME INTO HIS LANE AND STRUCK HIS VEHICLE WHICH CAUSED HIM TO RUN OFF OF THE RIGHT SIDE OF THE ROADWAY AND STRIKE A GUARDRAIL. UNIT #2 DRIVER STATES HE HAS NO MEMORY OF IF HE DRIFTED INTO THE LANE OCCUPIED BY UNIT #1 OR IF UNIT #1 DRIFTED INTO HIS LANE AND STRUCK HIM. NO INDEPENDANT WITNESSES WERE LOCATED.

NOTICE - THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS THE OFFICER'S FIRST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
HOYER-JT	SGT.	251	4P03	01-18-2010	STAYLOR-T.J.	CPL.	10GV06A2302

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	10-08-1943	M	B		01	13	4:3	1	1	2	HAWKINS- JOE BENJAMIN		
1	01-19-2007	M	B		05	21	4:3	1	1	2	DAVIS- JENNIFER JANINE	433 LEMON GRASS CT DUNCAN SC	29334
1	01-30-2002	M	B		03	13	4:3	1	1	2	DAVIS- ZACCHAEUS XAVIER	433 LEMON GRASS CT DUNCAN SC	29334
2	03-22-1976	M	W		01	13	7:3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitated; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 8- Deployment Unk.; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 81- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 09- Overturn/Rollover; 09- Cross Median/Center Line; 06- Immersion; 08- Ran off Road Left; 00- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Mat.); 13- Other Non-Collision; 19- Unk. Non-Collision

Collision: Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

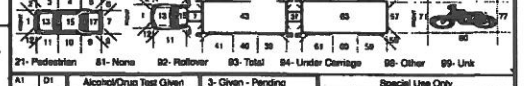
Collision: Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Rail End; 44- Culvert; 45- Curb; 46- Ditch; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other Post, Pole, Support, Etc.; 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Event	Event	Event	Event	Most Harmful
1st	10	31		22
2nd				
3rd				
4th				

1st Harmful: 22

Manner of Collision (Struck Veh.): 00- Not Col. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 12 29 3; Most Deformed: 12 29 3



21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 61- Train; 81- School Bus; 82- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Underride/Override: 6

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 9- Unk.

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

EB: E- walk: ; WB: W- walk: ; 1st Harmful Event Loc.: 12

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Character: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Road Surface Condition: 1

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 88- None; 99- Unk.

Traffic Control Type: 31

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-Junction; 99- Unk.

Junction Type: 19

School Bus Involved: 3- No; 9- Unk.

Work Zone: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes; 2- No

Primary: 18

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 99- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Glare; 65- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

Contributing Factors — Other: 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

ORIGINAL

D.P.S. USE ONLY	South Carolina Uniform Traffic Collision Report (For Investigating Officers) Supplemental Bus & Truck Collision Report	Amended-Attach Copy of Original Report	Corrected
10068303			

Page 1 of 1 Pages

Date	Time	County	Route Category	Collision Location (Route Number and Name if Any)	Auxiliary
06-18-2010	1000	GREENVILLE	1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County	ON 85	0-Mainline 2-Alternate 5-Spur 6-Connection 7-Business

SCREENING INFORMATION

NUMBER OF QUALIFYING VEHICLES INVOLVED

A Truck Having a GVWR of 10,001 lbs. or More For the Power Unit → 1

OR

A Vehicle with a Hazardous Materials Placard → 0

OR

JUN 28 2010

A Bus That is Designed or Used to Carry 16 or More Persons, Including the Driver → 0

OR

A Motor Vehicle Engaged in Interstate Commerce that is Designed or Used to Carry 9-15 Persons, Including the Driver, for Compensation → 0

Number of Persons Involved:

Sustaining Fatal Injuries → 0

JUN 30 2010

Transported for Immediate Medical Services → 0

Financial Responsibility SCDMV

Number of Vehicles Towed

Towed From the Scene Due to Damage → 1

Do Not Complete This Form Unless:

One or More Qualifying Vehicles was Involved - AND

One or More Qualifying Injuries was Sustained - OR

One or More Vehicles (not necessarily the truck or bus) Was Towed from the Scene

Total Number of Supplemental Forms Required for this Collision : 2

Unit Number 2 FR-10 Number B-08491

Carrier Information

Name: ~~Averett Express Inc~~ Averitt

Address: 518 ~~Old Kentuck~~ Ro 1415 Neal St.

City: Cookeville State: TN Zip: 38502

Business Phone Number: 864 879 4884

Identification Numbers

U.S. DOT 0366847 None = 0

ICC MC 121600 State:

State Number

Is this vehicle an (1) Interstate or a (2) Intrastate carrier? 1

Was a Citation Issued to this Vehicle? 1- Yes 2- No 3- Pending 2

Investigator's Name: HOTES-JT Rank: S/TPR Date: 06-18-2010

Access Control

1- No Access Control
2- Full Access Control
3- Partial Access Control

2

Vehicle Information

Gross Vehicle Weight Rating

Weight Rating of the Power Unit of the Truck

01- Less Than or Equal to 10,000 Pounds
02- 10,001-26,000 Pounds
03- More Than 26,000 Pounds
99- Unknown/Hit and Run

03

Vehicle Configuration

00- Passenger Car (only w/ HAZMAT placard)
01- Light Truck (only w/ HAZMAT placard)
02- Bus (seats for 9-15 people)
03- Bus (seats for 16 + people)
04- Single Unit Truck (2 axles/6+ Tires)
05- Single Unit Truck (3 or more axles)
06- Truck w/ Trailer
07- Truck-Tractor Only (Bobtail)
08- Tractor w/ Semi-Trailer
09- Tractor w/ Double Trailers
10- Tractor w/ Triple Trailers
98- Other/Unable to Classify
99- Unknown/Hit and Run

08

Cargo Body Type

00- Bus (seats for 9-15 people)
01- Bus (seats for 16+ people)
02- Enclosed Box
03- Cargo Tank
04- Flat Bed
05- Dump
06- Concrete Mixer
07- Auto Transport
08- Garbage/Refuse
09- Grain, Chips, Gravel
10- Pole
11- Intermodal Container
97- Not Applicable
98- Other
99- Unknown/Hit and Run

02

Trailer Length and Width

Length

00- No Trailer
01- Less than 480 in. (40 ft)
02- 481 in. - 576 in. (48 ft.)
03- 577 in. or more
99- Unknown/Hit and Run

Trailer 1 Length: 02 Trailer 2 Length:

Width

00- No Trailer
01- Less than 60 in. (5 ft.)
02- 61 in. - 84 in. (7 ft.)
03- 85 in. or more
99- Unknown/Hit and Run

Trailer 1 Width: 02 Trailer 2 Width:

Hazardous Material Involvment

Was This Vehicle Carrying Hazardous Materials? 1- Yes 2- No 3- Unknown/Hit and Run 2

Did the Vehicle Have a Hazardous Material Placard? 1-Yes 2- No 3- Unknown/Hit and Run 2

If "Yes", What Class of Hazardous Material (from placard/shipping papers)?

01- Class 1 (Explosives)
02- Class 2 (Gases)
03- Class 3 (Flammable Liquids)
04- Class 4 (Flammable Solids)
05- Class 5 (Oxidizing Substance)
06- Class 6 (Poison/Infectious Substance)
07- Class 7 (Radioactive)
08- Class 8 (Corrosives)
09- Class 9 (Misc. Goods)
10- No Placard
99- Other/Unknown/Hit and Run

If "YES", enter 4 digit HAZMAT (Dfrom placard/shipping papers)

Was Hazardous Material Released From This Vehicle's Cargo? 1-Yes 2- No 3- Unknown/Hit and Run 2

Notification of Release:

Reviewer's Name: Gaylord - T.J. Date: 06-20-2010

ORIGINAL

D.P.S. USE ONLY: 10060126 | Page 1 / Ct. 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01-2003) | # of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 0449 | Arrived: 0451

Date: 05-27-2010 | Time: 0415 | County: 23 | Collision Location (Rt. # / Name): S 85 | Miles: 1 | Dir. of: S | Mile/ Near City or Town of: Greenville

Lane # / Dir.: 1 / 1 / NE 6 W | Distance Offset: .03 Miles/Feet N/S | Direction: 6 E W | Base Intersection (Rt. # / Name): From 385 | ASRU code | MP/Grid

R.R. Id.: NA | From: Ramp Only NE 6 W | To: NE 6 W | Second Intersection (Rt. # / Name): Toward 146 | Latitude: 34° 49 5210 | Longitude: 82° 18 0720

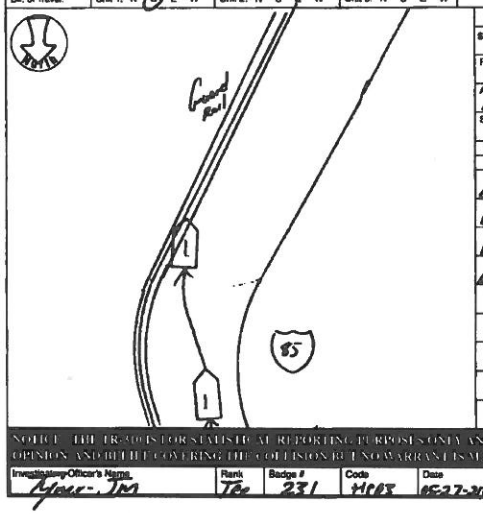
B-424693 | Driver/Pedestrian's Full Name: Burdette - Sherrie Lynn | Street/R.F.D.: 419 W Whitner St Lot 52 | Unit #: 1 | Sex: F | Race: W | Birth Date: 04-25-1965 | City, State, & Zip: Anderson SC 29624 | State: SC | Driver's License #: 00771442S(D) | Insurance Company: Allstate | Year: 2001 | Body: 4S | Vehicle Make: Ford | VIN #: JTHKK1ID448T0008810 | State: SC | Year: 2011 | License Plate #: DSL 243 | Owner's D.L. #: 00771442S(D) | Home Telephone: 864 844 4136 | Owner's Full Name: Burdette - Sherrie Lynn | Bus. Telephone: ( ) N/A | Street/R.F.D.: 419 W Whitner St Lot 52 | Contributed To Collision: Yes | City, State, & Zip: Anderson SC 29624 | Estimated Speed: 45 | Speed Limit: 60 | C.D.L. Req: Yes | T/S S Req: Yes | Alc/Drg info (see back): Yes | Summons #: E479776 21 | Code | Towed By: N/A

B-424694 | Driver/Pedestrian's Full Name | Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | State | Year | License Plate # | Owner's D.L. # | Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

B-424695 | Driver/Pedestrian's Full Name | Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

JUN 10 2010

Dir. of Travel: Unit 1: N 6 E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3500	$ N/A	$ N/A	$ 2000	$ N/A

Property Owner/Witness: D.O.T. | Address: 13 Saluda Dam Rd. Greenville | State: SC | Zip: 29611 | Phone: (864) 241-1224 | Property Owner/Witness | Address | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling south on I-85 entrance ramp from I-385. The driver was driving too fast for conditions and ran off the left side of the road striking a guardrail.

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION. IT DOES NOT WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Moore, JM | Rank: Tpr | Badge #: 231 | Code: HP03 | Date: 05-27-2010 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 10GV058295

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	04-25-1965	F	W	0	01	13	9	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0 - Not Injured; 1 - Possible; 2 - Non-Incapacitating; 3 - Incapacitating; 4 - Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20 - Pedestrian; 30 - Trailing Unit; 40 - Bus or Van (4th row or Higher); 50 - Other Enclosed Area (nontrailing); 51 - Other Unenclosed Area (nontrailing); 60 - Sleeper of Cab; 70 - Riding on Unit Exterior; 80 - Lap; 99 - Unit./N/A

Restraint/Safety Device: 00 - None Used; 11 - Shoulder Belt Only; 12 - Lap Belt Only; 13 - Shoulder & Lap Belt; 21 - Child Safety Seat; 66 - Other; 99 - Unk.

Air Bag Deployment / Switch: a) 1 - Deployed Front; 2 - Deployed Side; 3 - Deployed Both; 4 - Deployment Unk.; 7 - Not Applicable; b) 1 - Switch In On Position; 2 - Switch In Off Position; 3 - No Switch; 9 - Unknown

Ejection: 1 - Not Ejected; 2 - Part. Ejected; 3 - Tot. Ejected; 7 - Not App.; 9 - Unk.

Location After Impact: 1 - Not Trapped; 2 - Extricated (Mechanical Means); 3 - Freed (non-mech.); 4 - Not Applicable; 9 - Unknown

a) Transported to Medical Facility: 1 - Yes; 2 - No; 3 - Unknown

b) By: 1 - EMS; 2 - Police; 8 - Other; 9 - Unk.

Pedestrian, Motion/Pedalcycle Only: 31 - Helmet; 41 - Protective Pads; 51 - Reflective Clothing; 61 - Lighting

Sequence of Events

Non-Collision: 04 - Equipment Failure; 01 - Cargo/Equip Loss or Shift; 05 - Fire/Explosion; 06 - Overturn/Rollover; 09 - Cross Median/Center Line; 10 - Immersion; 08 - Ran off Road Left; 02 - Downhill Runway; 07 - Jackknife

Collision: Not Fixed: 27 - Pedestrian; 28 - Railway Veh.; 29 - Work Zone Maint. Equip.; 30 - Other Moveable Object; 31 - Unk. Moveable Object; 20 - Animal (Dom Only); 21 - Animal (All Other); 22 - Motor Veh. in Transport; 23 - Motor Veh. (Stopped); 24 - Motor Veh. (Other Roadway); 25 - Motor Veh. (Parked); 26 - Pedalcycle

Collision: Fixed Object: 47 - Embankment; 48 - Bridge Overhead Structure; 49 - Bridge Pier or Abutment; 44 - Culvert; 45 - Curb; 46 - Ditch; 35 - Mail Box; 36 - Median Barrier; 37 - Overhead Sign Support; 38 - Other (Post, Pole, Support, Etc.); 39 - Other (Wall, Building, Tunnel, Etc.); 50 - Shrubbery; 51 - Tree; 52 - Utility Pole; 53 - Impact Attenuator/Crash Cushion; 54 - Light/Luminaire Support; 55 - Unknown Fixed Object; 40 - Equipment; 41 - Fence; 42 - Guardrail End; 43 - Guardrail Face; 60 - Work Zone Maint. Equipment

Event 1	Event 2	Event 3	Event 4	Most Harmful Event	1st Harmful Event
24	51			51	51

Manner of Collision (Struck Veh.): 00 - Not Coll. W/Motor Veh.; 10 - Rear End; 20 - Head On; 30 - Rear-to-Rear; 41 - Angle; 42 - Angle; 43 - Angle; 50 - Sideswipe Same Dir.; 60 - Sideswipe Opposite Dir.; 70 - Backed Into; 99 - Unknown

1st / Most Deformed Area: 1st Deformed: 12; Most Deformed: 12

Vehicle Type: 01 - Automobile; 12 - Pickup/Truck; 13 - Truck Tractor; 14 - Other Truck; 15 - Full Size Van; 16 - Mini Van; 17 - Sport Utility; 25 - Motorcycle; 26 - Other Motorbike; 27 - Pedalcycle; 28 - Animal Drawn Veh.; 29 - Animal (Ridden); 41 - Pedestrian; 51 - Train; 61 - School Bus; 62 - Passenger Bus; 99 - Other; Unk. (Hit and Run Only)

Vehicle Use Code: 01 - Personal; 02 - Driver Training; 03 - Construction/Maint.; 04 - Ambulance; 05 - Military; 06 - Transport Passengers; 07 - Transport Property; 08 - Farm Use; 09 - Wrecker or Tow; 10 - Police; 11 - Government; 12 - Fire Fighting; 13 - Logging; 18 - Other; 41 - Pedestrian

Vehicle Attachment: 1 - None; 2 - Mobile Home; 3 - Semi-Trailer; 4 - Utility Trailer; 5 - Farm Trailer; 6 - Trailer w/Boat; 7 - Camper Trailer; 8 - Towed Motor Vehicle; 9 - Petroleum Tanker; A - Cowboy Trailer; B - Autocarrier Trailer; C - Other Tanker; D - Flat Bed; E - Twin Trailers; F - Other

Action Prior to Impact (Vehicle): 06 - Backing; 02 - Changing Lanes; 03 - Entering Traffic Lane; 04 - Leaving Traffic Lane; 05 - Making U-turn; 08 - Movements Essentially Straight Ahead; 07 - Overtaking/Passing; 09 - Parked; 10 - Turning Left; 11 - Turning Right; 99 - Unk.; 21 - Approaching/Leaving Vehicle; 22 - Entering/Crossing Laestion; 23 - Playing/Working on Vehicle; 24 - Pushing Vehicle; 25 - Standing; 26 - Walking, Playing, Cycling; 27 - Working

Action Prior to Impact (Non-motorist): 01 - Given - Known Results; 2 - Given - Unusable; 4 - None; 5 - Refused

Alcohol/Drug Test Given: 3 - Given - Pending

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1 - Breath (Alc. Only); 2 - Blood; 3 - Urine; 4 - Serum; 8 - Other

Underride/Override: 1 - Under - Compartment Intrusion; 2 - Under - No Intrusion; 3 - Under - Unknown; 4 - Over - MV in Transport; 5 - Over - Other Vehicle; 8 - None; 9 - Unk.

Drug Results: 1 - Amphetamines; 2 - Cocaine; 3 - Marijuana; 4 - Opiates; 5 - PCP; 8 - Other

Extent of Deformity: 0 - None/Minor; 2 - Functional Damage; 3 - Disabling Damage; 4 - Severe/Totaled; 5 - Not Applicable; 9 - Unk.

Alc Test Results: A1 - ; A2 - ; A3 - ; A: 1 - 0.00; 2 - Subject Refusal; 3 - Medical; 4 - Passenger; 5 - Shoulder; 6 - Outside Trafficway; 7 - Sidewalk; 8 - Inside; 9 - Unk.; B: X - walk; 1 - Y 2-N 9-U

Trafficway: 1 - Two-way, Not Divided; 2 - Two-way, Divided, Unprotected Median; 3 - Two-way, Divided, Barrier; 4 - One-way; 8 - Other; 1st Harmful Event: 6; Event Loc.: 52

Road Character: 1 - Straight - Level; 2 - Straight - On Grade; 3 - Straight - Hillcrest; 4 - Curve - Level; 5 - Curve - On Grade; 6 - Curve - Hillcrest; 3

Road Surface Condition: 1 - Dry; 2 - Wet; 3 - Snow; 4 - Slush; 5 - Ice; 6 - Contaminate; 7 - Water (Standing, etc.); 8 - Other; 9 - Unk.; 1

Traffic Control Type: 01 - Stop and Go Light; 02 - Flashing Traffic Signal; 11 - RR (X-bucks, Lights & Gates); 12 - RR (X-bucks & Lights); 13 - RR (X-bucks Only); 21 - Officer or Flagman; 22 - Oncoming Emergency Vehicle; 31 - Pavement Markings (only); 41 - Stop Sign; 42 - School Zone Sign; 43 - Yield Sign; 44 - Work Zone; 45 - Other Warning Signs; 51 - Flashing Beacon; 98 - None; 99 - Unk.; 9

Weather Condition: 1 - Clear (no adverse conditions); 2 - Rain; 3 - Cloudy; 4 - Sleet, Hail; 5 - Snow; 6 - Fog, Smog, Smoke; 7 - Blowing Sand, Oil, Dirt or Snow; 8 - Severe Crosswinds; 9 - Unk.; 1

Light Condition: 1 - Daylight; 2 - Dawn; 3 - Dusk; 4 - Dark (Lighting Unspecified); 5 - Dark (Street Lamp Not Lit); 6 - Dark (Street Lamp Not Lit); 7 - Dark (No Lights); 7

Junction Type: 01 - Crossover; 02 - Driveway; 03 - Five/More Points; 04 - Four-way Intersection; 05 - Railway Grade Crossing; 07 - Shared Use Paths or Trail; 08 - T-Intersection; 09 - Traffic Circle; 12 - Y-Intersection; 13 - Nonjunction; 99 - Unk.; 3

School Bus Involved: 1 - Yes, Directly; 2 - Yes, Indirectly; 3 - No; 9 - Unk.; 3

Work Zone: 1 - Before 1st Sign; 2 - Advanced Warning Area; 3 - Transition Area; 4 - Activity Area; 5 - Termination; Area; 1 - Yes 2 - No; 2

Work Zone Location: 1 - Shoulder/Median Work; 2 - Lane Shift/Crossover; 3 - Intermittent/Moving Work; 4 - Lane Closure; 8 - Other; 9 - Unk.; Work Zone Type; 1 - Yes 2 - No; Workers Present:

Primary Contributing Factors: 03; Others: 08

Driver: 01 - Disregarded Signs, Signals, Etc.; 02 - Distracted/Inattention; 03 - Driving Too Fast for Conditions; 04 - Exceeded Authorized Speed Limit; 05 - Failed to Yield Right of Way; 06 - Ran off Road; 07 - Fatigued/Asleep; 08 - Followed Too Closely; 09 - Cell Phone; 10 - Medical Related; 12 - Aggressive Operation of Vehicle; 13 - Over-correcting/Over-steering; 14 - Swerving to Avoiding Object; 15 - Wrong Side or Wrong Way; 16 - Under the Influence; 17 - Vision Obscured (Within Unit); 18 - Improper Lane Usage/Change; 28 - Other Improper Action; 29 - Unk.

Roadway: 30 - Debris; 31 - Non-highway Work; 32 - Obstruction in Roadway; 33 - Road Surface Condition (i.e., Wet); 34 - Rut, Holes, Bumps; 35 - Shoulders (None, Low, Soft, High); 36 - Traffic Control Device (i.e., Missing); 37 - Work Zone (Const./Maint./Utility); 38 - Worn, Travel-Polished Surface; 48 - Other; 49 - Unk.

Non-Motorist: 50 - Inattentive; 51 - Lying &/or Illegally in Roadway; 52 - Failure to Yield R. of W.; 53 - Not Visible (Dark Clothing); 54 - Disregard Signs, Signals, Etc.; 55 - Improper Crossing; 56 - Darting; 57 - Wrong Side of Road; 58 - Other; 59 - Unk.; 65 - Under the Infl.; 66 - Lying &/or Illegally in Roadway; 67 - Other Person Under the Influence

Environmental: 62 - Obstruction; 63 - Weather Cond.; 64 - Glare; 68 - Other; 69 - Unk.

Vehicle Defect: 70 - Brakes; 71 - Steering; 72 - Power Plant; 73 - Tires/Wheel; 74 - Lights; 75 - Signals; 76 - Windows/Shield; 77 - Restraint System; 78 - Truck Coupling; 79 - Cargo; 80 - Fuel System; 88 - Other; 89 - Unk.

60 - Animal in Road; 61 - Other

ORIGINAL

O.P.S. USE ONLY: 10060181 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report / Corrected | Notified: 1300 | Arrived: 1300

Date: 05-28-2010 | Time: 1250 | County: 23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County) | Collision Location (Rt. # / Name): 85 | (0- Main 2- Alternate 5- Spur 6- Connection 7- Business) | Miles: 4 | Dir.: S | In/Near City or Town of: Greenville

Lane # / Dir.: 1 S | Distance Offset: .1 Miles / Feet | Direction: S | (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | Base Intersection (Rt. # / Name): From 385 | (0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other) | ASRU code | MP/Grid | Latitude: 34° 50 0120

R.R. Id.: NA | From: S | Ramp Only: 2-Exit | To: S | (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- Other) | Second Intersection (Rt. # / Name): Toward 85 | (0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other) | Longitude: 82° 17 5560

B-332485 | Driver/Pedestrian's Full Name: Simpson - Rebecca Joyce

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 2 Spring Crossing Cir | City, State, & Zip: Greer SC 29650 | Birth Date: 01-24-1979 | Driver's License #: 00748108 3 (B) | State: SC | Insurance Company: State Farm | Year: 2007 | Body: SU | Vehicle Make: FORD | VIN #: 1FMEU64E37UB09702 | State: SC | License Plate #: 5P478 | Year: 2011 | Owner's D.L. #: 00748108 3 | Owner's Full Name: Simpson - Rebecca Joyce | Home Telephone: 918-8319 | Bus. Telephone: ( ) NONE | Contributed To Collision: No | Street/R.F.D.: 2 Spring Crossing Cir | City, State, & Zip: Greer SC 29650 | Estimated Speed: 5 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: NA | Code | Summons #: NA | Code | Towed By: NA

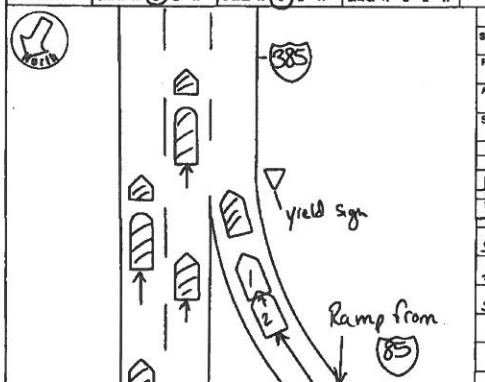
B-332486 | Driver/Pedestrian's Full Name: Corley - Shacara M.

Unit #: 2 | Sex: F | Race: B | Street/R.F.D.: 1000 Pine Gate Dr. #M203B | City, State, & Zip: Spartanburg SC 29303 | Birth Date: 08-18-1987 | Driver's License #: 0905997 38 (D) | State: SC | Insurance Company: State Farm | Year: 2001 | Body: CS | Vehicle Make: Chev | VIN #: 2G1WH52K019462996 | State: SC | Year: 2010 | License Plate #: DAE717 | Owner's D.L. #: 0905997 38 | Owner's Full Name: Corley - Shacara Morett | Home Telephone: 1003460-6690 | Bus. Telephone: ( ) NONE | Contributed To Collision: Yes | Street/R.F.D.: 1000 Pine Gate Dr. #M203B | City, State, & Zip: Spartanburg SC 29303 | Estimated Speed: 30 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: E524773 | Code: 21 | Summons #: E524774-89 | Code | Towed By: Apple (02)

B-332487 | Driver/Pedestrian's Full Name: NA

Unit #: NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Home Telephone | Bus. Telephone | Contributed To Collision: Yes No | Owner's Full Name: JUN 10 2010 | Street/R.F.D. | City, State, & Zip | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$1,500.00	$3,000.00	$ NA	$ NA	$ NA

Property Owner/Witness: NA | Address | State | Zip | Phone

Property Owner/Witness: NA | Address | State | Zip | Phone

Photos Y (N) | Describe What Happened (Refer to Units by Number): Both units were traveling on the exit ramp from I-385 southbound to I-385 southbound. Unit #1 stopped to slow for traffic. Unit #2, driving too fast for conditions, struck unit #1.

NOTICE: THE FACTS CONTAINED HEREIN ARE STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL SOURCES THEREOF.

Investigating Officer's Name: Garico - T.J. | Rank: Sgt | Badge #: 993 | Code: HP03 | Date: 05-28-2010 | Reviewed's Name: Bassett - D.L. | Rank: SGT. | Internal Agency Code: 10GV053992

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	01-24-1979	F	W	03	01	13	3	1	1	2			
2	08-18-1987	F	B	01	01	13	3	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal. b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 01- Shoulder Belt Only, 02- Lap Belt Only, 03- Shoulder & Lap Belt, 11- Child Safety Seat, 88- Other, 99- Unk.

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 61- Reflective Clothing, 81- Lighting

Air Bag Deployment / Switch: 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 9- Deployment Unk., 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Sequence of Events: 1 2 3 4

Non-Collision: 04- Equipment Failure

Collision: Not Fixed: 05- Fire/Explosion, 06- Overturn/Rollover, 07- Jackknife, 08- Immersion, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Non-Vehicular Matl.), 18- Other Non-collision, 19- Unk. Non-collision, 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. in Transport, 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Bridge Parapet End, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Light/Luminaire Support, 54- Pole, 55- Traffic Signal Support, 56- Tree, 57- Overhead Sign Support, 58- Unk. Fixed Object, 59- Other (Wall, Building, Tunnel, Etc.), 60- Boat, 61- Bridge Pillar/Support, 62- Work Zone Maint. Equipment, 63- Impact Attenuator/Crash Cushion, 64- Utility Pole, 65- Other Post, Pole, Support, Etc.), 66- Unk. Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 80- Unknown

Damaged Area: 1st / Most

Vehicle Type: 01- Automobile, 02- Passenger Bus, 03- Bus (16+ Unknown), 04- Ambulance, 05- Farm Use, 06- Fire Fighting, 07- Logging, 08- Other, 09- Unk. (Hit and Run Only), 10- Other Truck, 11- Pickup Truck, 12- Truck Tractor, 13- Utility Trailer, 14- Mini Van, 15- Full Size Van, 16- Sport Utility, 17- Motorcycle, 18- Other Motorbike, 19- Train, 20- Animal Drawn Veh., 21- Animal (Ridden), 22- Pedestrian, 23- Pedalcycle, 24- School Bus, 25- Other Bus, 26- Other Trailer, 27- Other Vehicle

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Wrecker or Tow, 09- Police, 10- Government, 11- Farm Use, 12- Logging, 13- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Livestock Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping in Traffic, 10- Turning Left, 11- Turning Right, 12- Changing Lanes, 13- Entering Traffic Lane, 14- Leaving Traffic Lane, 15- Making U-turn, 16- Movements Essentially Straight Ahead, 17- Overtaking/Passing, 18- Parked, 19- Slowing or Stopping in Traffic, 20- Turning Left, 21- Turning Right, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1- 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other. A2- A: 1- One 2- Inland 3- Median 4- Roadside 5- Roadway 6- Shoulder 7- Sidewalk 8- Outside Trafficway 9- Unk. B: X- walk: Y N. 1- Y 2- N 9- U. 1st Harmful Event Loc.: 12

Drug Results: D1- 1- Amphetamines, D2- 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other, 0- None/Minor, 1- Functional Damage, 2- Disabling Damage, 4- Severe/Totaled, 5- Not Applicable, 9- Unk.

Extent of Deformity: 0, 1, 2, 3, 4, 9

Trafficway: 3

Road Character: 4

Road Surface Condition: 1

Traffic Control Type: 98

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights), 9- Unk.

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

01- Stop and Go Light, 02- Flashing Traffic Signal, 03- Stop Sign, 04- Yield Sign, 05- Flashing Beacon, 06- School Zone Sign, 07- Railroad Crossing Sign, 08- Railroad Crossing Signal, 09- Railroad Gate, 10- Officer or Flagman, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 98- None, 99- Unk.

1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk. School Bus Involved: 3

1- Before 1st Sign, 2- At 1st Sign, 3- Transition Area, 4- Activity Area, 5- Termination Area. 1- Yes 2- No Work Zone: 2

Work Zone Location:

Work Zone Type:

1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk. 1- Yes 2- No Workers Present:

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Operating Defective Equipment, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Cell Phone, 20- Other Improper Action, 21- Unk.

Roadway: 30- Debris, 31- Non-Highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e.,-Missing), 37- Work Zone (Constr./Maint./Utility), 38- Other, 39- Worn, Travel-Polished Surface, 40- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk., 66- Under the Influence, 67- Other Person Under the Influence, 68- Unk.

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restrain Systems, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10057108 | Page # 3 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 3 | Amended - Attach Copy of Original Report | Corrected | Notified: 1756 | Arrived: 1756

Date: 4-29-2010 | Time: 1705 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name): S 85 | 0- Main 1- Alternate 2- Business 3- Spur 4- Secondary 5- County 6- Connection | Miles: 4.67 | Dir.: N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: 2 N | Distance Offset: .30 Miles / Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 385 | 0- Main 1- Alternate 2- Business 3- Spur 4- Connection 5- Business 6- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude: 34° 50 1280 | Longitude: 82 17256

R.R. Id.: N 1A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 493 | 0- Main 1- Alternate 2- Business 3- Spur 4- Connection 5- Business 6- Connection 7- Business 9- Other

B-708607 — Driver/Pedestrian/Bicyclist Full Name: Madir - Earliest

Unit #: 1 | Sex: M | Race: B | Street/R.F.D.: 700 N Indian Creek D | Birth Date: 8-14-1972 | City, State, & Zip: Clarkston GA 30021

State: GA | Driver's License #: 050567750 (C) | Insurance Company: Accord

Year: 2001 | Body: TT | Vehicle Make: Frht | VIN #: 1FUJA6AV21LH93277

State: GA | Year: 2010 | License Plate #: HG4025DB | Owner's D.L. #: 050567750

Home Telephone: (404) 841 5956 | Owner's Full Name: Madir - Earliest

Bus. Telephone: (770) 626-2196 | Street/R.F.D.: 700 N Indian Creek D

Contributed To Collision: No | City, State, & Zip: Clarkston GA 30021

Estimated Speed: 45 | Speed Limit: 60 | C.D.L. Req: Yes | Rec: No | T/B S Req: Yes | Rec: No | Alc/Drg Info (see back): Yes | No

Summons #: P475812 | Code: 46 | Summons #: N/A | Code: | Towed By: N/A

B-708608 — Driver/Pedestrian/Bicyclist Full Name: Donzella - Joellen

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 25 Church Hill Downs | Birth Date: 11/1/1964 | City, State, & Zip: Greenville SC 29615

State: SC | Driver's License #: 007 894567 | Insurance Company: (CO) State Farm

Year: 2009 | Body: 4Ds | Vehicle Make: Honda | VIN #: 2HGFA16619H346657

State: SC | Year: 2010 | License Plate #: FBG 297 | Owner's D.L. #: N/A

Home Telephone: (864) 458 9149 | Owner's Full Name: Donzella - Mark

Bus. Telephone: ( ) N/A | Street/R.F.D.: 25 Church Hill Downs

Contributed To Collision: No | City, State, & Zip: Greenville SC 29615

Estimated Speed: 00 | Speed Limit: 60 | C.D.L. Req: Yes | No | T/B S Req: Yes | No | Alc/Drg Info (see back): Yes | No

Summons #: N/A | Code: | Summons #: N/A | Code: | Towed By: Dotson (NOC)

B-708609 — Driver/Pedestrian/Bicyclist Full Name: Allen Robert Dale

Unit #: 3 | Sex: M | Race: W | Street/R.F.D.: 1733 County line Rd | Birth Date: 9-10-1963 | City, State, & Zip: Willis TX 77378

State: TX | Driver's License #: 17977982 (A) | Insurance Company: Accord

Year: 2005 | Body: PK | Vehicle Make: Ford | VIN #: 1FVPSDB9X5N867775

State: SC | License Plate #: P157987 | Owner's D.L. #: N/A

Home Telephone: (281) 444 6060 | Owner's Full Name: Transway Transport Inc

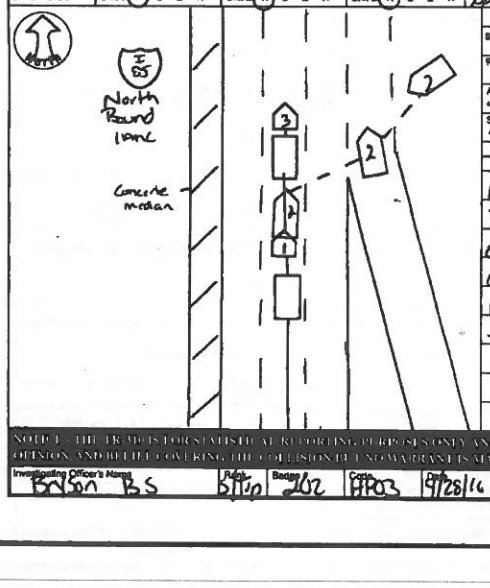
Bus. Telephone: (713) 705 7025 | Street/R.F.D.: 504 Menauhant Ct

Contributed To Collision: Yes | No | City, State, & Zip: Lexington SC 29072

Estimated Speed: 00 | Speed Limit: 60 | C.D.L. Req: Yes | No | T/B S Req: Yes | No | Alc/Drg Info (see back): Yes | No

Summons #: N/A | Code: | Summons #: N/A | Code: | Towed By: N/A

Direction of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 7500.00	$ 10000	$ 3500.00	$ N/A	$ N/A

Property Owner/Witness: Stanford - Ashley | Property Owner/Witness: N/A

Address: 4620 Chesnee Hwy | Address:

State: SC | Zip: 29323 | Phone: 864-201-5300 | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit 1, 2 and 3 were traveling North on Interstate 85. Unit 2 and 3 were stopped in traffic. The driver of unit 1 was following too closely and struck unit 2 in the rear. Then unit 1 struck unit 3 in the rear.

JUN 04 2010

NOTICE - THE REPORTS FOR VEHICLE ACCIDENT PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE EXACTNESS OF THE REPORT

Investigating Officer's Name: Bryson B.S | Rank: Sgt | Badge: 162 | Code: HP03 | Date: 4/28/10 | Reviewer's Name: A.H. Wilson | Rank: Sgt | Internal Agency Code: 106784314

Unit	Date of Birth	Sex	Race	INJ	Sent	AIR'D	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	8-14-1972	M	B	0	01	13	4	1	1	2			
2	11-1-1964	F	W	0	01	13	3	1	1	2			
2	5-15-1993	F	W	0	03	13	3	1	1	2			
2	7-20-1988	M	W	0	04	13	3	1	1	2			
3	7-10-1963	M	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; 9- Unknown

b) Motorcycle Only: Head Injury: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 99- Unk./MA

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 11- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployed Unk.; 9- Unknown. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: a) 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS; 2- Police; 8- Other; 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Matl.); 13- Other Non-collision; 14- Vehicle/Equip Damage; 15- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Dead Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Dropped); 24- Motor Veh. (Other Person); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Pole; 59- Other (Post, Pole, Support, Etc.); 60- Other (Wall, Building, Tunnel, Etc.); 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 80- Unknown

1st / Most: 1st Deformed: 1 9 31 | Most Deformed: 1 98 91

Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Domestic); 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Logging Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1 6

Extent of Deformity: 1 3

Trafficway: 3

Road Character: 2

Road Surface Condition: 1

Traffic Control Type: 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-Junction; 99- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other; 9- Unk.

Work Zone Location: ----------

Work Zone Type: ----------

Workers Present: 1- Yes 2- No

School Bus Involved: 3

Work Zone: 3

Harmful Event: 1st 5 / Loc. 5

Primary: 08

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 21- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence; 68- Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 69- Other; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

ORIGINAL

D.P.S. USE ONLY: 10059108

South Carolina Uniform Traffic Collision Report (For Investigating Officers) Supplemental Bus & Truck Collision Report

Amended-Attach Copy of Original Report ☐ Corrected ☐

Date	Time	County	Route Category	Collision Location (Route Number and Name if Any)	Auxiliary
4-29-2010	1755	Greenville 23	(1)-Interstate 4-Secondary; 2-US Primary 5-County; 3-SC Primary	ON 85	(0)-Mainline 6-Connection; 1-Alternate 7-Business; 5-Spur

SCREENING INFORMATION

NUMBER OF QUALIFYING VEHICLES INVOLVED

A Truck Having a GVWR of 10,001 lbs. or More For the Power Unit → 2

OR

A Vehicle with a Hazardous Materials Placard → Ø

OR

A Bus That is Designed or Used to Carry 16 or More Persons, Including the Driver → Ø

OR

A Motor Vehicle Engaged in Interstate Commerce that is Designed or Used to Carry 9-15 Persons, Including the Driver, for Compensation → Ø

Number of Persons Involved:

Sustaining Fatal Injuries → Ø

Transported for Immediate Medical Services → Ø

Number of Vehicles Towed

Towed From the Scene Due to Damage → 1

Do Not Complete This Form Unless:

One or More Qualifying Vehicles was Involved - AND

One or More Qualifying Injuries was Sustained - OR

One or More Vehicles (not necessarily the truck or bus) Was Towed from the Scene

Total Number of Supplemental Forms Required for this Collision: 2

Unit Number 3 FR-10 Number B708609

Carrier Information

Name: Transway Transport Inc

Address: 504 Merchant Ct 103 Moonshine Hill Rd

City: Lexington Humble State: SC TX Zip: 29072 77338

Business Phone Number: 713 409 2028

Identification Numbers

U.S. DOT 050924 None = 0 ☐

ICC MC 257790 State: SC

State Number

Was a Citation Issued to this Vehicle? 1-Yes 2-No 3-Pending: 2

Is this vehicle an (1) Interstate or a (2) Intrastate carrier? 1

Investigator's Name: Bryan Bs Agency: SHP Date: 4/29/10

Reviewer's Name: Sgt Wm A.H Date: 05-09-2010

Access Control

1- No Access Control 2- Full Access Control 3- Partial Access Control: 2

Vehicle Information

Gross Vehicle Weight Rating

Weight Rating of the Power Unit of the Truck

01- Less Than or Equal to 10,000 Pounds 02- 10,001-26,000 Pounds 03- More Than 26,000 Pounds 99- Unknown/Hit and Run: 03

Vehicle Configuration

00- Passenger Car (only w/ HAZMAT placard) 01- Light Truck (only w/ HAZMAT placard) 02- Bus (seats for 9-15 people) 03- Bus (seats for 16 + people) 04- Single Unit Truck (2 axles/6+ Tires) 05- Single Unit Truck (3 or more axles) 06- Truck w/ Trailer 07- Truck-Tractor Only (Bobtail) 08- Tractor w/ Semi-Trailer 09- Tractor w/ Double Trailers 10- Tractor w/ Triple Trailers 98- Other/Unable to Classify 99- Unknown/Hit and Run: 08

Cargo Body Type

00- Bus (seats for 9-15 people) 01- Bus (seats for 16+ people) 02- Enclosed Box 03- Cargo Tank 04- Flat Bed 05- Dump 06- Concrete Mixer 07- Auto Transport 08- Garbage/Refuse 09- Grain, Chips, Gravel 10- Pole 11- Intermodal Container 97- Not Applicable 98- Other 99- Unknown/Hit and Run: 04

Trailer Length and Width

Length

00- No Trailer 01- Less than 480 in. (40 ft) 02- 481 in. - 576 in. (48 ft.) 03- 577 in. or more 99- Unknown/Hit and Run

Trailer 1 Length: 03 Trailer 2 Length: Ø

Width

00- No Trailer 01- Less than 60 in. (5 ft.) 02- 61 in. - 84 in. (7 ft.) 03- 85 in. or more 99- Unknown/Hit and Run

Trailer 1 Width: 03 Trailer 2 Width: Ø

Hazardous Material Involvment

Was This Vehicle Carrying Hazardous Materials? 1-Yes 2-No 3-Unknown/Hit and Run: 2

Did the Vehicle Have a Hazardous Material Placard? 1-Yes 2-No 3-Unknown/Hit and Run: 2

If "Yes", What Class of Hazardous Material (from placard/shipping papers)?

01- Class 1 (Explosives) 02- Class 2 (Gases) 03- Class 3 (Flammable Liquids) 04- Class 4 (Flammable Solids) 05- Class 5 (Oxidizing Substance) 06- Class 6 (Poison/Infectious Substance) 07- Class 7 (Radioactive) 08- Class 8 (Corrosives) 09- Class 9 (Misc. Goods) 10- No Placard 99- Other/Unknown/Hit and Run:

If "YES", enter 4 digit HAZMAT ID from placard/shipping papers):

Was Hazardous Material Released From This Vehicle's Cargo? 1-Yes 2-No 3- Unknown/Hit and Run: 2

Notification of Release:

ORIGINAL

D.P.S. USE ONLY: 10057108

South Carolina Uniform Traffic Collision Report (For Investigating Officers)
Supplemental Bus & Truck Collision Report

Amended-Attach Copy of Original Report ☐ Corrected ☐

Page 2 of 3 Pages

Date	Time	County	Route Category	Collision Location (Route Number and Name if Any)	Auxiliary
4/29/2010	1755	Greenville	1-Interstate 4-Secondary 2-US Primary 5-County 3-SC Primary	ON 85	1-Mainline 6-Connection 2-Alternate 7-Business 5-Spur

SCREENING INFORMATION

NUMBER OF QUALIFYING VEHICLES INVOLVED

A Truck Having a GVWR of 10,001 lbs. or More For the Power Unit → 2

OR

A Vehicle with a Hazardous Materials Placard → Ø

OR

A Bus That is Designed or Used to Carry 16 or More Persons, Including the Driver → Ø

OR

A Motor Vehicle Engaged in Interstate Commerce that is Designed or Used to Carry 9-15 Persons, Including the Driver, for Compensation → Ø

Number of Persons Involved:

Sustaining Fatal Injuries → Ø

Transported for Immediate Medical Services → Ø

Number of Vehicles Towed

Towed From the Scene Due to Damage → 1

Do Not Complete This Form Unless:

One or More Qualifying Vehicles was Involved - AND

One or More Qualifying Injuries was Sustained - OR

One or More Vehicles (not necessarily the truck or bus) Was Towed from the Scene

Total Number of Supplemental Forms Required for this Collision: 2

Unit Number 1 FR-10 Number B-70860

Carrier Information

Name: Earliest Morning Specialty Equipment Leasing Inc

Address: 900 N Indian Creek Dr 130 Liberty Lane

City: Clarkston State: GA SC Zip: 30310-2111

Business Phone Number: 866 4 404 6826 404 296 2930

Identification Numbers

U.S. DOT 1963042 None = 0 ☐

ICC MC 695804 State: GA

State Number

Is this vehicle on (1) Interstate or a (2) Intrastate carrier? 1

Was a Citation Issued to this Vehicle? 1-Yes 2-No 3-Pending 1

Investigator's Name: Bryan B S Rank SITO Date 4/29/10

Access Control

1- No Access Control
2- Full Access Control
3- Partial Access Control → 2

Vehicle Information

Gross Vehicle Weight Rating

Weight Rating of the Power Unit of the Truck

01- Less Than or Equal to 10,000 Pounds
02- 10,001-26,000 Pounds
03- More Than 26,000 Pounds
99- Unknown/Hit and Run → 03

Vehicle Configuration

00- Passenger Car (only w/ HAZMAT placard)
01- Light Truck (only w/ HAZMAT placard)
02- Bus (seats for 9-15 people)
03- Bus (seats for 16 + people)
04- Single Unit Truck (2 axles/6+ Tires)
05- Single Unit Truck (3 or more axles)
06- Truck w/ Trailer
07- Truck-Tractor Only (Bobtail)
08- Tractor w/ Semi-Trailer
09- Tractor w/ Double Trailers
10- Tractor w/ Triple Trailers
96- Other/Unable to Classify
99- Unknown/Hit and Run → 08

Cargo Body Type

00- Bus (seats for 9-15 people)
01- Bus (seats for 16+ people)
02- Enclosed Box
03- Cargo Tank
04- Flat Bed
05- Dump
06- Concrete Mixer
07- Auto Transport
08- Garbage/Refuse
09- Grain, Chips, Gravel
10- Pole
11- Intermodal Container
97- Not Applicable
98- Other
99- Unknown/Hit and Run → 02

Trailer Length and Width

Length

00- No Trailer
01- Less than 480 in. (40 ft)
02- 481 in. - 576 in. (48 ft.)
03- 577 in. or more
99- Unknown/Hit and Run

Trailer 1 Length: 03 Trailer 2 Length: ØØ

Width

00- No Trailer
01- Less than 60 in. (5 ft.)
02- 61 in. - 84 in. (7 ft.)
03- 85 in. or more
99- Unknown/Hit and Run

Trailer 1 Width: 03 Trailer 2 Width: ØØ

Hazardous Material Involvment

Was This Vehicle Carrying Hazardous Materials? 1-Yes 2-No 3-Unknown/Hit and Run → 2

Did the Vehicle Have a Hazardous Material Placard? 1-Yes 2-No 3-Unknown/Hit and Run → 2

If "Yes", What Class of Hazardous Material (from placard/shipping papers)?

01- Class 1 (Explosives)
02- Class 2 (Gases)
03- Class 3 (Flammable Liquids)
04- Class 4 (Flammable Solids)
05- Class 5 (Oxidizing Substance)
06- Class 6 (Poison/Infectious Substance)
07- Class 7 (Radioactive)
08- Class 8 (Corrosives)
09- Class 9 (Misc. Goods)
10- No Placard
99- Other/Unknown/Hit and Run

If "YES", enter 4 digit HAZMAT ID(from placard/shipping papers) ☐☐☐☐

Was Hazardous Material Released From This Vehicle's Cargo? 1-Yes 2-No 3-Unknown/Hit and Run → 2

Notification of Release:

Reviewer's Name: Cpt W.M. [illegible] Date: 05-9-2010

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 07/2001)

D.P.S. USE ONLY: 10051895 | Page # 1 of 1 | # of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 0240 | Arrived: 0305

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	??? / Near City or Town of:
05-29-2010	0230	23	85	4	N	GREENVILLE

Lane # / Dir.: N/A | Of | Distance Offset: 30 Feet | Direction: N | From: Ramp Only | To: 1 | Base Intersection (Rt. # / Name): From 385 | AERU code | MP/Grid

R.R. Id.: N/A | From: SW | Ramp Only: 1 - Entrance, 2 - Exit | To: 5 | Second Intersection (Rt. # / Name): Toward 146/HOGSHUTT RD | Latitude: 34 49 59.90 | Longitude: 82 17 50.60

B-423316 — Driver/Pedestrian's Full Name: DAVISON- JOHN THOMAS

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 201 CHAPMAN RD APT D10 | Birth Date: 08-03-1988 | City, State, & Zip: FOUNTAIN INN SC 29644

State: SC | Driver's License #: 10087P839 (D) | Insurance Company: STATE FARM

Year: 1996 | Body: 2S | Vehicle Make: FORD | VIN #: 1FALP4042LTF170610

State: SC | Year: 2010 | License Plate #: DAF846 | Owner's D.L. #: 10087P839 (D)

Home Telephone: (864) 275-7644 | Owner's Full Name: DAVISON- JOHN THOMAS

Bus. Telephone: (864) 228-7944 | Street/R.F.D.: 201 CHAPMAN RD APT D10

Contributed To Collision: No | City, State, & Zip: FOUNTAIN INN SC 29644

Estimated Speed: 50 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: E475375 | Code: 21 | Summons #: N/A | Code | Towed By: PALMETTO TOWING (DAY)

B-423318 — Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 2

Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip

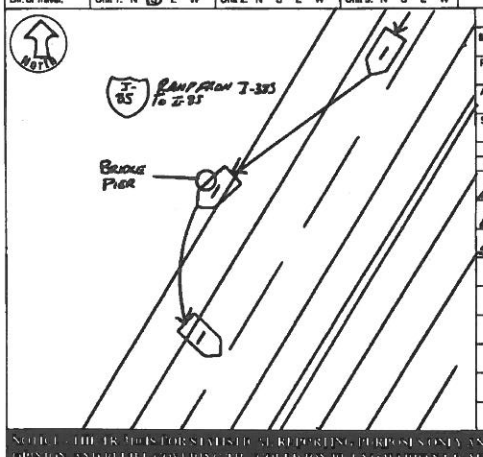
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Unit 3

Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name: MAY 21 2010 | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3500	$	$	$	$

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: N | Describe What Happened (Refer to Units by Number)

UNIT #1 WAS TRAVELING SOUTH ON THE ENTRANCE RAMP FROM I-385 TO I-85 TO FAST FOR CONDITIONS. UNIT #1 RAN OFF THE RIGHT SIDE OF THE ROADWAY AND STRUCK A BRIDGE SUPPORT.

NOTICE: THE DESCRIPTIONS AND STATISTICS REPORTED HEREON ARE BASED UPON THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE EXACTNESS THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
MORRIS-JT	OFFICER	751	1/P03	05/29/2010	A. H. WM	SGT	106Y 04/04/93

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Ejct	Lal	Trap	Name	Street Address	Zip Code
1	08-03-1988	M	W	2	01	13	7 3	1	1	1 4	DENNIS DAVISON		

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; 5- Not Injured; 9- Unknown

b) Motorcycle Only: Helmet: 1- Yes 2- No 3- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 99- Unk.; Pedestrian, Motorcycle/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting; 69- Other

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk.; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9-Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
10	12			42	42

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Down/Off Roadway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular); 13- Other Non-collision; 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Goes Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 29- Other Moveable Object

Collision: Fixed Object: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 39- Unk. Moveable Object; 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Support; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail Face; 51- Guardrail End; 52- Highway Traffic Sign Post; 53- Tree; 54- Utility Pole; 55- Impact Attenuator/Crash Cushion; 56- Wall; 57- Other (Fixed, Pole, Support, Etc.); 58- Other (Wall, Building, Tunnel, Etc.); 59- Unk. Fixed Object; 60- Work Zone Maint. Equipment; 69- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Damaged Area; 1st Deformed; Most Deformed

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 99- Other; 99- Unk.

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 61- Train; 62- Passenger Bus; 63- School Bus; 99- Unk. (Hit and Run Only); 99- Other

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Camper Trailer; 7- Towed Motor Vehicle; 8- Trailer w/Boat; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 88- Other; 99- Unk.; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; A: 1- Conv. 2- Media 3- Roadway 4- Roadside 5- Shoulder 6- Ditch 7- Sidewalk 8- Gore 9- Unk. B: X- walk: 1- Y 2-N 3-U

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Urine; 1- Breath (Alc. Only); 2- Blood; 3- Under- Compartment Intrusion; 4- Serum; 8- Other

Underride/Override: 1- Under- No Intrusion; 2- Under- MV in Transport; 3- Under- Unknown; 5- Over- Other Vehicle; 8- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 1

1st Harmful Event Loc.: 1

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 9- Unk.

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Yield Sign; 05- Officer or Flagman; 06- School Zone; 07- Railroad Crossing; 08- Other; 09- Unk.; 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None; 99- Unk.

31

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present:

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Soil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Severe Crosswinds; 8- Other; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-Junction; 99- Unk.

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Under the Influence; 15- Wrong Side or Wrong Way; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Cell Phone; 19- Improper Turning; 20- Other Improper Action; 21- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 65- Under the Infl.; 66- Other; 67- Lying &/or Illegally in Roadway; 68- Other; 69- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Glare; 66- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others:

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01/2001)

OR BLUSK ONLY 10049643 | Page # 1 of 1 | # of Units 1 | Amended - Attach Copy of Original Report | Corrected | Notified 1505 | Arrived 1510

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Near City or Town
05-03-2010	1505	23	385	.01	NE	Greenville

Lane # / Dir.: 1 Of 4 NE SW | Distance Offset: .01 Feet N E S W | Direction: 5 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 85 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid

Second Intersection (Rt. # / Name): Toward 146 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Latitude 34° 51 00.10 | Longitude 82° 17 09.20

R.R. Id.: N/A | From: NE 1 Entrance SW 2- Exit | Ramp Only | To: NE 4 Secondary SW 1- Interstate 2- US Primary 3- SC Primary 5- County 6- Other

B-332320

Driver/Pedestrian's Full Name: THOMPSON - TIFFANY LEE

Unit # 1 | Sex F | Race W | Street/R.F.D. 2008 ANDERSON Rd APT B

Birth Date 01-27-1990 | City, State, & Zip GREENVILLE SC 29611

State TN | Driver's License # 109203335 (D) | Insurance Company State Farm

Year 2003 | Body 4DR | Vehicle Make DLDS | VIN 1G3NK52F43C132602

State TN | Year 2010 | License Plate # CA85TJS | Owner's D.L. # N/A

Home Telephone (864) 991-3710 | Owner's Full Name CARPENTERS - JAMES M

Bus. Telephone (864) 224-3871 | Street/R.F.D. 604 American Rd

Contributed To Collision No | City, State, & Zip NASHVILLE TN 37209

Estimated Speed 25 | Speed Limit 25 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Citation # 6328647 | Summons # 347 | Code 07 | Towed By STATE AUTO

B-332321

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

B-332322

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

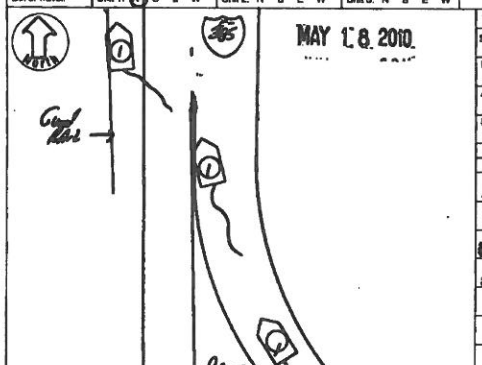
Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

Direction of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2500	$	$	$ N/A	$ N/A

Property Owner/Witness: N/A | Address: N/A | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number): unit #1 was on the Northbound Ramp from I-385 to Southbound I-85. Driver driving too fast for conditions (Heavy Rain) left Roadway to left striking Guardrail with left side.

Unit #1 - 157 3550 COB-02

NOTICE - THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE EXACTNESS OR CORRECTNESS THEREOF.

Investigating Officer's Name	Public	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Moon - T. ST	Yes	996	1903	05-03-2010	N. M. Wa	Cpl	10GV094361

Unit	Date of Birth	Sex	Race	INJ	Seat	MAIS	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	01-27-1990	F	W	0	01	3	4	3	1	1	2		

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet: 1- Yes 2- No 3- Unknown; Head Injury: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 04- Child Safety Seat; 05- Other; 06- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events: Mail Driving Record to: Office of Motor Vehicle Programs, P.O. Box 1498, Blythewood, SC 29016

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Impact
57				09	

Non-Collision: 00- Equipment Failure; 01- Cargo/Equip Loss or Shift; 02- Fire/Explosion; 03- Immersion; 04- Jackknife; 05- Cross Median/Center Line; 06- Intrusion; 07- Separation of Units; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Downhill Runaway; 12- Spill (Non-Hazardous Mat.)

Collision: Not Fixed: 13- Animal (Deer Only); 14- Animal (All Other); 15- Motor Veh. on Transport; 16- Motor Veh. (Stopped); 17- Motor Veh. (Other Roadway); 18- Other Non-collision; 19- Unk. Non-collision; 20- Pedalcycle; 21- Railway Veh.; 22- Work Zone Maint. Equip.; 23- Other Movable Object; 24- Motor Veh. (Parked); 25- Pedestrian

Collision: Fixed Object: 26- Bridge Overhead Structure; 27- Bridge Pier or Abutment; 28- Bridge Rail; 29- Culvert; 30- Guardrail Face; 31- Guardrail End; 32- Highway Traffic Sign Post; 33- Impact Attenuator/Crash Cushion; 34- Light/Luminaire Support; 35- Median Barrier; 36- Median Cable Barrier; 37- Median Crossover; 38- Mailbox; 39- Pole; 40- Utility Pole; 41- Object Struck; 42- Embankment; 43- Fence; 44- Tree; 45- Work Zone Maint. Equipment; 46- Other Fixed Object

47- Entrance/Exit Ramp; 48- Gore; 49- Shoulder; 50- Traffic Island; 51- Other Roadway; 52- Ditch; 53- Embankment; 54- Work Zone Maint. Equipment; 55- Other Non-Collision; 56- Pedestrian; 57- Pedalcycle; 58- Railway Vehicle; 59- Animal; 60- Motor Vehicle; 61- Other Non-Collision; 62- Fire; 63- Immersion; 64- Jackknife; 65- Cargo/Equipment Loss or Shift; 66- Fire/Explosion; 67- Cross Median; 68- Cross Center Line; 69- Downhill Runaway; 70- Ran off Road Right; 71- Ran off Road Left; 72- Other Non-Collision; 73- Unknown

Manner of Collision (Struck Veh.): 30- Rear-to-Rear; 50- Sideswipe Same Dir.; 00- Not Coll. w/Motor Veh.; 41- Angle; 60- Sideswipe Opposite Dir.; 10- Rear End; 42- Angle; 70- Backed Into; 20- Head On; 43- Angle; 99- Unknown

1st Point of Contact: 01 02 03 / 04 05 06 / 07 08 09

1st Deformed: 01 02 03 / 04 05 06 / 07 08 09

Most Deformed: 01 02 03 / 04 05 06 / 07 08 09

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Limousine; 29- Other Motor Veh.; 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Merging; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 12- Weaving; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Drug Results: D1 1- Amphetamines; D2 2- Cocaine; D3 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unavailable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 8- Other

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Special Use Only: 1 2 3 4 5 6 7

Underride/Overide: 6

1- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Extent of Deformity: 3

1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk.

Trafficway: 4

1- Core; 2- Inner Loop; 3- Median; 4- Roadway; 5- Roadside; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk.

1st Harmful Event Loc.: 3

Ex: X- walk; Y- 2-N 8-U

Event: 1- Y 2-N 9-U

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 9- Unk.

Road Character: 4

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Road Surface Condition: 2

01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Uncontrolled; 04- Stop Sign; 05- Yield Sign; 06- Officer or Flagman; 07- School Zone; 08- Other; 09- Unk.

Traffic Control Type: 31

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

2

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 9- Unk.

1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

13

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

School Bus Involved: 3

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone: 2

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other; 9- Unk.

Work Zone Location

Work Zone Type

1- Yes 2- No

Workers Present:

Primary Contributing Factors: 63

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Turning Improperly; 20- Operating Vehicle in Manner Inconsistent with Public Safety; 21- Illegal Drug Use; 22- Physical Impairment; 23- Pulling Out Improperly; 24- Cell Phone; 25- Passing Improperly; 26- Other Improper Action; 27- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Consts./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 66- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 89- Other; 99- Unk.

Drivers: 1 2 3

ORIGINAL

D.P.S. USE ONLY: 10049626 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 1 | Amended - Attach Copy of Original Report Corrected | Notified: 1316 | Arrived: 1322

Date: 05-01-2010 | Time: 1310 | Day: 03 | Collision Location (Rt. # / Name): S 385 | Miles: 2 | Dir: N E S W | Near City or Town of: Greenville

Lane # / Dir.: # N/A | Dir: N/A | Distance Offset: Miles .20 Feet | Direction: N E S W | Base Intersection (Rt. # / Name): From 85 | ASRU code | MP/Grid | Latitude: 34 49 49 46 | Longitude: 82 17 40 30

R.R. Id.: N/A | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 146 / Woodruff Rd | Main 2- Alternate 3- Spur 5- Connection 7- Business 9- Other

B-700270

Driver/Pedestrian's Full Name: Carson - Paul Matthew

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 330 E Beltline Blvd | Birth Date: 03-26-1988 | City, State, & Zip: Anderson, SC 29621

State: SC | Driver's License #: 100743033 (CD) | Insurance Company: State Farm

Year: 1996 | Body: 4S | Vehicle Make: Ford | VIN #: 4T1BG12KXTU670690

State: SC | Year: 2011 | License Plate #: GFS 243 | Owner's D.L. #: 100743033

Home Telephone: 864 760-3396 | Owner's Full Name: Paul M Carson

Bus. Telephone: ( ) N/A | Street/R.F.D.: 330 E Beltline Blvd

Contributed To Collision: No | City, State, & Zip: Anderson SC 29621

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: E407448 | Code: JI | Summons #: N/A | Code | Towed By: Any Daddy's (OP)

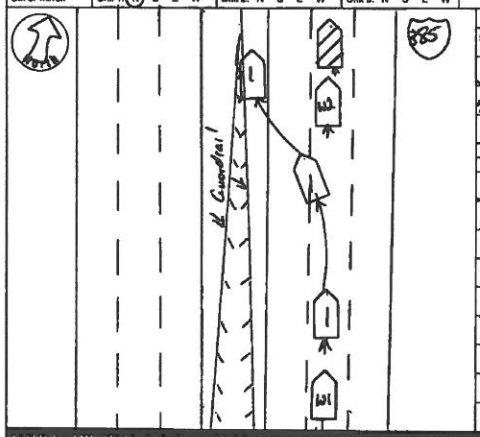
B-700272

Driver/Pedestrian's Full Name: N/A

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



B-700271

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Owner's Full Name: MAY 1 & 2010

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2500.00	$	$	$ N/A	$ N/A

Property Owner/Witness: Sutton - Chris A | Address: 701 Pineapple Pointe Greenville | State: SC | Zip: 29607 | Phone: 864 423-0784

Property Owner/Witness: Whitman - Susan | Address: 8 Fairview Ave Greer | State: SC | Zip: 29651 | Phone: 864 968-0421

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling north on I-385 Unit #1 was traveling too fast for conditions, swerved to avoid traffic, ran off of the road left and struck a guardrail. No Damage was done to the guardrail

NOTICE: THE INFORMATION ON THIS REPORT IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Bush - TF | Rank: PFC | Badge #: 608 | Dept: GP03 | Date: 05-01-2010 | Reviewer's Name: Hutto WA | Rank: Sgt | Internal Agency Code: 1060 0413714

Unit	Date of Birth	Sex	Race	Inj	Seat	R/SD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	03-26-1988	M	W	0	01	13	Y	1	N	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Used: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 99- Unk./NA

Restraints/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown; a) 1- Switch in On Position 3- No Switch; b) 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway

Collision: Not Fixed: 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Veh.); 13- Other Non-collision; 14- Unk. Non-collision

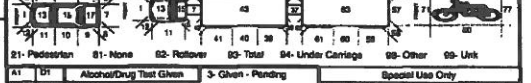
27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Rail End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Unk.

Event 1: 24 W 1 1 1 51 | Event 2: | Event 3: | Event 4: | Most Harmful: 1 | 1st Harmful Event: 51

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (Same Dir.); 41- Angle (Same Dir.); 42- Angle (Opp. Dir.); 43- Angle (Opp. Dir.); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 12 | Most Deformed: 12



21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 99- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 13- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 30- Animal (Drawn Veh.); 31- Animal (Ridden); 41- Pedestrian; 61- Train; 62- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 99- Other; Transport Passengers

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 12- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 88- Other; 99- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 8- Not Applicable; 9- Unk.

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 9- Other

Trafficway: 3

A1: 1- Curb; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Utility Pole; 9- Unk.

B: 1- Traffic; 2- Parked; 3- Unk.

1st Harmful Event: 51

1- Y 2-N 9-U

Event Loc.: N/A

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 9- Unk.: 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.: 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 98

11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 51- Flashing Beacon; 98- None; 99- Other Warning Signs

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.: 3

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 8- Dark (Street Lamp Not Lit): 1

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.: School Bus Involved: 3

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.: 13

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

1- Yes 2- No: Work Zone: | Work Zone Location | Work Zone Type | 1- Yes 2- No: Workers Present:

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Improper Backing; 10- Improper Start From Parked Position; 11- Improper Turning; 12- Left of Center; 13- Made Improper Entry to Limited Access Highway; 14- Operating Defective Equipment; 15- Over Correcting/Over Steering; 16- Passing Too Closely; 17- Passing/Lane Usage Improperly; 18- Traffic Control Disregarded; 19- Wrong Side/Wrong Way; 20- Improper Lane Change; 21- Parking Improperly; 22- Unsafe Speed; 23- Stopped Improperly in Traffic Lane; 24- Improper Passing; 25- Driving Wrong Way on One-Way Trafficway; 26- Improper Backing; 27- Improper Start From Parked Position; 28- Improper Turning; 29- Left of Center; 30- Made Improper Entry to Limited Access Highway; 31- Operating Defective Equipment; 32- Over Correcting/Over Steering; 33- Passing Too Closely; 34- Passing/Lane Usage Improperly; 35- Traffic Control Disregarded; 36- Wrong Side/Wrong Way; 37- Improper Lane Change; 38- Unsafe Speed; 39- Stopped Improperly in Traffic Lane; 40- Improper Passing; 41- Driving Wrong Way on One-Way Trafficway; 42- Improper Backing; 43- Improper Start From Parked Position; 44- Improper Turning; 45- Left of Center; 46- Made Improper Entry to Limited Access Highway; 47- Operating Defective Equipment; 48- Other; 49- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 39- Other; 40- Other; 41- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01/2005)

O.R.S. USE ONLY	Page # / Of:	# of Units	Amended - Attach Copy of Original Report / Corrected	Notified	Arrived
10047092	1	2		1803	1830

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Mile/Near City or Town of:
04/30/2010	1800	23	85	2	NE	GREENVILLE

Collision Location codes: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Connection 7- Business 8- Connection 9- Other

Lane # / Dir.	Distance Offset Miles / Yards	Direction	From	Base Intersection (Rt. # / Name)	ASRU code	MP/Grid
1 / 7 (N E S W)	.01	N E S W	385		Latitude	34 50 0300
R.R. Id.	From: Ramp Only	To	Second Intersection (Rt. # / Name)		Longitude	82 17 4180
N/A	N E S W: 1- Entrance 2- Exit	N E S W	146			

B-332113 — Driver/Pedestrian's Full Name: HAMILTON-CLEVELAND-S

Unit #	Sex	Race	Street/R.F.D.
1	M	B	2006 JESSICA WAY

Birth Date: 12-21-1942 — City, State, & Zip: CONYERS GA 30012

State	Driver's License #	Insurance Company
GA	056662848 (C)	QBE US. GRP.

Year	Body	Vehicle Make	VIN #
2001	4DR	NISS	1N4BA41E94C816786

State	Year	License Plate #	Owner's D.L. #
NY	2011	ESL3106	056662848 (C)

Home Telephone: 770 679-4487 — Owner's Full Name: HAMILTON-CLEVELAND-S

Bus. Telephone: ( ) N/A — Street/R.F.D.: 2006 JESSICA WAY

Contributed To Collision: No — City, State, & Zip: CONYERS GA 30012

Estimated Speed: 0 — Speed Limit: 60 — C.D.L. Req: Yes (No) — T/B S Req: Yes (No) — Alc/Drg info (see back): Yes (No)

Summons # / Code: N/A — Summons # / Code: N/A — Towed By: KELLETTS (Cor)

B-332114 — Driver/Pedestrian's Full Name: THOMPSON-CURTIS-III

Unit #	Sex	Race	Street/R.F.D.
2	M	B	558 WEST Rd.

Birth Date: 12-11-1989 — City, State, & Zip: MOORE SC 29369

State	Driver's License #	Insurance Company
SC	10068046 4 (D)	VICTORIA

Year	Body	Vehicle Make	VIN #
1999	SU	FORD	1FMDU32X6XUD54590

State	Year	License Plate #	Owner's D.L.
SC	2010	9255 CT	N/A

Home Telephone: 841529-6254 — Owner's Full Name: THOMPSON-CURTIS-JR.

Bus. Telephone: ( ) N/A — Street/R.F.D.: 105 FREEDOM Dr.

Contributed To Collision: Yes — City, State, & Zip: CLIFFENS SC 29330

Estimated Speed: 30 — Speed Limit: 60 — C.D.L. Req: Yes — T/B S Req: Yes (No) — Alc/Drg info (see back): Yes (No)

Summons # / Code: E473422 — Summons # / Code: N/A / 21 — Towed By: N/A

B-332115 — Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street/R.F.D.
N/A			

Birth Date — City, State, & Zip

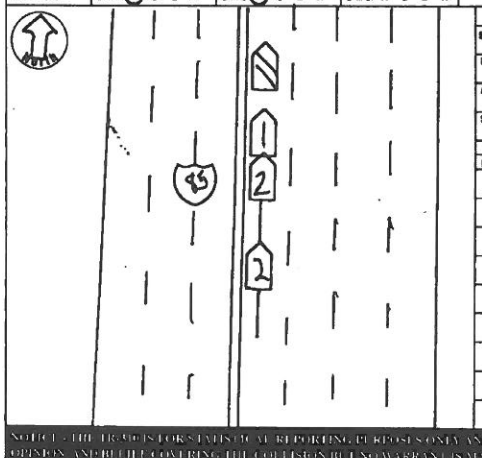
State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

Home Telephone: ( ) — Owner's Full Name — Street/R.F.D. — Bus. Telephone: ( ) — Contributed To Collision: Yes / No — City, State, & Zip

Estimated Speed — Speed Limit — C.D.L. Req: Yes / No — T/B S Req: Yes / No — Alc/Drg info (see back): Yes / No — Summons # / Code — Towed By

Dir. of Travel: Unit 1: N S E W — Unit 2: N S E W — Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 4500	$ 1000	$	$ N/A	$ N/A

Property Owner/Witness	Property Owner/Witness
Address	Address
State / Zip / Phone	State / Zip / Phone

Photos: (Y) N — Describe What Happened (Refer to Units by Number):

UNIT #1 WAS STOPPED IN TRAFFIC ON INTERSTATE 85 HEADED NORTH. UNIT #2 TRAVELING NORTH, TOO FAST FOR CONDITIONS, STRUCK UNIT #1 IN THE REAR

NOTICE - THE INFORMATION ON THIS OFFICIAL REPORTING FORM IS ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
CARTER - G.L.	SGT.	329	HP03	04/30/2010	TAYLOR - T.J.	CPL.	106704344 6

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.E.S.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	12-21-1942	M	B	1	01	13	43	1	1	1	DRIVER UNIT #1		
2	12-11-1989	M	B	0	01	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 99- Unk./N/A

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 5- Deployment Unk.; 6- Not Applicable; 7- Not Applicable; 8- Switch In On Position; 9- Unknown; a) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful
22				22
23				23

1st Harmful: 22

Non-Collision: 04- Equipment Failure

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Live, Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Entrainment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 1 7 / 2 / 3; Most Deformed: 1 7 / 3 7 / 3



Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Drawn Veh.); 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 6- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Overrride: 6

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- Unk.: 6

Extent of Deformity: 3

0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.: 3

Trafficway: 3

1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

1st Harmful Event Loc.: 57

A: 1- Shldr 2- Median 3- Roadway 4- Roadside 5- Gore 6- Separator 7- Sidewalk 8- Other; B: X- walk; 1- Y 2-N 9-U

Road Character: 1

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 28

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 3

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 2

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location:

Work Zone Type:

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 13

01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Roadway: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Primary: 03

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 66- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

ORIGINAL

D.P.S. USE ONLY: 10047018 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 2005 | Arrived: 2010

Date: 05-03-2010 | Time: 2000 | County: 23 | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County | Collision Location (Rt. # / Name): 85 | 1-Main 2-Alternate 5-Spur 6-Connection 7-Business | Miles: 1 | Dir. N E S W | Int'l / Near City or Town of: Greenville

Lane # / Dir.: 0 N/A | Off: N/A | Distance Offset: .01 Miles Feet | Direction: N E S W | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Base Intersection (Rt. # / Name): From 385 | 1-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid | Latitude: 34 50 0150 | Longitude: 82 17 4690

R.R. Id.: N/A | From: NE SW | Ramp Only: 1-Entrance 2-Exit | To: NE SW | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Second Intersection (Rt. # / Name): Toward 492

B-424648

Driver/Pedestrian's Full Name: Stubblefield-Alison Michelle

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 10 Chuckwood Ct.

Birth Date: 04-16-1992 | City, State, & Zip: Simpsonville SC 29680

State: SC | Driver's License #: 10146859 (D) | Insurance Company: Allstate

Year: 2000 | Body: UTL | Vehicle Make: Ford | VIN #: 1FMZU63X1YZB85203

State: SC | Year: 2010 | License Plate #: CLD 735 | Owner's D.L. #: N/A

Home Telephone: (864) 450-2487 | Owner's Full Name: Stubblefield-Robert James

Bus. Telephone: (864) 430-2487 | Street/R.F.D.: 10 Chuckwood Ct.

Contributed To Collision: (Yes) No | City, State, & Zip: Simpsonville SC 29680

Estimated Speed: 40 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg into (see back): Yes (No)

Summons # | Code | Summons # | Code | Towed By: Rivers (Apt)

B-424649

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg into (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

B-424650

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

MAY 12 2010

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg into (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

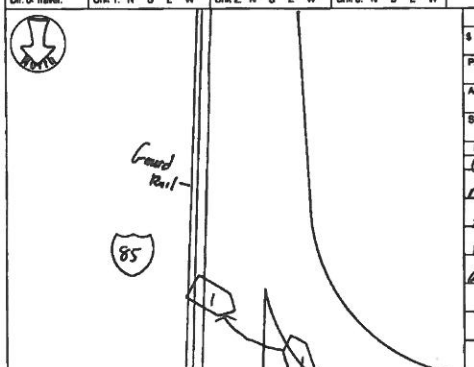
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ N/A	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: (Y) N | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling south on the exit ramp from I-385 to I-85. Unit #1 was traveling too fast for conditions and lost control of the vehicle and ran off the left side of the road and struck the guardrail.



NOTICE - THE INFORMATION ON THIS STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION, AND BELIEF COVERING THE COLLISION. NO WARRANTY IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Gaylor - T.J.	TPR	751	HPDT	05-03-2010	Taylor - T.J.	CPL.	10640000452

Unit	Date of Birth	Sex	Race	Alc	Sent	R/B	A.B.D.	Eject	LAI	Train	Name	Street Address	Zip Code
1	04-16-1992	F	W	1	01	13	4 3	1	1	1 4	Driver of Unit #1		

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; 9- Unknown

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 04 05 06 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Unknown. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Reflective Clothing; 51- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 08- Overturn/Rollover; 02- Cross Median/Center Line; 06- Immersion; 09- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-collision; 99- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 39- Other Moveable Object; 20- Animal (Open Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle

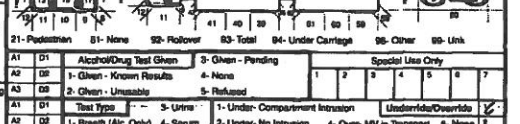
Collision: Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Equipment; 40- Bridge Pompat End; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge End; 44- Culvert; 45- Curb; 46- Ditch; 50- Guardrail Face; 51- Guardrail End; 52- Highway Traffic Sign Post; 53- Highway Traffic Sign Post; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Hmful
09	51			51	51

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed: 1 2 3 | Most Deformed: 1 2 3

Deformed Area



21- Pedestrian; 81- None; 92- Rollover; 93- Total; 94- Under Carriage; 98- Other; 99- Unk

Vehicle Type: 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 18- Pickup/Truck; 19- Truck Tractor; 20- Other Truck; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 89- Unk. (Hit and Run Only); 01- Automobile; 02- Motorcycle; 03- Other Motorbike

Vehicle Use Code: 04- Ambulance; 05- Farm Use; 06- Fire Fighting; 07- Military; 08- Wrecker or Tow; 09- Logging; 10- Transport Passengers; 11- Government; 12- Fire Fighting; 13- Police; 14- Other; 15- Logging; 16- Other; 17- Transport Property; 18- Pedestrian; 19- Unk. (Hit and Run Only); 01- Personal; 02- Driver Training; 03- Construction/Maint.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Undervride/Override: 8

Extent of Deformity: 1 5

0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk. | 4

Est. X-walk: 1- Y 2-N 9-U | 1st Harmful Event Loc.: 6 12

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest | 5

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk. | 2

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk. | 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk. | 2

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights) | 3

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk. | 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area | 2

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present: 1- Yes 2- No

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Ramjunction; 99- Unk. | 13

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Driving; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.; 18- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Animals in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others:

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01/2001)

D.P.S. USE ONLY: 10036851 | Page # 1 Of: 1 | # of Units: 2 | Amended - Attach Copy of Original Report: Corrected | Notified: 1700 | Arrived: 1710

Date	Time	County	Collision Location (Rt. # / Name)	Miles:	Dir.	Nr / Near City or Town of:
04-20-2010	1650	23	5 85	4.3	N S W	GREENVILLE

(1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County (10) Main 2- Alternate 5- Spur 6- Connection 7- Business

Lane # / Dr.: 1 / 6 | Of: N S W | Distance Offset: .1 Miles Feet | Direction: N S E W

Base Intersection (Rt. # / Name): From 385

Second Intersection (Rt. # / Name): Toward 146/WOODRUFF RD

ASRU code: | MPH/Grid:

Latitude: 34° 49' 57.60

Longitude: 82° 17' 50.30

R.R. Id.: N/A | Ramp: From / To: N E 1- Entrance S W 2- Exit

B-323305

Driver/Pedestrian's Full Name: MEINKE-MARIA BOOKER

Unit #: 1 | Sex: F | Race: W

Street/R.F.D.: 101 WILLIAMSBURG WAY

Birth Date: 02-16-1961 | City, State, & Zip: EASLEY SC 29642

State: SC | Driver's License #: 004218254 (D) | Insurance Company: ALLSTATE

Year: 2001 | Body: 4S | Vehicle Make: HYUN | VIN #: 5NPEU46F47H189133

State: SC | Year: 2011 | License Plate #: DAH604 | Owner's D.L. #: 004218254 (D)

Home Telephone: 864 871-3314 | Owner's Full Name: MEINKE-MARIA BOOKER

Bus. Telephone: 864 871-3314 | Street/R.F.D.: 101 WILLIAMSBURG WAY

Contributed To Collision: Yes | City, State, & Zip: EASLEY SC 29642

Estimated Speed: 45 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes

Summons # / Code / Summons # / Code / Towed By: N/A

B-323306

Driver/Pedestrian's Full Name: THOMAS-EDWARD

Unit #: 2 | Sex: M | Race: B

Street/R.F.D.: 1221 NIELSEN DR

Birth Date: 02-06-1980 | City, State, & Zip: CLARKSTON GA 30021

State: GA | Driver's License #: 048781725 (220) | Insurance Company: 21ST CENTURY

Year: 1997 | Body: SU | Vehicle Make: NISS | VIN #: 4N2ZDU15S7VU73010

State: GA | Year: 2011 | License Plate #: BKG6853 | Owner's D.L. #: N/A

Home Telephone: 404 701-1980 | Owner's Full Name: CAMP-RENITA MARISSA

Bus. Telephone: 404 701-1890 | Street/R.F.D.: 3570 PEASANT BROOK VILLAGE LN APT

Contributed To Collision: Yes | City, State, & Zip: LAWRENCEVILLE GA 30340

Estimated Speed: 45 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes

Summons # E406385 / Code 87 / Summons # / Code / Towed By: SMITH AUTO (EST)

B-323307

Driver/Pedestrian's Full Name: NORRIS-ALBERT DEAN JR

Unit #: 3 | Sex: M | Race: W

Street/R.F.D.: 6 W MILLSAP DR

Birth Date: 04-26-1993 | City, State, & Zip: GREER SC 29651

State: SC | Driver's License #: 10190908 (D) | Insurance Company: GREENVILLE CASUALTY

Year: 1991 | Body: TK | Vehicle Make: FORD | VIN #: 1FTEF14N5MNA12010

State: SC | Year: 2010 | License Plate #: EVF166 | Owner's D.L. #: N/A

Home Telephone: 864 221-6591 | Owner's Full Name: NORRIS-REGINA E

Bus. Telephone: 221-6591 | Street/R.F.D.: 120 PARK MEADOW CT

Contributed To Collision: No | City, State, & Zip: TOWNVILLE SC 29689

Estimated Speed: 55 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes

Summons # E406383 / Code 21 / Summons # E406384 / Code 87 / Towed By: JACKSON (EST)

Dr. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 2000	$ 1500	$ N/A	$ N/A

Property Owner/Witness / Address / State / Zip / Phone

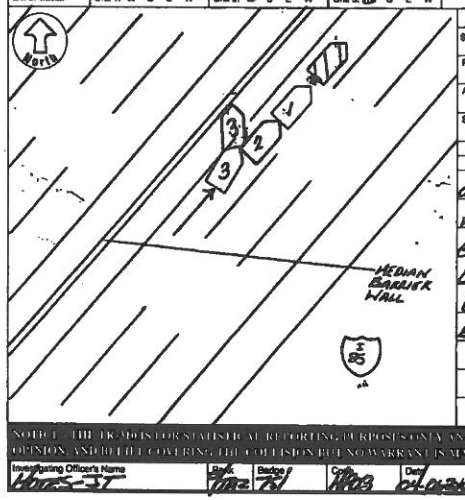
Property Owner/Witness / Address / State / Zip / Phone

Photo: Y

Describe What Happened (Refer to Units by Number):

UNIT #1 AND UNIT #2 WERE TRAVELING NORTH ON I-85 AND WERE SLOWING IN TRAFFIC. UNIT #3 WAS TRAVELING NORTH ON I-85 TOO FAST FOR CONDITIONS AND STRUCK UNIT #2 IN THE REAR WHICH CAUSED UNIT #2 TO STRIKE UNIT #1 IN THE REAR. UNIT #3 THEN STRUCK THE CONCRETE MEDIAN BARRIER. NO DAMAGE WAS CAUSED TO THE BARRIER.

APR 15 2010



NOTICE - THE TRAFFIC INVESTIGATOR'S STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
HUGHES-JT	PFC	761	HP03	04-20-10	H.H. WIN	SGT	10604346060

Unit	Date of Birth	Sex	Race	INJ	Seat	POSD	A.S.D.	Eject	EJ	Tran	Name	Street Address	Zip Code
1	02-16-1961	F	W	O	01	13	4/3	1	1	2			
2	02-06-1980	M	B	O	CV	13	4/3	1	1	2			
2	03-22-1956	M	B	O	03	13	4/3	1	1	2			
3	04-26-1993	M	W	O	01	13	4/3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (16+ Pass or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both / Deployment Unk.; 4- Not Deployed; 7- Not Applicable; a) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown; b)

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Moto/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful
12	1	1	1	22
22	2	2	2	22
22	3	3	3	22

Most Harmful Event: 22

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 08- Cross Median/Center Line; 09- Immersion; 10- Ran off Road Left; 11- Separation of Units; 12- Ran off Road Right; 88- Downhill Runaway; 89- Jackknife

Collision: Not Fixed: 27- Pedestrian; 28- Animal (Deer Only); 29- Pathway Veh.; 31- Animal (All Other); 32- Work Zone Maint. Equip.; 33- Motor Veh. in Transport; 34- Motor Veh. (Stopped); 35- Unk. Moveable Object; 36- Other Moveable Object; 37- Fixed (non-mech.); 38- Other Non-collision; 39- Unk. Non-collision; 40- Motor Veh. (Parked); 99- Pedalcycle

Collision: Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Equipment; 50- Bridge Pier or Abutment; 51- Bridge Rail; 52- Highway Traffic Sign Post; 53- Guardrail Face; 54- Culvert; 55- Median Barrier; 56- Overhead Sign Support; 57- Other (Post, Pole, Support, Etc.); 58- Other (Wall, Building, Tunnel, Etc.); 59- Tree; 60- Curb; 61- Utility Pole; 62- Impact Attenuator/Crash Cushion; 63- Unk. Fixed Object; 64- Light/Luminaire Support; 65- Work Zone Maint. Equipment; 66- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed: 7 7 7

Deformed Area

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other; 29- Unk. (Hit and Run Only); 30- Animal Drawn Veh.; 31- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 88- Other; 89- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1-; A2-; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unavailable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 9- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 9- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override:

Dr. Impr. - MV in Transport: 0- None; 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Total; 9- Unk.; 5- Not Applicable

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

1st Harmful Event Loc.: 1- Curve 2- Intersl. 3- Median 4- Roadway 5- Shoulder 6- Gore 7- Sidewalk 8- Off Roadway 9- Unk. 10- Ramp 11- Other Trafficway

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 8- Contaminate; 7- Water (Standing, etc.); 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other

Work Zones: 1- Yes 2- No

Workers Present: 1- Yes 2- No

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 57- Wrong Side of Road; 58- Unk.; 59- Darting; 67- Other Person Under the Influence; 68- Under the Infl.

Environmental: 60- Obstruction; 61- Animal in Road; 62- Weather Cond.; 63- Glare; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Window/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Primary: 03

Owner(s):

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01-2001)

D.P.S. USE ONLY: 10013481 | Page # 1 Of: 1 | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1700 | Arrived: 1800

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	-ds- / Near City or Town of:
02-12-2010	1654	23	5 85	200	N E S W	Greenville

Lane # / Dir.: 1 / Ct. 6 / N E S W | Distance Offset: .01 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 385 | 0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: Ramp Only: N E S W 1- Entrance 2- Exit | To: N E S W 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Toward: Second Intersection (Rt. # / Name): 146 | 0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Latitude: 34 ° 45 53.00 | Longitude: 82 ° 17 52.50

B-714994

Driver/Pedestrian's Full Name: Neace - Angela Gail Fox

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 550 Cross Creek Lane

Birth Date: 05-05-1962 | City, State, & Zip: Pauline SC 29374

State: SC | Driver's License #: 011677403 (D) | Insurance Company: Ace American

Year: 2007 | Body: 4Dr | Vehicle Make: Chev | VIN #: 2GWTE58K071404867

State: SC | Year: 2010 | License Plate #: CVK 767 | Owner's D.L. #: N/A

Home Telephone: 864 430-6882 | Owner's Full Name: Bilo LLC

Bus. Telephone: N/A | Street/R.F.D.: 256 Bilo Blvd.

Contributed To Collision: Yes (No) | City, State, & Zip: Mauldin SC 29662

Estimated Speed: 10 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # N/A | Code | Summons # N/A | Code | Towed By: N/A

B-714995

Driver/Pedestrian's Full Name: Sifters - Jeremy Hugh

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 6005 Sycamore Ridge Dr.

Birth Date: 04-21-1974 | City, State, & Zip: Decatur GA 30030

State: GA | Driver's License #: 053054720 (C) | Insurance Company: Geico

Year: 2010 | Body: 4Dr | Vehicle Make: Kia | VIN #: KNAFU4A22A5812746

State: GA | Year: 2010 | License Plate #: AAU 3446 | Owner's D.L. #: N/A

Home Telephone: 404 345-2163 | Owner's Full Name: Interstate Leasing

Bus. Telephone: N/A | Street/R.F.D.: 2960 E. Ponce De Leon Ave.

Contributed To Collision: Yes (No) | City, State, & Zip: Decatur GA 30030

Estimated Speed: 35 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # E25 BLKE | Code: 21 | Summons # N/A | Code | Towed By: JR Towing 6D

B-714996

Driver/Pedestrian's Full Name:

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

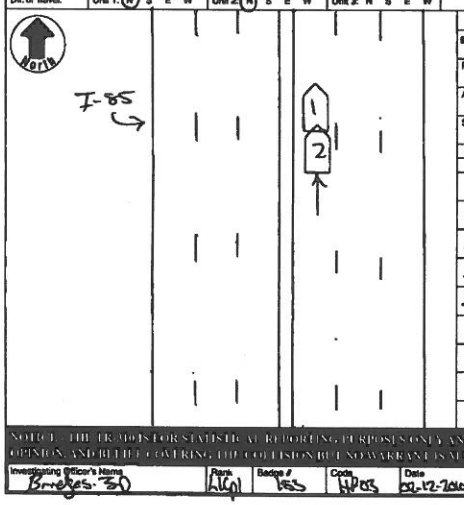
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1200 GE	$ 3000 GE	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and 2 traveling north on Interstate 85. Unit #1 had slowed due to traffic stopping ahead. Unit #2 traveling too fast for conditions struck the rear of Unit #1.

FEB 19 2010

NOTICE: THE REPORTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTHFULNESS OF SUCH A REPORT.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Bruckner 30	LCpl	1553	HP03	02-12-2010	Mike Whitmire	Sgt.	10GN0156Z7

Unit	Date of Birth	Sex	Race	DLI	Seat	NISD	A.B.D.	Eject	Lgt	Trap	Name	Street Address	Zip Code
1	05-05-1962	F	W	01	01	13	43	L	L	2			
2	04-21-1974	M	W	01	01	13	43	L	L	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nonrailing); 51- Other Unenclosed Area (nonrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unit/N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 99- Unk.; Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Unknown. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police; 8- Other; 9-Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22				22	22
22					

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Right; 10- Ran off Road Left; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-Collision; 99- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. on Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Non-Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 28- Other Moveable Object; 29- Unk. Moveable Object

Collision: Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Pillar; 44- Culvert; 45- Curb; 46- Ditch; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 69- Work Zone Maint. Equipment; 99- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

1st Deformed: 1 2 3

Most Deformed: 1 2 3

Vehicle Types: 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 04- Ambulance; 01- Personal; 02- Driver Training; 03- Construction/Maint.; 05- Farm Use; 06- Transport Passengers; 07- Transport Property; 08- Military; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Motorists Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Stopping or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 88- Other

Alc Test Results: A1- ; A2- ; A3- ; 1- Test Refused; 2- Test Given, Results Known; 3- Test Given, Results Unknown

Traffic Way: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 3

1st Harmful Event Loc.: 5

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Character: 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Road Surface Condition: 3

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

Traffic Control Type: 05

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

School Bus Involved: 3

Work Zone: 1- Yes; 2- No

Work Zone: 2

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Blowing Sand, Oil, Dirt or Snow; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Weather Condition: 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Light Condition: 1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Junction Type: 13

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Over-correcting/Over-steering; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 21- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction in Roadway; 63- Weather Cond.; 69- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others: 67- Other Person Under the Influence

ORIGINAL

O.P.S. USE ONLY 10000262 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2008) | # Of Units 1 | Amended - Attach Copy of Original Report: Corrected | Notified 0815 | Arrived 0827

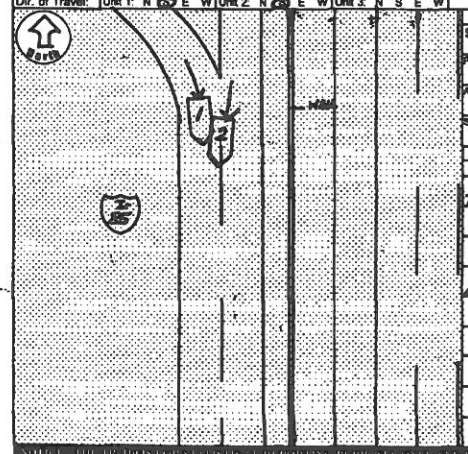
Date 01-27-2010 | Time 08:00 | County 23 | Collision Location (Rt. # / Name) 85 | Miles: 4.3 | Dir. N S E W | Mile / Near City or Town of: Greenville

Lane # / Dir. 2 | Of 2 | N E S W | Distance Offset .1 Miles Feet | Direction N E S W | Base Intersection (Rt. # / Name) 385 | From | Latitude 34°49 57.80 | Longitude 82°17 50.50

R.R. Id. N/A | From N E S W | Ramp Only | To N E S W | Second Intersection (Rt. # / Name) 146/Woodruff Rd | Toward

A-617968	A-617969	A-617970
Driver/Pedestrian's Full Name	Del Hunt - Robert Anderson Jr	Hamlin - Charles Seegar	
Unit #	1	2	1/A
Sex	M	M	
Race	W	W	
Street	926 Valley Ln	6281 S Pine St	
Birth Date	06-16-1974	11-29-1935	
City, State, & Zip	Marion SC 29571	Pacolet SC 29372	
State	SC	SC	
Driver's License #	00413088 (D)	01146480 (D)	
Insurance Company	State Farm	Liberty Mutual	
Year	2004	2001	
Body	SU	PU	
Vehicle Make	Nissan	Ford	
VIN #	5N1ED28D04C656022	1FMNF31F71EA37331	
State	SC	SC	
Year	2010	2000	
License Plate #	LVK786	ATS974	
Owner's D.L. #	00413088 (D)	01146480 (D)	
Home Telephone	(864) 985-3788	(864) 474-4497	
Owner's Full Name	Same - Robert Anderson Jr	Hamlin - Charles Seegar	
Bus. Telephone	(864) 489-1733	(864) 474-4497	
Street	926 Valley Ln	6281 S Pine St	
Contributed To Collision	Yes	No	
City, State, & Zip	Marion SC 29571	Pacolet SC 29372	
Estimated Speed	40	45	
Speed Limit	60	60	
C.D.L. Req: Yes / No			
T/S S Req: Yes / No			
Alc/Drg info (see back): Yes / No			
Summons #	N/A	N/A	
Code			
Towed By	N/A	N/A	

Dir. of Travel: Unit 1: N E W | Unit 2: N E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 400	$ 500	$	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y / N | Describe What Happened (Refer to Units by Number)

Unit #1 was on the exit ramp from I-385 to I-85 traveling South. Unit #2 was entering to merge onto the entrance ramp to I-385 South Bound. Unit #2 switched lanes improperly and struck Unit #1.

JAN 21 2010

NOTICE: THE PURPOSE OF STATE LAW REQUIRING THE REPORTING OF MOTOR VEHICLE COLLISIONS IS TO OBTAIN ACCURATE AND COMPLETE INFORMATION AND FACTS CONCERNING THE COLLISION IN ORDER THAT APPROPRIATE ACTION MAY BE TAKEN TO PROTECT THE PUBLIC INTEREST.

Investigating Officer's Name: Hare-JT | Rank: Cpl | Badge #: 751 | Cert #: 41903 | Date: 01/27/2010 | Reviewer's Name: H.H-WP | Rank: Sgt | Internal Agency Code: 003085

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	06-16-1974	M	W	O	01	13	[illegible]	1	1	2		[illegible]	
2	11-29-1935	M	W	O	01	13	[illegible]	1	1	2			
2	11-29-1935	F	W	O	03	13	[illegible]	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 11- Helmet; 12- Reflective Clothing; 41- Protective Pads; 99- Unk

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; a) 1- Switch in On Position; 2- No Switch; b) 1- Switch in Off Position; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downh.; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spl. Traffic Veh.; 13- Other Non-Collision; 14- Pedalcycle

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 30- Other Moveable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Fence; 49- Guardrail End; 50- Guardrail Face; 51- Highway Traffic Sign Post; 52- Impact Attenuator/Crash Cushion; 53- Light Support; 54- Mailbox; 55- Median Barrier; 56- Median Cable Barrier; 57- Overhead Sign Support; 58- Other Fixed Object; 59- Other Post, Pole or Support; 60- Tree; 61- Unk. Fixed Object; 99- Unk

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Most Deformed Area: 11 | 1st Deformed: 11 | 2nd Most Deformed: 11 | 2nd Deformed: 15

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 41- Pedestrian; 98- Other; 99- Unk.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Especially Illegal; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc. Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only

Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other

Trafficway Type: A- 1- Conc. 2- Asphalt 3- Island 4- Roadside 5- Median 6- Shoulder 7- Roadway 8- Outside Traffic Way 9- Unk; B- X-walk 1-Y 2-N 9-U; V- 1- Harmful Event Loc

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 98- None; 99- Unk

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

Work Zone Type: 1- Yes 2- No

Workers Present:

Junction Type: 01- Crossover; 02- Driveway; 03- Freeway/Ramps; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Improper Turning; 19- Cell Phone; 25- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 45- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 56- Improper Crossing; 57- Darting; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Glare; 65- Animal in Road; 66- Other; 67- Weather Cond.; 68- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10-000262 | Page # 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM (TR-310) | # Of Units: 2 | Amended / Attach Copy of Original Report / Corrected | Notified: 0815 | Arrived: 0827

Date: 01-01-2010 | Time: 0800 | County: 23 | Collision Location (Rt. # / Name): 85 | Miles: 4.3 | Dir.: N E S W | Juris / Near City or Town of: GREENVILLE

Lane # / Dir. | Distance Offset: Miles / Feet | Direction: N E S W | Base Intersection (Rt. # / Name) | ASRU code | MP/Gnd

R.R. Id. | Ramp Only: From / To | Second Intersection (Rt. # / Name) | Latitude | Longitude

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | 1- Entrance 2- Exit

Unit 1

A-617980 | Driver/Pedestrian's Full Name: A-617968 CALHOUN-ROBERT ANDREW

Unit # 1 | Sex | Race | Street

Birth Date | City, State, & Zip

State: SC | Driver's License #: 004190884(D) | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street

Contributed To Collision: No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S 5 Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Unit 2

A-617981 | Driver/Pedestrian's Full Name: A-617981 HOWELL-CHARLES SEBERT

Unit # 2 | Sex | Race | Street

Birth Date | City, State, & Zip

State: SC | Driver's License #: 011464260(D) | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street

Contributed To Collision: No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S 5 Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Unit 3

A-617982 | Driver/Pedestrian's Full Name: A617970

Unit # 3 | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

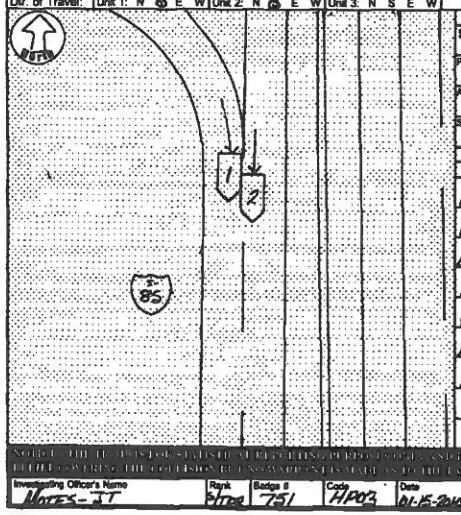
Home Telephone ( ) | Owner's Full Name: FEB 01 2010

Bus. Telephone ( ) | Street

Contributed To Collision: No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S 5 Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N E W | Unit 2: N E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$	$	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y | Describe What Happened (Refer to Units by Number)

PEBBERT AMENDED TO SHOW WHETHER UNIT#1 WAS UNIT #2 CONTRIBUTING, IN THIS COLLISION DUE TO THE DRIVER OF UNIT #1 STATING THAT UNIT #2 CHANGED LANES STRIKING HIS VEHICLE AND THE DRIVER OF UNIT #2 STATED THAT UNIT #1 CHANGED LANES STRIKING HIS VEHICLE. THERE IS NO INDEPENDANT WITNESS TO THIS COLLISION AND THE CONTRIBUTING UNIT CANNOT BE DETERMINED.

NOTICE: THE DISCLOSURE OF STATISTICAL INFORMATION PERTAINING TO ANY VEHICLE COLLISION OR TRAFFIC VIOLATION SHALL NOT BE CONSTRUED AS AN ADMISSION OF LIABILITY OR FACT BY ANY PERSON OR AGENCY INVOLVED IN THE COLLISION OR VIOLATION.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
HOYES-JT	SGT	751	HP03	01-15-2010	STARKS-SA	PFC	003085

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Ejct	LAI	Trap	Name	Street Address	Zip Code

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk /NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 71- Child Safety Seat; 88- Other; 99- Unk

Air Bag Deployment / Switch: a): 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 7-Not Applicable; b): 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Motorist Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 23- Motor Veh (In Transport); 24- Motor Veh (Stopped); 25- Motor Veh (Other Roadway); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip.; 38- Other Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier/Support End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 66- Other; 69- Unk.

1st Harmful: 1 2 3 2 3

1st Deformed / Most Deformed

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (→a|a←); 42- Angle (→b|b←); 43- Angle (↗|↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other Motorbike; 51- Tram; 81- School Bus; 38- Animal Drawn Veh; 39- Animal (Ridden); 41- Pedestrian; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 06- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian; 99- Unk.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Especially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor

Special Use Only

Undertide/Override: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV on Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 9- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights); 9- Unk.

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 1- Yes Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Yes 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes 2- No

Primary / Contributing Factors / Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 19- Cell Phone; 29- Unk

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 56- Improper Crossing; 57- Wrong Side of Road; 58- Darting; 59- Other; 65- Under the Influence; 67- Other Person Under Influence; 68- Other; 69- Unk.

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

ORIGINAL

OCT 21 2010

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01/2001)

D.P.S. USE ONLY	Page # / Of:	# of Units	Amended - Attach Copy of Original Report / Corrected	Notified	Arrived
10114981	1 / 1	1		1610	1620

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Hwy Near City or Town of:
09-29-2010	1605	23	85	.01	E	Greenville

Lane # / Dir.: 1 / L

Distance Offset: .03 Miles Feet; Direction: N

Base Intersection (Rt. # / Name) From: 146

Second Intersection (Rt. # / Name) Toward: 385

ASRU code:

MP/Grid:

Latitude: 34°50 05.00

Longitude: 82°17 49.20

R.R. Id.: N/A

Ramp Only From: NE

Ramp Only To: NW

B-225739

Driver/Pedestrian's Full Name: Ladwallader-Lewis Cody

Unit #: 1 | Sex: M | Race: W

Street/R.F.D.: 6 Idaredl ct.

Birth Date: 07-19-1994

City, State, & Zip: Simpsonville SC 29681

State: SC | Driver's License #: 122215704 (D) | Insurance Company: Nation Wide

Year: 2001 | Body: PK | Vehicle Make: Ford | VIN: 5TEW

State: SC | Year: 2011 | License Plate #: EPH 617 | Owner's D.L. #: N/A

Home Telephone: 864 249 4332 | Owner's Full Name: Ladwallader-Lewis W.

Bus. Telephone: ( ) N/A | Street/R.F.D.: 938 Jenkins Bridge Rd.

Contributed To Collision: Yes | City, State, & Zip: Simpsonville SC 29680

Estimated Speed: 50 | Speed Limit: 35 | C.D.L. Req: Yes (N) | T/B S Req: Yes (N) | Alc/Drg Info (see back): Yes (N)

Summons #: E601009 | Code: 21 | Summons #: N/A | Code: | Towed By: Keiths (OF)

B-225740

Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

State: | Year: | License Plate #: | Owner's D.L. #:

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed By:

B-225741

Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Home Telephone: ( ) | Owner's Full Name:

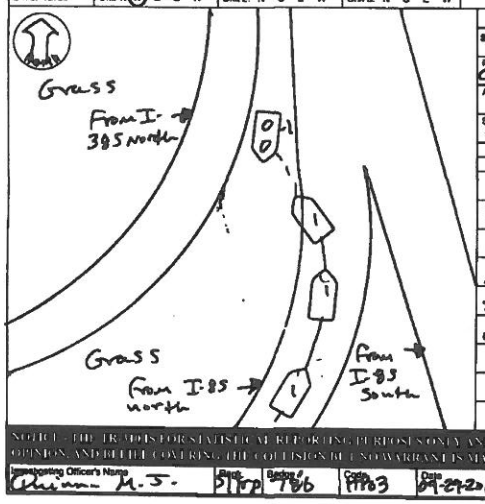
Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$3500	$ N/A	$ N/A	$ N/A	$ N/A

Property Owner/Witness: Cantrell-Howland | Property Owner/Witness: N/A

Address: 338 McDaniel Ave. Greenville | Address:

State: SC | Zip: 29601 | Phone: (864) 704-2807 | State: | Zip: | Phone:

Photo: Y (N)

Describe What Happened (Refer to Units by Number):

unit #1 was traveling north on entrance ramp from I-85 N. to I-385 N. Driver of unit # driving too fast for conditions lost control of his unit, ran off the left side of the road causing the unit to land on its side.

NOTICE - THE TR-310 DISTORY IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION AT THE SCENE. NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Chinn M.S.	PTO	786	PTO3	09-29-2010	A. Nix	Sgt	106V (08182

Unit	Date of Birth	Sex	Race	DLI	Seat	R/SD	A.I.S.D.	Eject	LA/	Tran	Name	Street Address	Zip Code
1	07-19-1994	M	W	a: 0 b:	01	13	a: 3 b:	1	1	a: 2 b:			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Testing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 89- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 5- Deployment Unk.; 6- Not Applicable; 1- Switch in On Position; 2- Switch in Off Position; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1-Yes; 2-No

Motorcycle Only

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Reflective Clothing; 41- Protective Pads; 81- Lighting

Sequence of Events (Max. Only 4) (Refer to Officer's Principal Responsibilities - Do Not Use Bullfrog Codes)

Non-Collision: 04- Equipment Failure

Collision: Not Fixed: 27- Pedestrian; 28- Railway Train; 29- Work Zone Maint. Equip.; 30- Motor Veh. (In Transport); 31- Motor Veh. (Stopped); 32- Motor Veh. (Parked); 33- Unk. Motorized Object; 34- Non-Motorized Object; 35- Deer; 36- Animal (Other); 37- Fixed Object

Collision: Fixed Object: 40- Embankment; 41- Bridge Overhead Structure; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Mail Box; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Pole (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 61- Un.Obj Pole; 62- Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 1 2 3

Most Deformed: 1 2 3

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Drawn Veh.); 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Military; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 99- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 6

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 1

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 4

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 5

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.; 2

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 89- None; 89- Unk.; 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Blast, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.; 2

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.; 13

Work Zone: 1- Yes; 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes; 2- No

School Bus Involved: 3

Primary: 03

Contributing Factors - Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Over-correcting/Over-steering; 12- Aggressive Operation of Vehicle; 13- Overloaded/Improper Loading; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence; 68- Under the Infl.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

DPS USE ONLY: 10136422

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001)

Page # 1 / Of: 1 | # of Units: 3 | Amended - Attach Copy of Original Report | Corrected | Notified: 0910 | Arrived: 0910

Date: 11-03-2010 | Time: 0910 | County: 23 | Collision Location (Rt. # / Name): 5 85 | Miles: 4.3 | Dir.: NE / SW | On / Near City or Town of: Greenville

Lane # / Dir.: 3 | Of: 6 | Dir.: NE / SW | Distance Offset: 5 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): 146 | ASRU code | MP/Grid | Latitude: 34° 49 5860 | Longitude: 82° 17 5020

R.R. Id.: N/A | From: NE SW | Ramp Only: 1 - Entrance, 2 - Exit | To: NE SW | Second Intersection (Rt. # / Name): 385

1 - Interstate, 2 - US Primary, 3 - SC Primary, 4 - Secondary, 5 - County, 6 - Other, 7 - Business, 8 - Connection, 9 - Other

B-322342

Driver/Pedestrian's Full Name: Demartino - David Vincent

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 2037 Cleveland St. Ext.

Birth Date: 12-23-1977 | City, State, & Zip: Greenville, SC 29607

State: SC | Driver's License #: 007323953 (D) | Insurance Company: State Farm

Year: 2001 | Body: 4S | Vehicle Make: GMC | VIN #: 1GKEK13T11R188444

State: SC | Year: 2011 | License Plate #: EKN691 | Owner's D.L. #: 007323953 (D)

Home Telephone: (864 238-2687 | Owner's Full Name: Demartino - David Vincent

Bus. Telephone: ( ) N/A | Street/R.F.D.: 2037 Cleveland St. Ext.

Contributed To Collision: No | City, State, & Zip: Greenville, SC 29607

Estimated Speed: 60 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes | Summons #: N/A | Code | Summons #: N/A | Code | Towed By: SE (EE)

B-322343

Driver/Pedestrian's Full Name: Rogers - Marty Lee

Unit #: 2 | Sex: M | Race: B | Street/R.F.D.: 9250 Scarlett Dr. SW

Birth Date: 12-18-1967 | City, State, & Zip: Covington, GA 30014

State: GA | Driver's License #: 049076411 (A) | Insurance Company: Travelers

Year: 2007 | Body: Tract | Vehicle Make: FTL | VIN #: 1FUJA6CK37LY16459

State: GA | Year: 2011 | License Plate #: IC97J06 | Owner's D.L. #: N/A

Home Telephone: 678 327-9589 | Owner's Full Name: Ryder Truck Rental

Bus. Telephone: (800 86-9960 | Street/R.F.D.: 1800 B Sarasota PKwy

Contributed To Collision: Yes | City, State, & Zip: Conyers, GA 30013

Estimated Speed: 60 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: No | Alc/Drg Info (see back): No | Summons #: E6274480 | Code: 22 | Summons #: N/A | Code | Towed By: N/A

B-322344

Driver/Pedestrian's Full Name: Jasok - Kenneth Michael

Unit #: 3 | Sex: M | Race: W | Street/R.F.D.: 54513 Rge Rd 260

Birth Date: 09-06-1967 | City, State, & Zip: Sturgeon County AB T8T 0W4

State: AB | Driver's License #: 119369-676 (16) | Insurance Company: ICBC

Year: 2009 | Body: Tract | Vehicle Make: Ptr Blt | VIN #: 1XPXD49X69D789947

Dir. of Travel: Unit 1: N | Unit 2: S | Unit 3: S

Home Telephone: 780 983-0722 | Owner's Full Name: Lane Transportation

Bus. Telephone: ( ) N/A | Street/R.F.D.: 32915 Mission Way

Contributed To Collision: No | City, State, & Zip: Mission, BC V2V6E4

Estimated Speed: 55 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: No | Alc/Drg Info (see back): No | Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

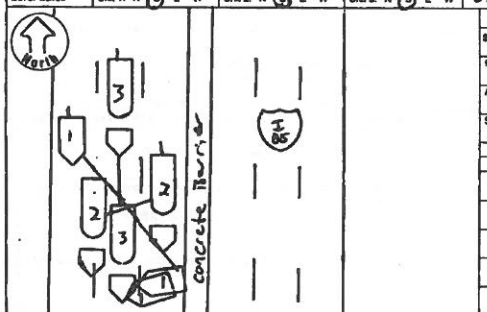
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3000	$ 0	$ 2000	$ N/A	$ N/A

Property Owner/Witness: Ford - Steven Lee | Address: 930 Bradley Dr Lot 26 Campobello SC 29322 | Phone: 864-778-3250

Property Owner/Witness: McCall - Kevin Joe | Address: 3462 Hwy 176 Tryon NC 28782 | Phone: 828-713-4363

Photo: Y/N | Describe What Happened (Refer to Units by Number):

Unit #1, Unit #2 and Unit #3 were traveling south on I-85. Unit #2 made an improper lane change. Unit #1 braked to avoid Unit #2, and lost control. Unit #1 struck the concrete barrier, and then struck Unit #3.



NOTICE - THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT DOES NOT WARRANT IT'S MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Lee - C.L | Rank: TFC | Badge #: 370 | Code: HP03 | Date: 11-03-2010 | Reviewer's Name: Stallard - T.J. | Rank: CPL. | Internal Agency Code: 10GV122367

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	12-23-1977	M	W	0	01	13	9X	1	1	2			
2	12-18-1967	M	B	0	01	13	4X	1	1	2			
3	09-06-1967	M	W	0	01	13	4X	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

Injury Status: 0 - Not Injured, 1 - Possible, 2 - Non-Incapacitating, 3 - Incapacitating, 4 - Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20 - Pedestrian, 30 - Trailing Unit, 40 - Bus or Van (4th row or Higher), 50 - Other Enclosed Area (nontrailing), 51 - Other Unenclosed Area (nontrailing), 60 - Sleeper of Cab, 70 - Riding on Unit Exterior, 80 - Lap, 89 - Unk./NA

Restraint/Safety Device: 00 - None Used, 11 - Shoulder Belt Only, 12 - Lap Belt Only, 13 - Shoulder & Lap Belt, 21 - Child Safety Seat, 89 - Other, 99 - Unk.

Air Bag Deployment / Switch: 1 - Deployed Front, 2 - Deployed Side, 3 - Deployed Both, 4 - Not Deployed, 7 - Not Applicable, 8 - Deployment Unk., 1 - Switch In On Position, 2 - Switch In Off Position, 3 - No Switch, 9 - Unknown

Ejection: 1 - Not Ejected, 2 - Part. Ejected, 3 - Tot. Ejected, 7 - Not App., 9 - Unk.

Motorcycle Only: Head Injury: 1 - Yes, 2 - No

Location After Impact: 1 - Not Trapped, 2 - Extricated (Mechanical Means), 3 - Freed (non-mech.), 4 - Not Applicable, 9 - Unknown

Transported to Medical Facility: a) 1 - Yes, 2 - No, 3 - Unknown; b) By: 1 - EMS, 2 - Police, 8 - Other, 9 - Unk.

Pedestrian, Motor/Pedalcycle Only: 31 - Helmet, 41 - Protective Pads, 51 - Reflective Clothing, 61 - Lighting

Sequence of Events

Non-Collision: 01 - Cargo/Equip Loss or Shift, 02 - Cross Median/Center Line, 03 - Downhill Runaway, 04 - Equipment Failure, 05 - Fire/Explosion, 06 - Immersion, 07 - Jackknife

Collision: Not Fixed: 20 - Animal (Deer Only), 21 - Animal (All Other), 22 - Motor Veh. (In Transport), 23 - Motor Veh. (Stopped), 24 - Motor Veh. (Non-Motor Vehicle), 25 - Motor Veh. (Parked), 26 - Pedalcycle, 27 - Pedestrian, 28 - Railway Veh., 29 - Work Zone Maint. Equip., 30 - Other Movable Object, 31 - Unk. Movable Object

Collision: Fixed Object: 40 - Bridge Overhead Structure, 41 - Bridge Pier or Abutment, 42 - Bridge Rail, 43 - Bridge Rail End, 44 - Culvert, 45 - Curb, 46 - Ditch, 47 - Embankment, 48 - Equipment, 49 - Fence, 50 - Guardrail End, 51 - Guardrail Face, 52 - Highway Traffic Sign Post, 53 - Impact Attenuator/Crash Cushion, 54 - Light/Luminaire Support, 55 - Mail Box, 56 - Median Barrier, 57 - Overhead Sign Support, 58 - Other (Post, Pole, Support, Etc.), 59 - Other (Wall, Building, Tunnel, Etc.), 60 - Tree, 61 - Utility Pole, 62 - Work Zone Maint. Equipment, 99 - Other

Event 1 | Event 2 | Event 3 | Most Harmful: 22 | 18 | 22 | 1st Impact

Manner of Collision (Struck Veh.): 00 - Not Coll. W/Motor Veh., 10 - Rear End, 20 - Head On, 30 - Rear-to-Rear, 40 - Angle, 50 - Sideswipe Same Dir., 60 - Sideswipe Opposite Dir., 70 - Backed Into, 99 - Unknown

1st / Most Deformed Area: 1st Deformed: 18 | 61 | 72; Most Deformed: 12 | 72 | 22

Vehicle Type: 01 - Automobile, 12 - Pickup/Truck, 13 - Truck Tractor, 14 - Other Truck, 15 - Full Size Van, 16 - Mini Van, 17 - Sport Utility, 25 - Motorcycle, 26 - Other Motorbike, 27 - Pedalcycle, 28 - Other Motorbike, 39 - Animal (Ridden), 41 - Pedestrian, 51 - Train, 61 - School Bus, 62 - Passenger Bus, 98 - Other, 99 - Unk. (Hit and Run Only)

Vehicle Use Code: 01 - Personal, 02 - Driver Training, 03 - Construction/Maint., 04 - Ambulance, 05 - Military, 06 - Transport Passengers, 07 - Transport Property, 08 - Farm Use, 09 - Wrecker or Tow, 10 - Police, 11 - Government, 12 - Fire Fighting, 13 - Logging, 18 - Other

Vehicle Attachment: 1 - None, 2 - Mobile Home, 3 - Semi-Trailer, 4 - Utility Trailer, 5 - Farm Trailer, 6 - Trailer w/Boat, 7 - Camper Trailer, 8 - Towed Motor Vehicle, 9 - Petroleum Tanker, A - Cowboy Trailer, B - Autocarrier Trailer, C - Other Tanker, D - Flat Bed, E - Twin Trailers, F - Other

Action Prior to Impact (Vehicle): 01 - Backing, 02 - Changing Lanes, 03 - Entering Traffic Lane, 04 - Leaving Traffic Lane, 05 - Making U-turn, 06 - Movements Essentially Straight Ahead, 07 - Overtaking/Passing, 08 - Parked, 09 - Slowing or Stopping in Traffic, 10 - Turning Left, 11 - Turning Right, 88 - Other, 99 - Unk.

Action Prior to Impact (Non-motorist): 21 - Approaching/Leaving Vehicle, 22 - Entering/Crossing Location, 23 - Playing/Working on Vehicle, 24 - Pushing Vehicle, 25 - Standing, 26 - Walking, Playing, Cycling, 27 - Working

Weather Condition: 1 - Clear (no adverse conditions), 2 - Rain, 3 - Cloudy, 4 - Sleet, Hail, 5 - Snow, 6 - Fog, Smog, Smoke, 7 - Blowing Sand, Oil, Dirt or Snow, 8 - Severe Crosswinds, 9 - Unk.

Light Condition: 1 - Daylight, 2 - Dawn, 3 - Dusk, 4 - Dark (Lighting Unspecified), 5 - Dark (Street Lamp Lit), 6 - Dark (Street Lamp Not Lit), 7 - Dark (No Lights)

Junction Type: 01 - Crossover, 02 - Driveway, 03 - Five/More Points, 04 - Four-way Intersection, 05 - Railway Grade Crossing, 07 - Shared Use Paths or Trail, 08 - T-Intersection, 09 - Traffic Circle, 12 - Y-Intersection, 13 - Non-Junction, 99 - Unk.

Alcohol/Drug Test Given: 1 - Given - Known Results, 2 - Given - Unknown, 3 - Given - Pending, 4 - None, 8 - Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1 - Breath (Alc. Only), 2 - Blood, 3 - Urine, 4 - Serum, 8 - Other

Override/Override: 1 - Under Compartment Intrusion, 2 - Under-No Intrusion, 3 - Under-Unknown, 4 - Over-MV in Transport, 5 - Over-Other Vehicle, 6 - None, 9 - Unk.

Drug Results: 1 - Amphetamines, 2 - Cocaine, 3 - Marijuana, 4 - Opiates, 5 - PCP, 8 - Other, 0 - None/Minor, 1 - Functional Damage, 2 - Disabling Damage, 4 - Severe/Totaled, 5 - Not Applicable, 9 - Unk.

Extent of Deformity: 3

Alc Test Results: A1 - A2 - A3 -

Roadway: 1 - Two-way, Not Divided, 2 - Two-way, Divided, Unprotected Median, 3 - Two-way, Divided, Barrier, 4 - One-way, 8 - Other

Trafficway: 3

Access: 1 - Gore, 2 - Island, 3 - Median, 4 - Roadside, 5 - Shoulder, 6 - Ramp, 7 - Sidewalk, 8 - Trailway, 9 - Unk.

1st Harmful Event: 1 - Y 2-N B-U; B: X-walk: Y; 1st Harmful Event Loc.: 5

Road Character: 1 - Straight - Level, 2 - Straight - On Grade, 3 - Straight - Hillcrest, 4 - Curve - Level, 5 - Curve - On Grade, 6 - Curve - Hillcrest

Road Surface Condition: 1 - Dry, 2 - Wet, 3 - Snow, 4 - Slush, 5 - Ice, 6 - Contaminate, 7 - Water (Standing, etc.), 8 - Other, 9 - Unk.

Traffic Control Type: 01 - Stop and Go Light, 02 - Flashing Traffic Signal, 11 - RR (X-bucks, Lights & Gates), 12 - RR (X-bucks & Lights), 13 - RR (X-bucks Only), 21 - Officer or Flagman, 22 - Oncoming Emergency Vehicle, 31 - Pavement Markings (only), 41 - Stop Sign, 42 - School Zone Sign, 43 - Yield Sign, 44 - Work Zone, 45 - Other Warning Signs, 51 - Flashing Beacon, 98 - None, 99 - Unk.

School Bus Involved: 3

Work Zone: 2

Work Zone Location: 1 - Shoulder/Median Work, 2 - Lane Shift/Crossover, 3 - Intermittent/Moving Work, 4 - Lane Closure, 8 - Other, 9 - Unk.

Work Zone Type: 1 - Yes, 2 - No

Workers Present: 1 - Yes, 2 - No

Primary Contributing Factors: 10

Driver: 01 - Disregarded Signs, Signals, Etc., 02 - Distracted/Inattention, 03 - Driving Too Fast for Conditions, 04 - Exceeded Authorized Speed Limit, 05 - Failed to Yield Right of Way, 06 - Ran off Road, 07 - Fatigued/Asleep, 08 - Followed Too Closely, 09 - Made an Improper Turn, 10 - Medical Related, 11 - Operating Defective Equipment, 12 - Aggressive Operation of Vehicle, 13 - Over-correcting/Over-steering, 14 - Swerving to Avoiding Object, 15 - Wrong Side or Wrong Way, 16 - Under the Influence, 17 - Vision Obscured (Within Unit), 18 - Improper Lane Usage/Change, 19 - Cell Phone, 28 - Other Improper Action, 29 - Unk.

Roadway: 30 - Debris, 31 - Non-Highway Work, 32 - Obstruction in Roadway, 33 - Road Surface Condition (i.e., Wet), 34 - Rut, Holes, Bumps, 35 - Shoulders (None, Low, Soft, High), 36 - Traffic Control Device (i.e., Missing), 37 - Work Zone (Constr./Maint./Utility), 38 - Worn, Travel-Polished Surface, 48 - Other, 49 - Unk.

Non-Motorist: 50 - Inattentive, 51 - Lying &/or Illegally in Roadway, 52 - Failure to Yield R. of W., 53 - Not Visible (Dark Clothing), 54 - Disregard Signs, Signals, Etc., 55 - Improper Crossing, 56 - Darting, 57 - Wrong Side of Road, 58 - Other, 59 - Unk.

Environmental: 60 - Animal in Road, 61 - Glare, 62 - Obstruction, 63 - Weather Cond., 68 - Other, 69 - Unk.

Vehicle Defect: 70 - Brakes, 71 - Steering, 72 - Power Plant, 73 - Tires/Wheel, 74 - Lights, 75 - Signals, 76 - Windows/Shield, 77 - Restraint System, 78 - Truck Coupling, 79 - Cargo, 80 - Fuel System, 88 - Other, 89 - Unk.

Others: 98 - Other, 99 - Unk.

ORIGINAL

D.P.S. USE ONLY	South Carolina Uniform Traffic Collision Report (For Investigating Officers) Supplemental Bus & Truck Collision Report	Amended-Attach Copy of Original Report	Corrected
10136427			

Page 1 of 1 Pages

Date	Time	County	Route Category	Collision Location (Route Number and Name if Any)	Auxiliary
11-03-2010	0910	Greenville	(1) Interstate, 2-US Primary, 3-SC Primary, 4-Secondary, 5-County	ON 85	(0) Mainline, 2-Alternate, 5-Spur, 6-Connection, 7-Business

SCREENING INFORMATION

NUMBER OF QUALIFYING VEHICLES INVOLVED

A Truck Having a GVWR of 10,001 lbs. or More For the Power Unit → 1

OR

A Vehicle with a Hazardous Materials Placard →

Forwarded to OHS DEC 09 2010

OR

A Bus That is Designed or Used to Carry 16 or More Persons, Including the Driver →

OR

A Motor Vehicle Engaged in Interstate Commerce that is Designed or Used to Carry 9-15 Persons, Including the Driver, for Compensation →

Number of Persons Involved:

Sustaining Fatal Injuries →

FR Data Entry Received DEC 14 2010

Transported for Immediate Medical Services →

Number of Vehicles Towed

Towed From the Scene Due to Damage → 1

Do Not Complete This Form Unless:

One or More Qualifying Vehicles was Involved - AND

One or More Qualifying Injuries was Sustained - OR

One or More Vehicles (not necessarily the truck or bus) Was Towed from the Scene

Total Number of Supplemental Forms Required for this Collision : 1

Unit Number 2 FR-10 Number B-322343

Carrier Information

Name: Ryder Truck Rental

Address: 1800 B. Sarasota Pkwy

City: Conyers State: GA Zip: 30013

Business Phone Number: 800 866 9960

Identification Numbers

U.S. DOT 305173 None = 0

ICC MC 304183 State:

State Number

Is this vehicle an (1) Interstate or a (2) Intrastate carrier? 1

Was a Citation Issued to this Vehicle? 1- Yes 2- No 3- Pending 1

Investigator's Name: Lee-C.L. Rank: TFC Date: 11/03/2010

Access Control

1- No Access Control
2- Full Access Control
3- Partial Access Control

3

Vehicle Information

Gross Vehicle Weight Rating

Weight Rating of the Power Unit of the Truck

01- Less Than or Equal to 10,000 Pounds
02- 10,001-26,000 Pounds
03- More Than 26,000 Pounds
99- Unknown/Hit and Run

03

Vehicle Configuration

00- Passenger Car (only w/ HAZMAT placard)
01- Light Truck (only w/ HAZMAT placard)
02- Bus (seats for 9-15 people)
03- Bus (seats for 16 + people)
04- Single Unit Truck (2 axles/6+ Tires)
05- Single Unit Truck (3 or more axles)
06- Truck w/ Trailer
07- Truck-Tractor Only (Bobtail)
08- Tractor w/ Semi-Trailer
09- Tractor w/ Double Trailers
10- Tractor w/ Triple Trailers
98- Other/Unable to Classify
99- Unknown/Hit and Run

08

Cargo Body Type

00- Bus (seats for 9-15 people)
01- Bus (seats for 16+ people)
02- Enclosed Box
03- Cargo Tank
04- Flat Bed
05- Dump
06- Concrete Mixer
07- Auto Transport
08- Garbage/Refuse
09- Grain, Chips, Gravel
10- Pole
11- Intermodal Container
97- Not Applicable
98- Other
99- Unknown/Hit and Run

02

Trailer Length and Width

Length

00- No Trailer
01- Less than 480 in. (40 ft)
02- 481 in. - 576 in. (48 ft.)
03- 577 in. or more
99- Unknown/Hit and Run

Trailer 1 Length: 03 Trailer 2 Length:

Width

00- No Trailer
01- Less than 60 in. (5 ft.)
02- 61 in. - 84 in. (7 ft.)
03- 85 in. or more
99- Unknown/Hit and Run

Trailer 1 Width: 03 Trailer 2 Width:

Hazardous Material Involvment

Was This Vehicle Carrying Hazardous Materials?

1- Yes 2- No 3- Unknown/Hit and Run 2

Did the Vehicle Have a Hazardous Material Placard?

1-Yes 2- No 3- Unknown/Hit and Run 2

If "Yes", What Class of Hazardous Material (from placard/shipping papers)?

01- Class 1 (Explosives)
02- Class 2 (Gases)
03- Class 3 (Flammable Liquids)
04- Class 4 (Flammable Solids)
05- Class 5 (Oxidizing Substance)
06- Class 6 (Poison/Infectious Substance)
07- Class 7 (Radioactive)
08- Class 8 (Corrosives)
09- Class 9 (Misc. Goods)
10- No Placard
99- Other/Unknown/Hit and Run

If "YES", enter 4 digit HAZMAT ID(from placard/shipping papers)

Was Hazardous Material Released From This Vehicle's Cargo?

1-Yes 2- No 3- Unknown/Hit and Run 2

Notification of Release:

Reviewer's Name: Gaylord - T.J. Date: 11-11-2010

ORIGINAL

D.P.S. USE ONLY: 10136427

South Carolina Uniform Traffic Collision Report (For Investigating Officers) Supplemental Bus & Truck Collision Report

Amended-Attach Copy of Original Report: ____ Corrected: ____

Page 2 of 2 Pages

Date	Time	County	Route Category	Collision Location (Route Number and Name if Any)	Auxiliary
11-03-2010	0910	Greenville	1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County	ON 85	1-Mainline 2-Alternate 5-Spur 6-Connection 7-Business

SCREENING INFORMATION

NUMBER OF QUALIFYING VEHICLES INVOLVED

A Truck Having a GVWR of 10,001 lbs. or More For the Power Unit → 1

OR

A Vehicle with a Hazardous Materials Placard →

Forwarded to OHS DEC 09 2010

A Bus That Is Designed or Used to Carry 16 or More Persons, Including the Driver →

OR

A Motor Vehicle Engaged in Interstate Commerce that is Designed or Used to Carry 9-15 Persons, Including the Driver, for Compensation →

Number of Persons Involved:

Sustaining Fatal Injuries →

FR Data Entry Received DEC 14 2010

Transported for Immediate Medical Services →

Number of Vehicles Towed

Towed From the Scene Due to Damage → 1

Do Not Complete This Form Unless:

One or More Qualifying Vehicles was Involved - AND

One or More Qualifying Injuries was Sustained - OR

One or More Vehicles (not necessarily the truck or bus) Was Towed from the Scene

Total Number of Supplemental Forms Required for this Collision :

Unit Number: 3 FR-10 Number B-322344

Carrier Information

Name: T Lane Transportation & Logistics

Address: 32915 Mission Way

City: Mission State: BC Zip: V2V 6E9

Business Phone Number: 780 982 0722

Identification Numbers

U.S. DOT 845331 None = 0 0

ICC MC 372882 State:

State Number

Is this vehicle an (1) Intersate or a (2) Intrastate carrier? 1

Was a Citation Issued to this Vehicle? 1-Yes 2-No 3-Pending 2

Investigator's Name: Lee - C.C. Rank: TFC Date: 11-03-2010

Reviewer's Name: Graylord - T.J. Date: 11-4-2010

Access Control

1- No Access Control
2- Full Access Control
3- Partial Access Control

3

Vehicle Information

Gross Vehicle Weight Rating

Weight Rating of the Power Unit of the Truck

01- Less Than or Equal to 10,000 Pounds
02- 10,001-26,000 Pounds
03- More Than 26,000 Pounds
99- Unknown/Hit and Run

03

Vehicle Configuration

00- Passenger Car (only w/ HAZMAT placard)
01- Light Truck (only w/ HAZMAT placard)
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03- Bus (seats for 16 + people)
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08

Cargo Body Type

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07- Auto Transport
08- Garbage/Refuse
09- Grain, Chips, Gravel
10- Pole
11- Intermodal Container
97- Not Applicable
98- Other
99- Unknown/Hit and Run

04

Trailer Length and Width

Length

00- No Trailer
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03- 577 in. or more
99- Unknown/Hit and Run

Trailer 1 Length: 03 Trailer 2 Length:

Width

00- No Trailer
01- Less than 60 in. (5 ft.)
02- 61 in. - 84 in. (7 ft.)
03- 85 in. or more
99- Unknown/Hit and Run

Trailer 1 Width: 03 Trailer 2 Width:

Hazardous Material Involvment

Was This Vehicle Carrying Hazardous Materials? 1-Yes 2-No 3-Unknown/Hit and Run: 2

Did the Vehicle Have a Hazardous Material Placard? 1-Yes 2-No 3-Unknown/Hit and Run: 2

If "Yes", What Class of Hazardous Material (from placard/shipping papers)?

01- Class 1 (Explosives)
02- Class 2 (Gases)
03- Class 3 (Flammable Liquids)
04- Class 4 (Flammable Solids)
05- Class 5 (Oxidizing Substance)
06- Class 6 (Poison/Infectious Substance)
07- Class 7 (Radioactive)
08- Class 8 (Corrosives)
09- Class 9 (Misc. Goods)
10- No Placard
99- Other/Unknown/Hit and Run

If "YES", enter 4 digit HAZMAT ID#(from placard/shipping papers)

Was Hazardous Material Released From This Vehicle's Cargo? 1-Yes 2-No 3-Unknown/Hit and Run: 2

Notification of Release:

ORIGINAL

DEC 1 3 2010

D.P.S. USE ONLY **10135024** | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1740 | Arrived 1810

Date 11-15-10 | Time 173023 | County 23 | Collision Location (Rt. # / Name) 8 I 85 | Miles: 8 | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir. 3 6 | Of | Distance Offset .01 Miles | Direction N E S W | Base Intersection (Rt. # / Name) From SC 146 Toward I 385 | ASRU code | MP/Grid | Latitude 34°50.0010 | Longitude 82°17.4610

R.R. Id. n/a | From: Ramp Only NE SW | To NE SW

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | 1- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | 1- Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other

B-602182 Driver/Pedestrian's Full Name: Mcclure - Francis W

Unit # 1 | Sex F | Race W | Street/R.F.D. 652 Keltner AVE | Birth Date 2-21-46 | City, State, & Zip Spartanburg SC 29302

State SC | Driver's License # 0016144116 (D) | Insurance Company State Farm

Year 07 | Body CN | Vehicle Make Ford | VIN # 4T1FA32P57U113144

State SC | Year 11 | License Plate # ANT101 | Owner's D.L. #

Home Telephone (864) 583-2200 | Owner's Full Name Mcclure - Francis W

Bus. Telephone ( ) | Street/R.F.D. 652 Keltner AVE

Contributed To Collision Yes (No) | City, State, & Zip Spartanburg SC 29302

Estimated Speed 0 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons # n/a | Code | Summons # n/a | Code | Towed By n/a

B-602183 Driver/Pedestrian's Full Name: Pruitt - mark C

Unit # 2 | Sex M | Race W | Street/R.F.D. 27 Rock Creek Dr | Birth Date 3-13-70 | City, State, & Zip Greenville SC 29605

State SC | Driver's License # 00867833 23 (2) | Insurance Company USAA

Year 99 | Body 4D | Vehicle Make Acur | VIN # JH4KA9659XC012644

State SC | Year 11 | License Plate # CDD920 | Owner's D.L. #

Home Telephone (864) 354-3783 | Owner's Full Name Pruitt - Joyce D

Bus. Telephone ( ) | Street/R.F.D. 148 Edgecombe Rd

Contributed To Collision Yes (No) | City, State, & Zip Spartanburg SC 29307

Estimated Speed 15 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons # E525191 | Code 21 | Summons # n/a | Code | Towed By Jan 25

B-602184 Driver/Pedestrian's Full Name

Unit # n/a | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$1500 N	$4000 N	$ n/a	$ n/a	$ n/a

Property Owner/Witness n/a | Address | Property Owner/Witness n/a | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Veh #1 and Veh #2 were traveling north on I85. The driver of veh #2 driving too fast for Conditions struck veh #1 in the rear.

NOTICE: THE ABOVE IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS CREATED FROM THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Sgt. Rick | Rank: Sgt | Badge #: 109 | Code: N703W3 | Date: 11-15-10 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 100V1270666

Unit	Date of Birth	Sex	Race	Inj	Seat	R/ED	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	2-21-1946	F	W	1	01	13	4	1	1	2	Drew vehicle 1		
2	3-13-1970	M	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 80- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure

Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

Collision: Fixed Object: 41- Embankment; 42- Bridge Overhead Structure; 43- Bridge Pier or Abutment; 44- Bridge Rail; 45- Curb; 46- Ditch; 47- Fence; 48- Guardrail End; 49- Guardrail Face; 50- Highway Traffic Sign Post; 51- Impact Attenuator/Crash Cushion; 52- Light/Luminaire Support; 53- Mail Box; 54- Median Barrier; 55- Overhead Sign Support; 56- Other (Post, Pole, Support, Etc.); 57- Other (Wall, Building, Tunnel, Etc.); 58- Tree; 59- Utility Pole; 60- Work Zone Maint. Equipment; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. w/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 98- Unknown

1st / Most Damaged Area; 1st Deformed; Most Deformed

Vehicle Types: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian; 99- Unk.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 99- Other; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Urine; 2- Blood; 3- Breath; 4- Serum; 8- Other

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 9- Unk.; Underride/Override

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.; Extent of Deformity

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 5- Other

1st Harmful Event Loc.: 1- Y 2-N 9-U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present:

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Snow; 7- Fog, Smog, Smoke; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: 05- Made an Improper Turn; 10- Medical Related

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Cell Phone; 11- Improper Backing; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Construction/Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Glare; 66- Other; 69- Unk.

Others: 03- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Trailer Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10045177 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2007) | # of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 0810 | Arrived: 0820

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Mile / Near City or Town of:
04-17-2010	0810	23	S 85 North Main St	4	E	Greenville

Lane # / Dir.	Distance Offset	Direction	Base Intersection (Rt. # / Name)	ASRU code	MP/Grid
1 NB	0 Miles / Feet	N E S W	From 146	Latitude	34 49 5220
R.R. Id.	From: Ramp Only To:		Second Intersection (Rt. # / Name)	Longitude	82 17 5906
NA	N E: 1 - Entrance S W: 2 - Exit	N E S W	Toward I 385		

Direction: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Main / Alternate / Spur: 5- Connection 6- Business 7- Business 8- Connection 9- Other

B-330229 — Driver/Pedestrian's Full Name: McAlister, Aimee Stephens

Unit #	Sex	Race	Street/R.F.D.
1	F	W	5 Miriam St

Birth Date: 04/13/1975 | City, State, & Zip: Lyman, SC 29365

State	Driver's License #	Insurance Company
SC	00422563 (S)	Allstate

Year	Body	Vehicle Make	VIN #
2000	US	STRN	1G8ZK5274YZ251680

State	Year	License Plate #	Owner's D.L. #
SC	2010	NF-157	NA

Home Telephone: None | Owner's Full Name: Stephens, Melba E

Bus. Telephone: NA | Street/R.F.D.: 40 Barnett Rd

Contributed To Collision: Yes / No | City, State, & Zip: Lyman SC 29365

Estimated Speed: 60 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # E-406999 | Code 21 | Summons # NA | Code | Towed By Sadisco (Ref)

B-330230 — Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street/R.F.D.
NA			

Birth Date: | City, State, & Zip:

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

State	Year	License Plate #	Owner's D.L. #

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes / No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

B-330231 — Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street/R.F.D.
NA			

Birth Date: | City, State, & Zip:

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

State	Year	License Plate #	Owner's D.L. #

Home Telephone: ( ) | Owner's Full Name: MAY. 07. 2010

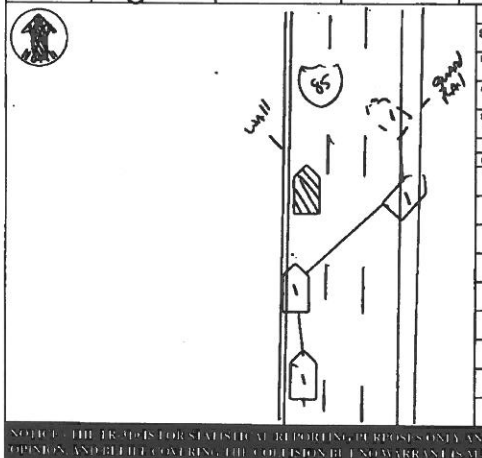
Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes / No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 5,000.00	$ NA	$ NA	$ 2,000.00	$ NA

Property Owner/Witness: SC DOT | Property Owner/Witness: Miranda Jackson

Address: 13 Saluda Dam Rd Greenville | Address: 305 Ligon St Greenville

State	Zip	Phone	State	Zip	Phone
SC	29605	864-241-1224	SC	29605	864-444-3240

Photo: (Y) N | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling north on I-85. Unit #1 driving too fast for conditions. Left control of her vehicle struck the wall then the guard rail

NOTICE: THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
CLARK, EW	Cpl	754	HP03	04-17-2010	BANISTER-D.L.	Sgt.	10GV042157

Unit	Date of Birth	Sex	Race	INJ	Seat	R/ED	A.E.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	04/13/1975	F	W	2	01	03	1	1	1	1-6	Same as Unit #1		

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Used: 1- Yes 2- No 3- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events: Event 1 | Event 2 | Event 3 | Event 4 | Most Harmful | 1st Point
Unit 1: 59 | 59 | 30 | 31 | 5 | 59
Unit 2: | | | | | |
Unit 3: | | | | | |

Non-Collision: 01- Cargo/Equip Loss or Shift; 08- Cross Median/Center Line; 09- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 09- Overturn/Rollover; 10- Ran off Road Left; 11- Ran off Road Right; 12- Spill (Non-Hazardous Mat.); 13- Separation of Units; 14- Tire Blow Out; 15- Vehicle Fire; 16- Other Non-collision; 17- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Overturned); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Curb; 44- Culvert; 45- Ditch; 46- Embankment; 47- Guardrail Face; 48- Guardrail End; 49- Impact Attenuator/Crash Cushion; 50- Light/Luminaire Support; 51- Mail Box; 52- Median Barrier; 53- Overhead Sign Support; 54- Pole (Post, Pipe, Support, Etc.); 55- Other (Wall, Building, Tunnel, Etc.); 56- Sign; 57- Traffic Signal; 58- Tree; 59- Utility Pole; 60- Work Zone Maint. Equipment; 61- Other Fixed; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. With Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

1st Deformed: 1 2 3 | Most Deformed: 1 2 3

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Horse/Mule); 29- Animal (Other); 31- Animal (Deer/Moose); 32- Animal (Bear); 33- Animal (Dog); 34- Animal (Cattle); 35- Animal (Sheep/Goat); 36- Animal (Swine); 37- Animal (Fowl); 38- Animal (Driven Veh); 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 63- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Tow Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Alcohol/Drug Test Given: A1 D1; A2 D2; A3 D3

Test Type: 1- Urine; 2- Blood; 3- Urine; 8- Other

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- Unk.

Underride/Override: 6

Drug Results: D1 1- Amphetamines; D2 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 8- Unk.

Extent of Deformity: 3

Traffic Control: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 3

Access: 1- Controlled; 2- Uncontrolled

Roadway Class: 1- Interstate; 2- US Primary; 3- SC Primary; 4- Secondary; 5- County; 6- Other

Roadway Type: 1- Divided Primary; 2- Undivided Primary; 3- Divided Secondary; 4- Undivided Secondary; 5- One-Way Trafficway; 6- Ramp; 7- Slowlane; 8- Turn Lane; 9- Unk.

Ramp Access: 1- Controlled; 2- Uncontrolled

Ramp Type: 1- Entrance; 2- Exit; 3- Collector-Distributor; 4- Through Roadway; 5- Outside Trafficway

Int. Relat.: 1- Within; 2- Ramp; 3- Service Road; 4- Roundabout; 5- Frontage Road; 6- Alley; 7- Crossover; 8- Driveway; 9- Other

Int. Type: 1- Not at Int.; 2- 2-Way; 3- 3-Way; 4- 4-Way; 5- 5-Point or More; 6- Traffic Circle; 7- Roundabout; 8- Railroad Grade Crossing; 9- Unk.

Traffic Control Type: 1- Yield Sign; 2- Stop and Go Light; 3- Stop Sign; 4- Work Zone; 5- Officer or Flagman; 6- Other Warning Signs; 7- Flashing Beacon; 8- None; 9- Unk.

Event Loc.: 1- Yield Sign; 2- Stop and Go Light; 3- Stop Sign; 4- Work Zone; 5- Officer or Flagman; 6- Other Warning Signs; 7- Flashing Beacon; 8- None; 9- Unk.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 8- Unk.

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Blowing Sand, Oil, Dirt or Snow; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Not Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-Junction; 99- Unk.

Roadway: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

School Bus Involved: 3

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

1- Yes 2- No: Work Zone: 2

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Location: ----------

Work Zone Type: ----------

1- Yes 2- No: Workers Present:

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Cell Phone; 20- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Influence; 67- Other Person Under the Influence

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Glare; 88- Other; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

ORIGINAL

D.P.S. USE ONLY: 10012286 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1100 | Arrived 1120

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Near City or Town of:
01-23-2010	1050	23	385	1	N E S W	Greenville

Lane # / Dir.	Distance Offset	Direction	Base Intersection (Rt. # / Name)	ARJU code	MP/Grid
# NA Of NA N E S W	.03 Miles N E S W	From 85		
R.R. Id. NA	From Ramp Only N E S W To N E S W	Second Intersection (Rt. # / Name) Toward 146	Latitude	34° 49 5540
			Longitude	82° 17 5070

B-713770 — Driver/Pedestrian's Full Name: Hilley - Devin Yvette

Unit #	Sex	Race	Street/R.F.D.
1	F	W	115 Clark Ave

Birth Date: 10-31-1990 | City, State, & Zip: Greer, SC 29651

State	Driver's License #	Insurance Company
SC	100959845(0)	Montgomery

Year	Body	Vehicle Make	VIN #
2004	4dr	Chev	KL1TD62674B239582

State	Year	License Plate #	Owner's D.L. #
SC	2010	DCW787	NA

Home Telephone: (864)561-3247 | Owner's Full Name: Hilley - Stanley Edwin

Bus. Telephone: ( ) NA | Street/R.F.D.: 115 Clark Ave

Contributed To Collision: Yes (No) | City, State, & Zip: Greer, SC 29651

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B S Req: Yes (No)	Alc/Drg info (see back): Yes (No)
55	55	Summons # NA	Code	Summons # NA	Code	Towed By: Bruce's Body Shop

B-713771 — Driver/Pedestrian's Full Name: Unknown

Unit #	Sex	Race	Street/R.F.D.
2	M	W	

Birth Date | City, State, & Zip

State	Driver's License #	Insurance Company
		Unknown

Year	Body	Vehicle Make	VIN #
	2dr	Ford	

State	Year	License Plate #	Owner's D.L. #

Home Telephone: ( ) | Owner's Full Name: Unknown

Bus. Telephone: ( ) | Street/R.F.D.

Contributed To Collision: No | City, State, & Zip

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/B S Req: Yes No	Alc/Drg info (see back): Yes (No)
60	55	Summons # NA	Code	Summons #	Code	Towed By: NA

B-713772 — Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street/R.F.D.
NA			

Birth Date | City, State, & Zip

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

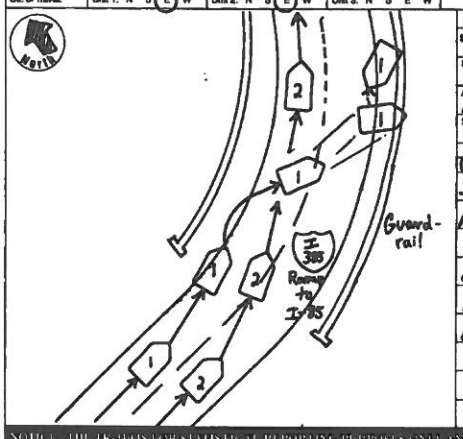
FEB 17 2010

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/B S Req: Yes No	Alc/Drg info (see back): Yes No
		Summons #	Code	Summons #	Code	Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 6,000	$ 0	$	$ 1,000	$ NA

Property Owner/Witness: SC DOT | Property Owner/Witness: Missita - Brett

Address: 13 Saluda Dam Rd, Gaffney | Address: 618 McSwain Rd, Chesney

State	Zip	Phone	State	Zip	Phone
SC	29617	864-241-1213	SC	29323	864-809-5137

Diagram: (Y) N — Describe What Happened (Refer to Units by Number)

Veh. 1 and 2 were traveling east on I-385 exit ramp to I-85 north bound. Driver 2 made an improper lane change and cut off driver 1. Driver 1 made an evasive maneuver left and lost control of veh. 1. Veh. 1 ran off the right side of the road and struck a guardrail. Driver 2 left the scene unidentified.

NOTICE - THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name: Stanchek - D.R. | Rank: Cpl | Badge #: 80 | Code: 11903 | Date: 01-23-2010 | Reviewer's Name: Bamstel - D.L. | Rank: Sgt. | Initials & Agency Code: 10 SP 001 99

Unit	Date of Birth	Sex	Race	INJ	Seat	MAIS	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	10-31-1990	F	W	3	01	13	3	1	1	1	Driver - veh. #1		
2	Unknown	M	W	1	01	99	9	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0 - Not Injured; 1 - Possible; 2 - Non-Incapacitating; 3 - Incapacitating; 4 - Fatal

b) Motorcycle Only — Helmet: 1 - Yes, 2 - No, 3 - Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Air Bag Deployment / Switch: 1 - Deployed Front; 2 - Deployed Side; 3 - Deployed Both; 4 - Not Deployed; 5 - Not Applicable; 1 - Switch in On Position; 2 - Switch in Off Position; 3 - No Switch; 9 - Unknown

Ejection: 1 - Not Ejected; 2 - Part. Ejected; 3 - Tot. Ejected; 7 - Not App.; 9 - Unk.

Head Injury: 1 - Yes; 2 - No

Location After Impact: 1 - Not Trapped; 2 - Extricated (Mechanical Means); 3 - Freed (non-mech.); 4 - Not Applicable; 9 - Unknown

a) Transported to Medical Facility: 1 - Yes; 2 - No; 3 - Unknown

b) By: 1 - EMS; 2 - Police; 8 - Other; 9 - Unk.

Restraint/Safety Device: 00 - None Used; 11 - Shoulder Belt Only; 12 - Lap Belt Only; 13 - Shoulder & Lap Belt; 19 - Unk.; 20 - Child Safety Seat; 90 - Other; Pedestrian, Motor/Pedalcycle Only: 91 - Helmet; 92 - Reflective Clothing; 93 - Protective Pads; 94 - Lighting

Sequence of Events

Non-Collision: 04 - Equipment Failure; 01 - Cargo/Equip Loss or Shift; 05 - Fire/Explosion; 09 - Overturn/Rollover; 08 - Cross Median/Center Line; 06 - Immersion; 10 - Ran off Road Left; 25 - Downhill Runaway; 07 - Jackknife; 11 - Ran off Road Right

Collision: Not Fixed: 27 - Pedestrian; 20 - Animal (Deer Only); 21 - Animal (All Other); 22 - Motor Veh. on Transport; 23 - Motor Veh. (Stopped); 24 - Motor Veh. (Other Roadway); 25 - Motor Veh. (Parked); 26 - Pedalcycle; 28 - Railway Veh.; 29 - Work Zone Maint. Equip.; 30 - Other Movable Object; 99 - Unk. Movable Object

Collision: Fixed Object: 47 - Embankment; 40 - Bridge Overhead Structure; 48 - Equipment; 41 - Bridge Pier or Abutment; 42 - Bridge Parapet End; 43 - Bridge Rail; 44 - Culvert; 45 - Curb; 46 - Ditch; 49 - Fence; 50 - Guardrail End; 51 - Guardrail Face; 52 - Highway Traffic Sign Post; 53 - Impact Attenuator/Crash Cushion; 54 - Light/Luminaire Support; 55 - Mail Box; 56 - Median Barrier; 57 - Overhead Sign Support; 58 - Pole (Post, Pole, Support, Etc.); 59 - Other (Wall, Building, Tunnel, Etc.); 60 - Tree; 61 - Utility Pole; 62 - Work Zone Maint. Equipment; 66 - Other; 99 - Unk.

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
18	51			51	51

Manner of Collision (Struck Veh.): 00 - Not Coll. W/Motor Veh.; 10 - Rear-End; 20 - Head On; 30 - Rear-to-Rear; 41 - Angle; 42 - Angle; 43 - Angle; 50 - Sideswipe Same Dir.; 60 - Sideswipe Opposite Dir.; 70 - Backed Into; 99 - Unknown

1st / Most Deformed Area

Vehicle Type: 01 - Automobile; 02 - Pickup/Truck; 03 - Truck Tractor; 04 - Other Truck; 15 - Full Size Van; 16 - Mini Van; 17 - Sport Utility; 25 - Motorcycle; 26 - Other Motorbike; 27 - Pedalcycle; 28 - Farm Use; 29 - Animal (Ridden); 31 - Train; 32 - Fire Fighting; 33 - Logging; 41 - Pedestrian; 61 - School Bus; 62 - Passenger Bus; 98 - Other; 99 - Unk. (Hit and Run Only)

Vehicle Use Code: 01 - Personal; 02 - Driver Training; 03 - Construction/Maint.; 04 - Ambulance; 05 - Military; 06 - Transport Passengers; 07 - Transport Property; 08 - Wrecker or Tow; 09 - Police; 10 - Government; 11 - Other

Vehicle Attachment: 1 - None; 2 - Mobile Home; 3 - Semi-Trailer; 4 - Utility Trailer; 5 - Farm Trailer; 6 - Trailer w/Boat; 7 - Camper Trailer; 8 - Towed Motor Vehicle; 9 - Petroleum Tanker; A - Lowboy Trailer; B - Autocarrier Trailer; C - Other Tanker; D - Flat Bed; E - Twin Trailers; F - Other

Action Prior to Impact (Vehicle): 01 - Backing; 02 - Changing Lanes; 03 - Entering Traffic Lane; 04 - Leaving Traffic Lane; 05 - Making U-turn; 06 - Maneuvering Essentially Straight Ahead; 07 - Overtaking/Passing; 08 - Parked; 09 - Slowing or Stopped in Traffic; 10 - Turning Left; 11 - Turning Right; 88 - Other; 99 - Unk.

Action Prior to Impact (Non-motorist): 21 - Approaching/Leaving Vehicle; 22 - Entering/Crossing Location; 23 - Playing/Working on Vehicle; 24 - Pushing Vehicle; 25 - Standing; 26 - Walking, Playing, Cycling; 27 - Working

Alc Test Results: A1 - ; A2 - ; A3 - ; 1 - Positive; 2 - Negative; 3 - Refused; 4 - Not Tested

Alcohol/Drug Test Given: 1 - Given - Known Results; 2 - Given - Unusable; 3 - Given - Pending; 4 - None; 5 - Refused

Test Type: 1 - Breath (Alc. Only); 2 - Blood; 3 - Urine; 4 - Serum; 8 - Other

Drug Results: 1 - Amphetamines; 2 - Cocaine; 3 - Marijuana; 4 - Opiates; 5 - PCP; 8 - Other

Special Use Only: 1 - Under - Compartment Intrusion; 2 - Under - No Intrusion; 3 - Under - Unknown; 4 - Over - MV in Transport; 5 - Over - Other Vehicle; 6 - None; 9 - Unk.; Underride/Override; Extent of Deformity: 0 - None/Minor; 1 - Functional Damage; 2 - Severe/Totaled; 3 - Disabling Damage; 9 - Unk.; 4 - Not Applicable

Trafficway: 1 - Two-way, Not Divided; 2 - Two-way, Divided, Unprotected Median; 3 - Two-way, Divided, Barrier; 4 - One-way; 8 - Other; 9 - Unk. — 4

Access: 1 - Open; 2 - Median; 3 - Roadway; 4 - Median; 5 - Shoulder; 6 - Gore; 7 - Ramp; 8 - Shoulder; 9 - Unk.; Ex. Y - Yellow; 1 - Y 2 - N 9 - U — 1

1st Harmful Event Loc. — 12

Road Character: 1 - Straight - Level; 2 - Straight - On Grade; 3 - Straight - Hillcrest; 4 - Curve - Level; 5 - Curve - On Grade; 6 - Curve - Hillcrest — 5

Road Surface Condition: 1 - Dry; 2 - Wet; 3 - Snow; 4 - Slush; 5 - Contaminants; 7 - Water (Standing, etc.); 8 - Other; 9 - Unk. — 1

Traffic Control Type: 01 - Stop and Go Light; 02 - Flashing Traffic Signal; 11 - RR (X-bucks, Lights & Gates); 12 - RR (X-bucks & Lights); 13 - RR (X-bucks Only); 21 - Officer or Flagman; 22 - Oncoming Emergency Vehicle; 31 - Pavement Markings (only); 41 - Stop Sign; 42 - School Zone Sign; 43 - Yield Sign; 44 - Work Zone; 45 - Other Warning Signs; 51 - Flashing Beacon; 88 - None; 99 - Unk. — 18

Weather Condition: 1 - Clear (no adverse conditions); 2 - Rain; 3 - Cloudy; 4 - Sleet, Hail; 5 - Fog, Smog, Smoke; 6 - Snow; 7 - Blowing Sand, Oil, Dirt or Snow; 8 - Severe Crosswinds; 9 - Unk. — 3

Light Condition: 1 - Daylight; 2 - Dawn; 3 - Dusk; 4 - Dark (Lighting Unspecified); 5 - Dark (Street Lamp Not Lit); 6 - Dark (Street Lamp Not Lit); 7 - Dark (No Lights) — 1

Junction Type: 01 - Crossover; 02 - Driveway; 03 - Five/More Points; 04 - Four-way Intersection; 05 - Railway Grade Crossing; 06 - T-Intersection; 07 - Shared Use Paths or Trail; 08 - Traffic Circle; 12 - Y-Intersection; 13 - Non-Junction; 99 - Unk. — 13

Work Zone: 1 - Yes; 2 - No — 2

Work Zone Location: 1 - Before 1st Sign; 2 - Advance Warning Area; 3 - Transition Area; 4 - Activity Area; 5 - Termination; Area

Work Zone Type: 1 - Shoulder/Median Work; 2 - Lane Shift/Crossover; 3 - Intermittent/Moving Work; 4 - Lane Closure; 8 - Other; 9 - Unk.

Workers Present: 1 - Yes; 2 - No

School Bus Involved: 3

Primary Contributing Factors — 18

Driver: 01 - Disregarded Signs, Signals, Etc.; 02 - Distracted/Inattention; 03 - Driving Too Fast for Conditions; 04 - Exceeded Authorized Speed Limit; 05 - Failed to Yield Right of Way; 06 - Ran off Road; 07 - Fatigued/Asleep; 08 - Followed Too Closely; 09 - Made an Improper Turn; 10 - Medical Related; 11 - Other; 12 - Aggressive Operation of Vehicle; 13 - Over-correcting/Over-steering; 14 - Swerving to Avoiding Object; 15 - Wrong Side or Wrong Way; 16 - Under the Influence; 17 - Vision Obscured (Within Unit); 18 - Improper Lane Usage/Change; 28 - Other Improper Action; 29 - Unk.

Roadway: 30 - Debris; 31 - Non-highway Work; 32 - Obstruction in Roadway; 33 - Road Surface Condition (i.e., Wet); 34 - Rut, Holes, Bumps; 35 - Shoulders (None, Low, Soft, High); 36 - Traffic Control Device (i.e., Missing); 37 - Work Zone (Constr./Maint./Utility); 38 - Worn, Travel-Polished Surface; 48 - Other; 49 - Unk.

Non-Motorist: 50 - Inattentive; 51 - Lying &/or Illegally in Roadway; 52 - Failure to Yield R. of W.; 58 - Other; 59 - Unk.; 65 - Under the Influence; 67 - Other Person Under the Influence

Environmental: 60 - Animal in Road; 61 - Glare; 62 - Obstruction; 63 - Weather Cond.; 65 - Other; 66 - Unk.

Vehicle Defect: 70 - Brakes; 71 - Steering; 72 - Power Plant; 73 - Tires/Wheel; 74 - Lights; 75 - Signals; 76 - Windows/Shield; 77 - Restraint System; 78 - Truck Coupling; 79 - Cargo; 80 - Fuel System; 88 - Other; 89 - Unk.

ORIGINAL

D.P.S. USE ONLY **10032156**

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01.2003)

Page # 1 Of: 1 | # of Units 1 | Amended - Attach Copy of Original Report | Corrected | Notified 1955 | Arrived 2003

Date 03-28-2010 | Time 1945 | County 23 | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name) 5 385 | (1) Main 2- Alternate 5- Spur 6- Connection 7- Business | Miles 1 | Dir. N E S W | In/Near City or Town of: Greenville

Lane # / Dir. 4 NB | Of NE SW | Distance Offset Miles .01 Feet | Direction N E S W | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From 85 | (1) Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ABRU code | MP/Grid | Latitude 34 49 49.10

R.R. Id. NA | From: NE SW | Ramp Only: 1- Entrance 2- Exit | To: NE SW | (4) Secondary 1- Interstate 2- US Primary 3- SC Primary 5- County 6- Other | Second Intersection (Rt. # / Name) Toward 183 | (1) Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Longitude 82 18 25.14

B-323488 Driver/Pedestrian's Full Name: Kirschner - Drew Anthony

Unit # 1 | Sex M | Race W | Street/R.F.D. 217 Duncan Chapel Rd #71

Birth Date 08-30-1985 | City, State, & Zip Greenville, SC 29617

State GA | Driver's License # 053827603 (C) | Insurance Company Right Choice

Year 1997 | Body PKP | Vehicle Make Ford | VIN # 1FTYR10U5WUC88892

State GA | Year 2010 | License Plate # RWA 8382 | Owner's D.L. # NA

Home Telephone 1250 446-0998 | Owner's Full Name Roser - Lamb D.

Bus. Telephone ( ) NA | Street/R.F.D. 462 Ash Ridge Way

Contributed To Collision No | City, State, & Zip Mauldin, GA 30307

Estimated Speed 55 | Speed Limit 55 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # F413466 | Code 21 | Summons # NA | Code | Towed By NA

B-323489 Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

B-323490 Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

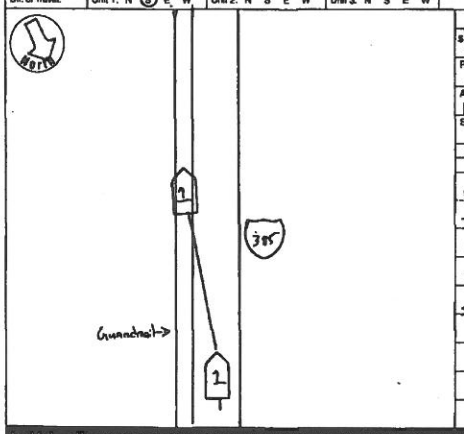
Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2,000.00	$ N/A	$ NA	$ 500.00	$ NA

Property Owner/Witness: SCDOT | Address: 13 Salinda Dam Rd, Gaffney | State SC | Zip 29341 | Phone (864) 241-1224

Property Owner/Witness | Address | State | Zip | Phone

Photos Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling South on the exit ramp from I-385 south to I-85 south. The driver of Unit #1 was driving too fast for conditions, causing Unit #1 to leave the roadway to the left and strike the guardrail.

APR 06 2010

SOURCE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE EXACTNESS OR ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Abercrombie - R.K	Tfc	433	4205	03-28-2010	Simms - SA	Pfc	10600311177

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	08-30-1985	M	W	0	01	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Used; Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 09 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

1	51								
2									
3									
4									
5									
6									

1st Most Harmful: 51

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Cross Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 31- Unk. Moveable Object

Collision: Fixed Object: 40- Embankment; 41- Bridge Overhead Structure; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Entrance/Exit; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Wall, Building, Tunnel, Etc.); 59- Other; 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

1st Deformed: 12 | Most Deformed: 12

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Motorized Bicycle; 29- Motorized Scooter; 30- Animal (Driven Veh.); 31- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 88- Other; 89- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 7- Camper Trailer; 8- Trailer w/Boat; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underride/Override: 46

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

0- None/Minor; 1- Functional Damage; 2- Structural Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Extent of Deformity: 1 2 3

Traffic Way: 4

Number of Lanes: 4

Divided By: 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 4

1st Harmful Event: 42

Road Character: 4

Road Surface Condition: 2

Traffic Control Type: 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 8- Dark (Street Lamp Not Lit)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

01- Straight - Level; 02- Straight - On Grade; 03- Straight - Hillcrest; 04- Curve - Level; 05- Curve - On Grade; 06- Curve - Hillcrest

01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Officer or Flagman; 04- Stop Sign; 05- School Zone Sign; 06- Yield Sign; 07- Work Zone; 08- Other Warning Signs; 09- Unk.

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Lane Closure; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Activity Area; 5- Termination

Work Zone: 2

1- Yes Directly; 2- Yes Indirectly; 3- No; 9- Unk.

School Bus Involved: 3

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area

1- Yes; 2- No

Workers Present:

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Action

Roadway: 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Non-Motorist: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Environmental: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Others: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Glare; 66- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

67- Other Person Under the Influence

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 01/2004

D.P.S. USE ONLY: 10039717 | Page # 1 Of: 1 | # Of Units | Amended - Attach Copy of Original Report | Corrected | Notified 0403 | Arrived 0413

Date: 4/10/10 | Time: 0403 | County: 03 | Collision Location (Rt. # / Name): I-385 South | In Near City or Town of: Greenville

Lane # / Dir.: 4 N | Distance Offset: .02 Feet N E S W | Base Intersection (Rt. # / Name): I-85 North | ASRU code | MP/Grid

R.R. Id. | From: Ramp Only | To | Second Intersection (Rt. # / Name): Roper Mtn. Rd | Latitude: 1093907" | Longitude: 1609 666"

Direction: 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Main/Alternate/Spur/Connection/Business: 1-Interstate 2-Alternate 3-Spur 4-Secondary 5-County 6-Other 7-Business 8-Other 9-Connection

Ramp Only: N E 1-Entrance S W 2-Exit | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other

T-369704

Driver/Pedestrian's Full Name: Adams-James Beverly

Unit #: 1 | Sex: M | Race: B | Birth Date: 7/10/77 | Street/R.F.D.: 3210 Bethel Rd Unit 36 | City, State, & Zip: Simpsonville SC 29681

State: SC | Driver's License #: 3820668 - D | Insurance Company: Allstate

Year: 2002 | Body: 4S | Vehicle Make: Saturn | VIN #: 1G8JW54R62Y583665

State: SC | Year: 2010 | License Plate #: FFF331 | Owner's D.L. #: same

Home Telephone: (864)9087927 | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: 17112FG | Code: 94 | Towed By: Elgins

T-369705

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

T-369706

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

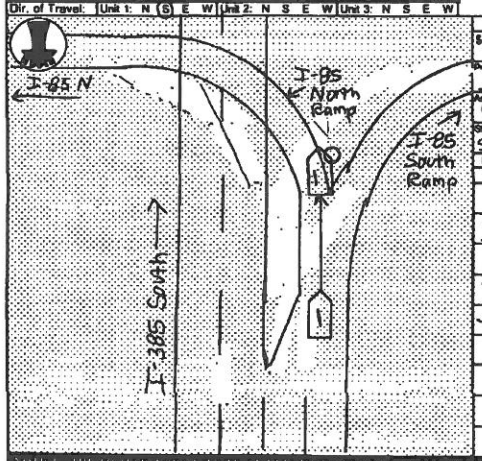
Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

APR 23 2010

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3000	$	$	$ 200	$

Property Owner/Witness: SCDOT

Address: 955 Park St. PO Box 191

State: SC | Zip: 29202 | Phone: (803) 737-2314

Photos Y(N) | Describe What Happened (Refer to Units by Number):

Unit #1 was traveling South on I-385. Unit #1 exited I-385 onto the entrance ramp to I-85 North. Unit #1 ran off the roadway & hit a sign. Unit #1 was towed by Elgin's.

SOURCE: THE INFORMATION ABOVE HAS BEEN FURNISHED VOLUNTARILY AND IS VERIFIED TO THE OFFICER'S BEST KNOWLEDGE. OPINION AS TO FAULT OR LIABILITY IS NOT EXPRESSED OR IMPLIED. NO WARRANTY IS MADE AS TO THE TRUTH OF ANY FACT OR OPINION SET FORTH HEREIN.

Investigating Officer's Name: Hawkins, J | Dept.: PPD | Badge #: 469 | Code: 220200 | Date: 4/10/10 | Reviewer's Name | Rank | Internal Agency Code: 10-31387

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	LA	Tran
1	7/10/77	M	B	0	01	13	49	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only: Helmet Usage: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

Air Bag Deployment / Switch: a) 1-Deployed Front 4-Not Deployed; 2-Deployed Side 7-Not Applicable; 3-Deployed Both 9-Deployment Unk. b) 1- Switch in On Position 3- No Switch; 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1-Yes 2-No

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 51- Helmet; 52- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

1: 10 | 2: 52 | 3: | 4: | Most Harmful: 10

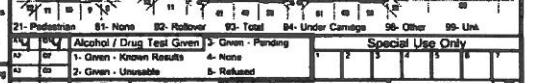
Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 09- Immersion; 03- Downhill Runaway; 07- Jackknife

Collision Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh (In Transport); 23- Motor Veh (Stopped); 24- Motor Veh (Other Roadway); 25- Motor Veh (Parked); 26- Pedalcycle; 28- Railway Veh; 29- Work Zone Maint Equip.; 30- Other Movable Object; 31- Unk Moveable Object

Collision Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel Etc.); 60- Other; 69- Unk; 80- Tree; 81- Utility Pole; 82- Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 01- Rear-to-Rear; 02- Rear End; 03- Head On; 04- Angle; 05- Sideswipe Same Dir.; 06- Sideswipe Opposite Dir.; 07- Rear-to-Side; 08- Backed Into; 09- Unknown

1st / Most Deformed Area: 1st Deformed: 12 | Most Deformed: 12



Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 18- Motorcycle; 19- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 8- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alc Test Results: A1- ; A2- ; A3-

Special Use Only

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Underride/Override: 6

Under- Compartment Intrusion: 1- Under- No Intrusion; 2- Under- Unknown; 3- Over- MV in Transport; 4- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 3

0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 8- Not Applicable

Trafficway: 4 | 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other

1st Harmful Event Loc: 62 | 1- Cross; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk; X- X-walk; Y- Y-walk; Z- Z-walk

Action Prior to Impact: 06 | (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 12- Other Unsafe Turning; 13- Crossed into Opposing Lane; 14- Other Improper Action

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 88- Other; 99- Unk.

Road Character: 4 | 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 9- Unk

Road Surface Condition: 1 | 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk

Traffic Control Type: 98 | 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Yield Sign; 05- Flashing Beacon; 06- School Zone Sign; 07- Railroad Crossing Sign; 08- Railroad Flashing Signal; 09- Railroad Gate; 10- Officer or Flagman; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 20- Crossing Emergency Vehicle; 21- Pavement Markings (only); 22- Oncoming Emergency Vehicle; 23- Other Warning Signs; 98- None; 99- Unk

Weather Condition: 1 | 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 4 | 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

School Bus Involved: 3 | 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 2 | 1- Yes 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

1- Yes 2- No Workers Present:

Junction Type: 01 | 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: 06

Others:

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 21- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Influence; 60- Animal in Road; 61- Clara; 88- Other; 89- Unk.

Environmental: 62- Obstruction; 63- Weather Cond; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 86- Other; 89- Unk

ORIGINAL

D.P.S. USE ONLY **10042600** | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2003) | # of Units 1 | Amended - Attach Copy of Original Report Corrected | Notified 0715 | Arrived 0740

Date 04-24-2010 | Time 0645 | County 23 | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Connection 7- Business | Collision Location (Rt. # / Name) 385 | (0) Main 2- Alternate 5- Spur 6- Connection 7- Business | Miles: 1 | Dir. N E S W | Mi./ Near City or Town of: Greenville

Lane # / Dir. # 1 | Of 1 | N E (S) W | Distance Offset Miles .01 (N) E S W | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From 85 | (0) Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude 34 49 37.10

RJR. Id. NA | From: N E (S) W (1) Ramp Only (2) Exit | To: (1) Entrance E (S) W | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Toward Second Intersection (Rt. # / Name) 183 | (0) Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Longitude 82 18 26.12

B-331849 — Driver/Pedestrian's Full Name: Gosnell-Kraemer

Unit # 1 | Sex F | Race W | Street/R.F.D. 125 Hickory River Dr.
Birth Date 02-13-1989 | City, State, & Zip Easley, SC 29642
State SC | Driver's License # 100560336 (D) | Insurance Company Unknown
Year 1996 | Body 4-Dr | Vehicle Make Buick | VIN # 1G4AG85MXT6437818
State SC | Year 2011 | License Plate # FVZ 580 | Owner's D.L. # 100560336 (D)
Home Telephone 864 419-5222 | Owner's Full Name Gosnell-Kraemer
Bus. Telephone ( ) NA | Street/R.F.D. 125 Hickory River Dr.
Contributed To Collision (1) No | City, State, & Zip Easley SC 29642
Estimated Speed 55 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Org Info (see back): Yes (No)
Summons # E413517 | Code 21 | Summons # | Code NA | Towed By Bankers (NOA)

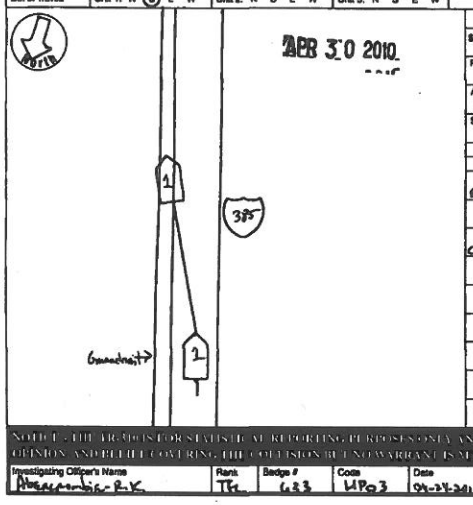
B-331850 — Driver/Pedestrian's Full Name:

Unit # N/A | Sex | Race | Street/R.F.D.
Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
State | Year | License Plate # | Owner's D.L. #
Home Telephone ( ) | Owner's Full Name
Bus. Telephone ( ) | Street/R.F.D.
Contributed To Collision Yes No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Org Info (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

B-331851 — Driver/Pedestrian's Full Name:

Unit # N/A | Sex | Race | Street/R.F.D.
Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
Home Telephone ( ) | Owner's Full Name
Bus. Telephone ( ) | Street/R.F.D.
Contributed To Collision Yes No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Org Info (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2,000.00	$ NA	$ NA	$ 500.00	$ NA

Property Owner/Witness: SCDOT | Address: 13 Saluda Dam Rd. | State SC | Zip 29611 | Phone (864)241-1324
Property Owner/Witness | Address | State | Zip | Phone

Photos: (Y) N | Describe What Happened (Refer to Units by Number)

Unit #2 was traveling south on Exit ramp from I-385 to I-85 south. The driver of Unit #1 was driving too fast for conditions, causing Unit #2 to leave the roadway to the left and strike the guardrail.

NOTICE - THE INFORMATION ENTERED ON THIS REPORT IS PERSONALLY KNOWN BY ME AND IS AN EXPRESSION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Abercrombie-P.K. | Rank: Tpr. | Badge #: 633 | Code: MP03 | Date: 04-24-2010 | Reviewer's Name: [illegible] | Rank: Sgt. | Internal Agency Code: 10GV041361

Unit	Date of Birth	Sex	Race	INJ	Seat	REST	A.S.D.	Eject	EXT	Trans	Name	Street Address	Zip Code
1	02-13-1989	F	W	1	01	13	4.3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 90- Unk./NA

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt and Safety Seat; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 20- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown; a) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown; b) 1- Switch in On Position 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 5- Other 9- Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 03- Immersion; 09- Ran off Road Left; 07- Downhill Runaway; 08- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Non-Motorist); 25- Motor Veh. (Parked); 26- Pedalcycle; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 47- Embankment; 48- Equipment; 49- Fence; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 45- Curb; 46- Ditch; 54- Light/Luminaire Support; 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Pole; 59- Guardrail End; 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 50- Other (Post, Pole, Support, Etc.); 99- Unk.; 39- Other (Wall, Building, Tunnel, Etc.)

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area | 1st Deformed: 12 | Most Deformed: 12

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Transport Passengers; 06- Farm Use; 07- Transport Property; 08- Military; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Merging; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 88- Unk.

Roadway: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; Road Character: 4

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk. — 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk. — 02

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk. — 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area — 3

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present: 1- Yes 2- No

Primary Contributing Factors — Driver: 03

01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 26- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (I.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 73- Tires/Wheel; 74- Lights; 75- Signals

82- Obstruction; 83- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 76- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.; 75- Windows/Shield; 77- Restraint System; 78- Truck Coupling

Others:

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- None/Minor

Special Use Only

Underride/Override: 0

1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 6- None; 9- Unk. — 2

Extent of Deformity: 3

1- Functional Damage; 2- Severe/Rotated; 3- Disabling Damage; 9- Unk.; 4- Not Applicable — 2

1st Harmful Event: 12

1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 4

A: 1- One; 2- Inland; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Unk.; 9- Outside Trafficway

B: X- traffic; 1- Y 2-N 9-U — Y

1st Harmful Event Loc.: 12

ORIGINAL

D.P.S. USE ONLY: 10042600 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2008) | # of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 0715 | Arrived: 0740

Date: 04-24-2010 | Time: 0645 | County: 23 | Collision Location (Rt. # / Name): S 385 | Miles: 1 | Dir.: S | Jct./ Near City or Town of: GREENVILLE

Lane # / Dir.: 1 S | Distance Offset: .01 Miles North | Direction: S | Base Intersection (Rt. # / Name): From 85 | ASRU code: | MP/Grid: | Latitude: 34 49 37.10 | Longitude: 82 18 26.12

R.R. Id.: NA | From: NE | Ramp Only: 1-Entrance 2-Exit | To: S | Second Intersection (Rt. # / Name): Toward 183

B-331849 — Driver/Pedestrian's Full Name: Gosnell-Kaarmen

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 125 Hickory River Dr.
Birth Date: 02-13-1989 | City, State, & Zip: Easley, SC 29642
State: SC | Driver's License #: 100560336 (D) | Insurance Company: Unknown
Year: 1996 | Body: 4-Dr | Vehicle Make: Buick | VIN #: 1G4AG85MXT6437818
State: SC | Year: 2011 | License Plate #: FVZ 580 | Owner's D.L. #: 100560336 (D)
Home Telephone: 864 419-5223 | Owner's Full Name: Gosnell-Kaarmen
Bus. Telephone: ( ) NA | Street/R.F.D.: 125 Hickory River Dr.
Contributed To Collision: No | City, State, & Zip: Easley SC 29642
Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes
Summons #: E413517 | Code: 21 | Summons #: NA | Code: | Towed By: Bakers (NOA)

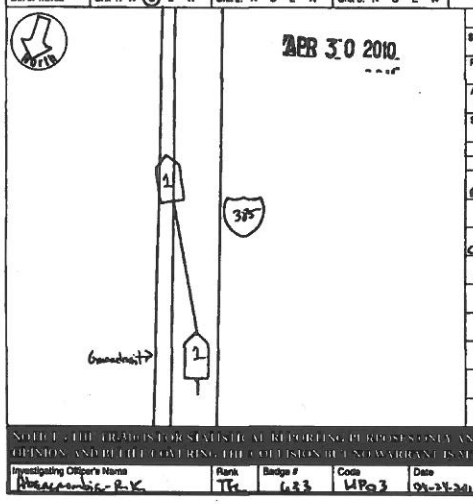
B-331850 — Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street/R.F.D.:
Birth Date: | City, State, & Zip:
State: | Driver's License #: | Insurance Company:
Year: | Body: | Vehicle Make: | VIN #:
State: | Year: | License Plate #: | Owner's D.L. #:
Home Telephone: ( ) | Owner's Full Name:
Bus. Telephone: ( ) | Street/R.F.D.:
Contributed To Collision: Yes No | City, State, & Zip:
Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No
Summons #: | Code: | Summons #: | Code: | Towed By:

B-331851 — Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street/R.F.D.:
Birth Date: | City, State, & Zip:
State: | Driver's License #: | Insurance Company:
Year: | Body: | Vehicle Make: | VIN #:
State: | Year: | License Plate #: | Owner's D.L. #:
Home Telephone: ( ) | Owner's Full Name:
Bus. Telephone: ( ) | Street/R.F.D.:
Contributed To Collision: Yes No | City, State, & Zip:
Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No
Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$2,000.00	$ NA	$ NA	$500.00	$ NA

Property Owner/Witness: SCDOT | Property Owner/Witness:
Address: 13 Saluda Dam Rd. | Address:
State: SC | Zip: 29611 | Phone: (864)241-1324 | State: | Zip: | Phone:

Photos: N | Describe What Happened (Refer to Units by Number):

Unit #2 was traveling south on Exit ramp from I-385 to I-85 south. The driver of Unit #1 was driving too fast for conditions, causing Unit #2 to leave the roadway to the left and strike the guardrail.

NOTICE - THE PURPOSE OF STATISTICAL REPORTING PERSONS ONLY AND IS NOT EXPECTATION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Abercrombie-P.K.	TPR	633	HP03	04-24-2010	[illegible]	Sgt	10GV041361

Unit	Date of Birth	Sex	Race	INJ	Seat	REST	A.S.D.	Eject	EXT	Trans	Name	Street Address	Zip Code
1	02-13-1989	F	W	1	01	13	4	1	1	2			
2	N/A												

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal
b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 — 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 04- Child Safety Seat; 05- Other; 09- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk.; a) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown
b) By: 1- EMS 2- Police; 8- Other; 9- Unk.

Pedestrian, Skater/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 03- Immersion; 09- Ran off Road Left; 10- Ran off Road Right; 08- Downhill Runaway; 07- Jackknife; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-collision; 14- Unk. Non-collision

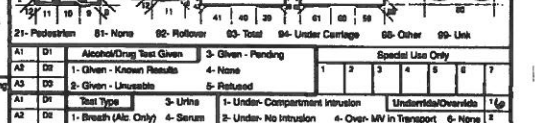
Collision: Not Fixed: 27- Pedestrian; 28- Pedalcyclist; 29- Railway Veh.; 20- Animal (Rider Only); 21- Animal (All Other); 22- Work Zone Maint. Equip.; 23- Motor Veh. in Transport; 24- Motor Veh. (Other Person); 25- Motor Veh. (Parked); 26- Unk. Movable Object

Collision: Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Bridge Pier or Abutment; 40- Bridge Parapet End; 41- Bridge Rail; 42- Culvert; 43- Curb; 44- Ditch; 45- Fence; 46- Guardrail End; 50- Guardrail Face; 51- Highway Traffic Sign Post; 52- Impact Attenuator/Crash Cushion; 53- Median Cable Barrier; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (Side); 42- Angle (Head); 43- Angle (Left); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 12 | Most Deformed: 12



21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 04- Ambulance; 12- Personal; 05- Military; 03- Transport Passengers; 03- Construction/Maint.; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 13- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian; 99- Unk. (Hit and Run Only)

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 12- Unk.; 13- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 88- Other; 99- Unk.

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 0

Extent of Deformity: 3

Traffic Way: 4

Trafficway Flow: 2

Lanes: 2

Road Character: 4

Road Surface Condition: 1

Traffic Control Type: 99

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

School Bus Involved: 3

Work Zone: 3

Work Zone Location:

Work Zone Type:

Workers Present: 1- Yes 2- No

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Phone; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 26- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 82- Obstruction; 83- Weather Cond.; 84- Other; 89- Unk.

Others: 60- Animal in Road; 61- Glare; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01.2001)

D.R.S. USE ONLY: 10060810 | Page # 1 Of: 1 | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1915 | Arrived: 1930

Date: 05-24-2010 | Time: 1910 | County: 23 | Collision Location (Rt. # / Name): 5 385 | Main | Alternate | Spur | Connection | Business | Miles: 1 | Dir.: NE | Near City or Town of: Greenville

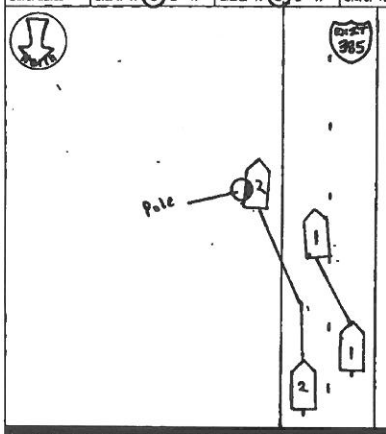
Lane # / Dir.: 1 2 S | Distance Offset: Miles .10 Feet | Direction: S | From: Base Intersection (Rt. # / Name): 85 | Toward: Second Intersection (Rt. # / Name): 183 | Interstate | US Primary | SC Primary | Secondary | County | Other | Ramp Only: From NE S 2 Exit, To N SW | ASRU code | MP/Grid | Latitude: 3450 03.70 | Longitude: 82 18 11.10

R.R. Id.: N/A

Unit 1
B-330445 | Driver/Pedestrian's Full Name: Unknown | Unit #: 1 | Sex: F | Race: W | Street/R.F.D. | Birth Date | City, State, & Zip
State | Driver's License #: | Insurance Company: Unknown
Year: 05 | Body | Vehicle Make: Mits. | VIN #
State | Year | License Plate # | Owner's O.L. #
Home Telephone | Owner's Full Name: Unknown | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes | City, State, & Zip
Estimated Speed: 45 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # / Code: N/A | Towed By: N/A

Unit 2
B-330446 | Driver/Pedestrian's Full Name: Director- Andrew Paul | Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 257 Pebble Rock Circle | Birth Date: 07-02-1985 | City, State, & Zip: Spartanburg, SC 29307
State: SC | Driver's License #: 101590057 (D) | Insurance Company: Geico
Year: 2006 | Body: SUV | Vehicle Make: GMC | VIN #: 1GKDT13S462204782
State: SC | Year: 2010 | License Plate #: BZD 587 | Owner's O.L. #: N/A
Home Telephone: (864) 978-4016 | Owner's Full Name: Lawing- Debra Nelson | Bus. Telephone: (864) 205-0690 | Street/R.F.D.: 424 Harrell Drive | Contributed To Collision: Yes | City, State, & Zip: Spartanburg, SC 29307
Estimated Speed: 40 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # / Code: N/A | Towed By: N/A

Unit 3
B-330447 | Driver/Pedestrian's Full Name | Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W
Home Telephone | Owner's Full Name: JUN 1 1 2010 | Bus. Telephone | Street/R.F.D. | Contributed To Collision: No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # / Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ D	$ 2500	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone
Property Owner/Witness: N/A | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and Unit #2 were both traveling South on I-385 Exit Ramp to I-85. Unit #1 changed lanes infront of Unit #2. Unit #2 avoided collision with Unit #1 and ran off the road and struck a pole. No contact was made between Unit #1 and Unit #2. No other information known about Unit #1.

NOTICE - THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANTS IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Andis-DC | Rank: Sgt/Pfr | Badge #: 712 | Code: HP03 | Date: 05-24-2010 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 10GU062433

Unit	Date of Birth	Sex	Race	INJ	Seat	R/BO	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	Unknown	F	W	0	01	13	4	1	1	2			
2	07-02-1985	M	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal
b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09
20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown
Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.
Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown
a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown
b) By: 1- EMS 2- Police 8- Other 9-Unk.
Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.
Pedestrian, Bicklist/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 09- Cross Median/Center Line; 10- Immersion; 11- Ran off Road Left; 12- Ran off Road Right; 03- Downhill Runaway; 07- Jackknife
Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 35- Other Movable Object
Collision: Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Bridge Pier or Abutment; 50- Bridge Rail; 51- Guardrail Face; 52- Guardrail End; 53- Impact Attenuator/Crash Cushion; 54- Culvert; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 81- Utility Pole; 82- Work Zone Maint. Equipment; 83- Highway Traffic Sign Post; 84- Traffic Signal Post; 85- Fence; 86- Shrubbery; 87- Fire Hydrant; 88- Tree; 89- Ditch; 90- Pedalcycle; 99- Unk.

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Hit
22				22	56
32	89	58		58	

Manner of Collision (Struck Veh.): 30- Rear-to-Rear; 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 40- Angle (<); 41- Angle (>); 42- Angle (→|←); 43- Angle (|→|←); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 81 29 3; Most Deformed: 81 29 3



Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Camper Trailer; 8- Trailer w/Boat; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Negotiating a Curve; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 12- Making Movements Essentially Straight Ahead; 99- Unk.
(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 28- Other

Alc Test Results: A1- ; A2- ; A3- ; 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused
Alcohol/Drug Test Given: D1 D2 D3
Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 8- Other
Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other
Special Use Only: 1 2 3 4 5 6 7
Underride/Override: 16
Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 5- Not Applicable: 2
Traffic Control Type: 98
Trafficway: 4
Lanes: 2
Work Zone: 3
Work Zone Location: 3
Work Zone Type: 2
Workers Present: 3
School Bus Involved: 3
Event Loc.: 52
Road Character: 1
Road Surface Condition: 2
Weather Condition: 2
Light Condition: 1
Junction Type: 13

Primary Contributing Factors: 18
Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.
Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.
Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.
Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.
Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.
Others: 66- Driving Under the Influence; 67- Other Person Under the Influence

ORIGINAL

JUL 27 2010

D.P.S. USE ONLY: 10078801 | Page 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1146 | Arrived: 1157

Date	Time	County	Collision Location (Ft. # / Name)	Miles	Dir.	Jct./Near City or Town of:
07-09-2010	1141	23	S 385	1	S	Greenville

Lane # / Dir.: 2 S | Distance Offset: .20 Miles | Direction: S | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Ft. # / Name) From: 85 | (0) Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other

ABRU code: | MP/Grid:

Latitude: 34 49 2860

R.R. Id.: N/A | From: S | Ramp Only: (4) Secondary 1- Interstate 2- US Primary 3- SC Primary 5- County 6- Other | To: | Second Intersection (Ft. # / Name) Toward: 163 | (0) Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other

Longitude: 82 17 34 70

B-085831

Driver/Pedestrian's Full Name: Hopkins - Jane Knight

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 3710 Fork Shoals Rd

Birth Date: 03-10-1955 | City, State, & Zip: Simpsonville SC 29680

State: SC | Driver's License #: 003535623 (D) | Insurance Company: State Auto

Year: 2004 | Body: 4DR | Vehicle Make: Lexus | VIN #: JTJBT123740139626

State: SC | Year: 201 | License Plate #: DTY807 | Owner's D.L. #: 003535623

Home Telephone: (864) 704-6055 | Owner's Full Name: Hopkins - Jane Knight

Bus. Telephone: ( ) N/A | Street/R.F.D.: 3710 Fork Shoals Rd

Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville SC 29680

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-085832

Driver/Pedestrian's Full Name: Johnson - George Howell

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 5207 Diesel

Birth Date: 10-16-1931 | City, State, & Zip: Dickinson TX 77539

State: TX | Driver's License #: 05599623 (C) | Insurance Company: United Services

Year: 2008 | Body: Van | Vehicle Make: Honda | VIN #: 5FNRL38298B034284

State: TX | Year: 2010 | License Plate #: NRL323 | Owner's D.L. #: N/A

Home Telephone: (281) 337-1134 | Owner's Full Name: Lijen - Jerok

Bus. Telephone: ( ) N/A | Street/R.F.D.: 1113 Richards Drive

Contributed To Collision: Yes (No) | City, State, & Zip: Friendswood TX 77546

Estimated Speed: 45 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: E405320 | Code: 22 | Summons # | Code | Towed By: N/A

B-085833

Driver/Pedestrian's Full Name:

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

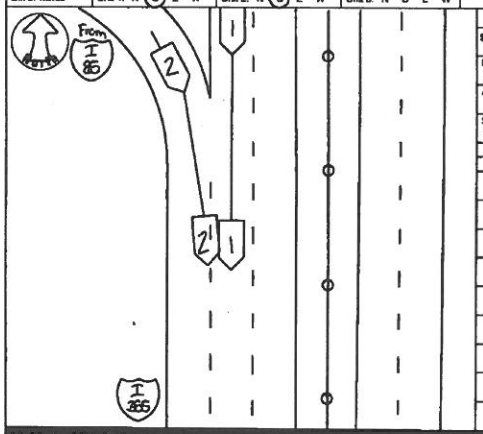
Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1,600.00	$ 2200.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: Martinez- Julio | Address: 5 Cardenock Ct. Simpsonville | State: SC | Zip: 29680 | Phone: 864-228-9809

Photo: Y (N)

Describe What Happened (Refer to Units by Number)

Unit 1 was Southbound on I-385. Unit 2 attempted to change lanes improperly onto I-385 Southbound, from I-85 southbound, and struck unit 1.

NOTICE: THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION. IT IS NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Lee- SD	TPC	63	HP03	07-09-2010		Sgt.	06V071995

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	03-10-1955	F	W	0	01	13	4	9	1	1	2			
2	10-16-1931	M	W	0	01	13	4	9	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 01- Shoulder Belt Only, 02- Lap Belt Only, 03- Shoulder & Lap Belt, 11- Child Safety Seat, 88- Other, 99- Unk., Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front, 2- Deployed Side, 3- Deployment Unk., 4- Not Deployed, 7- Not Applicable, 8- Switch In On Position, 9- Switch in Off Position

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure

Collision: Not Fixed: 27- Pedestrian

Collision: Fixed Object: 47- Embankment, 48- Bridge Overhead Structure, 49- Bridge Pier or Abutment, 50- Bridge Rail, 51- Guardrail Face, 52- Guardrail End, 53- Concrete Traffic Barrier, 54- Other Traffic Barrier, 55- Impact Attenuator/Crash Cushion, 56- Curb, 57- Ditch, 58- Embankment, 59- Culvert, 60- Bridge Pier or Abutment, 61- Bridge Rail, 62- Bridge Parapet End, 63- Bridge Pier or Abutment, 64- Culvert, 65- Highway Traffic Sign Post, 66- Tree, 67- Utility Pole, 68- Light/Luminaire Support, 69- Other Fixed Object, 70- Mail Box, 71- Other Post, Pole, Support, Etc.), 72- Other (Wall, Building, Tunnel, Etc.), 73- Work Zone Maint. Equipment, 74- Other Movable Object, 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st Harmful Event: 22

Most Harmful Event: 22

1st Deformed: 13 | Most Deformed: 13 | 10

Vehicle Type: 01- Automobile, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 28- Other Motorbike, 27- Pedalcycle, 38- Animal Drawn Veh., 39- Animal (Ridden), 41- Pedestrian, 61- Train, 62- Passenger Bus, 88- Other, 89- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping in Traffic, 10- Turning Left, 11- Turning Right, 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working, 99- Unk.

Alc Test Results: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 5- Other

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 5- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Special Use Only: 1- Under-Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 9- Unk.

Underride/Override: 1 6

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Disabling Damage, 4- Severe/Totaled, 5- Not Applicable, 9- Unk.

Trafficway: 3

1st Harmful Event Loc.: 5 2

Road Character: 5

Road Surface Condition: 1

Traffic Control Type: 98

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 06- Traffic Circle, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Work Zone: 1- Yes 2- No

Work Zone Location: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

Workers Present: 1- Yes 2- No

School Bus Involved: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk. 3

Primary Contributing Factors: 18

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Aggressive Operation of Vehicle, 12- Over-correcting/Over-steering, 13- Overtaking/Passing, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 28- Other Improper Action, 29- Unk.

Others: 18- Cell Phone

Roadway: 30- Debris, 31- Non-Highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 60- Obstruction, 61- Glare, 62- Animal in Road, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

ORIGINAL

SEP 22 cont.

D.P.S. USE ONLY: 10101466 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 1 | Amended - Attach Copy of Original Report / Corrected | Notified: 1955 | Arrived: 2005

Date	Time	Day/Dk	Collision Location (Rt. # / Name)	Miles	Dir.	Mile Marker / Near City or Town of:
08-17-2010	1945	23	1 Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Connection 7- Business 8- Alternate 9- Spur: 385	4.1	N E S W	Greenville

Lane # / Dir.	Distance Offset	Direction	Base Intersection (Rt. # / Name)	ASRU code	MP/Grid
1 / 1 / S W	.01 Miles Feet	N E S W	From: 85	Latitude: 34° 49 5480	
R.R. Id. N/A	From: 1- Entrance 2- Exit; To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other		Toward: 183	Longitude: 82° 17 5950	

B-042664 — Driver/Pedestrian's Full Name: Easley-Donald Keith Jr.

Unit #	Sex	Race	Street/R.F.D.	Birth Date	City, State, & Zip
1	M	W	513 Pine Ridge Rd	08-04-1983	Duncan, SC 29334

State	Driver's License #	Insurance Company
SC	04387913 (D)	State Farm

Year	Body	Vehicle Make	VIN #
2002	PK	Dodg	1D7HA16N925237775

State	Year	License Plate #	Owner's D.L. #
SC	2011	DZ9640	04387913 (D)

Home Telephone	Owner's Full Name
864 621-8776	Easley-Donald Keith Jr.

Bus. Telephone	Street/R.F.D.
( ) N/A	513 Pine Ridge Rd

Contributed To Collision	City, State, & Zip
Yes	Duncan, SC 29334

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
35	35			

Summons #	Code	Summons #	Code	Towed By
E614702	21	N19		Knights (Rear)

B-042665 — Driver/Pedestrian's Full Name

Unit #	Sex	Race	Street/R.F.D.
N/A			

Birth Date	City, State, & Zip

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

State	Year	License Plate #	Owner's D.L. #

Home Telephone	Owner's Full Name
( )	

Bus. Telephone	Street/R.F.D.
( )	

Contributed To Collision	City, State, & Zip
Yes No	

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/B S Req: Yes No	Alc/Drg info (see back): Yes No

Summons #	Code	Summons #	Code	Towed By

B-042666 — Driver/Pedestrian's Full Name

Unit #	Sex	Race	Street/R.F.D.
N/A			

Birth Date	City, State, & Zip

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

Home Telephone	Owner's Full Name
( )	

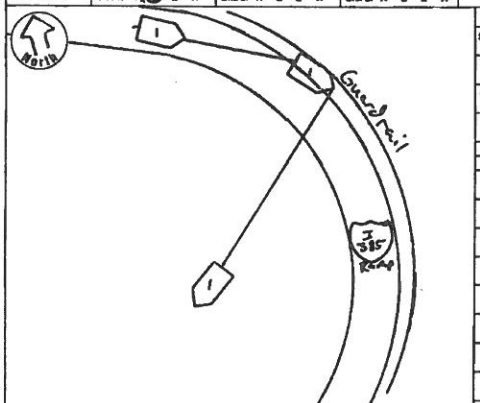
Bus. Telephone	Street/R.F.D.
( )	

Contributed To Collision	City, State, & Zip
Yes No	

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/B S Req: Yes No	Alc/Drg info (see back): Yes No

Summons #	Code	Summons #	Code	Towed By

Dir. of Travel: Unit 1: N E S W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ N/A	$ N/A	$ 500	$ N/A

Property Owner/Witness	Property Owner/Witness
SCDOT	N/A
Address: 13 Saluda Dam Rd	Address: Greenville
State: SC Zip: 29611 Phone: 864-241-1270	State Zip Phone

Photo: Y (N) Describe What Happened (Refer to Units by Number)

Unit #1 was exiting from I-385 south to I-85 south. Unit #1 was traveling too fast for conditions, and struck the guardrail.

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Lee C.L.	TFC	320	MPOS	08-17-2010		Sgt	LCSO89059

Unit	Date of Birth	Sex	Race	BU	Seat	R/SD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	08-04-1983	M	W	0	01	03	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk/NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 99- Unk.; 05- Other

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. — b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Height
07	51			51	

Non-Collision: 04- Equipment Failure; 05- Cargo/Equip Loss or Shift; 06- Fire/Explosion; 08- Overturn/Rollover; 09- Commercial Passenger Boarding/Alighting; 10- Cross Median/Center Line; 11- Off Road Right; 12- Off Road Left; 13- Pedestrian; 14- Pedalcycle; 15- Railway Vehicle; 16- Animal; 17- Work Zone Maint. Equip.; 18- Other Non-Collision; 19- Downhill Runaway; 20- Jackknife

Collision: Not Fixed: 27- Pedestrian; 28- Pedalcycle; 29- Railway Veh.; 30- Work Zone Maint. Equip.; 31- Other Movable Object; 32- Struck Unk. Movable Object; 33- Struck Unk. Fixed Object; 34- Struck Other Motor Vehicle; 35- Struck Other Object; 36- Struck Train; 37- Struck Bridge; 38- Struck Guardrail; 39- Struck Median; 40- Struck Traffic Sign Post; 41- Struck Overhead Sign Post; 42- Struck Light Post; 43- Struck Utility Pole; 44- Struck Other Fixed Object; 45- Struck Culvert; 46- Struck Curb; 47- Struck Ditch; 48- Struck Embankment; 49- Struck Fence; 50- Struck Wall; 51- Struck Building; 52- Struck Tree; 53- Struck Impact Attenuator; 54- Struck Bridge Support; 55- Struck Mail Box; 56- Struck Other Post, Pole or Support; 57- Struck Other Fixed Object

Collision: Fixed Object: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Train; 28- Other Non-Collision; 99- Unknown

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Deformed: 1 2 3 — Most Deformed: 1 2 3

Deformed Area: 1st / Most

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- School Bus; 35- Animal Drawn Veh.; 36- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 07- Transport Property; 08- Transport Passengers; 09- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Under Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 9- Unk.

Underride/Override

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Ramp; 99- Unk.

Trafficway: 1- Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Sand, Dirt, Oil, Gravel; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type

Workers Present: 1- Yes 2- No

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 19- Cell Phone

Roadway: 30- Debris; 48- Other; 31- Non-Highway Work; 49- Unk.; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 69- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others: 97- Other Person Under the Influence

ORIGINAL

OCT 05 2010

O.P.B. USE ONLY: 10107983 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 3 | Amended - Attach Copy of Original Report | Corrected | Notified: 1430 | Arrived: 1526

Date: 9/10/10 | Time: 1430 | County: 03 | Collision Location (Rt. # / Name): 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other; 8 I-385 North | 1-Main 2-Alternate 5-Spur 6-Connection 7-Business | Miles: Dir. N E S W | In (Name) City or Town of: Greenville

Lane # / Dir.: 3 | Of: 7 | Dir.: N E S W | Distance Offset: .25 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): From I-85 | ASRU code: | MP/Grid:

R.R. Id.: From Ramp Only: N E S W 1 - Entrance 2 - Exit | To: N E S W 1- Interstate 2- US Primary 3- SC Primary 4-Secondary 5-County 6-Other | Second Intersection (Rt. # / Name): Toward Garlington Rd | Latitude: 109284 | Longitude: 1611577

B-454741 | Driver/Pedestrian's Full Name: Irby - Brooke Lacey

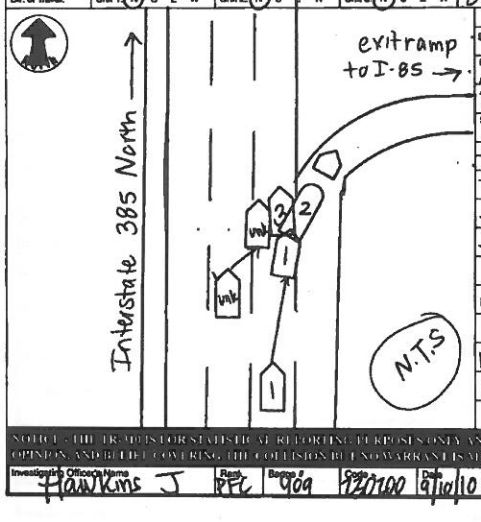
Unit # 1 | Sex: F | Race: B | Street/R.F.D.: 741 Woodruff Rd Apt 2436 | City, State, & Zip: Greenville SC 29607 | Birth Date: 3/03/90 | State: SC | Driver's License #: 101256631-D | Insurance Company: AllState | Year: 02 | Body: SU | Vehicle Make: Olds | VIN #: 1GHDT13S822128715 | State: SC | Year: 2011 | License Plate #: BFE 788 | Owner's D.L. #: | Home Telephone: 864 787-0971 | Owner's Full Name: Billups - Lillie Marie | Bus. Telephone: ( ) | Street/R.F.D.: 701 Crossview Dr | Contributed To Collision: Yes | City, State, & Zip: Simpsonville SC 29680 | Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # | Code | Summons # | Code | Towed By: Williams

B-454742 | Driver/Pedestrian's Full Name: Polly - Richard Allen

Unit # 2 | Sex: M | Race: B | Street/R.F.D.: 693 Shadow Dance Ln | City, State, & Zip: Boiling Springs SC 29316 | Birth Date: 2/18/71 | State: SC | Driver's License #: B 76697-D | Insurance Company: Wanna Fire | Year: 05 | Body: TR | Vehicle Make: FTL | VIN #: 1FUJAGDE5SLV19280 | State: SC | Year: 2010 | License Plate #: 446675 | Owner's D.L. #: | Home Telephone: 864 227 2732 | Owner's Full Name: Penske Truck Leasing | Bus. Telephone: 864 266-2714 | Street/R.F.D.: 5250 Old Maumee Rd | Contributed To Collision: No | City, State, & Zip: Ft. Wayne IN 46803 | Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # | Code | Summons # | Code | Towed By

B-454743 | Driver/Pedestrian's Full Name: Carron - Thomas J

Unit # 3 | Sex: M | Race: W | Street/R.F.D.: 153 Claridge Ct | City, State, & Zip: Fountain Inn SC 29644 | Birth Date: 5/21/59 | State: SC | Driver's License #: 10104916 | Insurance Company: Trumbull Ins | Year: 99 | Body: SU | Vehicle Make: Ford | VIN #: 1FMPU18L9XLA61391 | Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W | State: SC | Year: 2011 | License Plate #: DIX 883 | Owner's D.L. #: Same | Home Telephone: 821 369-4834 | Owner's Full Name | Bus. Telephone: ( ) | Street/R.F.D. | Contributed To Collision: No | City, State, & Zip | Estimated Speed: 50 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Org info (see back): Yes (No) | Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 1100	$ 800	$	$

Property Owner (Witness): Amber Wagner | Address: 57 Sadler Way | State: SC | Zip: 29607 | Phone: 542-5039

Property Owner (Witness): Paul Needham | Address: 208 Creektop Ct | State: SC | Zip: 29607 | Phone: 275-0867

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Two witnesses stated an elderly female was driving across several lanes of traffic & caused the collision. The elderly lady caused Unit #1 to swerve & strike Unit #2. Unit #1 then collided with Unit #3. Unit #1 was towed by Williams. Unit #2 was a Semi-truck. Units #2 & #3 had minor damage

NOTICE - THE INFORMATION ON THIS REPORT IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS SUBJECT TO CHANGE. THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Hawkins J | Rank: PFC | Badge #: 909 | Code: 920700 | Date: 9/10/10 | Reviewer's Name: | Rank: Sgt | Internal Agency Code: 10-77918

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trim	Name	Street Address	Zip Code
1	3/03/90	F	B	1	01	13	9	8	1	1	2	DRIVER 1		
2	2/18/71	M	B	0	01	13	4	9	1	1	2			
3	5/21/59	M	W	0	01	13	4	9	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 9-No

Seating Loc.: 01 02 03 04 05 06 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA; 99- Unknown

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9-Unk.

Pedestrian, Motorist/Pedalcyclists Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 81- Lighting

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Event
22				22	22
22				22	
22				22	

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 08- Immersion; 09- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular Cargo); 13- Other Non-Collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Person); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Support; 42- Bridge Rail; 43- Bridge Pier or Abutment; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail Face; 49- Guardrail End; 50- Impact Attenuator/Crash Cushion; 51- Concrete Traffic Barrier; 52- Other Post, Pole, or Support; 53- Other Traffic Sign Post; 54- Other Traffic Signal Post; 55- Mail Box; 56- Other Wall, Building, Tunnel; 57- Overhead Sign Support; 58- Tree; 59- Utility Pole; 60- Other

Manner of Collision (Struck Veh.): 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown; 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On

1st Impact: 20 | Most Damaged: 20

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 90- Other; 99- Unk/(Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Tow Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 85- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 9- Other

A2- A: 1- Core; 2- Median; 3- Roadway; 4- Roadside; 5- Shoulder; 6- Outside Trafficway; 7- Sidewalk; 8- Unk. B: X- traffic; 1- Y 2-N 9-U

A3-

Trafficway: 3 | 1st Harmful Event Loc.: 5 | 2

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Yield Sign; 05- Officer or Flagman; 06- Crossing Emergency Vehicle; 07- Pavement Markings (only); 08- RR (X-bucks, Lights & Gates); 09- RR (X-bucks & Lights); 10- RR (X-bucks Only); 11- School Zone Sign; 12- Other Warning Signs; 98- None; 99- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 8- Other

Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 4- Severe/Towed; 5- Not Applicable; 9- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Roadway: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 1- Yes 2- No Workers Present:

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other

School Bus Involved: 3 | Work Zone: 2

Primary: 14

Contributing Factors - Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Cell Phone; 19- Other Improper Action; 20- Unk.

Contributing Factors - Others: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (Stone, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 45- Other; 49- Unk.; 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 60- Under the Influ.; 80- Animal in Road; 81- Glare; 82- Obstruction; 83- Weather Cond.; 88- Other; 89- Unk.

Environmental

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10-107993

South Carolina Uniform Traffic Collision Report (For Investigating Officers) Supplemental Bus & Truck Collision Report (Revised 10/2009)

☐ Amended-Attach Copy of Original Report ☐ Corrected

Page _____ of _____ Pages

Date	Time	County	Route Category	Collision Location (Route Number and Name if Any)	Auxiliary
9/10/10	1430	Greenville	(1) Interstate, 2-US Primary, 3-SC Primary, 4-Secondary, 5-County, 6-Other	ON 385	(1) Mainline, 2-Alternate, 5-Spur, 6-Connection, 7-Business, 9-Other

IF THIS CRASH INCLUDES:

	How Many?
Any truck having a gross vehicle weight rating (GVWR) of more than 10,000 pounds used on public highways,	1
OR	
Any motor vehicle designed to transport nine (9) or more people, including the driver	Ø
OR	
Any vehicle displaying a hazardous materials placard (regardless of weight)	Ø

AND RESULTS IN:

	How Many?
Any fatality or fatalities	Ø
Any person(s) transported for immediate medical services	Ø
Number of Vehicles Towed	
Any disabled motor vehicle(s) towed away from the scene	1

Complete This Form Only If:

One or More Qualifying Vehicle(s) was Involved -AND

One or More Qualifying Injuries/Fatalities was Sustained -OR

One or More Disabled Vehicle(s) was Towed Away From the Scene

Total Number of Supplemental Forms Required for this Collision:

Unit Number 214 FR-10 Number _____

Carrier Information

Name: Richard Allen Polly

Address: 693 Shadow Dance Ln

City: Boiling Springs State: SC Zip: 29316

Business Phone Number: 864 266 2714

Identification Numbers

U.S. DOT ☐☐☐☐☐☐☐ None = 0 ☐

ICC MC ☐☐☐☐☐☐ State: ☐☐

State Number ☐☐☐☐☐☐☐☐

Is this vehicle an (1) Interstate or a (2) Intrastate carrier? 1

Was a Citation Issued to this Vehicle? 1- Yes 2- No 3- Pending 2

Investigator's Name: Hawkins, J. N Rank: PFC Date: 12/4/10

Access Control

1- No Access Control, 2- Full Access Control, 3- Partial Access Control: 2

Vehicle Information

Gross Vehicle Weight Rating

01- Less than or Equal to 10,000 Pounds, 02- 10,001-26,000 Pounds, 03- More than 26,000 Pounds, 99- Unknown/ Hit and Run: 01

Vehicle Configuration

00- Passenger Car (only w/ HAZMAT placard), 01- Light Truck (only w/ HAZMAT placard), 02- Bus (seats for 9-15 people), 03- Bus (seats for 16 + people), 04- Single Unit Truck (2axles/6+ tires), 05- Single Unit Truck (3 or more axles), 06- Truck w/ Trailer, 07- Truck-Tractor Only (Bobtail), 08- Tractor w/ Semi-Trailer, 09- Tractor w/ Double Trailers, 10- Tractor w/ Triple Trailers, 98- Other/Unable to Classify, 99- Unknown/ Hit and Run: 08

Cargo Body Type

00- Bus (seats for 9-15 people), 01- Bus (seats for 16+ people), 02- Enclosed Box, 03- Cargo Tank, 04- Flat Bed, 05- Dump, 06- Concrete Mixer, 07- Auto Transporter, 08- Garbage/Refuse, 09- Grain, Chips, Gravel, 10- Pole, 11- Intermodal Container, 12- Log, 97- N/A, 98- Other, 99- Unknown/ Hit and Run: 02

Trailer Length and Width

Length: 00- No Trailer, 01- Less than 480 in. (40 ft), 02- 481 in. - 576 in (48 ft.), 03- 577 in. or more, 99- Unknown/ Hit and Run

Trailer 1 Length: 99 Trailer 2 Length:

Width: 00- No Trailer, 01- Less than 60 in. (5 ft.), 02- 61 in. - 84 in. (7 ft.), 03- 85 in. or more, 99- Unknown/ Hit and Run

Trailer 1 Width: 99 Trailer 2 Width:

Hazardous Material Involvment

Was This Vehicle Carrying Hazardous Materials? 1- Yes 2- No 3- Unknown/Hit and Run: 2

Did the Vehicle Have a Hazardous Material Placard? 1-Yes 2- No 3- Unknown/Hit and Run: 2

If "Yes", What Class of Hazardous Material (off placard/shipping papers)?

01- Class 1 (Explosives), 02- Class 2 (Gases), 03- Class 3 (Flammable Liquids), 04- Class 4 (Flammable Solids), 05- Class 5 (Oxidizing Substance), 05- Class 6 (Poison/Infectious Substance), 07- Class 7 (Radioactive), 08- Class 8 (Corrosives), 09- Class 9 (Misc. Goods), 10- No Placard, 99- Other/Unknown/Hit and Run

If "YES", enter 4 digit HAZMAT ID (Look on placard/shipping papers) ☐☐☐☐

Did Hazardous Material Release from this Vehicle? 1-Yes 2- No 3- Unknown/Hit and Run: 2

Name of Agency Notified (In Case of Release):

Reviewer's Name: Date:

ORIGINAL

OCT 1,2 2010

O.P.S. USE ONLY: 10110451

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001)

Page # 1 Of 1 | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1838 | Arrived 1903

Date: 09-26-2010 | Time: 1845 | County: 23 | Collision Location (Rt. # / Name): 8 I-385 | Miles: 1.00 | Dir. N E S W | Int'l Near City or Town of: GREENVILLE

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Main 7- Business 8- Connection 9- Other

Lane # / Dir.: 1 S | Distance Offset: .15 Feet N S E W | Direction: 1 S | Base Intersection (Rt. # / Name): From I-85 | Second Intersection (Rt. # / Name): Toward S-183 | ASRU code | MP/Grid | Latitude 34.50.01.60 | Longitude 82.17.57.30

R.R. Id. n/a | Ramp Only: From NE 1- Entrance SW; To SW 2- Exit NE

B-226822 Driver/Pedestrian's Full Name: SCHAMELL-ZAKAR, LAURENCE

Unit # 1 | Sex M | Race W | Street/R.F.D. 121 PLANTATION DR

Birth Date 10/15/1987 | City, State, & Zip EASLEY, SC 29642

State SC | Driver's License # 100843205 | Insurance Company STATE FARM

Year 2001 | Body 4DR | Vehicle Make TOYT | VIN # JTDBE32K720054862

State n/a | Year n/a | License Plate # n/a | Owner's D.L. # n/a

Home Telephone 864 306 5212 | Owner's Full Name SCHAMELL-ZAKAR, JEANIE

Bus. Telephone ( ) n/a | Street/R.F.D. 121 PLANTATION DR

Contributed To Collision Yes | City, State, & Zip EASLEY, SC 29642

Estimated Speed 35 | Speed Limit 35 | C.D.L. Req: Yes | T/S 9 Req: Yes | Alc/Drg Info (see back): Yes | Summons # E749722 | Code 21 | Summons # n/a | Code | Towed By n/a

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B-226823 Driver/Pedestrian's Full Name

Unit # n/a | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: No | T/S 9 Req: No | Alc/Drg Info (see back): No | Summons # | Code | Summons # | Code | Towed By

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B-226824 Driver/Pedestrian's Full Name

Unit # n/a | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

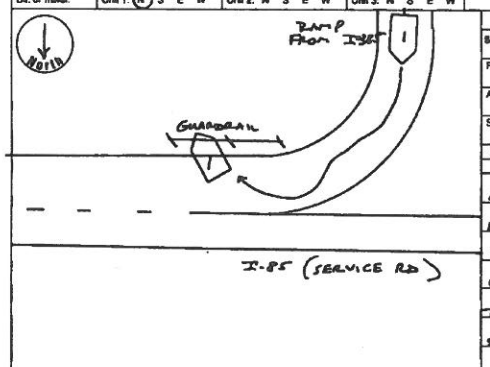
Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: No | T/S 9 Req: No | Alc/Drg Info (see back): No | Summons # | Code | Summons # | Code | Towed By

---

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 4000	$	$	$ 2,000 GUARDRAIL	$ n/a

Property Owner/Witness: SCDOT | Property Owner/Witness: n/a

Address: 13 SALUDA DAM RD GREENVILLE | Address

State SC | Zip 29617 | Phone (864) 241-1224 | State | Zip | Phone

Photo: | Describe What Happened (Refer to Units by Number)

Y (N) UNIT#1 WAS HEADED NORTH ON I-385, AND WAS EXITING ONTO I-85 ON THE EXIT RAMP. UNIT#1 TRAVELING TOO FAST FOR CONDITIONS, BEGAN TO SKID ON THE WET ROADWAY. UNIT#1 THEN RAN OFF THE RIGHT SIDE OF THE ROADWAY AND STRUCK A GUARDRAIL.

NOTE: THE DRIVER'S STATISTICAL REPORTING PURPOSES ONLY AND IS NOT A DETERMINATION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND/OR BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH, ACCURACY OR FACT.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
BRACKEN-JH	LCPL	119	HP03	09-26-2010		SGT	GCV1001067

Unit	Date of Birth	Sex	Race	INJ	Seat	RWD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	10/15/1987	M	W	0	0	U	Y	1	1	1			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 8- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Mail Copy TR Mail: Office of Highway Safety, P.O. Box 1456, Blythewood, SC 29016

Non-Collision: 04- Equipment Failure

Collision: Not Fixed: 27- Pedestrian; 28- Animal (Deer Only); 29- Animal (All Other); 30- Motor Veh. in Transport; 31- Motor Veh. (Stopped); 32- Motor Veh. (Other Reason); 33- Motor Veh. (Parked); 34- Railway Veh.; 35- Work Zone Maint. Equip.; 36- Other Movable Object; 37- Unk. Movable Object

Collision: Fixed Object: 47- Embankment; 48- Equipment; 49- Bridge Overhead Structure; 50- Bridge Pier or Abutment; 51- Bridge Rail; 52- Bridge Post; 53- Impact Attenuator/Crash Cushion; 54- Culvert; 55- Guardrail Face; 56- Guardrail End; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Median Barrier; 64- Unk. Fixed Object

Collision: Other: 01- Overturn/Rollover; 02- Fire/Explosion; 03- Immersion; 04- Jackknife; 05- Cargo/Equip. Loss or Shift; 06- Fell/Jumped from Motor Veh.; 07- Thrown or Ejected from Motor Veh.; 08- Ran off Road Left; 09- Ran off Road Right; 10- Cross Median; 11- Cross Center Line; 12- Downhill Runaway; 13- Other Non-collision; 14- Unk. Non-collision; 15- Pedalcycle; 16- Railway Veh.; 17- Animal; 18- Work Zone Maint. Equip.; 19- Other Movable Object; 20- Unk. Movable Object; 21- Impact Attenuator; 22- Bridge Overhead Structure; 23- Bridge Pier or Abutment; 24- Bridge Rail; 25- Bridge Post; 26- Guardrail Face; 27- Guardrail End; 28- Concrete Traffic Barrier; 29- Other Traffic Barrier; 30- Traffic Sign Post; 31- Overhead Sign Support; 32- Light Support; 33- Utility Pole; 34- Other Post, Pole or Support; 35- Culvert; 36- Curb; 37- Ditch; 38- Other Fixed Object

Front	Back	Event	Event	Most Harmful	1st Event
10	12	1	24	1	1
2	3	2	3		
3	3	3	3		

5 1

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

1st Deformed: 1 2 3 | Most Deformed: 1 2 3

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 89- Other; 99- Unk

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 30- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 88- Other; 99- Unk.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lomboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

D1 Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- Unk.; 7- None

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Ejected; 5- Not Applicable; 9- Unk.

Extent of Deformity: 1 2 3 4 5 6 7 8 9

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Access: 1- Conn 2- Ramp 3- Median 4- Gore 5- Roadway 6- Shoulder 7- Sidewalk 8- Unk. 9- Outside Trafficway

Ir: X- walk: 1 2 3 4 | 1st Harmful: 1 Y 2-N 9-U | Event Loc.: 1 2 3 4

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Blowing Sand, Oil, Dirt or Snow; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 8- Dark (Street Lamp Not Lit)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- Shared Use Paths or Trail; 07- T-Intersection; 08- Traffic Circle; 09- Unk.; 10- Y-Intersection; 11- Nonjunction

Work Zone: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

School Bus Involved: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Location: 1- Yes 2- No

Work Zone Type: 1- Yes 2- No

Workers Present:

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Driver Action; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 21- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 39- Other; 40- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

DEC 06 2019

D.P.S. USE ONLY: 10132830

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2011)

Page 1 Of 1 | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0849 | Arrived: 0829

Date: 11-05-2019 | Time: 0810 | County: GV | Collision Location (Rt. # / Name): 5 I-385 | Miles: 2.00 | Dir. N E S W | Mi. Near City or Town of: GREENVILLE

Lane # / Dir.: MV SW | Distance Offset: .25 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): I-85 | 0- Main 1- Alternate 2- Business 3- Spur 5- Connection 9- Other | ASRU code | MP/Grid

R.R. Id. | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): SC-146 | 0- Main 1- Alternate 2- Business 3- Spur 5- Connection 6- Business 7- Business 9- Other | Latitude: 34 50 04 60 | Longitude: 82 17 39 20

B-226912

Driver/Pedestrian's Full Name: MITCHELL-COURTNEY, MONTRELL

Unit # 1 | Sex: M | Race: B | Street/R.F.D.: 726 GLOUCESTER PKWY NO | Birth Date: 01-12-1996 | City, State, & Zip: GREENVILLE SC 29607

State: SC | Driver's License #: 011566242 (D) | Insurance Company: PROGRESSIVE

Year: 2006 | Body: SUV | Vehicle Make: NISS | VIN #: JN8AZ08T56W401109

State: SC | Year: 2011 | License Plate #: DST 300 | Owner's D.L. #: 011566242 (P)

Home Telephone: (864) 727 4878 | Owner's Full Name: MITCHELL-COURTNEY, MONTRELL

Bus. Telephone: ( ) N/A | Street/R.F.D.: 726 GLOUCESTER PKWY NO

Contributed To Collision: Yes (No) | City, State, & Zip: GREENVILLE SC 29607

Estimated Speed: 40 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: QUALITY COLLISION

B-226913

Driver/Pedestrian's Full Name: UNKNOWN

Unit # 2 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN # | State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes (No) | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # | Code | Towed By: N/A

B-226914

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip

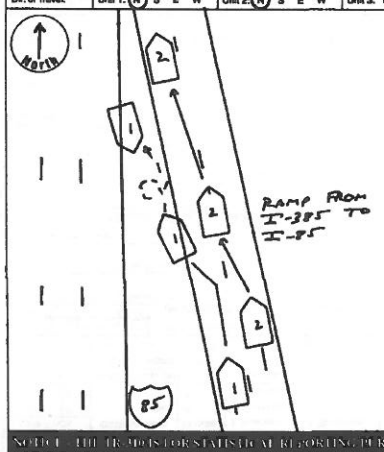
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 8500.00	$ 0	$	$ N/A	$ N/A

Property Owner/Witness: BRIDGES-KEVIN | Address: 101 BELCROSS DR GREENVILLE | State: SC | Zip: 29611 | Phone: 246 7098

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photo: | Describe What Happened (Refer to Units by Number): Y (N) UNIT#1 WAS HEADED NORTH on I-385, AND WAS on THE RAMP TOWARDS I-85 NORTH. UNIT#2 WAS HEADED NORTH ON I-385, AND WAS ON THE RAMP TO I-85 NORTH. UNIT#2 CHANGING LANES UNLAWFULLY, CHANGED LANES TO THE LEFT. UNIT#1 TOOK EVASIVE ACTION AND SWERVED TO THE LEFT INTO THE MEDIAN. UNIT#1 THEN OVERTURNED. UNIT#2 THEN FLED THE SCENE.



NOTICE: THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewed By Name	Rank	Internal Agency Code
BRACKEN-DH	CPL	129	NA01	11-05-2019		SGT	HPD/123114

Unit	Date of Birth	Sex	Race	INJ	Seat	MAIS	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	01-12-1996	M	B	a	01	3	4	1	1	2			
2	UNK	U	U	a	01	3	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; 9- Unknown

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Unknown. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 08- Cross Median/Center Line; 09- Immersion; 88- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Motorist Veh.); 18- Other Non-collision; 19- Unk. Non-collision

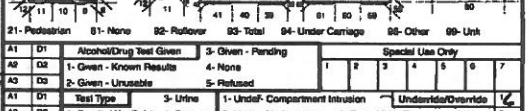
Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other

Event 1: 08 | Event 2: 18 | Event 3 | Event 4 | Most Harmful Event: 08 | 1st Injury: 08

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 12; Most Deformed: 12



Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 88- Other; 99- Unk.

Alc Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alc Test Results: A1- ; A2- ; A3-

Special Use Only: 1 2 3 4 5 6 7

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 9- Unk.

Underride/Override: 0- None; 1- Y 2-N 9-U

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; N- Not Applicable

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Access: 1- Open 2- Ramp 3- Median 4- Roadway 5- Shoulder 6- Roadside 7- Sidewalk 8- Gore 9- Outside Trafficway

1st Harmful Event Loc.: 1- Y 2-N 9-U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Work Zone: 1- Yes 2- No. Workers Present: 1- Yes 2- No. Work Zone Type: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; 6- Shoulder/Median Work; 7- Intermittent/Moving Work; 8- Lane Shift/Crossover; 9- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 29- Other Improper Action; 19- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Unk.; 67- Other Person Under the Influence; 88- Under the Infl.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others

ORIGINAL

DEC 06 2010

D.P.S. USE ONLY: 10132830

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001)

Page # 1 Of: 1 | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified | Arrived 0825

Date 11-05-2010 | Time 0810 | County 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name) 5 I-385 | 0- Main 1- Connection 2- Alternate 7- Business 5- Spur | Miles 2.00 | Dir. N E S W | Near City or Town of: GREENVILLE

Lane # / Dir. | Distance Offset Miles Feet | Direction N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) | 0- Main 1- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid

R.R. Id. | From / To: N E S W | Ramp Only: 1 - Entrance 2 - Exit | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name) | 0- Main 1- Connection 2- Alternate 7- Business 5- Spur 9- Other | Latitude | Longitude

B-226915 Driver/Pedestrian's Full Name: MITCHELL-COATNEY, MONTANA

Unit # 1 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # 011566242 (D) | Insurance Company PROGRESSIVE

Year | Body | Vehicle Make | VIN # | State | Year | License Plate # | Owner's D.L. #

Home Telephone (843) 722 4878 | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes (No) | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

B-226916 Driver/Pedestrian's Full Name: LOWDEN-DAMEL R

Unit # 2 | Sex M | Race W | Street/R.F.D. 209 WHALEBACK DR | Birth Date 07021966 | City, State, & Zip SIMPSONVILLE SC 29681

State SC | Driver's License # 011285478 (D) | Insurance Company STATE FARM

Year 2003 | Body SUV | Vehicle Make HONDA | VIN # JHLRA28703C165761

State SC | Year 2011 | License Plate # FSC553 | Owner's D.L. #

Home Telephone (864) 254-5751 | Owner's Full Name LOWDEN-DAMEL R | Bus. Telephone | Street/R.F.D. 209 WHALEBACK DR | Contributed To Collision: (Yes) No | City, State, & Zip SIMPSONVILLE SC 29681

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # 6781971 | Code 22 | Towed By N/A

B-226917 Driver/Pedestrian's Full Name

Unit # W | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

NORTH

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$	$	$	$	$

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

REPORT AMENDED TO SHOW INFORMATION

RA UNIT 2

NOTICE - THE PURPOSE OF STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: BRACKEN-DA | Rank: MPCO | Badge #: 145 | Code: HP03 | Date: 11-05-2010 | Reviewed By Name: | Rank: SGT | Internal Agency Code: 0420123114

Unit	Date of Birth	Sex	Race	Inj	Seat	R/SD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
2	07021966	M	W	0	01	13	45	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Usage: 1- Yes 2- No 3- Unk/NA; Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 04- Child Safety Seat; 05- Other; 09- Unk.

Air Bag Deployment / Switch: a): 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; b): 1- Switch In On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Wheeled Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. on Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip; 30- Other Moveable Object; 39- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pompol End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 69- Unk.; 80- Tree; 81- Utility Pole; 89- Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area; Most Deformed

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 04- Ambulance; 06- Farm Use; 08- Fire Fighting; 09- Transport Passengers; 10- Police; 11- Government; 12- Fire Fighting; 18- Other; 07- Transport Property; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1-; A2-; A3-

Test Type: 1- Urine; 2- Breath (Alc. Only); 3- Blood; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.; Underride/Override

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; E: E- walk; 1st Harmful Event Loc.: 1- Y 2- N 8-U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Dust; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Ninjunction; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type

Workers Present: 1- Yes 2- No

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Over-correcting/Over-steering; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 99- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others: 67- Other Person Under the Influence

JAN 2.4 2011

ORIGINAL

2010009350

SOUTH CAROLINA DPS/OHS & DMV USE ONLY

10150284

Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

Of Units: 01

Amended - Attach Copy of Original Report

Corrected

Notified: 1142

Arrived: 1155

Date	Time of Collision	County	Interstate / US Primary / SC Primary / Secondary / County / PP	Collision Location (Rt. # / Name)	On	Main / Alternate / Spur / Connector / Business	Miles	Dir.	In (Near) City or Town of:
12-13-2010	1140	23	3	385/ RAMP 8436	On	3	.16	N	GREENVILLE

Lane # / Dir.	Of	Dir.	Distance Offset (Miles / Feet)	Direction	Base Intersection (Rt # / Name)	From	Main / Alternate / Spur / Connector / Business
1	1	W	.01	N	85	From	3

GPS COORDINATES 00 00' 00.00"

DEGREES MINUTES SECONDS

Latitude	34	49	53.06
Longitude	82	18	00.29

R.R. Id.

From	Ramp Only	To
NE SW	1 - Entrance / 2 - Exit	NE SW

1- Interstate / 2- US Primary / 3- SC Primary / 4- Secondary / 5- County / 6- Other

Toward: Second Intersection (Rt. # / Name) 291

Driver/Pedestrian's Full Name

E-061500

MCCULLOUGH MEGAN ANN

Unit #	Sex	Race	Street/R.F.D.
01	F	W	1336 E. NORTH ST.

# Occ	Birth Date	City, State, & Zip
1	06-11-1994	GREENVILLE SC 29607

State	Driver's License #	Class	Insurance Company
SC	102157842	D	STATE FARM

Year	Body	Vehicle Make	VIN #
1998	SW	SUBA	4S3BG6850W7657738

State	Year	License Plate #	Owner's D.L. #
SC	2011	BLV282	UNKNOWN

Home Telephone: (864) 9822367

Owner's Full Name: MCCULLOUGH SHEILA MARIE

Bus. Telephone: (864) 6075036

Street/R.F.D.: 1336 E. NORTH ST.

Contributed To Collision: Yes / No

City, State, & Zip: GREENVILLE SC 29607

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/B S Req: Yes / No	Alc/Drg info (see back): Yes / No
50	55			

Summons #	Code	Summons #	Code	Towed
E788161	21			Yes / No

Driver/Pedestrian's Full Name

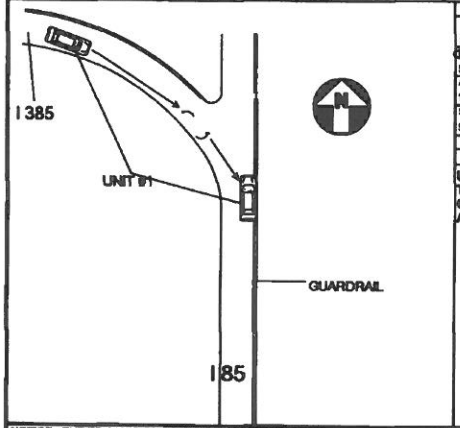
Unit #	Sex	Race	Street/R.F.D.

# Occ	Birth Date	City, State, & Zip

State	Driver's License #	Class	Insurance Company

Year	Body	Vehicle Make	VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$	$	GUARDRAIL $ 50	$

Property Owner/Witness: SCDOT

Address: 13 SALUDA DAM RD.

City: GREENVIL

State: SC Zip: 29611 Phone: 8642411224

Prior: Y / N

Describe What Happened (Refer to Units by Number)

UNIT #1 WAS TRAVELING ON THE RAMP FROM I 385 SOUTH TO I 85 SOUTH. UNIT #1 TRAVELING TOO FAST FOR CONDITIONS RAN OFF THE ROAD LEFT, SPUN THE VEHICLE AROUND, AND STRUCK THE GUARDRAIL FACE.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
GAMBRELL - J G	TFC.	T257	HP03	01-19-2011	WESLEY HIOTT	SGT	10GV138253

2010009350

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.S.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
01	06-11-1994	F	W	0	01	13	4 3	1	1	2	MCCULLOU MEGAN ANN	1336 E. NORTH ST.	GREENVILLE SC 29607

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2-Non-incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20-Pedestrian; 30-Training Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (restraining); 51-Other Unenclosed Area (nonrestraining); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 80-Lap; 99-Unk./NA

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 88-Other; 99-Unk.

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk. b) 1-Switch in On Position; 2-Switch in Off Position; 3-No Switch; 9-Unknown

Ejection: 1-Not Ejected; 2-Port Ejected; 3-Tot. Ejected; 7-Not App.; 9-Unk.

Head Injury: 1-Yes; 2-No

Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

a) Transported to Medical Facility: 1-Yes; 2-No; 3-Unknown

b) By: 1-EMS; 2-Police; 8-Other; 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet; 32-Reflective Clothing; 41-Protective Pads; 81-Lighting

Sequence of Events

Non-Collision: 01-Cargo/Equip Loss or Shift; 02-Cross Median/Center; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Overturn/Rollover; 09-Ran off Road Left; 10-Ran off Road Right; 11-Separation of Units; 12-Spill (Non-Hazmat Veh.); 13-Other Non-collision; 14-Unk. Non-collision

Collision: Not Fixed: 20-Animal (Dir. Only); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 26-Pedalcycle; 27-Pedestrian; 28-Railway Veh.; 29-Work Zone Maint. Equip.; 30-Other Movable Object; 39-Unk. Movable Object

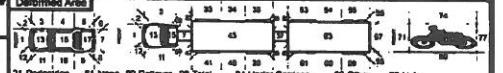
Collision: Fixed Object: 40-Bridge Overhead Structure; 41-Bridge Parapet End; 42-Bridge Pier or Abutment; 43-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Equipment; 49-Fence; 50-Guardrail End; 51-Guardrail Face; 52-Highway Traffic Sign Post; 53-Impact Attenuator/Crash Cushion; 54-Light/Luminaire Support; 55-Mail Box; 56-Median Barrier; 57-Overhead Sign Support; 58-Other (Post, Pole, Support, Etc.); 59-Tree; 61-Utility Pole; 62-Work Zone Maint. Equipment; 98-Other; 99-Unk.

Manner of Collision (Struck Veh.): 00-Not Coll. w/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 41-Angle; 42-Angle; 43-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

1st / Most Deformed Area

1st Deformed: 4

Most Deformed: 4



21-Pedestrian; 81-None; 82-Rollover; 83-Total; 84-Under Carriage; 98-Other; 99-Unk.

Vehicle Types: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 28-Animal Drawn Veh.; 39-Animal (Ridden); 41-Pedestrian; 51-Train; 61-School Bus; 62-Passenger Bus; 98-Other; 99-Unk (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Military; 06-Transport Passengers; 07-Transport Property; 08-Fare Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 16-Other

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Lowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Action Prior to Impact (Vehicle): 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk.; 27-Working

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 88-Other; 99-Unk.

Alc. Test Results: A1-; A2-; A3-

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Special Use Only

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 8-Other

1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV in transport; 5-Over-Other Vehicle; 8-None; 9-Unk.

Underride/Override

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other

9-None/Miner; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk.

Extent of Deformity

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights)

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other

1st Harmful Event Loc.: 1-Bore; 2-Median; 3-Median; 4-Roadside; 5-Roadway; 6-Shoulder; 7-Sidewalk; 8-Unk.; B. X-walk; 1-Y 2-H 3-U

Road Character: 1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk.

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 88-None; 99-Unk.

1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area; 6-Shoulder/Median Work; 7-Intermittent/Moving Work; 8-Lane Shift/Crossover; 9-Other; 1-Yes 2-No Work Zone; Work Zone Location; Work Zone Type; 1-Yes 2-No Workers Present

School Bus Involved: 1-Yes Directly; 2-Yes, Indirectly; 3-No; 9-Unk.

Contributing Factors — Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattentive; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 11-Other Improper Driver Action; 12-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper lane Usage/Change; 19-Cell Phone; 20-Texting; 28-Other Improper Action; 29-Unk.

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i.e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk

Non-Motorist: 50-Instarstree; 51-Lying And/ Illegally in Roadway; 52-Failure to Yield R. of W; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc.; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 66-Under the Influence; 67-Other Person Under Influence

Environmental: 60-Animal in Road; 61-Glare; 62-Obstruction; 63-Weather Cond.; 68-Other; 69-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 89-Unk.

ORIGINAL

OCT 22 2016

D.P.S. USE ONLY: 10115251 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 3 | Amended - Attach Copy of Original Report | Corrected | Notified: 1515 | Arrived: 1525

Date: 09-13-2016 | Time: 1505 | County: 23 | Collision Location (Rt. # / Name): S 385 | Miles: 6 | Dir.: N E S W | +or/ Near City or Town of: Greenville

Lane # / Dir.: 1 / 4 N E S W | Distance Offset: .30 Miles N E S W | Direction: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other | ASRU code | MP/Grid

R.R. #: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 183 | Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other | Latitude: 34 50 04 20 | Longitude: 82 18 03 30

B-087637 Driver/Pedestrian's Full Name: Harris-Meek Andrew

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 226 Brett Dr. | Birth Date: 05-26-1984 | City, State, & Zip: Mauldin SC 29662

State: SC | Driver's License #: 220324U7720 (E) | Insurance Company: Progressive

Year: 2008 | Body: 4S | Vehicle Make: Ford | VIN #: 1FAHP24W28G113496

State: SC | License Plate #: 2WA CHOPSHOP | Owner's D.L. #: N/A

Home Telephone: 864 905-3138 | Owner's Full Name: Mahlstedt-Sherri Elaine

Bus. Telephone: 864 905-3138 | Street/R.F.D.: 226 Brett Dr.

Contributed To Collision: Yes No | City, State, & Zip: Mauldin SC 29662

Estimated Speed: 65 | Speed Limit: 65 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg into (see back): Yes No | Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-087638 Driver/Pedestrian's Full Name: Coryell-Aaron Mitchell

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 5 Cardcreek Ct. | Birth Date: 05-22-1989 | City, State, & Zip: Simpsonville SC 29680

State: SC | Driver's License #: 10175587(CD) | Insurance Company: Geico

Year: 2007 | Body: 25 | Vehicle Make: Acur | VIN #: JH4DB85826S000178

State: SC | Year: 2016 | License Plate #: QAM883 | Owner's D.L. #: N/A

Home Telephone: (n/a) | Owner's Full Name: Coryell-Aaron Mitchell

Bus. Telephone: (n/a) | Street/R.F.D.: 5 Cardcreek Ct.

Contributed To Collision: Yes | City, State, & Zip: Simpsonville SC 29680

Estimated Speed: 65 | Speed Limit: 65 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg into (see back): Yes No | Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-087639 Driver/Pedestrian's Full Name: -Unknown-

Unit #: 3 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed: 65 | Speed Limit: 65 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg into (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 500	$ 0	$ N/A	$ N/A

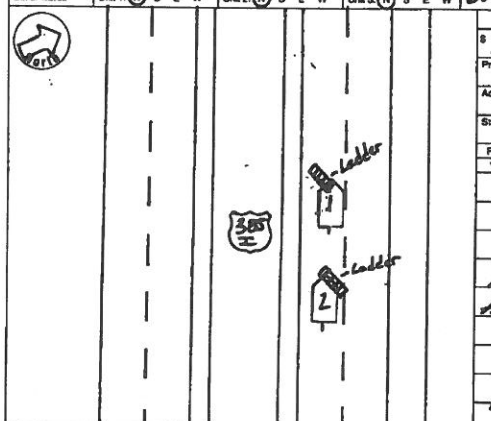
Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y N | Describe What Happened (Refer to Units by Number)

Units #1 and 2 were traveling North on Interstate 385. Unit #3, whose driver is unknown failed to properly secure its load and lost a piece of construction Equipment onto the roadway. Units #1 and #2 struck the ladder with the undercarriage portion of the vehicle.



NOTICE: THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE EXACTNESS OF ANY PART OF

Investigating Officer's Name: Hess-OT | Rank: TPR | Badge #: 841 | Car #: 1103 | Date: 09/22/16 | Reviewer's Name: H. W. Hall | Rank: Sgt | Internal Agency Code: 101/101539

Unit	Date of Birth	Sex	Race	INJ	Seat	RWD	A.B.D.	Ejct	Lal	Trap	Name	Street Address	Zip Code
1	05-26-1984	M	W	O	01	13	Y	1	1	N			
2	05-22-1989	M	W	O	01	13	Y	1	1	N			
3	Unknown	U	U	O	01	18	9	9	9	9			
				O									
				O									
				O									
				O									

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Used: 01 02 03; Not Used: 04 05 06; Unk: 07 08 09

Seating Loc.: 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 88- Unk./NA

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 09- Unk.; 11- Child Safety Seat; 12- Child Safety Seat; 13- Child Safety Seat; 19- Other; 21- Child Safety Seat; 22- Child Safety Seat; 23- Child Safety Seat; 29- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 8- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Head Injury: 1- Yes; 2- No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife

Collision: Not Fused: 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Matl.); 13- Other Non-collision; 19- Unk. Non-collision; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Over Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier/Support End; 42- Bridge Parapet End; 43- Bridge Pier or Abutment; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Pole, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Unk.

Event 1 / Event 2 / Event 3 / Event 4 / Most Harmful / 1st Harmful: 68 / 68 / 68 / 68

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 89- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Urine; 2- Blood; 3- Given - Pending; 4- None; 5- Refused; 6- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 6- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 8- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 9- Unk.

1st Deformed: 1 | Most Deformed: 1

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Access: 1- Open; 2- Median; 3- Roadway; 4- Roadside; 5- Shoulder; 6- Outside Trafficway; 7- Beneath; 9- Unk.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- RR (X-bucks, Lights & Gates); 04- RR (X-bucks & Lights); 05- RR (X-bucks Only); 06- School Zone Sign; 07- Stop Sign; 08- Yield Sign; 09- Officer or Flagman; 10- Oncoming Emergency Vehicle; 11- Pavement Markings (only); 12- Other Warning Signs; 13- Yield Sign; 14- Work Zone; 15- None; 16- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes; 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure

Work Zone Type: 1- Yes; 2- No

Workers Present: 1- Yes; 2- No; 9- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-junction; 99- Unk.

Primary Contributing Factor: 30

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 88- Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 69- Other; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 89- Other; 99- Unk.

ORIGINAL

OCT 21 2010

O.P.S. USE ONLY: 10115013 | Page 1 / Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01-2001) | # of Units: 2 | Amended - Attach Copy of Original Report Corrected | Notified: 1715 | Arrived: 1733

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	and Near City or Town of:
10-06-2010	1700	23	385	391	E	GREENVILLE

Lane # / Dir.: 2 / S | Of: 7 | Distance Offset: .50 Miles | Direction: N E S W

Base Intersection (Rt. # / Name): From 146

Second Intersection (Rt. # / Name): Toward 183

ASRU code: | MP/Grid:

Latitude: 34 50 04 70

Longitude: 82 18 14 50

R.R. Id.: NA

B-572647

Driver/Pedestrian's Full Name: BLACKSTOCK - BRIAN EARLE

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 110 BRANDON WAY

Birth Date: 05-01-1967 | City, State, & Zip: SIMPSONVILLE SC 29681

State: SC | Driver's License #: 00853812 4 (D) | Insurance Company: OLD DOMINION

Year: 2011 | Body: 4S | Vehicle Make: BMW | VIN #: WBAPH7C57BA800764

State: SC | Year: 2011 | License Plate #: DUH 469 | Owner's D.L. #: NA

Home Telephone: 864 286-1022 | Owner's Full Name: CENTURY BMW

Bus. Telephone: ( ) NA | Street/R.F.D.: 2750 LAURENS RD

Contributed To Collision: Yes (No) | City, State, & Zip: GREENVILLE SC 29607

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: NA | Code | Summons #: NA | Code | Towed By: NA

B-572648

Driver/Pedestrian's Full Name: KEGGENS - JAMES BERNARD

Unit #: 2 | Sex: M | Race: B | Street/R.F.D.: 483 REEZER RD

Birth Date: 09-24-1966 | City, State, & Zip: KINARDS SC 29355

State: SC | Driver's License #: 00858998 (4) | Insurance Company: FIRST ACCEPTANCE

Year: 2001 | Body: SV | Vehicle Make: FORD | VIN #: 2FMZA52421BA71598

State: SC | Year: 2011 | License Plate #: CFT 516 | Owner's D.L. #: NA

Home Telephone: 864 371-2452 | Owner's Full Name: DAVIS - GEORGE JR

Bus. Telephone: ( ) NA | Street/R.F.D.: 309 PREMIER DR

Contributed To Collision: Yes (No) | City, State, & Zip: PIEDMONT SC 29673

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: NA | Code | Summons #: NA | Code | Towed By: NA

B-572649

Driver/Pedestrian's Full Name:

Unit #: NA | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

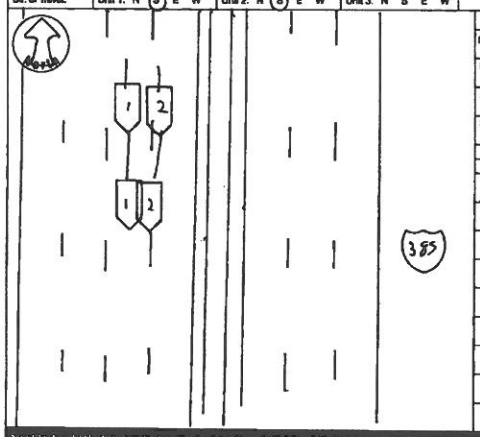
State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons #: | Code | Summons #: | Code | Towed By:

Direction of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000.00	$ 75.00	$	$ NA	$ NA

Property Owner/Witness: NA | Property Owner/Witness: NA

Address: | Address:

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

UNITS 1 AND 2 WERE BOTH HEADED SOUTH ON 385. BOTH DRIVERS STATED THEY HAD POSSESION OF THEIR LANE AND THAT THE OTHER DRIVER CHANGED LANES IMPROPERLY. NO INDEPENDANT WITNESSES WERE LOCATED

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A COLLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF OF THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
HAMLET - A.M.	TRP	948	HP03	10-06-2010	H. ALM	Sgt	106V1110 82

Unit	Date of Birth	Sex	Race	DU	Seat	N/BD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	05-07-1961	M	W	0	01	13	4.3	1	1	2			
2	09-24-1966	M	B	0	01	13	4.3	1	1	2			
2	09-06-1937	M	B	0	03	13	4.3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0 - Not Injured; 1 - Possible; 2 - Fatal; 3 - Non-incapacitating

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20 - Pedestrian; 30 - Trailing Unit; 40 - Bus or Van (4th row or Higher); 50 - Other Enclosed Area (nonrailing); 51 - Other Unenclosed Area (nonrailing); 60 - Sleeper of Cab; 70 - Riding on Unit Exterior; 80 - Lap; 99 - Unk./NA

Restraint/Safety Device: 00 - None Used; 11 - Shoulder Belt Only; 12 - Lap Belt Only; 13 - Shoulder & Lap Belt; 21 - Child Safety Seat; 99 - Unk.

Pedestrian, Motor/Pedalcycle Only: 31 - Helmet; 51 - Reflective Clothing; 41 - Protective Pads; 61 - Lighting

a) Transported to Medical Facility: 1 - Yes 2 - No 3 - Unknown

b) By: 1 - EMS 2 - Police 8 - Other 9 - Unk.

Air Bag Deployment / Switch: 1 - Deployed Front; 2 - Deployed Side; 3 - Deployed Both; 4 - Not Deployed; 5 - Deployment Unk.; 6 - Switch In On Position; 7 - Not Applicable; 8 - Switch In Off Position; 9 - Unknown; 3 - No Switch

Ejection: 1 - Not Ejected; 2 - Part. Ejected; 3 - Tot. Ejected; 7 - Not App.; 9 - Unk.

Location After Impact: 1 - Not Trapped; 2 - Extricated (Mechanical Means); 3 - Freed (non-mech.); 4 - Not Applicable; 9 - Unknown

Sequence of Events

Non-Collision: 04 - Equipment Failure

Collision: Not Fixed: 27 - Pedestrian; 28 - Railway Veh.; 29 - Work Zone Maint. Equip.; 30 - Other Movable Object; 31 - Unk. Movable Object; 32 - Animal (Deer Only); 33 - Animal (All Other); 34 - Motor Veh. (In Transport); 35 - Motor Veh. (Stopped); 36 - Motor Veh. (Other Parked); 37 - Motor Veh. (Parked); 38 - Pedalcycle

Collision: Fixed Object: 47 - Embankment; 48 - Bridge Overhead Structure; 49 - Equipment; 50 - Bridge Pier or Abutment; 51 - Guardrail Face; 52 - Highway Traffic Sign Post; 53 - Impact Attenuator/Crash Cushion; 54 - Light/Luminaire Support; 55 - Mail Box; 56 - Median Barrier; 57 - Overhead Sign Support; 58 - Other (Post, Pole, Support, Etc.); 59 - Other (Wall, Building, Tunnel, Etc.); 60 - Tree; 61 - Utility Pole; 62 - Work Zone Maint. Equipment; 63 - Other

Non-Collision: 01 - Coupl/Jknf Loss or Shft; 02 - Cross Median/Center Line; 03 - Downhill Runaway; 05 - Fire/Explosion; 06 - Immersion; 07 - Jackknife; 08 - Overturn/Rollover; 09 - Ran off Road Left; 10 - Ran off Road Right; 11 - Separation of Units; 12 - Spill (Non-Hazmat Veh.); 13 - Spill (Hazmat Veh.); 14 - Other Non-collision; 15 - Unk. Non-collision

Manner of Collision (Struck Veh.): 00 - Not Coll. W/Motor Veh.; 10 - Rear End; 20 - Head On; 30 - Rear-to-Rear; 40 - Angle (<); 41 - Angle (>); 42 - Angle (→|←); 43 - Angle (↗|↖); 50 - Sideswipe Same Dir.; 60 - Sideswipe Opposite Dir.; 70 - Backed Into; 99 - Unknown

1st Harmful Event: 22

Most Harmful: 22

1st Deformed: 10 | Most Deformed: 10

Deformed Area

Vehicle Type: 01 - Automobile; 12 - Pickup/Truck; 13 - Truck Tractor; 14 - Other Truck; 15 - Full Size Van; 16 - Mini Van; 17 - Sport Utility; 25 - Motorcycle; 26 - Other Motorbike; 27 - Pedalcycle; 28 - Animal Drawn Veh.; 30 - Animal (Ridden); 41 - Pedestrian; 51 - Train; 61 - School Bus; 62 - Passenger Bus; 98 - Other; 99 - Unk. (Hit and Run Only)

Vehicle Use Code: 01 - Personal; 02 - Driver Training; 03 - Construction/Maint.; 04 - Ambulance; 05 - Military; 06 - Transport Passengers; 07 - Transport Property; 08 - Farm Use; 09 - Wrecker or Tow; 10 - Police; 11 - Government; 12 - Fire Fighting; 13 - Logging; 18 - Other; 41 - Pedestrian

Vehicle Attachment: 1 - None; 2 - Mobile Home; 3 - Semi-Trailer; 4 - Utility Trailer; 5 - Farm Trailer; 6 - Trailer w/Boat; 7 - Camper Trailer; 8 - Towed Motor Vehicle; 9 - Petroleum Tanker; A - Lowboy Trailer; B - Autocarrier Trailer; C - Other Tanker; D - Flat Bed; E - Twin Trailers; F - Other

Action Prior to Impact (Vehicle): 01 - Backing; 02 - Changing Lanes; 03 - Entering Traffic Lane; 04 - Leaving Traffic Lane; 05 - Making U-turn; 06 - Movements Essentially Straight Ahead; 07 - Overtaking/Passing; 08 - Parked; 09 - Slowing or Stopped in Traffic; 10 - Turning Left; 11 - Turning Right; 88 - Other; 99 - Unk.

Action Prior to Impact (Non-motorist): 21 - Approaching/Leaving Vehicle; 22 - Entering/Crossing Location; 23 - Playing/Working on Vehicle; 24 - Pushing Vehicle; 25 - Standing; 26 - Walking, Playing, Cycling; 27 - Working

Alc Test Results: A1 - ; A2 - ; A3 -

Alcohol/Drug Test Given: 1 - Given - Known Results; 2 - Given - Unknown; 3 - Given - Pending; 4 - None; 5 - Refused

Test Type: 1 - Breath (Alc. Only); 2 - Blood; 3 - Urine; 4 - Serum; 8 - Other

Drug Results: 1 - Amphetamines; 2 - Cocaine; 3 - Marijuana; 4 - Opiates; 5 - PCP; 8 - Other; 0 - None/Minor; 2 - Functional Damage; 3 - Disabling Damage; 4 - Severe/Totaled; 8 - Not Applicable; 9 - Unk.

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1 2 3

Extent of Deformity: 1 2 3

Trafficway: 1 - Two-way, Not Divided; 2 - Two-way, Divided, Unprotected Median; 3 - Two-way, Divided, Barrier; 4 - One-way; 8 - Other; A: 1 - One; 2 - Inland; 3 - Median; 4 - Roadside; 5 - Roadway; 6 - Shoulder; 7 - Sidewalk; 8 - Other Trafficway; 9 - Unk.; B: X - walk: 1 - Y 2 - N 9 - U; 1 - Harmful Event Loc.: 2 - Not Harmful Event Loc.: 3

Road Character: 1 - Straight - Level; 2 - Straight - On Grade; 3 - Straight - Hillcrest; 4 - Curve - Level; 5 - Curve - On Grade; 6 - Curve - Hillcrest

Road Surface Condition: 1 - Dry; 2 - Wet; 3 - Snow; 4 - Slush; 5 - Contaminate; 6 - Ice; 7 - Water (Standing, etc.); 8 - Other; 9 - Unk.

Traffic Control Type: 01 - Stop and Go Light; 02 - Flashing Traffic Signal; 03 - Officer or Flagman; 04 - Oncoming Emergency Vehicle; 11 - RR (X-bucks, Lights & Gates); 12 - RR (X-bucks & Lights); 13 - RR (X-bucks Only); 21 - Stop Sign; 22 - Yield Sign; 31 - Pavement Markings (only); 41 - Stop Sign; 42 - School Zone Sign; 43 - Yield Sign; 44 - Work Zone; 45 - Other Warning Signs; 51 - Flashing Beacon; 99 - None; 99 - Unk.

Weather Condition: 1 - Clear (no adverse conditions); 2 - Rain; 3 - Cloudy; 4 - Sleet, Hail; 5 - Fog, Smog, Smoke; 6 - Blowing Sand, Oil, Dirt or Snow; 7 - Severe Crosswinds; 8 - Snow; 9 - Unk.

Light Condition: 1 - Daylight; 2 - Dawn; 3 - Dusk; 4 - Dark (Lighting Unspecified); 5 - Dark (Street Lamp Lit); 6 - Dark (Street Lamp Not Lit); 7 - Dark (No Lights)

School Bus Involved: 1 - Yes, Directly; 2 - Yes, Indirectly; 3 - No; 9 - Unk.

Junction Type: 01 - Crossover; 02 - Driveway; 03 - Five/More Points; 04 - Four-way Intersection; 05 - Railway Grade Crossing; 07 - Shared Use Paths or Trail; 08 - T-Intersection; 09 - Traffic Circle; 12 - Y-Intersection; 13 - Non-junction; 99 - Unk.

Work Zone: 1 - Before 1st Sign; 2 - Advanced Warning Area; 3 - Transition Area; 4 - Activity Area; 5 - Termination Area; 1 - Yes 2 - No

Work Zone Location: 1 - Shoulder/Median Work; 2 - Lane Shift/Crossover; 3 - Intermittent/Moving Work; 4 - Lane Closure; 5 - Other; 9 - Unk.

Work Zone Type: 1 - Yes 2 - No

Workers Present:

Primary Contributing Factors: 15

Driver: 01 - Disregarded Signs, Signals, Etc.; 02 - Distracted/Inattention; 03 - Driving Too Fast for Conditions; 04 - Exceeded Authorized Speed Limit; 05 - Failed to Yield Right of Way; 06 - Ran off Road; 07 - Fatigued/Asleep; 08 - Followed Too Closely; 09 - Made an Improper Turn; 10 - Medical Related; 11 - Operated Improperly; 12 - Aggressive Operation of Vehicle; 13 - Over-correcting/Over-steering; 14 - Swerving to Avoiding Object; 15 - Wrong Side or Wrong Way; 16 - Under the Influence; 17 - Vision Obscured (Within Unit); 18 - Cell Phone; 19 - Improper Lane Usage/Change; 28 - Other Improper Action; 29 - Unk.

Roadway: 30 - Debris; 31 - Non-highway Work; 32 - Obstruction in Roadway; 33 - Road Surface Condition (i.e., Wet); 34 - Rut, Holes, Stumps; 35 - Shoulders (None, Low, Soft, High); 36 - Traffic Control Device (i.e., Missing); 37 - Work Zone (Constr./Maint./Utility); 38 - Worn, Travel-Polished Surface; 48 - Other; 49 - Unk.

Non-Motorist: 50 - Inattentive; 51 - Lying &/or Illegally in Roadway; 52 - Failure to Yield R. of W.; 53 - Not Visible (Dark Clothing); 54 - Disregard Signs, Signals, Etc.; 55 - Improper Crossing; 57 - Wrong Side of Road; 58 - Darting; 59 - Unk.

Environmental: 60 - Animal in Road; 61 - Glare; 62 - Obstruction; 63 - Weather Cond.; 69 - Other; 69 - Unk.

Vehicle Defect: 70 - Brakes; 71 - Steering; 72 - Power Plant; 73 - Tires/Wheel; 74 - Lights; 75 - Signals; 76 - Windows/Shield; 77 - Restraint System; 78 - Truck Coupling; 79 - Cargo; 80 - Fuel System; 88 - Other; 99 - Unk.

ORIGINAL

JUL 01 2010

O.P.S. USE ONLY 10068773 | Page # 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2004) | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1601 | Arrived 1610

Date 6-7-2010 | Time 1601 | County 23 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary | Collision Location (Rt. # / Name) I-385 ramp | Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other | Miles: Dir. N E S W | (In) Near City or Town of: Greenville

Lane # / Dir. 1 2 (N E 8 W) | Distance Offset .5 (Miles Feet) N E S W | Direction 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name) Woodruff Rd. | Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other | ASRU code | MP/Grid

R.R. Id. | From Ramp Only (N E Entrance S W 2 - Exit) To 1- Interstate 4- Secondary 2- US Primary (5) County 3- SC Primary 6- Other | Toward Second Intersection (Rt. # / Name) Roper Mountain Rd | Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other | Latitude 1093737" | Longitude 1609793"

A-390370 Driver/Pedestrian's Full Name: Unknown

Unit # 1 | Sex | Race | Street | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company: Unknown

Year | Body | Vehicle Make | VIN # | State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name: Unknown | Bus. Telephone ( ) | Street | Contributed To Collision (Yes) No | City, State, & Zip

Estimated Speed 55 | Speed Limit 55 | C.D.L. Req: Yes / No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes (No) | Summons # | Code | Summons # | Code | Towed By (unknown)

A-390371 Driver/Pedestrian's Full Name: Harden-Donald Dewayne

Unit # 2 | Sex: M | Race: W | Street: 321 Forest Creek Drive | Birth Date: 1-6-1975 | City, State, & Zip: Seneca SC 29678

State: SC | Driver's License #: 8091913130 | Insurance Company: Allstate

Year: 2009 | Body: 4S | Vehicle Make: Honda | VIN: 2HGFA16589H545051

State: SC | Year: 2010 | License Plate #: 177CL | Owner's D.L. #: Same

Home Telephone: 864-710-3846 | Owner's Full Name: Same | Bus. Telephone | Street | Contributed To Collision (No) Yes | City, State, & Zip

Estimated Speed 55 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # | Code | Summons # | Code | Towed By: ALLWAYS SERVICE

A-390372 Driver/Pedestrian's Full Name

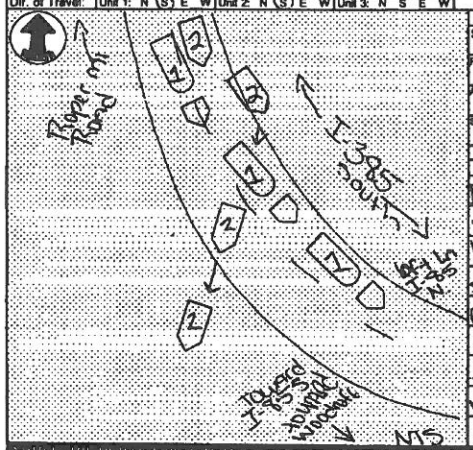
Unit # MP | Sex | Race | Street | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 0	$ 25,000	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo | Describe What Happened (Refer to Units by Number)

Y (N) Unit 2 stated he was on the South Bound ramp at Interstate 85 N and South when unit 2 swerved into his lane to enter onto I-85N. He swerved to the left to avoid the collision and then over corrected turning to the right. Unit 2 left the roadway and the front of his vehicle was face down in the ditch and then turn over on drivers side

NOTICE: THE INFORMATION CONTAINED IN THIS REPORT IS PROVIDED SOLELY AS A SERVICE TO THE OFFICER'S EMPLOYER FOR ITS USE AND BENEFIT IN DETERMINING THE OFFICER'S OPINIONS AND BELIEFS CONCERNING THE COLLISION BEING INVESTIGATED. NO WARRANTY IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name: D Richter | Rank: Pfc | Badge #: 76 | Date: 6/30/2010 | Date: 6/7/2010 | Reviewer's Name: [signature] | Rank: Sgt | Internal Agency Code: 5-210-051011

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	ASD	Eject	LAI	Tran	Name	Street Address	Zip Code
1	Unknown	U											
2	1-6-1975	M	W	0	01	13	3	3	1	1			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk, W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only: Helmet Used

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian, 30- Towing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (noncabin), 51- Other Unenclosed Area (noncabin), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk, N/A

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk; Pedestrian, Motor Prdy/cycle Only: 31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 81- Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front, 4-Not Deployed, 2-Deployed Side, 7-Not Applicable, 3-Deployed Both, 9-Deployment Unk; b) 1- Switch in On Position, 3- No Switch, 2- Switch in Off Position, 9- Unknown

Ejection: 1- Not Ejected, 2- Part Ejected, 3- Tot Ejected, 7- Not App, 9- Unk

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 8- Unknown

Transported to Medical Facility: a) 1- Yes, 2- No, 3- Unknown; b) By 1- EMS, 2- Police, 8- Other, 9- Unk

Sequence of Events

Non-Collision: 04- Equipment Failure, 05- Fire/Explosion, 06- Overturn/Rollover, 09- Run off Road Left, 10- Run off Road Right, 11- Separation of Units, 12- Ran into Water (Not Flood), 13- Other Non-Collision, 14- Pedalcycle, 15- Fell/Jumped from Vehicle, 99- Unk Non-Collision

Collision With Ped: 27- Pedestrian

Collision With Fixed Object: 45- Embankment, 46- Bridge Overhead Structure, 47- Bridge Pier or Abutment, 48- Bridge Rail, 49- Bridge Parapet End, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Curb, 55- Ditch, 56- Embankment, 57- Fence, 58- Wall, 59- Fire Hydrant, 60- Shrubbery, 61- Tree, 62- Work Zone Maint. Equipment, 63- Work Zone Traffic Control Device, 64- Other Fixed Object

Collision With Vehicle: 70- Railway Vehicle, 71- Work Zone Maint. Equip., 72- Motor Vehicle In Transport, 73- Motor Vehicle (Stopped), 74- Motor Vehicle (Other Roadway), 75- Motor Vehicle (Parked), 76- Pedalcycle

Collision With Other Object: 80- Other Movable Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle (Left), 41- Angle (Left), 42- Angle (Right), 43- Angle (Right), 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area: 1st Deformed 1 09 3; Most Deformed 1 11 2

Vehicle Type: 01- Automobile, 12- Pickup Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh., 29- Animal (Ridden), 41- Pedestrian, 51- Train, 81- School Bus, 82- Passenger Bus, 99- Unk (Hit and Run Only)

Vehicle Use Code: 04- Ambulance, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Tow Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Negotiating Curve, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopped in Traffic, 10- Turning Left, 11- Turning Right, 12- Proceeding Straight Ahead, 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working, 99- Unk.

Alc Test Results: A1-, A2-, A3-

Test Type: 1 Breath (Alc Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1 Amphetamines, 2 Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Alcohol / Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Special Use Only

1- Under - Compartment Intrusion, 2- Under - No Intrusion, 3- Under - Unknown, 4- Over - MV in Transport, 5- Over - Other Vehicle, 6- None, 9- Unk; Underride/Override: Y

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Severe/Totaled, 3- Disabling Damage, 4- Severe/Totaled, 5- Not Applicable, 8- Unk

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Non-junction, 99- Unk

Roadway: 01- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest; Road Character: 4

1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk; Road Surface Condition: 1

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Sign, 51- Flashing Beacon, 88- None, 99- Unk

Trafficway: 4; 1" Harmful Event Loc: 5; 1-Y 2-N 3-U: Y

School Bus Involved: 3

Work Zone: 1- Yes, 2- No: 2

Work Zone Location: ----------

Work Zone Type: ----------

Workers Present: 1- Yes 2- No:

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 26- Other Improper Action, 19- Cell Phone, 29- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (Ice, Wet), 34- Rut, Hole, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (Ice., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk

Non-Motorist: 50- Inattentive, 51- Lying and/or Illegally in Roadway, 52- Failure to Yield R of W, 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk., 68- Under the Influence, 67- Other Person Under Influence

Environmental: 62- Obstruction, 63- Weather Cond., 64- Animal in Road, 65- Glare, 66- Other, 69- Unk

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk

ORIGINAL

SEP 15 2010

D.P.S. USE ONLY: 10100033

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 01/2001)

Page # 1 / Of: 1 | # of Units: 2 | Amended - Attach Chg'd of Original Report | Corrected | Notified: 1240 | Arrived: 1257

Date: 09-30-2010 | Time: 1215 | Count: 03 | Collision Location (Rt. # / Name): S 385 | Miles: 1.0 | Dir.: N E S W | Near City or Town of: Greenville

Lane # / Dir.: 4 / 10 S | Distance Offset: Miles 0.05 Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 85 | 0- Main 1- Interstate 2- Alternate 3- SC Primary 4- Secondary 5- County 6- Connection 7- Business 8- Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 183 | Latitude: 34 50 04 40 | Longitude: 82 18 13 30

B-332383

Driver/Pedestrian's Full Name: Kengni Kamma-Kathriana

Unit # 1 | Sex: F | Race: B | Street/R.F.D.: 4001 Pelham Rd Apt 233 | City, State, & Zip: Greer SC 29650 | Birth Date: 01-06-1992

State: SC | Driver's License #: 101935882 (D) | Insurance Company: Farm Bureau

Year: 2003 | Body: 4S | Vehicle Make: Dodge | VIN #: 1B3ES26C230179623

State: SC | Year: 2012 | License Plate #: FZH772 | Owner's D.L. #: 101825882 (D)

Home Telephone: (864) 304 0913 | Owner's Full Name: Kengni Kamma-Kathriana

Bus. Telephone: (864) 304 7803 | Street/R.F.D.: 4001 Pelham Rd Apt 233

Contributed To Collision: No | City, State, & Zip: Greer SC 29650

Estimated Speed: 65 | Speed Limit: 55 | C.D.L. Req: Yes | No | T/S S Req: Yes | No | Alc/Drg info (see back): Yes | No

Summons # / Code: N/A | Summons # / Code: N/A | Towed By / Code: Mills (Rolls)

B-332384

Driver/Pedestrian's Full Name: Stone-Cynthia Moss

Unit # 2 | Sex: F | Race: W | Street/R.F.D.: 302 W Prentiss Ave | City, State, & Zip: Greenville SC 29605 | Birth Date: 03-10-1954

State: SC | Driver's License #: 00463739 4 (D) | Insurance Company: Allstate

Year: 1998 | Body: 4S | Vehicle Make: Buic | VIN #: 2G4WS52MXW1411092

State: SC | Year: 2011 | License Plate #: 535 850 | Owner's D.L. #: Unknown

Home Telephone: (864) 350 2268 | Owner's Full Name: Stone-Christopher Wilton

Bus. Telephone: (864) 235 0618 | Street/R.F.D.: 3499 Highway 414

Contributed To Collision: Yes | City, State, & Zip: Landrum SC 29356

Estimated Speed: 65 | Speed Limit: 55 | C.D.L. Req: Yes | No | T/S S Req: Yes | No | Alc/Drg info (see back): Yes | No

Summons # / Code: E671112 | Summons # / Code: N/A | Towed By: N/A

B-332385

Driver/Pedestrian's Full Name: N/A

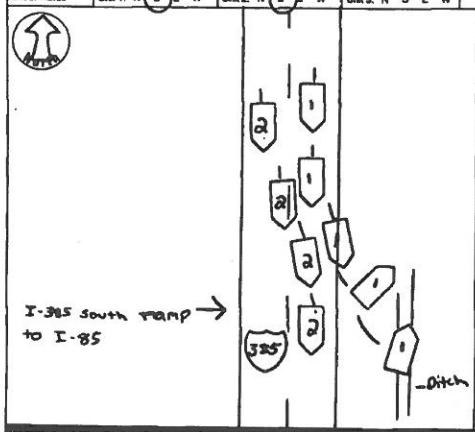
Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes | No | T/S S Req: Yes | No | Alc/Drg info (see back): Yes | No | Summons # / Code | Summons # / Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$1500.00	$ 0	$	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Phone: | Describe What Happened (Refer to Units by Number)

Y N Both units were traveling South on I-385 ramp to I-85, The driver of unit 2, changed lanes unlawfully into unit 1's lane of travel. The driver at unit 1 swerved to avoid a collision and lost control at unit 1. unit 1 traveled off the roadway left and struck a ditch. No contact was made between unit 1 and 2.

NOTICE - THE INFORMATION ON THIS FORM IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH AND ACCURACY THEREOF.

Investigating Officer's Name: Leabetter - D.S. | Rank: TFC | Badge #: 304 | Code: HP03 | Date: 09-30-2010 | Reviewed By Name | Rank: SGT | Internal Agency Code: 10GV095123

Unit	Date of Birth	Sex	Race	Inj	Seat	R/RD	A.S.D.	Eject	L/U	Trap	Name	Street Address	Zip Code
1	01-06-1992	F	B	1	01	13	H	3	1	1	Driver of	Unit 1	
2	03-10-1954	F	W	0	01	13	H	3	1	1			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Need Helmet: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 5- Deployment Unk.; 6- Not Applicable; 7- Switch In On Position; 8- Switch In Off Position; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Impact
01	46			46	46
18					

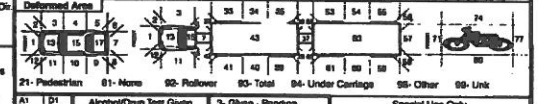
Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-Collision; 14- Unk. Non-Collision

Collision: Not Fixed: 97- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (in Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 29- Railway Veh.; 30- Work Zone Maint. Equip.; 39- Other Movable Object; 99- Unk. Movable Object

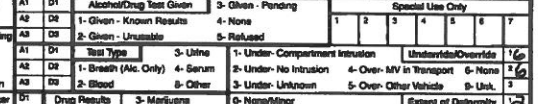
Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Support; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail Face; 49- Guardrail End; 50- Impact Attenuator/Crash Cushion; 51- Concrete Traffic Barrier; 52- Other Traffic Barrier; 53- Tree; 54- Utility Pole/Light Support; 55- Work Zone Maint. Equipment; 56- Wall, Building, Tunnel; 57- Overhead Sign Support; 58- Post, Pole; 59- Other Post, Pole or Support; 60- Other Fixed Object; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area



1st Deformed | Most Deformed



Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Deer/Veh.); 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 80- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk. | Trafficway: 3

A2- | A3-

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk. | 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Not Lit); 6- Dark (Street Lamp Lit); 7- Dark (No Lights) | 1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Ramp/Junction; 99- Unk. | 13

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest | Road Character: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk. | Road Surface Condition: 1

01- Stop and Go Light; 02- Flashing Traffic Signal; 21- Officer or Flagman; 22- Oncoming Emergency Vehicle | Traffic Control Type: 31

11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area | School Bus Involved: 3

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk. | 1- Yes 2- No Work Zone: 2

1- Yes 2- No Workers Present: | Work Zone Location | Work Zone Type

Primary: 18

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Non-Motorist; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheels; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10060395 | Page 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1620 | Arrived: 1710

Date: 6-4-10 | Time: 1600 | County: 23 | Collision Location (Rt. # / Name): I 385 | Miles: 6 | Dir.: N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: 2 3 | Distance Offset: .01 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From I 85 | (S) Main (M) Alternate (S) Spur 6- Connection 7- Business 8- Other | ASRU code | MP/Grid

R.R. Id.: n/a | From: Ramp Only NE SW 1- Entrance 2- Exit | To: NE SW 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward SC 146 | (S) Main (M) Alternate (S) Spur 6- Connection 7- Business 8- Other | Latitude: 34° 50.018' | Longitude: 82° 17.547'

B-424093 — Driver/Pedestrian's Full Name: Offic no - Constable F.

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 311 Settlement Rd | City, State, & Zip: Travelers Rest SC 29690 | Birth Date: 07-07-1961

State: SC | Driver's License #: 011272634 (DL) | Insurance Company: Cincinnati Insurance

Year: 05 | Body: SW | Vehicle Make: Dodg | VIN #: 2D8GV58275H548790

State: SC | Year: 10 | License Plate #: BVZ447 | Owner's D.L. #: n/a

Home Telephone: (864-610-9373 | Owner's Full Name: Meyer Tool Inc

Bus. Telephone: ( ) | Street/R.F.D.: 7 Park Plz

Contributed To Collision: Yes | City, State, & Zip: Greenville SC 29607

Estimated Speed: 45 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons #: n/a | Code | Summons #: n/a | Code | Towed By: n/a

B-424094 — Driver/Pedestrian's Full Name: Unknown

Unit #: 2 | Sex | Race | Street/R.F.D. | City, State, & Zip | Birth Date

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name: Unknown

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes | City, State, & Zip

Estimated Speed: 45 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons #: n/a | Code | Summons #: n/a | Code | Towed By: n/a

B-424095 — Driver/Pedestrian's Full Name:

Unit #: 3 | Sex | Race | Street/R.F.D. | City, State, & Zip | Birth Date

State | Driver's License # | Insurance Company

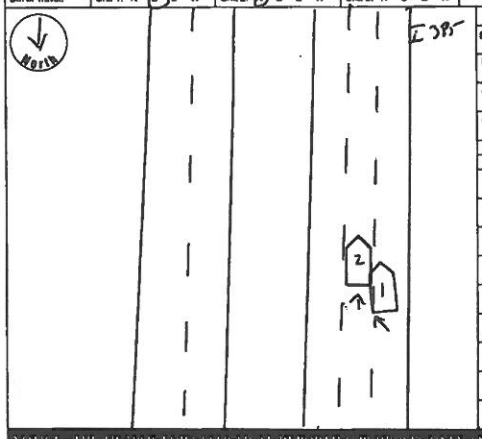
Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

JUN 14 2010

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$	$ n/a	$ n/a	$ n/a

Property Owner/Witness: n/a | Property Owner/Witness: n/a

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y N | Describe What Happened (Refer to Units by Number)

Veh# 1 and 2 Veh# 2 was traveling South on I 385. The driving of veh# 1 was changing lanes and struck Veh# 2, veh# 2 left the scene of the accident

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION. NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Sass, Rick | Rank: Sgt | Badge #: 703 | Code: RPD3W | Date: 6-4-2010 | Reviewer's Name | Rank: Sgt | Internal Agency Code

Unit	Date of Birth	Sex	Race	INJ	Seat	RMD	A.S.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	07-07-1961	F	W	O	01	13		1	1	U			
2	Unknown	U	U	O	01	99		1	1	U			

Race: A - Asian/Pacific Islander, B - African American, I - Alaskan Native or American Indian, W - Caucasian, H - Hispanic, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 10- Shoulder Belt Only, 11- Shoulder Belt Only Safety Seat, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child, 88- Other, 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 5- Deployment Unk., 6- Switch in On Position, 7- Not Applicable, 8- Switch in Off Position, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 8- Unknown

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown

b) By: 1- EMS, 2- Police, 8- Other, 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift, 05- Fire/Explosion, 09- Overturn/Rollover, 06- Immersion, 08- Ran off Road Left, 10- Ran off Road Right, 07- Jackknife

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. in Transport, 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Person), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Guardrail Face, 49- Guardrail End, 50- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 69- Work Zone Maint. Equipment, 99- Unk.

Event 1: 22 | Event 2 | Event 3 | Event 4 | Most Harmful Event: 1st Event

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Damaged Area: 1st = 12 | Most Damaged = 12

Damaged Area: 21- Pedestrian, 81- None, 82- Rollover, 83- Total, 84- Under Carriage, 88- Other, 99- Unk.

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 38- Animal (Drawn Veh.), 39- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 98- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian, 99- Unk.

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4= Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Cowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Alc Test Results: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 6- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1- Under: Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- M/V in Transport, 5- Over- Other Vehicle, 6- None, 9- Unk.

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Disabling Damage, 3- Severe/Totaled, 4- Not Applicable, 9- Unk.

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Merging, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping, 10- Turning Left, 11- Turning Right, 12- Weaving, 13- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working, 99- Unk.

Trafficway: 1- Not Divided, 2- Two-way, Not Divided, 3- Two-way, Divided, Barrier, 4- Two-way, Divided, Unprotected Median, 5- One-way, 8- Other

A: 1- Core, 2- Median, 3- Median, 4- Roadway, 5- Roadway, 6- Shoulder, 7- Sidewalk, 8- Shoulder, 9- Unk., 0- Outside Trafficway

B: X- walk: Y- Z-N 9-U: 1st Harmful Event Loc. = 5

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 03- Officer or Flagman, 21- Oncoming Emergency Vehicle, 22- Yield Sign, 23- Flashing Beacon, 41- Stop Sign, 44- Work Zone, 98- None, 99- Unk.

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Fog, Smog, Smoke, 6- Snow, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 06- Ramp, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Work Zone Location: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 5- Other

Work Zone Involved: 1- Yes 2- No

Workers Present: 1- Yes 2- No

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 2

Primary Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Improper Turn, 10- Medical Related, 11- Operating Defective Equipment, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 28- Other Improper Action, 29- Unk.

Roadway: 30- Debris, 31- Non-Highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Const./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Other, 57- Wrong Side of Road, 58- Other, 59- Unk., 67- Other Person Under the Influence

Environmental: 82- Obstruction, 83- Weather Cond., 88- Other, 89- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

ORIGINAL

JUL 1 2 2010

O.P.S. USE ONLY: 10075561 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0025 | Arrived: 0040

Date: 07-11-2010 | Time: 0020 | County: 23 | Collision Location (Rt. # / Name): S 385 | Miles: 2 | Dir.: N E S W | Near City or Township: Greenville

Lane # / Dir: 3 | Of: 4 | N E S W | Distance Offset: .25 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From: 85 | 4- Secondary 5- County 6- Other | 6- Connection 7- Business 8- Spur 9- Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary | Second Intersection (Rt. # / Name) Toward: 183 | 4- Secondary 5- County 6- Other | 6- Connection 7- Business 8- Spur 9- Other | Latitude: 34 50 06 10 | Longitude: 82 18 18 20

B-086200

Driver/Pedestrian's Full Name: Farmer, LISA J.

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 517 E. STANDING SPRINGS Rd.

Birth Date: 05-01-1986 | City, State, & Zip: SIMPSONVILLE, SC 29680

State: SC | Driver's License #: 00856453S (D) | Insurance Company: Allstate

Year: 2001 | Body: 4DR | Vehicle Make: KIA | VIN #: KNADE123X76224655

State: SC | Year: 2011 | License Plate #: DKB848 | Owner's D.L. #: 00856453S

Home Telephone: (864) 200-6092 | Owner's Full Name: FARMER, LISA J.

Bus. Telephone: N/A | Street/R.F.D.: 517 E. STANDING SPRINGS Rd.

Contributed To Collision: Yes | City, State, & Zip: SIMPSONVILLE, SC 29680

Estimated Speed: 45 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: Bowers (ROT)

B-086201

Driver/Pedestrian's Full Name: "Unknown"

Unit #: 2 | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company: "Unknown"

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #: "Unknown"

Home Telephone: ( ) "Unk" | Owner's Full Name

Bus. Telephone: ( ) | Street/R.F.D.

Contributed To Collision: No | City, State, & Zip

Estimated Speed | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-086202

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

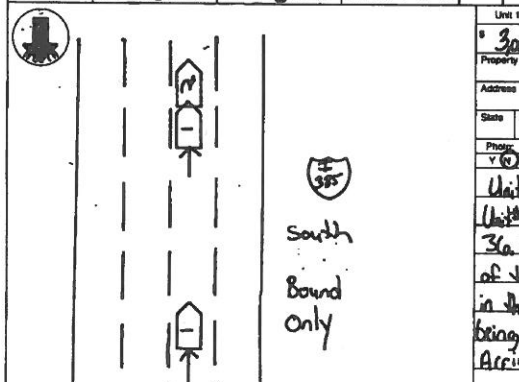
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.: $ 3000 | Unit 2 Dam.: $ 0 | Unit 3 Dam.: $ | Prop. Dam. 1: $ N/A | Prop. Dam. 2: $ N/A

Property Owner/Witness | Address | State | Zip | Phone

Photos: Y N | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling South Bound on I 385. Unit #2 was stopped facing South Bound on Exit 36. Unit #1 struck the rear end of Unit #2 because of the fact that Unit #2 was completely stopped in the Roadway. Unit #2 left the collision after being struck in the rear before Highway Patrol Arrived.

NOTICE - THE DRIVER'S STATEMENTS ON THIS REPORT ARE FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RECORDATION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: DEWBERRY, C.O. | Rank: PT | Badge #: 921 | Comp: HP03 | Date: 07-11-2010 | Reviewed By Name: S. SANDERS - D.L. | Rank: SGT. | Internal Agency Code: 10 CVOL 2975

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	EXT	Trap	Name	Street Address	Zip Code
1	05-01-1986	F	W	0	01	13	4	1	1	2			
1	07-16-1970	F	W	0	06	13	4	1	1	2			
1	01-30-1961	F	W	0	03	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 89- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 81- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk.; 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9-Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure; 61- Cargo/Equip Loss or Shift; 62- Fire/Explosion; 63- Immersion; 64- Jackknife; 65- Down/Obstruction

Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object

Collision: Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Equipment; 50- Median Barrier; 51- Overhead Sign Support; 52- Other (Post, Pole, Support, Etc.); 53- Bridge Pier or Abutment; 54- Guardrail End; 55- Other (Wall, Building, Tunnel, Etc.); 56- Mail Box; 57- Bridge Rail; 58- Guardrail Face; 59- Culvert; 60- Traffic Sign Post; 61- Utility Pole; 62- Highway Traffic Sign Post; 63- Impact Attenuator/Crash Cushion; 64- Light/Luminaire Support; 65- Tree; 66- Work Zone Maint. Equipment; 67- Embankment; 68- Ditch; 69- Fence; 70- Mailbox; 71- Other Post, Pole or Support; 72- Other Traffic Sign Post; 73- Other Wall, Building, or Tunnel; 74- Bridge Pier or Abutment; 75- Bridge Rail; 76- Guardrail Face; 77- Guardrail End; 78- Impact Attenuator/Crash Cushion; 79- Concrete Traffic Barrier; 80- Other Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (<90°); 42- Angle (>90°); 43- Angle (180°); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1- Front; 2- Front Right; 3- Right Side; 4- Rear Right; 5- Rear; 6- Rear Left; 7- Left Side; 8- Front Left; 9- Undercarriage; 10- Roof; 11- All Windows; 12- Unknown

1st Deformed: 1 | 99 | 3 | Most Deformed: 1 | 99 | 3

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under-No Intrusion; 3- Under-Unknown; 4- Over-MV in Transport; 5- Over-Other Vehicle; 8- None; 9- Unk.; Underride/Override; Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 9- Unk.; Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 1st Harmful Event Loc.: 1- Y 2- N 9- U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Yield Sign; 05- Work Zone; 06- RR (X-bucks, Lights & Gates); 07- RR (X-bucks & Lights); 08- RR (X-bucks Only); 09- Officer or Flagman; 10- Oncoming Emergency Vehicle; 11- Pavement Markings (only); 12- Other Warning Signs; 13- Flashing Beacon; 14- Work Zone; 15- None; 16- Yield Sign; 17- Other; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No Workers Present:

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non/junction; 99- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Animal in Road; 62- Weather Cond.; 63- Glare; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shields; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10013486 | Page # 1 Of: | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report: Corrected | Notified: 2305 | Arrived: 2313

Date: 02-12-2010 | Time: 2207 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): S 385 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business | Miles: 3 | Dir.: N E S W | In/Near City or Town of: Greenville

Lane # / Dir.: 2 | Ol: 41 | N E S W | Distance Offset: Miles / Feet: .10 | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From: 85 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code: | MP/Grid

R.R. Id.: NA | From: Ramp Only N E S W 1- Entrance 2- Exit | To: N E S W 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward: 146 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Latitude: 34 49 2930 | Longitude: 82 17 3570

B-704803 | Driver/Pedestrian's Full Name: De Los Santos-Adalberto E.

Unit #: 1 | Sex: M | Race: B | Street/R.F.D.: 304 Blue Sage Pl.

Birth Date: 01-21-1989 | City, State, & Zip: Simpsonville SC 29680

State: SC | Driver's License #: 101585741 (CD) | Insurance Company: Geico

Year: 2001 | Body: Mini | Vehicle Make: Toyt. | VIN #: JTLBO22K31U075889

State: SC | Year: 2001 | License Plate #: 1407 OPD | Owner's D.L. #: Unknown

Home Telephone: 864 729-8171 | Owner's Full Name: Rivera-Flora

Bus. Telephone: ( ) NA | Street/R.F.D.: 304 Blue Sage Pl.

Contributed To Collision: Yes | City, State, & Zip: Simpsonville SC 29680

Estimated Speed: 55 | Speed Limit: 65 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes | Summons #: 1308572 | Code: 21 | Towed By: NA

B-704804 | Driver/Pedestrian's Full Name: Hanson-Katheryn A.

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 132 Lauren Wood Cir.

Birth Date: 03-20-1981 | City, State, & Zip: Taylors SC 29687

State: SC | Driver's License #: 101125761 (CD) | Insurance Company: Progressive

Year: 2004 | Body: 4Dr. | Vehicle Make: Mazd. | VIN #: 1YVFB80D745N47342

State: SC | Year: 2010 | License Plate #: BXD 287 | Owner's D.L. #: Unknown

Home Telephone: ( ) NA | Owner's Full Name: Stellern-Scott L.

Bus. Telephone: ( ) NA | Street/R.F.D.: 132 Lauren Wood Cir.

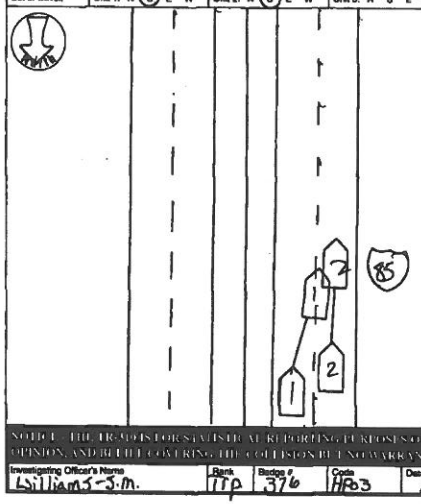
Contributed To Collision: No | City, State, & Zip: Taylors SC 29687

Estimated Speed: 55 | Speed Limit: 65 | C.D.L. Req: No | T/B S Req: No | Alc/Drg Info (see back): Yes | Summons #: NA | Code: NA | Towed By: NA

B-704805 | Driver/Pedestrian's Full Name

Unit #: NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision | City, State, & Zip | Estimated Speed | Speed Limit | C.D.L. Req | T/B S Req | Alc/Drg Info (see back) | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 1000	$ NA	$ NA	$ NA

Property Owner/Witness: NA | Property Owner/Witness: NA

Address | Address

State | Zip | Phone | State | Zip | Phone

Physic. (N) | Describe What Happened (Refer to Units by Number):

Unit #1 was traveling south on I-385 in the #1 lane. Unit #2 was traveling South on I-385 on the #2 lane. The driver of Unit #1 was driving too fast for conditions. Unit #1 lost control of the vehicle and struck Unit #2 in the left rear with the right front.

FEB 1 9 2010

NOTICE: THE INFORMATION ON THIS ACCIDENT REPORT IS FOR OFFICIAL USE ONLY AND IS A REFLECTION OF THE OFFICER'S PERSONAL KNOWLEDGE, OPINION, AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Williams-J.M. | Rank: ITP | Badge #: 376 | Code: HP03 | Date: 02-12-2010 | Reviewer's Name: Hi-Way | Rank: Sgt | Internal Agency Code: 10610/5903

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	01-21-1989	M	B	0	01	13	H	1	1	2			
2	03-20-1981	F	W	0	01	13	H	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Helmet Usage: 1- DOT Compliant Helmet; 2- Other Helmet; 3- No Helmet; 4- Novelty Helmet; 9- Unk.

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nonmailing); 51- Other Unenclosed Area (nonmailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 89- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 81- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unk. — b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk.

Head Injury: 1-Yes; 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9-Unk.

Sequence of Events: 1st Harmful Event: 1 | 2nd: 22 | 3rd: | 4th:

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross MedianCenter Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Ran/Separation; 06- Immersion; 07- Jackknife; 08- Left Roadway; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Wrecked Veh.); 13- Other Non-Collision; 19- Unk. Non-collision; 20- Pedalcycle

Collision: Not Fixed: 21- Animal (Deer Only); 22- Animal (All Other); 23- Motor Veh. in Transport; 24- Motor Veh. (Stopped); 25- Motor Veh. (Parked); 26- Train; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed: 1 2 3 | Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 07- Transport Property; 08- Transport Passengers; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 12- Weaving; 88- Other; 99- Unk. — (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- 1- Breath (Alc. Only); 2- Blood; 3- Urine; 8- Other. A2- 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused. A3- 1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 9- Unk.

Alcohol/Drug Test Given: Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Urine; 2- Blood; 3- Breath; 4- Serum; 8- Other

Underride/Override: 10 / 20

Drug Results: D1- 0- None/Minor; 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other. D2- 1- Functional Damage; 2- Disabling Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Extent of Deformity: 10 / 20 / 30

Traffic Way: 3

Alc: 1- Dore; 2- Median; 3- Roadway; 4- Island; 5- Roadside; 6- Shoulder; 7- Sidewalk; 8- Driveway; 9- Unk. — B: 1- Intersection; 2- Non-Intersection; 3- Driveway; 4- Ramp; 5- Other; 9- Unk.

1st Harmful Event Loc.: 3 / 2

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Severe Crosswinds; 7- Fog, Smog, Smoke; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-junction; 99- Unk.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 8- Contaminate; 7- Water (Standing, etc.); 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 3

Work Zone: 2

Work Zone Location: Before 1st Sign; Advanced Warning Area; Transition Area; Activity Area; Termination Area

Work Zone Type: Shoulder/Median Work; Lane Shift/Crossover; Intermittent/Moving Work; Lane Closure

Workers Present: 1- Yes; 2- No; 9- Unk.

Primary Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Cell Phone; 20- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 39- Other; 40- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Glare; 62- Obstruction; 63- Weather Cond.; 69- Other; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

Driver: 0 | Others: 3

ORIGINAL

JUL 06 2010

D.P.S. USE ONLY: 10070104 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2005) | # of Units: 2 | Amended - Attach Copy of Original Report Corrected | Notified: 1435 | Arrived: 1450

Date: 06-25-2010 | Time: 1400 | County: 23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County) | Collision Location (Rt. # / Name): S 385 | (0- Main 1- Alternate 2- Spur 6- Connection 7- Business) | Miles: 4.45 | Dir.: N E S W | +/-mi Near City or Town of: GREENVILLE

Lane # / Dir.: 1 | Dir.: 6 (N E S W) | Distance Offset: .20 Miles Feet | Direction: 3 (N E S W) (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | Base Intersection (Rt. # / Name): From 85 | (0- Main 1- Alternate 2- Alternate 3- SC Primary 4- Secondary 5- County 6- Other 7- Business 8- Connection 9- Other) | ASRU code | MP/Grid

R.R. Id.: NA | From: 6 W (N E S W) (1- Entrance 2- Exit) | Ramp Only | To: 3 (N E S W) (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | Second Intersection (Rt. # / Name): Toward 146 | Latitude: 34 49 9 30 | Longitude: 82 17 40 10

B-086896 — Driver/Pedestrian's Full Name: PATTERSON - BILL DAVIS

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 3429 FARRIS BRIDGE RD | Birth Date: 10-09-1966 | City, State, & Zip: EASLEY SC 29640

State: SC | Driver's License #: 007223382 (A) | Insurance Company: STATE FARM

Year: 2007 | Body: SU | Vehicle Make: JEEP | VIN #: 1J4FA24147L142282

State: SC | Year: 2011 | License Plate #: EFN 309 | Owner's D.L. #: 007223382 (A)

Home Telephone: (864) 307-4045 | Owner's Full Name: PATTERSON - BILL DAVIS

Bus. Telephone: ( ) NA | Street/R.F.D.: 3429 FARRIS BRIDGE RD

Contributed To Collision: Yes (No) | City, State, & Zip: EASLEY SC 29640

Estimated Speed: 65 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # NA | Code | Summons # NA | Code | Towed By NA

B-086897 — Driver/Pedestrian's Full Name: BRANDT - RODERICK SABE

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 422 SAT BIRD DR | Birth Date: 05-25-1971 | City, State, & Zip: SYLVA NC 28779

State: NC | Driver's License #: 7918270 (C) | Insurance Company: NC FARM BUREAU

Year: 2005 | Body: PK | Vehicle Make: TOYT | VIN #: 5TABT44165S462117

State: NC | Year: 2010 | License Plate #: SYE 7176 | Owner's D.L. #: NA

Home Telephone: (828) 507-8519 | Owner's Full Name: STEWART - MATTHEW LANE

Bus. Telephone: ( ) NA | Street/R.F.D.: 155 YONDER WAY

Contributed To Collision: No | City, State, & Zip: CULLOWHEE NC 28723

Estimated Speed: 65 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # EF30971 | Code: 2 | Summons # NA | Code | Towed By NA

B-086898 — Driver/Pedestrian's Full Name:

Unit #: NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

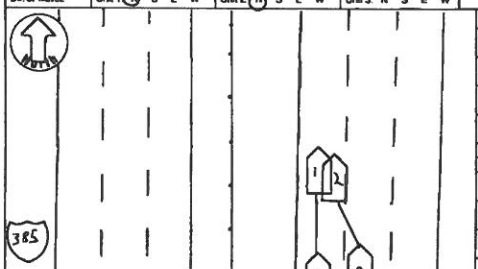
Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Direction of Travel: Unit 1 (N S E W) | Unit 2 (N S E W) | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500.00	$ 700.00	$	$ NA	$ NA

Property Owner/Witness: NA | Property Owner/Witness: NA

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Describe What Happened (Refer to Units by Number)

Y (N) UNITS 1 AND 2 WERE BOTH TRAVELING NORTH ON I 385. UNIT 2 ATTEMPTED TO MAKE A LANE CHANGE IMPROPERLY THIS RESULTED IN UNIT 2 STRIKING THE RIGHT SIDE OF UNIT 1.

NOTICE: THE FACTS CONTAINED IN THIS REPORT ARE FOR STATISTICAL REPORTING PURPOSES ONLY AND REFLECT THE OPINION OF THE OFFICER'S REASONABLE KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: HAMLET - A.M. | Rank: TRP | Badge #: 988 | Code: HH03 | Date: 06-25-2010 | Reviewer's Name | Rank: SGT | Internal Agency Code: 1064065425

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.S.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	10-09-1966	M	W	0	01	13	4 3	1	1	1			
2	05-25-1971	M	W	0	01	13	4 3	1	1	1			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Skater/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown

Switch: 1- In On Position; 2- In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure

Collision: Not Fixed: 25- Pedestrian; 26- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Animal Mov. Object; 31- Other Movable Object; 32- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail Face; 49- Guardrail End; 50- Highway Traffic Sign Post; 51- Mail Box; 52- Pole; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Utility Pole; 56- Other Post, Pole, Support; 57- Overhead Sign Support; 58- Tree; 59- Other (Wall, Building, Tunnel, Etc.); 60- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 1 2 3 | Most Deformed: 1 2 3

21- Pedestrian; 91- None; 92- Rollover; 93- Total; 94- Under Carriage; 98- Other; 99- Unk

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Drug Results: 0- None/Minor; 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- Unk.; Underride/Override

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Traffic Way: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; A: 1- One; 2- Inland; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Unk.; 9- Outside Trafficway; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

B: X- traffic: 1- Y 2-N 9-U

1st Harmful Event: 5

Loc.: 2

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary: 14

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.; 18- Cell Phone

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Glare; 66- Other; 69- Unk.

Others: Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

ORIGINAL

JUL 1, 9 2010

D.P.S. USE ONLY: 10075844 | Page # 1 Of 2 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 01/2001) | # of Units 4 | Amended - Attach Copy of Original Report | Corrected | Notified 1230 | Arrived 1249

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	+/- / Near City or Town of:
06-28-2010	1220	23	385	4.5 2	N E S W	Greenville

Lane # / Dir.: 3 S | Distance Offset: Miles .10 Feet | Direction: S | Base Intersection (Rt. # / Name): 85 | ASR/U codes | MP/Grid

R.R. Id.: N/A | From: Ramp Only 1 - Entrance 2 - Exit | To: | Second Intersection (Rt. # / Name): 146 Woodruff Rd | Latitude: 34 49 43.30 | Longitude: 82 17 34.30

Codes: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Main 7- Business 8- Connection 9- Other | Alternate | Spur

B-332053

Driver/Pedestrian's Full Name: Cothran - Mark Albert | Unit # 1 | Sex M | Race W | Birth Date 10-20-1957 | Street/R.F.D. 306 Stonebrook Farm Way | City, State, & Zip Greenville SC 29615 | State SC | Driver's License # 004458907 (10) | Insurance Company Hartford | Year 2009 | Body 4dr | Vehicle Make GMC | VIN # 1GKALBL135K9PX24164 | State SC | Year 2011 | License Plate # FET-938 | Owner's D.L. # N/A | Home Telephone (864) 350-3300 | Owner's Full Name Cothran Properties LLC | Bus. Telephone ( ) N/A | Street/R.F.D. 101 E Washington St Ste 310 | Contributed To Collision Yes | City, State, & Zip Greenville SC 29601 | Estimated Speed Ø | Speed Limit 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons # N/A | Code | Summons # N/A | Code | Tow as/By N/A

B-332054

Driver/Pedestrian's Full Name: Pennell - Kelly Peterson | Unit # 2 | Sex F | Race W | Birth Date 05-03-1978 | Street/R.F.D. 8 Summer Glen Dr | City, State, & Zip Simpsonville SC 29681 | State SC | Driver's License # 007632026 (10) | Insurance Company State Farm | Year 2007 | Body SUV | Vehicle Make Chev | VIN # 3GNFC16017G122149 | State SC | Year 2010 | License Plate # 207-BAJ | Owner's D.L. # 007632026 (10) | Home Telephone (864) 616-9810 | Owner's Full Name Pennell - Kelly Peterson | Bus. Telephone ( ) N/A | Street/R.F.D. 8 Summer Glen Dr | Contributed To Collision Yes | City, State, & Zip Simpsonville SC 29681 | Estimated Speed Ø | Speed Limit 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons # N/A | Code | Summons # N/A | Code | Towed By N/A

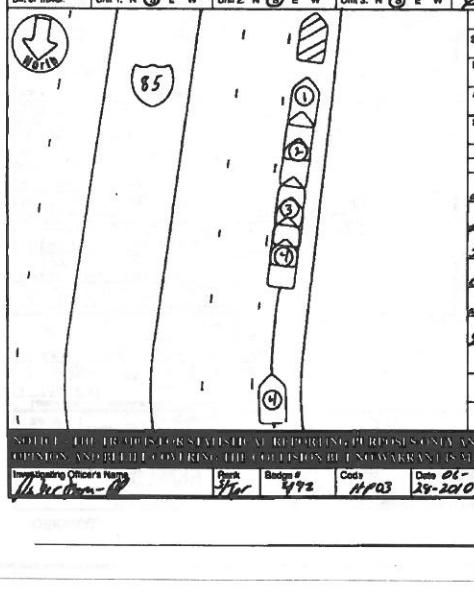
B-332055

Driver/Pedestrian's Full Name: Griffith - Rose M | Unit # 3 | Sex F | Race W | Birth Date 08-09-1943 | Street/R.F.D. 831 Abner Creek Rd | City, State, & Zip Greer SC 29651 | State SC | Driver's License # 001633306 (10) | Insurance Company Progressive | Year 2002 | Body 2dr | Vehicle Make Chev | VIN # 2G1WH12E029162543 | Dr. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W | Home Telephone (864) 918-5006 | Owner's Full Name Griffith - Rose M | Bus. Telephone ( ) N/A | Street/R.F.D. 831 Abner Creek Rd | Contributed To Collision Yes | City, State, & Zip Greer SC 29651 | Estimated Speed Ø | Speed Limit 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons # N/A | Code | Summons # N/A | Code | Towed By Auto Assurance

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 2500	$ 9000	$ N/A	$ N/A

Property Owner/Witness	Property Owner/Witness
Address	Address
State Zip Phone	State Zip Phone

Photo: Y | Describe What Happened (Refer to Units by Number): Unit #1, #2 and #3 were stopped south bound on I-385 for other traffic. Unit #4 was traveling too fast for conditions south bound on I-385 and struck Unit #3 in the rear, pushing Unit #3 forward causing it to strike Unit #2 in the rear end. Unit #3 and #2 were pushed forward causing Unit #2 to strike Unit #1 in the rear end.



NOTICE - THE PURPOSE OF STATISTICAL REPORTING PURSUED SOLELY AND EXCLUSIVELY BY THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BEING WITHOUT WARRANTY AS TO THE LEGAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewed by Supervisor	Rank	Internal Agency Code
M. McCraw	Tpr	492	HP03	06-28-2010		Cpl	10GV066509

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.E.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	10-20-1957	M	W	0	01	13	3	1	1	2			
2	05-03-1978	F	W	0	01	13	3	1	1	2			
3	08-09-1943	F	W	0	01	13	3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nonsailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Switch in On Position; 9- Switch in Off Position; 9- Unknown; 9- Deployment Unk.; 3- No Switch

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: a) 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Body Loss or Shift; 05- Fire/Explosion; 09- Overturn/Rollover; 02- Cross Median/Center Line; 06- Immersion; 10- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 11- Ran off Road Right; 12- Split (Two Wheeled Unit); 13- Separation of Units; 14- Other Non-collision; 15- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian; 28- Animal (Deer Only); 29- Railway Veh.; 21- Animal (All Other); 30- Work Zone Maint. Equip.; 22- Motor Veh. (In Transport); 31- Other Movable Object; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 32- Unk. Movable Object; 25- Motor Veh. (Parked); 26- Pedalcycle

Collision: Fixed Object: 47- Embankment; 48- Mail Box; 40- Bridge Overhead Structure; 49- Equipment; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 50- Median Barrier; 51- Guardrail Face; 52- Guardrail End; 53- Highway Traffic Sign Post; 54- Light/Luminaire Support; 55- Pole; 56- Traffic Sign Support; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Most Deformed; 1st Deformed; Most Deformed

Vehicle Type: 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 18- Pickup Truck; 19- Truck Tractor; 20- Other Truck; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 25- Motorcycle; 26- Other Motorbike; 31- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 41- Pedestrian; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 14- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 12- Changing Lanes; 99- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Drug Results: D1 1- Amphetamines; D2 2- Cocaine; D3 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Override/Override: 16

Intrusion: 1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown

Intrusion: 4- Over - MV in Transport; 5- Over - Other Vehicle; 6- None; 9- Unk.; 56

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk.; 12; 34

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 3

Access: 1- Cars; 2- Motor; 3- Freeway; 4- Interstate; 5- Island; 6- Roadside; 7- Sidewalk; 8- Shoulder; 9- Unk.; B: X- walk: V; 1- Y 2-N 9-U: V

1st Harmful Event Loc.: 5; 2nd Harmful Event Loc.: 5

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.; 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None; 99- Unk.; 99

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.; 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 1

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.; 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area; 1- Yes 2- No; Work Zone: 2

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

Work Zone Type

Workers Present: 1- Yes 2- No

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.; 13

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Action; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

JUL 1 9 2010

D.P.S. USE ONLY: 10075844 | Page 2 / Cn: 2 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 4 | Amended - Attach Copy of Original Report | Corrected | Notified: 1230 | Arrived: 1249

Date: 06-28-2010 | Time: 1220 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): 385 | 6- Main 7- Connection 8- Alternate 9- Business 5- Spur | Miles: 1/52 | Dir: N E S W | Dev Near City or Town of: Greenville

Lane # / Dir.: 3 S | Distance Offset: .10 Miles Feet N E S W | Direction: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 85 | 6- Main 7- Connection 8- Alternate 9- Business 5- Spur 0- Other | ASRU code | MP/Grid

R.R. Id.: NB | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- Other | Second Intersection (Rt. # / Name): Toward 146 Woodruff Rd | 6- Main 7- Connection 8- Alternate 9- Business 5- Spur 0- Other | Latitude: 34 ° 49 ' 47.70 | Longitude: 82 ° 17 ' 38.30

B-332059

Driver/Pedestrian's Full Name: Hartwech - Jay K

Unit #: 4 | Sex: M | Race: W | Street/R.F.D.: 2262 Folly Rd Unit 2-F | Birth Date: 10-20-1975 | City, State, & Zip: Folly Beach SC 29439

State: SC | Driver's License #: 102251963(0) | Insurance Company: Hartford

Year: 2010 | Body: 4dr | Vehicle Make: Ford | VIN #: 1FAHP2EW6AG153360

State: SC | Year: 2011 | License Plate #: GDM-637 | Owner's D.L. #: N/A

Home Telephone: 679 990-3730 | Owner's Full Name: Thermo Fisher Scientific

Bus. Telephone: ( ) N/A | Street/R.F.D.: 2262 Folly Rd Unit 2-F

Contributed To Collision: Yes | City, State, & Zip: Folly Beach SC 29439

Estimated Speed: 65 | Speed Limit: 55 | C.D.L. Req: Yes | T/S S Req: Yes | Alc/Drg info (see back): Yes | Summons #: F525070 | Code: 21 | Summons #: N/A | Code: | Towed By: Schwerin 24

B-332060

Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

State: | Year: | License Plate #: | Owner's D.L. #:

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: | Code: | Summons #: | Code: | Towed By:

B-332061

Driver/Pedestrian's Full Name:

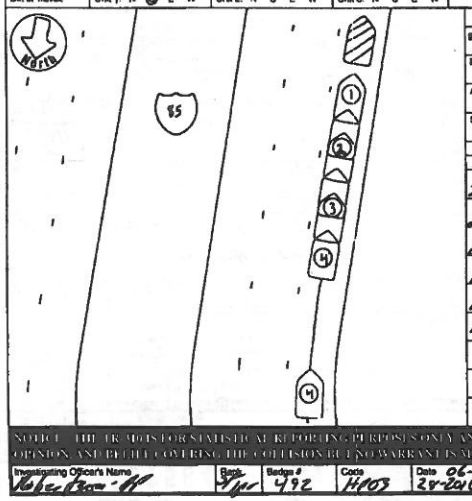
Unit #: N/A | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Estimated Speed: | Speed Limit: | C.D.L. Req: No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 23,000	$ N/A	$ N/A	$ N/A	$ N/A

Property Owner/Witness: | Address: | Property Owner/Witness: | Address:

State | Zip | Phone | State | Zip | Phone

Photo: Y | Describe What Happened (Refer to Units by Number): Unit #1, #2, and #3 were stopped South bound on I-385 for other traffic. Unit #4 was traveling too fast for conditions south bound on I-385 and struck Unit #3 in the rear, pushing Unit #3 forward causing it to strike Unit #2 in the rear end. Unit #3 and #2 were pushed forward causing Unit #2 to strike Unit #1 in the rear end.

NOTICE: THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Robertson - M | Rank: Cpl | Badge #: 492 | Code: H403 | Date: 06-28-2010 | Reviewer's Name: | Rank: Cpl | Internal Agency Code: 10GV066509

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
4	10-20-1975	M	W	0	01	13	3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS; 2- Police; 8- Other; 9-Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 02- Cross Median/Center Line; 06- Immersion; 03- Downhill Runaway; 07- Jackknife

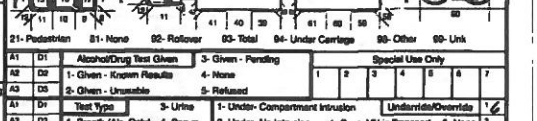
Collision: Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Non-Motor Veh.); 25- Motor Veh. (Parked); 26- Pedalcycle; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 99- Other Movable Object

Collision: Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other

Rollover: 1st Event: 23; 2nd Event: 23; Most Harmful: 23

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 1 / 0 / 3; Most Deformed: 1 / 3 / 3



Vehicle Type: 15- Full Size Van; 01- Automobile; 16- Mini Van; 12- Pickup/Truck; 17- Sport Utility; 13- Truck Tractor; 25- Motorcycle; 14- Other Truck; 26- Other Motorbike; 27- Pedalcycle; 38- Animal (Drawn Veh); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only); 21- Pedestrian; 31- None; 02- Rollover; 03- Total; 04- Under Carriage; 98- Other; 99- Unk

Vehicle Use Code: 04- Ambulance; 01- Personal; 05- Military; 02- Driver Training; 06- Transport Passengers; 03- Construction/Maint.; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 4- Utility Trailer; 1- None; 5- Farm Trailer; 2- Mobile Home; 6- Trailer w/Boat; 3- Semi-Trailer; 7- Camper Trailer; 8- Tow Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Test Type: 3- Urine; 1- Breath (Alc. Only); 2- Blood; 4- Serum; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Drug Results: 3- Marijuana; 1- Amphetamines; 4- Opiates; 2- Cocaine; 5- PCP; 8- Other

Extent of Deformity: 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Traffic Control: 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 8- Dark (Street Lamp Not Lit)

Trafficway: 3

1st Harmful Event Loc.: 0

Road Character: 1

Road Surface Condition: 1

Junction Type: 13- 5-Leg or More; 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Ramp/Junction; 99- Unk.

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area

Work Zone: 2

School Bus Involved: 0

Workers Present: 1- Yes; 2- No

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Other; 39- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Inattentive; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Others: 48- Other; 49- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

OCT 13 2010

D.P.S. USE ONLY 10110959 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1325 | Arrived 1325

Date 09-28-2010 | Time 1315 | County 23 | Collision Location (Rt. # / Name) 385 | Main / Alternate / Spur / Connection / Business | Miles 4.45 | Dir N E S W | Name Near City or Town of: GREENVILLE

Lane # / Dir. 1 4 S | Distance Offset .01 Miles Feet | Direction N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From 85 | 0- Main 1- Alternate 2- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude 34 49 50 20

R.R. Id. NA | From / To Ramp Only: N E S W 1- Entrance 2- Exit | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name) Toward 146 | 0- Main 1- Alternate 2- Spur 6- Connection 7- Business 9- Other | Longitude 82 17 40 70

B-698995 Driver/Pedestrian's Full Name: WILLIAMSON - ERNEST F

Unit # 1 | Sex M | Race W | Street/R.F.D. 2709 OLDE MILL RD | Birth Date 01-15-1954 | City, State, & Zip FLORENCE SC 29505

State SC | Driver's License # 004406876 (D) | Insurance Company GOVERNMENT EMPLOYEE

Year 2001 | Body 4S | Vehicle Make HOND | VIN # 5HMFA36236S021486

State SC | Year 2011 | License Plate # AAV 319 | Owner's D.L. # 004406876 (D)

Home Telephone (843) 206-2874 | Owner's Full Name WILLIAMSON ERNEST F

Bus. Telephone ( ) NA | Street/R.F.D. 2709 OLDE MILL RD

Contributed To Collision Yes (No) | City, State, & Zip FLORENCE SC 29505

Estimated Speed 60 | Speed Limit 60 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # NA | Code | Summons # NA | Code | Towed By BRUCE'S (ROT)

B-698997 Driver/Pedestrian's Full Name

Unit # NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1 (N) S E W | Unit 2 (N) S E W | Unit 3: N S E W

B-698996 Driver/Pedestrian's Full Name: UNKNOWN NON CONTACT

Unit # 2 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN # UNKNOWN

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name UNKNOWN

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision (Yes) No | City, State, & Zip

Estimated Speed | Speed Limit 60 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # NA | Code | Summons # NA | Code | Towed By NA

Unit 1 Dam. | Unit 2 Dam. | Unit 3 Dam. | Prop. Dam. 1 | Prop. Dam. 2

$ 2000.00 | $ -0- | $ | $ NA | $ NA

Property Owner/Witness NA | Address | State | Zip | Phone

Property Owner/Witness NA | Address | State | Zip | Phone

Photo: (Y) N | Describe What Happened (Refer to Units by Number)

UNITS 1 AND 2 WERE BOTH HEADING NORTH ON I-385. UNIT 1 DRIVER STATED THAT UNIT 2 MERGED INTO HIS LANE AND TO AVOID A COLLISION UNIT 1 MADE EVASIVE ACTION TO THE LEFT. UNIT 1 THEN LOST CONTROL OF HIS VEHICLE AND STRUCK A GUARDRAIL. NO DAMAGE TO THE GUARD RAIL WAS OBSERVED

NOTICE - THE DRAWINGS FOR SKETCH OF ACCIDENT REPORTING PURPOSES ONLY AND ARE NOT TO BE CONSTRUED AS BEING THE OFFICER'S BEST KNOWLEDGE OPINION, AND BELIEF - COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE EXACT ACCURACY THEREOF

Investigating Officer's Name HAMLET - A.M | Rank TRP | Badge # 946 | Code WB03 | Date 09-28-2010 | Reviewer's Name R.A. Wm | Rank Sgt | Internal Agency Code 1060 | 07701

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tow	Name	Street Address	Zip Code
1	01-15-1954	M	W	3	01	13	2	1	1	1	SAME AS DRIVER		
2	UNKNOWN	U	U	0	01	99	8	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; b) Motorcycle Only Head Injury: 1-Yes 9-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./N/A

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9-Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Wicket/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 81- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 08- Cross Median/Cross Line; 09- Immersion; 10- Ran off Road Left; 00- Downhill Runaway; 07- Jackknife; 12- Ran off Road Right

Collision: Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Railroad Veh.); 25- Motor Veh. (Parked); 26- Pedalcycle; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

Collision: Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Shrubbery; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Col. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed 14 | Most Deformed 14

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only); 00- Other

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 99- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 7- Camper Trailer; 8- Motorcycle Trailer; C- Other Trailer; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Stopped or Entering Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Drug Results: 0- None/Minor; 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 6- Other; 7- Functional Damage; 8- Disabling Damage; 9- Not Applicable

Test Type: 1- Urine; 2- Blood; 3- Given - Pending; 4- None; 1- Given - Known Results; 2- Given - Unusable; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Rotated; 4- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

A: 1- One 2- Inland 3- Median 4- Roadside 5- Roadway 6- Shoulder 7- Bikepath 8- Other 9- Unk.

B: X- walk; V- 1st Harmful Event 1- Y 2-N 9-U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Flashing Beacon; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary: 14

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

Others:

Imp Ln chng. correct

ORIGINAL

NOV. 02 2010

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR 310 (Rev. 01/2001)

O.R.I. USE ONLY: 10122313

Page # 1 Of: 1

# of Units: 2

Amended - Attach Copy of Original Report

Notified: 1937

Arrived: 1940

Date: 10/21/2010 Time: 1937 County: 23

Collision Location (Rt. # / Name): 8 I385 S

0- Main 1- Interstate 2- Alternate 3- SC Primary 4- Secondary 5- County 6- Connection 7- Business 8- Spur 9- Connection

Miles: Div. N E S W

In / Near City or Town of: GREENVILLE

Lane # / Dir.: 1 2 N E S W

Distance Offset: 0.16 Miles Feet

Direction: N E S W

Base Intersection (Rt. # / Name): From I85

Second Intersection (Rt. # / Name): Toward SC 146 WOODRUFF RD

0- Main 1- Interstate 2- Alternate 3- SC Primary 4- Secondary 5- County 6- Other 7- Business 8- Connection 9- Other

ASRU code: MP/Grid:

Latitude: 1093129

Longitude: 1611326

R.R. Id.: From NE SW 1- Entrance 2- Exit; To NE SW 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

B-450307

Driver/Pedestrian's Full Name: (WRIGHT) JOSHUA DANIEL

Unit #: 1 Sex: M Race: W

Street/R.F.D.: 9 HAZELTINE CT

Birth Date: 06/17/1984 City, State, & Zip: SIMPSONVILLE SC 29681

State: SC Driver's License #: 102166774 (D) Insurance Company: ALLSTATE

Year: 1999 Body: 4S Vehicle Make: BUIC VIN #: 2G4WB52KXX1463707

State: SC Year: 2010 License Plate #: BLQ627 Owner's D.L. #:

Home Telephone: 864 2317408 Owner's Full Name: (WRIGHT) DANIEL

Bus. Telephone: ( ) Street/R.F.D.: SAME

Contributed To Collision: Yes No City, State, & Zip: SAME

Estimated Speed: 50 Speed Limit: 55 C.D.L. Req: Yes No T/B S Req: Yes No Alc/Drg info (see back): Yes No

Summons #: 8793SFB Code: 4D Towed By: KELLETS

B-450308

Driver/Pedestrian's Full Name: (ROBERTSON) PORSCHA A

Unit #: 2 Sex: F Race: B

Street/R.F.D.: 1409 ROPER MTN RD

Birth Date: 08/07/1984 City, State, & Zip: GREENVILLE, SC 29615

State: SC Driver's License #: 011326268 (D) Insurance Company: STATE FARM

Year: 2000 Body: SW Vehicle Make: JEEP VIN #: 1J4G248S8YC203681

State: SC Year: 2011 License Plate #: GJT893 Owner's D.L. #:

Home Telephone: 864 918 4535 Owner's Full Name: SAME

Bus. Telephone: ( ) Street/R.F.D.: SAME

Contributed To Collision: Yes No City, State, & Zip: SAME

Estimated Speed: 60 Speed Limit: 55 C.D.L. Req: Yes No T/B S Req: Yes No Alc/Drg info (see back): Yes No

Summons #: — Code: Summons #: Code: Towed By:

B-450309

Driver/Pedestrian's Full Name: N/A

Unit #: Sex: Race: Street/R.F.D.:

Birth Date: City, State, & Zip:

State: Driver's License #: Insurance Company:

Year: Body: Vehicle Make: VIN #:

Estimated Speed: Speed Limit: C.D.L. Req: Yes No T/B S Req: Yes No Alc/Drg info (see back): Yes No

Summons #: Code: Summons #: Code: Towed By:

Direction of Travel: Unit 1: N S E W Unit 2: N S E W Unit 3: N S E W

Unit 1 Dam.: $ 2000 Unit 2 Dam.: $ 1200 Unit 3 Dam.: $ Prop. Dam. 1: $ Prop. Dam. 2: $

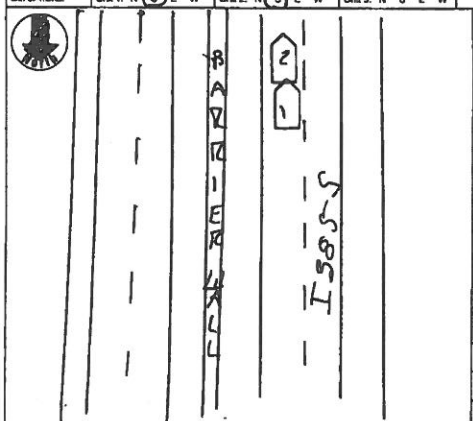
Property Owner/Witness: Property Owner/Witness:

Address: Address:

State: Zip: Phone: State: Zip: Phone:

Photos: Describe What Happened (Refer to Units by Number)

(2) UNIT 2 STOPPED FOR TRAFFIC CONGESTION AND WAS STRUCK BY UNIT 1 AS SHOWN.



NO INJURIES REPORTED

DIAGRAM NOT TO SCALE

NOTICE - THE INFORMATION ON THIS FORM IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT A REFLECTION OF THE OFFICER'S BELIEF, KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION. WE DO NOT WARRANT IN ANY MANNER AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: HUNTINGTON MS Rank: Cpl Badge #: 45 Code: 7.30200 Date: 10/21/2010 Reviewer's Name: Rank: Lt Internal Agency Code: 2-10-87822

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	06171984	M	W	0	01	B	4	3	1	2			
2	08071984	F	B	0	01	B	4	3	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Used: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt and Lap Belt; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 65- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1- Yes 2- No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 03- Cross Median/Center Line; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Trip (Two-Wheeled Veh.); 13- Other Non-Collision; 14- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian; 28- Animal (Deer Only); 29- Animal (All Other); 30- Motor Veh. (In Transport); 31- Motor Veh. (Stopped); 32- Motor Veh. (Parked); 33- Train; 34- Motor Veh. (Other Roadway); 35- Unk. Movable Object

Collision: Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Bridge Pier or Abutment; 50- Bridge Parapet End; 51- Bridge Rail; 52- Culvert; 53- Guardrail Face; 54- Guardrail End; 55- Impact Attenuator/Crash Cushion; 56- Concrete Traffic Barrier; 57- Other Traffic Barrier; 58- Tree; 59- Utility Pole; 60- Other Post, Pole or Support; 61- Other Fixed Object; 62- Fire Hydrant; 63- Mailbox; 64- Light/Luminaire Support; 65- Unk. Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Deer Only); 29- Animal (All Other); 30- Animal (Ridden); 41- Pedestrian; 61- School Bus; 62- Passenger Bus; 63- Other; 99- Unk. (H/J and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Tow Trailers; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Drug Results: 0- None/Minor; 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- Unk.

Extent of Deformity: 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 0- Not Applicable

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

A1/A2/A3: 1- Conc. 2- Asphalt 3- Median 4- Footpaths 5- Shoulder 6- Ditch 7- Sidewalk 8- Curb 9- Unk.

B1: X- walk; B2: 1st Harmful Event Loc.: 1- Y 2-N 9-U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 7- Dark (No Lights); 8- Dark (Street Lamp Not Lit)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 09- Unk.; 12- Y-Intersection; 13- Nonjunction

Work Zone: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Yes 2- No

Workers Present: 1- Yes 2- No

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Primary Contributing Factors: 08

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Animal in Road; 62- Weather Cond.; 63- Glare; 68- Other; 69- Unk.

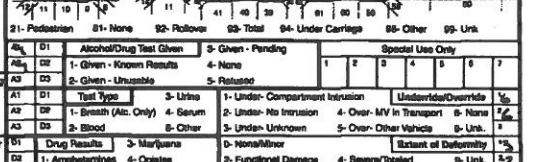
Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

Others:

1st Impact: 1 2 3 4 5 6 7

1st Deformed: 1 2 3

Most Deformed: 1 2 3



Alc 1: D1 Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Alc 2: D2 Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Alc 3: D3 Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk.

Special Use Only: 1 2 3 4 5 6 7

ORIGINAL

NOV 1, 2, 20[illegible]

D.P.S. USE ONLY: 10124157 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 0520 | Arrived: 0520

Date	Time	County	Collision Location (Ft. # / Name)	Miles	Dir.	In? Near City or Town of:
10-10-2010	0515	23	385	3	N E S W	Greenville

Lane # / Dir.: # / N E S W | Distance Offset: 2 Miles Feet | Direction: N E S W | Base Intersection (Ft. # / Name): From 85 | ASRU code | MP/Grid

R.R. Id.: n/a | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W | Second Intersection (Ft. # / Name): Toward 146 | Latitude: 34 ° 49 45.20 | Longitude: 82 ° 17 32.60

Roadway Type: 1 - Interstate 2 - US Primary 3 - SC Primary 4 - Secondary 5 - County 6 - Other | Main / Connection / Alternate / Business / Spur / Other

B-052360

Driver/Pedestrian's Full Name: Aranda-Sheregueta Kiara

Unit #: 1 | Sex: F | Race: B | Street/R.F.D.: 26 Duke St.

Birth Date: 04-24-1989 | City, State, & Zip: Greenville SC 29605

State: SC | Driver's License #: 10454597 | Insurance Company: Allstate

Year: 2003 | Body: CT | Vehicle Make: Acura | VIN #: 19UYA42673A016757

State: SC | Year: 2011 | License Plate #: CYHNVME | Owner's D.L. #: n/a

Home Telephone: ( ) n/a | Owner's Full Name: Salyer-Michael D.

Bus. Telephone: ( ) n/a | Street/R.F.D.: 50 2nd St

Contributed To Collision: Yes (12) | City, State, & Zip: Greenville SC 29611

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (15) | T/B S Req: Yes (16) | Alc/Drg info (see back): Yes (22) | Summons #: n/a | Code | Towed By: Mills (021)

B-052361

Driver/Pedestrian's Full Name

Unit #: n/a | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Towed By

B-052362

Driver/Pedestrian's Full Name

Unit #: n/a | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

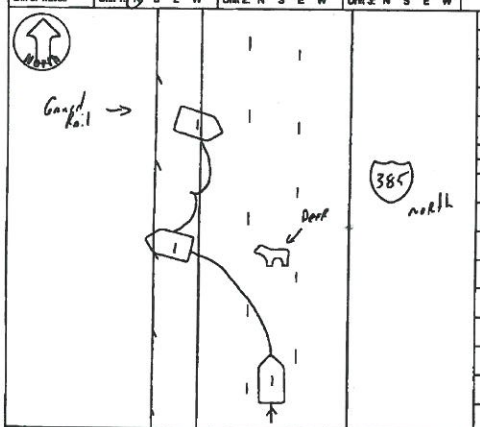
State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 5800.00	$ n/a	$ n/a	$ 500.00	$ n/a

Property Owner/Witness	Property Owner/Witness
SC DOT	n/a
Address: 13 Soludo Dr Rd Greenville	Address
State: SC Zip: 29617 Phone: (864) 241-1224	State Zip Phone

Photo: (Y) N | Describe What Happened (Refer to Units by Number)

Unit #1 was north on I-385. Unit #1 swerved to avoid a Deer lying in the Road. Unit #1 lost control and struck the guardrail.

NOTICE - THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RECORD OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTS AS SUCH AS THEY ARE

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Edwards- T. M.	Ptl	516	H103	10-10-2010	Hall W.M.	Sgt	106V112510

Changed to Animal from Swerve

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.S.D.	Eject	LAU	Tran	Name	Street Address	Zip Code
1	04-24-1989	F	B	1	01	13	1	1			Driver Unit #1		

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; 9- Unknown

b) Motorcycle Only: Helmet Worn: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 8- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1- Yes 2- No

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedacycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events: Most Harmful Event: 01 51 | 1st Hrmfl: 51

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular Matl.); 13- Other Non-Collision; 14- Unk. Non-Collision

Collision: Not Fixed: 27- Pedestrian; 28- Animal (Cows Only); 29- Railway Veh.; 30- Work Zone Maint. Equip.; 31- Animal (All Other); 32- Motor Veh. (In Transport); 33- Motor Veh. (Stopped); 34- Motor Veh. (Other Person Object); 35- Motor Veh. (Parked); 36- Other Movable Object; 99- Unk. Movable Object; 25- Pedalcycle

Collision: Fixed Object: 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 99- Unk. Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 1 2 3 | Most Deformed: 1 2 3

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Horse Veh.); 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 41- Pedestrian; 99- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 28- Other

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unavailable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Urine; 2- Blood; 3- Breath

Special Use Only: 1- Under-Compartment Intrusion; 2- Under-No Intrusion; 3- Under-Unknown; 4- Over-MV in Transport; 5- Over-Other Vehicle; 6- None; 9- Unk.

Underride/Override

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk.

Trafficway: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Character: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Road Surface Condition

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type

Workers Present: 1- Yes 2- No

School Bus Involved: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Primary Contributing Factors: 60

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Driving; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 99- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Influ.; 67- Other Person Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

DEC 1 3 2010

D.P.B. USE ONLY	Page #	SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001)	# of Units	Amended - Attach Copy of Original Report	Notified	Arrived
10135076	1 Of: 1		3	Corrected	0759	0802

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	*If Not Near City or Town of:
11-14-2010	0750	23	& 385	1	NE SW	Greenville

Lane # / Dr.	Distance Offset	Direction	Base Intersection (Rt. # / Name)	ASRU code	MP/Grid
2 Of: 6 NE SW	Miles: .1 Feet: N E S W	From: 85 To: 146	Second Intersection (Rt. # / Name)	Latitude: 34° 49 4540	Longitude: 82° 17 3914

R.R. Id.: N/A

B-571027

Driver/Pedestrian's Full Name: Nelson-Carey David

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 55 Dale Dr.

Birth Date: 04-13-1988 | City, State, & Zip: Simpsonville SC 29617

State: IL | Driver's License #: N42510484106(D) | Insurance Company: Progressive

Year: 2001 | Body: 4S | Vehicle Make: Toyt | VIN #: 1NXBR12E21Z484725

State: IL | Year: 2011 | License Plate #: L164460 | Owner's D.L. #: N42510484106(D)

Home Telephone: (864) 224-8140 | Owner's Full Name: Nelson-Carey

Bus. Telephone: ( ) N/A | Street/R.F.D.: 55 Dale Dr.

Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville SC 29617

Estimated Speed: 20 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-571028

Driver/Pedestrian's Full Name: Dorchester-Wendy Kathryn

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 546 Chimney Bluff Dr.

Birth Date: 07-15-1968 | City, State, & Zip: Mount Pleasant SC 29464

State: SC | Driver's License #: 01158337 2(D) | Insurance Company: Allstate

Year: 2006 | Body: MV | Vehicle Make: Dodge | VIN #: 2D4GP44L66R684902

State: SC | Year: 2011 | License Plate #: 156 | Owner's D.L. #: N/A

Home Telephone: 843 442-2070 | Owner's Full Name: Dorchester-Daniel Callendar

Bus. Telephone: ( ) N/A | Street/R.F.D.: 546 Chimney Bluff Dr.

Contributed To Collision: (Yes) No | City, State, & Zip: Mount Pleasant SC 29464

Estimated Speed: 30 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: E791253 | Code: 21 | Summons #: N/A | Code | Towed By: N/A

B-571029

Driver/Pedestrian's Full Name: Smith-Pamela E

Unit #: 3 | Sex: F | Race: B | Street/R.F.D.: 300 Watkins Rd.

Birth Date: 07-04-1976 | City, State, & Zip: Greenville SC 29617

State: SC | Driver's License #: 007382950(D) | Insurance Company: State Auto

Year: 2000 | Body: 4S | Vehicle Make: Niss | VIN #: JN1CA31D4YT753646

State: SC | Year: 2010 | License Plate #: CEA 875 | Owner's D.L. #: 007382950(D)

Home Telephone: 864 238-3698 | Owner's Full Name: Smith-Pamela E

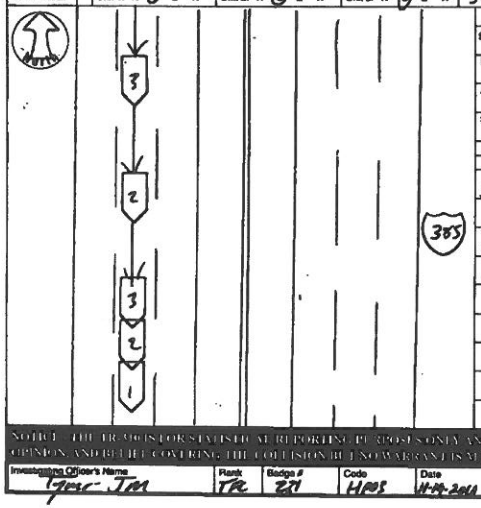
Bus. Telephone: ( ) N/A | Street/R.F.D.: 300 Watkins Rd.

Contributed To Collision: (Yes) No | City, State, & Zip: Greenville SC 29617

Estimated Speed: 30 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: E791254 | Code: 21 | Summons #: N/A | Code | Towed By: N/A

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N (S) E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 1500	$ 1500	$ N/A	$ N/A

Property Owner/Witness	Property Owner/Witness
Address	Address
State / Zip / Phone	State / Zip / Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

Units #1, #2, and #3 were traveling south on I-385. Unit #1 slowed due to traffic. Unit #2 was traveling too fast for conditions and struck Unit #1 in the rear. Unit #3 was traveling too fast for conditions and struck Unit #2 in the rear.

NOTICE: THE INFORMATION CONTAINED IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Tyner-Jim	TPR	221	HP05	11-19-2010		SGT	1060 1283 19

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	04-13-1988	M	W	0	01	13	4	1	1	2			
2	07-15-1968	F	W	0	01	13	4	1	1	2			
3	07-04-1976	F	B	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 66- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

c) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9-Unk.

Pedestrian, Moped/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure

Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 38- Unk. Moveable Object

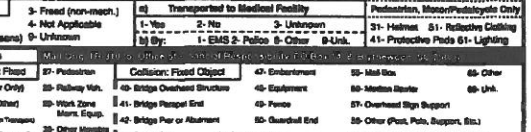
Collision: Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Bridge Pier or Abutment; 50- Bridge Parapet End; 51- Bridge Rail; 52- Guardrail Face; 53- Guardrail End; 54- Culvert; 55- Highway Traffic Sign Post; 56- Curb; 57- Impact Attenuator/Crash Cushion; 58- Light/Luminaire Support; 59- Mail Box; 60- Median Barrier; 61- Utility Pole; 62- Work Zone Maint. Equipment; 65- Other; 66- Unk.

Event 1: 22 | Event 2: 22 | Event 3: 22 | Event 4: 22 | Most Harmful Event: 22 | 1st Harmful Event: 22

01- Overturning/Rollover; 02- Jackknife; 03- Fire/Explosion; 04- Immersion; 05- Jettisoned Cargo; 06- Separation of Units; 07- Ran off Road Right; 08- Ran off Road Left; 09- Cross Median; 10- Cross Centerline; 11- Downhill Runaway; 12- Other Non-Collision; 13- Pedestrian; 14- Pedalcycle; 15- Railway Vehicle; 16- Animal; 17- Motor Vehicle in Transport; 18- Parked Motor Vehicle; 19- Struck Backing Vehicle; 20- Struck Stopped Vehicle; 21- Struck Parked Vehicle; 22- Struck Object Not Fixed; 23- Struck Fixed Object; 24- Other Collision; 25- Unk. Collision

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (┌└); 41- Angle (┐┘); 42- Angle (┌┐); 43- Angle (└┘); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 17 | Most Deformed: 17



21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 98- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Camper Trailer; 7- Boat Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Stopped or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.; 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Urine; 2- Blood; 3- Given - Pending; 4- None; 5- Refused

Alcohol/Drug Test Given: D1 1- Given - Known Results; D2 2- Given - Unusable

Drug Results: D1 1- Amphetamines; D2 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1/6

Deformed Area: 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- None; 5- Not Applicable; 9- Unk.

Extent of Deformity: 1/2 / 2/2 / 3/2

Trafficway: 3

Traffic Control Type: 6/8

Road Character: 1

Road Surface Condition: 1

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1 | 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 13 | 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 10- Y-Intersection; 11- Nonjunction; 99- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

School Bus Involved: 9

Work Zone Location: 2

Work Zone Type: 2

Workers Present: 1- Yes 2- No

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Driver Action

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 64- Other; 65- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

ORIGINAL

DEC 16 20[illegible]

D.P.S. USE ONLY: 10137798 | Page # 1 Of: 2 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2007) | # of Units: 4 | Amended - Attach Copy of Original Report | Corrected | Notified: 0817 | Arrived: 0830

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Is At/Near City or Town of:
11/12/2010	0815	23	385	1	N E S W	Greenville

Lane # / Dir.: 2 S | Distance Offset: Miles .01 Feet | Direction: S | Base Intersection (Rt. # / Name): From 85 | ASRU code | MP/Grid

R.R. Id.: N/A | Ramp Only: From | To | Second Intersection (Rt. # / Name): Toward 146 | Latitude: 34 44 43.60 | Longitude: 82 17 38.52

B-573019

Driver/Pedestrian's Full Name: Rutz - David - Arthur

Unit #	Sex	Race	Street/R.F.D.
1	M	W	600 University Rdg Apt. 9

Birth Date: 04-04-1979 | City, State, & Zip: Greenville, SC, 29601

State	Driver's License #	Insurance Company
SC	100976547 (D)	State Farm

Year	Body	Vehicle Make	VIN #
2002	SW	Sub9	JF1SF655526742067

State	Year	License Plate #	Owner's D.L. #
SC	2010	CLI745	100976547 (D)

Home Telephone: (317)696-2623 | Owner's Full Name: Rutz - David - Arthur

Bus. Telephone: (864)901-8745 | Street/R.F.D.: 600 University Rdg Apt. 9

Contributed To Collision: Yes / No (No) | City, State, & Zip: Greenville, SC, 29601

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg info (see back): Yes / No
0	55	N/A	N/A	(No)

Summons #	Code	Summons #	Code	Towed By
N/A		N/A		North Hills

B-573020

Driver/Pedestrian's Full Name: Koon - Kurla - W

Unit #	Sex	Race	Street/R.F.D.
2	F	W	106 Kingsmill Ct.

Birth Date: 03-06-1967 | City, State, & Zip: Taylors, SC, 29687

State	Driver's License #	Insurance Company
SC	003644151 (D)	Travelers

Year	Body	Vehicle Make	VIN #
2005	SU	Chev	1GNEK13235J265679

State	Year	License Plate #	Owner's D.L. #
SC	2011	DR6879	003644151 (D)

Home Telephone: (864)423-9958 | Owner's Full Name: Koon - Kurla - W

Bus. Telephone: (864)609-6617 | Street/R.F.D.: 106 Kingsmill ct.

Contributed To Collision: Yes / No (No) | City, State, & Zip: Taylors, SC, 29687

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg info (see back): Yes / No
0	55	N/A	N/A	(No)

Summons #	Code	Summons #	Code	Towed By
N/A		N/A		N/A

B-573021

Driver/Pedestrian's Full Name: Dubose - Brian - Mcbride

Unit #	Sex	Race	Street/R.F.D.
3	M	W	276 Oliver Dr.

Birth Date: 10-04-1958 | City, State, & Zip: Inman, SC, 29349

State	Driver's License #	Insurance Company
SC	004964229 (D)	Employers Mutual

Year	Body	Vehicle Make	VIN #
2005	TK	ISU	JALC4B16457011208

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg info (see back): Yes / No
55	55	N/A	N/A	(No)

Summons #	Code	Summons #	Code	Towed By
				N/A

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500 02	$ 1000 02	$ 3000 02	$ N/A	$ N/A

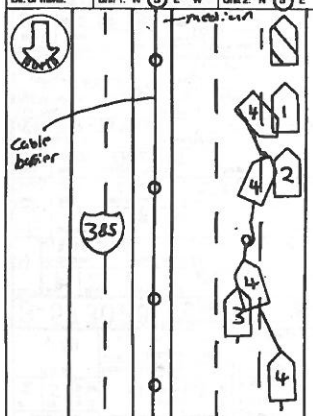
Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and unit #2 were Stopped in traffic headed South on I 385. Unit #3 was traveling South on I 385. Unit #4 traveling South, made an improper lane change and struck unit #3 in the front. Unit #4 then spun into the driver side front of unit #2 then slid into the driver side of unit #1.



NOTICE - THE INFORMATION STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF OVERING THE COLLISION BUT IS NOT WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Gambrell - T.G.	TFC	267	HP03	11/18/2010	[illegible]	Sgt	106V 127898

Unit	Date of Birth	Sex	Race	Sol	Seat	RSD	A.B.D.	Eject	Ext	Tran	Name	Street Address	Zip Code
1	04-04-1979	M	W	0	01	13	4	1	1	2			
2	03-06-1967	F	W	0	01	13	4	1	1	2			
3	10-04-1958	M	W	0	01	13	4	1	1	2			
4	08-08-1993	F	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 5- Deployment Unk.; 6- Not Applicable; 7- Not Applicable; 8- Switch In On Position; 9- Unknown; 0- Switch In Off Position

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; 9- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Head Injury: 1- Yes; 8- No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 06- Fire/Explosion; 05- Overturn/Rollover; 02- Cross Median/Center Line; 09- Immersion; 03- Downhill Runaway; 07- Jackknife; 08- Separation of Units; 10- Ran off Road Right; 11- Ran off Road Left; 12- Spill (Non-Vehicular Veh.); 13- Other Non-collision; 99- Unk. Non-collision

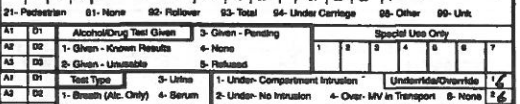
Collision: Not Fixed: 97- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 29- Railway Veh.; 28- Work Zone Maint. Equip.; 30- Other Moveable Object; 98- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Unk.

Events: 1st Harmful Event: 22; 2nd Harmful Event: 22; Most Harmful Event: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear-End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 10; Most Deformed: 10



Vehicle Type: 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 19- Truck Tractor; 20- Other Motorbike; 21- Bicycle; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other (Hit and Run Only)

Vehicle Use Code: 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Entering/Crossing Location; 21- Approaching/Leaving Vehicle; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 28- Walking, Playing, Cycling; 99- Unk.; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 9- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 8- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- None/Minor

Special Use Only

Intrusion: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk.

Underride/Override

Ejection: 1- Totally; 2- Partially; 3- Trapped; 4- Fully Ejected; 5- Unknown

Extent of Deformity: 1- None; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 3

Access: 1- Controlled; 2- Uncontrolled; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk.

Ex. walk: 1- Y 2- N 9- U

1st Harmful Event: 22

Event Loc.: 1- Y 2- N 9- U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 98- 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- RR (X-bucks, Lights & Gates); 04- RR (X-bucks & Lights); 05- RR (X-bucks Only); 06- Yield Sign; 07- Stop Sign; 08- School Zone Sign; 09- Officer or Flagman; 10- Crossing Guard; 11- Pavement Markings (only); 12- Work Zone; 13- Work Zone Warning Signs; 14- Other Warning Signs; 15- Crossing Emergency Vehicle; 16- Flashing Beacon; 17- Other; 18- None; 19- Unk.

School Bus Involved: 3- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 2

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other; 9- Unk.

Work Zone Location

Work Zone Type

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Poles; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factor: 18

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Other Improper Action; 20- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying In/Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 62- Obstruction; 60- Animal in Road; 61- Glare; 63- Weather Cond.; 66- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

DEC 16 2010

D.P.S. USE ONLY: 10137748 | Page # 3 Of: 2 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 4 | Amended - Attach Copy of Original Report Corrected | Notified: 0817 | Arrived: 0830

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	In/Near City or Town of:
11/18/2010	0815	23	385	1	N E S W	Greenville

Lane # / Dir.: 2 S SW | Distance Offset: .01 Miles Feet N E S W | Direction: 3 | Base Intersection (Rt. # / Name): From 85 | ASRU code | MP/Grid

R.R. Id.: N/A | Ramp Only: From NE SW 2 To NE SW | Second Intersection (Rt. # / Name): Toward 146 | Latitude: 34° 49 43.60 | Longitude: 82° 17 38.50

B-573028 — Sparling - Bethany - F

Unit #: 4 | Sex: F | Race: W | Street/R.F.D.: 8 Roanoke Hills Ct.
Birth Date: 09-08-1993 | City, State, & Zip: Simpsonville, SC, 29681
State: SC | Driver's License #: 1020 18190 (D) | Insurance Company: Allstate
Year: 2003 | Body: SU | Vehicle Make: Lexs | VIN #: JTJGF10UX3054464
State: SC | Year: 2011 | License Plate #: DUC145 | Owner's D.L. #: N/A
Home Telephone: (864) 363-7344 | Owner's Full Name: Sparling - Keith - C
Bus. Telephone: 864 420-5826 | Street/R.F.D.: 8 Roanoke Hills Ct.
Contributed To Collision: Yes | City, State, & Zip: Simpsonville, SC, 29681
Estimated Speed: 30 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg into (see back): Yes (No)
Summons #: E789659 | Code: 22 | Summons #: N/A | Code | Towed By: M. Hills (Rot)

B-573029 — Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.
Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
State | Year | License Plate # | Owner's D.L. #
Home Telephone ( ) | Owner's Full Name
Bus. Telephone ( ) | Street/R.F.D.
Contributed To Collision: Yes No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg into (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

B-573030 — Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.
Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
Dir. of Travel | Units: N S E W | Unit 2: N S E W | Unit 3: N S E W
Home Telephone ( ) | Owner's Full Name
Bus. Telephone ( ) | Street/R.F.D.
Contributed To Collision: Yes No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg into (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

North

See Page 1 for diagram

Unit # Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3000 est.	$	$	$ N/A	$ N/A

Property Owner/Witness | Property Owner/Witness
Address | Address
State | Zip | Phone | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number): See page 1 for narrative

NOTICE - THE INFORMATION ON THIS FORM IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Trambrell - J.G. | Rank: TFC | Badge #: 257 | Code: HP03 | Date: 11/18/2010 | Reviewer's Name: H. Rhea | Rank: Cpl | Internal Agency Code: 106 / 123898

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
				a b			a b			a b			
				a b			a b			a b			
				a b			a b			a b			
				a b			a b			a b			
				a b			a b			a b			
				a b			a b			a b			
				a b			a b			a b			
				a b			a b			a b			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal
b) Motorcycle Only: Head Injury: 1-Yes 2-No; Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nonrailing); 51- Other Unenclosed Area (nonrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 88- Unk./NA; 99- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown
b) By: 1- EMS 2- Police 8- Other 9- Unk.

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt Only Safety Seat; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 88- Other; 99- Unk.
Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Deployment Unk.; 7- Not Applicable; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22	23	24	1	22	22
2	0	0	0		
3	3	3	3		

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Overturn/Rollover; 07- Jackknife; 08- Immersion; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Trip-Wrecked Veh.); 13- Other Non-collision; 14- Unk. Non-collision
Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Animal (Deer Only); 31- Animal (All Other); 32- Motor Veh. (In Transport); 33- Motor Veh. (Stopped); 34- Motor Veh. (Other Roadway); 35- Motor Veh. (Parked); 36- Pedalcycle; 39- Other Moveable Object; 99- Unk. Moveable Object
Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Support; 42- Bridge Rail; 43- Bridge Pier or Abutment; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Poll, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 1st / Most Harmful Event: 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (<90°); 42- Angle (>90°); 43- Angle (180°); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed into; 99- Unknown

Deformed Area: 1st Deformed: 3; Most Deformed: 3

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 90- Other; 98- Unk

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Drawn Veh.); 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 99- Unk.
Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other
Trafficway: 3

Alcohol/Drug Test Given: 3- Given - Pending
1- Given - Known Results; 2- Given - Unusable; 4- None; 5- Refused
Special Use Only

Test Type: 3- Urine
1- Breath (Alc. Only); 2- Blood; 4- Serum; 5- Urine; 8- Other
Drug Results: 3- Marijuana
1- Amphetamines; 2- Cocaine; 4- Opiates; 5- PCP; 8- Other; 9- Unk.

1- Under Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- Unk.; 9- Unk.
Underride/Override: 96
Extent of Deformity: 4
0- None/Minor; 1- Functional Damage; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other
Trafficway: 3
1- Dirt; 2- Gravel; 3- Median; 4- Paved; 5- Paved/Dry; 6- Paved/Wet; 7- Paved/Snow; 8- Paved/Ice; 9- Unk.
Ramp: 1- Y 2- N 9- U
1st Harmful Event: 5
Loc.: 2

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest
Road Character: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.
Road Surface Condition: 1

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.
Traffic Control Type: 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.
1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)
1

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.
School Bus Involved: 5

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area
1- Yes 2- No Work Zone: 2
Work Zone Location: ----------
Work Zone Type: ----------

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Ramjunction; 99- Unk.
13

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.
1- Yes 2- No Workers Present:

Primary: 18

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 60- Under the Influence; 61- Glare

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Other; 66- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

Other: 00- None; 88- Other; 99- Unk.

CRASH DATA

I-85 @ WOODRUFF RD

ORIGINAL

D.P.S. USE ONLY: 10003727 | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev 01/2001)

# of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: MID | Arrived: 1435

Disp: 01-10-2010 | Time: 1405 | County: 23 (3-SC Primary)

Collision Location (Rt. # / Name): 6 146 | 0-Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other | Miles: 1 | Dir: E S W | Near City or Town of: Greenville

Lane # / Dir.: 3 | Of: 6 | Dir: S | Distance Offset: 50 Miles Feet | Direction: S | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other

Base Intersection (Rt. # / Name): From 86

Second Intersection (Rt. # / Name): Toward 1121 | 0-Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other

ASRU code | MP/Grid | Latitude: 34 49 47.00 | Longitude: 82 18 13.80

R.R. Id.: N/A | From: Ramp Only To: 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | 1-Entrance 2-Exit

B-700450 — Driver/Pedestrian's Full Name: Calhoun- Robert Anderson Jr.

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 226 Valley Green | Birth Date: 06-16-1974 | City, State, & Zip: Mauldin, SC 29662

State: SC | Driver's License #: 004130884 (D) | Insurance Company: State Farm

Year: 2004 | Body: SU | Vehicle Make: Niss | VIN #: SNIED28Y04C666022

State: SC | Year: 2004 | License Plate #: CVX 786 | Owner's D.L. #: 004130884 (D)

Home Telephone: (864) 995-2733 | Owner's Full Name: Calhoun- Robert Anderson Jr.

Bus. Telephone: (864) 995-2733 | Street/R.F.D.: 226 Valley Green

Contributed To Collision: Yes | City, State, & Zip: Mauldin, SC 29662

Estimated Speed: 10 | Speed Limit: 40 | C.D.L. Req: Yes (No) | T/B 5 Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # / Code: E326039 42 | Summons # / Code: N/A | Towed By: N/A

B-700451 — Driver/Pedestrian's Full Name: Rollins- Audy Paul

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 2045 Gibbs Shoals Road | Birth Date: 12-11-1971 | City, State, & Zip: Greer, SC 29650

State: SC | Driver's License #: 007053154 (B) | Insurance Company: State Farm

Year: 2006 | Body: SU | Vehicle Make: Kia | VIN #: KNDJD733365551204

State: SC | Year: 2010 | License Plate #: FBB 755 | Owner's D.L. #: 007053154 (B)

Home Telephone: (864) 877-4177 | Owner's Full Name: Rollins- Audy Paul

Bus. Telephone: (864) 877-4177 | Street/R.F.D.: 2045 Gibbs Shoals Road

Contributed To Collision: Yes (No) | City, State, & Zip: Greer, SC 29650

Estimated Speed: 35 | Speed Limit: 40 | C.D.L. Req: Yes (No) | T/B 5 Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # / Code: N/A | Towed By: N/A

B-700452 — Driver/Pedestrian's Full Name: N/A

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Home Telephone | Owner's Full Name: JAN 27 2010

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B 5 Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # / Code | Summons # / Code | Towed By

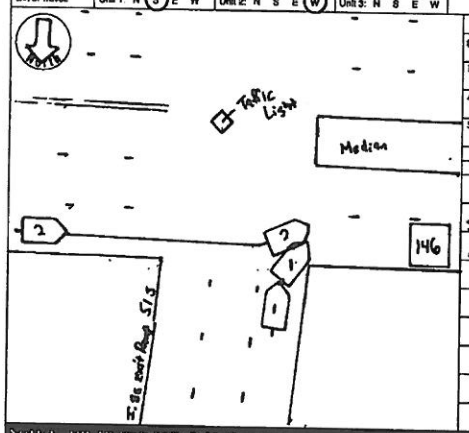
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 750	$ 1000	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photos: Y N | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling South on to SC-146 from I-85 Exit Ramp. Unit #2 was traveling West on SC-146. Unit #1 made an improper turn on red and struck Unit #2. No turn on red signs posted clearly at intersection.



NOTICE - THE INFORMATION ON THIS FORM IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT IS NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: Andis-DC | Rank: Sfpr | Badge #: 712 | Code: HP83 | Date: 01-10-2010 | Reviewer's Name: [illegible] | Rank: Sgt | Internal Agency Code: 004369

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	EJI	Tran	Name	Street Address	Zip Code
1	06-16-1974	M	W	0	01	13	4 9	1	1	2			
2	12-11-1971	M	W	0	01	13	4 9	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, I - Alaskan Native or American Indian, W - Caucasian, H - Hispanic, O - Other, U - Unk.

a) Injury Status: 0-Not Injured, 1-Possible, 2-Non-Incapacitating, 3-Incapacitating, 4-Fatal. b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 04 05 06 07 08 09

20-Pedestrian, 30-Trailing Unit, 40-Bus or Van (4th row or Higher), 50-Other Enclosed Area (noncrolling), 51-Other Unenclosed Area (noncrolling), 60-Sleeper of Cab, 70-Riding on Unit Exterior, 80-Lap, 99-Unk./N/A

Restraint/Safety Device: 00-None Used, 11-Shoulder Belt Only, 12-Lap Belt Only, 13-Shoulder & Lap Belt, 21-Child Safety Seat, 88-Other, 99-Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet, 41-Protective Pads, 51-Reflective Clothing, 61-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front, 2-Deployed Side, 3-Deployed Both, 4-Not Deployed, 7-Not Applicable, 9-Deployment Unk. b) 1-Switch in On Position, 2-Switch in Off Position, 3-No Switch, 9-Unknown

Ejection: 1-Not Ejected, 2-Part. Ejected, 3-Tot. Ejected, 7-Not App., 9-Unk.

Location After Impact: 1-Not Trapped, 2-Extricated (Mechanical Means), 3-Freed (non-mech.), 4-Not Applicable, 9-Unknown

a) Transported to Medical Facility: 1-Yes, 2-No, 3-Unknown. b) By: 1-EMS 2-Police 8-Other 9-Unk.

Sequence of Events

Non-Collision: 01-Cargo/Equip Loss or Shift, 02-Cross Median/Center Line, 03-Downhill Runaway, 04-Equipment Failure, 05-Fire/Explosion, 06-Immersion, 07-Jackknife, 08-Overturn/Rollover, 09-Ran off Road Left, 10-Ran off Road Right, 11-Separation of Units, 12-Spill (Non-Vehicular), 13-Other Non-collision, 19-Unk. Non-collision

Collision: Not Fixed: 20-Animal (Deer Only), 21-Animal (All Other), 22-Motor Veh. in Transport, 23-Motor Veh. (Unpowered), 24-Motor Veh. (Other Powered), 25-Motor Veh. (Parked), 26-Pedalcycle, 27-Pedestrian, 28-Railway Veh., 29-Work Zone Maint. Equip., 30-Other Movable Object, 99-Unk. Movable Object

Collision: Fixed Object: 40-Bridge Overhead Structure, 41-Bridge Pier or Abutment, 42-Bridge Rail, 43-Bridge Rail, 44-Culvert, 45-Curb, 46-Ditch, 47-Embankment, 48-Equipment, 49-Fence, 50-Guardrail End, 51-Guardrail Face, 52-Highway Traffic Sign Post, 53-Impact Attenuator/Crash Cushion, 54-Light/Luminaire Support, 55-Mail Box, 56-Median Barrier, 57-Overhead Sign Support, 58-Pole, 59-Other (Post, Pole, Support, Etc.), 60-Other (Wall, Building, Tunnel, Etc.), 61-Utility Pole, 69-Unk.

Manner of Collision (Struck Veh.): 00-Not Coll. W/Motor Veh., 10-Rear End, 20-Head On, 30-Rear-to-Rear, 40-Angle, 50-Sideswipe Same Dir., 60-Sideswipe Opposite Dir., 70-Backed Into, 80-Other, 99-Unknown

Deformed Area: 1st / Most; 1st Deformed; Most Deformed. 21-Pedestrian, 81-None, 82-Rollover, 83-Total, 84-Under Carriage, 85-Other, 99-Unk.

Vehicle Type: 01-Automobile, 02-Pickup/Truck, 03-Truck Tractor, 04-Other Truck, 15-Full Size Van, 16-Mini Van, 17-Sport Utility, 25-Motorcycle, 26-Other Motorbike, 27-Pedalcycle, 28-Animal (Drawn Veh.), 29-Animal (Ridden), 41-Pedestrian, 51-Train, 61-School Bus, 62-Passenger Bus, 98-Other, 99-Unk. (Hit and Run Only)

Vehicle Use Codes: 01-Personal, 02-Driver Training, 03-Construction/Maint., 04-Ambulance, 05-Military, 06-Transport Passengers, 07-Transport Property, 08-Farm Use, 09-Wrecker or Tow, 10-Police, 11-Government, 12-Fire Fighting, 13-Logging, 18-Other, 41-Pedestrian

Vehicle Attachment: 1-None, 2-Mobile Home, 3-Semi-Trailer, 4-Utility Trailer, 5-Farm Trailer, 6-Trailer w/Boat, 7-Camper Trailer, 8-Towed Motor Vehicle, 9-Petroleum Tanker, A-Lowboy Trailer, B-Autocarrier Trailer, C-Other Tanker, D-Flat Bed, E-Twin Trailers, F-Other

Action Prior to Impact (Vehicle): 01-Backing, 02-Changing Lanes, 03-Entering Traffic Lane, 04-Leaving Traffic Lane, 05-Making U-turn, 06-Movements Essentially Straight Ahead, 07-Overtaking/Passing, 08-Parked, 09-Slowing or Stopped in Traffic, 10-Turning Left, 11-Turning Right, 88-Other, 99-Unk.

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle, 22-Entering/Crossing Location, 23-Playing/Working on Vehicle, 24-Pushing Vehicle, 25-Standing, 26-Walking, Playing, Cycling, 27-Working

Alc Test Results: A1-, A2-, A3-

Test Type: 1-Urine, 2-Blood, 3-Given - Pending, 4-None, 5-Refused

Alcohol/Drug Test Given: 1-Given - Known Results, 2-Given - Unusable

Special Use Only

Drug Results: 1-Amphetamines, 2-Cocaine, 3-Marijuana, 4-Opiates, 5-PCP, 8-Other

Underride/Override: 0-None/Minor, 1-Under-Compartment Intrusion, 2-Under- No Intrusion, 3-Under- Unknown, 4-Over- MV in Transport, 5-Over- Other Vehicle, 9-Unk.

Extent of Deformity: 0-None/Minor, 1-Functional Damage, 2-Disabling Damage, 4-Severe/Totaled, 5-Not Applicable, 9-Unk.

Trafficway: 1-Two-way, Not Divided, 2-Two-way, Divided, Unprotected Median, 3-Two-way, Divided, Barrier, 4-One-way, 8-Other

Accident Type: A: 1-Cont. 2-Median 3-Roadway 4-Roadside 5-Ditch 6-Shoulder 7-Sidewalk 8-Unk. B: X-traffic 1-Y 2-N 9-U. 1st Harmful Event Loc.: 54

Road Character: 1-Straight - Level, 2-Straight - On Grade, 3-Straight - Hillcrest, 4-Curve - Level, 5-Curve - On Grade, 6-Curve - Hillcrest

Road Surface Condition: 1-Dry, 2-Wet, 3-Snow, 4-Slush, 5-Ice, 6-Contaminate, 7-Water (Standing, etc.), 8-Other, 9-Unk.

Traffic Control Type: 01-Stop and Go Light, 02-Flashing Traffic Signal, 11-RR (X-bucks, Lights & Gates), 12-RR (X-bucks & Lights), 13-RR (X-bucks Only), 21-Officer or Flagman, 22-Oncoming Emergency Vehicle, 41-Stop Sign, 42-School Zone Sign, 43-Yield Sign, 51-Flashing Beacon, 44-Work Zone, 45-Other Warning Signs, 99-None, 99-Unk.

School Bus Involved: 1-Yes, Directly, 2-Yes, Indirectly, 3-No, 9-Unk.

Work Zone: 1-Before 1st Sign, 2-Advanced Warning Area, 3-Transition Area, 4-Activity Area, 5-Termination Area, 1-Yes 2-No

Work Zone Location: 1-Shoulder/Median Work, 2-Lane Shift/Crossover, 3-Intermittent/Moving Work, 4-Lane Closure, 8-Other, 9-Unk.

Work Zone Type: 1-Yes 2-No

Workers Present: 1-Yes 2-No

Weather Condition: 1-Clear (no adverse conditions), 2-Rain, 3-Cloudy, 4-Sleet, Hail, 5-Snow, 6-Fog, Smog, Smoke, 7-Blowing Sand, Soil, Dirt or Snow, 8-Severe Crosswinds, 9-Unk.

Light Condition: 1-Daylight, 2-Dawn, 3-Dusk, 4-Dark (Lighting Unspecified), 5-Dark (Street Lamp Lit), 6-Dark (Street Lamp Not Lit), 7-Dark (No Lights)

Junction Type: 01-Crossover, 02-Driveway, 03-Five/More Points, 04-Four-way Intersection, 05-Railway Grade Crossing, 07-Shared Use Paths or Trail, 08-T-Intersection, 09-Traffic Circle, 12-Y-Intersection, 13-Roundabout, 99-Unk.

Primary Contributing Factors

Driver: 01-Disregarded Signs, Signals, Etc., 02-Distracted/Inattention, 03-Driving Too Fast for Conditions, 04-Exceeded Authorized Speed Limit, 05-Failed to Yield Right of Way, 06-Ran off Road, 07-Fatigued/Asleep, 08-Followed Too Closely, 09-Made an Improper Turn, 10-Medical Related, 11-Aggressive Operation of Vehicle, 12-Over-correcting/Over-steering, 13-Swerving to Avoiding Object, 14-Under the Influence, 15-Wrong Side or Wrong Way, 16-Under the Influence, 17-Vision Obscured (Within Unit), 18-Improper Lane Usage/Change, 28-Other Improper Action, 29-Unk.

Roadway: 30-Debris, 31-Non-highway Work, 32-Obstruction in Roadway, 33-Road Surface Condition (i.e., Wet), 34-Rut, Holes, Bumps, 35-Shoulders (None, Low, Soft, High), 36-Traffic Control Device (i.e., Missing), 37-Work Zone (Constr./Maint./Utility), 38-Worn, Travel-Polished Surface, 48-Other, 49-Unk.

Non-Motorist: 50-Inattentive, 51-Lying &/or Illegally in Roadway, 52-Failure to Yield R. of W., 53-Not Visible (Dark Clothing), 54-Disregard Signs, Signals, Etc., 55-Improper Crossing, 56-Darting, 57-Wrong Side of Road, 58-Other, 59-Unk., 88-Under the Influence, 89-Under the Influence

Environmental: 60-Animal in Road, 61-Glare, 62-Obstruction, 63-Weather Cond., 68-Other, 69-Unk.

Vehicle Defect: 70-Brakes, 71-Steering, 72-Power Plant, 73-Tires/Wheel, 74-Lights, 75-Signals, 76-Windows/Shield, 77-Restraint System, 78-Truck Coupling, 79-Cargo, 80-Fuel System, 88-Other, 89-Unk.

Others: 88-Other Person Under the Influence

ORIGINAL

D.P.S. USE ONLY: 10005342 | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT TR-310 (Rev. 01/2001)

# of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 2040 | Arrived: 2050

Date: 01-19-2010 | Time: 2032 | County: 23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- Other)

Collision Location (Rt. # / Name): 85 | (0- Main 2- Alternate 5- Spur 8- Connection 7- Business 9- Other) | Miles: 1 | Dir.: NE | Near City or Town of: GREENVILLE

Lane # / Dir.: 3 | Of: 3 | NE SW | Distance Offset: 12 Miles/Feet | Direction: N E S W | (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- Other)

Base Intersection (Rt. # / Name) From: 146 | Second Intersection (Rt. # / Name) Toward: 85 | (0- Main 2- Alternate 5- Spur 8- Connection 7- Business 9- Other)

R.R. Id.: N/A | From: NE SW 1- Entrance 2- Exit | To: NE SW (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- Other)

ASRU code | MP/Grid | Latitude: 34° 49' 38.30 | Longitude: 82° 18' 46.50

B-709315

Driver/Pedestrian's Full Name: LEWIS-SINCLAIR E.

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 508 HOLLY CREEK DR.

Birth Date: 06-17-1931 | City, State, & Zip: ANDERSON, SC 29621

State: SC | Driver's License #: 000991985 (D) | Insurance Company: HORACE MANN

Year: 2003 | Body: 4DR | Vehicle Make: NISS | VIN #: JN8AZ08T33W122298

State: SC | Year: 2010 | License Plate #: FGY010 | Owner's D.L. #: 000991985 (D)

Home Telephone: 864 335-1474 | Owner's Full Name: LEWIS-SINCLAIR E.

Bus. Telephone: 864 458-6111 | Street/R.F.D.: 508 HOLLY CREEK DR.

Contributed To Collision: No | City, State, & Zip: ANDERSON, SC 29621

Estimated Speed: D | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons # | Code | Towed By: N/A

B-709316

Driver/Pedestrian's Full Name: LEWIS-TIMOTHY TENNEN

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 6509 WHITEOAK RD.

Birth Date: 08-25-1962 | City, State, & Zip: COLUMBIA, SC 29206

State: SC | Driver's License #: 008114235 (D) | Insurance Company: PERMANENT GEN.

Year: 2002 | Body: SU | Vehicle Make: MCTS | VIN #: JA4LS21H42J065951

State: SC | Year: 2010 | License Plate #: ETC850 | Owner's D.L. #: N/A

Home Telephone: 803 790-7189 | Owner's Full Name: LEWIS-BLYTHE D.

Bus. Telephone: 803 736-8580 | Street/R.F.D.: 6509 WHITEOAK RD.

Contributed To Collision: Yes | City, State, & Zip: COLUMBIA, SC 29206

Estimated Speed: 20 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E324446 | Code: 82 | Summons #: N/A | Code | Towed By: N/A

B-709317

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

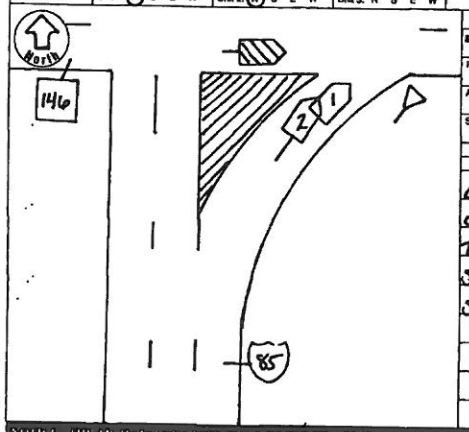
Home Telephone | Owner's Full Name: JAN 21, 2010

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000.00	$ 3500.00	$	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photo: Y N | Describe What Happened (Refer to Units by Number)

BOTH UNITS WERE TRAVELING NORTH ON I-85 EXIT RAMP TO SC 146. DRIVER OF UNIT 1 STATED HE STOPPED IN ORDER TO YIELD TO OTHER TRAFFIC. UNIT 2, STARTING IMPROPERLY FROM STOP, THEN STRUCK UNIT 1 ON THE LEFT REAR.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A COLLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION. IT IS NOT A WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: CANNON-J.B. | Badge #: 3128 | Badge #: 297 | Code: AP03 | Date: 01-19-2010 | Reviewer's Name: Taylor-T.J. | Rank: CPL. | Internal Agency Code: 7878

Unit	Date of Birth	Sex	Race	SHJ	Seat	RSD	A.B.D.	Eject	LAI	Trap
1	06-17-1931	M	W	0	01	13	4.3	1	1	2
2	08-25-1962	M	W	0	01	13	4.3	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Overturn/Rollover; 07- Jackknife; 08- Immersion; 09- Cargo/Equip Loss or Shift; 10- Fell/Jumped From Vehicle; 11- Separation of Units; 12- Ran off Road Right; 13- Ran off Road Left; 14- Cross Median; 15- Cross Center Line/Opposing Traffic; 16- Downhill Runaway; 17- Other Non-Collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 31- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Rail End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail Face; 49- Guardrail End; 50- Impact Attenuator/Crash Cushion; 51- Concrete Traffic Barrier; 52- Other Traffic Barrier; 53- Traffic Sign Post; 54- Other Post, Pole or Support; 55- Traffic Signal Post; 56- Tree; 57- Building; 58- Fire Hydrant; 59- Other Fixed Object

Event	Event	Event	Event	Most Harmful
1	22			23
2	23			

1st Harmful: 23

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 43- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 1 7 / 1 2

Most Deformed: 1 7 / 1 2

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Motorized Bike; 31- Train; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01 / 01; 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1 / 1; 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; A: 1- Clear 2- Blood 3- Medium 4- Residue 5- Shoulder 6- Outside Trafficway 7- Between 9- Unk.; B: X- traffic; Y- 1- Y 2-N 9-U

Test Type: 1- Breath (Alc. Only) 2- Blood 3- Urine 4- Serum 8- Other

Drug Results: 1- Amphetamines 2- Cocaine 3- Marijuana 4- Opiates 5- PCP 8- Other

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk.

Alc/Drug Results: 0- None/Minor; 1- Functional Impairment; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1 / 6

Extent of Deformity: 1 / 2

Trafficway: 4

1st Harmful Event: 2 / 32

Road Character: 5

Road Surface Condition: 1

Traffic Control Type: 43

School Bus Involved: 8

Work Zone: 2

Work Zone Location

Work Zone Type

Workers Present: 1- Yes 2- No

1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Weather Condition: 1 / 1; 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Severe Crosswinds; 7- Blowing Sand, Soil, Dirt or Snow; 8- Snow; 9- Unk.

Light Condition: 4 / 1; 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 13 / 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary: 28

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Driving; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 20- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Infl.; 67- Other Person Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 11- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 81- Lighting

Transported to Medical Facility: a) 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Mail Orig. Images to Office of Research and Statistics, PO Box 1498, Blythewood, SC 29016

ORIGINAL

D.P.S. USE ONLY: 10006578 | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 01/2001)

# of Units: 1 | Amended - Attach Copy of Original Report: Corrected | Notified: 0750 | Arrived: 0809

Date: 01-17-2010 | Time: 0745 | County: 23 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other

Collision Location (Rt. # / Name): 8 146 | 1- Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other

Miles: 2 | Dir.: N E W S | 4m / Near City or Town of: Greenville

Lane # / Dir.: 2 | Of: 2 | N E S W

Distance Offset: 30 Miles Feet | Direction: N E S W

1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other

Base Intersection (Rt. # / Name): From 85

ASRU code: | MP/Grid:

Latitude: 34° 49' 47.60"

Longitude: 82° 18' 24.15"

R.R. Id.: N/A | From: N E S W Entrance 1- Ramp Only 2- Exit | To: N E S W

Second Intersection (Rt. # / Name): Toward Woodruff Industrial

B-710158

Driver/Pedestrian's Full Name: Unknown

Unit #: 1 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company: Unknown

Year: 2003 | Body: SW | Vehicle Make: Jeep | VIN #: 1J4GX48S43C564822

State: SC | Year: 2010 | License Plate #: FEN 124 | Owner's D.L. #: N/A

Home Telephone: ( ) N/A | Owner's Full Name: Osmond-Gary Paul

Bus. Telephone: ( ) N/A | Street/R.F.D.: 3849 Camp Rd

Contributed To Collision: No | City, State, & Zip: Greer SC 29651

Estimated Speed: 20 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: Jerry's (RLL)

B-710159

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit: 45 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

B-710160

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

FEB 02 2010

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$2000.00	$ N/A	$ N/A	$ N/A	$ N/A

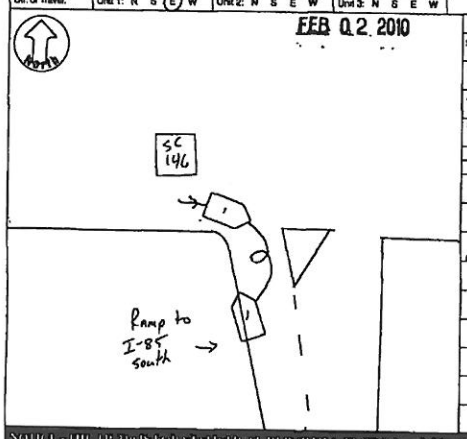
Property Owner/Witness: N/A | Property Owner/Witness: N/A

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 was exiting the ramp to I-85 south from SC 146. Un.t #1 lost control and struck the curb. The driver of unit #1 left the scene



NOTICE - THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH AND ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Edwards-C.O.	Ofc	546	0HP43	01-17-2010	Bradley-TPR	Sgt	00861

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	Unknown	U	U	0	01	99	9	9	1	1			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 04 05 06 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 85- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front 2- Deployed Side 3- Deployed Both 4- Not Deployed 7- Not Applicable 9- Deployment Unk.; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Most Harmful Events: Rule 43 Financial Responsibility Act of 1952 Effective 1 July 2010

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Overturn/Rollover; 07- Jackknife; 08- Immersion; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Event 1: 10 | Event 2 | Event 3 | Event 4 | Most Harmful: 45

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1-; A2-; A3-

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 8- PCP; 9- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Underride/Override: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk.

1st / Most Deformed Area

1st Deformed: 1 2 3 | Most Deformed: 1 2 3

21- Pedestrian; 81- None; 92- Rollover; 93- Total; 94- Under Carriage; 98- Other; 99- Unk.

Trafficway: 4 | Lanes: 6 | Event Loc.: 6

Road Character: 2 (1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest)

Road Surface Condition: 2 (1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.)

Traffic Control Type: 99 (01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.)

School Bus Involved: 3 (1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.)

Work Zone: 2 (1- Yes 2- No)

Work Zone Location: (1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area)

Work Zone Type: (1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.)

Workers Present: (1- Yes 2- No)

Weather Condition: 3 (1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.)

Light Condition: 1 (1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights))

Junction Type: 13 (01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 09- Unk.; 12- Y-Intersection; 13- Nonjunction)

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Cell Phone; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Instinctive 68- Under the Influence; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others:

ORIGINAL

D.P.S. USE ONLY **10021724** | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-10 | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1330 | Arrived 1350

Date 02-28-2010 | Time 1320 | County 23 | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County | Collision Location (Rt. # / Name) 85 | 0-Main 1-Alternate 2-Alternate 5-Spur 6-Connection 7-Business 8-Connection 9-Other | Miles: .10 | Dir. N E S W | In / Near City or Town of: GREENVILLE

Lane # / Dir. 3 | Of 3 | N E S W | Distance Offset .01 Miles Feet | Direction N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) 146 | ASRU code | MP/Grid

R.R. Id. NA | From N E S W | Ramp Only 1 - Entrance 2 - Exit | To N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name) 276 | Latitude 34° 49' 38.12" | Longitude 82° 18' 07.15"

A-595705 | Driver/Pedestrian's Full Name: Smith-Gregory Keith

Unit # 1 | Sex M | Race B | Street: 60 Uneeda Dr.

Birth Date 06-24-1970 | City, State, & Zip: Greenville, SC 29605

State SC | Driver's License # 097346178 (D) | Insurance Company: St Paul Fire & Marine

Year 2001 | Body SNV | Vehicle Make Jeep | VIN # 1J4FF48S41L619832

State SC | Year 2010 | License Plate # AAV 108 | Owner's D.L. # NA

Home Telephone (864) 422-8835 | Owner's Full Name: City of Greenville

Bus. Telephone (864) 467-5371 | Street: 348 S. Hudson St.

Contributed To Collision Yes (W) | City, State, & Zip: Greenville, SC 29601

Estimated Speed 0 | Speed Limit 60 | C.D.L. Req: Yes (No) | T/S 8 Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # NA | Code | Summons # NA | Code | Towed By NA

A-595706 | Driver/Pedestrian's Full Name: Davison-Richard Douglas

Unit # 2 | Sex M | Race W | Street: 533 N. Glassy Mountain Rd.

Birth Date 08-22-1959 | City, State, & Zip: Landrum, SC 29356

State SC | Driver's License # 007735284 (DR) | Insurance Company: Nationwide

Year 2001 | Body 2-DR | Vehicle Make Mazd. | VIN # WDBLK70GX1T069273

State SC | Year 2011 | License Plate # CUS 325 | Owner's D.L. # 007735284 (DR)

Home Telephone (864) 630-3656 | Owner's Full Name: Davison-Richard Douglas

Bus. Telephone (864) 895-9803 | Street: 533 N. Glassy Mountain Rd.

Contributed To Collision (W) | City, State, & Zip: Landrum, SC 29356

Estimated Speed 10 | Speed Limit 60 | C.D.L. Req: Yes (No) | T/S 8 Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # F184631 | Code 82 | Summons # NA | Code | Towed By (on) JR Towing

A-595707 | Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

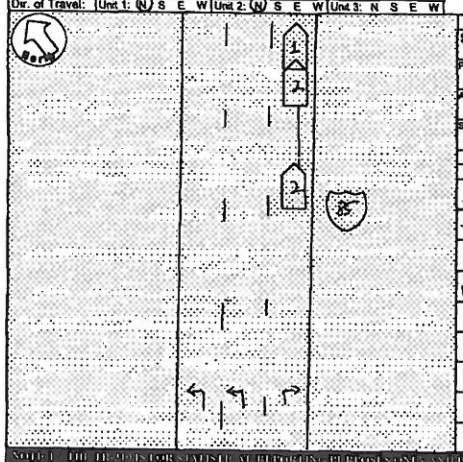
Bus. Telephone ( ) | Street

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S 8 Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 300.00	$ 1500.00	$ NA	$ NA	$ NA

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: | Describe What Happened (Refer to Units by Number)

(V) Unit #1 and Unit #2 were stopped in traffic on the ramp from I-85 to SC 146. The driver of Unit #2 improperly started from a stop, causing Unit #2 to strike Unit #1.

NOTICE: THE FACTS FOR CAUSE AT REPORTING PERSON'S ONLY AND IS SUBJECT TO CHANGE IF OTHER FACTS ARE DISCOVERED. THE OPINION AND BELIEF OF THE COLLISION INVESTIGATOR IS BASED ON FACTS AS KNOWN AT THE TIME OF REPORT.

Investigating Officer's Name: Abercrombie - R.K. | Rank TFC | Badge # 633 | Code HP03 | Date 03-22-2010 | Reviewer's Name: Gaylord - T.J. | Rank CPL. | Internal Agency Code: 10GV021153

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	06-24-1970	M	B	0	01	13	U	3	1	1	6		
2	08-22-1959	M	W	0	01	13	U	3	1	1	2		

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 — 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 7-Not Applicable; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shft; 02- Cross Median/Cross Line; 03- Downhill Runaway; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Trailer/Motor Veh.); 13- Other Non-Collision; 19- Unk. Non-Collision

Collision Fixed Object: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 30- Other Movable Object; 39- Unk. Movable Object; 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Rail End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 99- Unk.

Collision Not Fixed: 27- Pedestrian

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (<90°); 42- Angle (>90°); 43- Angle (=90°); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

1st Deformed: 1 2 3 4 5 6 7

Most Deformed: 1 2 3 4 5 6 7

Vehicle Types: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Fwt Bdrs Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Alcohol / Drug Test: Given 1- Given - Known Results 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc Only) 2- Blood; 3- Urine; 4- Serum; 8- Other

Underide/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 5- Not Applicable

Extent of Deformity: 0 1 2 3 4 5 6 7 8 9

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way Divided Barrier; 4- One-Way; 8- Other

A2- 1- Conc 2- Island 3- Median 4- Roadside 5- Roadway 6- Shoulder 7- Sidewalk 8- Unk. 9- Outside Trafficway

A3- A- 1- Straight - Level 2- Straight - On Grade 3- Straight - Hillcrest 4- Curve - Level 5- Curve - On Grade 6- Curve - Hillcrest 8- X-walk 9- Other

Trafficway: 4

1st Harmful Event Loc: 5 2

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Road Character: 1- Straight - Level 2- Straight - On Grade 3- Curve - Level 4- Curve - Hillcrest

Road Surface Condition: 1- Dry 2- Wet 3- Snow 4- Slush 5- Ice 6- Contaminate 7- Water (Standing, etc.) 8- Other 9- Unk

Traffic Control Type: 01- Stop and Go Light 02- Flashing Traffic Signal 03- RR (X-bucks, Lights & Gates) 04- RR (X-bucks & Lights) 05- RR (X-bucks Only) 06- Stop Sign 07- Yield Sign 08- School Zone Sign 09- Other Warning Signs 10- Officer or Flagman 11- Officer or Flagman 12- Oncoming Emergency Vehicle 31- Pavement Markings (only) 41- Slop Sign 42- School Zone Sign 43- Yield Sign 44- Work Zone 45- Other Warning Signs 51- Flashing Beacon 99- Unk

Weather Condition: 1- Clear (no adverse conditions) 2- Rain 3- Cloudy 4- Sleet, Hail 5- Snow 6- Fog, Smog, Smoke 7- Blowing Sand, Oil, Dirt or Snow 8- Severe Crosswinds 9- Unk.

Light Condition: 1- Daylight 2- Dawn 3- Dusk 4- Dark (Lighting Unspecified) 5- Dark (Street Lamp Lit) 6- Dark (Street Lamp Not Lit) 7- Dark (No lights)

School Bus Involved: 1- Yes, Directly 2- Yes, Indirectly 3- No 9- Unk.

Work Zone: 1- Yes 2- No

Work Zone Location: 1- Before 1st Sign 2- Advanced Warning Area 3- Transition Area 4- Activity Area 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work 2- Lane Shift/Crossover 3- Intermittent/Moving Work 4- Lane Closure 8- Other 9- Unk.

Workers Present: 1- Yes 2- No

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-junction; 99- Unk.

Primary Contributing Factors: 27

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 26- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 57- Wrong Side of Road; 66- Under the Influence; 67- Other Person Under Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY **10023819** | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 11/2011 | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 0948 | Arrived 0948

Date 3/3/10 | Time 948 | County 03 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary | Collision Location (Rt. # / Name) S Woodruff Rd | 1-Main 6-Connection 2-Alternate 7-Business 5-Spur | Miles: Dir. N E S W | (In) Near City or Town of: Greenville

Lane # / Dir. #1 of 3 N E S W | Distance Offset 50 Miles Feet | Direction N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name) From I-85 | 1-Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other | ASRU code | MP/Grid | Latitude 10°9.225" | Longitude 160°9.182"

R.R. Id. | From: N E S W 1 - Entrance 2 - Exit | Ramp Only | To: 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Second Intersection (Rt. # / Name) Toward Carolina Point Pkwy | 1-Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other

A-393205 — Driver/Pedestrian's Full Name: Vagan-Amanda Blair

Unit # 1 | Sex F | Race W | Street: 10 Faris Cir.
Birth Date 6/14/82 | City, State, & Zip: Greenville SC 29605
State SC | Driver's License # 7915549 - D | Insurance Company: Nationwide
Year 2007 | Body CN | Vehicle Make Saab | VIN # YS3FD79Y476000339
State SC | Year 2010 | License Plate # BQW326 | Owner's D.L. # Same
Home Telephone (864)313-0993 | Owner's Full Name
Bus. Telephone (864)967 2010 | Street
Contributed To Collision Yes / No | City, State, & Zip
Extent of Damage | Speed Limit 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)
Estimated Speed 10 | Summons # 91493 FB | Code 48 | Towed By

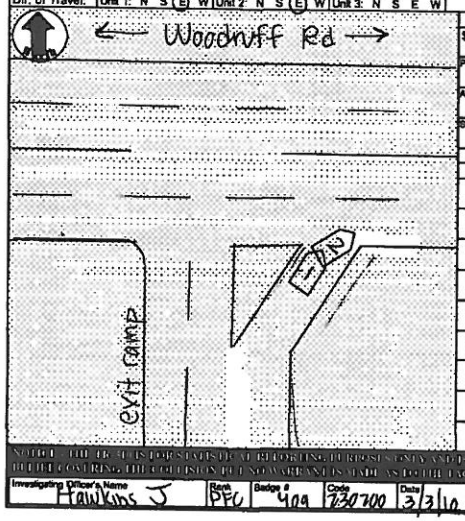
A-393206 — Driver/Pedestrian's Full Name: Runnion, Gena S.

Unit # 2 | Sex F | Race W | Street: 517 Spaulding Lake Dr
Birth Date 4/02/69 | City, State, & Zip: Greenville SC 29615
State SC | Driver's License # 7979820 - D | Insurance Company: Old Republic
Year 2008 | Body SU | Vehicle Make Ford | VIN # 1FMDK06W X8GA26354
State SC | Year 2010 | License Plate # FMV118 | Owner's D.L. #
Home Telephone (803)413-3155 | Owner's Full Name: Wheels LT.
Bus. Telephone (864)6750234 | Street: 517 Spaulding Lake Dr
Contributed To Collision Yes / No | City, State, & Zip: Greenville SC 29615
Estimated Speed 10 | Speed Limit 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)
Summons # | Code | Towed By

A-393207 — Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street
Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
Home Telephone ( ) | Owner's Full Name: N/A
Bus. Telephone ( ) | Street
Contributed To Collision Yes / No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back) Yes No
Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 1500	$	$	$

Property Owner/Witness | Address | State | Zip | Phone
Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Both units were on the exit ramp of I-85 to turn right onto Woodruff Rd. Unit # 2 slowed in traffic and was rear-ended by Unit #1. Both units had minor damage.

NOTICE: THE DRIVER IS DOCUMENTS HEREIN ARE SUBJECT TO PENALTY OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF OCCURRED. THE OFFICER IS NOT AN INSURANCE AGENT AND MAKES NO WARRANTIES AS TO THE FACTS REPORTED HEREIN.

Investigating Officer's Name: Hawkins J | Rank PFC | Badge # 409 | Code 730700 | Date 3/3/10 | Reviewer's Name | Rank Sgt | Internal Agency Code 10-200761

Unit	Date of Birth	Sex	Race	DLI	Seat	R/SD	A.D.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	6/14/82	F	W	C	01	13	49	1	1	2			
2	4/2/69	F	W	C	01	13	49	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal
b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nonriding); 51- Other Unenclosed Area (nonriding); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Unk /NA; 99- Unk

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 04- Child Safety Seat; 05- Other; 06- Unk; 07- Helmet; 08- Protective Pads; 09- Lighting; 10- Pedestrian, Motor/Pedalcycle Only

Air Bag Deployment / Switch: 1-Deployed Front 4-Not Deployed; 2-Deployed Side 7-Not Applicable; 3-Deployed Both 9-Deployment Unk.; 1- Switch in On Position 3- No Switch; 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown
b) By: 1- EMS 2- Police 8- Other 9- Unk

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 02- Fire/Explosion; 03- Overturn/Rollover; 05- Jackknife; 06- Separation of Units; 07- Ran off Road Right; 08- Ran off Road Left; 09- Downhill Runaway; 10- Ran off Road Right

Collision With Motor Vehicle In Transport: 11- Rear-to-Rear; 12- Rear-to-Side; 13- Head On; 14- Sideswipe Same Dir.; 15- Sideswipe Opposite Dir.; 16- Other Non-Collision

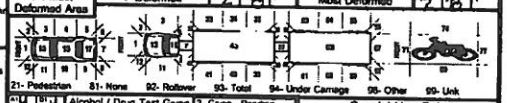
Collision With Fixed Object: 17- Pedestrian; 18- Pedalcycle; 19- Railway Veh; 20- Work Zone Maint. Equip; 21- Bridge Overhead Structure; 22- Bridge Pier or Abutment; 23- Bridge Rail; 24- Guardrail Face; 25- Guardrail End; 26- Concrete Traffic Barrier; 27- Other Traffic Barrier; 28- Tree; 29- Utility Pole; 30- Light/Luminaire Support; 31- Traffic Sign Post; 32- Work Zone Maint. Equip.; 33- Other Fixed Object

Collision With Other Object: 34- Impact Attenuator/Crash Cushion; 35- Bridge Pier or Abutment; 36- Bridge Rail; 37- Guardrail Face; 38- Guardrail End; 39- Concrete Traffic Barrier; 40- Other Traffic Barrier; 41- Tree; 42- Utility Pole; 43- Light/Luminaire Support; 44- Traffic Sign Post; 45- Other Post, Pole Support Unit; 46- Other (Wall, Building, Tunnel, Etc.)

Collision With Person, Motor Vehicle or Non-Motorist: 47- Motor Vehicle In Transport; 48- Motor Vehicle Other Roadway Object; 49- Motor Vehicle (Parked); 50- Unk Motor Vehicle Object; 51- Train; 52- Bicycle; 53- Animal (Domestic); 54- Animal (Wild); 55- Mail Box; 56- Motor Vehicle In Transport; 57- Other Non-Collision; 58- Unk Non-Collision

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (∠ 1°-45°); 41- Angle (∠ 46°-90°); 42- Angle (→|←); 43- Angle (∠ 91°-135°); 50- Sideswipe Same Dir; 60- Sideswipe Opposite Dir; 70- Backed Into; 99- Unknown

1st Point of Contact: 22
1st / Most Deformed Area: 12 / 18



Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Fid Sze Van; 16- Mtr Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other Motorbike; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint; 04- Ambulance; 05- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Other; 41- Pedestrian; 99- Unk. (Hit and Run Only)

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Two Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Negotiating a Curve; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Proceeding Straight Ahead; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only

Underride/Override: 0

Extent of Deformity: 0

Traffic Way: 4

Number of Lanes: 3

Road Character: 1

Road Surface Condition: 1

Traffic Control Type: 01

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: 08

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 26- Other Improper Action; 28-Unk

Others: 02

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 57- Wrong Side of Road; 86- Under the Influence; 87- Other Person Under Influence

Environmental: 60- Animal in Road; 61- Glare; 63- Weather Cond; 88- Other; 89- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

School Bus Involved: 2

Work Zone: 2

Work Zone Location: ----------

Work Zone Type: ----------

Workers Present: ----------

ORIGINAL

D.P.S. USE ONLY **10027599** Page # 1 Of: 2

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01/2001)

Of Units: 4 | Amended - Attach Copy of Original Report | Corrected | Notified 1149 | Arrived 1149

Date: 03-12-2010 | Time: 1149 | County: 23 | Collision Location (Rt. # / Name): 85 | Miles: .50 | Dir. N E S W | Int'l Near City or Town of: Greenville

Lane / Dir.: 2 S | Distance Offset: .02 Miles Feet | Direction: S | From: Ramp Only | To: 3 | Base Intersection (Rt. # / Name): 146 | ASRU code | MP/Grid

R.R. Id.: N/A | From: 2 | To: 3 | Second Intersection (Rt. # / Name): 276. | Latitude: 39°45'35.50" | Longitude: 82°18'20.30"

X-897700

Driver/Pedestrian's Full Name: Williams-Charree Ann

Unit #: 1 | Sex: F | Race: B | Street: 205 W. Belvedere Rd.

Birth Date: 06-26-1969 | City, State, & Zip: Greenville SC 29605

State: SC | Driver's License #: 004597683 (D) | Insurance Company: Geico

Year: 2003 | Body: CAR | Vehicle Make: Buic | VIN #: 3G5DA03E73S567654

State: SC | Year: 2010 | License Plate #: FWT 845 | Owner's D.L. #: 004597683 (D)

Home Telephone: (864) 201-9140 | Owner's Full Name: Williams-Charree Ann

Bus. Telephone: ( ) N/A | Street: 205 W. Belvedere Rd.

Contributed To Collision: Yes / No | City, State, & Zip: Greenville SC 29605

Estimated Speed: 00 | Speed Limit: 60 | C.D.L. Req: Yes (No) | Y/S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

X-897701

Driver/Pedestrian's Full Name: Thrift-John W

Unit #: 2 | Sex: M | Race: W | Street: 108 W. Dorchester Blvd.

Birth Date: 10-24-1950 | City, State, & Zip: Greenville SC 29605

State: SC | Driver's License #: 107305592 (D) | Insurance Company: Amica

Year: 2005 | Body: 4DR | Vehicle Make: Hyu | VIN #: KMHGD12G255433078

State: FL | Year: 2010 | License Plate #: 887 VNB | Owner's D.L. #: 107305592 (D)

Home Telephone: (864) 501-2481 | Owner's Full Name: Thrift-John W

Bus. Telephone: ( ) N/A | Street: 108 W. Dorchester Blvd.

Contributed To Collision: Yes / No | City, State, & Zip: Greenville SC 29605

Estimated Speed: 00 | Speed Limit: 60 | C.D.L. Req: Yes (No) | Y/S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

X-897702

Driver/Pedestrian's Full Name: Taylor-Nicole Samantha

Unit #: 3 | Sex: F | Race: W | Street: 300 Pollard Rd.

Birth Date: 07-01-1986 | City, State, & Zip: Easley SC 29835

State: SC | Driver's License #: 011601377 (D) | Insurance Company: Progressive

Year: 2007 | Body: 4DR | Vehicle Make: Niss | VIN #: 1N4AL11D87C255152

State: SC | Year: 2010 | License Plate #: FWV 609 | Owner's D.L. #: N/A

Home Telephone: (864) 385-3591 | Owner's Full Name: Bass-Rex Aaron

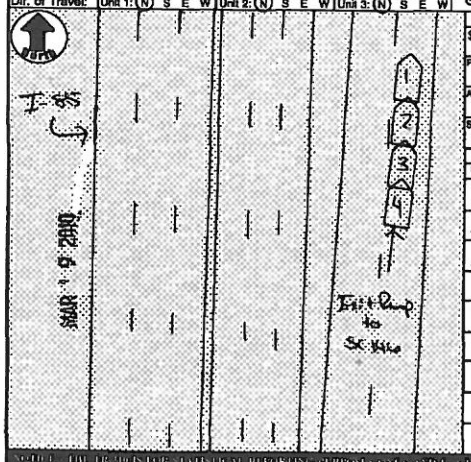
Bus. Telephone: N/A | Street: 102 Hollandale Dr. Apt 10

Contributed To Collision: Yes / No | City, State, & Zip: Easley SC 29617

Estimated Speed: 80 | Speed Limit: 60 | C.D.L. Req: Yes (No) | Y/S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: Hoover's (Rex)

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: (N) S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800.00	$ 2000.00	$ 5000.00	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Photo: (Y) (N) | Describe What Happened (Refer to Units by Number):

Unit#1, 2, 3 and 4 all traveling north on Interstate 85 exit ramp to SC 146. Unit#1, 2 and 3 stopped due to traffic stopping ahead. Unit#4 traveling too fast for conditions struck the rear of Unit#3 which pushed Unit#3 into Unit#2 and Unit#2 into Unit#1.

NOTICE: THE DETERMINATION OF FAULT OR LEGAL RESPONSIBILITY FOR MOTOR VEHICLE COLLISIONS AND ACTIONS RELATING THERETO IS A MATTER TO BE DETERMINED SOLELY BY APPLICATION OF THE LAW BY THE COURTS. THE COLLISION INVESTIGATION REPORT MAY NOT WARRANT ANY STATEMENT AS TO THE LEGAL LIABILITY OF ANY PERSON.

Investigating Officer's Name: Burdge 30 | Rank: Ofc | Badge #: 1553 | Code: HP03 | Date: 03-12-2010 | Reviewer's Name | Rank | Internal Agency Code: 10GN025155S

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SC	A.B.D.	Eject	L.A.I	Trap	Name	Street Address	Zip Code
1	06-26-1969	F	B	C	01	13	4	L	L	2			
2	10-24-1950	M	W	O	01	13	4	L	L	2			
2	02-03-1982	F	W	2	03	13	4	L	L	2	Zipperoli - C	108 W. Dorchester Blvd. Greville	29605
3	07-01-1986	F	W	O	01	13	4	L	L	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 70- Pedestrian; 80- Sleeper of Cab; 30- Trailing Unit; 70- Riding on Unit Exterior; 40- Bus or Van (4th row or Higher); 80- Lap; 50- Other Enclosed Area (nontrailing); 99- Unk./NA; 51- Other Unenclosed Area (nontrailing); 13- Shoulder & Lap Belt; 99- Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 71- Child Safety Seat; 86- Other; 99- Unk.

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 8-Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 8- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflectorized Clothing; 41- Protective Pads; 81- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 08- Overturn/Rollover; 02- Cross Median/Center Line; 06- Immersion; 09- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular Type); 18- Other Non-collision; 19- Unk. Non-collision

Collision Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Railway Veh.; 23- Work Zone Maint. Equip.; 24- Other Movable Object

Collision Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 48- Equipment; 41- Bridge Parapet End; 49- Fence; 42- Bridge Pier or Abutment; 50- Guardrail End; 43- Bridge Rail; 51- Guardrail Face; 44- Culvert; 52- Highway Traffic Sign Post; 45- Curb; 53- Impact Attenuator/Crash Cushion; 46- Ditch; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 61- Utility Pole; 60- Tree; 62- Work Zone Maint. Equipment; 63- Other; 99- Unk.

1st Harmful: 22

Manner of Collision (Struck Veh.): 00- Not Col. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (↘↗); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 41- Angle (↘↙); 42- Angle (→|←); 43- Angle (↗|↖); 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 21- Pedestrian; 81- None; 82- Rollover; 83- Total; 94- Under Carriage; 98- Other; 99- Unk.

Most Deformed: 22

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Owner Training; 03- Construction/Maint; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unavailable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underride/Override

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 4- Not Applicable

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other

1- Curve 3- Medium 5- Roadway 7- Sidewalk 9- Unk
2- Level 4- Roadside 6- Shoulder 8- Outside Trafficway

1st Harmful Event Loc: 1- X-walk; 2- N; 3- NE; 4- E; 5- SE; 6- S; 7- SW; 8- W

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Yield Sign; 05- Flashing Beacon; 06- School Zone Sign; 07- Railroad Crossing Sign; 08- Railroad Flashing Signal; 09- Railroad Gate; 10- Officer or Flagman; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 98- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Work Zone: 1- Yes 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes 2- No

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 57- Wrong Side of Road; 66- Under the Influence; 67- Other Person Under Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

O.P.E. USE ONLY 10051728

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM (Rev. 01-07)

Page # 1 Of 1 | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 0800 | Arrived 0810

Date 05-12-2010 | Time 0810 | Clear 23 | Collision Location (Rt. # / Name) 85 | Miles: 2.00 Dir. (N) E S W | +/- / Near City or Town of: Greenville

Lane # / Dir. 01 (N) E S W | Distance Offset .01 Miles Feet | Direction N E (S) W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt. # / Name) 146 | From | 0-Main 1-Interstate 2-Alternate 3-US Primary 4-SC Primary 5-Spur 6-Connection 7-Business 9-Other

Second Intersection (Rt. # / Name) 276 | Toward | 0-Main 1-Interstate 2-Alternate 3-US Primary 4-SC Primary 5-Spur 6-Connection 7-Business 9-Other

ASRU code | MP/Grid | Latitude 34°49'37.70" | Longitude 82°15'07.30"

R.R. Id. N/A | From (N) E S W | Ramp Only 1- Entrance 2- Exit | To (N) E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Z-328036

Driver/Pedestrian's Full Name: Wallace - Vivian Amaryllis

Unit # 1 | Sex F | Race N | Street: 340 Edenberry Way

Birth Date 05-21-1963 | City, State, & Zip: Easley SC 29642

State SC | Driver's License # 100452210 (D) | Insurance Company: Allstate

Year 2003 | Body Van | Vehicle Make Honda | VIN # 5FNRL18013B155257

State SC | Year 2010 | License Plate # RUP 346 | Owner's D.L. # N/A

Home Telephone (864) 320-2550 | Owner's Full Name: Wallace - Richard Lawrence

Bus. Telephone N/A | Street: 340 Edenberry Way

Contributed To Collision: Yes (No) | City, State, & Zip: Easley SC 29642

Estimated Speed 00 | Speed Limit 60 | D.L. Req: Yes (No) | T/S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons # N/A | Code | Towed By N/A

Z-328037

Driver/Pedestrian's Full Name: Cobb - Tracey Leonard

Unit # 2 | Sex M | Race W | Street: 4605 N. Mayer Rd.

Birth Date 04-22-1974 | City, State, & Zip: Belton SC 29627

State SC | Driver's License # 00375752568 (D) | Insurance Company: State Farm

Year 1998 | Body Utl | Vehicle Make Dodg | VIN # 1B4HS28Y7WF103020

State SC | Year 2010 | License Plate # FLZ 532 | Owner's D.L. # N/A

Home Telephone (864) 338-9057 | Owner's Full Name: Cobb - Rosemarie G

Bus. Telephone N/A | Street: 4605 N. Mayer Rd.

Contributed To Collision: (Yes) No | City, State, & Zip: Belton SC 29627

Estimated Speed 20 | Speed Limit 60 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons # ES31046 | Code 82 | Towed By N/A

Z-328038

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Towed By

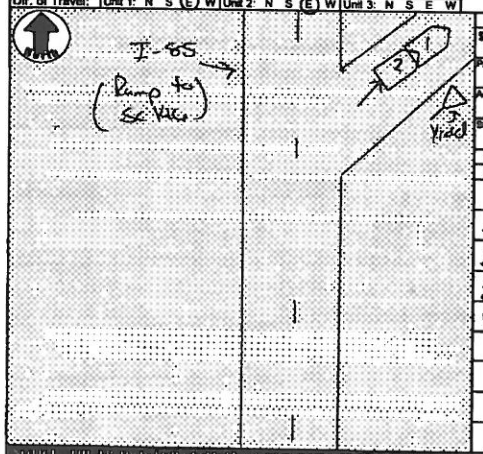
State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name MAY 21 2010

Bus. Telephone ( ) | Street

Contributed To Collision: Yes No | City, State, & Zip

Dir. of Travel: Unit 1: N S (E) W | Unit 2: N S (E) W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000.00	$ 800.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and 2 traveling east on the exit ramp from Interstate 85 to SC Hwy 146. Unit # 2 made an improper start from stop and struck the rear of Unit #1.

SOLELY FOR THE PURPOSE OF REPORTING PERSONAL INJURIES AND PROPERTY DAMAGE TO THE OFFICE OF THE STATE TREASURER AND THE DEPARTMENT OF MOTOR VEHICLES, THE COLLISION IS DEEMED TO HAVE OCCURRED IN THE STATE OF SOUTH CAROLINA.

Investigating Officer's Name: Brooks-SD | Rank: Lt. | Badge #: 163 | Code: HP03 | Date: 05-12-2010 | Reviewer's Name: Gaylord-T.J. | Rank: Cpl. | Internal Agency Code: 10GN0474748

Unit	Date of Birth	Sex	Race	INJ	Seat	R/BD	A.S.U.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	05-21-1963	F	W	0	01	13	3	1	1	2			
1	06-10-1996	F	W	0	08	13	3	1	1	2			
1	07-03-1993	F	W	0	06	13	3	1	1	2			
2	04-22-1974	M	W	0	01	13	3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 04- Child Safety Seat; 05- Other; 06- Unk; Pedestrian, Motorcyclist Only: 11- Helmet; 12- Reflective Clothing; 13- Protective Pads; 14- Lighting

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 7-Not Applicable; 9-Deployment Unk.; a) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk

Sequence of Events

1st Harmful	2nd	3rd	4th	Most Harmful
22	23			22

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 09- Immersion; 03- Downhill Runaway; 07- Jackknife; 08- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Cargo/Fuel); 15- Other Non-collision; 99- Unk Non-collision

Collision Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle

Collision Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 66- Other; 69- Unk

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (↘↙); 42- Angle (→|←); 43- Angle (↗|↙); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Deformed / Most Deformed

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 96- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian; 99- Unk.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Livestock Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1- Given - Pending; 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underride/Override: 6

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 9- Unk; 5- Not Applicable

Trafficway: 4 (1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other)

A: 1- Conc. 2- Island 3- Median 4- Roadside 5- Roadway 6- Shoulder 7- Sidewalk 8- Outside Trafficway 9- Unk

B: X-walk 1-Y 2-N 9-U

V: 1st Harmful Event Loc 57

Road Character: 1 (1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest)

Road Surface Condition: 1 (1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.)

Traffic Control Type: 43 (01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk)

School Bus Involved: 3 (1- Yes 2- No)

Work Zone: 2 (1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.)

Work Zone Location: ----------

Work Zone Type: ----------

Workers Present: (1- Yes 2- No)

Weather Condition: 3 (1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.)

Light Condition: 1 (1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights))

Junction Type: 13 (01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.)

Action Prior to Impact — (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Primary Contributing Factors: 28

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Vehicle Improperly; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Others: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 57- Wrong Side of Road; 65- Under the Influence; 67- Other Person Under Influence

Environmental: 60- Animal in Road; 61- Glare; 63- Obstruction; 63- Weather Cond; 68- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

ORIGINAL

D.P.S. USE ONLY **10056198** — Page 1 of 1 — SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM — # Of Units: 2 — Amended / Attach Copy of Original Report — Notified: 1841 — Arrived: 1849

Date: 5/17/16 — Time: 1841 — County: 03 — Collision Location (Rt. # / Name): & I-85 — Miles: — Dir: N E S W — City, Town or Twp. of: Greenville

Lane # / Dir.: 3 S — Distance Offset: 15 Feet — Direction: S W — Base Intersection (Rt. # / Name): Woodruff Rd — ASRU code: — MP/Grid: — Latitude: 1092226" — Longitude: 1609154"

R.R. Id. — From: SW — Ramp Only: 2 Exit — To: SW — Second Intersection (Rt. # / Name): Old Sulphur Springs

T-369110 — Driver/Pedestrian's Full Name: White - Jeremy Madison

Unit # 1 — Sex: M — Race: W — Street/R.F.D.: 1409 Roger Mtn. Rd. #548 — City, State, & Zip: Greenville SC 29615 — Birth Date: 3/10/96

State: NC — Driver's License #: 20866231 — Insurance Company: State Farm

Year: 2001 — Body: SU — Vehicle Make: Suba — VIN #: JF1SG63607H730001

State: NC — Year: 2010 — License Plate #: XTY6787 — Owner's D.L. #: same

Home Telephone: (919) 610-0324 — Owner's Full Name:

Bus. Telephone: ( ) — Street/R.F.D.:

Contributed To Collision: Yes — City, State, & Zip: No

Estimated Speed: 10 — Speed Limit: 45 — C.D.L. Req: Yes (No) — T/S S Req: Yes (No) — Alc/Drg Info (see back): Yes (No)

Summons #: 17140FG — Code: 98 — Summons #: — Code: — Towed By:

T-369111 — Driver/Pedestrian's Full Name: Duke - Mary S.

Unit # 2 — Sex: F — Race: W — Street/R.F.D.: 14 Sloan Ave — City, State, & Zip: Piedmont SC 29673 — Birth Date: 3/30/52

State: SC — Driver's License #: 418657266 - D — Insurance Company: American National

Year: 2005 — Body: VN — Vehicle Make: Dodg — VIN #: 2D4GP44L95R443673

State: SC — Year: 2010 — License Plate #: BUV533 — Owner's D.L. #:

Home Telephone: (864) 859-7101 — Owner's Full Name: Hooper - Melba Sue

Bus. Telephone: ( ) — Street/R.F.D.: 410 N. B. St

Contributed To Collision: No — City, State, & Zip: Easley SC 29640

Estimated Speed: 5 — Speed Limit: 45 — C.D.L. Req: Yes (No) — T/S S Req: Yes (No) — Alc/Drg Info (see back): Yes (No)

Summons #: — Code: — Summons #: — Code: — Towed By:

T-369112 — Driver/Pedestrian's Full Name:

Unit # N/A — Sex: — Race: — Street/R.F.D.: — Birth Date: — City, State, & Zip:

State: — Driver's License #: — Insurance Company:

Year: — Body: — Vehicle Make: — VIN #:

Dir. of Travel: Unit 1: N S E W — Unit 2: N S E W — Unit 3: N S E W

JUN 03 2016

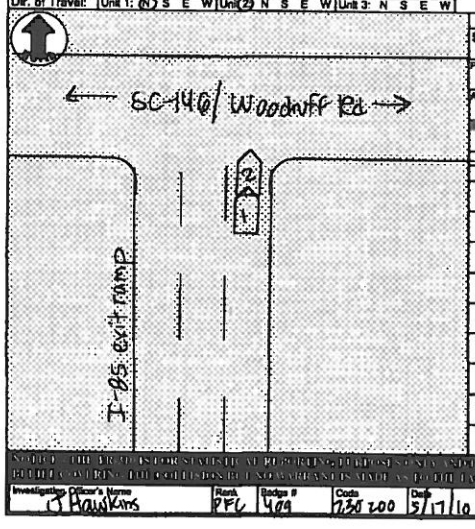
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 1600	$	$	$

Property Owner/Witness: — Address: — Zip: — Phone:

Property Owner/Witness: — Address: — Zip: — Phone:

Photo: Y (N) — Describe What Happened (Refer to Units by Number):

Both units were on the I-85 N exit ramp approaching Woodruff Rd. Unit #2 was slowing in traffic and was struck in the rear end by Unit #1.



NOTICE: THE REPORT IS FOR STATISTICAL REPORTING PURPOSES ONLY AND SHALL NOT BE USED FOR ANY OTHER PURPOSE, NOR BE MADE AVAILABLE TO ANY PERSON OR ORGANIZATION NOT HAVING A DIRECT INTEREST AS STATED IN SECTION 56-5-1270 OF THE 1976 CODE OF LAWS OF SOUTH CAROLINA, AS AMENDED.

Investigating Officer's Name: J Hawkins — Rank: PFC — Badge #: 409 — Code: 730200 — Date: 5/17/16 — Reviewer's Name: — Rank: — Internal Agency Code: 16-41859

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.S.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	3/8/96	M	W	0	01	13	49	1	1	2			
2	3/30/52	F	W	0	01	13	49	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, W - Caucasian, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-incapacitating, 3- Incapacitating, 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 — 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Air Bag Deployment / Switch: a) 1-Deployed Front, 2-Deployed Side, 3-Deployed Both, 4-Not Deployed, 7-Not Applicable, 9-Deployment Unk.; b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part: Ejected, 3- Tot. Ejected, 7- Not App., 8- Unk

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

B) Transported to Medical Facility: 1- Yes 2- No 3- Unknown — B) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Non-Vehicular Cargo), 13- Struck Fixed Object, 14- Struck Pedestrian, 15- Struck Railway Train, 16- Struck Work Zone Maint. Equip., 17- Struck Other Non-Motorist, 18- Struck Other Object, 19- Unk. Non-collision

Collision Not Fixed: 20- Animal (Deer Only), 21- Animal (Alt Other), 22- Motor Veh. (In Transport), 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh, 29- Work Zone Maint. Equip., 30- Other Movable Object, 31- Unk. Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 69- Other, 99- Unk.

	1st Event	Last Event
Unit 1	22	22
Unit 2	22	22

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle (↖ or ↗), 42- Angle (→ or ←), 43- Angle (↙ or ↘), 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area — 1st Deformed — Most Deformed

Vehicle Types: 01- Automobile, 12- Pickup Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh, 29- Animal (Ridden), 41- Pedestrian, 51- Train, 52- Passenger Bus, 98- Other, 99- Unk. (Hit and Run Only)

Alcohol / Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Special Use Only

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other

Underride/Override: 0- None, 1- Under - Compartment Intrusion, 2- Under - No Intrusion, 3- Under - Unknown, 4- Over - M/V in Transport, 5- Over - Other Vehicle, 6- None, 9- Unk.

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, B- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Trailer, D- Flat Bed, E- Twin Trailers, F- Other

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Severe/Totaled, 8- Unk., 9- Unk.

Alc Test Results: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-Way, 8- Other

Trafficway: 4

1st Harmful Event: 1- Curve, 2- Island, 3- Median, 4- Roadside, 5- Roadway, 6- Shoulder, 7- Sidewalk, 8- Outside Trafficway, 9- Unk

B/ X-mark: 1-Y 2-N 9-U — 1st Harmful Event Loc.: 5

Action Prior to Impact: 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopped in Traffic, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

(Vehicle): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

(Non-motorist)

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 03- Stop Sign, 04- Yield Sign, 05- Officer or Flagman, 06- Railway Crossing, 07- School Zone, 08- Railway Crossing, Emergency Vehicle, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Sign, 51- Flashing Beacon, 98- None, 99- Unk.

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Soil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark, (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Primary Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 25- Other Improper Action, 29- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (I.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (I.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying And/ Illegally in Roadway, 52- Failure to Yield R of W, 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Primary: 08

Others: 06, 09

School Bus Involved: 3

Work Zone: 2 (1- Yes 2- No)

Work Zone Location:

Work Zone Type:

Workers Present: (1- Yes 2- No)

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 Rev. 01.2001

D.P.S. USE ONLY: 10061062 | Page # 1 Of: 1 | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 0920 | Arrived 0935

Date 06-04-2010 | Time 0915 | County 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name) 85 | 0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 8- Connection 9- Other | Miles: 0 | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir. 3 | Of 4 | N E S W | Distance Offset 10 Miles Feet | Direction N E S W | From: Ramp Only 1- Entrance 2- Exit | To 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt. # / Name) From 146 | Second Intersection (Rt. # / Name) Toward 276 | 0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 8- Connection 9- Other

ASRU code | MP/Grid | Latitude 34 49 38.50 | Longitude 82 18 06.60

R.R. Id. NA

B-085762

Driver/Pedestrian's Full Name: Davis - Brittany Shenise

Unit # 1 | Sex F | Race B | Street/R.F.D. 1524 Parkway Apt 507 | Birth Date 09-15-1986 | City, State, & Zip Greenwood SC 29646

State SC | Driver's License # 011480864 (D) | Insurance Company Geico

Year 2006 | Body 4dS | Vehicle Make Toyt | VIN # 4T1BE32K66U131215

State SC | Year 2011 | License Plate # 4737 DV | Owner's D.L. # 011480864

Home Telephone 864 323-7525 | Owner's Full Name Davis - Brittany Shenis

Bus. Telephone ( ) NA | Street/R.F.D. 1524 Parkway Apt 507

Contributed To Collision No | City, State, & Zip Greenwood SC 29646

Estimated Speed 3 | Speed Limit 35 | C.D.L. Req: Yes | T/S S Req: Yes | Alc/Drg info (see back): Yes | Summons # E704467 | Code 27 | Summons # NA | Code | Towed By NA

B-085763

Driver/Pedestrian's Full Name: Brown - Julia Ann

Unit # 2 | Sex F | Race W | Street/R.F.D. 110 Hardy St | Birth Date 01-24-1975 | City, State, & Zip Williamston SC 29697

State SC | Driver's License # 004200364 (D) | Insurance Company Centre Mutual

Year 2001 | Body CP | Vehicle Make Honda | VIN # 1HGCG22551A008244

State SC | Year 2010 | License Plate # CSF778 | Owner's D.L. # 004200364

Home Telephone 864 276 4650 | Owner's Full Name Brown - Julia Ann

Bus. Telephone 864 842-2800 | Street/R.F.D. 110 Hardy St

Contributed To Collision Yes | City, State, & Zip Williamston SC 29697

Estimated Speed 0 | Speed Limit 35 | C.D.L. Req: Yes | T/S S Req: Yes | Alc/Drg info (see back): Yes | Summons # NA | Code | Summons # NA | Code | Towed By NA

B-085764

Driver/Pedestrian's Full Name: N/A

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

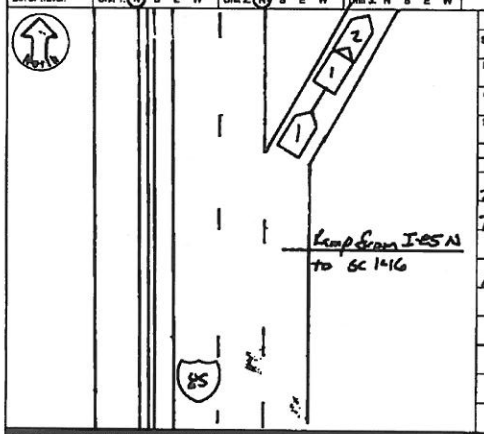
Unit 1 Dam. $500 | Unit 2 Dam. $500 | Unit 3 Dam. $NA | Prop. Dam. 1 $NA | Prop. Dam. 2 $NA

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

Units 1 and 2 were stopped on the ramp from I-85 North to SC 146. The driver of unit 1 made an improper start from stop and struck unit 2 with unit 1.



NOTICE: THE DRAWING FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE EXACTNESS OF THE DRAWING OR THE REPORT

Investigating Officer's Name: Woodall - SC | Badge # 842 | Code HP03 | Date 06-04-2010 | Reviewer's Name: A. H. Wilson | Rank SGT | Internal Agency Code 10-SC056852

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	09-15-1986	F	B	0	01	13	4 3	7	1	2			
2	01-24-1975	F	W	0	01	13	4 3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet: 1- Yes 2- No; Head Injury: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Deployment Unk.; 5- Not Deployed; 6- Not Applicable; 7- Not Applicable; 8- Switch in On Position; 9- Unknown; 0- Switch in Off Position

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular Cargo); 13- Other Non-Collision; 19- Unk. Non-Collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Eqp.; 30- Other Movable Object; 39- Unk. Movable Object

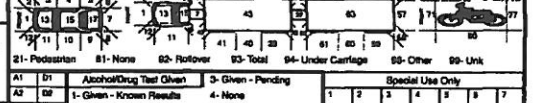
Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Support; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Event	Event	Event	Event	Most Harmful	1st Harmful
23	1	1	1	22	22
22	2	2	2		
	3	3	3		

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (↘↓↙); 42- Angle (→↓←); 43- Angle (↗↑↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed: 1st Deformed | Most Deformed

Deformed Area



21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal (Buggy, Wagon, Etc.); 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Underride/Override: 1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 6- None; 9- Unk.

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Extent of Deformity

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Positive Median Barrier; 4- One-way; 8- Other

A: 1- Cove; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Ditch; 9- Unk.

B: X- walk; V- veh.; 1- Y 2- N 9- U

1st Harmful Event Loc.

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Roadway: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Character

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 8- Contaminate; 7- Water (Standing, etc.); 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagmen; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.: School Bus Involved:

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area: 1- Yes 2- No: Work Zone:

Work Zone Location

Work Zone Type

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 9- Other/Unk.: 1- Yes 2- No: Workers Present:

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factor: 28

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Under the Influence; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Others

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

O.R.I. USE ONLY: 10063603 | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev 9/2001)

# of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1015 | Arrived: 1018

Date: 06-08-2010 | Time: 1010 | County: 23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County)

Collision Location (Rt. # / Name): 85 (0- Main 2- Alternate 5- Spur 6- Connection 7- Business)

Miles: .3 | Dir. (N E S W) | Int'l Near City or Town of: Greenville

Lane # / Dir.: 3 Of 7 (N E S W) | Distance Offset: .3 Miles (Feet) | Direction (N E S W) | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt. # / Name): From 146

ASRU code | MP/Grid

Latitude: 34 49 2670

R.R. Id.: N/A | From: Ramp Only (NE 1- Entrance 2- Exit SW) | To: (NE 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other SW)

Second Intersection (Rt. # / Name): Toward 276

Longitude: 82 18 4340

B-423931 — Driver/Pedestrian's Full Name: Cooper-Lee Derrick

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 88 Fagen Rd | City, State & Zip: Columbus NC 28722 | Birth Date: 02-16-1954

State: NC | Driver's License #: 3640735 (A) | Insurance Company: NC Farm Bureau

Year: 2000 | Body: 4S | Vehicle Make: FORD | VIN #: 1FAFP5526YA242705

State: NC | Year: 2011 | License Plate #: XTA1340 | Owner's D.L. #: 3640735

Home Telephone: 828 458-0349 | Owner's Full Name: Cooper-Lee Derrick

Bus. Telephone: ( ) N/A | Street/R.F.D.: 88 Fagen Rd

Contributed To Collision: No | City, State, & Zip: Columbus NC 28722

Estimated Speed: 00 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons # | Code | Towed By: N/A

B-423932 — Driver/Pedestrian's Full Name: Parker-Mary Ethel

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 37 Forest Lake Dr | Birth Date: 07-17-1934 | City, State, & Zip: Simpsonville SC 29681

State: SC | Driver's License #: 10136443 39 (D) | Insurance Company: USAA

Year: 2008 | Body: 4S | Vehicle Make: Niss | VIN #: 1N4AL11DX3C217230

State: SC | Year: 2011 | License Plate #: 9693CL | Owner's D.L. #: N/A

Home Telephone: 864 963-1441 | Owner's Full Name: Parker-Lyle Albert

Bus. Telephone: ( ) N/A | Street/R.F.D.: 37 Forest Lake Dr

Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville SC 29681

Estimated Speed: 00 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E524881 | Code: 22 | Summons #: N/A | Code | Towed By: Collins (Reg)

B-423933 — Driver/Pedestrian's Full Name: N/A

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W

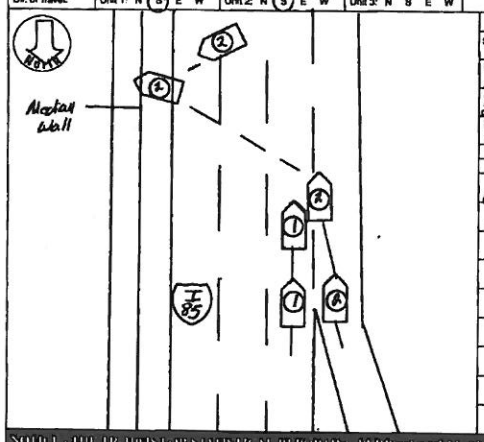
Home Telephone | Owner's Full Name: JUN. 1, 8, 2010

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 3000	$	$ N/A	$ N/A

Property Owner/Witness: Kane-Lt Col Steve | Address: 244 Terminal Rd Bldg 1808 | City: Greenville | State: SC | Zip: 29605 | Phone: 210-364-7160

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and 2 traveling south on I-85. Driver of Unit #2 made an improper lane change while merging and struck Unit #1. Unit #2 then spun out of control and struck the median wall.

NOTICE - THE PURPOSE OF STATISTICAL REPORTING FORMS IS ONLY AND IS NOT A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: ATKINS-J | Rank: TPC | Badge #: 920 | Code: HP03 | Date: 06/08/2010 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 10GV058489

Unit	Date of Birth	Sex	Race	INJ	Seat	AIRB	A.B.D.	Eject	EXT	Trap	Name	Street Address	Zip Code
1	02-16-1954	M	W	0	01	13	43	1	1	2			
2	07-12-1934	F	W	1	01	13	43	1	1	1/4	Driver Unit #1		
2	05-07-1957	F	W	1	03	13	43	1	1	5	ADS-Susan	39 Forest Lake Dr Simpsonville SC	29681

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal; Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Moped/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Event 1: 22 | Event 2: 22 | Event 3 | Event 4 | Most Harmful 1st Event: 22

Manner of Collision (Struck Veh.): 50

00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Matl.); 13- Other Non-collision; 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail End; 49- Fence; 50- Guardrail Face; 51- Guardrail Post; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Other

1st / Most Deformed Area: 1st Deformed: 3 | Most Deformed: 3 2 3

21- Pedestrian; 81- None; 92- Rollover; 93- Total; 94- Under Carriage; 98- Other; 99- Unk.

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Rider); 29- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1-; A2-; A3-

Test Type: 1- Urine; 1- Breath (Alc. Only); 2- Blood; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unknown; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.; Underride/Override

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Not Lit); 6- Dark (Street Lamp Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non/Junction; 99- Unk.

Roadway: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

School Bus Involved: 1- Yes 2- No

Work Zone: 1- Yes 2- No

Work Zone Location

Work Zone Type

Workers Present: 1- Yes 2- No

Primary Contributing Factors: 18

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Under the Influence; 15- Wrong Side or Wrong Way; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY **10064401** | Page # 1 / 1 Of: | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2003) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1543 | Arrived 1555

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Mi / Near City or Town of:
06072010	1530	23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other)	85 (3- Main 8- Connection 2- Alternate 7- Business 5- Spur)	.5	N E S W	GREENVILLE

Lane # / Dir.	Of		Distance Offset	Direction	Base Intersection (Rt. # / Name)		ASRU code	MP/Grid
3	3	S W	32 Miles Feet	N E S W	146 (From)	3- Main 8- Connection 2- Alternate 7- Business 5- Spur 9- Other	Latitude	34 49 37 90
R.R. Id.	From: (E S W) Ramp Only (2 Exit)	To (N E S W) (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other)	Second Intersection (Rt. # / Name)				Longitude	82 18 07 50
NIA	1- Entrance		276 (Toward)					

B-718864 — Driver/Pedestrian's Full Name: WHEAT - DAVID R.

Unit #	Sex	Race	Street/R.F.D.
1	M	W	157 CHARLES HAYES RD

Birth Date: 01261964 — City, State, & Zip: GAFFNEY SC 29340

State	Driver's License #	Insurance Company
SC	003302840 (D)	NATIONWIDE

Year	Body	Vehicle Make	VIN #
2004	SU	NISS	JN8DR07XX4W803192

State	Year	License Plate #	Owner's D.L. #
SC	2011	EAL 690	003302840 (D)

Home Telephone: 864 998 2873 — Owner's Full Name: WHEAT - DAVID R.

Bus. Telephone: 864 761 7033 — Street/R.F.D.: 157 CHARLES HAYES RD

Contributed To Collision: Yes (1) — City, State, & Zip: GAFFNEY SC 29340

Estimated Speed	Speed Limit	C.D.L. Req: Yes	T/S S Req: Yes	Alc/Drg Info (see back): Yes (5)
0	60	Summons # NIA	Code	Summons # NIA	Code	Towed By NIA

B-718865 — Driver/Pedestrian's Full Name: VANCE - ANGELA S.

Unit #	Sex	Race	Street/R.F.D.
2	F	W	110 SAXON DR

Birth Date: 12201982 — City, State, & Zip: PIEDMONT SC 29673

State	Driver's License #	Insurance Company
SC	00 7996881 (D)	GEICO

Year	Body	Vehicle Make	VIN #
2000	VN	DODG	1B4GP44GXYB760785

State	Year	License Plate #	Owner's D.L. #
SC	2010	6907 CS	UNK

Home Telephone: 864 270 9625 — Owner's Full Name: VANCE - JUSTIN M

Bus. Telephone: NIA — Street/R.F.D.: 110 SAXON DR.

Contributed To Collision: Yes (No) — City, State, & Zip: PIEDMONT SC. 29673

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/S S Req: Yes (No)	Alc/Drg Info (see back): Yes (6)
4	60	Summons # 6525929	Code 82	Summons # NIA	Code	Towed By NIA

B-718866 — Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street/R.F.D.
N/A			

Birth Date: — City, State, & Zip:

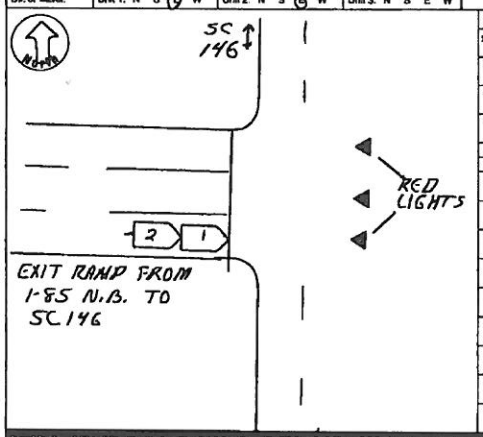
State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/S S Req: Yes No	Alc/Drg Info (see back): Yes No
		Summons #	Code	Summons #	Code	Towed By

Dir. of Travel: Unit 1: N S (E) W | Unit 2: N S (E) W | Unit 3: N S E W

JUN 21 2010



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 600	$ 600	$ NIA	$ NIA	$ NIA

Property Owner/Witness	Address	State	Zip	Phone
NIA				

Property Owner/Witness	Address	State	Zip	Phone
NIA				

Photo: Y (N) — Describe What Happened (Refer to Units by Number)

#1 & #2 WERE STOPPED FOR A RED LIGHT ON THE EXIT RAMP FROM I-85 NORTH, GOING TO SC-146. #2 THOUGHT #1 PULLED OFF AND ACCELERATED INTO THE REAR OF #1.

NOTICE: THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH OF ANY OF THE FACTS.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
BURSEY. DW	CPL	543	11003	06072010	Gaylor T.J.	CPL	10 GV 0581 17

Unit	Date of Birth	Sex	Race	Inj	Seat	R/SO	A.B.D.	Eject	Lal	Tran	Name	Street Address	Zip Code
1	01261964	M	W	0	01	13	4	3	1	1			
2	12201982	F	W	0	01	13	4	3	1	1			
2	02192004	M	W	0	04	21	7	1	1	2			
2	03072000	F	W	0	06	21	7	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk.; a) 1- Switch in On Position; 3- No Switch; b) 2- Switch in Off Position; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1- Yes; 2- No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Trip (Two-Wheeled Veh.); 13- Other Non-collision; 14- Unk. Non-collision

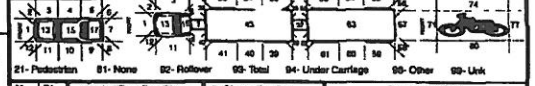
Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Slow Moving); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 38- Unk. Movable Object

Collision: Fixed Object: 40- Embankment; 41- Bridge Overhead Structure; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Fence; 48- Guardrail End; 49- Guardrail Face; 50- Highway Traffic Sign Post; 51- Impact Attenuator/Crash Cushion; 52- Light/Luminaire Support; 53- Mail Box; 54- Median Barrier; 55- Other Post, Pole, Support; 56- Other (Wall, Building, Tunnel, Etc.); 57- Overhead Sign Support; 58- Tree; 59- Utility Pole; 60- Other; 69- Unk.

Event 1: 22; Event 2: 23; Most Harmful: 22; 1st Event: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed: 1 2 / 1 2; Most Deformed: 1 2 3



Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 18- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 38- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; A: 1- Over 2- Under

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 4

Bi: X- walk: ; 1st Harmful Event Loc.: 24

1- Y 2-N 9-U: ; Event Loc.: 24

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 2

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.; 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.; 01

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.; 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes; 2- No; 2

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type:

Workers Present: 1- Yes; 2- No

Primary Contributing Factors: 25

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 18- Cell Phone; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others:

ORIGINAL

DEC 16 2010

D.P.S. USE ONLY: 10075030 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 01/2010 | # of Units: 2 | Amended - Attach Copy of Original Report / Corrected | Notified: 1908 | Arrived: 1922

Date: 06292010 | Time: 1908 | County: 23 | Collision Location (Rt. # / Name): 5 I 85 | Miles: | Dir. N E S W | In Near City or Town of: GREENVILLE

Lane # / Dir.: # 3 Dir 3 S W | Distance Offset: .02 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From WOODRUFF RD. | 1- Main 2- Alternate 3- Spur 5- Connection 7- Business 9- Other | ASRU code | MP/Grid

R.R. Id. | From: E S W 1 - Entrance 2 - Exit | Ramp Only | To: N E S W | Second Intersection (Rt. # / Name): Toward OLD SULPHUR SPRING RD. | Latitude: 1092217 | Longitude: 1609127

B-454984

Driver/Pedestrian's Full Name: HANSEN - GARY MARTIN

Unit # 1 | Sex: M | Race: W | Street/R.F.D.: 5507 SOLAR PL

Birth Date: 08/08/1960 | City, State, & Zip: GREENSBORO, NC 27406

State: NC | Driver's License #: 795906 2 (C) | Insurance Company: GREAT NORTHERN

Year: 2009 | Body: VN | Vehicle Make: CHRY | VIN #: ZA8HR64199R651003

State: NC | Year: 2011 | License Plate #: ZAP9997 | Owner's D.L. #

Home Telephone: 336 255-0870 | Owner's Full Name: MTS SYSTEMS CORP

Bus. Telephone: ( ) | Street/R.F.D.: 9000 MIDLANTIC DR.

Contributed To Collision: Yes | City, State, & Zip: MOUNT LAUREL, NJ 08054-1539

Estimated Speed: 15 | Speed Limit: 25 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: 65796 FE | Code: 87 | Towed By: N/A

B-454985

Driver/Pedestrian's Full Name: ORBIK - MARIA MAGDALENA

Unit # 2 | Sex: F | Race: W | Street/R.F.D.: 107 SURRYWOOD DR.

Birth Date: 03/28/1942 | City, State, & Zip: GREENVILLE, SC 29607

State: SC | Driver's License #: 100577062 (D) | Insurance Company: TRAVELERS

Year: 2005 | Body: 4S | Vehicle Make: TOYT | VIN #: 2T1KR32EX5C348815

State: SC | Year: 2010 | License Plate #: AZC247 | Owner's D.L. #: SAME

Home Telephone: 864 313-5956 | Owner's Full Name

Bus. Telephone: ( ) | Street/R.F.D.

Contributed To Collision: No | City, State, & Zip

Estimated Speed: 0 | Speed Limit: 25 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: N/A | Towed By

B-454986

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

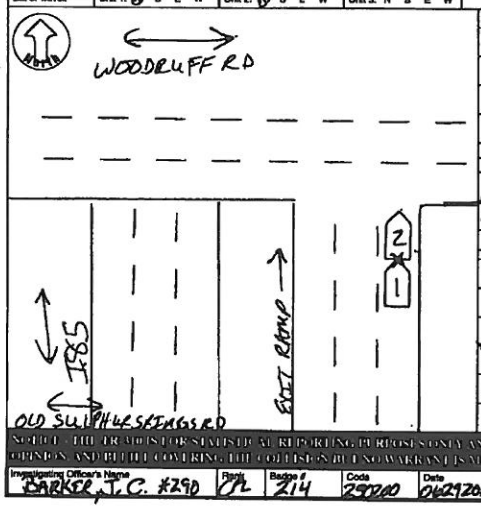
Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By



Unit 1 Dam.: $500 | Unit 2 Dam.: $3000 | Unit 3 Dam.: $ | Prop. Dam. 1: $ | Prop. Dam. 2: $

Property Owner/Witness | Address | City, State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y/N | Describe What Happened (Refer to Units by Number)

UNIT 2 WAS IN FRONT OF UNIT 1 ON THE EXIT RAMP WAITING TO TURN RIGHT. UNIT 1 WAS WATCHING TRAFFIC AND DID NOT SEE THAT UNIT 2 HAD NOT MOVED. UNIT 1 STARTED TO GO AND STRUCK UNIT 2 IN THE BACK OF THE VEHICLE.

NOTICE - THE TRUTH OF STATISTICS AS REPORTING PURPOSES ONLY AND IS RELIED UPON BY THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTS AS TO THE TRUTH THEREOF

Investigating Officer's Name: BARKER, J. C. #290 | Rank: PFC | Badge #: 214 | Code: 290100 | Date: 06/29/2010 | Reviewer's Name | Rank: SGT | Internal Agency Code: 10-54822

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.S.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	08081960	M	W	0	01	13	4.5	1	1	2			
2	03281942	F	W	0	01	13	4.3	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, I - Alaskan Native or American Indian, W - Caucasian, H - Hispanic, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal, 9- Unknown

b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 9- Deployment Unk. | b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Head Injury: 1- Yes, 2- No

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 61- Lighting

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22				22	22
24	2	2	2	24	
3	3	3	3		

Non-Collision: 01- Cargo/Equip Loss or Shift, 03- Cross Median/Center Line, 05- Downhill Runaway, 04- Equipment Failure, 06- Fire/Explosion, 08- Immersion, 07- Jackknife

Collision: Not Fixed: 09- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Pre-Attracted Veh.), 14- Crash: Non-collision, 19- Unk. Non-collision, 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. In Transport, 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 29- Pedalcycle, 99- Other Movable Object, 28- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Bridge Parapet End, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Pole, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Other, 61- Unlit Pole, 62- Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed: 1 2 3 4 5 6 7

Deformed Area

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh., 39- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 98- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Cowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact: (Vehicle) 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk. | (Non-motorist) 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1-, A2-, A3-

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: D1, D2, D3: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 0- None/Minor, 1- Under - Compartment Intrusion, 2- Under - No Intrusion, 3- Under - Unknown, 4- Over - MV in Transport, 5- Over - Other Vehicle, 9- Unk.

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Disabling Damage, 3- Severe/Totaled, 4- Not Applicable, 9- Unk.

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

Ev: 1- Ignition 2- Jackknife 3- Overturn 4- Rollover 5- Fire 6- Submersion 7- Hit Object 8- Other Non-Collision 9- Unk.

1st Harmful Event Loc.: 1- On Roadway, 2- On Shoulder, 3- In Median, 4- On Roadside, 5- On Gore, 7- On Gore, 8- Off Roadway, 9- Unk.

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 88- None, 99- Unk.

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Related to Business: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

School Bus Involved: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area, 1- Yes, 2- No

Work Zone: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

Work Zone Location: Work Zone Type: 1- Yes 2- No Workers Present:

Primary: 28

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Aggressive Operation of Vehicle, 12- Over-correcting/Over-steering, 13- Swerving to Avoiding Object, 14- Wrong Side or Wrong Way, 15- Under the Influence, 16- Vision Obscured (Within Unit), 17- Improper Lane Usage/Change, 18- Other Improper Action, 19- Cell Phone, 29- Unk.

Roadway: 30- Debris, 31- Non-Highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Aggressive Operation of Vehicle, 12- Over-correcting/Over-steering, 13- Swerving to Avoiding Object, 14- Wrong Side or Wrong Way, 15- Under the Influence, 16- Vision Obscured (Within Unit), 17- Improper Lane Usage/Change, 18- Other Improper Action, 19- Cell Phone, 29- Unk.

ORIGINAL

AUG 02 2016

D.P.S. USE ONLY: 10080960 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 11-2011) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1307 | Arrived 1314

Date 07/17/2016 | Time 1300 | County 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name) 85 | 1- Main 2- Alternate 5- Spur 8- Connection 7- Business 9- Other | Miles: .1 | Dir. N E S W | Near City or Town of: GREENVILLE

Lane # / Dir.: 3 | Of: 3 | N E S W | Distance Offset: 30 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From: 146 | 1- Main 2- Alternate 5- Spur 8- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude 34 49 49 80

R.R. Id.: NJA | From: N E (W) Ramp Only (E) Exit | To: (N) E W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Toward: Second Intersection (Rt. # / Name) 385 | Longitude 82 15 13 60

B-087343 | Driver/Pedestrian's Full Name: SOX - LINDSEY M.

Unit # 1 | Sex: F | Race: W | Street/R.F.D.: 100 GATEWAY BLVD #303 | Birth Date: 09/11/1987 | City, State, & Zip: GREENVILLE SC 29607

State: SC | Driver's License #: 100093526 (D) | Insurance Company: TRAVELERS

Year: 2000 | Body: CP | Vehicle Make: HOND | VIN #: 1HCEJ8246YL080465

State: SC | Year: 2011 | License Plate #: BWR168 | Owner's D.L. #: UNK

Home Telephone: (803) 374 3901 | Owner's Full Name: SOX - DEBRA D.

Bus. Telephone: ( ) NJA | Street/R.F.D.: 191 DUNBAR RD

Contributed To Collision: Yes (E) | City, State, & Zip: W COLUMBIA SC 29172

Estimated Speed: 0 | Speed Limit: 60 | C.D.L. Req: Yes (N) | T/B S Req: Yes (N) | Alc/Drg info (see back): Yes (N) | Summons #: NA | Code: | Summons #: NJA | Code: | Towed By: NJA

B-087344 | Driver/Pedestrian's Full Name: RIVERA - EDUARDO FLORES-

Unit # 2 | Sex: M | Race: H | Street/R.F.D.: 1005 LEONHARDT DR | Birth Date: 10/05/1980 | City, State, & Zip: GREENVILLE SC 29611

State: | Driver's License #: NONE | Insurance Company: ALLSTATE

Year: 1999 | Body: SU | Vehicle Make: LINC | VIN #: 5LMPU27L6XLJ06499

State: SC | Year: 2011 | License Plate #: ECX672 | Owner's D.L. #: UNK

Home Telephone: (864) 921 6463 | Owner's Full Name: LIMA - ROXANA E

Bus. Telephone: ( ) NJA | Street/R.F.D.: 1000 LEONHARDT DR

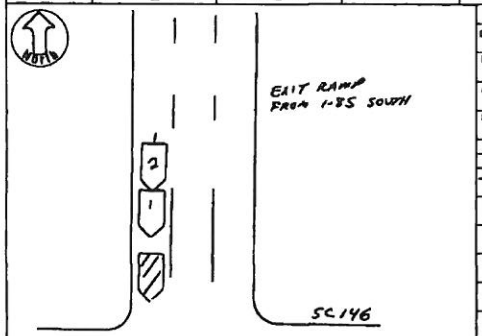
Contributed To Collision: Yes (E) | City, State, & Zip: GREENVILLE SC 29611

Estimated Speed: 5 | Speed Limit: 60 | C.D.L. Req: Yes (N) | T/B S Req: Yes (N) | Alc/Drg info (see back): Yes (N) | Summons #: E605458 | Code: TC | Summons #: NJA | Code: | Towed By: NJA

B-087345 | Driver/Pedestrian's Full Name

Unit # NJA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (E) S W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800	$ 600	$ NJA	$ NJA	$ NJA

Property Owner/Witness: NJA | Address: | State | Zip | Phone

Property Owner/Witness: NJA | Address: | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

UNITS #1 & 2 WERE STOPPED IN TRAFFIC ON THE EXIT RAMP FROM I-85 (SOUTH) ONTO SC 146. UNIT #2 IMPROPERLY STARTED FROM A STOP AND STRUCK UNIT #1 IN THE REAR.

NOTICE - THE REPORTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF. COATRING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: DUNLEY - DW | Rank: LCPL | Badge #: 3Y3 | Code: AP03 | Date: 07/17/2016 | Reviewer's Name: A. H. Wha | Rank: Sgt | Internal Agency Code: 106V025987

Unit	Date of Birth	Sex	Race	INJ	Seat	R/S/D	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	09/11/87	F	W	a: b:	01	13	4 3	i	1	a: 2 b:			
2	10/05/1980	M	H	a: b:	01	13	4 3	1	1	a: 2 b:			
				a: b:			a: b:			a: b:			
				a: b:			a: b:			a: b:			
				a: b:			a: b:			a: b:			
				a: b:			a: b:			a: b:			
				a: b:			a: b:			a: b:			
				a: b:			a: b:			a: b:			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unit./N/A

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 99- Unk.; 21- Child Safety Seat; 69- Other

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Unknown; a) 1- Switch In On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown; b)

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spit (Two-Wheeled Veh.); 13- Vehicle Non-Collision; 14- Other Non-Collision; 15- Pedalcycle

Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 31- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Dam; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 66- Other; 99- Unk.

Event 1 / 2 / 3 / 4: 23 22 | Most Harmful: 1st Event | Most Deformed: 17 7 3

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (<); 42- Angle (→|←); 43- Angle (>); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other Motorbike; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.; (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1-; A2-; A3-

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under-No Intrusion; 3- Under-Unknown; 4- Over-MV in Transport; 5- Over-Other Vehicle; 6- None; 9- Unk.

Undertride/Override: 1- Override; 2- Underride

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Event Loc.: 1- On Roadway; 2- On Shoulder; 3- In Median; 4- On Roadside; 5- On Gore; 6- Outside Trafficway; 9- Unk.

1st Harmful: 1- Y 2-N 9-U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Cloudy; 04- Fog, Smog, Smoke; 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other; 9- Unk.; Work Zone Location; Work Zone Type; 1- Yes 2- No Workers Present:; 1- Yes 2- No Work Zone:; School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Primary: 28

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Action; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 88- Under the Influence; 89- Animal in Road; 61- Glare; 87- Other Person Under the Influence

Environmental: 62- Obstruction; 63- Weather Cond.; 69- Other; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 89- Other; 99- Unk.

Others:

ORIGINAL

AUG 1 8 2010

D.P.S. USE ONLY **10088985** | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01 2007) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1722 | Arrived 1734

Date 08-06-2010 | Time 1715 | County 23 | 1- Interstate 4- Secondary 2- US Primary 6- County 3- SC Primary | Collision Location (Rt. # / Name) 146 / Woodruff Rd | 0- Main 5- Connection 2- Alternate 7- Business 5- Spur | Miles 0 | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir. 2 / 5 | Distance Offset 442 Miles Feet | Direction N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name) From 85 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur 8- Other | ASRU code | MP/Grid | Latitude 34 49 45 30

R.R. Id. N/A | From: N E S W Ramp Only 1- Entrance 2- Exit To: N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Second Intersection (Rt. # / Name) Toward 183 / Roper Mtn Rd | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | Longitude 82 18 13 10

B-331285

Driver/Pedestrian's Full Name: Murphy- Ryan Wesley

Unit # 1 | Sex M | Race W | Street/R.F.D. 220 Valley Crv

Birth Date 11-24-1981 | City, State, & Zip Mauldin SC 29662

State SC | Driver's License # 101783126 (D) | Insurance Company Allstate

Year 2000 | Body 25 | Vehicle Make Toyt | VIN # JTDDR32T6Y0015002

State SC | Year 2011 | License Plate # DRN233 | Owner's D.L. # 101783126

Home Telephone (864) 334-6562 | Owner's Full Name Murphy- Ryan Wesley

Bus. Telephone (N/A 703) 1313 | Street/R.F.D. 220 Valley Crv

Contributed To Collision Yes | City, State, & Zip Mauldin SC 29662

Estimated Speed 20 | Speed Limit 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons # N/A | Code | Summons # N/A | Code | Towed By N/A

B-331286

Driver/Pedestrian's Full Name: Thien- Ryan Alan

Unit # 2 | Sex M | Race W | Street/R.F.D. 200 River Terrace Ct

Birth Date 12-16-1980 | City, State, & Zip Piedmont SC 29673

State SC | Driver's License # 100834122 (D) | Insurance Company Geico

Year 1994 | Body PK | Vehicle Make GMC | VIN # 1GTCS14494R8530456

State SC | Year 2010 | License Plate # CMQ553 | Owner's D.L. # 100834122

Home Telephone (864) 414-1809 | Owner's Full Name Thien- Ryan Alan

Bus. Telephone (864) 969-4988 | Street/R.F.D. 200 River Terrace Ct

Contributed To Collision No | City, State, & Zip Piedmont SC 29673

Estimated Speed 15 | Speed Limit 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons # FC65110 | Code 44 | Summons # N/A | Code | Towed By N/A

B-331287

Driver/Pedestrian's Full Name:

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

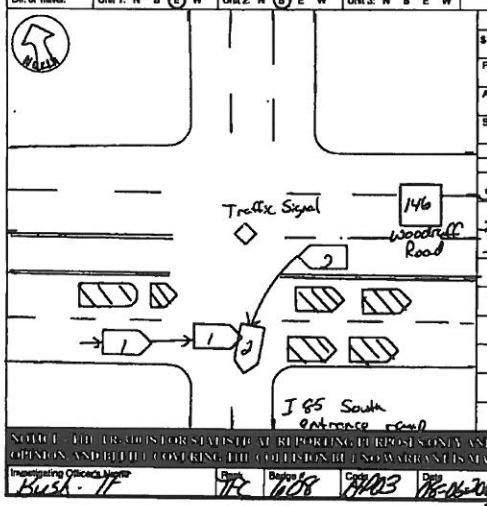
Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000.00	$ 500.00	$	$ N/A	$ N/A

Property Owned/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling east on SC146. Unit #2 was attempting to turn south onto I-85 entrance ramp from SC146 west. Unit #2 failed to yield right of way to unit #1 and was struck in the right rear.

NOTICE - THE DRIVER'S LICENSE AND INSURANCE INFORMATION REQUESTED ON THIS REPORT IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RECITATION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH THEREOF AT ANY COURT OF THE REPORT

Investigating Officer's Name: Bush - TF | Rank TFC | Badge # 1108 | Code AM03 | Date 08-06-2010 | Reviewer's Name | Rank | Internal Agency Code 1060083919

Unit	Date of Birth	Sex	Race	Inj	Seat	Rstd	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	11-24-1981	M	W	0	01	13	4	1	1	2			
2	12-16-1980	M	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Seating Loc. (cont.): 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife

Collision: Not Fixed: 20- Animal (Dom Veh.); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Oth Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip

Collision: Fixed Object: 40- Embankment; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Mail Box; 48- Sign; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Other Post, Pole, Support; 56- Other Wall, Building, Tunnel, Etc.; 57- Overhead Sign Support; 58- Tree; 59- Utility Pole; 60- Work Zone Maint. Equipment; 65- Other; 99- Unk.

Collision: Other Movable Object: 30- Other Movable Object; 99- Unk. Movable Object

Collision: Other Non-collision: 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Matl.); 13- Other Non-collision; 14- Pedestrian; 15- Pedalcycle; 16- Railway Vehicle; 17- Animal; 18- Motor Vehicle In Transport; 19- Unk. Non-collision

Event 1 / Event 2 / Event 3 / Most Harmful Event: 33 / 99 / 99 / 33

1st Harmful Event: 33

Manner of Collision (Struck Veh.): 00- Not Coll. w/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 43- Angle; 48- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 1 / 5 | Most Deformed: 1 / 5

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Ambulance; 29- Fire Fighting; 30- Military; 31- Transport Passengers; 32- Driver Training; 33- Police; 34- Other; 35- Animal Drawn Veh.; 36- Animal (Ridden); 37- Pedestrian; 38- Train; 39- Unk. (Hit and Run Only); 41- School Bus; 42- Passenger Bus; 43- Other; 99- Unk.

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 12- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 6

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Access: 1- Full; 2- Partial; 3- Median; 4- Crossover; 5- Roadway; 6- Shoulder; 7- Ramp; 8- Turnaround; 9- Unk.

Trafficway: 1

Extent of Deformity: 1- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Deformed Area: 3

Bi: X- traffic; 1st Harmful: 5; Event Loc.: 12

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.; 2

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Traffic Signal; 04- Stop Sign; 05- Yield Sign; 06- RR (X-bucks, Lights & Gates); 07- RR (X-bucks & Lights); 08- RR (X-bucks Only); 09- Officer or Flagman; 10- Oncoming Emergency Vehicle; 11- Pavement Markings (only); 12- Work Zone; 13- School Zone Sign; 14- Other Warning Signs; 99- None; 01

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.; 3

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 1

School Bus Involved: 1- Yes Directly; 2- Yes, Indirectly; 3- No; 9- Unk.; 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes; 2- No

Work Zone Location: ----------

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes; 2- No

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.; 04

Primary Contributing Factors: 05

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Glare; 66- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheels; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 86- Unk.

Others:

ORIGINAL

SEP 0.2 2010

D.P.S. USE ONLY: 10095319 | Page # 1 Of. 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev 01/2010) | # of Units: 3 | Amended - Attach Copy of Original Report Corrected | Notified: 1917 | Arrived: 1923

Date: 9-21-10 | Time: 1917 | County: 23 (1- Interstate, 2- US Primary, 3- SC Primary, 4- Secondary, 5- County) | Collision Location (Rt. # / Name): S J-85 South Ramp | (1- Main, 2- Alternate, 5- Spur, 6- Connection, 7- Business) | Miles: | Dir. N E S W | In Near/Off Town of: Greenville

Lane # / Dir.: # 1 | Dir. Of (N E S W) | Distance Offset: Miles 150 (FEET) | Direction (N E S W) | 1- Interstate, 2- US Primary, 3- SC Primary, 4- Secondary, 5- County, 6- Other

Base Intersection (Rt. # / Name): From Woodruff Rd | (1- Main, 2- Alternate, 5- Spur, 6- Connection, 7- Business, 9- Other) | ASRU code | MP/Grid | Latitude 10 92 669

R.R. Id. | From Ramp Only (N E 1- Entrance, 2- Exit; S W 1- Interstate, 2- US Primary, 3- SC Primary, 4- Secondary, 5- County, 6- Other) | Second Intersection (Rt. # / Name): Toward I385 South | (1- Main, 2- Alternate, 5- Spur, 6- Connection, 7- Business, 9- Other) | Longitude 16 08 870

B-360025 — Driver/Pedestrian's Full Name: Basch-Byrd, Michelle L.

Unit # 1 | Sex: F | Race: W | Street/R.F.D.: 7 Clairmont Ave.
Birth Date: 6-20-1975 | City, State, & Zip: Spartanburg, SC 29316
State: SC | Driver's License #: 4250558 (D) | Insurance Company: Travelers
Year: 2005 | Body: 4DR | Vehicle Make: KIA | VIN #: KNAG012G055431900
State: SC | Year: 2010 | License Plate #: EYX 546 | Owner's D.L. #:
Home Telephone: (864 574-5821 | Owner's Full Name: -Same-
Bus. Telephone: 864 205-9857 | Street/R.F.D.:
Contributed To Collision: Yes | City, State, & Zip:
Estimated Speed: 30 | Speed Limit: 45 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons # | Code | Summons # | Code | Towed By: Heckman's

B-360026 — Driver/Pedestrian's Full Name: Sellers-Jimmy Ronnie

Unit # 3 | Sex: M | Race: W | Street/R.F.D.: 127 Woodland Way
Birth Date: 3-9-1950 | City, State, & Zip: Greenville SC 29601
State: SC | Driver's License #: 1739332 (D) | Insurance Company: Penn National
Year: 1998 | Body: 4DR | Vehicle Make: Volvo | VIN #: YV1LS5578W1547611
State: SC | Year: 2011 | License Plate #: EYK 450 | Owner's D.L. #:
Home Telephone: (864) 235-0030 | Owner's Full Name: -Same-
Bus. Telephone: ( ) | Street/R.F.D.:
Contributed To Collision: Yes | City, State, & Zip:
Estimated Speed: | Speed Limit: 45 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons # | Code | Summons # | Code | Towed By

B-360027 — Driver/Pedestrian's Full Name: Bradley-Douglass Clyde Jr.

Unit # 2 | Sex: M | Race: W | Street/R.F.D.: 1705 Powell Mill Rd
Birth Date: 12-22-1948 | City, State, & Zip: Spartanburg, SC 29301
State: SC | Driver's License #: 416020380 (BM) | Insurance Company: State Farm
Year: 2002 | Body: CARR | Vehicle Make: DODGE | VIN #: 3B6NGC13T726301787
State: SC | Year: 2011 | License Plate #: USA 450 | Owner's D.L. #:
Home Telephone: (864 576-7129 | Owner's Full Name: Bradley-Larissa J.
Bus. Telephone: ( ) | Street/R.F.D.: 1705 Powell Mill Rd
Contributed To Collision: Yes | City, State, & Zip: Spartanburg, SC 29301
Estimated Speed: 0 | Speed Limit: 45 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 5,000	$ 1,500	$ 500	$	$

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y(N) | Describe What Happened (Refer to Units by Number)

Units #2 & #3 Were Stationary In Traffic In Lane #1 On The I-85 South Exit Ramp To Woodruff Rd. Unit #1 Was Moving In The Same Lane/Direction Approaching Units #2 & #3. Traveling Too Fast For Conditions, Unit #1 Was Unable To Stop & Did Strike The Rear Of Unit #2. Unit #2 Was Then Pushed Into Unit #3. Driver Of Unit #1 Transported. Drawing Not To Scale

NOTICE - THE PURPOSES FOR STATISTICAL REPORTING. PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT SO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Gault J X 556 | Rank: PFC | Badge #: 24 | Code: 0230200 | Date: 9-21-10 | Reviewer's Name: [signature] | Rank: Sgt | Internal Agency Code: 10-JHP

Unit	Date of Birth	Sex	Race	BU	Seat	R/SD	A.R.D.	Eject	Ext	Trav	Name	Street Address	Zip Code
1	6-20-1975	F	W	2	01	13	1	01	01	1	Basch-Byrd, Michelle	7 Clairmont Ave.	29316
2	12-22-1948	M	W	01	01	13	1	01	01	2			
2	2-22-1973	F	W	01	08	13	1	01	01	2			
3	3-9-1950	M	W	01	01	13	1	01	01	2			
3	543-452	F	W	D	03	13	1	01	01	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal
b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown
b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: a) 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Wheeled Veh.); 13- Tire Failure; 14- Other Non-collision; 15- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. on Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 69- Work Zone Maint. Equipment; 69- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1- Front; 2- Front-Right; 3- Right Side; 4- Right-Rear; 5- Rear; 6- Rear-Left; 7- Left Side; 8- Front-Left; 9- Top; 10- Undercarriage; 11- Unk.

1st Deformed: 1 1 2 7 3 7 | Most Deformed: 1 1 2 7 3 7

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 8- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Access: 1- Core; 2- Inland; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk.

B: K- walk; V- 1st Harmful Event Loc.: 1- Y 2- N 9- U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present:

Primary: 03 | Contributing Factors: 02

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 26- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 02- Obstruction; 03- Weather Cond.; 04- Animal in Road; 81- Glare; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

SEP 30 2010

D.P.S. USE ONLY: 10106065 | Page 1 | Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 6-2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1200 | Arrived: 1220

Date: 9/18/2010 | Time: 1145 | 23 | County: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name): 85 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other | Miles: 4 | Dir.: N E S W | In/ Near City or Town of: GREENVILLE

Lane # / Dir.: 3 SC | Distance Offset: 50 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From: 146 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other | ASRU code | MP/Grid | Latitude: 34 49 38 20

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name) Toward: 276 | Longitude: 82 18 57 60

B-226396 | Driver/Pedestrian's Full Name: SMITH - MARY-K

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 110 SUMMERFIELD LN | Birth Date: 12-26-1963 | City, State, & Zip: ANDERSON SC 29621

State: SC | Driver's License #: 102312882(D) | Insurance Company: LIBERTY MUTUAL

Year: 2003 | Body: SU | Vehicle Make: LEXS | VIN #: JTJHF10493O294932

State: SC | Year: 2011 | License Plate #: ETT181 | Owner's D.L.: 102312882(D)

Home Telephone: 864-367-0505 | Owner's Full Name: SMITH - MARY-K

Bus. Telephone: 412-262-1425 | Street/R.F.D.: 110 SUMMERFIELD LN.

Contributed To Collision: No | City, State, & Zip: ANDERSON SC 29621

Estimated Speed: 0 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-226397 | Driver/Pedestrian's Full Name: STEVENSON - ALAN-C

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 15 WEMBLEY RD.

Birth Date: 12-23-1945 | City, State, & Zip: GREENVILLE SC 29607

State: SC | Driver's License #: 002364723(D) | Insurance Company: STATE FARM

Year: 2004 | Body: CP | Vehicle Make: TOYT | VIN #: 2T1CF22P81C522714

State: SC | Year: 2010 | License Plate #: 3JD310 | Owner's D.L.: 002364723(D)

Home Telephone: 864-350-4488 | Owner's Full Name: STEVENSON - ALAN-C

Bus. Telephone: N/A | Street/R.F.D.: 15 WEMBLEY RD.

Contributed To Collision: Yes | City, State, & Zip: GREENVILLE SC 29607

Estimated Speed: 20 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: E745719 | Code: 21 | Summons #: N/A | Code | Towed By: N/A

B-226398 | Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800	$ 1800	$	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

UNIT #1 WAS STOPPED IN TRAFFIC ON THE RAMP FROM INTERSTATE 85 TO SC 14 HEADED NORTH. UNIT #2, TRAVELING NORTH, TOO FAST FOR CONDITIONS, STRUCK UNIT # 1 IN THE REAR.

SOURCE: THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH THEREOF.

Investigating Officer's Name: CARTER - GL | Rank: STAL | Badge #: 229 | Code: HP03 | Date: 9/18/2010 | Reviewer's Name | Rank: SGT | Internal Agency Code: 106V702667

Unit	Date of Birth	Sex	Race	INJ	Seat	R/ED	A.B.D.	Eject	LAI	Trav	Name	Street Address	Zip Code
1	12-26-1963	F	W	6	01	13	4 3	1	1	2			
2	12-23-1945	M	W	0	01	13	4 3	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./N/A

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable; b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Head Injury: 1- Yes, 2- No

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown

b) By: 1- EMS, 2- Police, 8- Other, 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 05- Fire/Explosion, 06- Immersion, 07- Jackknife

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. (In Transport), 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Bridge Parapet End, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 66- Other, 99- Unk.

Unit Sketch: 1st Impact, 1st Deformed, Most Deformed

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle, 41- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 63- Animal (Drawn Veh.), 64- Animal (Ridden), 88- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopped in Traffic, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1- 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Positive Median Barrier, 4- One-way, 8- Other; A2-; A3-

Trafficway: 4

Deformed Area: 1- Front, 2- Back, 3- Left Side, 4- Right Side, 5- Top/Roof, 6- Undercarriage, 7- Unknown

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 6

Intrusion: 1- Under- Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV In Transport, 5- Over- Other Vehicle, 6- None, 8- Unk.

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Disabling Damage, 3- Severe/Rotated, 8- Unk., 9- Not Applicable

Most Deformed: 2

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Dusk, 6- Snow, 7- Blowing Sand, Soil, Dirt or Snow, 8- Fog, Smog, Smoke, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 06- T-Intersection, 07- Shared Use Paths or Trail, 08- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Road Character: 5- 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Traffic Control Type: 13- 01- Stop and Go Light, 02- Flashing Traffic Signal, 03- Stop Sign, 04- Yield Sign, 05- Officer or Flagman, 06- School Zone Sign, 07- RR (X-bucks, Lights & Gates), 08- RR (X-bucks & Lights), 09- RR (X-bucks Only), 10- Pavement Markings, 11- Work Zone, 12- Other Warning Signs, 99- None

Harmful Event: 1st 12 / Harmful 12

Work Zone: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination, 1- Yes, 2- No

Work Zone Location: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure

Work Zone Type: 1- Yes, 2- No

Workers Present: 1- Yes, 2- No

School Bus Involved: 3

Emergency Vehicle Responding: 2

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Aggressive Operation of Vehicle, 12- Over-correcting/Over-steering, 13- Swerving to Avoiding Object, 14- Under the Influence, 15- Wrong Side or Wrong Way, 16- Vision Obscured (Within Unit), 17- Traffic Control Device (i.e., Missing), 18- Improper Lane Usage/Change, 19- Cell Phone, 20- Other Improper Action, 21- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 82- Obstruction, 83- Weather Cond., 88- Other, 89- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Animal in Road: 80

ORIGINAL

OCT 21 2010

D.P.S. USE ONLY: 10114399 | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 01/2001)

# of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0708 | Arrived: 0715

Date: 9/20/10 | Time: 0708 | County: 03 | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): 8 I-85 N | (1) Main 2- Alternate 5- Spur 6- Connection 7- Business | Miles: | Dir. N E S W | (2) Near Co. or Town of: Greenville

Lane # / Dir.: 4 4 | Distance Offset: .25 Miles Feet | Direction (B) N E S W | Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From SC-146 | (1) Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MPG/Grid | Latitude: 1092223 | Longitude: 1609140

R.R. Id. | From: (1) NE Ramp Only (2) SW Exit | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward Salters Rd

B-454753 | Driver/Pedestrian's Full Name: Hester- James Anthony Jr

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 1072 Piedmont Golf Course Rd Apt 24A | Birth Date: 07/02/87 | City, State, & Zip: Piedmont SC 29673

State: SC | Driver's License #: 101383870 - D | Insurance Company:

Year: 1996 | Body: 2S | Vehicle Make: Ford | VIN #: 1FASP11J7TW168131

State: SC | Year: 2010 | License Plate #: EWG 797 | Owner's D.L. #: Same

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes | No | City, State, & Zip:

Estimated Speed: 5 | Speed Limit: 15 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: 66031FI | Code: 94 | Summons #: 66332 FI | Code: 94 | Towed By:

B-454754 | Driver/Pedestrian's Full Name: Irby- Chaunsel E.

Unit #: 2 | Sex: F | Race: B | Street/R.F.D.: 200 Pine Creek Ct Ext. Apt H107 | Birth Date: 11/14/60 | City, State, & Zip: Greenville SC 29605

State: SC | Driver's License #: 89709915 - D | Insurance Company: Nationwide

Year: 1986 | Body: 4S | Vehicle Make: Buic | VIN #: 1G4HR6634GH432445

State: SC | Year: 2011 | License Plate #: CTK 245 | Owner's D.L. #: Same

Home Telephone: 8642775361 | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes | No | City, State, & Zip:

Estimated Speed: 0 | Speed Limit: 15 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: | Code: | Summons #: | Code: | Towed By:

B-454755 | Driver/Pedestrian's Full Name:

Unit #: W/A | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

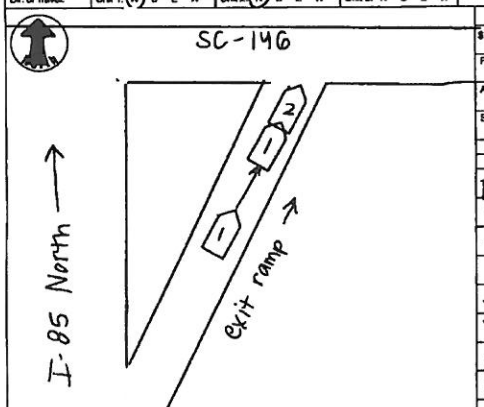
State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: | Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800	$ 800	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Both units were slowing in traffic. Unit #1 started to move forward & struck Unit #2 in the rear end. Both units were on I-85 ramp to exit onto Woodruff Rd. The driver & passenger of Unit #2 were transported to Greenville Memorial Hospital.

NOTICE: THE DPS COLLISION REPORT IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS AN OFFICIAL OPINION AND IS NOT ADMISSIBLE AS EVIDENCE. THE COLLISION REPORT IS MADE WITHOUT WARRANTY AS TO THE ACCURACY OF THE FACTS REPORTED.

Investigating Officer's Name: Hawkins J | Rank: PFC | Badge #: 409 | Code: 220100 | Date: 9/20/10 | Reviewer's Name: | Rank: Sgt | Internal Agency Code: 10-B0255

Unit	Date of Birth	Sex	Race	INJ	Seat	AIRB	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	7/02/87	M	W	0	01	99	99	1	1	2			
2	11/14/60	F	B	1	01	99	99	1	1	1	Chaunsel Irby	200 Pine Creek Ct Ext H107	29605
2	04/10/84	F	B	1	02	99	99	1	1	1	Tera Irby	200 Pine Creek Ct. Ext #107	29605

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontesting); 51- Other Unenclosed Area (nontesting); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 99- Unk.; 21- Child Safety Seat; 69- Other

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: 1- Yes 2- No 3- Unknown; By: 1- EMS 2- Police 5- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 81- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 19- Animal (Deer Only); 21- Animal (All Other); 23- Motor Veh. (In Transport); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Median Barrier; 56- Mail Box; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Event 1 / Event 2 / Event 3 / Event 4 / Most Harmful / 1st Event: 22 / 22 / 22 / 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 80- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 10 / 7

1st Deformed: 1 7 3 | Most Deformed: 1 7 2

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unknown; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alc Test Results: A1- ; A2- ; A3- ; AU- ; DU-

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 0

Intrusion: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.: 6

Extent of Deformity: 1- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.: 0

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other: 4

Access: 1- Limited; 2- Ramp; 3- Street; 4- Frontage; 5- Service; 6- Bike Path; 7- Sidewalk; 8- Outside Trafficway; 9- Unk.: 1

Event Loc.: 1- Y 2-N 9-U: Y: 1st Harmful: 5 2

Action Prior to Impact: 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; [Vehicle] 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; [Non-motorist] 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 88- Other; 99- Unk.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest: 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.: 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None: 01

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.: 3

Work Zone: 1- Yes 2- No: 2

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other; 9- Unk.

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.: 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights): 1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 09- Unk.; 10- Y-Intersection; 11- Nonjunction: 08

Primary: 28

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 99- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 49- Other; 99- Unk.

Non-Motorists: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 80- Animal in Road; 81- Glare; 82- Obstruction; 83- Weather Cond.; 89- Other; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 85- Other; 99- Unk.

Drivers: 01- Driver; 02- Driver; 03- Driver; 04- Driver; 05- Driver; 06- Driver; 07- Driver; 08- Driver

ORIGINAL

NOV 0 9 2016

D.P.S. USE ONLY: 10122281 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 01/2011 | # Of Units: 2 | Amended - Attach Copy of Original Report | Notified: 1538 | Arrived: 1545

Date: 10/21/2016 | Time: 1538 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): 85 I85 SOUTH | 0-Main 1-Alternate 2-Alternate 5-Spur 6-Connection 7-Business | Miles: 13 | Dir.: N E S W | In / Near / Off | Town of: GREENVILLE

Lane # / Dir.: # | Dir. | N E S W | Distance Offset: 36 Miles / Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

From: SC14 | Toward: US 276 | Base Intersection (Rt. # / Name) | Second Intersection (Rt. # / Name) | 0-Main 1-Alternate 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid | Latitude: 1098585 | Longitude: 1608793

R.R. Id. | From: Ramp Only | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

A-341449 Driver/Pedestrian's Full Name: UNKNOWN, HISTRUN

Unit #: | Sex: | Race: | Street:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

State: | Year: | License Plate #: | Owner's D.L. #:

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street:

Contributed To Collision: Yes / No | City, State, & Zip:

Ejected: | Speed: N/A | Speed Limit: 60 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons # | Code | Summons # | Code | Towed By

A-341450 Driver/Pedestrian's Full Name: (KOCH) KATHRYN YOUNG

Unit #: 2 | Sex: F | Race: W | Street: 18 AFTON AV

Birth Date: 12/20/1977 | City, State, & Zip: GREENVILLE SC 29601

State: SC | Driver's License #: 20077055003 D | Insurance Company: TRAVELERS

Year: 2010 | Body: SU | Vehicle Make: FORD | VIN #: 1FMEU6EE5AUA68740

State: SC | Year: 2011 | License Plate #: GTQ689 | Owner's D.L. #:

Home Telephone: (864) 735-6885 | Owner's Full Name: SAME

Bus. Telephone: (864) 214-3275 | Street: SAME

Contributed To Collision: Yes / No | City, State, & Zip: SAME

Estimated Speed: 0 | Speed Limit: 60 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons # | Code | Summons # | Code | Towed By

A-341451 Driver/Pedestrian's Full Name: N/A

Unit #: | Sex: | Race: | Street:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

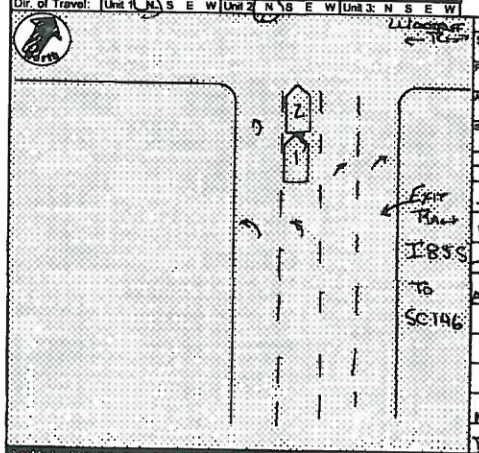
Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street:

Contributed To Collision: Yes / No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ UNK	$ 5000	$	$	$

Property Owner/Witness: NONE | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

UNIT 2 WAS STOPPED FOR THE TRAFFIC LIGHT WHEN UNIT 1 STRUCK UNIT 2 UNIT 1 LEFT THE SCENE. UNIT 1 WAS ENCIRCLED AS A SMALL GRY OR BEIGE SUV

NO INJURIES

DIAGRAM NOT TO SCALE

Source: THE OFFICER'S STATUTORY AUTHORITY FOR REQUIRING PERSONS TO MAKE REPORTS IS SECTION(S) OF THE OFFICER KNOWLEDGE AND BELIEF CONCERNING THE COLLISION AS REPORTED IS MADE AS BOTH IS DULY SWORN BY OATH

Investigating Officer's Name: HUNTINGTON, M.S. | Rank: SGT | Badge #: 43 | Code: 22000 | Date: 10/21/2016 | Reviewer's Name: | Rank: | Internal Agency Code: 42-10-89283

SB ramp

Corrected

Unit	Date of Birth	Sex	Race	INJ	Best	RSD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	UNK	U	U		01	99	9	1	1	2			
2	12/20/1977	F	W	3	01	13	9	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 04- Child Safety Seat; 05- Other; 06- Unk; 07- Pedestrian, Motor/Pedalcycle Only; 08- Helmet; 09- Reflective Clothing; 10- Protective Pads; 11- Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 7-Not Applicable 9-Deployment Unk.; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9- Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision - Not Fixed: 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 30- Other Moveable Object; 31- Guardrail Face; 32- Guardrail End; 33- Other Fixed Object; 34- Median Cable Barrier; 35- Median Cross Over; 36- Bridge Rail; 37- Bridge Pier or Abutment; 38- Overhead Sign Support; 39- Light / Luminaire Support; 40- Utility Pole; 41- Other Post, Pole or Support; 42- Culvert; 43- Curb; 44- Ditch; 45- Embankment; 46- Fence; 47- Mail Box; 48- Tree; 49- Fire Hydrant; 50- Other Fixed Object

Collision - Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Unk

Collision - Other Motorable Object: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (↘↑↙); 41- Angle (→|←); 42- Angle (→|↙); 43- Angle (↗|↙); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed | Most Deformed | 1- Front; 2- Front Right; 3- Right Side; 4- Rear Right; 5- Rear; 6- Rear Left; 7- Left Side; 8- Front Left; 9- Undercarriage; 10- Roof; 11- Windshield; 12- Unknown

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Low Boy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- A2- A3-

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unavailable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1 Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 9- Unk.

Underride/Override: 0- None; 1- Underride; 2- Override; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 9- Unk; 8- Not Applicable

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 99- Unk.; 27- Working

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other

Lane: 1- Drive; 2- Median; 3- Roadway; 4- Island; 5- Roadside; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk; B- X-walk; I-Y-Z-H-9-U

1st Harmful Event Loc: 1- Entrance Ramp; 2- Exit Ramp; 3- Gore; 4- Crossover; 5- Turnaround; 6- Bridge; 7- Overpass; 8- Underpass; 9- Unk

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

School Bus Involved: 1- Yes Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Yes 2- No. Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area. Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

Workers Present: 1- Yes 2- No

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 87- Wrong Side of Road; 88- Under the Influence; 89- Other Person Under Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

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D.P.S. USE ONLY: 10122359 | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 01/2001)

# of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1617 | Arrived: 1632

Date: 10-14-2010 | Time: 1608 | County: 23 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary

Collision Location (Rt. # / Name): & I-85 SB | 0- Main 5- Connection 2- Alternate 7- Business 5- Spur | Miles: 1 | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: 1 | Of: 4 | N E S W | Distance Offset: .40 Miles Feet | Direction: N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other

Base Intersection (Rt. # / Name): From SC-146 Woodruff Rd. | 0- Main 5- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid | Latitude: 1092662

R R. Id. | From: Ramp Only 1- Entrance 2- Exit | To: N E S W 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other

Second Intersection (Rt. # / Name): Toward I-385 | 0- Main 5- Connection 2- Alternate 7- Business 5- Spur 9- Other | Longitude: 1608887

B-241525 | Driver/Pedestrian's Full Name: Hit & Run

Unit #: 1 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN # | State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

B-241526 | Driver/Pedestrian's Full Name: Plemmons-Betty C.

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 15 Fieldcrest Cir. | Birth Date: 05-03-1946 | City, State, & Zip: Asheville NC 28806

State: NC (C) | Driver's License #: 474833 | Insurance Company: Nationwide

Year: 1994 | Body: SUV | Vehicle Make: Ford | VIN #: 1FMDU34E9XZA89240

State: NC | Year: 2011 | License Plate #: VZJ 1686 | Owner's D.L. #: unknown

Home Telephone: 828 251-5511 | Owner's Full Name: Plemmons-Richard G. | Bus. Telephone | Street/R.F.D.: 15 Fieldcrest Cir | Contributed To Collision: No | City, State, & Zip: Asheville NC 28806

Estimated Speed: 0 | Speed Limit: 60 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: N/A | Code: N/A | Summons # | Code | Towed By: N/A

B-241527 | Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Direction of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

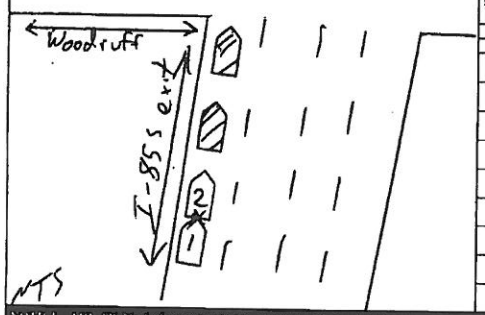
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ unk	$ 1500	$	$	$

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photos: Y N | Describe What Happened (Refer to Units by Number)

Unit 2 was stopped in traffic. Unknown Unit 1 struck Unit 2 in the rear. Unit 1 left the scene.



NOTICE: THE TRAFFIC RECORDS STATISTICAL REPORTING PURPOSE ONLY AND IS A REFLECTION OF THE OFFICER'S PRESENT KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTS HEREIN OR OUR MAY THEREOF.

Investigating Officer's Name: MP Tierney | Rank: PFC | Badge #: 263 | Code: 230200 | Date: 10-14-10 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 10-87466

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	Unk.	M	U		01	99	9	9	9	2			
2	9-3-46	F	W		01	13	4	1	1	2	Driver Unit 2		
24	12-12-44	M	W		03	13	4	1	1	2	Richard Plemmons	Same as Unit 2	

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 88- Unk./NA; 89- Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front 2- Deployed Side 3- Deployed Both 4- Not Deployed 7- Not Applicable 8- Deployment Unk.; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected 2- Part. Ejected 3- Tot. Ejected 7- Not App. 9- Unk.

Location After Impact: 1- Not Trapped 2- Extricated (Mechanical Means) 3- Freed (non-mech.) 4- Not Applicable 9- Unknown

Transported to Medical Facility: a) 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet 51- Reflective Clothing 41- Protective Pads 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Down/Jt Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Fuel/Wheeled Veh.); 13- Tire Failure; 14- Other Non-collision; 15- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Unattended); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail Face; 49- Guardrail End; 50- Impact Attenuator/Crash Cushion; 51- Concrete Traffic Barrier; 52- Other Post, Pole or Support; 53- Other Traffic Sign Post; 54- Other Wall, Building, Tunnel; 55- Utility Pole; 56- Median Barrier; 57- Overhead Sign Support; 58- Tree; 59- Work Zone Maint. Equipment; 60- Other Fixed Object; 69- Unk.

Event 1: 22; Event 2: 23; Most Harmful: 22; 1st Harmful: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (Left); 42- Angle (Right); 43- Angle (Right); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Damaged: 1st Damaged 99 2 7 3; Most Damaged 99 2 7 3

Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 35- Animal Drawn Van; 36- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; Test Type: 1- Urine 2- Breath (Alc. Only) 3- Blood; Drug Results: 1- Amphetamines 2- Cocaine 3- Marijuana 4- Opiates 5- PCP 8- Other

Special Use Only: 1- Given - Known Results 2- Given - Unusable 3- Given - Pending 4- None 5- Refused

Underride/Override: 1- Under- Compartment Intrusion 2- Under- No Intrusion 3- Under- Unknown 4- Over- MV in Transport 5- Over- Other Vehicle 6- None 9- Unk.

Extent of Deformity: 0- None/Minor 1- Functional Damage 2- Disabling Damage 3- Severe/Tpldsed 5- Not Applicable 9- Unk.

Weather Condition: 1- Clear (no adverse conditions) 2- Rain 3- Cloudy 4- Sleet, Hail 5- Snow 6- Fog, Smog, Smoke 7- Blowing Sand, Oil, Dirt or Snow 8- Severe Crosswinds 9- Unk.

Light Condition: 1- Daylight 2- Dawn 3- Dusk 4- Dark (Lighting Unspecified) 5- Dark (Street Lamp Lit) 6- Dark (Street Lamp Not Lit) 7- Dark (No Lights)

Junction Type: 01- Crossover 02- Driveway 03- Five/More Points 04- Four-way Intersection 05- Railway Grade Crossing 07- Shared Use Paths or Trail 08- T-Intersection 09- Traffic Circle 12- Y-Intersection 13- Nonjunction 99- Unk.

Trafficway: 1- Two-way, Not Divided 2- Two-way, Divided, Unprotected Median 3- Two-way, Divided, Barrier 4- One-way 8- Other

Road Character: 1- Straight - Level 2- Straight - On Grade 3- Straight - Hillcrest 4- Curve - Level 5- Curve - On Grade 6- Curve - Hillcrest

Road Surface Condition: 1- Dry 2- Wet 3- Snow 4- Slush 5- Ice 6- Contaminate 7- Water (Standing, etc.) 8- Other 9- Unk.

Traffic Control Type: 01- Stop and Go Light 02- Flashing Traffic Signal 03- Stop Sign 04- School Zone Sign 05- Officer or Flagman 06- Oncoming Emergency Vehicle 07- Pavement Markings (only) 08- RR (X-bucks, Lights & Gates) 09- RR (X-bucks & Lights) 10- RR (X-bucks Only) 11- Yes, Directly 12- Yes, Indirectly 13- No 99- Unk.

School Bus Involved: 1- Before 1st Sign 2- Advanced Warning Area 3- Transition Area 4- Activity Area 5- Termination Area; 1- Yes 2- No

Work Zone: 1- Shoulder/Median Work 2- Lane Shift/Crossover 3- Intermittent/Moving Work 4- Lane Closure 8- Other 9- Unk.; 1- Yes 2- No

Work Zone Location: ----------

Work Zone Type: ----------

Workers Present: 1- Yes 2- No

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc. 02- Distracted/Inattention 03- Driving Too Fast for Conditions 04- Exceeded Authorized Speed Limit 05- Failed to Yield Right of Way 06- Ran off Road 07- Fatigued/Asleep 08- Followed Too Closely 09- Made an Improper Turn 10- Medical Related 11- Other Improper Action 12- Aggressive Operation of Vehicle 13- Over-correcting/Over-steering 14- Swerving to Avoiding Object 15- Wrong Side or Wrong Way 16- Under the Influence 17- Vision Obscured (Within Unit) 18- Improper Lane Usage/Change 28- Other Improper Action 29- Unk.

Roadway: 30- Debris 31- Non-highway Work 32- Obstruction in Roadway 33- Road Surface Condition (i.e., Wet) 34- Rut, Holes, Bumps 35- Shoulders (None, Low, Soft, High) 36- Traffic Control Device (i.e., Missing) 37- Work Zone (Constr./Maint./Utility) 38- Worn, Travel-Polished Surface 48- Other 49- Unk.

Non-Motorist: 50- Inattentive 51- Lying &/or Illegally in Roadway 52- Failure to Yield R. of W. 53- Not Visible (Dark Clothing) 54- Disregard Signs, Signals, Etc. 55- Improper Crossing 56- Darting 57- Wrong Side of Road 58- Other 59- Unk.

Environmental: 60- Obstruction 61- Glare 62- Obstruction 63- Weather Cond. 68- Other 69- Unk.

Vehicle Defect: 70- Brakes 71- Steering 72- Power Plant 73- Tires/Wheel 74- Lights 75- Signals 76- Windows/Shield 77- Restraint System 78- Truck Coupling 79- Cargo 80- Fuel System 88- Other 89- Unk.

Contributing Factors: Other: 99- Unk.

ORIGINAL

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D.P.S. USE ONLY: 10136573 | Page # 01 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2007) | # Of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0751 | Arrived*: 0805

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	In / Near-City or Town of:
11/8/2010	0750	23	5 I-85 N			Greenville

Lane # / Dir.: 1 N | Distance Offset: 45 Feet | Direction: S | From: Ramp Only | To: 3 | R.R. Id.

Base Intersection (Rt. # / Name): 32 Woodruff Rd | Second Intersection (Rt. # / Name): US 276 Laurens Rd

ASRU codes | M.P./Grid | Latitude: 10°92235" | Longitude: 160°9173"

X-043255 | Driver/Pedestrian's Full Name: AMIDON, Heather G

Unit #: 1 | Sex: F | Race: W | Street: 417 Liberty Ct.

Birth Date: 12/29/1978 | City, State, & Zip: Anderson, SC 29624

State: SC | Driver's License #: 7520423 (D) | Insurance Company: Nationwide

Year: 2005 | Body: 4D | Vehicle Make: Ford | VIN #: 1FMZU73E65ZA43185

State: SC | Year: 2011 | License Plate #: ETL 328 | Owner's D.L. #

Home Telephone: (803) 320 4380 | Owner's Full Name: Same

Bus. Telephone: ( ) | Street

Contributed To Collision: Yes | City, State, & Zip

Estimated Speed: 5 | Speed Limit: 35 | C.D.L. Req: Yes | T/S S Req: Yes | Alc/Drg Info (see back): Yes | Summons #: 52798 FA | Code: 4B | Towed By

X-043256 | Driver/Pedestrian's Full Name: DIMOPOULOS, Peter K

Unit #: 2 | Sex: M | Race: W | Street: 304 Four Lakes Dr

Birth Date: 11/21/1949 | City, State, & Zip: EASLEY, SC 29642

State: SC | Driver's License #: 4522824 (D) | Insurance Company: OLD Dominion

Year: 2010 | Body: 4d | Vehicle Make: Toyt | VIN #: JTDKN3DU2A0209301

State: SC | Year: 2011 | License Plate #: GNZ 944 | Owner's D.L. #

Home Telephone: (864) 903 3055 | Owner's Full Name: Same

Bus. Telephone: ( ) | Street

Contributed To Collision: No | City, State, & Zip

Estimated Speed: 0 | Speed Limit: 35 | C.D.L. Req: Yes | T/S S Req: Yes | Alc/Drg Info (see back): Yes | Towed By: N/A

X-043257 | Driver/Pedestrian's Full Name

Unit #: 1 | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company:

Year | Body | Vehicle Make | VIN #

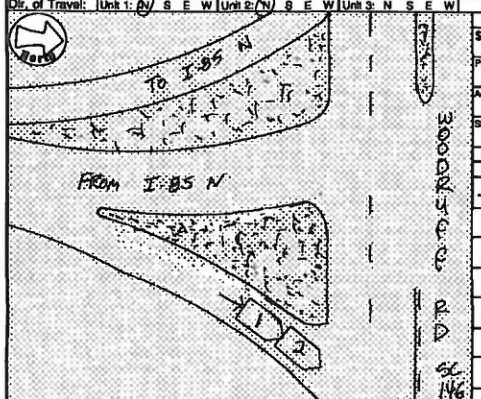
Home Telephone | Owner's Full Name

Bus. Telephone | Street

Contributed To Collision | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2500	$ 2000	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y N | Describe What Happened (Refer to Units by Number):

Both Units were stopped at the end of Access Ramp. Unit 2 Rolled forward then stopped for on comming traffic then was struck in the Rear by Unit 1. Unit 1 thought Unit 2 was still moving and looked to left for traffic before Collision

NOTICE: THE DEPARTMENT'S INVESTIGATION OF TRAFFIC COLLISIONS IS ONLY AN AID TO THE COURTS IN DETERMINING LEGAL LIABILITY. THE OPINIONS AND CONCLUSIONS REACHED BY THE COLLISION INVESTIGATOR ARE NOT BINDING ON ANY COURT OF LAW.

Investigating Officer's Name: Dempsey D 71 | Rank: Cpl | Badge #: 108 | Code: 0230200 | Date: 11/8/2010 | Reviewer's Name | Rank | Internal Agency Code: 10-96835

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	ABD	Ejct	LAI	Tran	Name	Street Address	Zip Code
1	12/29/78	F	W	4	01	13	4	1	1	2			
2	11/21/49	M	W	0	01	15	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 71- Child Safety Seat; 88- Other; 99- Unk

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 81- Lighting

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 8-Deployment Unk; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22	1			22	22
22	2				

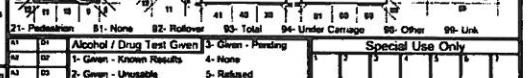
Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 08- Cross Median/Center Line; 09- Immersion; 10- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 11- Ran off Road Right; 12- Separation of Units; 16- Other Non-collision; 19- Unk. Non-collision

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 23- Motor Veh. (In Transport); 24- Motor Veh. (Stopped); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Fence; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail End; 49- Guardrail Face; 50- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 10- Not Coll. W/ Motor Veh.; 1st Harmful Collision: 10; 00- Rear-to-Rear; 01- Angle (<-|-); 02- Angle (->|<-); 03- Angle (-/|\-); 04- Sideswipe Same Dir.; 05- Sideswipe Opposite Dir.; 06- Backed Into; 09- Unknown

Most Deformed Area: 1st / Most Deformed: 1 / 8



Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 11- Government; 12- Fire Fighting; 13- Logging; 08- Transport Passengers; 10- Police; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1- Given - Pending; 2- Given - Knowns Results; 3- Given - Unusable; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Undermide/Overmide: 6

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk

Extent of Deformity: 0

0- None/Minor; 1- Functional Damage; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk

Traffic Control: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other

Trafficway: 4

1- Core; 2- Inland; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Unk; 9- Unk

B: X-walk; 1st Harmful Event Loc: 5

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Character: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk

Road Surface Condition: 1

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 98- None; 99- Unk

Traffic Control Type: 43

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

School Bus Involved: 3

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone: 2

1- Yes 2- No

Work Zone Location: ---

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

Work Zone Type: ---

1- Yes 2- No

Workers Present: ---

Primary: 09

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk; 57- Wrong Side of Road; 85- Under the Influence; 87- Other Person Under Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond; 68- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

ORIGINAL

DEC 16 2010

D.P.S. USE ONLY: 10137787 | Page 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 1 | Amended - Attach Copy of Original Report Corrected | Notified | Arrived: 1420 | 1455

Date: 11-16-2010 | Time: 1409 | County: 23 | Collision Location (Rt. # / Name): 85 | Main: 8 Connection | Miles: .02 | Dir.: E | Nearest City or Town of: Greenville

Lane # / Dir.: N/A | Dir. of Travel: N | Distance Offset: 101 Miles Feet | Direction: E | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude: 34 49 48.60

R.R. Id.: N/A | From: Ramp Only Entrance 2- Exit | To: E | Second Intersection (Rt. # / Name): Toward 385 | Longitude: 82 18 03.40

B-572374

Driver/Accompanist's Full Name: Williams-Shymice N.

Unit #: 1 | Sex: F | Race: B | Street/R.F.D.: 1900 Boiling Rd. Ext.

Birth Date: 03/10/1988 | City, State, & Zip: Taylors SC 29687

State: SC | Driver's License #: 100671369 (D) | Insurance Company: Allstate

Year: 1997 | Body: 4S | Vehicle Make: Honda | VIN #: 1HGCD5609VA190776

State: SC | Year: 2010 | License Plate #: FAN438 | Owner's D.L. #: N/A

Home Telephone: 864608-2098 | Owner's Full Name: Williams - Nieasha

Bus. Telephone: N/A | Street/R.F.D.: 6 Charcross ct.

Contributed To Collision: No | City, State, & Zip: Greenville SC 29615

Estimated Speed: 40 | Speed Limit: 45 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons #: N/A | Code | Towed By: North Hills

B-572375

Driver/Restrainer Full Name: unknown

Unit #: 2 | Sex: N/A | Race: N/A | Street/R.F.D.: N/A

Birth Date: N/A | City, State, & Zip: N/A

State: N/A | Driver's License #: N/A | Insurance Company: N/A

Year: N/A | Body: 4S | Vehicle Make: N/A | VIN #: N/A

State: N/A | Year: N/A | License Plate #: N/A | Owner's D.L. #: N/A

Home Telephone: ( ) N/A | Owner's Full Name: N/A

Bus. Telephone: ( ) N/A | Street/R.F.D.: N/A

Contributed To Collision: Yes | City, State, & Zip: N/A

Estimated Speed: 45 | Speed Limit: 45 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons #: N/A | Code | Towed By: N/A

B-572376

Driver/Pedestrian's Full Name:

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Towed By

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000.00	$ 100.00	$ N/A	$ N/A	$ N/A

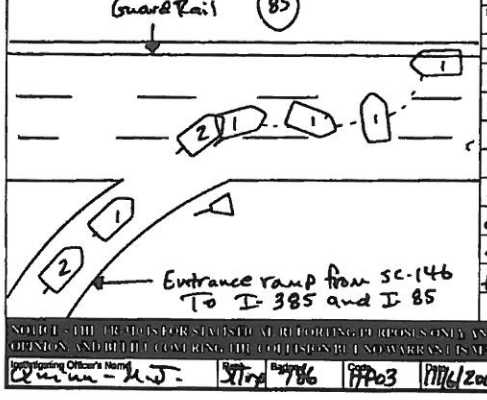
Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photos: Y N

Describe What Happened (Refer to Units by Number)

Unit #1 was traveling east on entrance ramp from SC-146 to I-385 unit #2 was traveling east on entrance ramp behind unit #1. Driver of unit #2 for unknown reasons struck unit #1 in the rear causing unit #1 do strike the guardrail. Driver # of unit #2 fled the scene. There was no damage done to the guardrail.



NOTICE - THE DRIVER'S FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE CORRECTNESS OF THE REPORT.

Investigating Officer's Name: Quinn - M.J. | Rank: Sgt | Badge #: 786 | Code: HP03 | Date: 11/16/2010 | Reviewed By Name | Rank: Sgt | Internal Agency Code: 786V18-7245

Unit	Date of Birth	Sex	Race	Inj.	Seat	R/SD	A.I.S.D.	Eject	Ext.	Trap	Name	Street Address	Zip Code
1	03/10/1988	F	B	1	01	13	43	1	1	1	Driver #1.		
2	unknown	U	U	0	01	99	99	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 | 04 05 06 | 07 08 09

Restraint/Safety Devise: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 20- Child Safety Seat; 21- Child Booster Seat; 30- Helmet; 40- Protective Pads; 50- Other; 51- Reflective Clothing; 61- Lighting; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown; a) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown; b)

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events: Most Dmg TR-310 Collision Diagram Pg. 1 Event Descriptions

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harm
24				24	
22				22	22

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazarded Veh.); 13- Other Non-Collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Guardrail End; 48- Guardrail Face; 49- Highway Traffic Sign Post; 50- Impact Attenuator/Crash Cushion; 51- Light/Luminaire Support; 52- Other Post, Pole; 53- Sign Support; 54- Tree; 55- Mail Box; 56- Other (Well, Building, Tunnel, Etc.); 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other Fixed Object; 60- Unk.

Manner of Collision (Struck Veh.): 10- Not Coll. W/Motor Veh.; 00- Unk.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Deformed Area: 1st Deformed: 13 28 2; Most Deformed: 15 28 3

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Dogs, Etc.); 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 68- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1-; A2-; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: Underride/Override; Extent of Deformity; 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; Trafficway; 1st Harmful Event Loc.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Related Unit: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Before 1st Sign: 1- Yes; 2- No

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other

Work Zone Type: 1- Yes 2- No

Workers Present: 1- Yes 2- No

Primary: 29

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Factor; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Traffic Control Device (i.e., Missing); 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

FEB 0 3 2010

2010006685

SOUTH CAROLINA DPS/OHS & DMV USE ONLY: 10154907 | Page # 1 Of 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

Of Units: 02 | Amended - Attach Copy of Original Report | Corrected | Notified: 1003 | Arrived: 1014

Date	Time of Collision	Day	Collision Location (Rt. # / Name)	Miles	Dir.	In (Near) City or Town of:
11-30-2010	0059	23	5 85/ RAMP 8433	.88	N E S W	GREENVILLE

Lane # / Dir.: 3 Of 3 (N) E S W

Distance Offset: 20 Miles (Feet)

Direction: N E S W

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6 - Other

Base Intersection (Rt # / Name) From: 14rd WOODRUFF RD

0-Main 1-Alternate 2-Business 3-Spur 4-Connection 5-Business 6-Other

Second Intersection (Rt. # / Name) Toward: 27rd LAURENS RD

GPS COORDINATES 00 00' 00 00"

DEGREES MINUTES SECONDS

Latitude	34	49	42.20
Longitude	82	18	07.24

R.R. Id. | From | Ramp Only | To

1 - Entrance Ramp (N E S W 1) | Exit (N E S W 2)

E-051205

Driver/Pedestrian's Full Name: FREEMAN | SUSAN | MOSER

Unit #	Sex	Race	Street/R.F.D.
01	F	W	109 PINEHAVEN WAY

Occ: 1 | Birth Date: 06-20-1949 | City, State, & Zip: SIMPSONVILLE SC 290807060

State	Driver's License #	Class	Insurance Company
SC	092202855	D	UNITED SERVICES AUTO ASSN

Year	Body	Vehicle Make	VIN #
2008	4S	LEXS	JTHBJ46G482285305

State	Year	License Plate #	Owner's D.L. #
SC	2011	5382EB	UNKNOWN

Home Telephone: (864) 2287303 | Owner's Full Name: FREEMAN | WILLIAM | B

Bus. Telephone: (864) 5619048 | Street/R.F.D.: 109 PINEHAVEN WAY

Contributed To Collision: Yes (No) | City, State, & Zip: SIMPSONVILLE SC 290807060

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B 5 Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
0	25	Summons #	Code	Summons #	Code	Towed: Yes (No)

Driver/Pedestrian's Full Name

Unit # | Sex | Race | Street/R.F.D.

Occ | Birth Date | City, State, & Zip

State | Driver's License # | Class | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B 5 Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed: Yes No

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W

E-051206

Driver/Pedestrian's Full Name: GAMBLE | PAUL | JOSEPH

Unit #	Sex	Race	Street/R.F.D.
02	M	B	43 ELM ST APT 2

Occ: 1 | Birth Date: 06-07-1977 | City, State, & Zip: CLEMSON SC 296311077

State	Driver's License #	Class	Insurance Company
SC	007278924	D	GEICO

Year	Body	Vehicle Make	VIN #
2003	4S	FORD	1FAFP33P03W235198

State	Year	License Plate #	Owner's D.L. #
SC	2011	DRM927	007278924

Home Telephone: (864) 7044807 | Owner's Full Name: GAMBLE | PAUL | JOSEPH

Bus. Telephone: ( ) | Street/R.F.D.: 43 ELM ST APT 2

Contributed To Collision: Yes (No) | City, State, & Zip: CLEMSON SC 296311077

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B 5 Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
25	25	E7864907	21	Summons #	Code	Towed: Yes (No)

Driver/Pedestrian's Full Name

State | Year | License Plate # | Owner's D.L. #

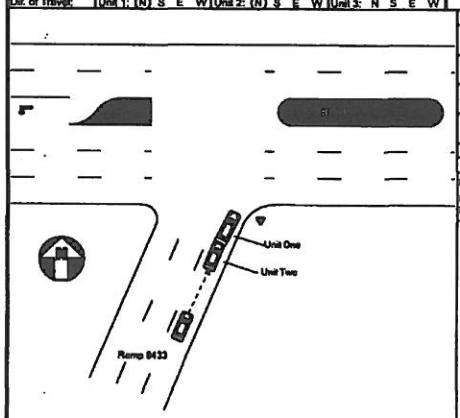
Home Telephone: ( ) | Owner's Full Name

Bus. Telephone: ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B 5 Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed: Yes No



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800	$ 1000	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | City | Address | City

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

UNITS ONE AND TWO TRAVELING NORTH ON I-85 EXIT RAMP (8433). UNIT ONE STOPPED FOR YIELD SIGN. DRIVER OF UNIT TWO, DRIVING TOO FAST FOR CONDITIONS, STRUCK THE CENTER REAR OF UNIT ONE WITH THE CENTER FRONT.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
FRANKS - M A	L/CPL	T138	HP03	12-23-2010	WESLEY HIOTT	SGT	10GV133830

2010006685

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.S.	Eject	LAI	Trap	Name	Street Address	Zip Code
01	06-20-1949	F	W	0	01	13	4	3	1	1	2	FREEMAN SUSAN MOSER	109 PINEHAVEN WAY SIMPSONVIL SC	290807060
02	06-07-1977	M	B	0	01	13	4	3	1	1	2	GAMBLE PAUL JOSEP	43 ELM ST APT 2 CLEMSON SC	296311077

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2-Non-incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle: Head Injury 1-Yes 2-No; Location After Impact 1-Not Trapped 2-Extricated (Mechanical Means) 3-Freed (non-mech.) 4-Not Applicable 9-Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20-Pedestrian; 30-Trailing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nontrailing); 51-Other Unenclosed Area (nontrailing); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 99-Unk./NA

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 88-Other; 99-Unk.

Pedestrian, Motorcycle/cycle Only: 31-Helmet; 41-Protective Pads; 51-Lighting; 61-Lighting

a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown

b) By: 1-EMS 2-Police 8-Other 9-Unk.

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 7-Not Applicable 9-Deployment Unk.; b) 1-Switch in On Position 2-Switch in Off Position 3-No Switch 9-Unknown

Ejection: 1-Not Ejected 2-Part. Ejected 3-Tot. Ejected 7-Not App. 9-Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful
22				22

Non-Collision: 01-Cargo/Equip Loss or Shift; 02-Cross Median/Center; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Ran off Road Left; 09-Ran off Road Right; 10-Separation of Units; 11-Overturn (Rollover); 12-Spill (Non-Motorist Unk.); 13-Other Non-collision; 19-Unk. Non-collision

Collision: Not Fixed Object: 20-Animal (Not Other); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 26-Pedalcycle; 27-Pedestrian; 28-Railway Veh.; 29-Work Zone Maint. Equip.; 30-Other Movable Object; 39-Unk. Movable Object

Collision: Fixed Object: 40-Bridge Overhead Structure; 41-Bridge Pier or Support; 42-Bridge Parapet End; 43-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Equipment; 49-Fence; 50-Guardrail End; 51-Guardrail Face; 52-Highway Traffic Sign Post; 53-Impact Attenuator/Crash Cushion; 54-Light/Luminaire Support; 55-Median Barrier; 56-Other Post, Pole, Support, Ent.); 57-Overhead Sign Support; 58-Other (Wall, Building, Tunnel, Etc.); 59-Tree; 61-Utility Pole; 63-Work Zone Maint. Equipment; 69-Unk.

Manner of Collision (Struck Veh.): 00-Not Coll. w/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 40-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

1st / Most Deformed Area

1st Deformed | Most Deformed

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 28-Animal Drawn Veh.; 39-Animal (Riddant); 41-Pedestrian; 51-Train; 61-School Bus; 62-Passenger Bus; 69-Other (Hit and Run Only); 99-Unk

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Military; 07-Transport Property; 08-Farm Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 41-Pedestrian; 99-Unk

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Boat Trailer; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Lowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Action Prior to Impact: 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk.; 27-Working

(Vehicle) (Non-motorist): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling

Alc Test Results: A1- A2- A3-

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other; 0-None/Minor; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk.

Alc/Drug Test Given: 1-Given - Known Results; 2-Given - Unstable; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 8-Other

Special Use Only

Undercarriage Intrusion: 1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown

Underride/Override: 1-Under-No Intrusion; 2-Under-Unknown; 3-Over-Underride; 4-Over-MV in transport; 5-Over-Other Vehicle; 8-None; 9-Unk.

Extent of Deformity: 0-None/Minor; 1-Functional Damage; 2-Disabling Damage; 3-Severe/Totaled; 4-Not Applicable; 9-Unk.

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 5-Other

1st Harmful Event Loc.: 1-5 2-M 3-S 4-R 5-Ditch 6-Shoulder 7-Sidewalk 8-Outside Trafficway 9-Unk. A-Bridge B-X-traffic 1-Y 2-M 3-U

Road Character: 1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk.

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 43-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 98-None; 99-Unk.

School Bus Involved: 1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk.

Work Zone: 1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area; 1-Yes 2-No

Work Zone Location: 1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk.

Work Zone Type:

Workers Present:

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk

Primary Contributing Factors

Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattentive; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 12-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper lane Usage/Change; 19-Cell Phone; 20-Texting; 26-Other Improper Action; 29-Unk.

Others: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i.e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R of W.; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc.; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 68-Under the Influence; 67-Other Person Under Influence

Environmental: 60-Animal in Road; 61-Glare; 62-Obstruction; 63-Weather Cond.; 68-Other; 69-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 99-Unk.

ORIGINAL

D.P.S. USE ONLY **10002129** | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 Rev. 01.2001

# of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 0450 | Arrived: 0451

Date: 01/01/2010 | Time: 0450 | County: 23 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary

Collision Location (Rt. # / Name): 5 Woodruff Rd (146) | 1- Main 5- Connection 2- Alternate 7- Business 5- Spur | Miles: | Dir. N E S W | Near City or Town of: Greenville

Lane # / Dir.: # 2 | Of 2 | N E S W

Distance Offset: 486 Miles Feet | Direction N E S W

Base Intersection (Rt. # / Name): From I-85

Second Intersection (Rt. # / Name): Toward Market Point Dr.

1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other

1- Main 5- Connection 2- Alternate 7- Business 5- Spur 9- Other

ASRU code | MP/Grid | Latitude 10 92 156 | Longitude 16 09 271

R.R. Id. | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W

B-361351

Driver/Pedestrian's Full Name: Unknown

Unit # 1 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #: 1999 SU Tait JT3GN87R4X0095339

State: SC | Year: 2011 | License Plate #: FGL616 | Owner's D.L. #

Home Telephone: (864) 292-6734 | Owner's Full Name: *DOAN, TIEN QUOC

Bus. Telephone | Street/R.F.D.: 136 WARREN Rd

Contributed To Collision: No | City, State, & Zip: Greenville SC 29609

Estimated Speed: 50 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons # | Code | Towed By: Williams

B-361352

Driver/Pedestrian's Full Name

Unit # — | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

B-361353

Driver/Pedestrian's Full Name

Unit # — | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

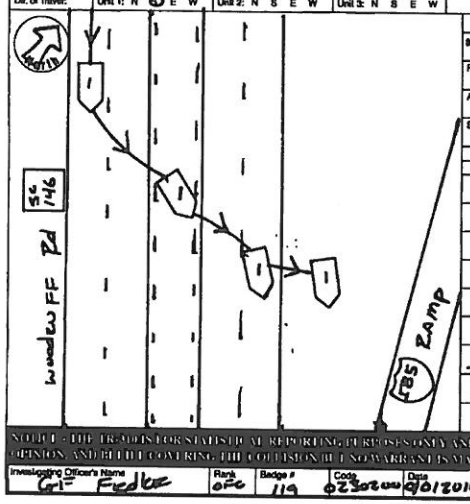
Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 10,000	$	$	$ —	$

Property Owner/Witness — | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photos: Y N | Describe What Happened (Refer to Units by Number)

Unit 1 was traveling south on Woodruff Rd. Unit 1 lost control crossed into the on coming lane & ended up on the grass median. THE DRIVER of the vehicle fled the scene before I arrived. I called the above phone number but it was disconnected. JAN 25 2010

NOTICE - THE PRIMARY PURPOSE FOR THIS FORM IS FOR STATISTICAL REPORTING, PURPOSES ONLY AND IS A RECORDATION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH OF ANY FACT OR ACCURACY THEREOF.

Investigating Officer's Name: Cpl Fiedler | Rank: OFC | Badge #: 119 | Code: 02302000 | Date: 01/01/2010 | Reviewer's Name: | Rank: Sgt | Internal Agency Code: 10-05080

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1				1	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 04 05 06 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (481 raw or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unk.; a) 1- Switch in On Position 2- Switch in Off Position; b) 3- No Switch; 8- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-Collision; 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Dead Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object

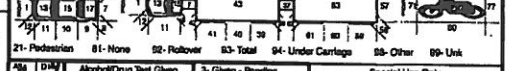
Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Other; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail End; 49- Guardrail Face; 50- Highway Traffic Sign Post; 51- Impact Attenuator/Crash Cushion; 52- Light/Luminaire Support; 53- Median Barrier; 54- Mail Box; 55- Other Post, Pole, Support, Etc.; 56- Other Wall, Building, Tunnel, Etc.; 57- Overhead Sign Support; 58- Tree; 59- Utility Pole; 60- Work Zone Maint. Equipment; 61- Unk. Fixed Object

Event 1 / 2 / 3 / 4: 01

Most Harmful: 1st Event 01

Manner of Collision (Struck Veh.): 00- Not Col. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed 1; Most Deformed 1



Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 30- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 82- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movement Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under-No Intrusion; 3- Under-Unknown; 4- Over-MV in Transport; 5- Over-Other Vehicle; 6- None; 9- Unk.

Underride/Override: 1 2 3 4 5 6 7

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 5- Not Applicable

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

1st Harmful Event Loc.: B- Ped/Veh; 1- Y 2- N 9- U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Snow; 7- Fog, Smog, Smoke; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Cell Phone; 99- Unk.

Drivers: 06

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 49- Other; 99- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

67- Other Person Under the Influence

ORIGINAL

D.P.S. USE ONLY **10034433** | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 0510 | Arrived 0510

Date 4/2/10 | Time 0510 | County 03 | Collision Location (Rt. # / Name) SC-146/Woodruff | Miles | Dir. | (In) Near City or Town of: Greenville

Lane # / Dir. 2 S W | Of 5 | Distance Offset 15 Miles (Feet) | Direction N E S W | Base Intersection (Rt. # / Name) I-85 | ASRU code | MP/Grid

R.R. Id. | From Ramp Only N E S W | To | Second Intersection (Rt. # / Name) Old Country Rd | Latitude 1092538 | Longitude 1608813

A-393220 Driver/Pedestrian's Full Name: Wulf - Harald Martin

Unit # 1 | Sex M | Race W | Street 507 Milstead Way

Birth Date 9/25/29 | City, State, & Zip Greenville SC 29615

State SC | Driver's License # 32609908 - D | Insurance Company State Farm

Year 2001 | Body SU | Vehicle Make Toyt | VIN # JTEHF21A010005751

State SC | Year 2010 | License Plate # EJX733 | Owner's D.L. # same

Home Telephone 864297-7580 | Owner's Full Name

Bus. Telephone ( ) | Street

Contributed To Collision (Yes) No | City, State, & Zip

Estimated Speed 15 | Speed Limit 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # 17109FG | Code 47 | Summons # | Code | Towed By Mike's

A-393221 Driver/Pedestrian's Full Name: Linsley - Jeffrey

Unit # 2 | Sex M | Race W | Street 1416 Camp Rd Apt A

Birth Date 8/7/84 | City, State, & Zip Charleston SC 29412

State SC | Driver's License # 113 19225 - D | Insurance Company Nationwide

Year 1993 | Body 2S | Vehicle Make Hond | VIN # JHMBA8143PC003469

State SC | Year 2010 | License Plate # 7821AM | Owner's D.L. #

Home Telephone 8645699559 | Owner's Full Name Linsley - Fredric William

Bus. Telephone ( ) | Street 1212 Old Mill Rd

Contributed To Collision Yes (No) | City, State, & Zip Easley SC 29642

Estimated Speed 35 | Speed Limit 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # | Code | Summons # | Code | Towed By

A-393222 Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name APR 09 2010

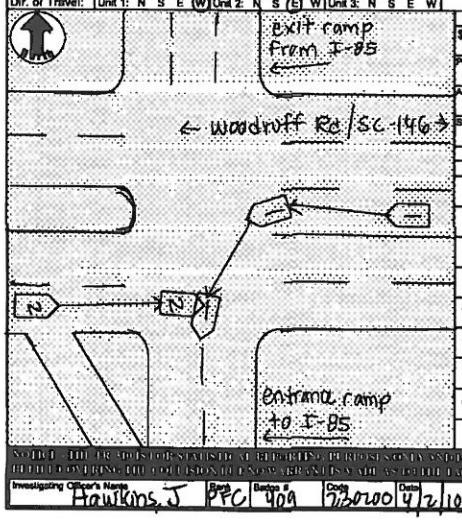
Bus. Telephone ( ) | Street

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E (W) Unit 2: N S (E) W Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$3000	$2000	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #2 was traveling East on Woodruff when Unit #1 failed to yield the right of way. Unit #1 had disabling damage & Unit #2 had front end damage. Both units stated they had a green light. Unit #1 stated he did not see Unit #2 until it was too late.

NOTICE: THE INFORMATION CONTAINED IN THIS REPORT IS FURNISHED TO YOU SOLELY AS A RECORD OF THE COLLISION AND IS NOT INTENDED TO BE USED AS THE BASIS FOR ANY OPINION OR CONCLUSION AS TO LIABILITY IN OR DISPOSITION OF ANY CLAIM OR LAWSUIT GROWING OUT OF THE COLLISION. IT IS FURNISHED TO YOU WITH THE UNDERSTANDING AND AGREEMENT THAT NEITHER THE STATE OF SOUTH CAROLINA NOR ANY OF ITS AGENCIES, OFFICERS OR EMPLOYEES SHALL BE LIABLE FOR ANY OPINION OR CONCLUSION AS TO LIABILITY IN OR DISPOSITION OF ANY CLAIM OR LAWSUIT GROWING OUT OF THE COLLISION.

Investigating Officer's Name: Hawkins, J | Rank PFC | Badge # 409 | Code 7/30/2010 | Date 4/2/10 | Reviewer's Name | Rank Sgt | Internal Agency Code 10-29035

Unit	Date of Birth	Sex	Race	INJ	Seat	R/ED	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	9/25/29	M	W	0	01	13	49	1	1	2			
2	8/7/84	M	W	0	01	13	49	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury 1-Yes 2-No

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 99- Unk; Pedestrian Motor/Pedalcycle Only: 31- Helmet; 51 Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front 4-Not Deployed; 2-Deployed Side 7-Not Applicable; 3-Deployed Both 9-Deployment Unk; b) 1- Switch in On Position 3- No Switch; 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected; 2- Part Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk

Sequence of Events

Non-Collision: 04- Equipment Failure; 05- Separation of Units; 06- Ran off Road Right; 07- Jackknife

Collision Not Listed; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh (In Transport); 23- Motor Veh (Stopped); 24- Motor Veh (Other Moveable Object); 25- Motor Veh (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Fence; 48- Guardrail End; 49- Guardrail Face; 50- Highway Traffic Sign Post; 51- Mail Box; 52- Other Fixed Object; 53- Shrubbery; 54- Tree; 55- Utility Pole; 56- Wall, Building, Tunnel; 57- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↘↗); 42- Angle (→|←); 43- Angle (↗|↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 21- Pedestrian; 01- None; 92- Rollover; 93- Total; 94- Under Carriage; 98- Other; 99- Unk

1st Deformed: 1 1 | Most Deformed: 1 1

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Van; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 82- Passenger Bus; 98- Other; 99- Unk (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Tractor w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Logging Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Negotiating a Curve; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Traveling Straight Ahead; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 88- Other; 99- Unk.

Alc Test Results: A1- ; A2- ; AS- ; 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Alcohol / Drug Test Given: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk

Underride/Override: 1- Under; 2- Over; 8- None; 9- Unk

Extent of Deformity: 1- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other

1st Harmful Event Loc: 1- Gore; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Utility Pole; 9- Unk

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Sand, Mud, Dirt, Oil, Gravel; 7- Water (Standing, etc.); 8- Other; 9- Unk

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 98- None; 99- Unk

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights); 9- Unk

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Ramp/Junction; 99- Unk

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk

Work Zone: 1- Yes 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

Workers Present: 1- Yes 2- No

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 21- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (Inop., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 60- Under the Influence; 87- Other Person Under Influence

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Glare; 65- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 89- Other; 99- Unk

Primary: 09

Others: 10 | 06 | X | 04

ORIGINAL

D.P.S. USE ONLY: 10009360 | Page # 1 Of: 1 | NORTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 7/2010) | # Of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1946 | Arrived: 1949

Date: 1/30/10 | Time: 1946 | County: 03 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name): S Woodruff Rd | 1- Main 2- Alternate 5- Spur 8- Connector 7- Business | Miles: | Dir.: N E S W | In Place (City) or Town of: Greenville

Lane # / Dir.: #2 W | Distance Offset: 2 Miles | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): I-85 | 1- Main 2- Alternate 5- Spur 6- Connector 7- Business 9- Other | ASRU code | MP/Grid

R.R. Id. | From: N E S W | Ramp Only | To: N E S W | 1 - Entrance 2 - Exit | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Carolina Pointe Pkwy | Latitude: 1092285 | Longitude: 1609137

T-369095

Driver/Pedestrian's Full Name: Bagwell - Michael Corey

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 146 Blackberry Valley Rd | Birth Date: 4/12/78 | City, State, & Zip: Greenville SC 29617

State: SC | Driver's License #: 7387087 - D | Insurance Company: Prop Casualty Ins.

Year: 1999 | Body: 4S | Vehicle Make: Chev | VIN #: 2C3HE66G4XH731097

State: SC | Year: 2010 | License Plate #: CGM332 | Owner's D.L. #:

Home Telephone: (864)631-1713 | Owner's Full Name: Bagwell - Cecil Ronnie

Bus. Telephone: ( ) | Street/R.F.D.: 146 Blackberry Valley Rd

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29617

Estimated Speed: 35 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Citation: 01483 FB | Cycle: 21 | Summons #: | Code: | Towed By:

T-369096

Driver/Pedestrian's Full Name: Marshall - Thomas

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 130 Parker St | Birth Date: 4/20/55 | City, State, & Zip: Williamston SC 29697

State: SC | Driver's License #: 482905SC-D | Insurance Company: State Farm

Year: 04 | Body: 4S | Vehicle Make: Dodg | VIN #: 1B3ES56C94D516582

State: SC | Year: 2010 | License Plate #: ENC528 | Owner's D.L. #: same

Home Telephone: (864)847-1449 | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes (No) | City, State, & Zip:

Estimated Speed: 10 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Citation: | Cycle: | Summons #: | Code: | Towed By: Mike's

T-369097

Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

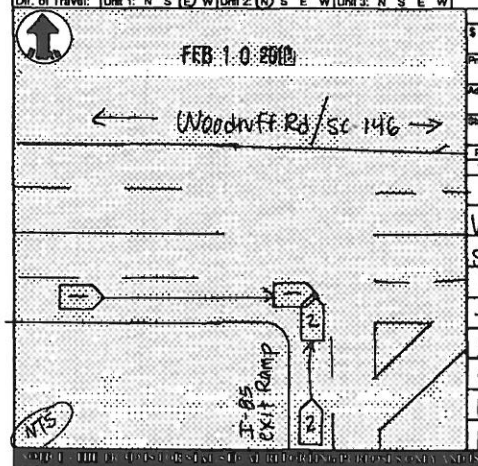
Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Citation: | Cycle: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

FEB 10 2010



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800	$ 2000	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photos Y(N) | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling East on Woodruff Rd & was unable to stop in time for the red light. Unit #2 was coming off the I-85 exit ramp & was struck by Unit #1 in the drivers side front corner. Units declined EMS. Unit #2 was towed by Mike's.

SEE BACK FOR IMPORTANT LEGAL REPORTING PROVISIONS AND WARNINGS REFLECTIVE OF THE OFFICER'S BEST KNOWLEDGE AND BELIEF COVERING DRIVER, VEHICLE(S) AND WITNESS STATES TO THE BEST OF THEIR KNOWLEDGE

Investigating Officer's Name: J. Hawkins | Rank: OFC | Badge #: 909 | Code: 230200 | Date: 1/30/10 | Reviewer's Name: | Rank: Sgt | Internal Agency Code: 10-17.665

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	4/12/78	M	W	0	01	13	49	1	1	2			
2	4/20/55	M	W	0	01	13	49	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, W - Caucasian, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 — 20- Pedestrian, 30- Trating Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontraining), 51- Other Unenclosed Area (nontraining), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk /NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk

Air Bag Deployment / Switch: 1-Deployed Front, 2-Deployed Side, 3-Deployed Both, 4-Not Deployed, 7-Not Applicable, 9-Deployment Unk.; a) 1- Switch in On Position 2- No Switch 3- Unknown; b) 1- Switch in Off Position 2- Switch in On Position 3- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App, 9- Unk

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right

Collision Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. (In Transport), 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh, 29- Work Zone Maint. Equip., 30- Other Movable Object, 99- Unk. Movable Object

Collision Fixed Object: 40- Embankment, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 88- Other, 99- Unk

Event 1: 72 | Event 2: 72 | 1st Harmful: 22

11- Separation of Units, 12- Spill (Cargo/Material), 13- Other Non-collision, 19- Unk. Non-collision

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area: 1st Deformed | Most Deformed

Vehicle Type: 01- Automobile, 12- Pickup Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh., 29- Animal (Ridden), 41- Pedestrian, 51- Train, 62- Passenger Bus, 98- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other

Alcohol / Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Special Use Only

Test Type: 1- Breath (Alc Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Trailer w/Boat, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Alc Test Results: A1-, A2-, A3-

Underride/Override: 1- Under-Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 8- None, 9- Unk.

Extent of Deformity: 1- Minor, 2- Functional Damage, 3- Disabling Damage, 4- Severe/Totaled, 5- Not Applicable, 9- Unk.

Action Prior to Impact: 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopped in Traffic, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

(Vehicle): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

(Non-motorist)

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-Way, 8- Other

1- Conc. 2- Island 3- Median 4- Roadside 5- Roadway 6- Shoulder 7- Sidewalk 8- Unk. 9- Outside Trafficway; X-walk, 1-Y-2-N-9-U; 1st Harmful Event Loc.

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 03- Stop Sign, 04- Yield Sign, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Sign, 51- Flashing Beacon, 98- None, 99- Unk.

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No lights)

School Bus Involved: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 06- T-Intersection, 07- Shared Use Paths or Trail, 08- Traffic Circle, 09- Unk., 10- Y-Intersection, 11- Nonjunction

1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area, 6- Unk.

Work Zone: 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

Work Zone Type: 1- Yes 2- No Workers Present:

Primary Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fell/Jumped/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Non-highway Work, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Cell Phone, 28- Other Improper Action, 29- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk

Others:

ORIGINAL

D.P.S. USE ONLY: 10015309 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM (TR-310) (Rev. 10/2001) | # Of Units: 2 | Amended - Attach Copy of Original Report | Notified: 2332 | Arrived: 2336 | Connected

Date: 12-12-10 | Time: 2333 | County: 23 | Collision Location (RL # / Name): SC146 Woodruff Rd | Main | Miles: | Dir. | City/Town City or Town of: Greenville

Lane # / Dir.: 1 | Dir.: N S | Distance Offset: 50 | Direction: N S E W | Base Intersection (RL # / Name): I-85 S | Main | ASRU code | MP/Grid

R.R. Id.: NA | From: N S E W | Ramp Only | To: N S E W | Second Intersection (RL # / Name): Old Country Rd | Main | Latitude: 109° 23' 57" | Longitude: 160° 88' 09"

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | 1- Entrance 2- Exit | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | 1- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other

A-389437 — Driver/Pedestrian's Full Name: Wolff-Ally Marie

Unit #: 1 | Sex: F | Race: W | Street: 9 Jamestown Dr. | Birth Date: 05-01-1992 | City, State, & Zip: Greenville, SC 29615 | State: SC | Driver's License #: 101363431 (D) | Insurance Company: Allstate | Year: 07 | Body: SU | Vehicle Make: TOYT | VIN #: 5TEBU14R97Z017321 | State: SC | Year: 2010 | License Plate #: RET9160 | Owner's D.L. #: NA | Home Telephone: (864) 567-8311 | Owner's Full Name: Wolff, Kelly Evans | Bus. Telephone: ( ) NA | Street: Same As | Contributed To Collision: No | City, State, & Zip: Same | Estimated Speed: 15 | Speed Limit: 40 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: 16670F8 21 | Code: NA | Summons #: | Code: | Towed By: NA

A-389438 — Driver/Pedestrian's Full Name: Duvall-Christopher Jake

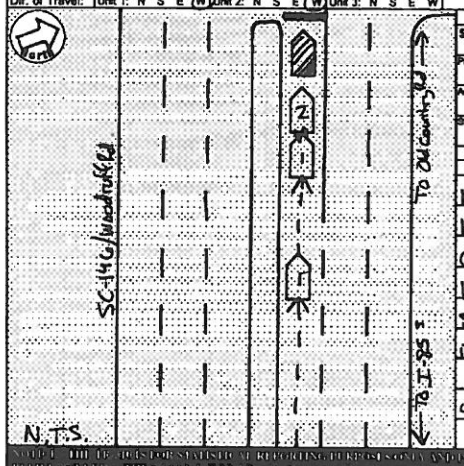
Unit #: 2 | Sex: M | Race: W | Street: 9 B Horseshoe Cir. | Birth Date: 07-25-99 | City, State, & Zip: Greenville, SC 29605 | State: SC | Driver's License #: 100709865 (D) | Insurance Company: Greenville Casualty | Year: 1990 | Body: JS | Vehicle Make: NISS | VIN #: JN1H5360PSW140195 | State: SC | Year: 2010 | License Plate #: RCY203 | Owner's D.L. # NA | Home Telephone: (864) 347-6980 | Owner's Full Name: Clark-Jessica Alana | Bus. Telephone: ( ) NA | Street: 280 N Highway 150 | Contributed To Collision: No | City, State, & Zip: Pacolet, SC 29372 | Estimated Speed: 0 | Speed Limit: 40 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: NA | Code: | Summons #: NA | Code: | Towed By: NA

A-389439 — Driver/Pedestrian's Full Name:

Unit #: NA | Sex: | Race: | Street: | Birth Date: | City, State, & Zip: | State: | Driver's License #: | Insurance Company: | Year: | Body: | Vehicle Make: | VIN #:

Home Telephone: ( ) | Owner's Full Name: FEB 24 2010 | Bus. Telephone: ( ) | Street: | Contributed To Collision: Yes / No | City, State, & Zip: | Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E (W) | Unit 2: N S E (W) | Unit 3: N S E W



Unit 1 Dem.	Unit 2 Dem.	Unit 3 Dem.	Prop. Dam. 1	Prop. Dam. 2
$1000	$2000	$	$ NA	$ NA

Property Owner/Witness: NA | Address | City | State | Zip | Phone

Property Owner/Witness: NA | Address | City | State | Zip | Phone

Photo: Y(N) | Describe What Happened (Refer to Units by Number):

Operator of unit #2 stated that as he was stopped in traffic in lane #1 of SC146 W, his vehicle was struck in the rear by Unit #1. Operator of unit #1 states that she was traveling W in lane #1 of SC-146 and was unable to stop in time to avoid striking unit # 2. Damage is present on the front of unit #1 + the rear of unit #2. No injuries reported at report time.

NOTE: THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS AN OPINION AS TO FAULT OR LIABILITY. THE COLLISION REPORT MAY NOT BE ADMISSIBLE AS EVIDENCE IN COURT BY LAW.

Investigating Officer's Name: Charles-T.J | Rank: Cpl. | Badge #: 2165 | Code: 2309200 | Date: 12-12-10 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 10-016023

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.S.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	05-01-92	W	F	0	01	13	4	9	1	1	2		
2	07-25-99	W	M	0	01	13	4	9	1	1	2		

Race: 1 - Alaskan Native or American Indian; B - African American; H - Hispanic; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk /NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; a) 1- Switch in On Position 3- No Switch; b) 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

1st Event	11	12	
2nd Event	23		
3rd Event			
4th Event			
Most Harmful	22		

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Cargo/Material); 13- Other Non-collision; 14- Unk Non-collision

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh (In Transport); 23- Motor Veh (Stopped); 24- Motor Veh (Other Roadway); 25- Motor Veh (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 30- Other Moveable Object; 39- Unk Moveable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Unk

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area; 1st Deformed; Most Deformed

Vehicle Type: 01- Automobile; 02- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 29- Other; 31- School Bus; 32- Passenger Bus; 33- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 52- Fire Fighting; 53- Logging; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian; 99- Unk.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Waiting, Playing, Cycling; 27- Working

Alc Test Results: A1-; A2-; A3-

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under-No Intrusion; 3- Under-Unknown; 4- Over-MV in Transport; 5- Over-Other Vehicle; 6- None; 9- Unk

Underride/Override: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Over 50% of Vehicle; 5- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other; 9- Unk.

Event Loc: 1- Gore; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Bridge; 8- Outside Trafficway; 9- Unk.

1st Harmful Event: 1- Overturn/Rollover; 2- Fire/Explosion; 3- Immersion; 4- Jackknife; 5- Cargo/Equip. Loss or Shift; 6- Separation of Units; 7- Ran off Road Right; 8- Ran off Road Left; 9- Struck Object Not Fixed; 10- Struck Pedestrian; 11- Struck Pedalcycle; 12- Struck Train; 13- Struck Other Motor Vehicle; 14- Struck Other Object; 15- Other Non-Collision; 16- Unk Non-Collision; 17- Fire/Explosion; 18- Immersion; 19- Jackknife; 20- Overturn/Rollover; 21- Ran off Road Right; 22- Ran off Road Left; 23- Cargo/Equip. Loss or Shift; 24- Other Non-Collision; 25- Pedestrian; 26- Pedalcycle; 27- Railway Vehicle; 28- Animal (All Other); 29- Motor Vehicle (In Transport); 30- Motor Vehicle (Stopped); 31- Motor Vehicle (Parked); 32- Motor Vehicle (Other Roadway); 33- Other Moveable Object; 34- Other Fixed Object; 99- Unk.

Most Harmful Event: 1- Overturn/Rollover; 2- Fire/Explosion; 3- Immersion; 4- Jackknife; 5- Cargo/Equip. Loss or Shift; 6- Separation of Units; 7- Ran off Road Right; 8- Ran off Road Left; 9- Struck Object Not Fixed; 10- Struck Pedestrian; 11- Struck Pedalcycle; 12- Struck Train; 13- Struck Other Motor Vehicle; 14- Struck Other Object; 15- Other Non-Collision; 16- Unk Non-Collision; 17- Fire/Explosion; 18- Immersion; 19- Jackknife; 20- Overturn/Rollover; 21- Ran off Road Right; 22- Ran off Road Left; 23- Cargo/Equip. Loss or Shift; 24- Other Non-Collision; 25- Pedestrian; 26- Pedalcycle; 27- Railway Vehicle; 28- Animal (All Other); 29- Motor Vehicle (In Transport); 30- Motor Vehicle (Stopped); 31- Motor Vehicle (Parked); 32- Motor Vehicle (Other Roadway); 33- Other Moveable Object; 34- Other Fixed Object; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Not Lit); 6- Dark (Street Lamp Lit); 7- Dark (No lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

02- Rapidly Flashing Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagmen; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

01- Stop and Go Light

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No Workers Present:

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Driver Action; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying and/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Under the Influence; 67- Other Person Under Influence; 68- Other; 69- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10018699 | Page 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM (Rev. 8/2011) | # Of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0057 | Arrived: 0107

Date: 12/15/2010 | Time: 0057 | County: 23 | Collision Location (Rt. # / Name): S SC-146/Woodruff Rd | Miles: | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: #2 D N E S W | Distance Offset: 57 Miles | Direction: S | Base Intersection (Rt. # / Name): I-85 | ASRU code | MP/Grid | Latitude: 1092558 | Longitude: 1608902

R.R. Id.: N/A | From: N E S W | Ramp Only | To: N E S W | Second Intersection (Rt. # / Name): Access Ramp

A-389512	A-389513	A-389514
Driver/Pedestrian's Full Name	Johnson-Calvin Zantavious	Norris-Jimmy Leveldric	
Unit #	1	2	
Sex	M	M	
Race	B	B	
Street	223 Parsons Rd	15 Ackley Rd	
City, State, & Zip	Woodruff, SC 29388	Greenville, SC 29607	
Birth Date	4/30/1991	03/10/1978	
State	SC	SC	
Driver's License #	101146546	0111337785	
Insurance Company	Peerless	Direct	
Year	2000	2000	
Body	SU	SU	
Vehicle Make	Mits	Linc	
VIN #	JA4LS31HXYP032240	5LMRU27A24LJ02714	
State	SC	SC	
Year	2011	2010	
License Plate #	FLX205	995XLT	
Owner's D.L. #			
Home Telephone	(864) 206-1728	(864) 325-9462	
Owner's Full Name	Styles-Kelly Elizabeth	Same	
Bus. Telephone			
Street	114 Connie Dr	As	
Contributed To Collision	Yes / No	No	
City, State, & Zip	Woodruff, SC 29388	Driver	
Estimated Speed	35	20	
Speed Limit	35	35	
C.D.L. Req: Yes / No			
T/S 3 Req: Yes / No			
Alc/Drg info (see back): Yes / No			
Summons #	94T945FB	N/A	
Code			
Towed By	N/A	N/A	

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 2000	$ —	$ —	$ —

Property Owner/Witness: N/A | Address: | State | Zip | Phone

Property Owner/Witness: N/A | Address: | State | Zip | Phone

Photos Y(N) | Damage Must Happened (Refer to Units by Number)

Unit # 1 was traveling East bound on Woodruff Rd. Unit # 2 was attempting to turn left on Woodruff Rd from I-85. Unit # 2 had the right of way to turn left. Unit #1 went through the red light striking unit # 2.

No injuries were reported on scene.

NOTICE: THE PURPOSE OF STATISTICAL REPORTING IS PREVENTION AND NOT ALLOCATION OF FAULT OR LIABILITY. NEITHER OPINION AND HOWEVER CONCERNING THE COLLISION BUT STATEMENTS MADE AS TO THE FACTUAL ASPECTS ARE REQUIRED.

Investigating Officer's Name: Dean, M.C. | Rank: Ofc | Badge #: 256 | Cad #: 256200 | Date: 12/14/2010 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 10-16448

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	04/30/1991	M	B	0	01	13	4	1	1	2			
2	03/10/1978	M	B	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trolley Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 98- Unk/NA

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 04- Child Safety Seat; 05- Other; 06- Unk; 07- Helmet; 08- Reflective Clothing; 09- Protective Pads; 10- Lighting

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 02- Fire/Explosion; 03- Immersion; 05- Overturn/Rollover; 06- Jackknife; 07- Jackknife; 08- Ran off Road Right; 09- Ran off Road Left; 10- Other Non-Collision

Collision With Fixed Object: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh (In Transport); 23- Motor Veh (Stopped); 24- Motor Veh (Parked); 25- Motor Veh (Other Roadway); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 30- Other Movable Object; 31- Unk. Movable Object; 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Harmful Event: 01 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99

1st Deformed: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99

Most Deformed: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 51- Train; 61- School Bus; 82- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- For Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Alc Test Results: A1- ; A2- ; A3- ; 1- Test Refused; 2- Test Given, Results Unknown; 3- Test Given, Results Known; 4- Test Not Given

Test Type: 1- Breath (Az Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Undermide/Overmide: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected-Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other — 2

1st Harmful Event Loc: 1- On; 2- Inland; 3- Median; 4- Median; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Unk; 9- Outside Trafficway; B- X-walk; 1 V 2 N S E W — 5

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest — 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk — 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Yield Sign; 05- Flashing Beacon; 06- None; 07- Officer or Flagman; 08- Other Warning Sign; 09- Unk — 01

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk. — 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights) — 5

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk — 13

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk. — 3

Work Zone: 1- Yes; 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes; 2- No

Primary Contributing Factors: 01

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (Ice, Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Influence; 67- Other Person Under Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10023811 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1711 | Arrived 1726

Date 3/6/2010 | Time 1710 | County 03 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary | Collision Location (Rt. # / Name) S(SC146) WOODRUFF RD. | Main 8- Connection 2- Alternate 7- Business 5- Spur | Miles: | Dir. N E S W | In / Near City or Town of: GREENVILLE

Lane # / Dir. 1 | Of 2 | N E & W | Distance Offset .06 Miles Feet | Direction N S E W | Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name) I 85 | Main 8- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid

R.R. Id. | From: Ramp Only N E: 1- Entrance S W: 2- Exit | To N E S W | 1- Interstate 2- US Primary 3- SC Primary | Secondary 5- County 6- Other | Second Intersection (Rt. # / Name) CAROLINA POINT | Main 8- Connection 2- Alternate 7- Business 5- Spur 9- Other | Latitude 1094306 | Longitude 160 9179

B-363181

Driver/Pedestrian's Full Name: GREGG-ELIJAH CLIFFORD

Unit # 1 | Sex M | Race W | Street/R.F.D. 65 CENTURY CIR 1050F | Birth Date 5/14/1988 | City, State, & Zip GREENVILLE, SC, 29607

State SC | Driver's License # 100306805 (D) | Insurance Company NATIONWIDE

Year 2005 | Body TRK | Vehicle Make FORD | VIN # 1FTRF12Z5NB23609

State SC | Year 2011 | License Plate # PH6479 | Owner's D.L. # S

Home Telephone (864) 444-1612 | Owner's Full Name A

Bus. Telephone (864) 990-7679 | Street/R.F.D. M

Contributed To Collision: Yes / No | City, State, & Zip E

Estimated Speed 30 | Speed Limit 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons # 91767 | Code FB | Summons # N/A | Code N/A | Towed By N/A

B-363182

Driver/Pedestrian's Full Name: SKINNER-LATEF BROWN

Unit # 2 | Sex F | Race W | Street/R.F.D. 75 B GLENT MILL CREEK RD. | Birth Date 12/9/1991 | City, State, & Zip MOUNTVILLE, SC, 29370

State SC | Driver's License # 101350043 (D) | Insurance Company USAA

Year 2005 | Body SU | Vehicle Make FORD | VIN # 1FMYU04125KB49673

State SC | Year 2010 | License Plate # EB73550 | Owner's D.L. #

Home Telephone (864) 682-5070 | Owner's Full Name SKINNER-CHRIS ANTHONY

Bus. Telephone (864) 923-3157 | Street/R.F.D. SAME AS

Contributed To Collision: Yes | City, State, & Zip DRIVER

Estimated Speed 0 | Speed Limit 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons # N/A | Code N/A | Summons # N/A | Code N/A | Towed By N/A

B-363183

Unit # N/A | Driver/Pedestrian's Full Name | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name | Bus. Telephone ( ) | Street/R.F.D. | Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800	$ 900	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | Address

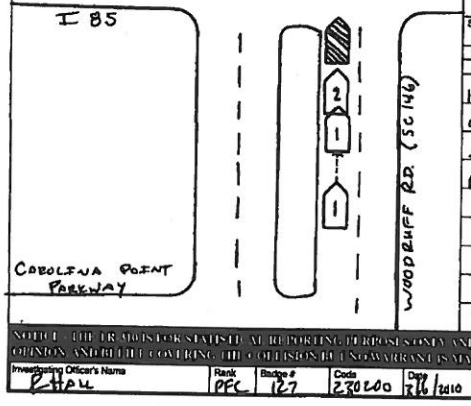
State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

UNIT 2 WAS STOPPED IN TRAFFIC WHEN UNIT 1 APPROACHED TRAVELING TOO FAST FOR CONDITIONS CAUSING THE FRONT OF UNIT 1 TO STRIKE THE REAR OF UNIT 2. NO INJURIES REPORTED ON SCENE.

NOTE

MAR 16 2010



MAP NOT TO SCALE

NOTICE: THE DRIVER'S STATEMENT AT REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION. IT IS NO WARRANTY IS MADE AS TO THE TRUTH OF ANY OR ALL OF THE FACTS

Investigating Officer's Name: P HALL | Rank PFC | Badge # 127 | Code 230200 | Date 3/16/2010 | Reviewer's Name | Rank SGT | Internal Agency Code 10-21801

Unit	Date of Birth	Sex	Race	Inj	Seat	R/SD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	5/14/1988	M	W	0	01	13	49	1	1	2			
2	12/9/1991	F	W	0	01	13	49	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 81- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployed Unk; 9- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 8- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events: 1st / Most Harmful Event | 1st Deformed | Most Deformed

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 03- Overturn/Rollover; 02- Cross Median/Center Line; 08- Immersion; 09- Ran off Road Left; 03- Downhill Runway; 07- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Roll (Trailing Unit); 14- Other Non-collision; 19- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 25- Railway Veh.; 21- Animal (All Other); 26- Work Zone Maint. Equip; 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 15- Other Non-collision; 25- Motor Veh. (Parked); 29- Pedalcycle

Collision: Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 48- Equipment; 41- Bridge Pier or Abutment; 49- Fence; 42- Bridge Parapet End; 50- Guardrail End; 43- Bridge Rail; 51- Guardrail Face; 44- Culvert; 52- Highway Traffic Sign Post; 45- Curb; 53- Impact Attenuator/Crash Cushion; 46- Ditch; 54- Light/Luminaire Support

55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Unk.

Most Harmful: 23

Manner of Collision (Struck Veh.): 30- Rear-to-Rear; 10- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 50- Sideswipe Same Dir.; 41- Angle; 42- Angle; 43- Angle; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Vehicle Type: 15- Full Size Van; 01- Automobile; 16- Mini Van; 12- Pickup/Truck; 17- Sport Utility; 13- Truck Tractor; 25- Motorcycle; 14- Other Truck; 26- Other Motorbike; 27- Pedalcycle; 28- Transport Bus; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 04- Ambulance; 01- Personal; 05- Military; 02- Driver Training; 06- Transport Passengers; 03- Construction/Maint.; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Livestock Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Test Type; 2- Blood; 3- Urine; 1- Breath (Alc. Only); 4- Serum; 8- Other; Drug Results: 3- Marijuana; 1- Amphetamines; 4- Opiates; 2- Cocaine; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Impairment; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Alc/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1- Under- Compartment-Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 1- Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other. 2

Access: 1- Conc. 2- Island 3- Median 4- Median 5- Roadway 6- Shoulder 7- Sidewalk 8- Unk. 9- Outside Trafficway

Int. Relat.: 1- Y 2- N 8- U

Int. Hwy/Rd: 1- X- traffic 2- Y 8- U

1st Harmful Event: 1

Event Loc.: 2

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest. 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk. 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk. 01

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk. 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area. 2

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 2

Workers Present: 1- Yes 2- No 2

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk. 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights). 1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk. 04

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 19- Cell Phone; 29- Unk.

Others: 10

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 46- Other; 48- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Window/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY **10051493** | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01 2001) | # of Units 3 | Amended - Attach Copy of Original Report | Corrected | Notified 1225 | Arrived 1285

Date 05-01-2010 | Time 1220 | County 23 (3 SC Primary) | Collision Location (Ft. # / Name) 8 146 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur | Miles: 1 | Dir. (E) S W | Inv/ Near City or Town of: Greenville

Lane # / Dir. 1 | Of 6 | N (E) S W | Distance Offset 50 Meters (Feet) | Direction N (E) S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- Other | Base Intersection (Rt. # / Name) From 85 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid

R.R. Id. N/A | From: Ramp Only N E S W 1- Entrance 2- Exit | To N E S W 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- Other | Toward Second Intersection (Rt. # / Name) 564 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | Latitude 34 49 46.40 | Longitude 82 18 12.20

B-330397

Driver/Pedestrian's Full Name: Wilson- Carolyn Smith

Unit # 1 | Sex F | Race B | Street/R.F.D. 418 Sellwood Circle | Birth Date 11-12-1956 | City, State, & Zip Simpsonville, SC 29680

State SC | Driver's License # 006867471 (D) | Insurance Company Allstate

Year 1997 | Body SU | Vehicle Make Ford | VIN # 1FMFU18L5VLB71315

State SC | Year 2011 | License Plate # DIL 182 | Owner's D.L. # N/A

Home Telephone (864) 963-7891 | Owner's Full Name Smith- Mia Yashika

Bus. Telephone (864) 963-7891 | Street/R.F.D. 1009 Willow Branch Drive

Contributed To Collision (Yes) No | City, State, & Zip Simpsonville, SC 29680

Estimated Speed | Speed Limit 35 40 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # E472097 | Code 48 | Summons # N/A | Code | Towed By Considerated (GR)

B-330398

Driver/Pedestrian's Full Name: Elliott- James Scott

Unit # 2 | Sex M | Race W | Street/R.F.D. 15 Catbriar Court | Birth Date 09-30-1991 | City, State, & Zip Simpsonville, SC 29680

State SC | Driver's License # 10125686226 (D) | Insurance Company Allstate

Year 1993 | Body SU | Vehicle Make Jeep | VIN # 1J4FT68S8PL604151

State SC | Year 2010 | License Plate # EQB 118 | Owner's D.L. # N/A

Home Telephone (864) 962-1136 | Owner's Full Name McGregor- Stacy Lynn

Bus. Telephone (864) 962-1136 | Street/R.F.D. 15 Catbriar Court

Contributed To Collision Yes (No) | City, State, & Zip Simpsonville, SC 29680

Estimated Speed 0 | Speed Limit 40 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # N/A | Code | Summons # N/A | Code | Towed By M+J (GR)

B-330399

Driver/Pedestrian's Full Name: Bristol- Jeffery R.

Unit # 3 | Sex M | Race W | Street/R.F.D. 150 Terry Creek Road | Birth Date 09-17-1968 | City, State, & Zip Travelers Rest, SC 29690

State SC | Driver's License # 007748779 (A) | Insurance Company State Farm

Year 1997 | Body TK | Vehicle Make Chev | VIN # 1GCEV24K4VS127638

State SC | Year 2011 | License Plate # DKH 869 | Owner's D.L. # 007748779 (A)

Home Telephone (864) 884-0794 | Owner's Full Name Bristol- Jeffery R.

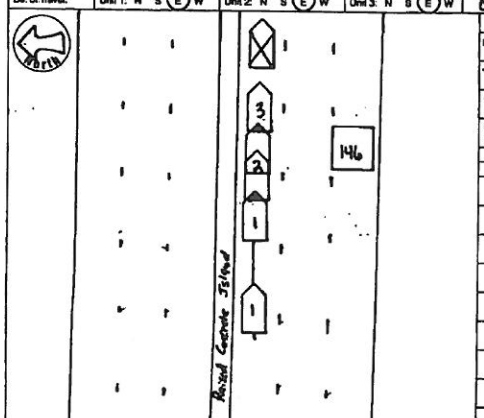
Bus. Telephone (864) 884-0794 | Street/R.F.D. 150 Terry Creek Road

Contributed To Collision Yes (No) | City, State, & Zip Travelers Rest, SC 29690

Estimated Speed 0 | Speed Limit 40 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # N/A | Code | Summons # N/A | Code | Towed By N/A

Dir. of Travel: Unit 1: N S (E) W | Unit 2: N S (E) W | Unit 3: N S (E) W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 5000	$ 5000	$ 1500	$ N/A	$ N/A

Property Owner/Witness: Albert- Alan Clay | Property Owner/Witness: N/A

Address: 1421 Roper Mtn. Rd. Greenville | Address

State SC | Zip 29607 | Phone (864) 420-9170 | State | Zip | Phone

Photos Y (N) | Describe What Happened (Refer to Units by Number)

All 3 units were traveling East on SC-146. Units #2 and #3 were stopped due to traffic ahead. Unit #1 was following too closely and struck the rear of Unit #2. Unit #1 forced Unit #2 into the rear of Unit #3.

MAY. 2 1 2010

NOTICE - THE PURPOSE OF STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S PRESENT KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Andis- DC | Rank: Sgt | Badge #: 712 | Code: HP03 | Date: 05-01-2010 | Reviewer's Name: | Rank | Internal Agency Code: 1060437 05

Unit	Date of Birth	Sex	Race	INJ	Seat	R/ED	A.B.D.	Eject	Ext	Trap
1	11-12-1956	F	B	0	01	13	4	1	1	2
2	09-30-1991	M	W	0	01	13	4	1	1	2
3	09-17-1968	M	W	0	01	13	4	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk/N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 65- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 08- Overturn/Rollover; 09- Rest of Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Inhabited Veh.); 13- Other Non-collision; 14- Unk. Non-collision; 02- Cross Median/Center Line; 03- Downhill Runaway; 06- Immersion; 07- Jackknife

Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 21- Animal (Not Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 99- Unk. Movable Object

Collision: Fixed Object: 47- Embankment; 48- Equipment; 49- Fence; 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 65- Other; 69- Unk.

Event 1: 33 | Event 2: 33 | Event 3: 22 | Most Harmful Event: 22 | 1st Event

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only); 39- Animal (Driven Veh.); 98- Other

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 13- Logging; 16- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Working, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only

1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 6- None; 9- Unk.

Underride/Override

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

1st Harmful Event Loc.: 1- V 2-N 3-U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type:

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 26- Other Improper Action; 18- Cell Phone; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence; 68- Under the Infl.; 69- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 65- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others:

ORIGINAL

JUL 01 2010

D.P.S. USE ONLY: 10068900 | Page # 1 Of 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM (TR-310) (Rev. 01/2001)

Of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1704 | Arrived: 1716

Date: 6-15-2010 | Time: 1701 | County: 23

Collision Location (Rt. # / Name): SC-146 / GOODLETT RD.

Miles: | Dir. of: N E S W | In / Near City or Town of: GREENVILLE

Lane # / Dir.: 1 / 6 S | Distance Offset: 767 | Direction: S | Base Intersection (Rt. # / Name): I-85

Second Intersection (Rt. # / Name): CAROLINA POINTE PKWY

ASRU code: | MP/Grid:

Latitude: 10°22'55" | Longitude: 160°54'0"

R.R. Id.: From: Ramp Only | To:

Interstate / Secondary: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Main / Alternate / Spur: 1-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other

N E 1 - Entrance 2 - Exit | S W 1 - Entrance 2 - Exit

A-390520 — Driver/Pedestrian's Full Name: ZACHARY CHARLES RINEHART

Unit # 1 | Sex: M | Race: W | Street: 357 BAILEY ST.

Birth Date: 5-6-1987 | City, State, & Zip: MARS HILL, NC 28754

State: NC | Driver's License #: 33124597 (C) | Insurance Company: STATE FARM

Year: 2003 | Body: 4S | Vehicle Make: STRM | VIN #: 1G8AG52FX33193055

State: NC | Year: 2011 | License Plate #: EDA 7929 | Owner's D.L. #

Home Telephone: (704) 642-2577 | Owner's Full Name: DAVID C. RINEHART

Bus. Telephone: ( ) | Street: PO BOX 481

Contributed To Collision: Yes / No | City, State, & Zip: GAMBIER, OH 43022

Estimated Speed: 20 | Speed Limit: 35 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg Info (see back): Yes / No | Summons #: 65097F1 | Code: 21 | Summons # | Code | Towed By

A-390521 — Driver/Pedestrian's Full Name: DELACRUZ, SHERRY BONITA

Unit # 2 | Sex: F | Race: B | Street: 170 CARVER ST.

Birth Date: 7-5-1965 | City, State, & Zip: COWPENS, SC 29330

State: SC | Driver's License #: 008575640 (D) | Insurance Company: STATE FARM

Year: 1999 | Body: SP | Vehicle Make: HOND | VIN #: 1HGCG2253XA020973

State: SC | Year: 2010 | License Plate #: FAC670 | Owner's D.L. #

Home Telephone: (864) 279-5475 | Owner's Full Name: SAME

Bus. Telephone: ( ) | Street: AS

Contributed To Collision: Yes / No | City, State, & Zip: DENVER

Estimated Speed: 0 | Speed Limit: 35 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg Info (see back): Yes / No | Summons # | Code | Summons # | Code | Towed By

A-390522 — Driver/Pedestrian's Full Name: N/A

Unit # N/A | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

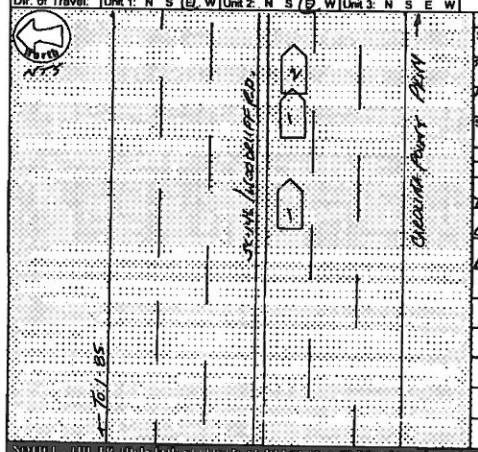
Home Telephone | Owner's Full Name

Bus. Telephone | Street

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg Info (see back): Yes / No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 750	$ 750	$ —	$ —	$ —

Property Owner/Witness: N/A | Address: N/A | State | Zip | Phone

Property Owner/Witness: N/A | Address: N/A | State | Zip | Phone

Photo: Y / N | Describe What Happened (Refer to Units by Number)

Unit 1 drive stated that as he was traveling behind Unit #2 he saw she was coming to a stop, but was unable to stop before striking the rear of Unit #2.

Unit #2 did advise she had neck pain.

SOURCE: THE DRIVER'S LICENSE AUTHORIZING PERSON ONLY AND IS RELIED UPON BY THE OFFICER AT THE TIME OF THE COLLISION. THE COLLISION REPORT IS PREPARED BY THE OFFICER AND RELIED UPON BY THE DRIVER. NO WARRANTY IS MADE AS TO THE ACCURACY OF ANY INFORMATION.

Investigating Officer's Name: Dept. M.C. | Rank: PFC | Badge #: 256 | Code: 320200 | Date: 6-15-2010 | Reviewed By: | Rank: CPL | Internal Agency Code: 10-50441

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	5-6-1987	M	W	0	01	13	4	2	1	2			
2	7-5-1965	F	B	1	01	13	4	3	1	2	SHERRY DELACRUZ	170 CARVER ST.	29330

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Other; 99- Unk /NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk; Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 7-Not Applicable 8-Deployment Unk. 9-Unk; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected 2- Part Ejected 3- Tot Ejected 7- Not App 9- Unk

Location After Impact: 1- Not Trapped 2- Extricated (Mechanical Means) 3- Freed (non-mech.) 4- Not Applicable 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk

Sequence of Events

Non-Collision: 01- Overturn/Rollover; 02- Crash Into Parked Car; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Separation of Units; 07- Jackknife; 08- Ran off Road Left; 09- Ran off Road Right; 10- Ran off Road Unk; 11- Submerged; 12- Spilled Load; 13- Other Non-collision; 14- Unk Non-collision

Collision: 1st Harmful: 22 / 23 / 22

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 87- Work Zone Maint. Equipment

Collision Fixed Object: 20- Pedestrian; 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Other Movable Object; 26- Pedalcycle; 27- Railway Veh; 28- Work Zone Maint. Equip; 30- Struck Veh. (Parked); 31- Unk Movable Object; 32- Train; 33- Animal (Deer Only)

Manner of Collision (Struck Veh.): 00- Not Collision; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (Left); 41- Angle (Right); 42- Angle (Left); 43- Angle (Right); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

1st Deformed: 7 | Most Deformed: 7

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 16- Full Size Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other Motorbike; 51- Train; 81- School Bus; 82- Passenger Bus; 88- Other; 99- Unk (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1 Amphetamines; 2- Cocaine; 3- Marijuana; 4 Opiates; 5 PCP; 8- Other

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3 Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 0 / 0

Extent of Deformity: 0 / 0

Action Prior to Impact: 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Negotiating a Curve; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 12- Driving Straight Ahead; 88- Other; 99- Unk.; 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Trafficway: 1 | 1" Harmful Event Loc: 12

Road Character: 1 | Road Surface Condition: 1 | Traffic Control Type: 20

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1 | 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Junction Type: 13 | 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

Work Zone: 1- Yes 2- No | Work Zone Location: | Work Zone Type: | Workers Present: | School Bus Involved: 1- Yes 2- No

Contributing Factors

Primary: 03

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 26- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 57- Wrong Side of Road; 88- Under the Influence; 87- Other Person Under Influence

Environmental: 60- Obstruction; 60- Animal in Road; 63- Weather Cond.; 61- Glare; 68- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

ORIGINAL

JUL 16 2010

D.P.S. USE ONLY: 10074993 | Page 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 01/2001 | # of Units: 2 | Amended - Attach Copy of Original Report: Corrected | Notified: 1127 | Arrived: 1136

Date: 7/1/2010 | Time: 1124 | County: 23 | Collision Location (Rt. # / Name): 5 WOODRUFF RD. (SC 146) | Miles: | Dir. N E S W | In Hwy City or Town of: GREENVILLE

Lane # / Dir.: 2 | Of: 2 | N E S W | Distance Offset: .03 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): From I 85 S RAMP | ASRU code: | MP/Grid:

R.R. Id.: From: Ramp Only, N E S W | To: N E S W | Second Intersection (Rt. # / Name): Toward WOODRUFF IND. | Latitude: 109 2453 | Longitude: 160 8670

Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Connection 9- Other

B-363493 | Driver/Pedestrian's Full Name: GENTILE - CHERYL LYNN

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 310 SASSAFRAS DR. | City, State, & Zip: EASLEY, SC 29642 | Birth Date: 3/14/1970

State: SC | Driver's License #: 102 385 80 (D) | Insurance Company: HARTFORD

Year: 2004 | Body: 4S | Vehicle Make: CHEVY | VIN #: 2GNWT57K891213007

State: SC | Year: 2011 | License Plate #: BYE 913 | Owner's D.L. #

Home Telephone: (864) 877-9524 | Owner's Full Name: INTERFACE GLOBAL

Bus. Telephone: (917) 576-7233 | Street/R.F.D.: 310 SASSAFRAS DR.

Contributed To Collision: No | City, State, & Zip: EASLEY, SC 29642

Estimated Speed: 10 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: 19277 | Code: 94 | Towed By: N/A

B-363494 | Driver/Pedestrian's Full Name: HOGAN - CINDY RHODEN

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 119 TUSCANY WAY | Birth Date: 1/23/1962 | City, State, & Zip: GREER, SC 29650

State: SC | Driver's License #: 100 205 951 (D) | Insurance Company:

Year: 2010 | Body: SUN | Vehicle Make: KIA | VIN #: 5XYKUDA22BG060782

State: SC | Year: 2011 | License Plate #: X107724 | Owner's D.L. #

Home Telephone: (864) 238-5292 | Owner's Full Name: BEST KIA - MCE ENTERPRISE

Bus. Telephone: (864) 662-4800 | Street/R.F.D.: 5031 HIGHWAY 153

Contributed To Collision: Yes | City, State, & Zip: EASLEY, SC 29642

Estimated Speed: 0 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: N/A | Code: N/A | Towed By: N/A

B-363495 | Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Owner's Full Name | Home Telephone | Bus. Telephone | Contributed To Collision: No | Estimated Speed | Speed Limit | C.D.L. Req: No | T/B S Req: No | Alc/Drg Info (see back): No | Summons # | Code | Towed By

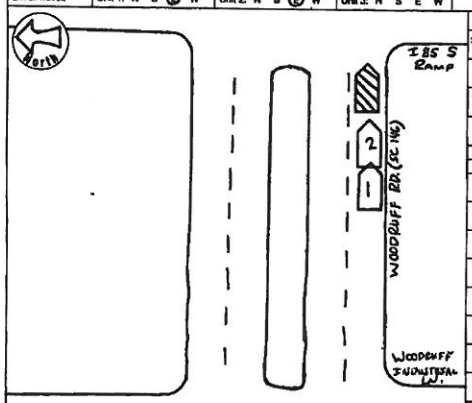
Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 800	$	$	$

Property Owner/Witness | Address | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

UNIT 2 WAS STOPPED IN TRAFFIC WHEN UNIT 1 STRUCK THE REAR OF UNIT 2 CAUSING MINOR DAMAGE TO BOTH VEHICLES. NO INJURIES REPORTED ON SCENE.



MAP NOT TO SCALE

NOTICE - THE TRAFFIC COLLISION STATISTICS AT REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name: R. Howe #641 | Rank: PFC | Badge #: 157 | Code: 23260 | Date: 7/1/2010 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 10-55335

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	Ext.	Trans	Name	Street Address	Zip Code
1	3/14/1970	F	W	0	01	13	4	1	1	2			
2	1/23/1962	F	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 88- Unk./NA, 99- Unknown

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 8- Deployment Unk., 9- Unknown; a) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes, 2- No, 9- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Sequence of Events: Most Significant Events Leading to the Collision

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Event
22				22	
23					22

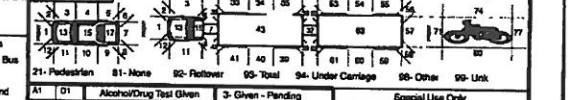
Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Trailer (Non-Wheeled Veh.), 13- Other Non-collision, 14- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian, 28- Animal (Deer Only), 29- Railway Veh, 29- Work Zone Maint. Equip., 30- Other Movable Object, 31- Animal (All Other), 32- Motor Veh. (In Transport), 33- Motor Veh. (Stopped), 34- Motor Veh. (Other Railroad), 35- Unk. Movable Object, 36- Motor Veh. (Parked), 38- Pedalcycle

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Fence, 49- Guardrail End, 50- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 69- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area



1st Deformed: 1 | 2 | 7 | 3 — Most Deformed: 1 | 2 | 7 | 3

Vehicle Types: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 38- Animal Drawn Veh., 39- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 82- Passenger Bus, 88- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping in Traffic, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1-, A2-, A3-

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Special Use Only: 1 2 3 4 5 6 7

4- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; Underride/Override; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor, 2- Functional Damage, 3- Disabling Damage, 4- Severe/Totaled, 5- Not Applicable, 9- Unk.

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 98- None, 99- Unk.

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Primary: 04

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Aggressive Operation of Vehicle, 12- Over-correcting/Over-steering, 13- Swerving to Avoiding Object, 14- Wrong Side or Wrong Way, 15- Under the Influence, 16- Vision Obscured (Within Unit), 17- Improper Lane Usage/Change, 18- Other Improper Action, 19- Unk.

Others:

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond., 69- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Traffic Control: 2

Work Zone: 2

Work Zone Location:

Work Zone Type:

Workers Present: 2

Road Surface Condition: 1

Road Character: 1

Trafficway: 2

1st Harmful Event Loc.: 5

1st Harmful Event: 22

Extent of Deformity: 2

Underride/Override: 96

Special Use Only: 3

Alcohol/Drug Test Given: 3

Test Type: 2

Drug Results: 3

Alc Test Results: A1-, A2-, A3-

Vehicle Attachment: 1

Vehicle Use Code: 01

Vehicle Attachment: 1

Action Prior to Impact (Vehicle): 04

Action Prior to Impact (Non-motorist):

Weather Condition: 1

Light Condition: 1

Junction Type: 15

Primary: 04

School Bus Involved: 3

Traffic Control Type: 98

ORIGINAL

OCT 21 2016

D.P.S. USE ONLY: 10114365

Page # 1 Of 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

Of Units: 2

Amended - Attach Copy of Original Report / Corrected

Notified: 1820

Arrived: 1900

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	In / Near City or Town of:
10/02/2016	1818	23	SC 146 Woodruff Rd.			Greenville

1- Interstate 4- Secondary; 2- US Primary 5- County; 3- SC Primary; Main 6-Connection; 2-Alternate 7-Business; 5-Spur

Lane # / Dir.	Distance Offset	Direction	Base Intersection (Rt. # / Name)	ASRU code	MP/Grid
1 / 06	585 Meters (FEET)	N E S W	I 85		

Ramp Only: From / To; 1 - Entrance 2 - Exit

Towed: Second Intersection (Rt. # / Name): Carolina Point Pkwy

Latitude: 34° 51' 11"

Longitude: 82° 13' 12"

A-392395 — Driver/Pedestrian's Full Name: Watts, Ryan Matthew

Unit # 1 | Sex: M | Race: W | Street: 105 Scarborough Dr.

Birth Date: 03/24/1994 | City, State, & Zip: Greer SC 29650

State: SC | Driver's License #: 102156157 (D) | Insurance Company: Nationwide

Year: 2002 | Body Type | Vehicle Make: FORD | VIN #: 1FAFP40402F116787

State: SC | Year: 2012 | License Plate #: GHM197 | Owner's D.L. #

Home Telephone: (864) 770-5492 | Owner's Full Name: Watts, Thomas J.

Bus. Telephone: ( ) | Street: SAME

Contributed To Collision: No | City, State, & Zip

Estimated Speed: 5 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons #: 55793FM21 | Code | Towed By

A-392396 — Driver/Pedestrian's Full Name: McCroskey, Sarah

Unit # 2 | Sex: F | Race: B | Street: 109 Courtneybrook Trl.

Birth Date: 04/02/1993 | City, State, & Zip: Mauldin SC 29662

State: SC | Driver's License #: 101824161 (D) | Insurance Company: Spare Farm

Year: 2000 | Body: 4S | Vehicle Make: CHEV | VIN #: 2G1WH55K179309433

State: SC | Year: 2012 | License Plate #: GMN159 | Owner's D.L. #

Home Telephone: (864) 517-8822 | Owner's Full Name: Spaulding, Mary Katherine

Bus. Telephone: ( ) | Street: SAME

Contributed To Collision: Yes | City, State, & Zip

Estimated Speed: 0 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons # | Code | Towed By

A-392397 — Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

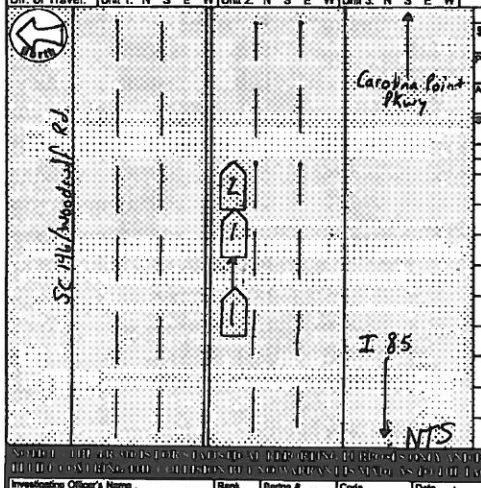
Bus. Telephone | Street

Contributed To Collision: No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 500	$ —	$ —	$ —

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photo: Y (N)

Describe What Happened (Refer to Units by Number)

Unit 1 was following behind Unit 2. Unit 2 stopped for traffic but unit 1 was unable to stop in time. Unit 1 struck the rear of unit 2.

No injuries at time of report.

NOTICE: THE PENALTIES FOR FAILURE TO REPORT AS REQUIRED BY SECTION 56-5-1270 OF THE SOUTH CAROLINA CODE OF LAWS ARE CONTAINED IN SECTION 56-5-1280 OF THE SOUTH CAROLINA CODE OF LAWS.

Investigating Officer's Name: J.M. Semanyk | Rank: PFC | Badge #: 179/284 | Code: 0230200 | Date: 10/02/2016 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 16-83915

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	03/24/1994	M	W	0	01	99	9 9	1	1	2			
2	04/02/1993	F	B	0	01	99	9 9	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 70- Riding on Unit Exterior; 80- Sleeper of Cab; 90- Unk; 99- Unk /NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 8-Deployment Unk; 9-Unknown; 1- Switch in On Position; 3- No Switch; 2- Switch in Off Position; 9- Unknown

Ejection: 1- Not Ejected; 2- Part Ejected; 3- Tot Ejected; 7- Not App; 9- Unk

b) Motorcycle Only — Head Injury: 1-Yes 2-No; Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

e) Transported to Medical Facility: 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk

Pedestrian/Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spilled Load/Object; 13- Trailer Swerving; 19- Unk Non-collision

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (Other); 22- Motor Vehicle in Transport; 23- Motor Vehicle Parked; 24- Motor Vehicle Other Roadway; 25- Other Moveable Object; 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip.; 99- Unk

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail Face; 49- Guardrail End; 50- Impact Attenuator; 51- Concrete Traffic Barrier; 52- Other Traffic Sign Post; 53- Impact Attenuator Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other Post, Pole or Support; 59- Other Fixed Object; 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Wall; 64- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (↖↑↗); 41- Angle (↙↓↘); 42- Angle (→|←); 43- Angle (↗|↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

1st Deformed: 1 2 3 4 5 6 7

Most Deformed: 1 2 3 4 5 6 7

21- Pedestrian; 81- None; 82- RollOver; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 29- Other; 31- Train; 32- School Bus; 33- Animal Drawn Veh.; 39- Animal (Ridden); 81- Train (Not and Run Only); 82- Passenger Bus; 99- Unk

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Tractor; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1 Breath (Air Only); 2 Blood; 3- Urine; 4- Serum; 8- Other

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk

Underride/Override: 6

Drug Results: 1 Amphetamines; 2 Cocaine; 3 Marijuana; 4 Opiates; 5 PCP; 8- Other

0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk

Extent of Deformity:

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Negotiating a Curve; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 12- Entering Traffic Lane from Parking Position; 13- Other; 99- Unk

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Trafficway: 2

1- One; 2- Median; 3- Median; 4- Roadside; 5- Shoulder; 6- Roadside; 7- Sidewalk; 8- Shoulder; 9- Unk; A- Ramp; B- Ramp; X- Intersection; Y- Intersection

1st Harmful Event Loc: 5 7

Road Character: 1

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc); 8- Other; 9- Unk

Traffic Control Type: 98

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 98- None; 99- Unk

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights); 8- Other; 9- Unk

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

Work Zone Location: ----------

Work Zone Type: ----------

1- Yes 2- No Workers Present.

School Bus Involved: 3

1- Yes 2- No Work Zone: 2

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 1- Yes Directly; 2- Yes, Indirectly; 3- No; 8- Other; 9- Unk

Primary: 03

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (Is, Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk; 65- Under the Influence; 67- Other Person Under Influence

Environmental: 62- Obstruction; 63- Weather Cond; 64- Animal in Road; 65- Glare; 66- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

Others:

ORIGINAL

OCT 21 2010

D.P.S. USE ONLY: 10114503 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01 2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1420 | Arrived: 1451

Date: 09/22/2010 | Time: 14:18 | County: 23 | Collision Location (Rt. # / Name): S SC 146 Woodruff Rd | Miles: | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: 1 N | Distance Offset: .32 Miles (Feet) | Direction: S | Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From I 85 | Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: Ramp Only 1- Entrance 2- Exit | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward Cardinal Pt Pkwy | Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Latitude: 1092317 | Longitude: 1609138

B-456454 | Driver/Pedestrian's Full Name: Hosey, John A

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 205 Piedmont Rd

Birth Date: 05081976 | City, State, & Zip: Piedmont SC 29673

State: SC | Driver's License #: 088123496 (A) | Insurance Company: Progressive

Year: 96 | Body: PK | Vehicle Make: NISS | VIN: JN1CA21D8TT749198

State: SC | Year: 2011 | License Plate #: ES5635 | Owner's D.L. #: Same

Home Telephone: 864-770-3691 | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: 5 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: 6354HAN | Code: 89 | Towed By: NTA

B-456455 | Driver/Pedestrian's Full Name: Jones, Chanel L.

Unit #: 2 | Sex: F | Race: B | Street/R.F.D.: 100 Turtle Creek Dr #M142

Birth Date: 08131984 | City, State, & Zip: Greenville SC 29615

State: SC | Driver's License #: 01145 7537 (D) | Insurance Company: Taylors Ins.

Year: 98 | Body: 4S | Vehicle Make: Ford | VIN: 1FAFP10P7WW142012

State: SC | Year: 2011 | License Plate #: EC5459 | Owner's D.L. #: Same

Home Telephone: 864 201-9539 | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: 0 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: NTA | Code: | Towed By: NTA

B-456456 | Driver/Pedestrian's Full Name:

Unit #: | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons #: | Code: | Towed By:

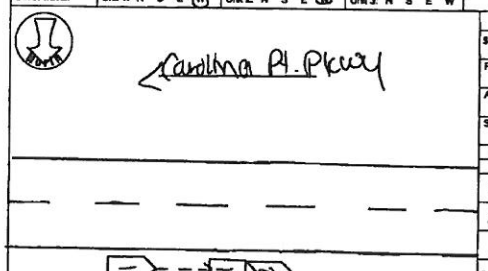
Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 200	$ 75	$	$	$

Property Owner/Witness: | Address: | State | Zip | Phone:

Photo: | Describe What Happened (Refer to Units by Number)

Unit 1 advised that he looked away from the road and he hit unit 2 in the rear. Unit 2 was transported to the hospital. Diag ram not drawn to scale.



NOTICE: THE DRAWING IS STATED FOR REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE "ACCURACY" OF SAID DRAWING THEREOF.

Investigating Officer's Name: J.D. Bridges | Rank: Pfc | Badge #: 491 | Code: 01230 | Date: 09/22/2010 | Reviewed/Confirmed | Rank: Sgt | Internal Agency Code: 10-80933

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	05081976	M	W	0	01	13	1	1	12				
2	08131984	F	B	1	01	12	1	1	1		Jones, Chanel	100 Turtle Creek Dr M142	29615

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet: 1- Yes 2- No 3- Unknown; By: 1- EMS 2- Police 8- Other 9- Unk.

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 65- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1- Yes; 2- No

Sequence of Events

1st	2nd	3rd	4th	Most Harmful
1	1	1	1	22
2	2	2	2	53
3	3	3	3	

1st Most Harmful

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 39- Unk. Moveable Object

Collision: Fixed Object: 41- Embankment; 42- Equipment; 43- Bridge Pier or Abutment; 44- Culvert; 45- Guardrail Face; 46- Curb; 47- Ditch; 48- Bridge Overhead Structure; 49- Bridge Parapet End; 50- Bridge Rail; 51- Guardrail End; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Other Post, Pole, Support, Etc.; 58- Tree; 59- Utility Pole; 60- Other (Wall, Building, Tunnel, Etc.); 61- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Deformed Area: 1st / Most; 1st Deformed; Most Deformed; 21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 98- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 29- Animal (Ridden); 30- Animal (Drawn Veh.); 61- Train; 62- Passenger Bus; 95- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 19- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unassess; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 0 1 2 3

Extent of Deformity: 0 1 2 3 9- Unk.

0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable

Trafficway: 2

Event Loc.: 1st Harmful 53; Event 53

Road Character: 1

Road Surface Condition: 1

Traffic Control Type: 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non/Junction; 99- Unk.

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 20- Other Improper Action; 19- Cell Phone; 29- Unk.

Others: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.; 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 97- Other Person Under the Influence

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Animal in Road; 62- Weather Cond.; 63- Glare; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

OCT 2 8 2010

S.P.S. USE ONLY: 10117503 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 Rev. 01/2007 | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 933 | Arrived: 942

Day: 10/16/2010 | Time: 932 | County: 23 | Collision Location (Rt. # / Name): Woodruff Rd/146 | 0-Main 6-Connection 2-Alternate 7-Business 5-Spur | Miles: 0 | Dir. N E S W | In (Name) or Town of: Greenville

Lane # / Dir.: 1 / 4 / N E S W | Distance Offset: 213 Miles Feet | Direction: N E S W | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Base Intersection (Rt. # / Name): From I-85 N | 0-Main 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid | Latitude: 109 23 48 | Longitude: 160 20 81

R.R. Id.: N/A | From: Ramp Only N E S W 1-Entrance 2-Exit | To: N E S W 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Second Intersection (Rt. # / Name): Toward Carolina A Pkwy | 0-Main 5-Spur 6-Connection 7-Business 9-Other

B-454498 | Driver/Pedestrian's Full Name: Bryant-Deborah Hester

Unit #: 1 | Sex: F | Race: B | Street/R.F.D.: 1180 Seneca Ext. St.

Birth Date: 12311967 | City, State, Zip: Calhoun Falls SC 29628

State: SC | Driver's License #: 877802 | Insurance Company: SC Farm Bureau

Year: 2001 | Body: 4S | Vehicle Make: Mitsu | VIN: JA3AM46691E186099

State: SC | Year: 2011 | License Plate #: ECG307 | Owner's D.L. #: Same

Home Telephone: 864 38-8870 | Owner's Full Name: Same

Bus. Telephone: ( ) | Street/R.F.D.: /

Contributed To Collision: No | City, State, & Zip: /

Estimated Speed: 15 | Speed Limit: 40 | C.D.L. Req: Yes | No | T/S S Req: Yes | No | Alc/Drg Info (see back): Yes | No

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-454499 | Driver/Pedestrian's Full Name: Lee-Bryan Andrew

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 7712 Hudson Rd NW

Birth Date: 05261977 | City, State, Zip: Wilson NC 27896

State: NC | Driver's License #: 24786901 | Insurance Company: Allstate

Year: 2008 | Body: MP | Vehicle Make: Honda | VIN: 5J6YH28768L003871

State: NC | Year: 2011 | License Plate #: 3VS9366 | Owner's D.L. #: Same

Home Telephone: 252 292-5537 | Owner's Full Name: Same

Bus. Telephone: ( ) | Street/R.F.D.: /

Contributed To Collision: Yes | No | City, State, & Zip: /

Estimated Speed: 0 | Speed Limit: 40 | C.D.L. Req: Yes | No | T/S S Req: Yes | No | Alc/Drg Info (see back): Yes | No

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-454500 | Driver/Pedestrian's Full Name: N/A

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dr. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.: $ 1000 | Unit 2 Dam.: $ 1500 | Unit 3 Dam.: $ | Prop. Dam. 1: $ N/A | Prop. Dam. 2: $

Property Owner/Witness: N/A | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

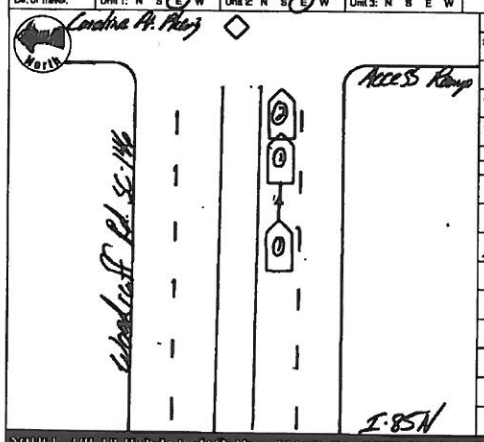


Photo: Y/N | Describe What Happened (Refer to Units by Number): Unit 2 was stopped at the traffic Signal. Unit 1 was travelling too fast for conditions and struck Unit 2 in the rear.

No Injuries Reported

Diagram not to Scale

NOTICE - THE DEPARTMENT OF PUBLIC SAFETY AND ITS AGENTS DO NOT GUARANTEE THE ACCURACY, ADEQUACY, OR COMPLETENESS OF THIS REPORT OR DATA CONTAINED IN IT. NO WARRANTY IS MADE AS TO THE FITNESS OF THE REPORT OR DATA FOR ANY PURPOSE. IT IS EXPRESSLY UNDERSTOOD THAT THE DEPARTMENT OF PUBLIC SAFETY AND ITS AGENTS ARE NOT LIABLE FOR ANY DAMAGES, INCLUDING SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, THAT MAY RESULT FROM THE USE OF THIS REPORT OR DATA CONTAINED IN IT. THE OPINIONS EXPRESSED IN THIS REPORT ARE NOT NECESSARILY THOSE OF THE DEPARTMENT OF PUBLIC SAFETY OR ITS AGENTS.

Investigating Officer-Name: AS Frank | Rank: AFC | Badge #: 335 | Date: 10/16/2010 | Reviewer's Name: | Rank: | Date: 10-27-10

Unit	Date of Birth	Sex	Race	INJ	Seat	MAD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	12311967	F	B	0	01	13	99	1	1	2			
2	05261977	M	W	0	01	12	99	1	1	2			
2	08131979	F	W	0	03	13	99	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Use: 1- Yes 2- No 3- Unknown; Transported to Medical Facility: 1- Yes 2- No 3- Unknown; By: 1- EMS 2- Police 8- Other 9- Unk.

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Devices: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front 2- Deployed Side 4- Not Deployed 7- Not Applicable; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected 2- Part. Ejected 3- Tot. Ejected 7- Not App. 9- Unk.

Location After Impact: 1- Not Trapped 2- Extricated (Mechanical Means) 3- Freed (non-mech.) 4- Not Applicable 9- Unknown

Head Injury: 1-Yes 2-No

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Trip (Two-Wheeled Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 25- Pedestrian; 26- Pedalcycle; 27- Railway Veh.; 28- Animal (Rider Only); 29- Animal (All Other); 30- Motor Veh. (In Transport); 31- Work Zone Maint. Equip.; 32- Other Moveable Object; 33- Motor Veh. (Stopped); 34- Motor Veh. (Other Roadway); 35- Unk. Moveable Object; 36- Motor Veh. (Parked)

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Passage End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Unk.

Most Deformed: 1st Event: 22; 2nd Event: 23; Most Severe: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 1 / 7 / 3; Most Deformed: 1 / 7 / 3

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 23- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Drawn Veh.); 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; Drug Results: 0- None/Minor; 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- Unk.

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1 0

Intrusion: 1- Under- Compartment; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk. 2 0

Extent of Deformity: 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk. 1 0 2

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk. 2

Access: 1- Controlled; 2- Partial; 3- Median; 4- Frontage; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Unk. 9- Outside Trafficway

Hit/Run: X- yes; Y- 1 Y 2-N 9-U 1 2

Event Loc.: 1st 2nd 3rd

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 9- Unk. 2

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk. 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- RR (X-bucks, Lights & Gates); 04- RR (X-bucks & Lights); 05- RR (X-bucks Only); 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk. 01

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk. 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No 2

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No Workers Present: 2

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk. 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights) 1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk. 13

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Primary: 03 | Others: 02

ORIGINAL

NOV 03 2010

D.P.S. USE ONLY: 10120013 | Page 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2010) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1950 | Arrived: 2000

Date: 10-10-2010 | Time: 1947 | County: 23 | 1- Interstate 4- Secondary 3- US Primary 5- County 6- SC Primary | Collision Location (Ft. # / Name): S 146 | Main 8- Connection 3- Alternate 7- Business 5- Spur | Miles: .05 | Dir. N E S W | 1917 Near City or Town of: Greenville

Lane # / Dir.: # 2 | Of: 5 | N S E W | Distance Offset: .02 Miles Feet | Direction: N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | From: Base Intersection (Ft. # / Name): 85 | Main 8- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: Ramp Only N E S W 1- Entrance 2- Exit | To: N E S W 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Toward: Second Intersection (Ft. # / Name): 564 | Main 8- Connection 2- Alternate 7- Business 5- Spur 9- Other | Latitude: 3449 4160 | Longitude: 82 1806 20

B-718735

Driver/Pedestrian's Full Name: Mullinax - William - Alan

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 219 Mary St.

Birth Date: 04-25-1960 | City, State, & Zip: Greenville SC 29611

State: SC | Driver's License #: 00 49800 69 (D) | Insurance Company: Geico

Year: 2002 | Body: 4S | Vehicle Make: Toyt | VIN #: 4T1BF28B52U211811

State: SC | Year: 2011 | License Plate #: 221-GCM | Owner's D.L. #: 00 49800 69

Home Telephone: (864) 434-0871 | Owner's Full Name: Mullinax - William - Alan

Bus. Telephone: (864) 455-3120 | Street/R.F.D.: 219 Mary St.

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29611

Estimated Speed: 0 | Speed Limit: 35 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes | Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-718736

Driver/Pedestrian's Full Name: Hurt - Brandon - Wayne

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 206 Burning Bush Rd.

Birth Date: 12-09-1993 | City, State, & Zip: Greenville SC 29607

State: SC | Driver's License #: 102 0538 26 (D) | Insurance Company: State Auto Property

Year: 2005 | Body: PK | Vehicle Make: Niss | VIN #: 1NGBA07A25N551994

State: SC | Year: 2011 | License Plate #: FNV-751 | Owner's D.L. #: N/A

Home Telephone: (864) 458-8957 | Owner's Full Name: Hurt - Wayne

Bus. Telephone: (864) 420-2031 | Street/R.F.D.: 1819 Morse Landing Rd.

Contributed To Collision: No | City, State, & Zip: Cross Hill SC 29332

Estimated Speed: 5 | Speed Limit: 35 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes | Summons #: N/A | Code | Summons #: E746946 | Code: 02 | Towed By: N/A

B-718737

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

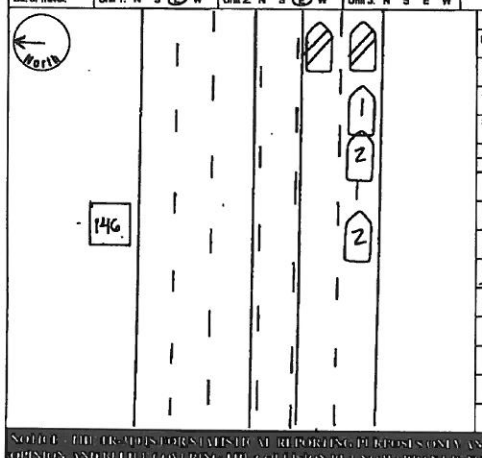
Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$900.00	$1500.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

Unit #1 was stopped in traffic headed East on SC 146. Unit #2 was also stopped on SC 146 behind unit #1, headed East, improperly started from stop and struck unit #1

NOTICE - THE INFORMATION ON THIS REPORT IS FOR STATISTICAL PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS AN OFFICIAL OPINION AND/OR LEGAL CONCLUSION AS TO FAULT OR LIABILITY. ALL WARRANTS ARE ISSUED BY THE MAGISTRATE'S OFFICE.

Investigating Officer's Name: Frayer - JV | Rank: TFC | Badge #: 820 | Code: HP03 | Date: 10-10-2010 | Reviewer's Name | Rank: SGT | Internal Agency Code: 106V112G8C

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	04-25-1960	M	W	0	01	13	4 3	1	1	2			
2	12-09-1993	M	W	0	01	13	4 3	1	1	2			
2	02-22-1944	M	W	0	03	13	4 3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Worn (R) or Other Protective Device Worn (O)

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1-Yes 2-No

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22				22	
23				23	22

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 08- Immersion; 09- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Wrecked Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway Motor Veh. (Parked); 25- Motor Veh. (Parked); 26- Pedalcycle; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 48- Equipment; 41- Bridge Parapet End; 49- Fence; 42- Bridge Pier or Abutment; 50- Guardrail End; 43- Bridge Rail; 51- Guardrail Face; 44- Culvert; 52- Highway Traffic Sign Post; 45- Curb; 53- Impact Attenuator/Crash Cushion; 46- Ditch; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 65- Other; 66- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Deformed Area: 1st Deformed | Most Deformed

Vehicle Type: 15- Full Size Van; 01- Automobile; 16- Mini Van; 12- Pickup/Truck; 17- Sport Utility; 13- Truck Tractor; 25- Motorcycle; 14- Other Truck; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Van; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 04- Ambulance; 01- Personal; 05- Military; 02- Driver Training; 06- Transport Passengers; 03- Construction/Maint.; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 4- Utility Trailer; 1- None; 5- Farm Trailer; 2- Mobile Home; 6- Trailer w/Boat; 3- Semi-Trailer; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 09 | 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Making Three Point Turn; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 09 | 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Urine; 2- Breath (Alc. Only); 3- Blood

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 0 0

Extent of Deformity: 1 2 3

Trafficway: 2

1st Harmful Event: 24

Event Loc.:

Road Character: 2

Road Surface Condition: 1

Traffic Control Type: 99

School Bus Involved: 3

Work Zone: 2

Work Zone Location:

Work Zone Type:

Workers Present:

Weather Condition: 1 | 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Soil, Dirt or Snow; 6- Snow; 7- Fog, Smog, Smoke; 8- Severe Crosswinds; 9- Unk.

Light Condition: 7 | 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 8- Dark; 9- Unk.

Junction Type: 13 | 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Roadway: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Work Zone; 05- Other Warning Signs; 06- None; 07- Officer or Flagman; 08- Oncoming Emergency Vehicle; 09- Pavement Markings (only); 10- RR (X-bucks, Lights & Gates); 11- RR (X-bucks & Lights); 12- RR (X-bucks Only); 13- Yield Sign; 14- Flashing Beacon; 15- School Zone Sign; 99- Unk.

Primary Contributing Factor: 28

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Cell Phone; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Animal in Road; 62- Weather Cond.; 63- Glare; 68- Other; 69- Unk.

Others: 67- Other Person Under the Influence; 73- Signals; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

NOV 04 2010

D.P.S. USE ONLY: 10120575 | Page 1 Of 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 07-2001)

# of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 2140 | Arrived: 2155

Date: 10-17-2010 | Time: 2130 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Collision Location (Rt. # / Name): 5 146 | 0- Main 1- Alternate 2- Spur 6- Connection 7- Business | Miles: 5 | Dir. N E S W | Near City or Town of: Greenville

Lane # / Dir.: 2 S | Distance Offset: .01 Miles Feet | Direction N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt. # / Name): From 85 | 0- Main 1- Alternate 2- Spur 6- Connection 7- Business 8- Other

ASRU code | MP/Grid | Latitude: 34 49 49 90 | Longitude: 82 18 11 30

R.R. Id.: N/A | From: Ramp Only N E S W | To: 1- Entrance 2- Exit N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Second Intersection (Rt. # / Name): Toward Country Clubs

B-569338

Driver/Pedestrian's Full Name: Mobley-Jessica Erin

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 109 SummerCrest Ct.

Birth Date: 12-30-1981 | City, State, & Zip: Easley SC 29642

State: SC | Driver's License #: 101533683 (CO) | Insurance Company: Nationwide

Year: 2001 | Body: 4S | Vehicle Make: SUZI | VIN #: JS3JX52Z83K103998

State: SC | Year: 2011 | License Plate #: PKU 877 | Owner's D.L. #: N/A

Home Telephone: 864 704-8061 | Owner's Full Name: Mobley-Jessica Erin

Bus. Telephone: 8647048061 | Street/R.F.D.: 109 SummerCrest Ct

Contributed To Collision: No | City, State, & Zip: Easley SC 29642

Estimated Speed: 15 | Speed Limit: 40 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-569339

Driver/Pedestrian's Full Name: Bisco-Diastado Gates

Unit #: 2 | Sex: M | Race: H | Street/R.F.D.: 1150 Village Ridge Rd

Birth Date: 05-26-1978 | City, State, & Zip: San Diego CA 92131

State: CA | Driver's License #: A7911519 (CC) | Insurance Company: Self-Insured

Year: 2001 | Body: 4S | Vehicle Make: TOYT | VIN #: 4T1BF3EKXAU068788

State: CA | Year: 2011 | License Plate #: BTT 4046 | Owner's D.L. #: N/A

Home Telephone: 858 832-2178 | Owner's Full Name: Hertz Vehicles LLC

Bus. Telephone: 858 336-2178 | Street/R.F.D.: 225 Brae Blvd

Contributed To Collision: No | City, State, & Zip: Parkridge NJ 07656

Estimated Speed: 22 | Speed Limit: 40 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-569340

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

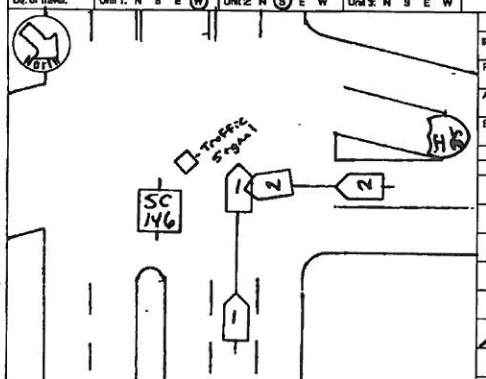
Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1,000	$ 1,000	$	$ N/A	$ N/A

Property Owner/Witness | Address | City, State, Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling West on SC 146. Unit #2 was coming South onto SC-146 from the Exit Ramp from I-85. Due to the lack of evidence and contradicting statements, I was unable to determine A primary Contributor. Unit #1 had damage on the passenger side door. Unit #2 damage was on the front fender area.

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH OF ANY FACT HEREIN

Investigating Officer's Name: Horn's - OT | Rank: Ofc | Badge #: 841 | Code: 77103 | Date: 10-17-2010 | Reviewing Officer's Name | Rank: Sgt | Internal Agency Code: 10GW115569

Unit	Date of Birth	Sex	Race	Inj	Seat	Rest	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	12-30-1981	F	W	O	D	D	13	1	1	2			
1	[illegible]	M	W	O	D	03	13	1	1	2			
2	[illegible]	M	H	O	D	01	13	1	1	2			
2	12-26-1978	M	H	O	D	D	13	1	1	2			
2	07-13-1979	M	H	O	D	04	13	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nonsailing); 51- Other Unenclosed Area (nonsailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 69- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk.; b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 81- Lighting

Sequence of Events

Most Dng TR Action: [illegible]

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22				22	22

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicle Veh.); 18- Other Non-Collision; 19- Unk. Non-collision

Collision: Fixed Object: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Pedalcycle; 26- Pedestrian; 27- Railway Veh.; 28- Work Zone Maint. Equip.; 29- Unk. Moveable Object; 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 61- Unk. Fixed Object; 69- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 12 7 3 | Most Deformed: 12 7 3

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 04- Ambulance; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Livestock Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 89- Other

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor

Special Use Only: 1- Under-Compartment Intrusion; 2- Under-No Intrusion; 3- Under-Unknown; 4- Over-MV In Transport; 5- Over-Other Vehicle; 6- None; Underride/Override: 6; 1st Harmful Event: 22

Extent of Deformity: 0

Roadway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; Trafficway: 2

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 8- Curve - Hillcrest; Road Character: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.; Road Surface Condition: 1

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 8- Dark (Street Lamp Not Lit); 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.; Traffic Control Type: 01

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.; School Bus Involved: 3

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No; Work Zone: 2

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 1- Yes 2- No; Work Zone Location; Work Zone Type; Workers Present:

Primary: 29

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoid; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 26- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Instructed; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others:

ORIGINAL

NOV 16 2010

D.P.S. USE ONLY **10126890** | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 01/2001 | # of Units 2 | Amended - Attach Copy of Original Report / Corrected | Notified 2208 | Arrived 2226

Date 10-08-2010 | Time 2200 | County 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name) 5 SC 146 | 5- Main 2- Alternate 5- Spur 6- Connection 7- Business | Miles .10 | Dir. N E S W | Dir/ Near City or Town of: GREENVILLE

Lane # / Dir. 2 | CI 4 | N E S W | Distance Offset Miles .10 Feet | Direction N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From I-85 | 5- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude 34 49 41.60 | Longitude 82 18 06.50

R.R. Id. NA | From N E S W | Ramp Only 1 - Entrance 2 - Exit | To N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Passed Second Intersection (Rt. # / Name) CAROLINA POINT PKWY

B-226855 — Driver/Pedestrian's Full Name: BUMGEY - ROBERT KEITH

Unit # 1 | Sex M | Race W | Street/R.F.D. 40 KINGSGATE CT | Birth Date 10/19/1962 | City, State, & Zip SIMPSONVILLE SC 29681

State SC | Driver's License # 00815033 8 | DL | Insurance Company SOMPO JAPAN

Year 2009 | Body SUV | Vehicle Make DODGE | VIN # 1D8GU58K09W509586

State SC | Year 2011 | License Plate # ANZ531 | Owner's D.L. #

Home Telephone (803) 437 4911 | Owner's Full Name DAICHI SANKYO INC

Bus. Telephone ( ) NA | Street/R.F.D. 40 KINGSGATE CT

Contributed To Collision Yes / No | City, State, & Zip SIMPSONVILLE SC 29681

Estimated Speed 15 | Speed Limit 45 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons # NA | Code | Summons # NA | Code | Towed By NA

B-226856 — Driver/Pedestrian's Full Name: UNKNOWN

Unit # 2 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes / No | City, State, & Zip

Estimated Speed 45 | Speed Limit 45 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons # NA | Code | Summons # NA | Code | Towed By NA

B-226857 — Driver/Pedestrian's Full Name: N/A

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Estimated Speed | Speed Limit | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons # | Code | Summons # | Code | Towed By

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 0	$	$ NA	$ NA

Property Owner/Witness NA | Address | State | Zip | Phone

Property Owner/Witness NA | Address | State | Zip | Phone

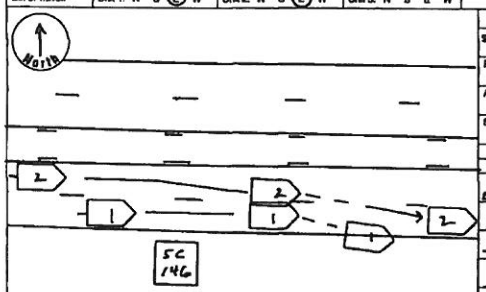


Photo: Y (N) | Describe What Happened (Refer to Units by Number)

UNIT#1 AND UNIT#2 WERE HEADED EAST ON SC 146. UNIT#2, MAKING AN IMPROPER LANE CHANGE, CHANGED LANES TO THE RIGHT AND STRUCK THE LEFT SIDE OF UNIT#1. UNIT#2 THEN FLED THE SCENE.

NOTICE - THE INFORMATION CONTAINED IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF AT THE TIME OF FILING. THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name BRACKEN-DH | Rank CPL | Badge # 115 | Code HP03 | Date 10-08-2010 | Reviewer's Name Holland - T.J. | Rank CPL. | Internal Agency Code 10GU1120J1

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	Ext	Trav	Name	Street Address	Zip Code
1	10/19/1962	M	W	0	01	12	4	1	1	2			
2	UNK	U	U	0	01	13	4	1	1	12			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 01- Child Safety Seat; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 05- Fire/Explosion; 06- Immersion; 07- Jackknife

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Side Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 39- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Guardrail End; 48- Guardrail Face; 49- Highway Traffic Sign Post; 50- Impact Attenuator/Crash Cushion; 51- Light/Luminaire Support; 52- Median; 53- Other Post, Pole, Support; 54- Other Traffic Barrier; 55- Shrubbery; 56- Tree; 57- Unknown Fixed Object; 58- Utility Pole; 59- Work Zone Maint. Equipment; 60- Other; 99- Unk.

Event 1: 24 | Event 2: 22 | Event 3 | Most Harmful: 1st = 24

1st Point of Damage: 1st Deformed: 10 | 2nd: 23 | 3rd | Most Deformed: 10

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 52- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movement Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Other / Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Alcohol/Drug Test Given: D1 Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other. D2 Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV In Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underride/Override: 1 6 | 2 6 | 3

Extent of Deformity: 1 2 | 2 9 | 3

Trafficway: 2- Two-way, Not Divided; 1- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk. | 2

A: 1- Dirt; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk.

1st Harmful Event: A 1 | P 1 | Loc. 5 20

B: X- width: 1 | Y- 2-N 9-U: 1 | 1

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest | 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk. | 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk. | 88

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk. | 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes; 2- No | 2

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Closure; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes; 2- No

Workers Present:

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk. | 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights) | 1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk. | 13

Primary: 18

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others:

ORIGINAL

DEC 1 0 2010

O.P.S. USE ONLY **10134894** | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 | # Of Units 2 | Amended - Attach Copy of Original Report | Notified 2031 | Arrived 2045

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	In / Near City or Town of:
10292010	2030	23	5F148 & Woodruff Rd			Greenville

Lane # / Dir.: 1 / 6 (N E S W) | Distance Offset: 35 Feet | Direction: (N E S W) | Base Intersection (Rt. # / Name) From: I-85 | Toward: Old Country Rd | ASRU code | MP/Grid | Latitude 1092556 | Longitude 1608837

R.R. Id. | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W

A-391861 — Driver/Pedestrian's Full Name: Brookshire, Donald R

Unit #	Sex	Race	Street
1	M	W	101 Peach Dr

Birth Date 12291993 | City, State, & Zip Pendleton SC 29670 | State SC | Driver's License # 10702085960 | Insurance Company STATE FARM

Year	Body	Vehicle Make	VIN #
1997	SU	JEEP	1J4FX78S1VC572893

State SC | Year 2011 | License Plate # GAM 547 | Owner's D.L. #

Home Telephone (864) 642-2489 | Owner's Full Name Brookshire, Pamela A

Bus. Telephone ( ) | Street Same

Contributed To Collision (Yes) No | City, State, & Zip Same

Estimated Speed 10 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # 8760 PB | Code 48 | Towed By N/A

A-391862 — Driver/Pedestrian's Full Name: ARFUN, Bobby J

Unit #	Sex	Race	Street
2	M	W	139 Williamson Dr

Birth Date 07251952 | City, State, & Zip Belton SC 29627 | State SC | Driver's License # 45175599 (AM) | Insurance Company Kemper

Year	Body	Vehicle Make	VIN #
2009	SU	KIA	KNDJJ741295029061

State SC | Year 2011 | License Plate # CXW 153 | Owner's D.L. #

Home Telephone (864) 225-1857 | Owner's Full Name ARFUN, Sheila G

Bus. Telephone ( ) | Street Same

Contributed To Collision (No) | City, State, & Zip

Estimated Speed 20 | Speed Limit 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

A-391863 — Driver/Pedestrian's Full Name

Unit #	Sex	Race	Street
X			

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

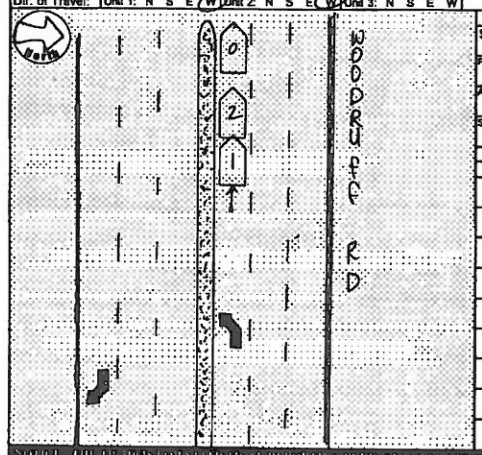
Bus. Telephone ( ) | Street

Contributed To Collision Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back) Yes No

Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E (W) | Unit 2: N S E (W) | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1800	$ 2000	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Describe What Happened (Refer to Units by Number)

Unit 2 started to Roll forward when struck in the rear by Unit 1. Driver of Unit 1 had looked left and was unaware of slowed traffic in front of him

NOTICE: THE TRUTH OF THIS REPORT IS NOT GUARANTEED OR WARRANTED BY THE OFFICER. SEE STATUTES AND REGULATIONS GOVERNING THIS COLLISION REPORT. NO WARRANTIES ARE MADE AS TO THE FORM OR LEGALITY THEREOF.

Investigating Officer's Name: Dempsey, D | Rank: Cpl | Badge #: 708 | Code: 0730200 | Date: 10-29-2010 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 10-91475

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	ASB	Eject	LAI	Tran	Name	Street Address	Zip Code
1	12291993	M	W	0	01	13	N	1	1	2			
2	07251952	M	W	0	01	13	N	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 — 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk; Pedestrian, Motorcycle/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; a) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; b) 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 8- Unk

Motorcycle Only — Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

e) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk

Sequence of Events

1st Harmful	2nd Harmful	3rd Harmful	4th Harmful
22	22		

Non-Collision: 01- Crsg/Exp Loss of Shift; 02- Other Mvmt/Contrl Loss; 03- Downh ↑ Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Cargo/Debris); 13- Tire Failure/Debris; 14- Other Non-collision; 15- Unk Non-collision

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (Al. Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Other Movable Object; 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip.; 30- Unk Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail Face; 49- Guardrail End; 50- Highway Traffic Sign Post; 51- Impact Attenuator/Crash Cushion; 52- Light/Luminaire Support; 53- Mail Box; 54- Other Post, Pole or Support; 55- Other Traffic Sign Support; 56- Median Barrier; 57- Overhead Sign Support; 58- Other Fixed Object; 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Wall; 64- Other; 99- Unk

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (Both Going ↑); 41- Angle (→ & ↑); 42- Angle (→ & ↓); 43- Angle (← & ↑); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1° Deformed Area — 1° Deformed: 1 2 7 — Most Deformed: 1 2 7

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 13- Full Size Van; 14- Mini Van; 15- Sport Utility; 16- Motorcycle; 17- Other Motorbike; 18- Train; 19- Pedalcycle; 20- Animal Drawn Veh.; 21- Animal (Rider); 22- Pedestrian; 23- Ambulance; 24- Farm Use; 25- Mil/Gov; 26- Wrecker or Tow; 27- Logging; 28- Other; 29- Unk (Hit and Run Only); 61- School Bus; 62- Passenger Bus

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Negotiating a Curve; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 12- Straight Ahead; 88- Other; 99- Unk

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Working; Playing; Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; A- ; B

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Al. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk

Special Use Only

Under/Override: 6 / 6

Extent of Deformity: 2 / 2

0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk

Traffic Way: 2 — A- Alley; B- Ramp; C- Roadway; D- Shoulder; E- Outside Trafficway; F- Sidewalk; G- Unk; H- X-walk; I-V 2-Wheel; J-V 3-or 4-Wheel; K- 1st Harmful Event Loc: 5

1- One; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- X-walk; 9- Unk

1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way Divided Barrier; 4- One-Way; 8- Other

Road Character: 1 — 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1 — 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminants; 7- Water (Standing, etc.); 8- Other; 9- Unk

Traffic Control Type: 99 — 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 88- None; 99- Unk

Weather Condition: 1 — 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Cond tion: 4 — 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

School Bus Involved: 3 — 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk

Junction Type: 3 — 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

Work Zone: 2 — 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

Work Zone Type: 1- Yes 2- No Workers Present:

Primary Contributing Factors: 09

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Drove Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (When Unit); 18- Improper Lane Usage/Change; 26- Other Improper Action; 27- Unk; 28- Unk; 29- Unk

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Hole, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (Ie., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk; 66- Under the Influence; 67- Other Person Under Influence

Environmental: 62- Obstruction; 63- Weather Cond; 64- Animal in Road; 65- Glare; 66- Other; 89- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

ORIGINAL

DEC 13 2010

D.P.S. USE ONLY **10135768** | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2007) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1209 | Arrived 1211

Date 10/24/10 | Time 1209 | County 23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Municipal) | Collision Location (Rt. # / Name) 5 SC-140 | (5) Main 2- Alternate 5- Spur 6- Connection 7- Business | Miles: Dir. N E S W | Log Near City or Town of: Greenville

Lane # / Dir. 2 | Of 4 | N E S (W) | Distance Offset 0 Miles Feet | Direction N E S W | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From I-85 | (6) Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other | ASRU code | MP/Grid

R.R. Id | From: Ramp Only N E S W 1- Entrance 2- Exit | To N E S W | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary (5) County 6- Other | Second Intersection (Rt. # / Name) Toward Carolina Point Pkwy | (6) Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Latitude 1092460 | Longitude 1608975

B-454798 | Driver/Pedestrian's Full Name: Bird-Teresa Parker

Unit # 1 | Sex F | Race W | Street/R.F.D. 379 Quarter Round Rd | Birth Date 3/02/69 | City, State, & Zip Pacolet SC 29372

State SC | Driver's License # 82149288-D | Insurance Company State Farm

Year 2004 | Body SV | Vehicle Make Buick | VIN # 5GAEV13718J109614

State SC | Year 2011 | License Plate # EDD911 | Owner's D.L. # same

Home Telephone 864 812-1071 | Owner's Full Name

Bus. Telephone 864 479-1914 | Street/R.F.D.

Contributed To Collision (Yes) No | City, State, & Zip

Estimated Speed 10 | Speed Limit 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons # 58666 3 Fm 94 | Code | Towed By

B-454799 | Driver/Pedestrian's Full Name: Smith-Robert Manning

Unit # 2 | Sex M | Race W | Street/R.F.D. 808 Todd Rd | Birth Date 5/19/72 | City, State, & Zip Honea Path SC 29654

State SC | Driver's License # 895118I-D | Insurance Company Farm Bureau

Year 2003 | Body TK | Vehicle Make Dodg | VIN # 1D7HL38N83S120039

State SC | Year 2011 | License Plate # ARB899 | Owner's D.L. # same

Home Telephone 864 940-0021 | Owner's Full Name

Bus. Telephone 864 369-6491 | Street/R.F.D.

Contributed To Collision Yes (No) | City, State, & Zip

Estimated Speed 0 | Speed Limit 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons # | Code | Towed By

B-454800 | Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Towed By

Dir. of Travel: | Unit 1: N S E (W) | Unit 2: N S E (W) | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800	$ 900	$	$	$

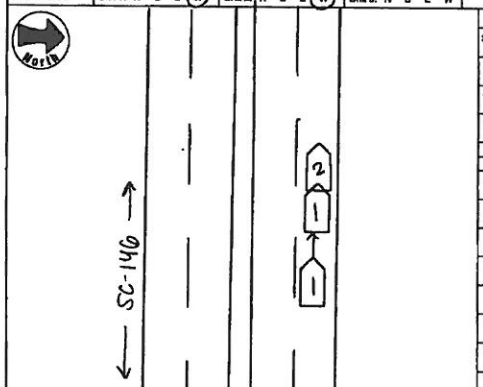
Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #2 was stopped in traffic. Unit #1 Stopped then attempted to start again & struck the rear end of unit #2.



NOTICE - THE INFORMATION ON THIS FORM IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RECORD OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Hawkins, J. | Rank PFC | Badge # 409 | Code 120700 | Date 11/24/10 | Reviewer's Name | Rank Sgt | Internal Agency Code 10-98592

Unit	Date of Birth	Sex	Race	INJ	Seat	RSTD	A.I.S.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	3/2/64	F	W	C	01	13	4 4 9	1	1	2			
2	5/7/72	M	W	C	01	13	4 4 9	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Head Injury: 1-Yes 2-No

Sequence of Events: 1 | 2 | 3 | 4 | Most Harmful | 1st Harmful

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 02- Cross Median/Center Line; 03- Downhill Runaway; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Mat.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian; 30- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 28- Rail; 29- Work Zone Maint. Equip.; 99- Other Movable Object

Collision: Fixed Object: 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Culvert; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Mnnt. Equipment; 41- Bridge Overhead Structure; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Bridge Parapet End; 45- Curb; 46- Ditch; 64- Light/Luminaire Support; 65- Work Zone Mnnt. Equipment

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 1 2 3 4 5 6 7 | Most Deformed: 1 2 3 4 5 6 7

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 98- Other; 99- Unk.

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Deer); 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 88- Other; 99- Unk.; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Special Use Only: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 9- Unk.

Underride/Override: 0 1 2 3 4 5 6 7 8 9

Extent of Deformity: 0 1 2 3 4 5 6 7 8 9

Trafficway: 2- Two-way, Not Divided; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Number of Thru Lanes: 2

Road Type: 1- Alley; 2- Ramp; 3- Street; 4- Roadside; 5- Shoulder; 6- Outside Trafficway; 7- Sidewalk; 8- Unk.; I- Interstate; U- U.S. route; S- State; R- Frontage Road

1st Harmful Event Loc.: 5 2

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 8- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present:

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Traffic Circle; 07- Shared Use Paths or Trail; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 29- Other Improper Action; 99- Unk.; 18- Cell Phone

Primary: 02 | Driver: 28

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Influence; 67- Other Person Under the Influence

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Glare; 65- Other; 69- Unk.; 60- Animal in Road

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

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D.P.S. USE ONLY: 10138184 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 Rev. 01/2003 | # Of Units: 2 | Amended - Attach Copy of Original Report: Corrected | Notified: 0951 | Arrived: 0955

Date: 11-26-2010 | Time: 0951 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- City | Collision Location (Rt. # / Name): 146 S WOODRUFF RD | Main 2-Alternate 5-Spur 6-Connection 7-Business | Miles: | Dir. N E S W | Of / Near City or Town of: GREENVILLE

Lane # / Dir.: 2 4 | Of: | N E S W | Distance Offset: 420.17 Miles | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): 85 | Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code: | MP/Grid:

R.R. Id. | From N E S W | Ramp Only 1 - Entrance 2 - Exit | To N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Toward: CAROLINA POINT PKWY | Second Intersection (Rt. # / Name): | Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | Latitude: 34° 49' 22.43" | Longitude: 82° 16' 09.72"

X-430765

Driver/Pedestrian's Full Name: SEAY - PEGGY DIXIE S

Unit #: 1 | Sex: F | Race: W | Street: 278 RIDGEFIELD CIR

Birth Date: 4-9-1954 | City, State, & Zip: EASLEY SC 29640

State: SC | Driver's License #: 00367414 2 (D) | Insurance Company: ALLSTATE

Year: 2005 | Body: 4S | Vehicle Make: FORD | VIN #: 2FMEP74W25X168721

State: SC | Year: 2011 | License Plate #: 682 SCZ | Owner's D.L. #: SAME

Home Telephone: (864) 754-6770 | Owner's Full Name: SAME

Bus. Telephone: ( ) NA | Street: AS

Contributed To Collision: No | City, State, & Zip: DRIVER

Estimated Speed: 20 | Speed Limit: 35 | C.D.L. Req: Yes | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: (33561721) | Code: | Summons #: NA | Code: | Towed By: NA

X-430766

Driver/Pedestrian's Full Name: KINDLEY - MARLEN M.

Unit #: 2 | Sex: F | Race: H | Street: 258 RICHARDSON RD

Birth Date: 2-7-1962 | City, State, & Zip: SIMPSONVILLE SC 29680

State: SC | Driver's License #: 00433580 0 (D) | Insurance Company: 21ST CENTURY

Year: 2000 | Body: 4S | Vehicle Make: MERC | VIN #: 1MEFM55S7YA641012

State: SC | Year: 2011 | License Plate #: FST 738 | Owner's D.L. #: NA

Home Telephone: (864) 757-9680 | Owner's Full Name: KINDLEY - JOHN H.

Bus. Telephone: ( ) NA | Street: SAME

Contributed To Collision: Yes | City, State, & Zip: SAME

Estimated Speed: 0 | Speed Limit: 35 | C.D.L. Req: Yes | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: NA | Code: | Summons #: NA | Code: | Towed By: NA

X-430767

Driver/Pedestrian's Full Name: N/A

Unit #: | Sex: | Race: | Street:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Home Telephone: ( ) | Owner's Full Name:

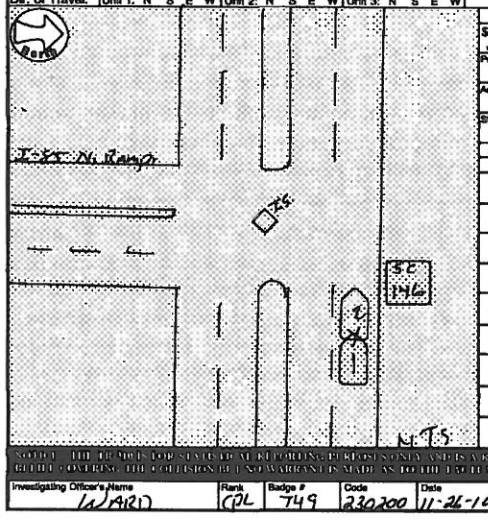
Bus. Telephone: ( ) | Street:

Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$3000.	$2000.	$	$	$

Property Owner/Witness: NONE REPORTED | Property Owner/Witness: | Address: | Address: | State | Zip | Phone | State | Zip | Phone

Photo: | Describe What Happened (Refer to Units by Number)

UNIT #1 SAID SHE WAS DOING SOMETHING WITH HER RADIO, AND LOOKED UP AND SAW UNIT #2 STOPPED IN TRAFFIC. UNIT #1 STRUCK UNIT #2 WHO WAS STOPPED IN TRAFFIC. NO INJURIES

NOTICE: THE DRIVER'S FAILURE TO REPORT A PERSONAL INJURY OR PROPERTY DAMAGE COLLISION AS REQUIRED BY LAW MAY RESULT IN THE SUSPENSION OF THE DRIVER'S PRIVILEGE TO OPERATE A MOTOR VEHICLE IN SOUTH CAROLINA. ANY PERSON WHO KNOWINGLY MAKES A FALSE REPORT OF A CRIME TO A LAW ENFORCEMENT OFFICER IS GUILTY OF A MISDEMEANOR AND MUST BE FINED NOT LESS THAN ONE HUNDRED DOLLARS NOR MORE THAN TWO HUNDRED DOLLARS OR IMPRISONED NOT MORE THAN THIRTY DAYS. THE COLLISION REPORT IS NOT A WARRANT OR SUMMONS AND SHALL NOT BE CONSIDERED AS SUCH BY THE COURTS. IT IS FOR THE CONFIDENTIAL USE OF THE DEPARTMENT OF PUBLIC SAFETY AND OTHER AUTHORIZED AGENCIES. IT SHALL BE AVAILABLE FOR INSPECTION ONLY UNDER CONDITIONS PRESCRIBED BY LAW OR COURT RULE. THE COLLISION REPORT SHALL NOT BE USED FOR ANY PURPOSE RELATING TO THE INSURANCE COVERAGE OF A VEHICLE INVOLVED IN THE COLLISION, EXCEPT THAT THE DEPARTMENT OF MOTOR VEHICLES MAY USE THE REPORT IN ADMINISTERING THE UNINSURED MOTORIST COVERAGE ACT.

Investigating Officer's Name: WARD | Rank: CPL | Badge #: 749 | Code: 230200 | Date: 11-26-10 | Reviewer's Name: | Rank: Sgt | Internal Agency Code: 10-98999

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	4-9-1954	F	W	C	01	13	43	1	1	2			
2	2-7-1962	F	H	O	01	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk /NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 09- Overturn/Rollover; 02- Cross Median/Center Line; 06- Immersion; 09- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right

Collision Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 28- Railway Veh.; 21- Animal (All Other); 29- Work Zone Maint. Equip.; 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 39- Unk. Movable Object; 10- Unk. Non-collision

Collision Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 48- Equipment; 41- Bridge Parapet End; 49- Fence; 42- Bridge Pier or Abutment; 50- Guardrail End; 43- Bridge Rail; 51- Guardrail Face; 44- Culvert; 52- Highway Traffic Sign Post; 45- Curb; 53- Impact Attenuator/Crash Cushion; 46- Ditch; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment

Event 1: 23 | Event 2: 23 | Event 3: | Event 4: | Most Harmful: 23 | 1st Harmful: 23

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 1 | 2nd: 7 | 3rd: | Most Deformed: 1 | 2nd: 7 | 3rd:

Vehicle Types: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 99- Unk. (Hit and Run Only)

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 98- Other; 99- Unk

Vehicle Use Code: 04- Ambulance; 05- Transport Passengers; 06- Construction/Maint.; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk

Underride/Override

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

6- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 4- Not Applicable; 9- Unk

Extent of Deformity

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other

1st Harmful Event Loc: 1- Case; 2- Median; 3- Roadway; 4- Island; 5- Roadside; 6- Shoulder; 7- Sidewalk; 8- Unk; 9- Outside Trafficway

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Cloudy; 04- Fog, Smog, Smoke; 05- Sleet, Hail; 06- Blowing Sand, Oil, Dirt or Snow; 07- Severe Crosswinds; 08- Rain; 09- Snow; 10- Unk.

21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 23- Pavement Markings (only); 24- Yield Sign; 25- Flashing Beacon; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 31- Stop Sign; 32- School Zone Sign; 33- Other Warning Signs; 34- Work Zone; 35- None

Weather Condition: 1- Clear (no adverse conditions); 2- Rain

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk

School Bus Involved:

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

1- Yes 2- No Work Zone:

Work Zone Location

Work Zone Type

1- Yes 2- No Workers Present:

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (Inop, Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Darkyard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 99- Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond; 68- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

Others:

ORIGINAL

DEC 2 1 2016

D.P.S. USE ONLY: 10139348 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Received 2344 | Arrived 2344

Date 11-25-2016 | Time 2343 | County 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name) 5 146 | Main 2-Alternate 5-Spur 6-Connection 7-Business | Miles: 5.60 | Dir. N E S W | Near City or Town of: Greenville

Lane # / Dir. 2 S | Distance Offset 5 Miles/Feet | Direction N E S W | Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From 85 | Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid

R.R. Id. NA | From N E S W: 1- Entrance 2- Exit | Ramp Only | To N E S W: Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- Other | Toward Second Intersection (Rt. # / Name) 385 | Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | Latitude 34 °49 '45.00" | Longitude 82 °18 '13.50"

T-235028 | Driver/Pedestrian's Full Name: Garcia - Leobardo Ramirez

Unit # 1 | Sex M | Race H | Street/R.F.D. 10 Teresa Dr. | Birth Date 11-18-1982 | City, State, & Zip Vale Shoals, SC 29692

State SC | Driver's License # NA | Insurance Company Infinity

Year 1992 | Body 2DS | Vehicle Make Ford | VIN # 1ZVPT20C1N5191611

State SC | Year 2011 | License Plate # FFH 329 | Owner's D.L. # NA

Home Telephone (864) 337-0465 | Owner's Full Name Mendoza-Esparza - Juan

Bus. Telephone ( ) NA | Street/R.F.D. 207 Mineral Ct.

Contributed To Collision Yes (No) | City, State, & Zip Greenwood, SC 29646

Estimated Speed 45 | Speed Limit 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # E772608 | Code 871 | Summons # NA | Code | Towed By Keller's Korner | Y (N)

T-235029 | Driver/Pedestrian's Full Name: Thompson - Shaw M.

Unit # 2 | Sex M | Race B | Street/R.F.D. 815 Hellams St. | Birth Date 9-23-1985 | City, State, & Zip Fountain Inn, SC 29644

State SC | Driver's License # 011484683 (D) | Insurance Company Infinity

Year 2001 | Body PK | Vehicle Make Chev | VIN # 2GCEC19T411105534

State SC | Year 2011 | License Plate # GSF 557 | Owner's D.L. # 011484683

Home Telephone (864) 380-7844 | Owner's Full Name Thompson - Shaw M.

Bus. Telephone ( ) NA | Street/R.F.D. 815 Hellams St.

Contributed To Collision Yes (No) | City, State, & Zip Fountain Inn, SC 29644

Estimated Speed 10 | Speed Limit 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # NA | Code | Summons # | Code | Towed By NA

T-235030 | Driver/Pedestrian's Full Name

Unit # NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

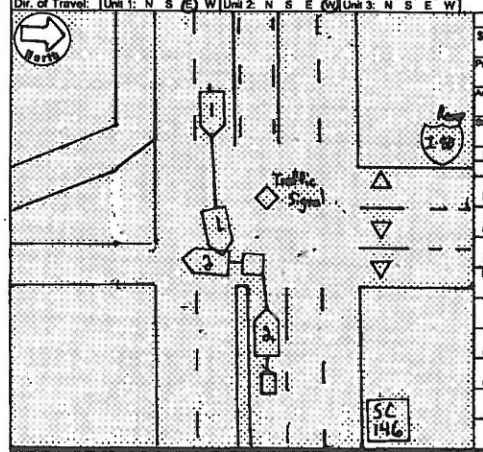
Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 6000	$ 3500	$	$ NA	$ NA

Property Owner/Witness: NA | Address | State | Zip | Phone

Property Owner/Witness: NA | Address | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling East on SC-146. Unit #2 was traveling West on SC-146, preparing to turn left on to the I-85 South ramp. Unit #2 made a left turn and Unit #1 struck Unit #2 on the right side. Unable to determine an "at fault" party.

SOUTH CAROLINA LAW REQUIRES THAT A REPORT BE MADE OF ANY ACCIDENT RESULTING IN INJURY OR DEATH OR APPARENT PROPERTY DAMAGE OF $300.00 OR MORE. THE INFORMATION REPORTED HEREIN IS MADE AS TRUTHFULLY AS I KNOW HOW.

Investigating Officer's Name: Kesling - SG | Rank TFC | Badge # 719 | Code HP03 | Date 11-25-2016 | Reviewer's Name K. Allen | Rank Sgt | Internal Agency Code 10GV131351

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	11-18-1982	M	H	0	01	13	43	1	1	2			
2	9-23-1985	M	B	0	01	13	43	1	1	2			
2	2-17-1987	M	B	0	03	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting; 99- Unk.

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 7-Not Applicable 8-Deployment Unk.; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: a) 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 20- Pedestrian; 30- Training Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 09- Immersion; 08- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right

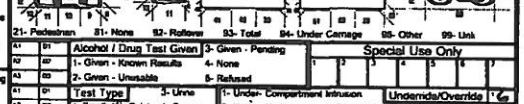
Collision Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 28- Railway Veh; 21- Animal (All Other); 29- Work Zone Maint. Equip.; 22- Motor Veh (In Transport); 23- Motor Veh (Stopped); 24- Motor Veh (Other Roadway); 25- Motor Veh (Parked); 26- Pedalcycle; 39- Unk. Movable Object; 40- Other Movable Object

Collision Fixed Object: 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 66- Other; 69- Unk

Most Harmful: 1st Harmful 12; 2nd Harmful 22; 1st Harmful Event 12

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↖↗); 42- Angle (→|←); 43- Angle (↙↘); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed 12; Most Deformed 12



Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 18- Full Size Van; 19- Conversion Van; 20- Medium/Heavy Truck; 21- Bus; 22- Motor Home; 27- Pedalcycle; 28- Transit Bus; 29- School Bus; 30- Animal Drawn Veh.; 31- Animal (Ridden); 41- Pedestrian; 51- Train; 82- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unavailable; 3- Given - Pending; 4- None; 8- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 8- Unk.

Special Use Only

Underride/Override

Extent of Deformity

Traffic Way: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other

Trafficway

Event Loc.: A- 1- Curb; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk.; B- X-walk: 1-Y 2-N 9-U; 1st Harmful Event Loc.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminants; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 51- Flashing Beacon; 98- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type

Workers Present: 1- Yes 2- No

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- Shared Use Paths or Trail; 07- Traffic Circle; 08- T-Intersection; 09- Traffic Circle; 10- Unk.; 11- Y-Intersection; 12- Roundabout; 13- Non-junction

Primary: 29

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Improper Turn Signal; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (Ice., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

DEC 3 1 2010

SOUTH CAROLINA DPS/OHS & DMV USE ONLY

10142209

Page # 1 Of 1

Of Units 02

Amended - Attach Copy of Original Report: Corrected

Notified 0002

Arrived 0002

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

2010005565

Date: 11-16-2010 | Time of Collision: 2358 | County: 23

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- PP

Collision Location (Rt. # / Name): 5 148/ WOODRUFF RD

6-Connection 7-Business

Miles: .01 | Dir.: N E S W

In (Near) City or Town of: GREENVILLE

Lane # / Dir.: # 1 | Dir. 7 | N E S W

Distance Offset: .09 Miles Feet

Direction: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt # / Name): From 81

Second Intersection (Rt. # / Name): Toward / OLD COUNTRY RD

GPS COORDINATES 00 00' 00.00"

DEGREES MINUTES SECONDS

Latitude: 34 48 45.55

Longitude: 82 19 12.31

R.R. Id.

From: Ramp Only 1- Entrance 2- Exit

To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

E-045057

Driver/Pedestrian's Full Name: HAMMONTREE JONATHAN WAYNE

Unit # 01 | # Occ 2 | Sex M | Race W | Street/R.F.D. 119 BRONCO LN

Birth Date 09-26-1987 | City, State, & Zip PICKENS SC 296717505

State SC | Driver's License # 100868998 | Class D | Insurance Company NATIONWIDE

Year 2005 | Body 4DR | Vehicle Make DODG | VIN # 1B3ES56C55D278870

State SC | Year 2011 | License Plate # EVG822 | Owner's D.L. # 100868998

Home Telephone (864) 9878731 | Owner's Full Name HAMMONTREE JONATHAN WAYNE

Bus. Telephone ( ) | Street/R.F.D. 119 BRONCO LN

Contributed To Collision: Yes (No) | City, State, & Zip PICKENS SC 296717505

Estimated Speed: 15 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req. Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # | Code | Summons # | Code | Towed: Yes (No)

Driver/Pedestrian's Full Name

Unit # | # Occ | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Class | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

E-045058

Driver/Pedestrian's Full Name: BLANK DEBORAH LOUISE

Unit # 02 | # Occ 1 | Sex F | Race W | Street/R.F.D. 110 CLEARFIELD DRIVE

Birth Date 04-15-1956 | City, State, & Zip GREENVILLE SC 29607

State SC | Driver's License # 094117114 | Class D | Insurance Company PGAC OF OHIO

Year 2005 | Body 4DR | Vehicle Make HOND | VIN # 2HGES16565H537573

State SC | Year 2011 | License Plate # AXV776 | Owner's D.L. # 094117114

Home Telephone (864) 2882586 | Owner's Full Name BLANK DEBORAH LOUISE

Bus. Telephone ( ) | Street/R.F.D. 110 CLEARFIELD DRIVE

Contributed To Collision: Yes (No) | City, State, & Zip GREENVILLE SC 29607

Estimated Speed: 15 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # | Code | Summons # | Code | Towed: Yes (No)

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed: Yes No

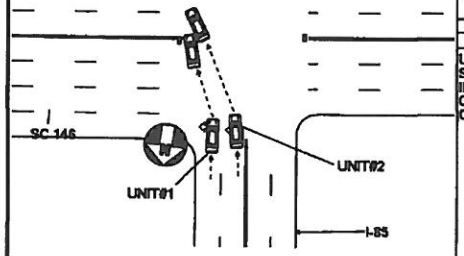
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 1000	$	$	$

Property Owner/Witness | Address | City | State | Zip | Phone

Property Owner/Witness | Address | City | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

UNIT#1 AND 2 WERE TURNING LEFT ONTO SC 146 FROM I-85 SOUTH.THE DRIVER OF UNIT#1 SAID THAT UNIT#2 CAME INTO HIS LANE AND STRUCK HIM.UNIT#2 SAID THAT UNIT#1 CAME INTO HER LANE AND STRUCK HER. DUE TO CONFLICTING STORIES NO CHARGES WERE MADE.



NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
MARLOW - F W	S/TRP	T509	HP03	12-05-2010	WESLEY HIOTT	SGT	10GV127102

2010005565

Unit	Date of Birth	Sex	Race	INJ.	Seat	R/SD	A S D	Eject	LAI	Tren	Name	Street Address	Zip Code
01	09-26-1987	M	W	0	01	13	4 9	1	1	2	HAMMONTR JONATHAN WAYN	119 BRONCO LN PICKENS SC	296717505
02	04-15-1956	F	W	0	01	13	4 9	1	1	2	BLANK DEBORAH LOUIS	110 CLEARFIELD DRIVE GREENVILLE SC	29607
01	07-31-1988	F	W	0	03	13	4 9	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0-Not Injured; 1-Possible injury; 2-Non-Incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20-Pedestrian; 80-Sleeper of Cab; 30-Trailing Unit; 70-Riding on Unit Exterior; 40-Bus or Van (6th row or Higher); 50-Other Enclosed Area (nonlearing); 60-Lap; 51-Other Unenclosed Area (nonlearing); 99-Unk./NA

Restraint/Safety Device: 00-None Used; 01-Shoulder belt; 02-Lap Belt Only; 03-Shoulder & Lap Belt; 11-Child Safety Seat; 99-Other; 99-Unk.

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.

a) 1-Switch in On Position; 2-Switch in Off Position; 3-No Switch; 9-Unknown

Ejection: 1-Not Ejected; 2-Part. Ejected; 3-Tot. Ejected; 7-Not Appl.; 9-Unk.

Head Injury: 1-Yes; 2-No

Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

a) Transported to Medical Facility: 1-Yes; 2-No; 3-Unknown

b) By: 1-EMS; 2-Police; 9-Other; 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet; 32-Reflective Clothing; 41-Protective Pads; 61-Lighting

Sequence of Events

Non-Collision: 04-Equipment Failure; 81-Camp/Equip Loss or Shift; 05-Fire/Explosion; 82-Cross Median/Center; 06-Immersion; 83-Downhill Runaway; 07-Jackknife; 08-Other Non-Collision

Collision: Not Fixed: 22-Pedestrian; 29-Animal (Not Other); 23-Motor Veh. (In Transport); 24-Motor Veh. (Stopped); 25-Pedalcycle; 26-Railway Veh.; 27-Animal (All Other); 28-Work Zone Maint. Equip.; 38-Other Movable Object; 28-Unk. Movable Object

Collision: Fixed Object: 47-Embankment; 48-Bridge Overhead Structure; 49-Bridge Pier or Abutment; 50-Bridge Rail; 51-Guardrail Face; 52-Guardrail End; 53-Impact Attenuator/Crash Cushion; 54-Concrete Traffic Barrier; 55-Other Traffic Barrier; 56-Mail Box; 57-Overhead Sign Support; 58-Median Barrier; 59-Conc. Traffic Barrier; 60-Culvert; 61-Curb; 62-Ditch; 63-Embankment; 64-Fence; 65-Tree; 66-Utility Pole; 67-Light/Luminaire Support; 68-Other Fixed Object; 69-Unk. Fixed Object

Manner of Collision (Struck Veh.): 00-Not Coll. w/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 41-Angle; 42-Angle; 43-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

1st / Most Deformed Area

Most Deformed

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 18-Light Truck; 19-Bus; 20-Other Motorbike; 21-Pedalcycle; 22-Motorcycle; 23-Animal Drawn Veh.; 24-Animal (Ridden); 25-Pedestrian; 26-Other Non-Motorist; 27-Train; 28-Unk. (Hit and Run Only); 29-Unknown

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Military; 06-Transport Passengers; 07-Transport Property; 08-Farm Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 18-Other; 41-Pedestrian; 99-Unk. (Hit and Run Only)

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Logging Trailer; B-Auto Carrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Alc Test Results: 1-Test-way, Not Divided; 2-Test-way, Divided, Unprotected Median; 3-Test-way, Divided, Barrier; 4-One-Way; 8-Other

Trafficway: 2

Special Use Only

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 5-Other

1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV in Transport; 5-Over-Other Vehicle; 9-Unk.

Underride/Override

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other; 0-None/Minor; 1-Functional Damage; 2-Disabling Damage; 3-Severe/Totaled; 4-Severe/Totaled; 5-Not Applicable; 9-Unk.

Extent of Deformity

Action Prior to Impact: 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk.

(Vehicle) (Non-motorist): 21-Approaching Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights)

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk

Primary: 28

Contributing Factors

Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattentive; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 11-Over-correcting/Over-steering; 12-Aggressive Operation of Vehicle; 13-Swerving to Avoiding Object; 14-Wrong Side or Wrong Way; 15-Under the Influence; 16-Vision Obscured (Within Unit); 17-Improper lane Usage/Change; 18-Cell Phone; 19-Texting; 20-Other Improper Action; 21-Unk.

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i.e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 69-Under the Influence; 67-Other Person Under Influence

Environmental: 60-Obstruction in Road; 61-Glare; 62-Obstruction; 63-Weather Cond; 69-Other; 69-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 89-Other; 99-Unk.

School Bus Involved: 3

Work Zone: 2

Work Zone Location

Work Zone Type

Workers Present: 1-Yes 2-No

JAN 07 2011

ORIGINAL

20100007653

SOUTH CAROLINA DPS/HS & DMV USE ONLY: 10145404 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 7/2010) | # Of Units 02 | Amended - Attach Copy of Original Report | Corrected | Notified 1339 | Arrived 1340

Date of Collision	Time of Collision	County	Collision Location (Rt. # / Name)	Miles:	Dir.	In (Near) City or Town of:
12-03-2010	1332	23	5 146/ WOODRUFF RD	.41	N E S W	GREENVILLE

Lane # / Dir.: # 3 | Of 5 | N E S W | Distance Other: Miles .01 Feet | Direction: N E S W

Base Intersection (Rt # / Name): From 8914/

Second Intersection (Rt. # / Name): Toward 8913/

GPS COORDINATES 00 00' 00 00" — DEGREES MINUTES SECONDS: Latitude 34 40 26.62; Longitude 82 17 32.42

R.R. Id. | From: Ramp Only: N E 1 - Entrance, S W 2 - Exit | To: 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other 7-Business 8-Connection 9-Other

E-051209	Driver/Pedestrian's Full Name		
	BOND	PAULA	HAWTHORNE

Unit #	Sex	Race	Street/R.F.D.
01	F	W	209 POPE LN

# Occ	Birth Date	City, State, & Zip	
1	03-05-1968	GREENVILLE	SC 296058440

State	Driver's License #	Class	Insurance Company
SC	008573035	D	STATE FARM

Year	Body	Vehicle Make	VIN #
1998	4S	HOND	1HGCG5558WA068591

State	Year	License Plate #	Owner's D.L. #
SC	2010	BVB 278	008573035

Home Telephone	Owner's Full Name		
(864) 2775118	BOND	PAULA	HAWTHORNE

Bus. Telephone	Street/R.F.D.
(864) 5250865	209 POPE LN

Contributed To Collision	City, State, & Zip	
Yes	GREENVILLE	SC 296058440

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/S S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)			
		Summons #	Code	Summons #	Code	Towed	Yes (No)
20	35	E786506	82	E786506	89		

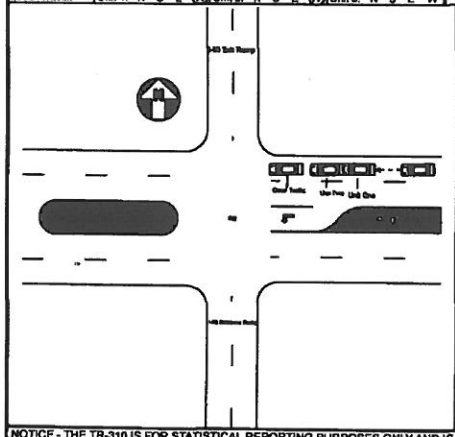
Driver/Pedestrian's Full Name

Unit #	Sex	Race	Street/R.F.D.
# Occ	Birth Date	City, State, & Zip	

State	Driver's License #	Class	Insurance Company

Year	Body	Vehicle Make	VIN #

Dir. of Travel: Unit 1: N S E (W) Unit 2: N S E (W) Unit 3: N S E W



E-051210	Driver/Pedestrian's Full Name		
	DRIGGERS III	JAMES	R

Unit #	Sex	Race	Street/R.F.D.
02	M	W	730 WILSON FERRY RD

# Occ	Birth Date	City, State, & Zip	
1	01-09-1979	MOORE	SC 29369

State	Driver's License #	Class	Insurance Company
IL	D626-4567-9009	C	STATE FARM

Year	Body	Vehicle Make	VIN #
2002	SU	FORD	1FMZU73K82ZC73046

State	Year	License Plate #	Owner's D.L. #
IL	2010	6134157	D626-4567-9009

Home Telephone	Owner's Full Name		
(864) 5745203	DRIGGERS III	JAMES	R

Bus. Telephone	Street/R.F.D.
(217) 8413660	730 WILSON FERRY RD

Contributed To Collision	City, State, & Zip	
Yes (No)	MOORE	SC 29368

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/S S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)			
		Summons #	Code	Summons #	Code	Towed	Yes (No)
0	25						

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed: Yes No

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000	$ 500	$	$	$

Property Owner/Witness		Property Owner/Witness	
Address	City	Address	City
State / Zip / Phone		State / Zip / Phone	

Photo: Y (N) — Describe What Happened (Refer to Units by Number)

UNITS ONE AND TWO TRAVELING WEST ON SC 146, STOPPED IN TRAFFIC. DRIVER OF UNIT ONE MADE AN IMPROPER START FROM STOP, STRIKING THE CENTER REAR OF UNIT TWO WITH THE CENTER FRONT.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
FRANKS - M A	L/CPL	T138	HP03	12-24-2010	WESLEY HOTT	SGT	10GV134931

20100007653

Unit:	Date of Birth	Sex	Race	INJ:	Seat	R/SD	A	B	Eject	Lat:	Trans:	Name	Street Address	Zip Code
01	03-05-1968	F	W	0	01	13	4	3	1	1	2	BOND PAULA HAWT	209 POPE LN GREENVILLE SC	296058440
02	01-09-1979	M	W	0	01	13	4	3	1	1	2	DRUGGERS JAMES R	730 WILSON FERRY RD MOORE SC	29369

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2-Non-Incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle: Helmet Worn 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20-Pedestrian, 30-Trailing Unit, 40-Bus or Van (4th row or Higher), 50-Other Enclosed Area (monitoring), 51-Other Unenclosed Area (monitoring), 60-Sleeper of Cab, 70-Riding on Unit Exterior, 80-Lap, 99-Unk. ANA

Restraint/Safety Device: 00-None Used, 01-Shoulder belt, 02-Lap Belt Only, 03-Shoulder & Lap Belt, 04-Child Safety Seat, 05-Other, 99-Unk.; Pedestrian, Motor/Pedalcycle Only: 51-Helmet, 52-Reflective Clothing, 53-Protective Pads

Air Bag Deployment / Switch: a) 1-Deployed Front, 2-Deployed Side, 3-Deployed Both, 4-Not Deployed, 7-Not Applicable, 9-Deployment Unk.; b) 1-Switch In On Position, 2-Switch In Off Position, 3-No Switch, 9-Unknown

Ejection: 1-Not Ejected, 2-Part. Ejected, 3-Tot. Ejected, 7-Not App, 9-Unk

Head Injury: 1-Yes, 2-No

Location After Impact: 1-Not Trapped, 2-Extricated (Mechanical Means), 3-Freed (non-mech.), 4-Not Applicable, 9-Unknown

a) Transported to Medical Facility: 1-Yes, 2-No, 3-Unknown

b) By: 1-EMS, 2-Police, 8-Other, 9-Unk

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful
22	1			22
23	2	2	2	
3	3	3	3	

Non-Collision: 01-Cargo/Equip Loss or Shift, 02-Cross Median/Center, 03-Downhill Runaway, 04-Equipment Failure, 05-Fire/Explosion, 06-Immersion, 07-Jackknife

Collision: Not Fixed: 20-Animal (All Other), 21-Animal (Ridden), 22-Motor Veh. (In Transport), 23-Motor Veh. (Stopped), 24-Motor Veh. (Other Roadway), 25-Motor Veh. (Parked), 26-Pedalcycle, 27-Pedestrian, 28-Railway Veh., 29-Work Zone Maint. Equip., 30-Struck Object, 38-Unk. Movable Object

Collision: Fixed Object: 40-Bridge Overhead Structure, 41-Bridge Parapet End, 42-Bridge Pier or Abutment, 43-Bridge Rail, 44-Culvert, 45-Curb, 46-Ditch, 47-Embankment, 48-Equipment, 49-Fence, 50-Guardrail End, 51-Guardrail Face, 52-Highway Traffic Sign Post, 53-Impact Attenuator/Crash Cushion, 54-Light/Luminaire Support, 55-Mail Box, 56-Median Barrier, 57-Overhead Sign Support, 58-Other (Post, Pole, Support, Etc.), 59-Other (Wall, Building, Tunnel, Etc.), 61-Utility Pole, 62-Work Zone Maint. Equipment, 69-Other, 99-Unk.

Collision: Other: 31-Ran Off Road Right, 32-Ran Off Road Left, 33-Crossed Into Opposing Lane, 34-Downhill Runaway, 35-Other Movable Object, 36-Fell/Jumped from Vehicle, 37-Thrown or Falling Object, 39-Other Non-Collision, 48-Unk. Non-collision

Manner of Collision (Struck Veh.): 00-Not Coll. w/ Motor Veh., 1st Harmful Event; 10-Rear End, 2nd Harmful Event; 20-Head On, 30-Rear-to-Rear, 40-Angle, 41-Angle, 42-Angle, 43-Angle, 50-Sideswipe Same Dir., 60-Sideswipe Opposite Dir., 70-Backed Into, 99-Unknown

1st / Most Deformed Area

1st Deformed: 1 2 7 5; Most Deformed: 1 2 7 5

Vehicle Type: 01-Automobile, 02-Pickup Truck, 03-Truck Tractor, 04-Other Truck, 15-Full Size Van, 16-Mini Van, 17-Sport Utility, 25-Motorcycle, 26-Other Motorbike, 27-Pedalcycle, 38-Animal Drawn Veh., 39-Animal (Ridden), 41-Pedestrian, 51-Train, 61-School Bus, 62-Passenger Bus, 98-Other, 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal, 02-Driver Training, 03-Construction/Maint., 04-Ambulance, 05-Military, 06-Transport Passengers, 07-Transport Property, 08-Farm Use, 09-Wrecker or Tow, 10-Police, 11-Government, 12-Fire Fighting, 13-Logging, 18-Other, 41-Pedestrian

Vehicle Attachment: 1-None, 2-Mobile Home, 3-Semi-Trailer, 4-Utility Trailer, 5-Farm Trailer, 6-Trailer w/Boat, 7-Camper Trailer, 9-Towed Motor Vehicle, 9-Petroleum Tanker, A-Lowboy Trailer, B-Autocarrier Trailer, C-Other Tanker, D-Flat Bed, E-Twin Trailers, F-Other

Action Prior to Impact (Vehicle): 01-Backing, 02-Changing lanes, 03-Entering traffic lane, 04-Leaving traffic lane, 05-Making U-turn, 06-Movements Essentially Straight Ahead, 07-Overtaking/passing, 08-Parked, 09-Slowing or Stopped in traffic, 10-Turning left, 11-Turning right, 88-Other, 99-Unk.

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle, 22-Entering/Crossing Location, 23-Playing/Working on Vehicle, 24-Pushing Vehicle, 25-Standing, 26-Walking, Playing, Cycling, 27-Working

Alc Test Results: A1-, A2-, A3-

Drug Results: 1-Amphetamines, 2-Cocaine, 3-Marijuana, 4-Opiates, 5-PCP, 8-Other, 0-None/Minor, 9-Unk.

Alcohol / Drug Test Given: 1-Given - Known Results, 2-Given - Unusable, 3-Given - Pending, 4-None, 5-Refused

Test Type: 1-Breath (Alc Only), 2-Blood, 3-Urine, 4-Serum, 8-Other, 1-Under-Compartment Intrusion, 2-Under-No Intrusion, 3-Under-Unknown, 4-Over-MV in transport, 5-Over-Other Vehicle, 6-None, 9-Unk.

Underride/Override: 1-Yes, 2-No

Extent of Deformity: 0-None/Minor, 1-Functional Damage, 2-Disabling Damage, 3-Severe/Totaled, 4-Not Applicable, 9-Unk.

Special Use Only

Weather Condition: 1-Clear (no adverse conditions), 2-Rain, 3-Cloudy, 4-Sleet, Hail, 5-Snow, 6-Fog, Smog, Smoke, 7-Blowing Sand, Oil, Dirt or Snow, 8-Severe Crosswinds, 9-Unk.

Light Condition: 1-Daylight, 2-Dawn, 3-Dusk, 4-Dark (Lighting Unspecified), 5-Dark (Street Lamp Lit), 6-Dark (Street Lamp Not Lit), 7-Dark (No lights)

Junction Type: 01-Crossover, 02-Driveway, 03-Five/More Points, 04-Four-way Intersection, 05-Railway Grade Crossing, 07-Shared Use Paths or Trail, 08-T-Intersection, 09-Traffic Circle, 12-Y-Intersection, 13-Nonjunction, 99-Unk.

Road Character: 1-Straight - Level, 2-Straight - On grade, 3-Straight - Hillcrest, 4-Curve - Level, 5-Curve - On grade, 6-Curve - Hillcrest

Road Surface Condition: 1-Dry, 2-Wet, 3-Snow, 4-Slush, 5-Ice, 6-Contaminate, 7-Water (Standing, etc), 8-Other, 9-Unk

Traffic Control Type: 01-Stop and Go Light, 02-Flashing Traffic Signal, 03-Officer or Flagman, 21-Officer or Flagman, 22-Oncoming Emergency Vehicle, 11-RR (X-bucks, Lights & Gates), 12-RR (X-bucks & Lights), 13-RR (X-bucks Only), 31-Pavement Markings (only), 41-Stop Sign, 42-School zone Sign, 43-Yield Sign, 44-Work Zone, 45-Other Warning Signs, 51-Flashing Beacon, 98-None, 99-Unk

Trafficway: 1-Two-way, Not Divided, 2-Two-way, Divided, Unprotected Median, 3-Two-way, Divided, Barrier, 4-One-Way, 8-Other

Trafficway Description: A: 1-One, 2-Inbound, 3-Median, 4-Roadside, 7-Sidewalk, 8-Outside Trafficway, 9-Unk; B: X-walk, 1-7, 2-N, 8-U

1st Harmful Event Loc.: 5, 2

School Bus Involved: 1

Work Zone: 2

Work Zone Location

Work Zone Type

Workers Present: 1-Yes, 2-No

Contributing Factors — Driver: 01-Disregarded Signs, Signals, Etc., 02-Distracted/Inattention, 03-Driving Too Fast for Conditions, 04-Exceeded Authorized Speed Limit, 05-Failed to Yield Right of Way, 06-Ran off Road, 07-Fatigued/Asleep, 08-Followed Too Closely, 09-Made an Improper Turn, 10-Medical Related, 12-Aggressive Operation of Vehicle, 13-Over-correcting/Over-steering, 14-Swerving to Avoiding Object, 15-Wrong Side or Wrong Way, 16-Under the Influence, 17-Vision Obscured (Within Unit), 18-Improper lane Usage/Change, 19-Cell Phone, 20-Texting, 28-Other Improper Action, 29-Unk.

Roadway: 30-Debris, 31-Non-Highway Work, 32-Obstruction in Roadway, 33-Road Surface Condition (I e., Wet), 34-Rut, Holes, Bumps, 35-Shoulders (None, Low, Soft, High), 36-Traffic Control Device (I e., Missing), 37-Work Zone (Const /Maint./Utility), 38-Worn, Travel-Polished Surface, 48-Other, 49-Unk.

Non-Motorist: 50-Instrserve, 51-Lying &/or Illegally in Roadway, 52-Failure to Yield R. of W., 53-Not Visible (Dark Clothing), 54-Disregard Signs, Signals, Etc., 55-Improper Crossing, 56-Darting, 57-Wrong Side of Road, 58-Other, 59-Unk., 68-Under the Influence, 67-Other Person Under Influence

Environmental: 62-Obstruction, 63-Animal in Road, 64-Weather Cond, 65-Glare, 69-Other, 99-Unk

Vehicle Defect: 70-Brakes, 71-Steering, 72-Power Plant, 73-Tires/Wheel, 74-Lights, 75-Signals, 76-Windows/Shield, 77-Restraint System, 78-Truck Coupling, 79-Cargo, 80-Fuel System, 88-Other, 99-Unk

ORIGINAL

JAN 28 2011

D.P.S. USE ONLY: 10153575 | Page 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 07-2008) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 2127 | Arrived: 2140

Date: 12/20/2010 | Time: 2125 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name): SC 146 & Woodruff Rd | Main 6- Connection 7- Business 5- Spur | Miles: | Dir. N E S W | In Near City or Town of: Greenville

Lane # / Dir.: 1 / W | Distance Offset: 49 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From I-85 S | Main 6- Connection 7- Business 8- Spur 9- Other | 2- Alternate | 5- Spur | AS/RU code | MP/Grid

Latitude: 1092557 | Longitude: 1608804

R.R. Id. | From: N E S W 1- Entrance 2- Exit | Ramp Only | To: N E S W 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Toward: Second Intersection (Rt. # / Name): Old Country Rd

B-452776

Driver/Pedestrian's Full Name: Zeady, Katherine L

Unit # 1 | Sex: F | Race: W | Street/R.F.D.: 423 PLAMONDON DR | City, State, & Zip: Simpsonville, SC 29680 | Birth Date: 05051978

State: SC | Driver's License #: 10181533 29 (D) | Insurance Company: ALLSTATE

Year: 2007 | Body: CP | Vehicle Make: FORD | VIN #: 1ZVFT80N775311575

State: SC | Year: 2010 | License Plate #: USA 1139 | Owner's D.L. #

Home Telephone: (346-8607 | Owner's Full Name: Zeady, STEPHEN A

Bus. Telephone: (420-7493 | Street/R.F.D.: 1125 Old Bush River Rd

Contributed To Collision: No | City, State, & Zip: CHAPIN SC 29036

Estimated Speed: 10 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: 60668 FM | Code: 44 | Towed By: North Hills

B-452777

Driver/Pedestrian's Full Name: McCormick, Julie A

Unit # 2 | Sex: F | Race: W | Street/R.F.D.: 505 Royal Dutch Ln | City, State, & Zip: Simpsonville, SC 29681 | Birth Date: 03159473

State: SC | Driver's License #: 10013605 1 (D) | Insurance Company: STATE FARM

Year: 1995 | Body: CP | Vehicle Make: Toyt | VIN #: 4T1SK12C7SU486135

State: SC | Year: 2011 | License Plate #: DCA 3B | Owner's D.L. #

Home Telephone: (962-0066 | Owner's Full Name: S M e

Bus. Telephone: 919-272-0406 | Street/R.F.D.:

Contributed To Collision: Yes (No) | City, State, & Zip:

Estimated Speed: 30 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: | Code: | Towed By: Mike Williams

B-452778

Driver/Pedestrian's Full Name:

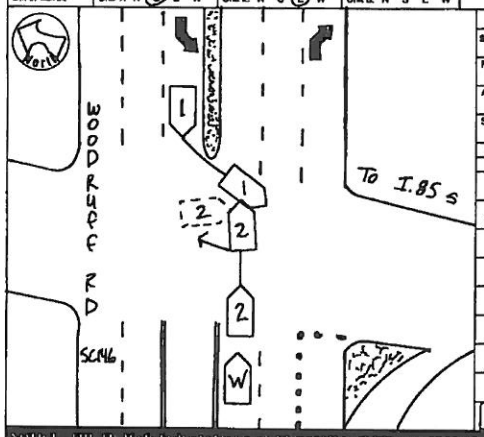
Unit # X | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 7000	$ 6,000	$	$	$

Driver/Witness: Taylor, Misty | Property Owner/Witness:

Address: | Address:

State: | Zip: | Phone: 704-9062 | State: | Zip: | Phone:

Photos: Y N | Describe What Happened (Refer to Units by Number):

Unit 1 attempted to turn left from Woodruff Rd onto I-85 S and crossed into the path of Unit 2 traveling straight

W = Witness

NOTICE - THE TRAFFIC COLLISION STATISTICS REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: Dempsey D 71 | Rank: Cpl | Badge #: 108 | Code: 023040 | Date: 12/20/2010 | Reviewer's Name: | Rank: Sgt | Internal Agency Code: 10-105497

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	05051978	F	W	0	01	13	4	1	1	2			
2	03159473	F	W	0	01	13	1	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal | b) Motorcycle Only: Helmet Worn: 1- Yes 2- No | Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 9- Unknown; b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unk.

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Head Injury: 1- Yes 2- No | Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown | b) By: 1- EMS 2- Police 8- Other 9- Unk.

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 81- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure

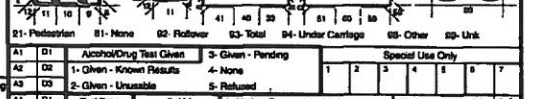
Collision: Not Fixed: 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object, 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Sculptures, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Pole, 61- Traffic Sign Post, 62- Tree, 63- Utility Pole, 64- Work Zone Maint. Equipment, 66- Other, 99- Unk.

Event 1 / Event 2 / Event 3 / Event 4 / Most Harmful Event: 22 / 22 / 22 / 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 98- Unknown

1st / Most Deformed Area | 1st Deformed: 3 2 3 | Most Deformed: 3 2 3



21- Pedestrian, 81- None, 82- Rollover, 83- Total, 84- Under Carriage, 88- Other, 89- Unk.

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 38- Animal Drawn Veh., 39- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 88- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Cowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Merging, 07- Overtaking/Passing, 08- Parked, 09- Stopped or Stalled, 10- Turning Left, 11- Turning Right, 12- Entering Traffic Lane From Parking Position, 13- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working, 88- Other, 99- Unk.

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Soil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 06- Shared Use Paths or Trail, 07- T-Intersection, 08- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Aggressive Operation of Vehicle, 12- Over-correcting/Over-steering, 13- Swerving to Avoiding Object, 14- Wrong Side or Wrong Way, 15- Under the Influence, 16- Vision Obscured (Within Unit), 17- Cell Phone, 18- Improper Lane Usage/Change, 19- Other Improper Action, 20- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 46- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 62- Obstruction, 63- Weather Cond., 64- Animal in Road, 65- Glare, 66- Other, 69- Unk.

Others: 67- Other Person Under the Influence

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 88- None, 99- Unk.

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Alc Test Results: A1- , A2- , A3-

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1- Under- Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 6- None, 9- Unk.

Extent of Deformity: 1- None/Minor, 2- Functional Damage, 3- Disabling Damage, 4- Severe/Totaled, 8- Not Applicable, 9- Unk.

Event Loc.: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Harmful Event: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 5- Other Fixed Object, 6- Pedalcycle, 7- Railroad, 8- Shoulder, 9- Utility, 10- Other Non-Fixed Object, 11- Overturn/Rollover, 12- Pedestrian, 13- Pedalcycle, 14- Railroad Train, 15- Ran off Road Left, 16- Ran off Road Right, 17- Separation of Units, 18- Struck (Two-Wheeled Veh.), 19- Other Non-collision, 20- Animal (Deer Only), 21- Animal (All Other), 22- Work Zone Maint. Equip., 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Railway Veh., 28- Railway Veh. (In Transport), 29- Other Movable Object, 30- Unk. Movable Object, 31- Embankment, 32- Fell/Jumped From Vehicle, 33- Fire/Explosion, 34- Immersion, 35- Jackknife, 36- Other Non-collision, 37- Pavement Surface Irregularity, 38- Ran off Road Right, 39- Ran off Road Left, 40- Rollover (Not Collision), 41- Shoulders, 42- Traffic Lane, 43- Vehicle in Traffic, 44- Work Zone, 45- Other Non-collision, 46- Unk. Non-collision

Traffic Lane: 1- Center, 2- Left, 3- Right, 4- Left Turn, 5- Right Turn, 6- Left Turn/Right Turn, 7- Left Turn/Left Turn, 8- Other, 9- Unk.

ORIGINAL

D.P.S. USE ONLY **10028429** | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2009) | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1502 | Arrived 1510

Date 03/12/2010 | Time 1502 | County 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name) SC 146 & WOODRUFF RD | 0-Main 1-Alternate 5-Spur 6-Connection 7-Business | Miles: Dir. N E S W | (In) Near City or Town of: GREENVILLE

Lane # / Dir. #2 Dir. N E S W | Distance Offset Miles/Feet 0.08 | Direction N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) I85 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid

R.R. Id. | From N E S W | Ramp Only To 1- Entrance N E S W 2- Exit | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Toward: Second Intersection (Rt. # / Name) MARCOT POINT DR. | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | Latitude ° 1092298 | Longitude ° 1609167

Driver/Pedestrian's Full Name: A-343273 (NGUYEN) CHRISTOPHER DAO

Unit # 1 | Sex M | Race AA | Street 7000 BRYNHURST DR | Birth Date 02051981 | City, State, & Zip CHARLOTTE N.C. 28210

State SC | Driver's License # 26190684 | Insurance Company SELF INS. ENTERPRISE

Year 2010 | Body SU | Vehicle Make FORD | VIN # 1FMCU0EG0AKC23115 | State – | Year – | License Plate # – | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name NATIONAL CAR RENTAL

Bus. Telephone (803) 822-5152 | Street 3000 AVIATION WAY

Contributed To Collision Yes | City, State, & Zip W COLUMBIA, SC. 29170

Estimated Speed 30 | Speed Limit 40 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # 879095FB4B | Code | Towed By

Driver/Pedestrian's Full Name: A-343274 (LONG) MATTHEW DEANGELO JR

Unit # 2 | Sex M | Race W | Street 1493 CLEVELAND ST APT B204-A | Birth Date 05131990 | City, State, & Zip GREENVILLE, SC 29607

State SC | Driver's License # 10090005587 | Insurance Company STATE FARM

Year 1995 | Body 4S | Vehicle Make FORD | VIN # 1FALP6247SG112669 | State SC | Year 2010 | License Plate # ACS 555 | Owner's D.L. #

Home Telephone (864) 546-0974 | Owner's Full Name (TEFFORT) DUWAYNE

Bus. Telephone ( ) | Street 113 DUTCH OAKS DR

Contributed To Collision Yes | City, State, & Zip TEMO, SC 29063

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Towed By

Driver/Pedestrian's Full Name: A-343275 N/A

Unit # | Sex | Race | Street | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name | Bus. Telephone ( ) | Street | Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 7000	$	$	$

Property Owner/Witness: NONE | Property Owner/Witness | Address | Address | State Zip Phone | State Zip Phone

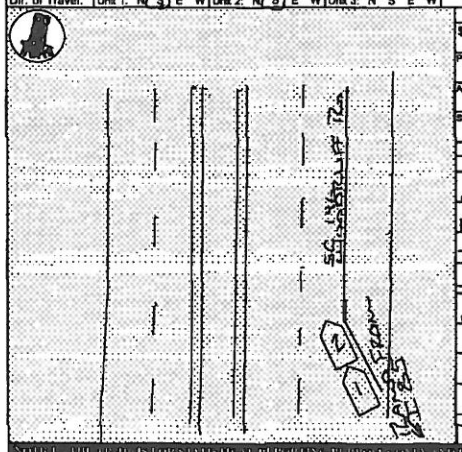


Photo: Describe What Happened (Refer to Units by Number)

(KM) UNIT 2 WAS WAITING TO MERGE ONTO WOODRUFF RD. UNIT 2 PULLED FORWARD & STOPPED, UNIT 1 PULLED FORWARD AND FAILED TO STOP IN TIME AND STRUCK UNIT 2 AS SHOWN.

NO INJURIES REPORTED

DIAGRAM NOT TO SCALE

NOTICE: THE DRIVER IS FURTHER STATUTORILY REQUIRED TO NOTIFY THE DEPARTMENT OF MOTOR VEHICLES WITHIN TEN DAYS AND REPORT CONTINUING THE COLLISION IF NO WARRANT IS MADE. A $25.00 FINE IS LEVIED FOR FAILURE TO REPORT.

Investigating Officer's Name: HUNTING, TOM M.S. | Rank: CPL | Badge #: 49 | Code | Date: 03/12/2010 | Date: 03/12/2010 | Reviewer's Name | Rank: SGT | Internal Agency Code: 12-10-24539

Unit	Date of Birth	Sex	Race	DMJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	02031981	M	W	0	01	13	4	9	1	1	2		
2	05151990	M	W	0	01	13	4	3	1	1	2		

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trolley Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontraiing); 51- Other Unenclosed Area (nontraiing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk /NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

Air Bag Deployment / Switch: a) 1-Deployed Front 4-Not Deployed; 2-Deployed Side 7-Not Applicable; 3-Deployed Both 9-Deployment Unk.; 1- Switch in On Position 3- No Switch; 2- Switch in Off Position 9- Unknown; b)

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Fixed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Overturn/Rollover; 07- Jackknife; 08- Immersion; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill from Vehicle; 13- Other Non-collision; 14- Pedalcycle; 15- Railway Vehicle; 16- Work Zone Maint. Equip; 17- Animal; 18- Other Movable Object

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 38- Other Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Other Post, Pole Support, Etc.; 58- Other (Fixed, Pole Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Wire

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area | 1st Deformed | Most Deformed

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only

Undermide/Overmide: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other

1st Harmful Event Loc: 1- Core; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk; X- Work Zone; Y- Y or S-U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone: 1- Yes 2- No

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

1- Yes 2- No Workers Present:

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 21- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 67- Other Person Under Influence

Environmental: 60- Obstruction; 61- Animal in Road; 62- Weather Cond.; 63- Glare; 88- Other; 89- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others: 02

ORIGINAL

JAN 12 2011

D.P.S. USE ONLY: 10146157 | Page 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 01/2011 | # of Units 1 | Amended - Attach Copy of Original Report | Corrected | Notified 0849 | Arrived 0900

Date: 11-22-2010 | Time: 0730 | County: 23 | Collision Location (Rt. # / Name): 85 | Miles: 2.17 | Dir. N E S W: S | In / Near City or Town of: GREENVILLE

Lane # / Dir.: 3 6 S | Distance Offset: 1.20 Miles Feet | Direction: S | Base Intersection (Rt. # / Name): 385 | From | ASRU code | MP/Grid

R.R. Id: NA | From: NE | Ramp Only: 2 - Exit | To: SW | Second Intersection (Rt. # / Name): 276 | Toward | Latitude: 34 49 00 40 | Longitude: 82 19 29 40

B-572863 — Driver/Pedestrian's Full Name: ORTEGA-OMAR CANO

Unit #: 1 | Sex: M | Race: H | Street/R.F.D.: 219 FLOYD CIR | Birth Date: 12-8-1989 | City, State, & Zip: EASLEY SC 29640

State: SC | Driver's License #: NONE | Insurance Company: ACCESS

Year: 2000 | Body: CN | Vehicle Make: VOLK | VIN #: 3VWDC21V8YM800050

State: SC | Year: 2011 | License Plate #: FYU 270 | Owner's D.L. #: NA

Home Telephone: (864) 797-0173 | Owner's Full Name: ORTEGA-OMAR CANO

Bus. Telephone: ( ) NA | Street/R.F.D.: 219 FLOYD CIR

Contributed To Collision: No | City, State, & Zip: EASLEY SC 29640

Estimated Speed: 60 | Speed Limit: 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes (No) | Summons #: NA | Code: | Summons #: NA | Code: | Towed By: MONTANO

B-572864 — Driver/Pedestrian's Full Name:

Unit #: NA | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

State: | Year: | License Plate #: | Owner's D.L. #:

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: | Code: | Summons #: | Code: | Towed By:

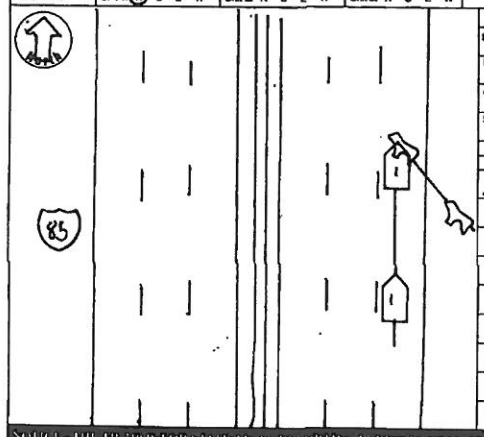
B-572865 — Driver/Pedestrian's Full Name:

Unit #: NA | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Dir. of Travel: | Unit 1: (N) S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1200.00	$	$	$ N/A	$ N/A

Property Owner/Witness: | Address: | State: | Zip: | Phone:

Property Owner/Witness: | Address: | State: | Zip: | Phone:

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

UNIT 1 WAS HEADING NORTH ON S 85. UNIT 1 STRUCK A DEER DARTED IN FRONT OF HIS VEHICLE AND WAS UNABLE TO AVOID STRIKING THE DEER.

NOTICE - THE TR-310 STATISTICAL REPORTING PROJECT ONLY AND IS NOT A FUNCTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: HARLEY A.M. | Rank: TPO | Badge #: 9448 | Code: HP03 | Date: 11-22-2010 | Reviewer's Name: | Rank: | Internal Agency Code: 1065V 129328

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	12-15-1964	M	W	0	01	13	4	1	1	3			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events — Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Two Wheeled Veh.); 13- Struck Fixed Object; 14- Other Non-Collision; 15- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Guardrail Face; 46- Guardrail End; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Auxocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact — (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk. — (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Test Refused; 2- Test Taken; 3- Given - Pending; 4- None; 5- Refused; Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other; Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; Special Use Only: 1- Given - Known Results; 2- Given - Unusable

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Dark (Street Lamp Lit); 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Deformed Area: 1 = Minor; 2 = Moderate; 3 = Severe; 4 = Disabling; 5 = Destroyed; 6 = Undercarriage; 7 = Trailer Separation. 1st Deformed: 13. Most Deformed: 13.

Damage Extent: 1 = Minor; 2 = Moderate; 3 = Severe; 4 = Disabling; 5 = Destroyed; 6 = Undercarriage; 7 = Trailer Separation. Direct: 20. Most Severe: 20. 1st Harmful: 20.

21- Pedestrian; 81- None; 92- Rollover; 93- Total; 94- Under Carriage; 95- Other; 96- Unk.

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1 6

Extent of Deformity: 1 2 3

Trafficway: 3

1st Harmful Event Loc.: 5 4

Road Character: 1

Road Surface Condition: 1

Traffic Control Type: 98

School Bus Involved: 3

Work Zone: 2

Work Zone Location:

Work Zone Type:

Workers Present: 1- Yes 2- No

Primary Contributing Factor: 60

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operated Vehicle Aggressively; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Unk.

Others: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 39- Other Roadway; 40- Other; 48- Animal in Road; 49- Unk.; 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 60- Animal in Road; 61- Glare; 68- Under the Influ.; 69- Other; 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 79- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

Roadway; Non-Motorist; Environmental: 02- Obstruction; 03- Weather Cond.; 58- Other; 60- Unk.

Vehicle Defect

ORIGINAL

NOV 24 2010

O.P.S. USE ONLY: 10129214 > | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT (TCR) (Rev. 01/2007) | # of Units 1 | Amended - Attach Copy of Original Report | Corrected | Notified 0810 | Arrived 0825

Date: 12-31-2010 | Time: 0810 | County: 23 | Collision Location (Rt. # / Name): 85 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business | Miles: 6 | Dir. N E S W | Of/Near City or Town of: Greenville

Lane # / Dir.: N/A | Qr. N E S W | Distance Offset: .20 Miles (N E S W) | Direction: 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Base Intersection (Rt. # / Name): From 146 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: Ramp Only N E S W | 1-Entrance 2-Exit | To: N E S W | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Second Intersection (Rt. # / Name): Toward 385 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | Latitude: 34 49 46 90 | Longitude: 82 18 05 20

B-570304 | Driver/Pedestrian's Full Name: Moreno-Mark

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 1081 Oaks St | Birth Date: 02-11-1981 | City, State, & Zip: Rockhill SC 29732

State: SC | Driver's License #: 0078415213(C) | Insurance Company: Progressive Ins

Year: 2007 | Body: 4S | Vehicle Make: TOYT | VIN #: JTDBT923371033865

State: SC | Year: 2010 | License Plate #: ATN339 | Owner's D.L. #: N/A

Home Telephone: 803 412-0614 | Owner's Full Name: Moreno-Leticia

Bus. Telephone: 803 412-0614 | Street/R.F.D.: 1081 Oaks Dr.

Contributed To Collision: Yes | City, State, & Zip: Rockhill SC 29372

Estimated Speed: 45 | Speed Limit: 60 | C.D.L. Req: Yes | Alc/Drg Info (see back): Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes

Summons #: E750659 | Code: 21 | Summons #: N/A | Code: | Towed By: Smith Auto

B-570305 | Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

State: | Year: | License Plate #: | Owner's D.L. #:

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes / No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed By:

B-570306 | Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

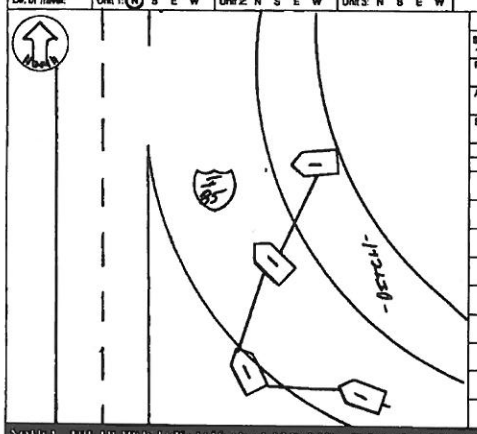
State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$1,800	$	$	$ N/A	$ N/A

Property Owner/Witness: | Property Owner/Witness:

Address: | Address:

State: | Zip: | Phone: | State: | Zip: | Phone:

Photo: Y N | Describe What Happened (Refer to Units by Number)

Unit # 1 was traveling North on Interstate 85, was hit for conditions, ran off road left, ran off road right and struck a mirage Abtl.

NOTICE: THE TRUTH OF STATEMENTS REPORTING PERSONS AND DRIVERS ARE RELIED UPON BY THE OFFICERS BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH AND ACCURACY THEREOF.

Investigating Officer's Name: Harris-DT | Rank: TPR | Badge #: 841 | Agency: HP03 | Date: 12-31-10 | Reviewer's Name: H. Hahn | Rank: SGT | Internal Agency Code: 10841/121736

Unit	Date of Birth	Sex	Race	Inj	Seat	Veh	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	02-11-1981	M	W	2	01	13	3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 66- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; a) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 8- Unknown; b) 9- Unk.

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 38- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 08- Immersion; 09- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Ran off Road Right; 13- Hit Fixed Object; 14- Other Non-collision; 99- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian; 28- Animal (Does Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Parked); 25- Motor Veh. (Parked); 26- Pedalcycle

Collision: Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area; 1st Deformed; Most Deformed

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only); 21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 98- Other; 99- Unk

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Making Three Point Turn; 13- Merging; 14- Enter from Parking Position; 15- Enter from Shoulder; 16- Leaving Parking Position; 17- Leaving Shoulder; 18- Other Improper Action; (Vehicle-Related); 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.; (Non-motorist)

Alc Test Results: A1- ; A2- ; A3- ; 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; Trafficway: 4

Test Type: 3- Urine; 1- Breath (Alc. Only); 2- Blood; 4- Serum; 8- Other; A1 D1; A2 D2; A3 D3

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV In Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.; Underride/Override: 6

Drug Results: 3- Marijuana; 1- Amphetamines; 2- Cocaine; 4- Opiates; 5- PCP; 8- Other; D1 D2 D3

0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.; Extent of Deformity: 2

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - On Grade; 5- Curve - Level; 6- Curve - Hillcrest; 8- Curve - Hillcrest; Road Character: 5

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.; Road Surface Condition: 1

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 5

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-Junction; 99- Unk.

Traffic Control Type: 98

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 3

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 2

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: ----------

Work Zone Type: ----------

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.; 1- Yes 2- No Workers Present:

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Cell Phone; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Other Improper Action; 99- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 63- Improper Crossing; 64- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Animal in Road; 62- Weather Cond.; 63- Glare; 68- Other; 69- Unk.

Others:

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 79- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

DEC 2 3, 2010

2010006220

SOUTH CAROLINA DPS/OHS & DMV USE ONLY

10140781

Page # 1 Of 1

Of Units 02

Amended - Attach Copy of Original Report

Cancelled

Notified 2020

Arrived 2031

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 7/2010)

Date 11-24-2010 | Time of Collision 2018 | Day 23

Collision Location (Rt. # / Name): 5 85

Miles | Dir. N E S W

In Near City or Town of: GREENVILLE

Lane # / Dir. | Of | Dir. N E S W

Distance Offset: Miles / Feet .05 | Direction N E S W

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other 6- PP

Base Intersection (Rt # / Name): 146 WOODRUF RD

Main 2-Alternate 5-Spur 6-Connection 7-Business

From

Ramp Only: From N E S W 1 - Entrance 2 - Exit | To 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6 - Other

Second Intersection (Rt. # / Name): 385

Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other

Toward

GPS COORDINATES 00 00' 00.00"

DEGREES MINUTES SECONDS

Latitude 34 40 31.66

Longitude 82 16 33.16

R.R. Id.

Driver/Pedestrian's Full Name

E-045069 | BURGESS | RYAN | RENARD

Unit # 01 | Sex M | Race B | Street/R.F.D. 35 DEWEY DR

Occ 4 | Birth Date 12-22-1975 | City, State, & Zip ADAIRSVILLE GA 301033055

State GA | Driver's License # 051337473 | Class C | Insurance Company STATE FARM

Year 2005 | Body 4DR | Vehicle Make RISS | VIN # 1N4BA41E25C865001

State GA | Year 2010 | License Plate # AQT0747 | Owner's D.L. # 051337473

Home Telephone (404) 6031011 | Owner's Full Name BURGESS RYAN RENARD

Bus. Telephone ( ) | Street/R.F.D. 35 DEWEY DR

Contributed To Collision Yes (No) | City, State, & Zip ADAIRSVILLE GA 301033055

Estimated Speed 0 | Speed Limit 60 | C.D.L. Req. Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # | Code | Summons # | Code | Towed Yes (No)

Driver/Pedestrian's Full Name

Unit # | Sex | Race | Street/R.F.D.

Occ | Birth Date | City, State, & Zip

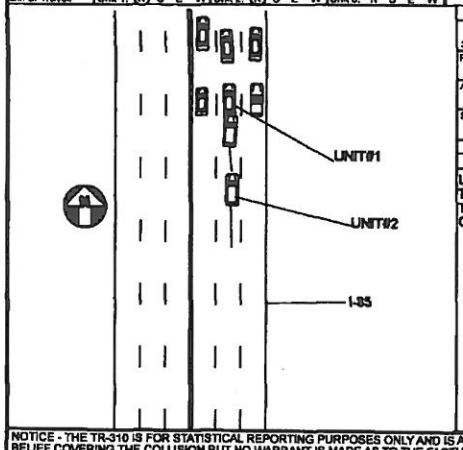
State | Driver's License # | Class | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req. Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed Yes No

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W



Driver/Pedestrian's Full Name

E-045070 | AHMED | ELMAHMOUD | MOHAMMAD

Unit # 02 | Sex M | Race O | Street/R.F.D. 1506 GREENSBORO RD

Occ 3 | Birth Date 06-05-1958 | City, State, & Zip MARTINSVILLE VA 24112

State VA | Driver's License # 234815123 | Class MON | Insurance Company STATE FRAM

Year 2001 | Body SUV | Vehicle Make DODG | VIN # 1B4HS28N21F520935

State VA | Year 2011 | License Plate # JWL5334 | Owner's D.L. # 234815123

Home Telephone (276) 6182799 | Owner's Full Name AHMED ELMAHMOUD MOHAMMAD

Bus. Telephone ( ) | Street/R.F.D. 1506 GREENSBORO RD

Contributed To Collision Yes (No) | City, State, & Zip MARTINSVILLE VA 24112

Estimated Speed 10 | Speed Limit 60 | C.D.L. Req. Yes (No) | T/B S Req Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # E755432 | Code 21 | Summons # | Code | Towed Yes (No)

Driver/Pedestrian's Full Name

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req. Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed Yes No

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$1500	$1000	$	$	$

Property Owner/Witness | Property Owner/Witness

Address City | Address City

State Zip Phone | State Zip Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

UNIT#1 WAS STOPPED NORTH BOUND ON I-85 DUE TO TRAFFIC.UNIT#2 WAS TRAVELING NORTH BOUND ON I-85. THE DRIVER OF UNIT#2, DRIVING TOO FAST FOR CONDITIONS STRUCK THE REAR OF UNIT#1.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
MARLOW - F W	S/TRP	TS09	HP03	12-03-2010	TONI GAYLORD	CPL	10GV130826

2010006220

Unit	Date of Birth	Sex	Race	# Inj	Seat	R/SD	A.S.D	Eject	I.A.I	Trans	Name	Street Address	Zip Code
01	12-22-1975	M	B	0	01	13	4	1	1	2	BURGESS RYAN RENAR	35 DEWEY DR ADAIRSVILL GA	301033055
02	06-05-1958	M	O	0	01	13	4	1	1	2	AHMED ELMAHMOU MOHA	1506 GREENSBORO RD MARTINSVIL VA	24112
01	11-29-1976	F	B	0	03	13	4	1	1	2			
01	05-22-2007	F	B	0	00	21	4	1	1	2			
01	08-30-2010	M	B	0	05	21	4	1	1	2			
02	02-18-1976	F	W	0	03	13	4	1	1	2			
02	05-03-1998	M	O	0	05	21	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2-Non-incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle: Head Injury 1-Yes 2-No; Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09

20-Pedestrian; 30-Towing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nontrailing); 51-Other Unenclosed Area (nontrailing); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 80-Lap; 99-Unk./NA

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 69-Other; 99-Unk.

a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown

b) By: 1-EMS 2-Police 8-Other 9-Unk.

Pedestrian, Motor/Pedacycle Only: 31-Helmet; 51-Reflective Clothing; 41-Protective Pads; 61-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk. b) 1-Switch In On Position; 2-Switch in Off Position; 3-No Switch; 9-Unknown

Ejection: 1-Not Ejected; 2-Part. Ejected; 3-Tot. Ejected; 7-Not App.; 9-Unk.

Sequence of Events

Non-Collision	Collision: Not Fixed	Collision: Fixed Object
01-Cargo/Equip Loss or Shift; 02-Cross Median/Center; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife	20-Animal (Over Only); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 26-Pedalcycle; 27-Pedestrian; 28-Railway Veh.; 29-Work Zone Maint. Equip.; 30-Other Movable Object; 38-Unk. Movable Object	40-Bridge Overhead Structure; 41-Bridge Parapet End; 42-Bridge Pier or Abutment; 43-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Fence; 49-Guardrail End; 50-Guardrail Face; 51-Highway Traffic Sign Post; 52-Impact Attenuator/Crash Cushion; 53-Light/Luminaire Support; 54-Other Fixed Object; 55-Mail Box; 56-Other Post, Pole, Support; 57-Overhead Sign Support; 58-Other (Wall, Building, Tunnel, Etc.); 59-Tree; 60-Utility Pole; 61-Work Zone Maint. Equipment; 99-Other/Unk.

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Hrmful
22	1	1	1	1	22
23	2	2	2	2	23
	3	3	3	3	

Manner of Collision (Truck Veh.): 00-Not Coll. w/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 41-Angle; 42-Angle; 43-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

1st Most Deformed Area | 1st Deformed | Most Deformed

21-Pedestrian; 81-None; 82-Rollover; 83-Total; 84-Under Carriage; 89-Other; 99-Unk.

Vehicle Type: 01-Automobile; 03-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 25-Motorcycle; 28-Other Motorbike; 27-Pedalcycle; 38-Animal Drawn Veh.; 39-Animal (Ridden); 41-Pedestrian; 51-Train; 61-School Bus; 62-Passenger Bus; 68-Other; 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Military; 06-Transport Passengers; 07-Transport Property; 08-Farm Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 18-Other; 41-Pedestrian

Vehicle Attachment: 1-Utility Trailer; 2-Horse Trailer; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Lowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Action Prior to Impact (Vehicle): 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk.

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working; 88-Other; 99-Unk.

Alc Test Results: A1- ; A2- ; AS-

Drug Results: 0-None/Neg.; 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 6-Other; 7-Sedatives/Barbiturates; 8-Hallucinogens; 9-Unk.

Extent of Deformity: 1-Minor Damage; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk.

Special Use Only

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 8-Other

Underride/Override: 1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV In transport; 5-Over-Other Vehicle; 6-None; 9-Unk.

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other

1st Harmful Event Loc: 1-Entr 2-Ramp 3-Median 4-Roadway 5-Shoulder 6-Outside Trafficway 7-Sidewalk 8-Unk. B-X-walk 1-Y 2-H 3-U

Road Character: 1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk.

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagmen; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 99-None; 99-Unk.

School Bus Involved: 1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk.

Work Zone: 1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area; 1-Yes 2-No

Work Zone Location: 1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk.

Work Zone Type: 1-Yes 2-No

Workers Present: 1-Yes 2-No

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights); 8-Dawn

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk.

Primary Contributing Factors: 03

Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 11-Over-correcting/Over-steering; 12-Aggressive Operation of Vehicle; 13-Overtaking/Passing; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper lane Usage/Change; 19-Cell Phone; 20-Texting; 28-Other Improper Action; 29-Unk.

Others:

Roadway: 30-Debris; 31-Non-Highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i.e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Instantiflex; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W.; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc.; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 65-Under the Influence; 67-Other Person Under Influence

Environmental: 60-Obstruction; 62-Animal in Road; 63-Weather Cond.; 81-Glare; 89-Other; 99-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 78-Signals; 79-Windows/Shield; 77-Restraint System; 79-Truck Coupling; 79-Cargo; 80-Fuel System; 89-Other; 99-Unk.

ORIGINAL

JAN 25 2011

SOUTH CAROLINA DPS/HS & DMV USE ONLY

10151195

Page # 1 Of 1

Of Units 02

Amended - Attach Copy of Original Report: Corrected

Notified 1530

Arrived 1550

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

20100107795

Date of Collision	Time of Collision	County	Interstate / US Primary / SC Primary	Secondary / County / PP	Collision Location (Rt. # / Name)	Main / Alternate	Connection / Business	Miles	Dir.	In A(Near) City or Town of:
12-23-2010	1455	23	3	8	SS/ RAMP 8333	2	6	.03	NE	GREENVILLE

Lane # / Dir.	Of	Dir.	Distance Offset (Miles/Feet)	Direction	Base Intersection (Rt # / Name)	Main / Alternate	Connection / Business
3	3	SW	.50 Feet	S	146/ WOODRUFF RD	2	7

R.R. Id.	From	Ramp Only	To	Second Intersection (Rt. # / Name)	Main / Alternate	Connection / Business
	NE SW	1 Entrance 2 - Exit	NE SW	492/ PELHAM RD	2	7

GPS COORDINATES 00 00' 00.00" — DEGREES MINUTES SECONDS

Latitude: 34 49 47.21

Longitude: 82 15 06.60

E-066627

Driver/Pedestrian's Full Name: WEBB PAUL EARL

Unit #	Sex	Race	Street/R.F.D.
01	M	W	509 TIMBER WALK DR

Of Occ: 01

Birth Date: 09-24-1968

City, State, & Zip: SIMPSONVILLE SC 296814553

State	Driver's License #	Class	Insurance Company
SC	008572779	D	PALMETTO

Year	Body	Vehicle Make	VIN #
2007	PK	NISS	1N6AD09U27C447700

State	Year	License Plate #	Owner's D.L. #
SC	2011	165WYR	

Home Telephone: (864) 9795847

Owner's Full Name: WEBB CHARLES G

Bus. Telephone: (864) 9795847

Street/R.F.D.: 813 NINETY SIX HWY

Contributed To Collision: Yes / No

City, State, & Zip: GREENWOOD SC 29646

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
35	30			

Summons #	Code	Summons #	Code	Towed	Towed: Yes (No)
E709579	21				

Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street/R.F.D.

Of Occ:

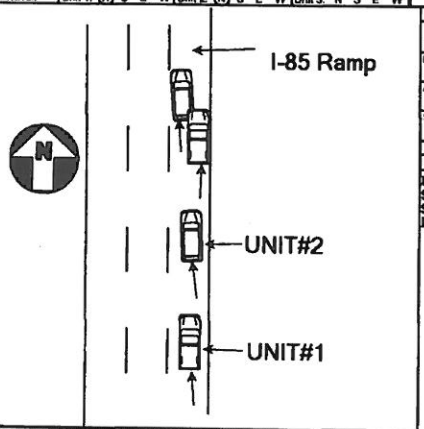
Birth Date:

City, State, & Zip:

State	Driver's License #	Class	Insurance Company

Year	Body	Vehicle Make	VIN #

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$1000	$500	$	$	$

Property Owner/Witness: Property Owner/Witness

Address: City: Address: City:

State: Zip: Phone: State: Zip: Phone:

Photo: Y (N) Describe What Happened (Refer to Units by Number)

UNIT #1,AND UNIT #2 WERE NORTHBOUND I-85 RAMP FROM SC 146. DRIVER #1, DRIVING TOO FAST FOR CONDITIONS STRUCK #2, SLOWING TO MERGE RIGHT REAR, WITH LEFT FRONT.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
MOON - T J	LCPL	T798	HP03	01-04-2011	WESLEY HIOTT	SGT	10GV143180

E-066628

Driver/Pedestrian's Full Name: HENRY WILLIAM B

Unit #	Sex	Race	Street/R.F.D.
02	M	W	4 MEADOW SPRINGS LN

Of Occ: 02

Birth Date: 04-07-1944

City, State, & Zip: GREER SC 296501005

State	Driver's License #	Class	Insurance Company
SC	011339569	D	GEICO

Year	Body	Vehicle Make	VIN #
1995	TK	CHEV	1GCCS14ZXSK168369

State	Year	License Plate #	Owner's D.L. #
SC	1995	1298AX	011339569

Home Telephone: (864) 8010885

Owner's Full Name: HENRY WILLIAM B

Bus. Telephone: (864) 2011302

Street/R.F.D.: 4 MEADOW SPRINGS LN

Contributed To Collision: Yes (No)

City, State, & Zip: GREER SC 296501005

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
35	15			

Summons #	Code	Summons #	Code	Towed	Towed: Yes (No)
				JR (OR)	

State: Year: License Plate #: Owner's D.L. #:

Home Telephone: ( )

Owner's Full Name:

Bus. Telephone: ( )

Street/R.F.D.:

Contributed To Collision: Yes No

City, State, & Zip:

Estimated Speed	Speed Limit	C.D.L. Req: Yes	T/B S Req: Yes	Alc/Drg Info (see back): Yes

Summons #	Code	Summons #	Code	Towed	Towed: Yes

Unit:	Date of Birth	Sex	Race	INJ:	Seat:	R/SD	A.S.D	Eject.	LAI:	Tran:	Name			Street Address		Zip Code
01	09-24-1968	M	W	0	01	13	4 3	1	1	2	WEBB	PAUL	EARL	509 TIMBER WALK DR	SIMPSONVIL SC	296814553
02	04-07-1944	M	W	0	01	13	4 3	1	1	2	HENRY	WILLIAM	B	4 MEADOW SPRINGS LN	GREER SC	296501005
02	11-16-1974	M	B	0	03	13	4 3	1	1	2						

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2-Non-incapacitating; 3-Incapacitating; 4-Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20-Pedestrian; 30-Trailing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nonriding); 51-Other Unenclosed Area (nonriding); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 80-Lap; 99-Unk /NA

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 69-Other; 99-Unk.

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk. b) 1-Switch in On Position; 2-Switch in Off Position; 3-No Switch; 9-Unknown

Ejection: 1-Not Ejected; 2-Part Ejected; 3-Tot. Ejected; 7-Not App; 9-Unk.

b) 2 or 3 Wheel Motorized Vehicle: Head Injury: 1-Yes 2-No

Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown

b) By: 1-EMS 2-Police 8-Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet; 41-Reflective Clothing; 51-Lighting

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harm
22	1	1	1	22
22	2	2	2	22
3	3	3	3	

1st Harmful: 22

Non-Collision: 01-Cargo/Equip Loss or Shift; 02-Cross Median/Center; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Overturn/Rollover; 09-Ran off Road Left; 10-Ran off Road Right; 11-Separation of Units; 12-Spill (Pre-Impact Veh.); 14-Other Non-collision; 19-Unk. Non-collision

Collision Not Fixed: 20-Animal (Over Only); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 29-Unk. Movable Object; 37-Pedestrian; 38-Pedalcycle; 39-Railway Veh; 40-Work Zone Maint. Equip.

Collision: Fixed Object: 41-Bridge Overhead Structure; 42-Bridge Pier or Abutment; 43-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Guardrail End; 49-Guardrail Face; 50-Impact Attenuator/Crash Cushion; 51-Concrete Traffic Barrier; 52-Other Post, Pole or Support; 53-Other Traffic Sign Post; 54-Other Traffic Signal Support; 55-Utility Pole; 56-Work Zone Maint. Equipment; 57-Overhead Sign Support; 58-Mail Box; 59-Other Fixed Object; 60-Tree; 61-Unk. Fixed Object; 62-Work Zone Marker; 63-Other Marker; 64-Traffic Sign Post; 65-Other Post, Pole or Support; 66-Other Traffic Barrier; 67-Other Traffic Signal Support; 68-Unk. Traffic Barrier; 69-Other (Wall, Building, Tunnel, Etc.)

Manner of Collision (Struck Veh.): 00-Not Coll. w/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 41-Angle; 42-Angle; 43-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 04-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 18-Motor Home; 19-Motorcycle; 20-Other Motorbike; 27-Pedalcycle; 28-Animal Drawn Veh; 29-Animal (Ridden); 41-Pedestrian; 51-Train; 61-School Bus; 62-Passenger Bus; 69-Other; 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Military; 06-Transport Passengers; 07-Transport Property; 08-Fants Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 18-Other; 41-Pedestrian

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Tow Trailer; A-Lowboy Trailer; B-Autocarrier Trailer; C-Other Trailer; D-Flat Bed; E-Twin Trailers; F-Other

Action Prior to Impact (Vehicle): 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk.

(Non-motorist): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights)

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk.

Primary Contributing Factors: Driver: 03

Others:

Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 12-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper Lane Usage/Change; 19-Cell Phone; 20-Texting; 28-Other Improper Action; 29-Unk

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i.e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc.; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk; 65-Under the Influence; 67-Other Person Under Influence

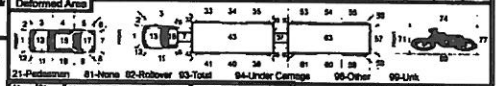
Environmental: 82-Obstruction; 83-Animal in Road; 84-Weather Cond.; 85-Glare; 86-Other; 88-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 89-Unk.

1st / Most Deformed Area: 1-Front; 2-Right Side; 3-Rear; 4-Left Side; 5-Top/Roof; 6-Undercarriage; 7-All Areas; 8-Unit Not at Scene; 9-Unk.

1st Deformed: 1 | 2 | 3

Most Deformed: 1 | 2 | 3



21-Pedestrian; 81-None; 82-Rollover; 83-Total; 84-Under Carriage; 86-Other; 99-Unk.

Special Use Only: 1 2 3 4 5 6 7

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unavailable; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 8-Other

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other

Alc Test Results: A1-; A2-; A3-

Underride/Override: 0 1 2 3 4 5 6

Extent of Deformity: 0-None/Minor; 1-Functional Damage; 2-Disabling Damage; 3-Severe/Totaled; 4-Overturned; 5-Not Applicable; 9-Unk.

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other

Access Control: A: 1-Full; 2-Median; 3-Roadway; 4-Ramp; 5-Lane; 6-Roadside; 7-Sidewalk; 8-Unk. B: X-walk; 8-Unk. M: Harmful Event Loc.

Road Character: 1-Straight - Level; 2-Straight - On grade; 3-Curve - Level; 4-Curve - On grade; 5-Curve - Hillcrest; 6-Curve - Hillcrest

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 99-None; 99-Unk.

School Bus Involved: 1-Yes, Directly; 2-Yes, Indirectly; 3-No; 8-Unk.

Work Zone: 1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area; 1-Yes 2-No

Work Zone Location: 1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk.

Work Zone Type

Worker's Presence: 1-Yes 2-No

ORIGINAL

JAN 25 2010

SOUTH CAROLINA DPS/OHS & DMV USE ONLY
10151194

Page # 1 Of 1

SOUTH CAROLINA
TRAFFIC COLLISION REPORT FORM
TR-310 (Rev. 7/2010)

Of Units: 02

Amended - Attach Copy of Original Report | Corrected

Notified: 1530

Arrived: 1540

20100010794

Date: 12-23-2010 | Time of Collision: 1455 | County: 23

Collision Location (Rt. # / Name): 85/ RAMP 8333

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- PP 6- Connector 7- Business 9- Other

Main 2- Alternate 5- Spur

Miles: .08 | Dir. N E S W

In (Near) City or Town of: GREENVILLE

Lane # / Dir.: # 3 | Of | N E S W

Distance Offset: .02 (Miles / Feet) | Direction: N E S W

Base Intersection (Rt # / Name): From 146/ WOODRUFF RD

GPS COORDINATES 00 00' 00 00"

DEGREES MINUTES SECONDS

Latitude: 34 32 09.70

Longitude: 82 10 15.97

R.R. Id. | From: N E S W | Ramp Only: 1 Entrance 2 - Exit | To

Second Intersection (Rt. # / Name): Toward 403/ PELHAM RD

E-066625

Driver/Pedestrian's Full Name: HENRY WILLIAM B

Unit #: 01 | # Occ: 02 | Sex: M | Race: W

Street/R.F.D.: 4 MEADOW SPRINGS LN

Birth Date: 04-07-1944

City, State, & Zip: GREER SC 296501065

State: SC | Driver's License #: 011339569 | Class: D | Insurance Company: GEICO

Year: 1995 | Body: TK | Vehicle Make: CHEV | VIN #: 1GCCS14ZXSK186369

State: SC | Year: 2011 | License Plate #: 1298AX | Owner's D.L. #: 011339569

Home Telephone: (864) 8010885 | Owner's Full Name: HENRY WILLIAM B

Bus. Telephone: (864) 2011382 | Street/R.F.D.: 4 MEADOW SPRINGS LN

Contributed To Collision: Yes | City, State, & Zip: No GREER SC 296501065

Estimated Speed: 35 | Speed Limit: 25 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E7855579 | Code: 21 | Summons #: | Code: | Towed: Yes (No) | JR (OR)

E-066626

Driver/Pedestrian's Full Name: BLANDIN NATATASH M

Unit #: 02 | # Occ: 01 | Sex: F | Race: B

Street/R.F.D.: 4 LEDFORD DR

Birth Date: 08-25-1975

City, State, & Zip: GREENVILLE SC 296053833

State: SC | Driver's License #: 007276989 | Class: D | Insurance Company: GEICO

Year: 1999 | Body: SU | Vehicle Make: CHEV | VIN #: 1GNEK13R8XJ411852

State: SC | Year: 2011 | License Plate #: CLZ777 | Owner's D.L. #: 007276989

Home Telephone: (864) 2031533 | Owner's Full Name: BLANDIN NATATASH M

Bus. Telephone: (864) 2031533 | Street/R.F.D.: 4 LEDFORD DR

Contributed To Collision: Yes (No) | City, State, & Zip: GREENVILLE SC 296053833

Estimated Speed: 35 | Speed Limit: 5 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: | Code: | Summons #: | Code: | Towed: Yes (No)

Driver/Pedestrian's Full Name:

Unit #: | # Occ: | Sex: | Race:

Street/R.F.D.:

Birth Date:

City, State, & Zip:

State: | Driver's License #: | Class: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Home Telephone: ( )

Owner's Full Name:

Bus. Telephone: ( )

Street/R.F.D.:

Contributed To Collision: Yes No

City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed: | Yes No

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 500	$	$	$

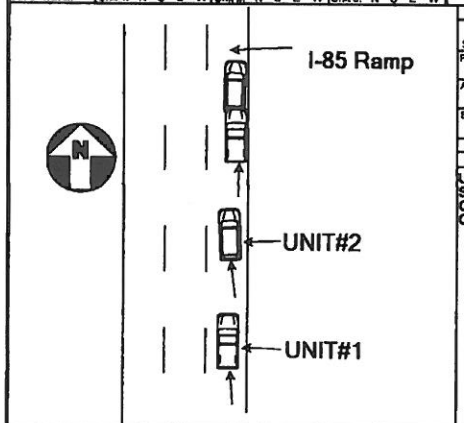
Property Owner/Witness | Property Owner/Witness

Address | City | Address | City

State | Zip | Phone | State | Zip | Phone

Photo Y (N) | Describe What Happened (Refer to Units by Number)

UNIT #1,AND UNIT #2 WERE NORTHBOUND I-85 RAMP FROM SC 146. DRIVER #1 DRIVING TOO FAST FOR CONDITIONS,STRUCK #2,STOPPING FOR A COLLISION CENTER REAR,WITH CENTER FRONT.



NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
MOON - T J	L/CPL	T798	HP03	01-04-2011	WESLEY HIOTT	SGT	10GV143152

20100010794

Unit:	Date of Birth	Sex:	Race	INJ.	Seat:	R/SD	A.B.D	Eject	LA:	Tran:	Name	Street Address	Zip Code
01	04-07-1944	M	W	0	01	13	4	3	1	2	HENRY WILLIAM B	4 MEADOW SPRINGS LN GREER SC	296501065
02	08-25-1975	F	B	0	01	13	4	3	1	2	BLANDIN NATATASH M	4 LEDFORD DR GREENVILLE SC	296053833
01	01-10-1978	F	W	0	03	13	4	3	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk

a) Injury: 0-Not Injured; 1-Possible Injury; 2-Non-incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle: Head Injury 1-Yes 2-No

Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Transported to Medical Facility: a) 1-Yes 2-No 3-Unknown; b) By: 1-EMS 2-Police 8-Other 9-Unk.

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 88-Other; 99-Unk

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk; b) 1-Switch In On Position; 2-Switch In Off Position; 3-No Switch; 9-Unknown

Ejection: 1-Not Ejected; 2-Part. Ejected; 3-Tot. Ejected; 7-Not Apps; 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet; 41-Protective Pads; 51-Reflective Clothing; 61-Lighting

Sequence of Events

Non-Collision: 01-Cargo/Equip Loss or Shift; 02-Cross Median/Center; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Other Nonfixed Object

Collision: Fixed Object: 25-Pedestrian; 26-Railway Veh; 27-Work Zone Maint. Equip.; 28-Other Movable Object; 41-Bridge Overhead Structure; 42-Bridge Pier or Abutment; 43-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Equipment; 49-Fence; 50-Guardrail Face; 51-Guardrail End; 52-Highway Traffic Sign Post; 53-Impact Attenuator/Crash Cushion; 54-Light/Luminaire Support; 55-Mail Box; 56-Median Barrier; 57-Overhead Sign Support; 58-Other (Post, Pole, Support, Etc.); 59-Other (Wall, Building, Tunnel, Etc.); 60-Tree; 61-Utility Pole; 62-Work Zone Maint. Equipment; 99-Unk

Collision: Other Object: 20-Animal (Deer Only); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 26-Unk. Moveable Object; 29-Pedalcycle

Manner of Collision (Since Veh.): 1-Not Coll. w/ Motor Veh.; 2-Rear End; 3-Head On; 4-Angle; 5-Rear-to-Rear; 6-Sideswipe Same Dir.; 7-Sideswipe Opposite Dir.; 8-Backed Into; 9-Unknown

1st / Most Deformed Area: 1st Deformed | Most Deformed

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 04-Other Truck; 16-Mini Van; 17-Sport Utility; 23-Motorcycle; 28-Other Motorbike; 27-Pedalcycle; 38-Animal Drawn Veh.; 39-Animal (Ridden); 41-Pedestrian; 51-Train; 61-School Bus; 62-Passenger Bus; 88-Other; 89-Unk (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Fire; 06-Military; 07-Transport Passengers; 08-Transport Property; 09-Police; 10-Other Public; 11-Government; 12-Fire Fighting; 13-Logging; 14-Other; 41-Pedestrian

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Cowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Action Prior to Impact (Vehicle): 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other

Non-motorist: 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working; 99-Unk.

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Not Lit); 6-Dark (Street Lamp Lit); 7-Dark (No lights); 8-Dark (Street Lamp Lit)

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk

Primary Contributing Factors — Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 12-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper Lane Usage/Change; 19-Cell Phone; 20-Texting; 28-Other Improper Action; 29-Unk.

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (I e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (I e., Missing); 37-Work Zone (Const Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W.; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc.; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 88-Under the Influence; 87-Other Person Under Influence

Environmental: 60-Obstruction; 61-Weather Cond; 62-Glare; 68-Other; 69-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 89-Unk.

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Special Use Only

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 5-Other

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 6-Other; 0-None/Minor; 1-Functional Damage; 2-Severe/Totaled; 3-Disabling Damage; 9-Unk; 8-Not Applicable

Alc Test Results: A1- ; A2- ; A3-

1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other; Trafficway

1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest; Road Character

1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk; Road Surface Condition

01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 88-None; 99-Unk.; Traffic Control Type

1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk.; School Bus Involved:

1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area; 1-Yes 2-No; Work Zone:

Work Zone Location; Work Zone Type

1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk.; 1-Yes 2-No; Workers Present:

ORIGINAL

D.P.S. USE ONLY: 10112783 | Page 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 2116 | Arrived: 2133

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Near City or Town of:
08-25-2010	2100	23	S 85	.08	N E S W	Greenville

Lane # / Dir.: 1 | Dir.: N | Distance Offset: .06 Miles | Direction: S | Collision Location: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 385 | Second Intersection (Rt. # / Name): Toward 146 | Main / Connection / Alternate / Business / Spur | ASRU code | MP/Grid | Latitude: 34 49 46.80 | Longitude: 82 18 06.20

R.R. Id.: N/A | From: Ramp Only: 2 - Exit | To: 3 - SC Primary

B-424021

Unit #	Sex	Race	Driver/Pedestrian's Full Name	Street/R.F.D.	Birth Date	City, State, & Zip
1	M	W	Norman - James M	119 Sandy Spring Ct	10-27-1962	Sandy Springs SC 29621

State	Driver's License #	Insurance Company
SC	003435585 (A)	ACE American

Year	Body	Vehicle Make	VIN #
2006	TK	Intl	1HSMKAAN06H336793

State	Year	License Plate #	Owner's D.L. #
NC	2011	LV16487	N/A

Home Telephone: 864-770-7519 | Owner's Full Name: CC&C Operations LLC | Bus. Telephone: 864-213-1200 | Street/R.F.D.: 4115 Coca Cola Plz | Contributed To Collision: No | City, State, & Zip: Charlotte NC 28211

Estimated Speed	Speed Limit	C.D.L. Req: Yes	T/B S Req: Yes	Alc/Drg info (see back): Yes	No
35	35	No	No	No	No

Summons #: N/A | Code: N/A | Summons #: N/A | Code: N/A | Towed By: N/A

B-424022

Unit #	Sex	Race	Driver/Pedestrian's Full Name	Street/R.F.D.	Birth Date	City, State, & Zip
2	F	W	Garlock - Morgan Chandler	228 Castellan Dr	07-03-1993	Greer SC 29650

State	Driver's License #	Insurance Company
SC	12309 1435 (D)	First National

Year	Body	Vehicle Make	VIN #
2008	4S	Chev	1G1JF52F837238992

State	Year	License Plate #	Owner's D.L. #
SC	2011	7437EW	N/A

Home Telephone: 864-915-0080 | Owner's Full Name: Garlock - Holly Ruth | Bus. Telephone: ( ) N/A | Street/R.F.D.: 228 Castellan Dr | Contributed To Collision: Yes | City, State, & Zip: Greer SC 29650

Estimated Speed	Speed Limit	C.D.L. Req: Yes	T/B S Req: Yes	Alc/Drg info (see back): Yes	No
35	35	No	No	No	No

Summons #: EW15493 | Code: 22 | Summons #: N/A | Code: N/A | Towed By: N/A

B-424023

Unit #	Sex	Race	Driver/Pedestrian's Full Name	Street/R.F.D.	Birth Date	City, State, & Zip
N/A						

State	Driver's License #	Insurance Company

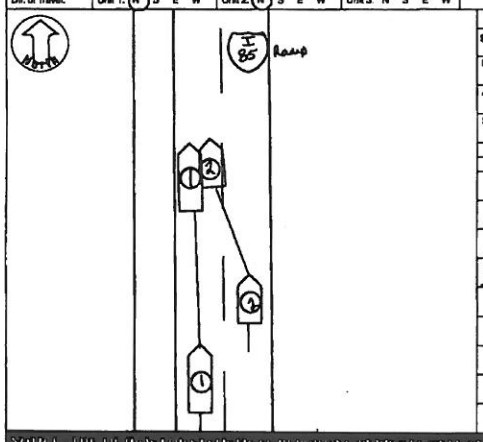
Year	Body	Vehicle Make	VIN #

Home Telephone: ( ) | Owner's Full Name | Bus. Telephone: ( ) | Street/R.F.D. | Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed	Speed Limit	C.D.L. Req: Yes	T/B S Req: Yes	Alc/Drg info (see back): Yes	No
		No	No	No	No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N | Unit 2: N | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 100	$ 2500	$	$ N/A	$ N/A

Property Owner/Witness | Address | City, State & Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and 2 were traveling north on the I-85 exit ramp. Driver of Unit #2 made an improper lane change and struck Unit #1.

NOTICE - THE TRUTH FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE BY HIM AS TO THE ACCURACY THEREOF

Investigation Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Atkins - J.K.	PFC	920	HP03	8-25-10	Stahl, R	Sgt	101-V093006

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	Ext	Trav	Name	Street Address	Zip Code
1	10-27-1962	M	W	0	01	13	7 3	1	1	2			
2	07-03-1993	F	W	0	01	13	4 3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 90- Unk./NA

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 99- Unk.; 21- Child Safety Seat; 05- Other; Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 61- Reflective Clothing; 41- Protective Pads; 81- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Deployment Unk.; 7- Not Deployed; 8- Not Applicable; 9- Unknown. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1-Yes 2-No

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS; 2- Police; 8- Other; 9-Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22	1			22	22
22	2	1	2	22	
3	3	3	3		

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 07- Ran off Road Left; 08- Ran off Road Right; 09- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazarded Veh.); 13- Spill (Hazarded Veh.); 14- Other Non-collision; 15- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. on Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 31- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pompet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Landmark Support; 55- Median Barrier; 56- Mail Box; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 89- Other; 99- Unk.

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 31- Unk. Moveable Object; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 04- Ambulance; 05- Military; 07- Personal; 08- Transport Passengers; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Inspect (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Other

Action Prior to Inspect (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 13- Y-Intersection; 14- Nonjunction; 99- Unk.

Primary: 18

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Under the Influence; 15- Wrong Side or Wrong Way; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Improper Action; 19- Cell Phone; 29- Other Improper Action; 99- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 58- Other; 59- Unk.; 67- Other Person Under the Influence; 68- Under the Infl.

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 69- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 78- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 89- Other; 99- Unk.

Others: 00- None; 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Other

Extent of Deformity: 1- None; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 6- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 3

A: 1- Conc; 2- Island; 3- Median; 4- Roadside; 5- Shoulder; 6- Embankment; 7- Sidewalk; 8- Curb; 9- Unk.

B: X- walls; 1- Y 2-N 9-U

1st Harmful Event: 24; Event Loc.: 1

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 46- Other Warning Signs; 51- Flashing Beacon; 52- Pavement Markings (only); 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes; 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type

Workers Present: 1- Yes; 2- No

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01-2001)

D.P.S. USE ONLY: 10014358 | Page # 1 of 1 | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1527 | Arrived: 1844

Date: 02-05-2010 | Time: 1421 | County: 23 | Collision Location (Rt. # / Name): S 85 | Mi/Nr/ Near City or Town of: Greenville

Lane # / Dir.: 3 6 | Of: S W | Direction: N E S W | Distance Offset: .30 Miles N E S W Feet | Base Intersection (Rt. # / Name): From 146 Woodruff Rd | Second Intersection (Rt. # / Name): Toward 164 Pelham Rd | ASRU code | MP/Grid | Latitude: 34 49 37.30 | Longitude: 82 18 22.10

R.F.I. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 8- Connection 9- Other

B-706219

Driver/Pedestrian's Full Name: Greer - Ronald Orlando

Unit #: 1 | Sex: M | Race: B | Street/R.F.D.: 2311 Rolling Green Rd

Birth Date: 07-20-1973 | City, State, & Zip: Anderson SC 29621

State: SC | Driver's License #: 001093104 (O) | Insurance Company: Statefarm

Year: 2000 | Body: 4dr | Vehicle Make: Hond | VIN #: 4A3AA46G0YE093949

State: SC | Year: 2010 | License Plate #: CQV-254 | Owner's D.L. #: 001093104 (O)

Home Telephone: 864 221-6438 | Owner's Full Name: Greer - Ronald Orlando

Bus. Telephone: ( ) N/A | Street/R.F.D.: 2311 Rolling Green Rd

Contributed To Collision: Yes (No) | City, State, & Zip: Anderson SC 29621

Estimated Speed: 60 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Towed By: N/A

B-706220

Driver/Pedestrian's Full Name: Unknown

Unit #: 2 | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company: Unknown

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #: Unknown

Home Telephone | Owner's Full Name: Unknown

Bus. Telephone | Street/R.F.D.

Contributed To Collision: (Yes) No | City, State, & Zip

Estimated Speed: 65 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Towed By: N/A

B-706221

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #: FEB 22 2010.

Home Telephone | Owner's Full Name

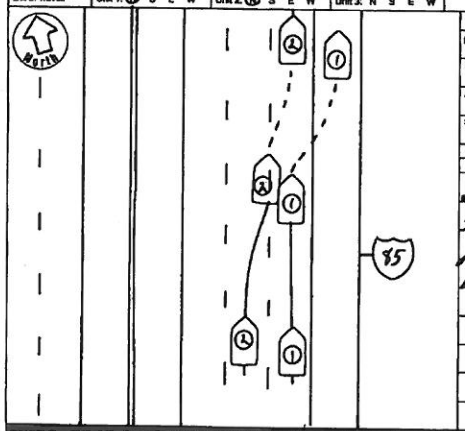
Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1400	$ 0	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and #2 were traveling north bound on I-85. Unit #2 made an improper lane change striking Unit #1 in the left front quarter panel area with the right side of Unit #2. Unit #2 left the scene and is not located.

NOTICE - THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RECORD OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Anderson-MP | Rank: TFC | Badge #: 492 | Code: HP03 | Date: 02-05-2010 | Reviewer's Name: Bradley - JM | Rank: Cpl | Internal Agency Code: 10GV014385

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	Ext	Tran	Name	Street Address	Zip Code
1	07-20-1973	M	B	01	01	13	4	1	1	2			
2													

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 04 05 06 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt & Lap Belt; 13- Shoulder & Lap Belt; 20- Child Safety Seat; 85- Other; 99- Unk.

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 81- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Most Harmful Event: Must Be Completed for Every PDO and Collision Report

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular); 13- Tire Failure/Debris; 14- Vehicle Comes Apart; 15- Other Non-collision; 16- Unk. Non-collision

Collision: Not Fixed: 17- Animal (Dead Only); 18- Animal (Alive); 19- Motor Veh. in Transport; 20- Motor Veh. (Stopped); 21- Motor Veh. (Parked); 22- Pedalcycle; 23- Pedestrian; 24- Railway Veh.; 25- Work Zone Maint. Equip.; 26- Other Movable Object

Collision: Fixed Object: 27- Embankment; 28- Bridge Overhead Structure; 29- Bridge Pier or Abutment; 30- Bridge Rail; 31- Culvert; 32- Curb; 33- Ditch; 34- Fence; 35- Guardrail End; 36- Guardrail Face; 37- Highway Traffic Sign Post; 38- Impact Attenuator/Crash Cushion; 39- Light/Luminaire Support; 40- Mail Box; 41- Other Post, Pole, Support; 42- Other Traffic Barrier; 43- Tree; 44- Utility Pole; 45- Work Zone Maint. Equipment; 46- Other Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 11 | 24 | 2; Most Deformed: 11 | 99 | 3

21- Pedestrian; 81- None; 82- Rollover; 93- Total; 94- Under Carriage; 98- Other; 99- Unk.

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 29- Other; 30- Animal (Drawn Veh.); 31- Animal (Ridden); 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 14- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 7- Camper Trailer; 8- Trailer w/Boat; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Other. (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 99- Unk.; 27- Working

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk.

Trafficway: 3

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 98

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 55- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary: 18

Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Glare; 66- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 89- Other; 99- Unk.

Others: 1 | 13

Work Zone: Type | Location | Workers Present:

School Bus Involved: 3

Extent of Deformity: 2

Event Loc.: 1 Y 2 M 9 U

Harmful Event: 1 | 2

CRASH DATA

I-385 @ WOODRUFF RD

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01-2001)

O.P.S. USE ONLY	Page #	# of Units	Amended - Attach Copy of Original Report	Notified	Arrived
10002442	1 Of: 1	2	Corrected	1806	1815

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Near City as Town of:
01/05/2010	1803	23	385	2	N E S W	Greenville

Lane # / Dir.: 2 / 4 S — Distance Offset: .3 Feet — Direction: N S E W — Base Intersection (Rt. # / Name): From 146 — ASRU code: — MP/Grid: — Latitude: 34° 49 2870 — Longitude: 82° 17 3530

R.R. Id.: N/A — Ramp Only: From NE SW, To NE SW — Second Intersection (Rt. # / Name): Toward 85

B-701923

Driver/Pedestrian's Full Name: Bynum- Carol Towns

Unit #	Sex	Race	Street/R.F.D.
1	F	W	200 Greenside Ct.

Birth Date: 11-17-1946 — City, State, & Zip: Simpsonville SC 29681

State: SC — Driver's License #: 102256606 (D) — Insurance Company: Progressive

Year	Body	Vehicle Make	VIN #
2001	SUV	Lexus	JTJHA231420024399

State: SC — Year: 2010 — License Plate #: FUA 993 — Owner's D.L. #: N/A

Home Telephone: 864) 735-5613 — Owner's Full Name: Bynum- Robert Andrew

Bus. Telephone: ( ) N/A — Street/R.F.D.: 200 Greenside Ct.

Contributed To Collision: Yes (No) — City, State, & Zip: Simpsonville SC 29681

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B S Req: Yes (No)	Alc/Drg info (see back): Yes (No)
0	55	Summons # N/A	Code N/A	Towed By N/A

B-701924

Driver/Pedestrian's Full Name: Fowler- Terry Lee

Unit #	Sex	Race	Street/R.F.D.
2	M	W	3271 Highway 414

Birth Date: 10-14-1961 — City, State, & Zip: Taylors SC 29687

State: SC — Driver's License #: 000267155 (D) — Insurance Company: Travelers

Year	Body	Vehicle Make	VIN #
2006	SUV	Kia	KNDJD733165531162

State: SC — Year: 2010 — License Plate #: DEH 601 — Owner's D.L. #: N/A

Home Telephone: 864) 616-8651 — Owner's Full Name: Fowler- Terri C

Bus. Telephone: ( ) N/A — Street/R.F.D.: 1627 Pumpkintown Hwy

Contributed To Collision: (Yes) No — City, State, & Zip: Pickens SC 29671

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B S Req: Yes (No)	Alc/Drg info (see back): Yes (No)
25	55	Summons # E320154	Code 21	Towed By N/A

B-701925

Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street/R.F.D.
N/A			

Birth Date: — City, State, & Zip:

State: — Driver's License #: — Insurance Company:

Year: — Body: — Vehicle Make: — VIN #:

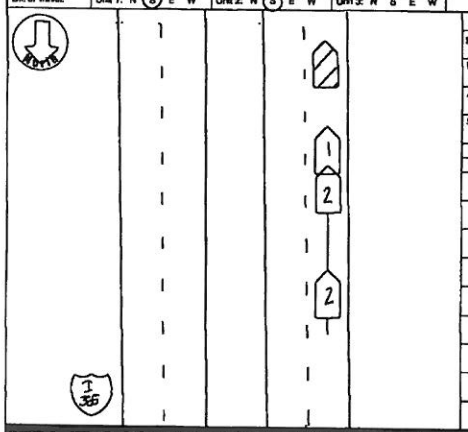
Home Telephone: ( ) — Owner's Full Name:

Bus. Telephone: ( ) — Street/R.F.D.:

Contributed To Collision: Yes No — City, State, & Zip:

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/B S Req: Yes No	Alc/Drg info (see back): Yes No
		Summons #	Code	Towed By

Dir. of Travel: Unit 1: N (S) E W — Unit 2: N (S) E W — Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1200.00	$ 1200.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A — Property Owner/Witness: N/A

Address: — Address:

State: Zip: Phone: — State: Zip: Phone:

Photo: Y (N) — Describe What Happened (Refer to Units by Number)

Units 1 and 2 were Southbound on I-385. Unit 1 slowed and stopped for traffic. Unit 2, traveling too fast for conditions, struck unit 1.

JAN 25 2010

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Lobe- CT	TPC	586	HP03	01-05-2010	A. of - W-n	Sgt	CD2562

Unit	Date of Birth	Sex	Race	Inj	Seat	MAD	A.B.D.	Eject	Ext	Trap
1	11-17-1946	F	W	O	01	13	49	1	1	2
2	10-14-1961	M	W	O	01	13	49	1	1	2

Name: — Street Address: — Zip Code:

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Helmet Used: Y-Yes N-No

Seating Loc.: D1 D2 D3 / 04 05 06 / 07 08 09

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 04- Child Safety Seat; 05- Other; 06- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Switch in On Position; 9- Switch in Off Position; 0- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1-Yes 2-No

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 21- Helmet; 41- Protective Pads; 61- Lighting; 81- Reflective Clothing

Sequence of Events — Most Harmful Event: 1 9 2 1 3

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Two-Wheeled Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Position); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area — 1st Deformed — Most Deformed

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 18- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact — (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk. — (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- — Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other - Unknown; 6- None; 7- Unk. — Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- Unk.; 0- None/Minor

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1 4 — Extent of Deformity: 1 2 — 2 — 3

Traffic Control Device: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other — Trafficway: 3

Access: 1- Open; 2- Mixed; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk. — B: X- traffic; Y- 2-N 0-U — 1st Harmful Event Loc.: 5 2

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest — 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk. — 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk. — 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk. — 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights) — 1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk. — 13

Roadway: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk. — Work Zone: 1- Yes 2- No — Workers Present: 1- Yes 2- No — Work Zone Location: ; Work Zone Type:

Primary Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Cell Phone; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Others: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY **10003730** | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 07/08 | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1700 | Arrived 1710

Date 01/12/2010 | Time 1695 | County 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name) 385 | 0- Main 1- Alternate 5- Spur 6- Connection 7- Business | Miles: 4.76 | Dir. (N E S W) | In / Near City or Town of: Greenville

Lane # / Dir. 1 N | Distance Offset .05 Feet | Direction N | From: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- Other | Base Intersection (Rt. # / Name) 146 | 0- Main 1- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid

R.R. Id. N/A | From: Ramp Only, Entrance, Exit | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Toward: Second Intersection (Rt. # / Name) 385 | Latitude 34° 49' 2780" | Longitude 82° 17' 2660"

A-603748 — Driver/Pedestrian's Full Name: Blackmon – Ryan H.

Unit # 1 | Sex M | Race W | Street 722 Grace St | Birth Date 08/04/1981 | City, State, & Zip Greenwood, SC 29649 | State SC | Driver's License # 0176579220 (V) | Insurance Company State Farm | Year 2007 | Body 4dr | Vehicle Make Nis | VIN # 1N4AL21E57N555544 | State SC | Year 2010 | License Plate # ARE 216 | Owner's D.L. # N/A | Home Telephone (864) 923-8152 | Owner's Full Name Blackmon – Melissa M. | Bus. Telephone (864) 227-7849 | Street 103 Karlie Ct | Contributed To Collision (Yes) No | City, State, & Zip Greenwood, SC 29649

Estimated Speed 20 | Speed Limit 35 | C.D.L. Req: Yes (No) | T/S B Req: Yes (No) | Alc/Drg into (see back): Yes (No) | Summons # E335911 | Code 31 | Summons # N/A | Code | Towed By South Main Collision Center

A-603749 — Driver/Pedestrian's Full Name: Wardlaw – David O.

Unit # 2 | Sex M | Race W | Street 220 Kitts Dr. | Birth Date 12-27-1961 | City, State, & Zip Augusta, GA 30909 | State GA | Driver's License # 044567838 | Insurance Company State Farm | Year 2001 | Body 2dr | Vehicle Make Honda | VIN # 2HGFG21551H706898 | State GA | Year 2010 | License Plate # ADE7158 | Owner's D.L. # N/A | Home Telephone (706) 231-3514 | Owner's Full Name Wardlaw – David O. | Bus. Telephone (706) 821-7401 | Street 220 Kitts Dr. | Contributed To Collision Yes (No) | City, State, & Zip Augusta, GA 30909

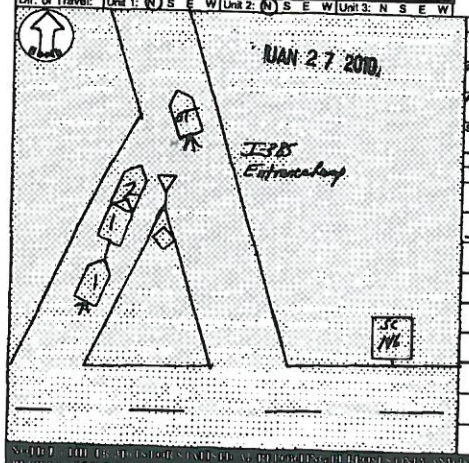
Estimated Speed 0 | Speed Limit 35 | C.D.L. Req: Yes (No) | T/S B Req: Yes (No) | Alc/Drg into (see back): Yes (No) | Summons # N/A | Code | Summons # N/A | Code | Towed By N/A

A-603750 — Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street | Birth Date | City, State, & Zip | Home Telephone | Owner's Full Name | Bus. Telephone | Street | Contributed To Collision Yes No | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S B Req: Yes No | Alc/Drg into (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000.00	$ 800.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Property Owner/Witness: N/A

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number): Units #1 and 2 were traveling north on the I-385 entrance ramp to I-385 north bound from SC-146. Unit #2 stopped yielding for other traffic. The driver of unit #1, driving too fast for conditions, and struck the rear of unit #2.

NOTICE: THE INFORMATION CONTAINED IN THIS REPORT IS FOR THE EXCLUSIVE USE OF THE DEPARTMENT OF PUBLIC SAFETY AND IS NOT TO BE DISCLOSED TO ANY PERSON OR AGENCY WITHOUT THE EXPRESS WRITTEN CONSENT OF THE DEPARTMENT OF PUBLIC SAFETY.

Investigating Officer's Name: Bradley JN | Rank Cpl | Badge # 59 | Code HA3 | Date 01/12/2010 | Reviewer's Name Bradley JN | Rank Cpl

Interpreted as 01/04/2010

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	02-09-1987	M	W	0	01	R	99	1	1	2			
1	07-13-1981	F	W	0	03	B	1	1	1	2			
2	12-27-1961	M	W	0	01	B	1	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, I - Alaskan Native or American Indian, H - Hispanic, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-incapacitating, 3- Incapacitating, 4- Fatal, 9- Unk. | b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nonrazing), 51- Other Unenclosed Area (nonrazing), 80- Sleeper of Cab, 70- Riding on Unit Exterior, 90- Unk /NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Air Bag Deployment / Switch: a) 1-Deployed Front 4-Not Deployed, 2-Deployed Side 7-Not Applicable, 3-Deployed Both 9-Deployment Unk. | b) 1- Switch in On Position 3- No Switch, 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown | b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 32- Reflective Clothing, 41- Protective Pads, 81- Lighting

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Med./Cntrdir. Lane, 03- Downhill Runaway, 04- Equipment Failure, 05- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Run off Road Left, 10- Run off Road Right, 11- Separation of Units, 12- Spill (Non-Vehicular), 18- Other Non-collision, 19- Unk. Non-collision

Sequence of Events

1st Harmful	2nd Harmful	3rd Harmful	Most Harmful
23	22	20	

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. (In Transport), 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Railway Veh, 26- Pedalcycle, 27- Pedestrian, 28- Work Zone Maint. Equip, 38- Other Movable Object, 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Ped, Pole Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle (↘), 42- Angle (→), 43- Angle (↗), 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area: 1 | 1st Deformed: 1 | Most Deformed: 1 | 7

Vehicle Type: 01- Automobile, 12- Pickup Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh., 29- Animal (Ridden), 31- Train, 41- Pedestrian, 51- School Bus, 52- Passenger Bus, 99- Unk. (Hit and Run Only), 00- Other

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Governmenrs, 12- Fire Fighting, 13- Logging, 14- Other, 41- Pedestrian

Alcohol / Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Alc Test Results: A1- , A2- , A3-

Special Use Only

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Auto/Camper Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Undermde/Overmde: 1-6

Extent of Deformity: 1-3

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopped in Traffic, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided Barrier, 4- One-Way, 8- Other | 1- Curve 2- Island 3- Median 4- Roadway 5- Shoulder 6- Ramp 7- Sidewalk 8- Outside Trafficway 9- Unk | 1-V 2-N 8-U | 1- X-walk 8- Other | 1- Harmful Event | 2- Not Harmful Event

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No lights)

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 99- None

Junction Type: 01- Crossover, 02- Driveway, 03- Four/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

School Bus Involved: 1- Yes 2- No

Work Zone: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area, 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittant/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

Work Zone Type

1- Yes 2- No Workers Present:

Primary: 03 | Others: 02

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc, 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 20- Other Improper Action, 19- Cell Phone, 29- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying and/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Under the Influence, 59- Other, 59- Unk.

Environmental: 62- Obstruction, 60- Animal in Road, 61- Glare, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

ORIGINAL

Hit+Run

D.P.S. USE ONLY: 10009327 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM | # Of Units 2 | Amended - Attach Copy of Original Report | Notified 2306 | Arrived 2311

Date: 01/02/2010 | Time: 2301 | County: 23 | Collision Location (Rt. # / Name): & I385S | Miles: Dir N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: #2 Dir N E S W | Distance Offset: .26 Miles Feet | Direction N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): Woodruff Rd. | 0-Main 1-Alternate 2-Alternate 5-Spur 6-Connection 7-Business 8-Connection 9-Other | ASRU code | MP/Grid

R.R. Id. | From N E S W | Ramp Only 1 - Entrance 2 - Exit | To 1 Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Toward From | Second Intersection (Rt. # / Name): I85 | 0-Main 1-Alternate 2-Alternate 5-Spur 6-Connection 7-Business 8-Connection 9-Other | Latitude: 109° 45 33 | Longitude: 161 05 50

A- 388972 | Driver/Pedestrian's Full Name: UNKNOWN

Unit # 1 | Sex | Race | Street | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | State | Year | License Plate # | Owner's D.L. # | Home Telephone | Owner's Full Name | Bus. Telephone | Street | Contributed To Collision (Yes) No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

A- 388973 | Owner/Pedestrian's Full Name: Ferguson-Kristin Lee

Unit # 2 | Sex: F | Race: W | Street: 2354 standing springs Rd | Birth Date: 11171981 | City, State, Zip: Greenville SC 29605 | State: SC | Driver's License #: 0078355484 (0) | Insurance Company: Sentinel | Year: 1995 | Body: LS | Vehicle Make: Toyt | VIN #: 1NXA80480S0094792 | State: SC | Year: 2010 | License Plate #: DXM307 | Owner's D.L. # | Home Telephone: 864-574-5816 | Owner's Full Name: Anders-Debra | Bus. Telephone | Street: Same | Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: N/A | Code | Summons # | Code | Towed By: N/A

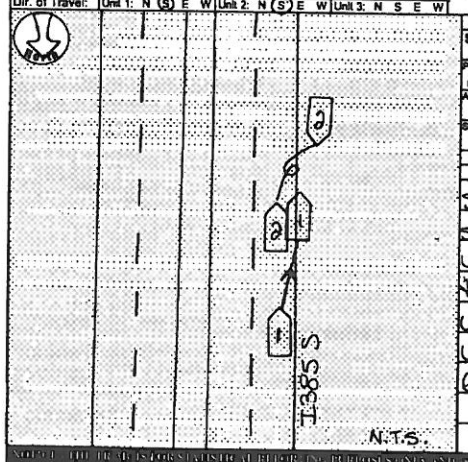
A- 388974 | Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Home Telephone | Owner's Full Name | Bus. Telephone | Street | Contributed To Collision: Yes No | City, State, & Zip

FEB 1 0 2010

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ N/A	$ 1500.	$	$	$

Property Owner/Witness: Elmer Toops | Address | State | Zip | Phone: 354-1368 | Property Owner/Witness | Address | State | Zip | Phone

Photo: Y N | Describe What Happened (Refer to Units by Number)

Unit #2 was driving on I385S She states Unit #1 struck her drivers side mirror. She got in front of Unit #1 to slow him down. Unit #1 then went into the grass & struck Unit #2 in the passenger side. Unit #1 then left the area. Diagram not to scale.

NOTICE: THE DRIVER IS REQUIRED BY LAW TO REPORT ACCIDENTS AND SUBMIT THIS REPORT TO THE DEPARTMENT OF PUBLIC SAFETY WITHIN 15 DAYS. SEE SECTION 56-5-1270 OF SOUTH CAROLINA TRAFFIC LAWS. FAILURE TO COMPLY IS PUNISHABLE BY A FINE OF NOT MORE THAN $100.00.

Investigating Officer's Name: WILLIAMS, JE | Rank: PFC | Badge #: 410 | Code: 29300 | Date: 01/6/10 | Reviewer's Name: T.B. Long | Rank: Sgt | Internal Agency Code: 10-9152

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SID	A.S.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1													
2	11171981	F	W	1 2	01	13	49	1	1	13	Kristin Ferguson	2354 Standing Springs	29605
2	05 21 1982	M	W	1 2	03	13	49	1	1	13	Daniel Keith Lamb	2354 Standing Springs	29605
2	09 08 2008	M	W	1 2	07	21	49	1	1	13	Kaden Ferguson	2354 Standing Springs	29605

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Used

Seating Loc: 01 02 03 04 05 06 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk /NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk. | Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Ejection: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk. | 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1-Yes 2-No

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk

Sequence of Events

Non-Collision: 01- Camp/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (non-vehicular); 13- Other Non-collision; 14- Unk. Non-collision

Collision: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 38- Other Moveable Object; 39- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 61- Utility Pole; 82- Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (≈ 15°); 41- Angle (≈ 45°); 42- Angle (≈ 90°); 43- Angle (≈ 135°); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Harmful Collision: 11 | 82

1st / Most Deformed Area: 1st Deformed 99 4; Most Deformed 99 4

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01 | 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 99- Unk.

Vehicle Attachment: 1 | 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Livestock Trailer; B- Autocamer Trailer; C- Other Tanker; D- Flat Bed; E- Two Trailers; F- Other

Action Prior to Impact (Vehicle): 06 | 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 99- Unk.; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; N

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Drug Results: 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 5- Unk; 9- Not Applicable

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other — 3

1st Harmful Event Loc: 1- Curve - On Grade; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Hillcrest; 5- Straight - Level; 6- Curve - Level — 55

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - On Grade; 5- Curve - Hillcrest — 4

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk — 2

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk — 98

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk — 3

Work Zone: 1- Yes 2- No — 2

Work Zone Location

Work Zone Type

Workers Present: 1- Yes 2- No — 2

Weather Condition: 2 | 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 7 | 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Junction Type: 13 | 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

Primary Contributing Factors: 12

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (Inop., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Unk.; 66- Under the Influence; 67- Other Person Under Influence

Others: 1 2

Environmental: 62- Obstruction; 63- Animal in Road; 64- Weather Cond.; 65- Glare; 66- Other; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01-2001)

DPS USE ONLY: 10008257 | Page # 1 | Of: 1 | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1830 | Arrived: 1900

Date: 01-27-2010 | Time: 1815 | County: 23 | Collision Location (Rt. # / Name): S 385 | Main: 0 | Connection: 8 | Miles: 1 | Dir.: N E S W | Near City or Town of: Greenville

Lane # / Dir.: 1 | Ol: 4 | N E S W | Distance Offset: .10 Miles/Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | Main: 0 | Connection: 8 | Alternate: 2 | Business: 7 | Spur: 5 | Other: 9 | ASRU code | MP/Grid | Latitude: 34 49 60.70

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 107 | Main: 0 | Connection: 8 | Alternate: 2 | Business: 7 | Spur: 5 | Other: 9 | Longitude: 82 17 25.70

B-700483

Driver/Pedestrian's Full Name: Pardi- Marcus Casey

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 204 Flagstar Court

Birth Date: 11-12-1976 | City, State, & Zip: Fountain Inn, SC 29644

State: SC | Driver's License #: 007210281 (D) | Insurance Company: SC Farm Bureau

Year: 2007 | Body: TK | Vehicle Make: Toyt | VIN #: STEBW58137X025626

State: SC | Year: 2010 | License Plate #: AEJ 890 | Owner's D.L. #: 007210281 (D)

Home Telephone: (864) 483-0295 | Owner's Full Name: Pardi- Marcus Casey

Bus. Telephone: (864) 483-0285 | Street/R.F.D.: 204 Flagstar Court

Contributed To Collision (Yes): No | City, State, & Zip: Fountain Inn, SC 29644

Estimated Speed: 45 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: N/A | Code | Summons #: N/A | Code | Towed By: Guggells (OR)

B-700484

Driver/Pedestrian's Full Name: Vanacore- Carol Ann

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 6104 Yellow Jasmine Drive

Birth Date: 10-05-1949 | City, State, & Zip: Simpsonville, SC 29681

State: NC | Driver's License #: 374406674 (C) | Insurance Company: Allstate

Year: 2008 | Body: 4S | Vehicle Make: Dodge | VIN #: 1B3LC46KX8N199553

State: SC | Year: 2010 | License Plate #: FPG 234 | Owner's D.L. #: 374406674 (C)

Home Telephone: (864) 399-9753 | Owner's Full Name: Vanacore - Carol Ann

Bus. Telephone: (864) 399-9753 | Street/R.F.D.: 6104 Yellow Jasmine Drive

Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville, SC 29681

Estimated Speed: 30 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-700485

Driver/Pedestrian's Full Name: N/A

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

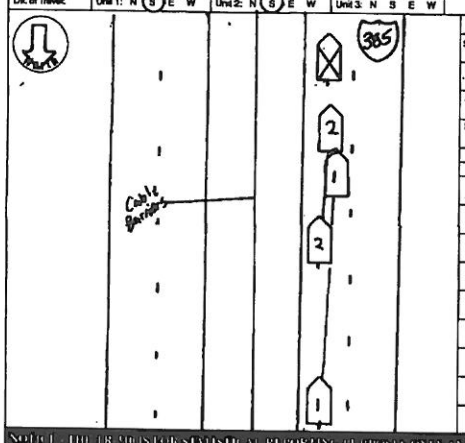
State | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 500	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Injured: Y N | Describe What Happened (Refer to Units by Number)

Unit #1 and Unit # 2 were both traveling South on I-385. Unit # 2 was forced to slow down due to slow moving traffic ahead. Unit #1 attempted to slow down but the accelerator pedal stuck and Unit #1 struck the rear of Unit # 2. No Summons issued due to the defective accelerator pedal.

NOTICE - THE INFORMATION ESTABLISHED AT REPORTING IT RELATES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE AT THE TIME OF THE REPORT. ANY OPINION AND/OR CONCLUSION CONTAINED IN THE COLLISION REPORT IS NOT A WARRANTY OR GUARANTEE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Andis- DC | Rank: Sgt | Badge #: 712 | Agency: HP03 | Date: 01-27-2010 | Reviewer's Name: [illegible] | Rank: Sgt | Internal Agency Code: IDGV 010583

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	11-12-1976	M	W	0	01	13	4R	1	1	2			
2	10-05-1949	F	W	0	01	13	4R	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk/N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 8- Unknown

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 42- Lighting

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Overturn/Rollover; 07- Jackknife; 08- Separation of Units; 09- Ran off Road Left; 10- Ran off Road Right; 11- Downhill Runaway

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Unk. Movable Object; 31- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Entrance/Exit; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 66- Other; 69- Unk.

Event 1: 32 | Event 2: 22 | Event 3 | Event 4 | Most Harmful: 22 | 1st Harmful: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 80- Unknown

1st Impact Collision: 10

Deformed Area: 1st Deformed: 1 2 7 3 | Most Deformed: 1 2 7 3

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 20- Other Motorbike; 27- Pedalcycle; 28- Motorcycle; 33- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Working; 13- Other; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Urine; 2- Blood; 3- Breath (Alc. Only); 4- Serum; 8- Other; 9- Unk.

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk. Underride/Override: 1 6 / 2 6 / 3

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 4- Not Applicable; 9- Unk. 1 0 / 2 0 / 3

Traffic Way: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other: 3

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 8- Curve - Hillcrest: 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.: 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.: 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Soil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Severe Crosswinds; 8- Snow; 9- Unk.: 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights): 3

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.: 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No: 2

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present:

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.: 13

Primary Contributing Factor: 72

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obstructed (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 21- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (Ie., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle's Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10008277 | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 Rev. 01 2001

# of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0753 | Arrived: 0754

Date	Time	County	Collision Location (Ft. # / Name)	Miles	Dir.	+/- / Near City or Town of:
01-28-2010	0746	23	S 385	3	N E S W	Greenville

Lane # / Dir.: # 2, Of 4, N E S W

Distance Offset: Miles / Feet .5

Direction: N E S W

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Municipal 9- Other

Base Intersection (Ft. # / Name): From 146

Second Intersection (Ft. # / Name): Toward Butler Rd

0- Main 1- Interstate 2- Alternate 3- US Primary 4- SC Primary 5- Spur 6- Connection 7- Business 9- Other

ASRU code | MP/Grid

Latitude: 34° 48' 39.30"

Longitude: 82° 17' 11.10"

R.R. Id.: N/A

From / To: N E S W; 1- Entrance 2- Exit; Ramp Only

B-323908

Driver/Pedestrian's Full Name: Vickerman- Michael Stephen

Unit # 1 | Sex: M | Race: W

Street/R.F.D.: 211 Branchester Ct.

Birth Date: 12-04-1981 | City, State, & Zip: Greenville SC 29607

State: SC | Driver's License #: 007910579 (D) | Insurance Company: Allstate

Year: 2010 | Body: 4DR | Vehicle Make: Mazda | VIN #: JM1BL1SF6A1144882

State: SC | Year: 2010 | License Plate #: ECW617 | Owner's D.L. #: 007910579

Home Telephone: (941) 430-3534 | Owner's Full Name: Vickerman- Michael Stephen

Bus. Telephone: ( ) N/A | Street/R.F.D.: 211 Branchester Ct.

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29607

Estimated Speed: 0 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-323909

Driver/Pedestrian's Full Name: Vaughter- Brooks Alan

Unit # 2 | Sex: M | Race: W

Street/R.F.D.: 116 Starrwood Dr.

Birth Date: 03-10-1982 | City, State, & Zip: Starr SC 29684

State: SC | Driver's License #: 007672682 (A) | Insurance Company: Peerless

Year: 2007 | Body: PKP | Vehicle Make: Toyota | VIN #: 3TMLU42N57M012850

State: SC | Year: 2010 | License Plate #: DHE417 | Owner's D.L. #: 007672682

Home Telephone: (941) 934-1659 | Owner's Full Name: Vaughter- Brooks Alan

Bus. Telephone: ( ) N/A | Street/R.F.D.: 116 Starrwood Dr.

Contributed To Collision: Yes (No) | City, State, & Zip: Starr SC 29684

Estimated Speed: 10 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E320090 | Code: 21 | Summons #: N/A | Code | Towed By: N/A

B-323910

Driver/Pedestrian's Full Name: N/A

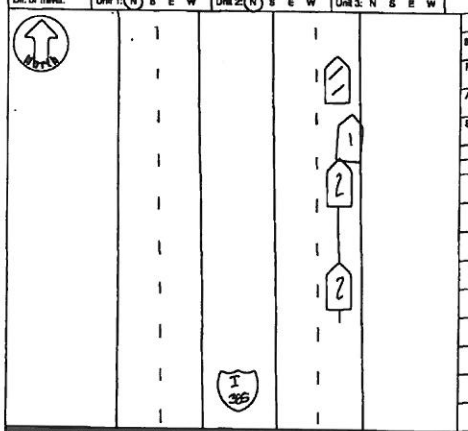
Unit # | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Owner's Full Name | Home Telephone | Bus. Telephone | Street/R.F.D. | Contributed To Collision | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Towed By

FEB 05 2010

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800.00	$ 800.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photos Y (N) | Describe What Happened (Refer to Units by Number):

Units 1 and 2 were Northbound on I-385. Unit 1 slowed and stopped for traffic. Unit 2, traveling too fast for conditions, struck Unit 1.

NOTICE: THE INFORMATION STATED AT REPORTING PERSON'S ARE ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE EXACTNESS OF ACCURACY THEREOF

Investigating Officer's Name: LaDue- CJ | Rank: TFC | Badge #: 586 | Code: 4003 | Date: 01-28-2010 | Reviewer's Name: A.H-WA | Rank: Sgt | Internal Agency Code: 10SVO10707

Unit	Date of Birth	Sex	Race	Inj	Seat	RMSD	A.B.D.	Eject	Lic	Tran	Name	Street Address	Zip Code
1	12-04-1981	M	W	0	01	13	49	1	1	2			
2	03-10-1982	M	W	01	01	13	49	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 55- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22				22	
23				23	

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Down/Ct Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Matl.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Unk. Movable Object; 39- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area; 1st Deformed; Most Deformed

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 63- Animal (Ridden); 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Given - Pending; 2- Given - Unusable; 3- Given - Known Results; 4- None; 5- Refused

Alcohol/Drug Test Given: D1 Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; D2 Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Severe Crosswinds; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 8- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: ----------

Work Zone Type: ----------

Workers Present: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk. 1- Yes 2- No

Primary: 05

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Others:

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Traffic Control Device (i.e., Missing); 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Animal in Road; 62- Weather Cond.; 63- Glare; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10012799 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 01/2001 | # of Units: 1 | Amended - Attach Copy of Original Report: Corrected | Notified: 0130 | Arrived: 0150

Date: 02-26-10 | Time: 0110 | County: 23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | Collision Location (Rt. # / Name): 5 385 | (Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other) | Miles: 4 | Dir. N E S W | Mile / Near City or Town of: GREENVILLE

Lane # / Dir: 1 / N/A | Dir: N E S W | Distance Offset: Miles / Feet | Direction: N E S W | Base Intersection (Rt. # / Name): From 146/WOODRUFF RD | Toward 107/BUTLER RD | ASRU code | MP/Grid | Latitude: 34 49 28.60 | Longitude: 82 17 19.70

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | Second Intersection (Rt. # / Name)

B-323332 — SMITH-PATRICK JASON

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 630 FAIRVIEW RD APT 199 | Birth Date: 08-14-1985 | City, State, & Zip: SIMPSONVILLE SC 29681 | State: SC | Driver's License #: 0114992392 (D) | Insurance Company: NONE | Year: 1999 | Body: 4S | Vehicle Make: OLDS | VIN #: 1G8WK52HXYF331416 12 | State: SC | Year: 2010 | License Plate #: EUF741 | Owner's D.L. #: 0114992392 (D) | Home Telephone: 864-354-5101 | Owner's Full Name: SMITH-PATRICK JASON | Bus. Telephone: (864) 354-5107 | Street/R.F.D.: 630 FAIRVIEW RD APT 199 | Contributed To Collision: No | City, State, & Zip: SIMPSONVILLE SC 29681 | Estimated Speed: 70 | Speed Limit: 65 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: E327472 | Code: Z1 | Summons #: E327471 | Code: 77 | Towed By: HOWARD'S (Rec)

B-323333 — Driver/Pedestrian's Full Name

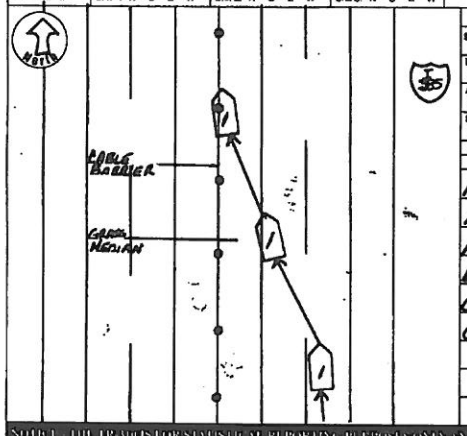
Unit #: N/A | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip: | State: | Driver's License #: | Insurance Company: | Year: | Body: | Vehicle Make: | VIN #: | State: | Year: | License Plate #: | Owner's D.L. #: | Home Telephone: | Owner's Full Name: | Bus. Telephone: | Street/R.F.D.: | Contributed To Collision: Yes / No | City, State, & Zip: | Estimated Speed: | Speed Limit: | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: | Code: | Towed By

B-323334 — Driver/Pedestrian's Full Name

Unit #: N/A | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip: | State: | Driver's License #: | Insurance Company: | Year: | Body: | Vehicle Make: | VIN #: | Home Telephone: | Owner's Full Name: | Bus. Telephone: | Street/R.F.D.: | Contributed To Collision: Yes / No | City, State, & Zip: | Estimated Speed: | Speed Limit: | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: | Code: | Towed By

FEB 18 2010

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2500	$	$	$ 1000	$

Property Owner/Witness: S.C. DEPT. OF TRANSPORTATION | Address: 13 SALUDA DAM RD GREENVILLE | State: SC | Zip: 29611 | Phone: (864)241-1224

Photos: Y | Describe What Happened (Refer to Units by Number):

UNIT #1 WAS TRAVELING NORTH ON I-385 TOO FAST FOR CONDITIONS. UNIT #1 LOST CONTROL AND RAN OFF THE ROADWAY INTO THE GRASS MEDIAN. UNIT #1 THEN STRUCK THE CABLE BARRIER. THE DRIVER OF UNIT #1 FLED THE COLLISION SCENE ON FOOT BUT WAS LATER CONTACTED.

NOTICE - THE TRAFFIC CRASH STATISTICAL REPORTING PURPOSES ONLY AND IS A RECORDATION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: HOLES-JT | Rank: SGT | Badge #: 79 | Code: 1003 | Date: 02/26/2010 | Reviewer's Name: BOLSTEE-DL | Rank: SGT | Badge #: 0193 | Code: 4

Unit	Date of Birth	Sex	Race	INJ	Seat	MSD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	08-14-1985	M	W	0	01	13	131	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nonmoving); 51- Other Unenclosed Area (nonmoving); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 90- Unk./NA

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt Only Safety Bead; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 20- Child; 80- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both / Deployment Unk.; 4- Not Deployed; 7- Not Applicable; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 61- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events: 1st / Most

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. Other Roadway; 25- Pedalcycle; 26- Pedestrian; 27- Railway Veh.; 28- Work Zone Maint. Equip.; 29- Other Movable Object; 30- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle ("_/" or "/‾"); 41- Angle ("_|" or "|‾"); 42- Angle ("|_|" or "|‾|"); 43- Angle ("/|" or "|\"); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Deformed Area: 1st Deformed / Most Deformed

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 26- Other Motorbike; 27- Pedalcycle; 28- Motorcycle; 29- Other Motorbike; 31- Train; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 61- School Bus; 62- Passenger Bus; 88- Other; 89- Unk. (Hit and Run Only)

Vehicle Use Codes: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Urine; 2- Breath (Alc. Only); 3- Blood

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 8- PCP; 9- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

A1: 1- Open; 2- Median; 3- Island; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk.

B1: X- walk; 1- Y 2-N 9-U

1st Harmful Event Loc.: 32

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 61- Flashing Beacon; 99- None

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Yes 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 88- Unk.

Primary: 05

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Driver Impaired: 1- Alcohol; 2- Drugs; 3- Alcohol & Drugs; 4- Medication; 5- Fatigue; 6- Illness; 7- Other; 8- None Apparent; 9- Unk.

ORIGINAL

D.P.S. USE ONLY: 10013438 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 11/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1633 | Arrived: 1641

Date: 02-13-2010 | Time: 1620 | County: 23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | Collision Location (Rt. # / Name): S - 385 | (0- Main 1- Alternate 2- Business 3- Spur 5- Connection 7- Business 8- Other) | Miles: 4.77 | Dir.: N E S W | Int'sect City or Town of: Greenville

Lane # / Dir.: 1 | Or: 1 | N E S W | Distance Offset: .04 Miles North East South West | Direction: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Thereof 564 | (0- Main 1- Alternate 2- Business 3- Spur 5- Connection 6- Connection 7- Business 8- Other) | Latitude: 34 49 25.40 | Longitude: 82 17 25.20

B-701014

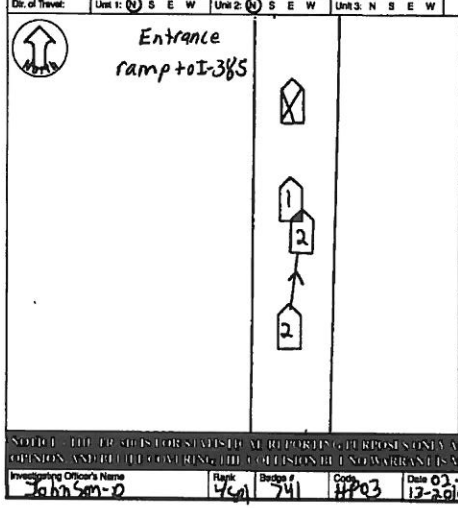
Driver/Pedestrian's Full Name: Harris-Latisa L | Unit #: 1 | Sex: F | Race: B | Street/R.F.D.: 1314 State Park Road | Birth Date: 03-03-1969 | City, State, & Zip: Greenville SC 29609 | State: SC | Driver's License #: 008917764 (D) | Insurance Company: State Farm | Year: 1999 | Body: CP | Vehicle Make: Toyota | VIN #: 2T1CF22PXC188183 | State: SC | Year: 2010 | License Plate #: DTT863 | Owner's D.L. #: 008917764 | Home Telephone: (864) 346-2798 | Owner's Full Name: Harris-Latisa L | Bus. Telephone: ( ) N/A | Street/R.F.D.: 1314 State Park Road | Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29609 | Estimated Speed: 0 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons #: N/A | Code | Summons # | Code | Towed By: N/A

B-701015

Driver/Pedestrian's Full Name: Byrd-Tabbatha M | Unit #: 2 | Sex: F | Race: B | Street/R.F.D.: 219 Clear Lake Drive | Birth Date: 12-03-1969 | City, State, & Zip: Simpsonville SC 29680 | State: SC | Driver's License #: 008706334 (D) | Insurance Company: State Farm | Year: 2001 | Body: SW | Vehicle Make: Chev | VIN #: 1GNEK13T61J180824 | State: SC | Year: 2010 | License Plate #: CGG263 | Owner's D.L. #: 008706334 | Home Telephone: (864) 787-6552 | Owner's Full Name: Byrd-Tabbatha M | Bus. Telephone: ( ) N/A | Street/R.F.D.: 219 Clear Lake Drive | Contributed To Collision: (Yes) No | City, State, & Zip: Simpsonville SC 29680 | Estimated Speed: 20 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons #: E325294 | Code: 48 | Summons # | Code: N/A | Towed By: N/A

B-701016

Driver/Pedestrian's Full Name | Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W | Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1,500	$ 1,500	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Address: N/A | State | Zip | Phone

Property Owner/Witness | Address: N/A | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Units 1 and 2 were traveling North on the entrance ramp to I-385 North from SC-146. Unit 1 stopped due to stopped traffic ahead and was struck in the rear by Unit 2. Unit 2 was following too closely.

FEB 1 9 2010

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Johnson-D | Rank: Mgt | Badge #: 741 | Code: HP03 | Date: 02-13-2010 | Reviewer's Name: A. H-wn | Rank: Sgt | Internet Agency Code: 406V0162O2

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	03031969	F	B	0	01	13	4	1	1	2			
1	03251997	M	B	0	03	13	4	1	1	2			
1	03251997	M	B	0	06	13	4	1	1	2			
2	03031969	F	B	0	01	13	1	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only: Helmet Used: 1- Yes 2- No. Head Injury: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch in On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police; 8- Other; 9- Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22	1	1	22	22	
23	2	2	23		
0	3	3	3		

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 08- Immersion; 09- Jackknife; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Left; 11- Ran off Road Right; 12- Spill (Non-Hazardous Mat.); 13- Separation of Units; 14- Motor Veh. Other Non-collision; 15- Motor Veh. (Parked); 16- Unk. Non-collision

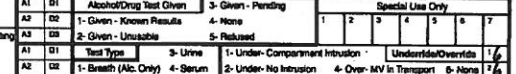
Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. In-Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Powered); 25- Pedalcycle

Collision: Fixed Object: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object; 45- Bridge Overhead Structure; 46- Bridge Pier or Abutment; 47- Bridge Parapet End; 48- Bridge Rail; 49- Guardrail Face; 50- Guardrail End; 51- Concrete Traffic Barrier; 52- Other Traffic Barrier; 53- Traffic Sign Post; 54- Impact Attenuator/Crash Cushion; 55- Utility Pole; 56- Other Post, Pole, Support; 57- Overhead Sign Support; 58- Other (Fixed Object); 59- Unk. Fixed Object; 60- Tree; 61- Boulder; 62- Work Zone Maint. Equipment; 63- Mail Box; 64- Other; 65- Unk.; 66- Fence; 67- Wall; 68- Building; 69- Impact Attenuator; 70- Other Fixed Object; 71- Unk. Fixed Object; 72- Culvert; 73- Ditch; 74- Embankment; 75- Guardrail Face; 76- Guardrail End; 77- Concrete Traffic Barrier; 78- Other Traffic Barrier; 79- Traffic Sign Post; 80- Overhead Sign Support; 81- Light/Luminaire Support; 82- Utility Pole; 83- Other Post, Pole, Support; 84- Other Fixed Object; 85- Unk. Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (same dir.); 41- Angle (left turn); 42- Angle (right turn); 43- Angle (unk.); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 16 | Most Deformed: 16 32



21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 98- Other; 99- Unk

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other; 31- Train; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian; 99- Unk.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 6- Farm Trailer; 7- Camper Trailer; 8- Trailer w/Boat; 5- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 6

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 2

0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 4

1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Event Loc.: 32

A: 1- Ditch 2- Shoulder 3- Median 4- Roadside 5- Roadway 6- Gutter 7- Sidewalk 8- Outside Trafficway 9- Unk.

B: X- walk: 1- Y 2-N 9-U; 1= Harmful

Road Character: 1

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 9- Unk.

Road Surface Condition: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminants; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 99

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 3

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 8- Unk.

Work Zone: 2

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: ----------

Work Zone Type: ----------

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Influence: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Severe Crosswinds; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Fog, Smog, Smoke; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- Shared Use Paths or Trail; 07- T-Intersection; 08- Traffic Circle; 09- Unk.; 10- Y-Intersection; 11- Nonjunction

Primary: 08

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Others: 67- Other Person Under the Influence

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Window/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

O.P.S. USE ONLY **10014231** | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01-2011) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1758 | Arrived 1805

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	In / Near / City or Town of:
02-05-2010	1748	23	5 385	4	E	Greenville

Lane # / Dir.: 3 / 3 (S) | Distance Offset: .1 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): From 146 / Woodruff Rd | ASRU code | MP/Grid

R.R. Id.: NA | From: Ramp Only: NE SW 2-Exit | To: NE SW 2-Exit | Second Intersection (Rt. # / Name): Toward 183 / Roper Mtn Rd | Latitude 34 49 3170 | Longitude 82 17 3430

B-322372 — Driver/Pedestrian's Full Name: Jones - Ricky John Jr.

Unit # 1 | Sex M | Race B | Street/R.F.D. 105 Sir Thopas PL | Birth Date 11-28-1968 | City, State, & Zip Piedmont SC 29673 | State SC | Driver's License # 008765400 (D) | Insurance Company Allstate | Year 1999 | Body 4S | Vehicle Make HYUN | VIN # KMHJF25F5XU878338 | State SC | Year 2010 | License Plate # ADC710 | Owner's D.L. # 008765400 (D)

Home Telephone (864) 314-7973 | Owner's Full Name Jones - Ricky John Jr. | Bus. Telephone (864) 346-1806 | Street/R.F.D. 105 Sir Thopas PL | Contributed To Collision: Yes (No) | City, State, & Zip Piedmont SC 29673

Estimated Speed 20 | Speed Limit 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)
Summons # NA | Code | Summons # NA | Code | Towed By Latimer's (OR)

B-322373 — Driver/Pedestrian's Full Name: Hamilton - Rosanne Gowan

Unit # 2 | Sex F | Race W | Street/R.F.D. 155 Riverplace unit 102 | Birth Date 05-25-1953 | City, State, & Zip Greenville SC 29601 | State SC | Driver's License # 101946957 (D) | Insurance Company USAA | Year 2007 | Body SU | Vehicle Make Kia | VIN # KNDJD736875707202 | State SC | Year 2010 | License Plate # ARZ212 | Owner's D.L. # 101946957 (D)

Home Telephone (864) 283-2327 | Owner's Full Name Hamilton - Rosanne Gowan | Bus. Telephone ( ) NONE | Street/R.F.D. 155 Riverplace unit 102 | Contributed To Collision: Yes (No) | City, State, & Zip Greenville SC 29601

Estimated Speed 10 | Speed Limit 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)
Summons # E326474 | Code 22 | Summons # NA | Code | Towed By Hawkins (OR)

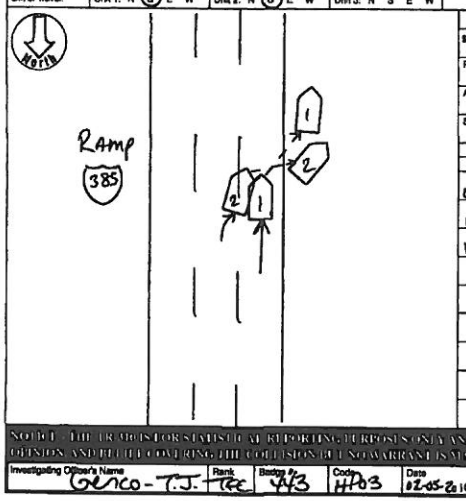
B-322374 — Driver/Pedestrian's Full Name: NA

Unit # NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name FEB 22 2010 | Bus. Telephone ( ) | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$2,500.00	$2,500.00	$ NA	$ NA	$ NA

Property Owner/Witness: NA | Property Owner/Witness: NA

Address | Address | State | Zip | Phone | State | Zip | Phone

Photos (Y/N) | Describe What Happened (Refer to Units by Number): Both units were traveling South on I-385. Both units exited the interstate to SC 146. Unit #2 changing lanes unlawfully, struck unit #1.

NOTICE - THE INFORMATION CONTAINED IN THIS REPORT IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Greco - T.J. | Rank: TFC | Badge #: 443 | Code: HP03 | Date: 02-05-2010 | Reviewer's Name: Summers SA | Badge: PELT | Internal Agency Code: 106V01363

Unit	Date of Birth	Sex	Race	INJ	Seat	Rstd	A.B.D.	Eject	Lat	Trap	Name	Street Address	Zip Code
1	11-28-1968	M	B	1	01	13	3	1	1	1	Driver of unit #1		
1	11-14-1986	F	B	1	03	13	3	1	1	1	Isles-Imani	55 Villa Rd Apt 339 Gville SC	29615
1	10-09-1969	F	B	1	06	13	3	1	1	1	Allen-Cheryl	55 Villa Rd Apt 339 Gville SC	29615
2	05-25-1953	F	W	0	01	13			1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskian Native or American Indian; O - Other; U - Unk.; W - Caucasian

Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Switch in On Position; 9- Switch in Off Position; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Motorcycle Only — Head Injury: 1-Yes 2-No; Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Pedestrian, Motor/Pedalcycle Only — Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown; By: 1- EMS 2- Police 8- Other 9-Unk.; 31- Helmet; 61- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular); 13- Other Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. On Roadway; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 88- Railway Veh.; 89- Work Zone Maint. Equip.; 90- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail End; 49- Guardrail Face; 50- Highway Traffic Sign Post; 51- Impact Attenuator/Crash Cushion; 52- Light/Luminaire Support; 53- Mail Box; 54- Median Barrier; 55- Pavement End; 56- Pole; 57- Traffic Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Utility Pole; 61- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed | Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 38- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 19- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 4

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unavailable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Urine; 2- Blood; 3- Other

Underride/Override: 6

Test Type: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV In Transport; 5- Over- Other Vehicle; 6- None; 8- Unk.

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 5- Not Applicable; 9- Unk.

Extent of Deformity: 3

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - On Grade; 5- Curve - Level; 6- Curve - Hillcrest

Road Surface Condition: 2- Dry; 3- Wet; 4- Slush; 5- Snow; 6- Contaminate; 7- Ice; 8- Other; 9- Unk.; 9- Water (Standing, etc.)

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 8- Dark (Street Lamp Lit)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-Junction; 99- Unk.

11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign

School Bus Involved: 3

Work Zone: 1- Yes 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present:

Primary Contributing Factors: 18

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 25- Other Improper Action; 19- Cell Phone; 99- Unk.

Others:

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 69- Other; 69- Unk.; 61- Glare

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10014342

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

Page # 01 / 1 — # Of Units: 1 — Amended - Attach Copy of Original Report — Corrected — Notified: 1571 — Arrived: 1557

Date: 01-04-2010 — Time: 1505 — County: 23 — Collision Location (Rt. # / Name): 385 — Miles: 1 — Dir.: N E S W — Jct.-Near City or Town of: Greenville

Lane # / Dir.: 01 N E S W — Distance Offset: 103 Feet — Direction: N E S W — 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

R.R. Id.: N/A — From: N E S W — Ramp Only — To: N E S W — 1- Entrance 2- Exit — 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt. # / Name): 146 — (1) Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other — ASRU code — MP/Gnd

Second Intersection (Rt. # / Name): 107 — (1) Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other — Latitude: 34°48.5250 — Longitude: 82°17.2070

A-619408 — Driver/Pedestrian's Full Name: Fulley- Chris A.

Unit #: 1 — Sex: M — Race: B — Street: 116 Ry [sic] St

Birth Date: 01-22-1970 — City, State, & Zip: Laurens SC 29360

State: SC — Driver's License #: 0074438250 — Insurance Company: Self Insured

Year: 2006 — Body: TK — Vehicle Make: FORD — VIN #: 1FDXF45526DB17187

State: AZ — Year: 2001 — License Plate #: AD15200 — Owner's D.L. #: N/A

Home Telephone: 864-591-1318 — Owner's Full Name: Unaul of Arizona

Bus. Telephone: N/A — Street: PO Box 21508

Contributed To Collision: Yes / No — City, State, & Zip: Phoenix AZ 85036

Estimated Speed: 65 — Speed Limit: 65 — C.D.L. Req: Yes (No) — TIB 5 Req: Yes (No) — Alc/Drg info (see back): Yes (No)

Summons #: E321723 — Code: 21 — Summons #: E321724 — Code: 96 — Towed By: Hawkins (Ford)

A-619409 — Driver/Pedestrian's Full Name:

Unit #: N/A — Sex — Race — Street

Birth Date — City, State, & Zip

State — Driver's License # — Insurance Company

Year — Body — Vehicle Make — VIN #

Home Telephone — Owner's Full Name

Bus. Telephone — Street

Contributed To Collision: Yes / No — City, State, & Zip

Estimated Speed — Speed Limit — C.D.L. Req: Yes No — TIB 5 Req: Yes No — Alc/Drg info (see back): Yes No

Summons # — Code — Summons # — Code — Towed By

A-619410 — Driver/Pedestrian's Full Name:

Unit #: N/A — Sex — Race — Street

Birth Date — City, State, & Zip

State — Driver's License # — Insurance Company

Year — Body — Vehicle Make — VIN #

Home Telephone — Owner's Full Name

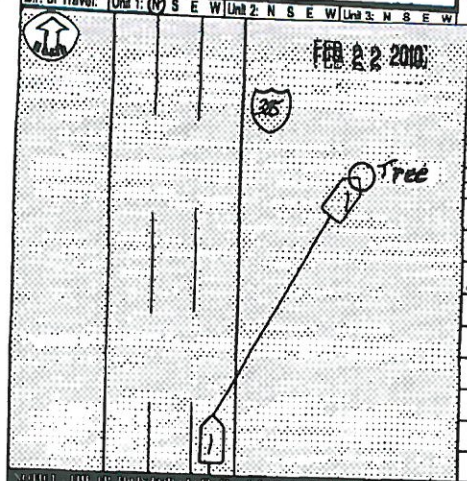
Bus. Telephone — Street

Contributed To Collision: Yes / No — City, State, & Zip

Estimated Speed — Speed Limit — C.D.L. Req: Yes No — TIB 5 Req: Yes No — Alc/Drg info (see back): Yes No

Summons # — Code — Summons # — Code — Towed By

Dir. of Travel: Unit 1: (N) S E W — Unit 2: N S E W — Unit 3: N S E W



FEB 22 2010

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 39000	$ N/A	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A — Property Owner/Witness: N/A

Address — Address

State — Zip — Phone — State — Zip — Phone

Photos — Describe What Happened (Refer to Units by Number)

Y (N) Unit #1 was travelling West on I-385. Unit #1, driving too fast for conditions, ran off the roadway and struck a tree.

NOTICE: THE DISCLOSURE OF THIS ACCIDENT REPORT TO PERSONS WHO ARE NOT INVOLVED IN THE ACCIDENT IS RESTRICTED TO THOSE PERSONS AND ENTITIES SPECIFIED IN SECTION 56-5-1270 OF THE SOUTH CAROLINA CODE OF LAWS AS AMENDED. ANY OTHER USE OR RELEASE OF INFORMATION CONTAINED IN THIS REPORT IS PROHIBITED AND MAY SUBJECT THE RELEASING AGENCY TO LIABILITY UNDER THE PROVISIONS OF THE DRIVER'S PRIVACY PROTECTION ACT, 18 U.S.C. 2721 ET SEQ.

Investigating Officer's Name: Hayes- TF — Rank: Sgt — Badge #: 837 — Code: HP03 — Date: 02-04-2010 — Reviewer's Name: Baylor- T. J. — Rank: CPL. — Internal Agency Code: 1006V013293

Unit	Date of Birth	Sex	Race	DU	Seat	R/SD	A.B.D.	Eject	L/U	Trap	Name	Street Address	Zip Code
1	01-22-1970	M	B	1	01	13	13	1	1	1	Driver (Unit #1)		
1	00-00-0000	M	B	0	03	13	13	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 — 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nonhauling); 51- Other Unenclosed Area (nonhauling); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 81- Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk. — b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: a) 1- Yes 2- No 3- Unknown — b) By 1- EMS 2- Police 8- Other 9- Unk.

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Intersect; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill from Vehicle; 13- Struck Object; 14- Other Non-collision; 15- Unk. Non-collision

Sequence of Events

1st Harmful	2nd Harmful	3rd Harmful	Most Harmful
10	10	60	60

Collision Not Fixed: 27- Pedestrian; 28- Railway Van; 29- Work Zone Maint. Equip; 30- Animal (Deer Only); 31- Animal (All Other); 32- Motor Veh. (In Transport); 33- Motor Veh. (Stopped); 34- Motor Veh. (Other Roadway); 35- Motor Veh. (Parked); 36- Unk. Motor Vehicle; 37- Pedalcycle

Collision Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Bridge Parapet End; 50- Bridge Pier or Abutment; 51- Bridge Rail; 52- Culvert; 53- Curb; 54- Ditch; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Wire Strung Low; 64- Work Zone Maint. Vehicle; 65- Unk. Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area — 1st Deformed — Most Deformed



21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 89- Unk.

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 19- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Tractor w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 0- None/Minor; 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underide/Overide: 16

Extent of Deformity: 3

Trafficway: 3

1st Harmful Event Loc: 6

Road Character: 1

Road Surface Condition: 1

Traffic Control Type: 31

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 7- Dark (No lights); 8- Dark (Street Lamp Not Lit)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-junction; 99- Unk.

Primary Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 62- Obstruction; 63- Weather Cond; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others: 1- Yes 2- No Work Zone: 2

Work Zone Location: ---------

Work Zone Type: ---------

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

School Bus Involved: 3

1- Yes 2- No Workers Present:

ORIGINAL

D.P.S. USE ONLY **10014934** | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 6-2010) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1550 | Arrived 1600

Date	Time	County	Collision Location (Rt. # / Name)	Mile Marker	Dir.	Near City or Town of:
12-06-2010	1540	23	385	1	N E S W	Greenville

Lane # / Dir.: 3 Of 3 N E S W | Distance Offset: .06 Feet N E S W | Direction: 3 | Base Intersection (Rt. # / Name) From: 146 | ASRU code | MP/Grid

R.R. Id.: NA | Ramp Only From: N E S W 2 | To: N E S W 5 | Second Intersection (Rt. # / Name) Toward: 385 | Latitude 34° 49' 3160 | Longitude 82° 17' 3420

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | D- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other

B-322765 — Driver/Pedestrian's Full Name: Bozard - James Raymond, III

Unit # 1 | Sex M | Race W | Street/R.F.D. 707 Chandler Rd, Apt. 727 | Birth Date 01-05-1990 | City, State, & Zip Greer, SC 29651

State SC | Driver's License # 100782871 (D) | Insurance Company Hartford

Year 2008 | Body 4dr | Vehicle Make Kia | VIN # KNAFE121585551740

State SC | Year 2010 | License Plate # DWL 335 | Owner's D.L. # NA

Home Telephone (803) 719-6890 | Owner's Full Name Bozard - James Raymond, Jr.

Bus. Telephone (864) 314-0339 | Street/R.F.D. 208 Barnevelder Dr.

Contributed To Collision: Yes (No) | City, State, & Zip Lexington, SC 29072

Estimated Speed 0 | Speed Limit 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # NA | Code | Summons # NA | Code | Towed By NA

B-322766 — Driver/Pedestrian's Full Name: Lattimore - Michael Ray

Unit # 2 | Sex M | Race B | Street/R.F.D. 211 Forrester Creek Way | Birth Date 07-11-1992 | City, State, & Zip Greenville, SC 29609

State SC | Driver's License # 10792111 (D) | Insurance Company State Farm

Year 2007 | Body 4dr | Vehicle Make Toyt | VIN # JTNBE46K173056135

State SC | Year 2010 | License Plate # CWH 526 | Owner's D.L. # NA

Home Telephone (864) 676-0740 | Owner's Full Name Marketplace Staffing

Bus. Telephone (864) 561-5750 | Street/R.F.D. 496 Garlington Rd.

Contributed To Collision: Yes (No) | City, State, & Zip Greenville, SC 29615

Estimated Speed 30 | Speed Limit 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # E411303 | Code 21 | Summons # NA | Code | Towed By NA

B-322767 — Driver/Pedestrian's Full Name

Unit # NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

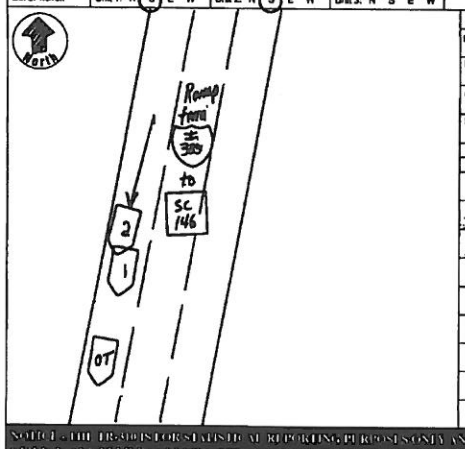
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1,200	$ 1,200	$	$ NA	$ NA

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photos (H) | Describe What Happened (Refer to Units by Number)

Veh.'s 1 and 2 were traveling south on I385 ramp to SC 146. Driver 1 stopped for other traffic. Driver 2, driving too fast for conditions, struck veh. 1 in the rear.

FEB 23 2011

SOLELY THE BASIS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RECITATION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Stanchick - A.R. | Rank: HCpl | Badge #: 29 | Code: 14P03 | Date: 12-06-2010 | Reviewer's Name: Dawson | Rank: Sgt | Internal Agency Code: 1060013838

Unit	Date of Birth	Sex	Race	BAI	Seat	RSD	A.S.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	01-05-1990	M	W	0	01	13	4	3	1	1	2		
2	07-11-1992	M	B	0	01	13	4	3	1	1	2		

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 89- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Unknown. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1- Yes; 2- No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Matl.); 13- Other Non-Collision; 14- Unk. Non-Collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Support; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail Face; 49- Guardrail End; 50- Highway Traffic Sign Post; 51- Impact Attenuator/Crash Cushion; 52- Other Post, Pole or Support; 53- Other Traffic Barrier; 54- Tree; 55- Utility Pole; 56- Work Zone Maint. Equipment; 57- Wall, Building, Tunnel; 58- Other Fixed Object; 59- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 60- Sideswipe Same Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed | Deformed Area

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 29- Unk. (Hit and Run Only); 31- Train; 32- Animal Drawn Veh.; 33- Animal (Ridden); 61- School Bus; 62- Passenger Bus; 99- Other

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Underride/Override: 0- None/Minor; 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- None; 6- Over- Other Vehicle; 9- Unk.

Extent of Deformity: 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 5- Not Applicable

Trafficway: 1- Straight - Level; 2- Straight - Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Character: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Road Surface Condition

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

1st Harmful Event Loc.: 1- Y 2- N 9- U

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (No Lights); 6- Dark (Street Lamp Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk. Work Zone Location; Work Zone Type; 1- Yes 2- No Workers Present:

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Yes 2- No

Primary: 05

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 68- Under the Influ.; 69- Animal in Road; 81- Glare; 82- Obstruction; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 85- Other; 89- Unk.

Others:

ORIGINAL

O.P.S. USE ONLY: 10020769 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM | # Of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1830 | Arrived: 1900

Date: 02-12-2010 | Time: 1815 | County: 23 | (1)-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Collision Location (Rt. # / Name): 385 | (1)-Main 2-Alternate 3-Spur 6-Connection 7-Business | Miles: 0.5 | Dir.: N E S W | Int'l Near City or Town of: Greenville

Lane # / Dir.: 2 S | Dist. Offset: 0.10 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | (1)-Main 2-Alternate 3-Spur 6-Connection 7-Business 8-Other 9-Other | ASRU code | MP/Gnd | Latitude: 34°49.2020" | Longitude: 82°17.2830"

R.R. No.: N/A | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4-Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 107

Z-329563 | Driver/Pedestrian's Full Name: Standing In Roadway (Disabled)

Unit #: 1 | Sex | Race | Street | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company: Progressive

Year: 1999 | Body: BA | Vehicle Make: NISS | VIN #: 3N1AB41D6XL070299

State: SC | Year: 2010 | License Plate #: ERX 808 | Owner's D.L. #: 08473491

Home Telephone | Owner's Full Name: Trammell-Mayn Jenene

Bus. Telephone: 3847271611 | Street: 261 West Lane # 604

Contributed To Collision: Yes (No) | City, State, & Zip: Clemson, SC 29631

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # | Code | Summons # | Code | Towed By: N/A

Z-329564 | Driver/Pedestrian's Full Name: UNKNOWN

Unit #: 2 | Sex: M | Race: W | Street | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body: Su | Vehicle Make: CHEV | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name: UNKNOWN

Bus. Telephone | Street

Contributed To Collision: Yes (No) | City, State, & Zip

Estimated Speed: 30 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # | Code | Summons # | Code | Towed By: N/A

Z-329565 | Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name: MAY

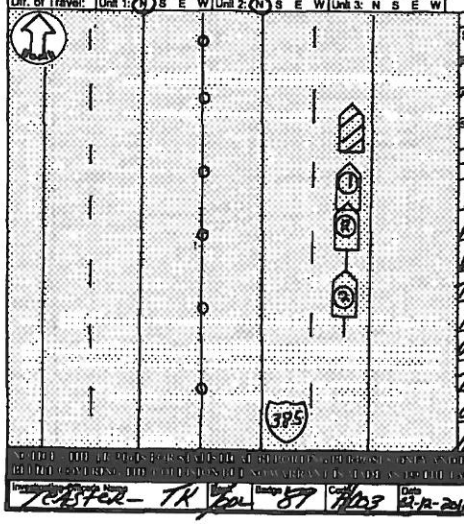
Bus. Telephone | Street

Contributed To Collision: Yes (No) | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 700.00	$ 100.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number):

Unit #1 was standing, (Disabled) in the Roadway due to being involved in A previous Collision, (Z329561). Unit #1 was in lane #2 of Interstate 385 Northbound. The driver of Unit #2 driving too fast for Conditions (Snow) Slid into the Rear of Unit #1 with the Front of Unit #2. The driver of Unit #2 gave the driver of Unit #1 his name but At the of Report his identity has not been VARIFied.

NOTICE: THE INFORMATION CONTAINED IN THIS REPORT IS FOR THE EXCLUSIVE USE OF THE SOUTH CAROLINA DEPARTMENT OF PUBLIC SAFETY AND OTHER AUTHORIZED INDIVIDUALS AND AGENCIES. IT IS NOT TO BE DISCLOSED TO ANY UNAUTHORIZED PERSON OR AGENCY.

Investigator's Name & Agency: TRASTER - TR | Dept: 200 | Badge: 87 | Code: TR03 | Date: 02-12-2010 | Reviewed By's Name: Bradley - JH | Rank: Sgt. | Badge: 87 | Code: 015772

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran
1	10-21-1978	F	B	C	01	13	3	1	1	2
2	UNKNOWN	M	W	O	01	99	9	1	1	9

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; O - Other; U - Unk; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unprotected Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk AIA

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 11- Child Safety Seat; 88- Other; 99- Unk; Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 81- Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 7-Not Applicable; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facilty: 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Sequence of Events

Unit	Event 1	Event 2	Event 3	Event 4	Most Harmful
1	23				23
2	23				23

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 18- Other Non-collision; 19- Unk Non-collision

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pompet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Other Post, Pole Support, Etc.; 57- Overhead Sign Support; 58- Other (Post, Pole Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↘↙); 42- Angle (→|←); 43- Angle (↗↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed | Most Deformed

Z1- Pedestrian: 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 85- Other; 89- Unk.

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 89- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Cods: 04- Ambulance; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Underide/Overide: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Test Results: 1- Under; 2- Over; 3- None/Minor; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Extent of Deformity: 1- Functional Damage; 2- Disabling Damage; 9- Unk.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other; 9- Unk. | 3

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest | 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 9- Unk | 3

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 88- None; 99- Unk | 31

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk | 5

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights) | 7

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-junction; 99- Unk | 13

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk. | 3

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area | 2

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

Work Zone Type

Workers Present: 1- Yes 2- No

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscurred (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (I.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk; 66- Under the Influence; 67- Other Person Under Influence

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 68- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

ORIGINAL

D.P.S. USE ONLY: 10021305 | Page # 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT (DPS-CR-0200) | # Of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1830 | Arrived: 1900

Date: 02-12-2010 | Time: 1815 | County: 23 | Collision Location (Rt. # / Name): 385 | 0-Main 6-Connector 2-Alternate 7-Business 5-Spur | Miles: 0.50 | Dir.: (S) W | Near City or Town of: Greenville

Lane # / Dir.: 2 / S | Distance Offset: 0.10 | Direction: (S) W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid

R.R.Id.: N/A | From: S W | Ramp Only: 1 - Entrance 2 - Exit | To: S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 107 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | Latitude: 34°49'2020" | Longitude: 82°17'2830"

Z-329560

Driver/Pedestrian's Full Name: Wamsley-Michael A.

Unit #: 1 | Sex: M | Race: W | Street: 200 Montague Dr.

Birth Date: 10-16-1951 | City, State, & Zip: Easley, SC. 29640

State: SC | Driver's License #: 00 795 8507 (D) | Insurance Company: USAA

Year: 2001 | Body: SUV | Vehicle Make: Chev | VIN #: 1GNFK26379J105411

State: SC | Year: 2010 | License Plate #: EAM 905 | Owner's D.L. #: 00 795 8507 (D)

Home Telephone: 864 313 8360 | Owner's Full Name: Wamsley-Michael A.

Bus. Telephone: 864 276 4069 | Street: 200 Montague Dr.

Contributed To Collision: Yes | City, State, & Zip: Easley, SC. 29640

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes | T/S S Req: Yes | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

Z-329561

Driver/Pedestrian's Full Name: GAMBRELL-KARYN Jenene

Unit #: 2 | Sex: F | Race: B | Street: 201 West Lane #604

Birth Date: 10-21-1978 | City, State, & Zip: Clemson, S.C. 29631

State: SC | Driver's License #: 00 797 3491 (D) | Insurance Company: Progressive

Year: 1999 | Body: PICK | Vehicle Make: DODG | VIN #: 3N1AB41D6XL070299

State: SC | Year: 2010 | License Plate #: ERZ808 | Owner's D.L. #: 00 797 3491 (D)

Home Telephone: 864 221 1928 | Owner's Full Name: GAMBRELL-KARYN Jenene

Bus. Telephone: 864 221 1611 | Street: 201 West Lane #604

Contributed To Collision: (Yes) No | City, State, & Zip: Clemson, S.C. 29631

Estimated Speed: 40 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: E327680 | Code | Summons #: N/A | Code | Towed By: M.U.S. Towing

Z-329562

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

Bus. Telephone | Street

Contributed To Collision: Yes (No) | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

MAR 09 2010

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$200.00	$1,200.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Damage Would Happened (Refer to Units by Number): Unit #1 is Unit #2, is Unit #2, were traveling North on Interstate 385 during a period of snow. Near the twenty-six mile marker, the driver of Unit #1 stopped due to an unknown Vehicle stopped ahead of him. The driver of Unit #2, driving too fast for Conditions, slid into the rear of Unit #1 with the front of Unit #2.

NOTICE: THE DRIVER OF ANY VEHICLE INVOLVED IN A MOTOR VEHICLE COLLISION ON THE PUBLIC ROADS OF SOUTH CAROLINA RESULTING IN INJURY TO OR DEATH OF ANY PERSON OR TOTAL PROPERTY DAMAGE TO THE APPARENT EXTENT OF $1,000.00 OR MORE SHALL REPORT THE COLLISION TO THE DEPARTMENT OF PUBLIC SAFETY WITHIN FIFTEEN DAYS.

Investigating Officer / Title: Tolbert-TK | Badge: 89 | Date: 02-12-2010 | Reviewer's Name: Sanderson-D.C. | Rank | Agency: | Internal Agency Only: 10600815679

Unit	Date of Birth	Sex	Race	BAI	Seat	RSD	A.S.D.	Eject	LAI	Trim	Name	Street Address	Zip Code
1	10-16-1951	M	W	0	01	13	4-3	1	1	2			
1	07-20-1982	F	W	0	03	13	4-3	1	1	2			
1	03-24-1959	F	W	0	04	18	7	1	1	2			
1	10-18-2004	M	W	0	06	21	7	1	1	2			
1	01-23-1999	M	W	0	07	13	7	1	1	2			
2	10-21-1978	F	B	0	01	13	4-3	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, I - Aleutian Native or American Indian, W - Caucasian, H - Hispanic, O - Other, U - Unk

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-incapacitating, 3- Incapacitating, 4- Fatal | b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Towing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontowing), 51- Other Unenclosed Area (nontowing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk /NA

Air Bag Deployment / Switch: 1-Deployed Front, 2-Deployed Side, 3-Deployed Both, 4-Not Deployed, 7-Not Applicable, 9-Deployment Unk. | a) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown | b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App, 9- Unk

Head Injury: 1-Yes, 2-No

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Transported to Medical Facility: a) 1- Yes, 2- No, 3- Unknown | b) By: 1- EMS 2- Police 8- Other 9- Unk.

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 20- Child Safety Seat, 88- Other, 99- Unk | Pedestrian, Motor-Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 61- Lighting

Sequence of Events

1st: 22	2nd: 23	3rd: 23	4th	Most Harmful: 22	

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/RollOver, 09- Ran off Road Left, 10- Ran off Road Right

Collision Not Fixed: 11- Separation of Units, 12- Ran off Road Right, 13- Ran off Road Left, 14- Other Non-collision, 15- Pedalcycle, 16- Railway Vehicle, 17- Animal (Deer Only), 18- Animal (All Other), 19- Motor Veh (In Transport), 20- Motor Veh (Stopped), 21- Motor Veh (Parked), 22- Unk Moveable Object

Collision Fixed Object: 23- Impact Attenuator, 24- Bridge Pier or Abutment, 25- Bridge Rail, 26- Culvert, 27- Curb, 28- Ditch, 29- Embankment, 30- Guardrail Face, 31- Guardrail End, 32- Highway Traffic Sign Post, 33- Light/Luminaire Support, 34- Mail Box, 35- Other Post, Pole, Support, 36- Median Barrier, 37- Median Cross Over, 38- Other Fixed Object, 39- Overhead Sign Support, 40- Pavement Surface Irregularity, 41- Pedestrian, 42- Pedalcycle, 43- Railway Vehicle, 44- Work Zone Maint. Equip., 45- Other Movable Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12

1st Deformed: 7 | 2 | 1

Most Deformed: 7 | 2 | 1

Vehicle Type: 01- Automobile, 02- Pickup Truck, 03- Truck Tractor, 04- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh., 29- Animal (Ridden), 31- Train, 81- School Bus, 82- Passenger Bus, 88- Other, 41- Pedestrian, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact: (Vehicle) 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping in Traffic, 10- Turning Left, 11- Turning Right, 12- Other | (Non-motorist) 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 99- Unk., 27- Working

Alc Test Results: A1-, A2-, A3-

Alcohol / Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Special Use Only: 1 2 3 4 5 6 7

1- Under Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 6- None, 9- Unk. | Underride/Override: 1 6

Extent of Deformity: 0 | 0- None/Minor, 1- Functional Damage, 2- Severe/Totaled, 3- Disabling Damage, 4- Not Applicable, 9- Unk. 3

Traffic Control: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 03- Stop Sign, 04- Yield Sign, 05- Officer or Flagman, 06- Other, 07- School Zone Sign, 08- Other Warning Sign, 09- Unk.

Traffic Control: 31

Traffic Control Type: 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Sign, 51- Flashing Beacon, 98- None, 99- Unk.

Traffic Control: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk. | School Bus Involved: 3

Traffic Control: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area | 1- Yes 2- No | Work Zone: 2

Work Zone Location: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 5- Other, 9- Unk.

Work Zone Type: 1- Yes 2- No Workers Present:

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest: 1

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Sand, Mud, Dirt or Snow, 7- Water (Standing, etc.), 8- Other, 9- Unk.: 3

1st Harmful Event Loc: 1-Y 2-H 9-U: 5 | 1st Harmful Event: 22

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Soil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.: 5

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No lights): 7

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.: 13

Primary Contributing Factors: 03 | 63

Driver: 01- Disregarded Signs, Signals, Etc, 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Operating Defective Equipment, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 26- Other Improper Action, 29-Unk

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (Ice, Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (Ie., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R of W, 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc, 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 66- Under the Influence, 67- Other Person Under Influence, 58- Other, 59- Unk.

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond, 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10022828 | Page # 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/01/2010) | # Of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0725 | Arrived: 0810

Date: 02-26-2010 | Time: 0710 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): 5 385 | 0- Main 1- Alternate 5- Spur 6- Connection 7- Business | Miles: 4.78 | Dir.: N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: # 1 | Dir. N E S W | Distance Offset: .04 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): 146 | 0- Main 1- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): 564 | Latitude: 34° 48' 25.20" | Longitude: 82° 17' 25.00"

Z-328063

Driver/Pedestrian's Full Name: Cuervo-Claudia m

Unit #: 1 | Sex: F | Race: H | Street: 119 Hickory Drive | Birth Date: 10-1960 | City, State, & Zip: Simpsonville SC 29681

State: SC | Driver's License #: 0077449928 (DL) | Insurance Company: State Farm

Year: 2001 | Body: 4S | Vehicle Make: Nissan | VIN #: 5N1ED28T01C524054

State: SC | Year: 2001 | License Plate #: BMF365 | Owner's D.L. #: N/A

Home Telephone: (864) 335-0050 | Owner's Full Name: Cuervo-Gabriel

Bus. Telephone: ( ) N/A | Street: 119 Hickory Drive

Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville SC 29681

Estimated Speed: Speed: 0 | Speed Limit: 65 | C.D.L. Req: Yes (No) | Code: N/A | T/S 9 Req: Yes (No) | Summons #: N/A | Alc/Drg Info (see back): Yes (No) | Code: N/A | Towed By: N/A

Z-328064

Driver/Pedestrian's Full Name: Krein-Scott R

Unit #: 2 | Sex: m | Race: W | Street: 415 South Pine Street | Birth Date: 18-1969 | City, State, & Zip: Walhalla SC 29691

State: SC | Driver's License #: 00870625 8 (EM) | Insurance Company: SouthEastern

Year: 2000 | Body: 4D | Vehicle Make: Ford | VIN #: 1FMPU16L5YLB73397

State: SC | Year: Perm | License Plate #: CG62163 | Owner's D.L. #: N/A

Home Telephone: (864) 638-4200 | Owner's Full Name: County of Oconee

Bus. Telephone: ( ) N/A | Street: 415 South Pine Street

Contributed To Collision: (Yes) No | City, State, & Zip: Walhalla SC 29691

Estimated Speed: Speed: 15 | Speed Limit: 65 | C.D.L. Req: Yes (No) | Summons #: E33308121 | Code: N/A | T/S 9 Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Towed By: N/A

Z-328065

Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

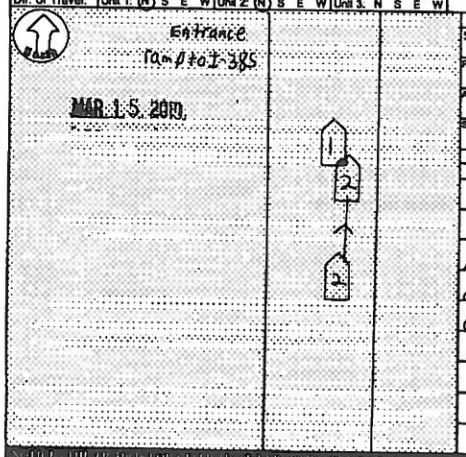
Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street:

Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S 9 Req: Yes No | Alc/Drg Info (see back): Yes No | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1,000.00	$ 500.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: | Address: N/A | State | Zip | Phone | Property Owner/Witness: | Address: N/A | State | Zip | Phone

Photo: Y(N) | Describe What Happened (Refer to Units by Number):

Unit 1 was stopped on the Entrance ramp to I-385 Northbound From SC-146. Unit 2 were traveling North on the same ramp. The driver of Unit 2 was driving too fast for conditions and inattentive. Unit 2 struck Unit 1 in the rear.

SUBJECT TO THE PENALTIES PRESCRIBED BY LAW, I CERTIFY THAT THE INFORMATION CONTAINED IN THIS REPORT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Investigating Officer's Name: Johnson-O | Rank: Cpl | Badge #: 741 | Code: H903 | Date: 03-26-2010 | Reviewer's Name: M.H.Wm | Rank: Sgt | Internal Agency Code: 106V020360

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	10101960	F	H	0	01	13	N	8	1	1			
2	11181969	m	W	0	01	13	N	8	1	1			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Worn: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trasing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrasing); 51- Other Unenclosed Area (nontrasing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt and Lap Belt; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; a) 1- Switch in On Position; 3- No Switch; b) 2- Switch in Off Position; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facilty: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 81- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh (In Transport); 23- Motor Veh (Stopped); 24- Motor Veh (Other Roadway); 25- Motor Veh (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip.; 35- Other Movable Object; 39- Unk. Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Pres, Pole Support, Etc.); 59- Other (Wall, Building, Tunnel Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 65- Other; 69- Unk.

Unit | Lane # | Event 1 | Event 2 | Most Harmful Event | 1st Harmful Event: 11- Separation of Units; 12- Spill (Non-Motorist Veh.); 18- Other Non-collision; 19- Unk. Non-collision

Manner of Collision (Struck Veh.): 00- Not Col. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↘↙); 42- Angle (→|←); 43- Angle (↗↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 6 12; Most Deformed: 6 12

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other Motorbike; 38- Animal Drawn Veh; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only); Other

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Two Trailers; F- Other

Alc / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alc Test Results: A1- ; A2- ; A3-

Special Use Only: 1 2 3 4 5 6 7

Undernide/Override: 6

Extent of Deformity: 2

Action Prior to Impact: 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 98- Unk.

(Vehicle) (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Trafficway: 4 | 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other

Event Loc.: 1" Harmful: 5R

Road Character: 1 | 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1 | 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk

Traffic Control Type: 13 | 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 98- None; 99- Unk.

Weather Condition: 1 | 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1 | 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 7- Dark (No lights); 8- Dark (Street Lamp Not Lit)

School Bus Involved: 8 | 1- Yes Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1 | 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure

Work Zone Type: 8- Other; 9- Unk.

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

1- Yes 2- No Workers Present:

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Others:

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10029133 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Not/fied: 1900 | Arrived: 1900

Date: 02/19/2010 | Time: 1900 | County: 23 | Collision Location (Rt. # / Name): 385 | Miles: 2 | Dir.: S | Near City or Town of: Greenville

Lane # / Dir.: 2 4 S | Distance Offset: .01 Miles Feet | Direction: S | From: 146 | To: 107 | ASRU code: | MP/Grid: | Latitude: 34° 48 59.5 | Longitude: 82° 17 25.00 | R.R. Id: N/A

B-328687 Driver/Pedestrian's Full Name: Goodnough-Edward-S
Unit # 1 | Sex: M | Race: W | Street/R.F.D.: 206 Barley Run. | Birth Date: 02-04-1987 | City, State, & Zip: Simpsonville, SC, 29681
State: SC | Driver's License #: 00854808 1 (D) | Insurance Company: State Farm
Year: 1995 | Body: 3S | Vehicle Make: merc | VIN #: 4M2DV11W9SDJ89546
State: SC | Year: 2010 | License Plate #: A24157 | Owner's D.L. #: 00854808 1 (D)
Home Telephone: 864 962 - 9208 | Owner's Full Name: Goodnough-Edward-S
Bus. Telephone: (864) 989-6387 | Street/R.F.D.: 206 Barley Run.
Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville, SC, 29681
Estimated Speed: 60 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)
Summons #: N/A | Code | Summons # | Code | Towed By: N/A

B-328688 Driver/Pedestrian's Full Name: Wilson-Maurice-Randolph Jr
Unit # 2 | Sex: M | Race: B | Street/R.F.D.: 815 E. Butler Rd. Apt. 413 | Birth Date: 07-09-1978 | City, State, & Zip: Greenville, SC, 29607
State: SC | Driver's License #: 00777 6381 (D) | Insurance Company: Geico
Year: 2001 | Body: CV | Vehicle Make: Porch | VIN #: WP0CB29821U662071
State: - | Year: - | License Plate #: NONE | Owner's D.L. #: 00777 6381 (D)
Home Telephone: (864) 676 - 9686 | Owner's Full Name: Wilson-Maurice-Randolph Jr.
Bus. Telephone: (864) 517 - 0009 | Street/R.F.D.: 815 E. Butler Rd. Apt 413
Contributed To Collision: Yes (No) | City, State, & Zip: Greenville, SC, 29607
Estimated Speed: 80 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)
Summons #: E414363 | Code: 51 | Summons #: N/A | Code | Towed By: J.R. Towing (OR)

B-328689 Driver/Pedestrian's Full Name
Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W

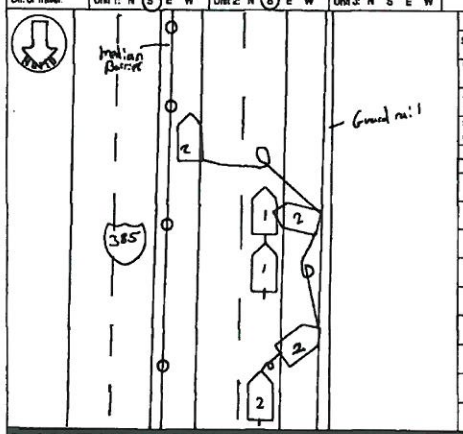
Home Telephone: ( ) | Owner's Full Name: MAR 29 2010
Bus. Telephone: ( ) | Street/R.F.D.
Contributed To Collision: Yes No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 4000	$	$ 1000	$ N/A

Property Owner/Witness: SCDOT | Property Owner/Witness
Address: 13 Shady Dan Rd., Greenville | Address
State: SC | Zip: 29611 | Phone: 864-241-1234 | State | Zip | Phone

Physic. (Y) (N) | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling South on I-385. Unit #2 traveling south on I-385 driving Reckless, lost control of the vehicle spinning into the guardrail then spinning into the passenger side of unit #1 and coming to rest in the grass median.



NOTICE: THE ID QUESTION STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION. IT IS NO WARRANTY IS MADE AS TO ITS TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name: Grambrell - J.G. | Rank: Trp | Badge #: 257 | Code: HP03 | Date: 02/19/2010 | Reviewer's Name: Taylor - T.J. | Rank: CPL. | Internal Agency Code: 10GV0279S6

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran
1	02-04-1987	M	W	0	01	13	4	1	1	2
2	07-09-1978	M	B	0	01	13	4	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.
a) Injury Status: 0 - Not Injured; 1 - Possible; 2 - Non-incapacitating; 3 - Incapacitating; 4 - Fatal
b) Motorcycle Only
Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09
20 - Pedestrian; 30 - Trailing Unit; 40 - Bus or Van (4th row or Higher); 50 - Other Enclosed Area (nontrailing); 51 - Other Unenclosed Area (nontrailing); 60 - Sleeper of Cab; 70 - Riding on Unit Exterior; 80 - Lap; 99 - Unk./NA
Restraint/Safety Device: 00 - None Used; 11 - Shoulder Belt Only; 12 - Lap Belt Only; 13 - Shoulder & Lap Belt; 21 - Child Safety Seat; 88 - Other; 99 - Unk.
Pedestrian, Motorist/Pedalcycle Only: 31 - Helmet; 51 - Reflective Clothing; 41 - Protective Pads; 81 - Lighting
Air Bag Deployment / Switch: 1 - Deployed Front; 2 - Deployed Side; 3 - Deployed Both; 4 - Not Deployed; 7 - Not Applicable; 5 - Switch in On Position; 6 - Switch in Off Position; 9 - Unknown
Ejection: 1 - Not Ejected; 2 - Part. Ejected; 3 - Tot. Ejected; 7 - Not App.; 9 - Unk.
Head Injury: 1 - Yes; 2 - No
Location After Impact: 1 - Not Trapped; 2 - Extricated (Mechanical Means); 3 - Freed (non-mech.); 4 - Not Applicable; 9 - Unknown
a) Transported to Medical Facility: 1 - Yes; 2 - No; 3 - Unknown
b) By: 1 - EMS; 2 - Police; 9 - Other / Unk.
Sequence of Events
Manner of Collision (Struck Veh.): 00 - Not Coll. W/Motor Veh.; 10 - Rear End; 20 - Head On; 30 - Rear-to-Rear; 41 - Angle; 42 - Angle; 43 - Angle; 50 - Sideswipe Same Dir.; 60 - Sideswipe Opposite Dir.; 70 - Backed Into; 99 - Unknown
Non-Collision: 04 - Equipment Failure; 05 - Fire/Explosion; 06 - Immersion; 07 - Jackknife; 08 - Overturn/Rollover; 09 - Ran off Road Left; 10 - Ran off Road Right; 11 - Separation of Units; 12 - Skid (No Wheels/Veh.); 13 - Slide (No Wheels/Veh.); 14 - Other Non-collision; 15 - Pedalcycle; 16 - Railway Vehicle; 17 - Animal (Rider Only); 18 - Animal (Driven); 19 - Motor Vehicle (Stopped); 20 - Motor Vehicle (Other Roadway); 21 - Motor Vehicle (Parked); 22 - Work Zone Maint. Equip.; 23 - Other Moveable Object; 24 - Impact Attenuator; 25 - Bridge Pier or Abutment; 26 - Bridge Parapet; 27 - Bridge Rail; 28 - Culvert; 29 - Guardrail Face; 30 - Guardrail End; 31 - Concrete Traffic Barrier; 32 - Other Traffic Barrier; 33 - Tree; 34 - Utility Pole; 35 - Other Fixed Object; 36 - Unk. Moveable Object; 37 - Unk. Fixed Object
Collision: Not Fixed: 20 - Animal (Deer Only); 21 - Animal (All Other); 22 - Motor Veh. on Transport; 23 - Motor Veh. (Stopped); 24 - Motor Veh. (Other Roadway); 25 - Motor Veh. (Parked); 26 - Pedalcycle; 27 - Pedestrian; 28 - Railway Veh.; 29 - Work Zone Maint. Equip.; 99 - Unk.
Collision: Fixed Object: 40 - Bridge Overhead Structure; 41 - Bridge Parapet End; 42 - Bridge Pier or Abutment; 43 - Bridge Rail; 44 - Culvert; 45 - Curb; 46 - Ditch; 47 - Embankment; 48 - Equipment; 49 - Fence; 50 - Guardrail End; 51 - Guardrail Face; 52 - Highway Traffic Sign Post; 53 - Impact Attenuator/Crash Cushion; 54 - Light/Luminaire Support; 55 - Mail Box; 56 - Median Barrier; 57 - Overhead Sign Support; 58 - Other (Post, Pole, Support, Etc.); 59 - Other (Wall, Building, Tunnel, Etc.); 60 - Shrubbery; 61 - Traffic Sign Post; 62 - Traffic Signal Support; 63 - Tree; 64 - Utility Pole; 65 - Work Zone Mains, Equipment; 66 - Wall; 99 - Unk.
Vehicle Types: 01 - Automobile; 02 - Pickup/Truck; 03 - Truck Tractor; 04 - Other Truck; 15 - Full Size Van; 16 - Mini Van; 17 - Sport Utility; 25 - Motorcycle; 26 - Other Motorbike; 27 - Pedalcycle; 28 - Animal (Driven Veh.); 29 - Animal (Ridden); 30 - Pedestrian; 31 - Train; 61 - School Bus; 62 - Passenger Bus; 99 - Other; Unk. (Hit and Run Only)
Vehicle Use Code: 01 - Personal; 02 - Driver Training; 03 - Construction/Maint.; 04 - Ambulance; 05 - Military; 06 - Transport Passengers; 07 - Transport Property; 08 - Farm Use; 09 - Wrecker or Tow; 10 - Police; 11 - Government; 12 - Fire Fighting; 13 - Logging; 18 - Other; 41 - Pedestrian
Vehicle Attachment: 1 - None; 2 - Mobile Home; 3 - Semi-Trailer; 4 - Utility Trailer; 5 - Farm Trailer; 6 - Trailer w/Boat; 7 - Camper Trailer; 8 - Towed Motor Vehicle; 9 - Petroleum Tanker; A - Cowboy Trailer; B - Autocarrier Trailer; C - Other Tanker; D - Flat Bed; E - Twin Trailers; F - Other
Action Prior to Impact (Vehicle): 01 - Backing; 02 - Changing Lanes; 03 - Entering Traffic Lane; 04 - Leaving Traffic Lane; 05 - Making U-turn; 06 - Movements Essentially Straight Ahead; 07 - Overtaking/Passing; 08 - Parked; 09 - Slowing or Stopped in Traffic; 10 - Turning Left; 11 - Turning Right; 99 - Unk.
Action Prior to Impact (Non-motorist): 21 - Approaching/Leaving Vehicle; 22 - Entering/Crossing Location; 23 - Playing/Working on Vehicle; 24 - Pushing Vehicle; 25 - Standing; 26 - Walking, Playing, Cycling; 27 - Working; 28 - Other
Alc Test Results: A1 - ; A2 - ; A3 - ; Alcohol/Drug Test Given: 1 - Given - Known Results; 2 - Given - Unusable; 3 - Given - Pending; 4 - None; 5 - Refused
Test Type: 1 - Breath (Alc. Only); 2 - Blood; 3 - Urine; 8 - Other
Drug Results: 1 - Amphetamines; 2 - Cocaine; 3 - Marijuana; 4 - Opiates; 5 - PCP; 8 - Other; 9 - None/Minor
Special Use Only: 1 - Under-Compartment Intrusion; 2 - Under- No Intrusion; 3 - Under- Unknown; Underride/Override; 4 - Over- MV In Transport; 5 - Over- Other Vehicle; 8 - None; 9 - Unk.
Extent of Deformity: 0 - None; 1 - Functional Damage; 2 - Disabling Damage; 3 - Severe/Totaled; 4 - Not Applicable; 9 - Unk.
Trafficway: 1 - Two-way, Not Divided; 2 - Two-way, Divided, Unprotected Median; 3 - Two-way, Divided, Barrier; 4 - One-way; 8 - Other; 9 - Unk.
Bl. X - walk; 1st Harmful Event Loc.
Road Character: 1 - Straight - Level; 2 - Straight - On Grade; 3 - Straight - Hillcrest; 4 - Curve - Level; 5 - Curve - On Grade; 6 - Curve - Hillcrest; 8 - Other; 9 - Unk.
Road Surface Condition: 1 - Dry; 2 - Wet; 3 - Snow; 4 - Slush; 5 - Ice; 6 - Contaminants; 7 - Water (Standing, etc.); 8 - Other; 9 - Unk.
Traffic Control Type: 01 - Stop and Go Light; 02 - Flashing Traffic Signal; 11 - RR (X-bucks, Lights & Gates); 12 - RR (X-bucks & Lights); 13 - RR (X-bucks Only); 21 - Officer or Flagman; 22 - Oncoming Emergency Vehicle; 31 - Pavement Markings (only); 41 - Stop Sign; 42 - School Zone Sign; 43 - Yield Sign; 44 - Work Zone; 45 - Other Warning Signs; 51 - Flashing Beacon; 99 - None; 99 - Unk.
School Bus Involved: 1 - Yes, Directly; 2 - Yes, Indirectly; 8 - No; 9 - Unk.
Work Zone: 1 - Before 1st Sign; 2 - Advanced Warning Area; 3 - Transition Area; 4 - Activity Area; 5 - Termination Area
Work Zone Location: 1 - Shoulder/Median Work; 2 - Lane Shift/Crossover; 3 - Intermittent/Moving Work; 4 - Lane Closure; 8 - Other; 9 - Unk.
Work Zone Type
Workers Present: 1 - Yes; 2 - No
Weather Condition: 1 - Clear (no adverse conditions); 2 - Rain; 3 - Cloudy; 4 - Sleet, Hail; 5 - Snow; 6 - Fog, Smog, Smoke; 7 - Blowing Sand, Oil, Dirt or Snow; 8 - Severe Crosswinds; 9 - Unk.
Light Condition: 1 - Daylight; 2 - Dawn; 3 - Dusk; 4 - Dark (Lighting Unspecified); 5 - Dark (Street Lights On); 7 - Dark (No Lights); 8 - Dark (Street Lamp Not Lit); 9 - Unk.
Junction Type: 01 - Crossover; 02 - Driveway; 03 - Five/More Points; 04 - Four-way Intersection; 05 - Railway Grade Crossing; 07 - Shared Use Paths or Trail; 08 - T-Intersection; 09 - Traffic Circle; 12 - Y-Intersection; 13 - Nonjunction; 99 - Unk.
Primary Contributing Factors: Driver: 01 - Disregarded Signs, Signals, Etc.; 02 - Distracted/Inattention; 03 - Driving Too Fast for Conditions; 04 - Exceeded Authorized Speed Limit; 05 - Failed to Yield Right of Way; 06 - Ran off Road; 07 - Fatigued/Asleep; 08 - Followed Too Closely; 09 - Made an Improper Turn; 10 - Medical Related; 11 - Aggressive Operation of Vehicle; 12 - Over-correcting/Over-steering; 13 - Swerving to Avoiding Object; 14 - Wrong Side or Wrong Way; 15 - Under the Influence; 16 - Cell Phone; 17 - Vision Obscured (Within Unit); 18 - Improper Lane Usage/Change; 28 - Other Improper Action; 29 - Unk.
Roadway: 30 - Debris; 31 - Non-highway Work; 32 - Obstruction in Roadway; 33 - Road Surface Condition (i.e., Wet); 34 - Rut, Holes, Bumps; 35 - Shoulders (None, Low, Soft, High); 36 - Traffic Control Device (i.e., Missing); 37 - Work Zone (Constr./Maint./Utility); 38 - Worn, Travel-Polished Surface; 48 - Other; 49 - Unk.
Non-Motorist: 50 - Inattentive; 51 - Lying &/or Illegally in Roadway; 52 - Failure to Yield R. of W.; 53 - Not Visible (Dark Clothing); 54 - Disregard Signs, Signals, Etc.; 55 - Improper Crossing; 56 - Darting; 57 - Wrong Side of Road; 58 - Other; 59 - Unk.; 87 - Other Person Under the Influence
Environmental: 60 - Obstruction; 61 - Glare; 62 - Animal in Road; 63 - Weather Cond.; 68 - Other; 69 - Unk.
Vehicle Defect: 70 - Brakes; 71 - Steering; 72 - Power Plant; 73 - Tires/Wheel; 74 - Lights; 75 - Signals; 76 - Windows/Shield; 77 - Restraint System; 78 - Truck Coupling; 79 - Cargo; 80 - Fuel System; 88 - Other; 89 - Unk.

m3 - wrote date as 02/19, corrected to 03/19

ORIGINAL

NOV 04 2010

D.P.S. USE ONLY: 10120649 | Page # 1 of | SOUTH CAROLINA TRAFFIC COLLISION REPORT (TR-310) (Rev. 2010) | # of Units: 2 | Amended - Attach Copy of Original Report: Corrected | Notified: 0830 | Arrived: 0850

Date: 10-8-2010 | Time: 0830 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name): 385 | 0- Main 1- Alternate 2- Spur 6- Connection 7- Business | Miles: 1.0 | Dir.: N E S W | Mile/ Near City or Town of: Greenville

Lane # / Dir.: 1 3 | OL: N E S W | Distance Offset: .50 (Miles / Feet) | Direction: N E S W | Base Intersection (Rt. # / Name): 85 | From | ASRU code | MP/Grid | Latitude: 35° 49' 30.20 | Longitude: 82° 17' 33.30

R.R. Id.: N/A | From: Ramp Only N E 1- Entrance 2- Exit S W | To: N E 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other S W | Second Intersection (Rt. # / Name): 146 | Toward | 0- Main 1- Alternate 2- Spur 6- Connection 7- Business 9- Other

B-229900

Driver/Pedestrian's Full Name: BROCK- RANDALL WAYNE JR

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 270 Lynn Rd | Birth Date: 01-04-1985 | City, State, & Zip: Taylors SC 29687

State: SC | Driver's License #: 011405579 (D) | Insurance Company: State Farm

Year: 1999 | Body: VAN | Vehicle Make: CHEV | VIN #: 2GHWL52M9X9209633

State: SC | Year: 2010 | License Plate #: 934YCC | Owner's D.L. #: N/A

Home Telephone: 864 349-7656 | Owner's Full Name: RETZER- SHARON DENISE

Bus. Telephone: 864 349-7656 | Street/R.F.D.: 307 old Stagecoach Rd

Contributed To Collision: No | City, State, & Zip: EASLEY SC 29642

Estimated Speed: 15 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E077166Y | Code: 21 | Summons #: N/A | Code | Towed By: N/A

B-229901

Driver/Pedestrian's Full Name: HEATH- JASON MICHAEL

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 1904 Lake Cunningham Rd | Birth Date: 05-20-1977 | City, State, & Zip: Great SC 29651

State: SC | Driver's License #: 00411 4073 (D) | Insurance Company: State Farm

Year: 2000 | Body: PKT | Vehicle Make: CHEV | VIN #: 1GCCS19945Y 163343

State: SC | Year: 2010 | License Plate #: CFR549 | Owner's D.L. #: 00411 4073 (D)

Home Telephone: 864 517-8815 | Owner's Full Name: HEATH- JASON MICHAEL

Bus. Telephone: 864 517-8815 | Street/R.F.D.: 1904 Lake Cunningham Rd

Contributed To Collision: Yes | City, State, & Zip: Great SC 29651

Estimated Speed: 0 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: CCA

B-229902

Driver/Pedestrian's Full Name: N/A

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

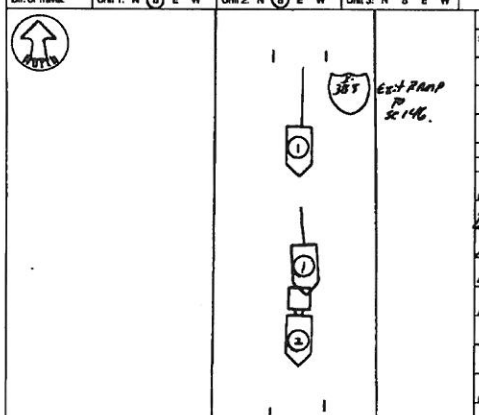
Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 1500	$	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit # 1 was traveling, and unit # 2 had stopped for traffic I-385 southbound ramp to SC 146. Driver # 2 driving too fast for conditions, Struck # 2 trailer of trailer pushing it forward into back of truck with trailer front.

unit # 1- 082174231540A

unit # 2- 193406426 40A

NOTICE - THE INFORMATION ON THIS ACCIDENT REPORT, PURPOSELY AND BY STATUTE, IS NOT TO BE CONSTRUED AS AN OPINION AND IS NOT ADMISSIBLE AS EVIDENCE IN ANY ACTION FOR DAMAGES ARISING OUT OF THE ACCIDENT. (SECTION 56-5-1270, 1976 CODE OF LAWS, AS AMENDED)

Investigating Officer's Name: Moon- T. J. | Badge #: 796 | Badge #: 7996 | Code: 7903 | Date: 10-8-2010 | Reviewer's Name: Gaylord - T. J. | Badge #: CPL. | Agency Code: 10615684

Unit	Date of Birth	Sex	Race	INJ	Seat	AIRB	A.B.D.	Eject	EXT	Trap	Name	Street Address	Zip Code
1	01-04-1985	M	W	0	01	13	99	1	1	U			
1	08-03-1990	F	W	0	03	13	99	1	1	U			
2	05-20-1977	M	W	3	01	13	99	1	1	U			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 11- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: 1- Yes; 2- No; 9- Unknown; By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 81- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Overturn/Rollover; 02- Fire/Explosion; 03- Immersion; 05- Jackknife; 06- Cargo/Equip Loss or Shift; 07- Separation of Units; 08- Ran off Road Right; 09- Ran off Road Left; 10- Cross Median; 11- Cross Center Line; 12- Downhill Runaway; 13- Other Non-Collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. In Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. Other Roadway; 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Median Barrier; 56- Mail Box; 57- Overhead Sign Support; 58- Pole (Post, Pole, Support, Etc.); 59- Other (Post, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Event 1	Event 2	Event 3	Event 4	Most Harmful Event	1st Harmful Event
23	1			23	12
22	2			22	
	3				

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↘|↙); 42- Angle (↦|↤); 43- Angle (↗|↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 1 2 3; Most Deformed: 1 2 3

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 51- Train; 38- Animal Drawn Veh.; 39- Animal (Ridden); 98- Other; 99- Unk. (Hit and Run Only); 01- School Bus; 02- Passenger Bus

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1-; A2-; A3-

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Blowing Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Cloudy; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present: 1- Yes 2- No

Intersection: 1st Harmful Event: 1- Y 2-N 9-U; Event Loc.: 1- Ent. Ramp 2- Main 3- Exit Ramp 4- Parallel 5- Roadway 6- Shoulder 7- Crossover Trafficway 8- Unk.; Rt. At- traffic: 1- Yes 2- No 9- Unk.

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 69- Other; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

Others: 67- Other Person Under the Influence

ORIGINAL

D.P.S. USE ONLY: 10031217 | Page 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. C 2001 | # of Units: 3 | Amended - Attach Copy of Original Report | Corrected | Notified: 1801 | Arrived: 1829

Date: 03-26-2010 | Time: 1759 | County: 23 (1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County) | Collision Location (Rt. # / Name): 385 | (Main 2-Alternate 5-Spur 6-Connection 7-Business) | Miles: .1 | Dir.: NE SW | Just Near City or Town of: Greenville

Lane # / Dir.: 2 | Dir.: 4 NE 3 W | Distance Offset: .01 Miles N E S W | Direction: 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 8-Other | Base Intersection (Rt. # / Name): 146 | (Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other) | ASRU code: | MP/Grid:

R.R. Id.: N/A | From: NE SW | Ramp Only: 1-Entrance 2-Exit | To: NE SW | (Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 8-Other) | Second Intersection (Rt. # / Name): 85 | Toward | Latitude: 34492680 | Longitude: 82773120

B-700417

Driver/Pedestrian's Full Name: Durham-Jeremy-Douglas

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 106 Indian Trail Rd

Birth Date: 10-29-1981 | City, State, & Zip: Seneca SC 29672

State: SC | Driver's License #: 00783232 2 (D) | Insurance Company: Selective Way

Year: 1995 | Body: 4S | Vehicle Make: Ford | VIN #: 1FALP52U58A230612

State: SC | Year: Perm | License Plate #: CG49653 | Owner's D.L. #: N/A

Home Telephone: (864)324-1561 | Owner's Full Name: Oconee County School District

Bus. Telephone: (864)973-4551 | Street/R.F.D.: 414 South Pine Street

Contributed To Collision: Yes (No) | City, State, & Zip: Walhalla SC 29691

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons #: N/A | Code | Towed By: N/A

B-700418

Driver/Pedestrian's Full Name: Erickson-Scott-A

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 116 Wild Meadow DR.

Birth Date: 07-13-1970 | City, State, & Zip: Simpsonville SC 29681

State: SC | Driver's License #: 0115 39071 (D) | Insurance Company: Zurich American

Year: 2007 | Body: 4S | Vehicle Make: Ford | VIN #: 1FAHP24176G158883

State: SC | Year: 2010 | License Plate #: BMS-426 | Owner's D.L. #: N/A

Home Telephone: (864)406-2072 | Owner's Full Name: Wheels LT Nationwide Mutual

Bus. Telephone: (864)288-0244 | Street/R.F.D.: 206 Harness TRL.

Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville SC 29681

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons #: N/A | Code | Towed By: N/A

B-700419

Driver/Pedestrian's Full Name: Elliott-Regina-Campbell

Unit #: 3 | Sex: F | Race: W | Street/R.F.D.: 340 Winter Berry DR.

Birth Date: 02-17-1974 | City, State, & Zip: Athens GA. 30606

State: GA | Driver's License #: 053242160 (C) | Insurance Company: Maryland Casualty

Year: 1991 | Body: TK | Vehicle Make: Chev | VIN #: 1GBHC33R2VF001343

Dir. of Travel: Unit 1: N (E) W | Unit 2: N (S) E W | Unit 3: N (S) E W

Estimated Speed: 45 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons #: N/A | Code | Summons #: E408663 21 | Code | Towed By: N/A

Home Telephone: (706)201-7509 | Owner's Full Name: Precision Construction Erectors

Bus. Telephone: (706)371-7479 | Street/R.F.D.: 779 Whiting Rd.

Contributed To Collision: Yes (No) | City, State, & Zip: Lavonia GA. 30553

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$400.00	$3000.00	$2900.00	$ N/A	$ N/A

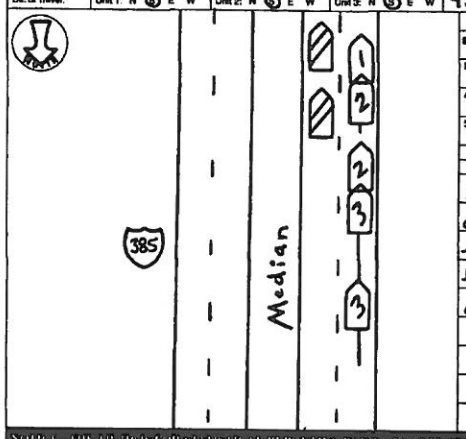
Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

Unit# 1 and 2 were both stopped in traffic headed South on interstate 385, Unit# 3 was traveling South on interstate 385, too fast for conditions, struck unit# 2, and causeing unit# 2 to hit unit# 1

APR 02 2010



NOTE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name: Frayre-JV | Rank: TFC | Badge #: 826 | Code: HP03 | Date: 03-26-2010 | Reviewer's Name: Boyd-T.J. | Rank: CPL | Internal Agency Code: 10GV0304 84

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	10-29-1981	M	W	0	01	13	43	1	1	2			
2	07-13-1970	M	W	0	02	13	43	1	1	2			
1	04-26-1994	M	W	0	06	13	7	1	1	2			
2	07-13-1970	M	W	0	01	13	43	1	1	2			
3	02-17-1974	F	W	0	01	13	43	1	1	2			
3	10-27-1985	M	W	0	02	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No; Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Seating Loc.: D1 D2 D3 D4 D5 D6 D7 D8 D9

Seating Loc.: 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Moped/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 81- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Switch In On Position; 9- Switch In Off Position; 0- Unknown; a) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unk.

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 03- Cross Median/Center Line; 03- Down/Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife

Collision: Not Fixed: 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Mat.); 13- Other Non-Collision; 19- Unk. Non-Collision; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway Object); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 39- Other Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Fence; 49- Guardrail End; 50- Guardrail Face; 51- Highway Traffic Sign Post; 52- Impact Attenuator/Crash Cushion; 53- Mail Box; 54- Light/Luminaire Support; 55- Median Barrier; 56- Pole/Support; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Event 1: 22 | Event 2: 22 | Event 3: 23 | Most Harmful: 22 | 1st Event

Manner of Collision (Struck Veh.): 00- Not Col. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal; 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1-; A2-; A3-

Test Type: 1- Urine; 2- Breath (Alc. Only); 3- Blood; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Underride/Override: 1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 5- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 5- Other

B: X- walk; V- Vehicle; 1- Y 2-N 9-U

1st Harmful Event Loc.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary: 03

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 20- Debris; 30- Non-Highway Work; 31- Obstruction in Roadway; 32- Road Surface Condition (i.e., Wet); 33- Shoulders (None, Low, Soft, High); 34- Rut, Holes, Bumps; 35- Traffic Control Device (i.e., Missing); 36- Work Zone (Constr./Maint./Utility); 37- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

ORIGINAL

D.P.S. USE ONLY: 10033135 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # Of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1705 | Arrived: 1720

Date: 03-23-2010 | Time: 1700 | County: 23 | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Collision Location (Rt. # / Name): 385 | 0-Main 1-Alternate 2-Alternate 3-Spur 5-Spur 6-Connection 7-Business | Miles: 1.80 | Dir.: N E S W | Int/ Near City or Town of: Greenville

Lane # / Dir.: 1 N | Distance Offset: 15.00 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): 14 | 0-Main 1-Alternate 2-Alternate 3-Spur 5-Connector 7-Business 9-Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: Ramp Only N E S W | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): 85 | Toward | Latitude: 34° 45' 26.70" | Longitude: 82° 17' 25.80"

X- 897736 | Driver/Pedestrian's Full Name: Chapman - Donald Conray

Unit #: 1 | Sex: M | Race: W | Street: 13 Goodhaven Dr.
Birth Date: 05-21-1963 | City, State, & Zip: Greenville SC 29609
State: SC | Driver's License #: 005[illegible] (D) | Insurance Company: Nationwide
Year: 2005 | Body: 4Dr | Vehicle Make: Ford | VIN #: 1FMCU[illegible]
State: SC | Year: 2011 | License Plate #: DVD 407 | Owner's D.L. #: 005[illegible] (D)
Home Telephone: (864) 752-5115 | Owner's Full Name: Chapman - Donald Conray
Bus. Telephone: N/A | Street: 13 Goodhaven Dr.
Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29609
Estimated Speed: 00 | Speed Limit: 25 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)
Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

X- 897737 | Driver/Pedestrian's Full Name: Willis - Theron Daniel

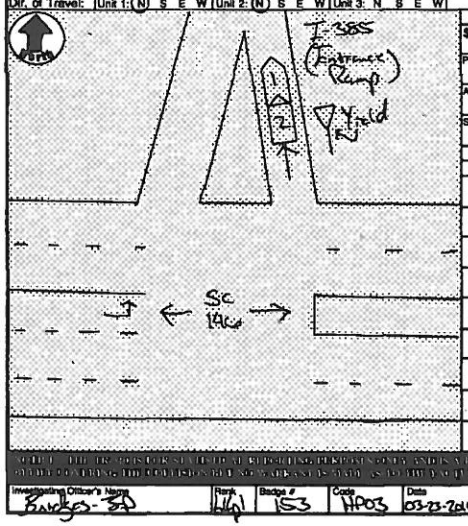
Unit #: 2 | Sex: M | Race: W | Street: 913 Keller Rd.
Birth Date: 05-27-1989 | City, State, & Zip: Taylors SC 29687
State: SC | Driver's License #: 100[illegible] (D) | Insurance Company: State Farm
Year: 1992 | Body: 4Dr | Vehicle Make: Olds | VIN #: 1G3AL[illegible]
State: SC | Year: 2010 | License Plate #: FCT [illegible] | Owner's D.L. #: N/A
Home Telephone: (864) 553-3409 | Owner's Full Name: Willis - Brenda Hebron
Bus. Telephone: N/A | Street: 913 Keller Rd.
Contributed To Collision: (Yes) No | City, State, & Zip: Taylors SC 29687
Estimated Speed: 00 | Speed Limit: 20 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)
Summons #: E331[illegible] | Code: 21 | Summons #: N/A | Code | Towed By: N/A

X- 897738 | Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street
Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company:
Year | Body | Vehicle Make | VIN #
Home Telephone | Owner's Full Name
Bus. Telephone | Street
Contributed To Collision: Yes No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

APR 05 2010

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500.00	$ 500.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Property Owner/Witness
Address | Address
State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and 2 traveling north on Interstate 385 entrance ramp from SC 14. Unit #1 stopped due to oncoming traffic and was struck in the rear by Unit #2 who was traveling too fast for conditions.

APR 07 2010

Investigating Officer's Name: Burgess - 30 | Rank: Cpl | Badge #: 153 | Code: HP03 | Date: 03-23-2010 | Reviewer's Name: [illegible] | Rank: Cpl | Internal Agency Code: 10GV02933Ce

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	05-21-1963	M	W	O	01	13	4	3	L	L	2		
2	05-27-1989	M	W	D	01	13	4	3	L	L	2		

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk
a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal
b) Motorcycle Only: Head Injury: 1-Yes 2-No
Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09
Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 04- Child Safety Seat; 05- Other; 99- Unk
Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; 1- Switch on; 2- Switch off; 3- No Switch; 9- Unknown
Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.
Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown
a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown
b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.
Pedestrian, Motor/Pedalcycle Only: 51- Helmet; 52- Reflective Clothing; 61- Protective Pads; 62- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 05- Fire/Explosion; 06- Immersion; 07- Jackknife
Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Traffic Control Device; 31- Other Movable Object; 32- Other Non-collision; 33- Unk. Movable Object; 34- Unk. Non-collision
Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 69- Work Zone Maint. Equipment; 69- Other; 99- Unk.
1st Harmful: 22
Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (>14°); 41- Angle (<14°); 42- Angle (>14-); 43- Angle (<14-); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown
1st / Most Deformed Area: 1st Deformed; Most Deformed
Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Motorized Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)
Vehicle Use Codes: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian
Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Auto-carrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other
Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused
Special Use Only
Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine
Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other
Alc Test Results: A1-; A2-; A3-
Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.
Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working
Roadway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other; Trafficway: 4
1- Dirt; 2- Gravel; 3- Median; 4- Roadside; 5- Shoulder; 6- Outside Traffic-way; 7- Sidewalk; 8- Other; 9- Unk
Lt. X-walk: N; 1st Harmful Event Loc: 01
1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; Road Character: 1
1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk; Road Surface Condition: 1
Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk
Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)
Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Officer or Flagman; 04- Oncoming Emergency Vehicle; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Pavement Markings (only); 31- Yield Sign; 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk: 43
Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-junction; 99- Unk: 13
School Bus Involved: 3
Work Zone: 1- Yes 2- No: 2
Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area
Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.
Workers Present: 1- Yes 2- No
Primary Contributing Factors: 03
Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.
Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.
Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 57- Wrong Side of Road; 65- Under the Influence; 67- Other Person Under Influence
Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond; 68- Other; 69- Unk.
Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

O.P.S. USE ONLY
10040177

Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM
TR-310 Rev. 01 2001

# of Units: 2

Amended - Attach Copy of Original Report | Corrected

Notified: 1237 | Arrived: 1258

Date: 04-08-2010 | Time: 1220 | County: 23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County)

Collision Location (Rt. # / Name): 0- Main 1- Alternate 2- Spur 6- Connection 7- Business: 385

Miles: 4.76 | Dir: S W (E) | In / Near City or Town of: GREENVILLE

Lane # / Dir.: 1 | S W

Distance Offset: 39 Feet (N E S W) | Direction: S (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other)

Base Intersection (Rt. # / Name): From 146

Second Intersection (Rt. # / Name): Toward 85

ASRU code | MPO/Grid

Latitude: 34 49 44.30

Longitude: 82 17 43.30

R.R. Id.: NA

From: Ramp Only (N E S W) 1- Entrance 2- Exit | To: (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other)

B-330871

Driver/Pedestrian's Full Name: Rogers- Susan B

Unit #: 1 | Sex: F | Race: W

Street/R.F.D.: 303 Marsh Ck Dr

Birth Date: 02-07-1967 | City, State, & Zip: Mauldin Sc 29662

State: Sc | Driver's License #: 0047470648 (D) | Insurance Company: State Farm

Year: 2002 | Body: SUV | Vehicle Make: Lexus | VIN #: JTJGF10U620147227

State: Sc | Year: 2010 | License Plate #: FAN725 | Owner's D.L. #: 47470068 (D)

Home Telephone: (864) 704-5164 | Owner's Full Name: Rogers- Susan B.

Bus. Telephone: (864) 704-5164 | Street/R.F.D.: 303 Marsh Ck Dr

Contributed To Collision: Yes (No) | City, State, & Zip: Mauldin Sc 29662

Estimated Speed: 05 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: NA | Code | Summons #: NA | Code | Towed By: NA

B-330872

Driver/Pedestrian's Full Name: Jones- Robert T

Unit #: 2 | Sex: M | Race: W

Street/R.F.D.: 470 Fern Lake Rd

Birth Date: 05-11-1967 | City, State, & Zip: Boiling Springs Sc 29316

State: Sc | Driver's License #: 102115797 (D) | Insurance Company: USAA

Year: 2004 | Body: Ytn | Vehicle Make: Nsks | VIN #: WWWAK73C96E867179

State: Sc | Year: 2010 | License Plate #: RTN-485 | Owner's D.L. #: 102115797 (D)

Home Telephone: (864) 426-5968 | Owner's Full Name: Jones- Jennifer

Bus. Telephone: (864) 426-5768 | Street/R.F.D.: 470 Fern Lake Rd

Contributed To Collision: Yes (No) | City, State, & Zip: Boiling Springs Sc 29316

Estimated Speed: 15 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: F472889 | Code: 4B | Summons #: NA | Code | Towed By: NA

B-330873

Driver/Pedestrian's Full Name

Unit #: NA | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

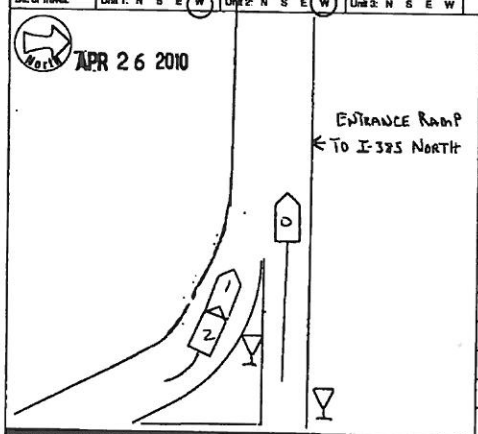
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E (W) | Unit 2: N S E (W) | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 900	$ 1700	$ NA	$ NA	$ NA

Property Owner/Witness: NA | Property Owner/Witness: NA

Address | Address

State | Zip | Phone | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

UNITS #1 & 2 WERE TRAVELING WBT ON THE ENTRANCE RAMP TO I-385 NORTH FROM SC 146, HOWEVER AS UNIT #1 STOPPED FOR OTHER TRAFFIC IT WAS STRUCK IN THE RR BY UNIT #2, WHICH WAS FOLLOWING TOO CLOSELY.

NOTICE: THE INFORMATION CONTAINED IN THIS REPORT IS FOR OFFICIAL PURPOSES ONLY AND IS SUBJECT TO REVISION. THE OFFICER'S OPINION AND FINDINGS CONTAINED IN THIS REPORT ARE NOT WARRANTS AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name: Griffin - J.D. | Rank: LCpl | Badge #: 104 | Code: H203 | Date: 04-09-2010 | Reviewer's Name: Bradley - JM | Rank: Cpl | Internal Agency Code: 106V075399

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	02-07-1967	F	W	C	01	13	4	1	1	2			
2	05-11-1967	M	W	B	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander | B - African American | I - Alaskan Native or American Indian | W - Caucasian | H - Hispanic | O - Other | U - Unk.

a) Injury Status: 0- Not Injured | 1- Possible | 2- Non-Incapacitating | 3- Incapacitating | 4- Fatal

b) Motorcycle Only: Helmet Used (1- Yes 2- No 3- Unknown)

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian | 30- Trailing Unit | 40- Bus or Van (4th row or Higher) | 50- Other Enclosed Area (nontrailing) | 51- Other Unenclosed Area (nontrailing) | 60- Sleeper of Cab | 70- Riding on Unit Exterior | 80- Lap | 99- Unk./NA

Restraint/Safety Device: 00- None Used | 11- Shoulder Belt Only | 12- Lap Belt Only | 13- Shoulder & Lap Belt | 99- Unk. | 21- Child Safety Seat | 88- Other

Pedestrian, Motor/Pedalcycle Only: 31- Helmet | 41- Protective Pads | 51- Reflective Clothing | 81- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front | 2- Deployed Side | 3- Deployed Both | 4- Not Deployed | 7- Not Applicable | 9- Deployment Unk. b) 1- Switch In On Position | 2- Switch In Off Position | 3- No Switch | 9- Unknown

Ejection: 1- Not Ejected | 2- Part. Ejected | 3- Tot. Ejected | 7- Not App. | 9- Unk.

Head Injury: 1-Yes | 2-No

Location After Impact: 1- Not Trapped | 2- Extricated (Mechanical Means) | 3- Freed (non-mech.) | 4- Not Applicable | 9- Unknown

a) Transported to Medical Facility: 1- Yes | 2- No | 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22				22	22
22				22	

Non-Collision: 01- Cargo/Equip Loss or Shift | 03- Cross Median/Center Line | 04- Equipment Failure | 05- Fire/Explosion | 06- Immersion | 07- Jackknife | 08- Overturn/Rollover | 09- Ran off Road Left | 10- Ran off Road Right | 11- Separation of Units | 12- Spill (Non-Flammable Veh.) | 13- Spill (Flammable Veh.) | 14- Other Non-collision | 15- Unk. Non-collision

Collision: Not Fixed: 19- Animal (Dom/Wild) | 20- Animal (Deer Only) | 21- Animal (All Other) | 22- Motor Veh. (In Transport) | 23- Motor Veh. (Stopped) | 24- Motor Veh. (Other Roadway) | 25- Motor Veh. (Parked) | 26- Pedalcycle | 27- Pedestrian | 28- Railway Veh. | 29- Work Zone Maint. Equip. | 30- Other Movable Object | 31- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure | 41- Bridge Pier or Support | 42- Bridge Rail | 43- Bridge Pier or Abutment | 44- Culvert | 45- Curb | 46- Ditch | 47- Embankment | 48- Equipment | 49- Fence | 50- Guardrail End | 51- Guardrail Face | 52- Highway Traffic Sign Post | 53- Impact Attenuator/Crash Cushion | 54- Light/Luminaire Support | 55- Mail Box | 56- Median Barrier | 57- Overhead Sign Support | 58- Other (Post, Pole, Support, Etc.) | 59- Other (Wall, Building, Tunnel, Etc.) | 60- Tree | 61- Utility Pole | 62- Work Zone Maint. Equipment | 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh. | 10- Rear End | 20- Head On | 30- Rear-to-Rear | 40- Angle (↘↙ / ↗↖) | 41- Angle (→|← / ←|→) | 42- Angle (↘↗ / ↖↙) | 43- Angle (↗↘ / ↙↖) | 50- Sideswipe Same Dir. | 60- Sideswipe Opposite Dir. | 70- Backed Into | 99- Unknown

1st / Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 21 22 23 31 32 33 34 35 39 40 41 43 51 52 53 54 55 57 59 60 61 79 80

Vehicle Type: 01- Automobile | 02- Pickup/Truck | 03- Truck Tractor | 04- Other Truck | 15- Full Size Van | 16- Mini Van | 17- Sport Utility | 25- Motorcycle | 26- Other Motorbike | 27- Pedalcycle | 28- Ambulance | 29- Fire | 30- Police | 31- Public Utility | 32- Other Emergency | 33- Motor Home | 34- Farm Equip. | 35- Construction Equip. | 36- Logging | 37- Towed Unit | 38- Animal (Drawn Veh.) | 39- Animal (Ridden) | 41- Pedestrian | 51- Train | 61- School Bus | 62- Passenger Bus | 98- Other | 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal | 02- Driver Training | 03- Construction/Maint. | 04- Ambulance | 05- Military | 06- Transport Passengers | 07- Transport Property | 08- Farm Use | 09- Wrecker or Tow | 10- Police | 11- Government | 12- Fire Fighting | 13- Logging | 18- Other

Vehicle Attachment: 1- None | 2- Mobile Home | 3- Semi-Trailer | 4- Utility Trailer | 5- Farm Trailer | 6- Trailer w/Boat | 7- Camper Trailer | 8- Towed Motor Vehicle | 9- Petroleum Tanker | A- Cowboy Trailer | B- Auxiliary Trailer | C- Other Tanker | D- Flat Bed | E- Twin Trailers | F- Other

Action Prior to Impact (Vehicle): 01- Backing | 02- Changing Lanes | 03- Entering Traffic Lane | 04- Leaving Traffic Lane | 05- Making U-turn | 06- Movements Essentially Straight Ahead | 07- Overtaking/Passing | 08- Parked | 09- Slowing or Stopped in Traffic | 10- Turning Left | 11- Turning Right | 88- Other | 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle | 22- Entering/Crossing Location | 23- Playing/Working on Vehicle | 24- Pushing Vehicle | 25- Standing | 26- Walking, Playing, Cycling | 27- Working

Alc Test Results: A1- | A2- | A3-

Test Type: 1- Breath (Alc. Only) | 2- Blood | 3- Urine | 4- Serum | 8- Other

Drug Results: 1- Amphetamines | 2- Cocaine | 3- Marijuana | 4- Opiates | 5- PCP | 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results | 2- Given - Unusable | 3- Given - Pending | 4- None | 5- Refused

Special Use Only

1- Under- Compartment Intrusion | 2- Under- No Intrusion | 3- Under- Unknown | 4- Over- MV in Transport | 5- Over- Other Vehicle | 6- None | 9- Unk.

Underride/Override

Extent of Deformity: 0- None/Minor | 1- Functional Damage | 2- Severe/Totaled | 3- Disabling Damage | 5- Not Applicable | 9- Unk.

Weather Condition: 1- Clear (no adverse conditions) | 2- Rain | 3- Cloudy | 4- Sleet, Hail | 5- Snow | 6- Fog, Smog, Smoke | 7- Blowing Sand, Oil, Dirt or Snow | 8- Severe Crosswinds | 9- Unk.

Light Condition: 1- Daylight | 2- Dawn | 3- Dusk | 4- Dark (Lighting Unspecified) | 5- Dark (Street Lamp Lit) | 6- Dark (Street Lamp Not Lit) | 7- Dark (No Lights)

Junction Type: 01- Crossover | 02- Driveway | 03- Five/More Points | 04- Four-way Intersection | 05- Railway Grade Crossing | 07- Shared Use Paths or Trail | 08- T-Intersection | 09- Traffic Circle | 12- Y-Intersection | 13- Nonjunction | 99- Unk.

Traffic Control Type: 01- Stop and Go Light | 02- Flashing Traffic Signal | 11- RR (X-bucks, Lights & Gates) | 12- RR (X-bucks & Lights) | 13- RR (X-bucks Only) | 21- Officer or Flagman | 22- Oncoming Emergency Vehicle | 31- Pavement Markings (only) | 41- Stop Sign | 42- School Zone Sign | 43- Yield Sign | 44- Work Zone | 45- Other Warning Signs | 51- Flashing Beacon | 98- None | 99- Unk.

Trafficway: 1- Two-way, Not Divided | 2- Two-way, Divided, Unprotected Median | 3- Two-way, Divided, Barrier | 4- One-way | 8- Other

Road Character: 1- Straight - Level | 2- Straight - On Grade | 3- Straight - Hillcrest | 4- Curve - Level | 5- Curve - On Grade | 6- Curve - Hillcrest

Road Surface Condition: 1- Dry | 2- Wet | 3- Snow | 4- Slush | 5- Ice | 6- Contaminate | 7- Water (Standing, etc.) | 8- Other | 9- Unk.

Work Zone: 1- Yes, Directly | 2- Yes, Indirectly | 3- No | 8- Unk.

Work Zone: 1- Before 1st Sign | 2- Advanced Warning Area | 3- Transition Area | 4- Activity Area | 5- Termination | Area | 1- Shoulder/Median Work | 2- Lane Shift/Crossover | 3- Intermittent/Moving Work | 4- Lane Closure | 5- Other

Work Zone: 1- Yes 2- No

Work Zone Location

Work Zone Type

Work Zone: 1- Yes 2- No Workers Present:

School Bus Involved: 1- Yes, Directly | 2- Yes, Indirectly | 3- No | 8- Unk.

1st Harmful Event Loc.: 1 Y 2 N 8-U

Primary: 08

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc. | 02- Distracted/Inattention | 03- Driving Too Fast for Conditions | 04- Exceeded Authorized Speed Limit | 05- Failed to Yield Right of Way | 06- Ran off Road | 07- Fatigued/Asleep | 08- Followed Too Closely | 09- Made an Improper Turn | 10- Medical Related | 11- Over-correcting/Over-steering | 12- Aggressive Operation of Vehicle | 13- Over-correcting/Over-steering | 14- Swerving to Avoiding Object | 15- Wrong Side or Wrong Way | 16- Under the Influence | 17- Vision Obscured (Within Unit) | 18- Improper Lane Usage/Change | 19- Cell Phone | 20- Other Improper Action | 29- Unk.

Others: 30- Debris | 31- Non-Highway Work | 32- Obstruction in Roadway | 33- Road Surface Condition (i.e., Wet) | 34- Rut, Holes, Bumps | 35- Shoulders (None, Low, Soft, High) | 36- Traffic Control Device (i.e., Missing) | 37- Work Zone (Constr./Maint./Utility) | 38- Worn, Travel-Polished Surface | 48- Other | 49- Unk.

Roadway

Non-Motorist: 50- Inattentive | 51- Lying &/or Illegally in Roadway | 52- Failure to Yield R. of W. | 53- Not Visible (Dark Clothing) | 54- Disregard Signs, Signals, Etc. | 55- Improper Crossing | 56- Darting | 57- Wrong Side of Road | 58- Other | 59- Unk. | 67- Other Person Under the Influence | 68- Under the Infl.

Environmental: 60- Animal in Road | 61- Glare | 62- Obstruction | 63- Weather Cond. | 69- Other | 89- Unk.

Vehicle Defect: 70- Brakes | 71- Steering | 72- Power Plant | 73- Tires/Wheel | 74- Lights | 75- Signals | 76- Windows/Shield | 77- Restraint System | 78- Truck Coupling | 79- Cargo | 80- Fuel System | 88- Other | 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10040373 | Page # 1 / Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 2/2009) | # Of Units: 3 | Amended / Attach Copy of Original Report | Notified: 1805 | Arrived: 1815

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Mi / Near City or Town of:
04-08-2010	1800	23	S 385	4.5	N E S W	Greenville

Lane # / Dir.: # 1, Or 6, N E S W | Distance Offset: .01 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): 146 | 0-Main 1-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Toward: Second Intersection (Rt. # / Name): 85 | 0-Main 1-Alternate 5-Spur 6-Connection 7-Business 9-Other | Latitude: 34° 49' 44 60" | Longitude: 82° 17' 38 20"

Z-327688

Driver/Pedestrian's Full Name: Watley - Kennisha M.

Unit #	Sex	Race	Street
1	F	B	500 Fairview St Apt D5

Birth Date: 07-27-1986 | City, State, & Zip: Fountain Inn, SC 29644

State	Driver's License #	Insurance Company
SC	100015515 (D)	Northbrook

Year	Body	Vehicle Make	VIN #
1998	TK	Ford	1FTCR10U8PTA70978

State	Year	License Plate #	Owner's D.L. #
SC	2011	FSK 819	N/A

Home Telephone: (864) 201-0974 | Owner's Full Name: Taylor - Reznia L.

Bus. Telephone: ( ) N/A | Street: 102 Vaughn St

Contributed To Collision: Yes / No | City, State, & Zip: Fountain Inn, SC 29644

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg info (see back): Yes / No
5	55	Summons # E473257	Code 21	Summons # N/A	Code	Towed By N/A

Z-327689

Driver/Pedestrian's Full Name: Chiang - Keiko

Unit #	Sex	Race	Street
2	F	U	214 Needles Dr

Birth Date: 10-25-1951 | City, State, & Zip: Simpsonville, SC 29680

State	Driver's License #	Insurance Company
SC	004934421 (D)	State Farm

Year	Body	Vehicle Make	VIN #
2006	SU	Stru	5GZCZ33D36S848694

State	Year	License Plate #	Owner's D.L. #
SC	2010	ENB 964	004934421 (D)

Home Telephone: (864) 313-2371 | Owner's Full Name: Chiang - Keiko

Bus. Telephone: ( ) N/A | Street: 214 Needles Dr

Contributed To Collision: Yes / No | City, State, & Zip: Simpsonville, SC 29680

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg info (see back): Yes / No
2	55	Summons # N/A	Code	Summons # N/A	Code	Towed By N/A

Z-327690

Driver/Pedestrian's Full Name: Hayes - Leslie Simmons

Unit #	Sex	Race	Street
3	F	U	9 Middlefield Ct

Birth Date: 05-17-1977 | City, State, & Zip: Simpsonville, SC 29680

State	Driver's License #	Insurance Company
SC	007246897 (D)	Progressive

Year	Body	Vehicle Make	VIN #
2001	43	N153	JNICA31D01T615227

State	Year	License Plate #	Owner's D.L. #
SC	2011	DEH 326	007246897 (D)

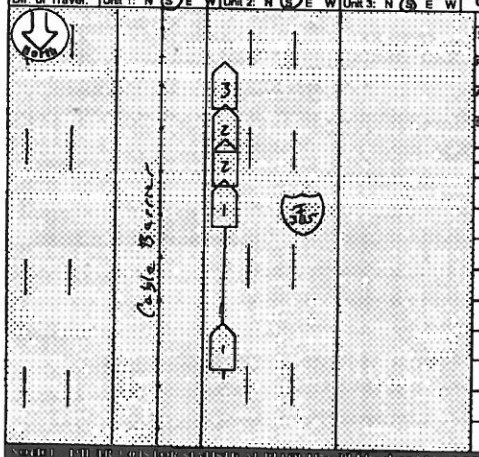
Home Telephone: (864) 905-5334 | Owner's Full Name: Hayes - Leslie Simmons

Bus. Telephone: ( ) N/A | Street: 9 middlefield Ct

Contributed To Collision: Yes / No | City, State, & Zip: Simpsonville, SC 29680

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg info (see back): Yes / No
0	55	Summons # N/A	Code	Summons # N/A	Code	Towed By N/A

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dem. 1	Prop. Dem. 2
$ 350	$ 500	$ 750	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1, Unit #2, and Unit #3 were traveling Soluth on I-385. Unit #2 and Unit #3 stopped for traffic. Unit #1 was traveling too fast for conditions and struck Unit #2. Unit #2 was forced into Unit #3.

APR 26 2010

SOUTH CAROLINA LAW REQUIRES YOU TO REPORT THIS INFORMATION. FAILURE TO DO SO MAY RESULT IN SUSPENSION OF YOUR DRIVER LICENSE AND/OR REGISTRATION CERTIFICATE(S). FALSE REPORTING IS A MISDEMEANOR AND MAY RESULT IN A FINE AND/OR JAIL SENTENCE.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Lee - C.L.	TPR	320	HP03	04-08-2010	Barfield - D.L.	SGT	10GV035508

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.S.D.	Ejct	LAI	Trap	Name	Street Address	Zip Code
1	07-27-1986	F	B	0	01	13	43	1	1	2			
2	10-25-1951	F	U	0	01	13	43	1	1	2			
3	05-17-1977	F	U	0	01	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Usage: 1- Yes 2- No 3- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk; Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: a): 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk. b): 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

1st Harmful	Most Harmful
1	27
2	22
3	22
22	

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular); 13- Other Non-collision; 19- Unk. Non-collision

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 38- Other Movable Object; 39- Unk. Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 87- Work Zone Maint. Equipment; 88- Other; 89- Unk

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (↘|↙); 41- Angle (↘|↗); 42- Angle (→|←); 43- Angle (↗|↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed / Most Deformed

Special Use Only

Vehicle Type: 11- Full Size Van; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 35- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 88- Other; 99- Unk (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Logging Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Underride/Override: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under-Unknown; 4- Over-MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 8- Not Applicable

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Yield Sign; 05- School Zone Sign; 06- Other Warning Sign; 07- Officer or Flagman; 08- Control Device; 09- RR (X-bucks, Lights & Gates); 10- RR (X-bucks & Lights); 11- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 43- Yield Sign; 51- Flashing Beacon; 98- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk

Traffic Control Type: 98

Trafficway: 3

1st Harmful Event Loc: 51

School Bus Involved: 3

Work Zone: 2

Work Zone Location:

Work Zone Type:

Workers Present:

Primary Contributing Factors: 07

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 66- Under the Influence; 67- Other Person Under Influence; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 88- Other; 89- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10040379 | Page 1 of 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 01/2007)

# of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0722 | Arrived: 0733

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	+/- / Near City or Town of:
04-02-2010	0720	23	385 Ramp	5	E	Greenville

Lane # / Dir.: 3 / 3 / S | Distance Obtain: 30 Miles Feet | Direction: N

Base Intersection (Rt. # / Name): From 146

Second Intersection (Rt. # / Name): Toward 85

ASRU code: | MP/Grid:

Latitude: 34° 49 2950

Longitude: 82° 17 3640

R.R. Id.: N/A | From: N E S W | Ramp Only: 1-Entrance 2-Exit | To: N E S W

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | 0- Main 1- Interstate 2- Alternate 3- US Primary 5- Spur 6- Connection 7- Business 9- Other

B-331366

Driver/Pedestrian's Full Name: Capparelli - Sara Marie

Unit # 1 | Sex: F | Race: W | Street/R.F.D.: 16 Ashford Ave

Birth Date: 02-03-1986 | City, State, & Zip: Greenville SC 29609

State: SC | Driver's License #: 0115270 82 (D) | Insurance Company: State Farm

Year: 1998 | Body: SU | Vehicle Make: Chev | VIN #: 1GNCS13WOW2250632

State: SC | Year: 2011 | License Plate #: CWN 878 | Owner's D.L. #: NA

Home Telephone: (864) 201 2100 | Owner's Full Name: Capparelli - DJ or RL

Bus. Telephone: ( ) NA | Street/R.F.D.: 16 Ashford Ave

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29609

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: NA | Code | Summons #: NA | Code | Towed By: NA

B-331367

Driver/Pedestrian's Full Name: Shade - Megan Danielle

Unit # 2 | Sex: F | Race: B | Street/R.F.D.: 19701 E Country Club Dr 508

Birth Date: 10-24-1990 | City, State, & Zip: Aventura FL 33180

State: FL | Driver's License #: S300 544 90 884 0 | (E) | Insurance Company: Ocean Harbor

Year: 2005 | Body: 4S | Vehicle Make: 0006 | VIN #: 1B3ES56C95D288570

State: R | Year: 2010 | License Plate #: AHN3196 | Owner's D.L. #: NA

Home Telephone: (305) 788 8146 | Owner's Full Name: Shade - Sherry Head

Bus. Telephone: ( ) NA | Street/R.F.D.: 211 NE 212th ST

Contributed To Collision: Yes (No) | City, State, & Zip: Miami FL 33179

Estimated Speed: 20 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E472976 | Code: 21 | Summons #: NA | Code | Towed By: NA

B-331368

Driver/Pedestrian's Full Name:

Unit # NA | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Home Telephone: ( ) | Owner's Full Name: APR 26 2010

Bus. Telephone: ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 400	$ 1000	$	$ NA	$ NA

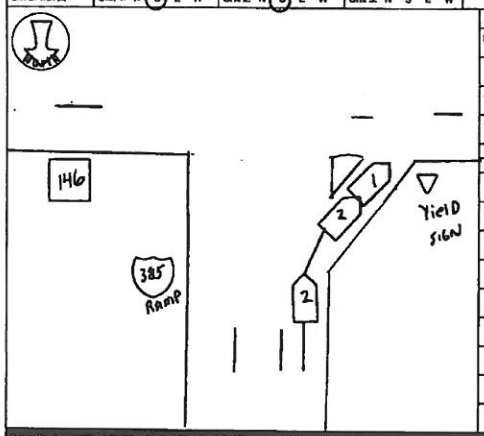
Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photos (Y) (N) | Describe What Happened (Refer to Units by Number)

Unit 1 was stopped for traffic headed south on the I-385 ramp. Unit 2 was traveling too fast for conditions south on the I-385 ramp. Unit 2 struck Unit 1 in the rear.



NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Johnson - MC	STPA	4410	HP03	04-12-2010	[illegible] - D.C.	SGT.	1066 036852

Unit	Date of Birth	Sex	Race	INJ	Seat	R/S/D	A.B.D.	Eject	Lal	Trap	Name	Street Address	Zip Code
1	02-03-1986	F	W	C	C1	13	4	01	01	2			
2	10-24-1990	F	B	1	C1	13	4	01	C1	2			
2	10-08-1985	M	B	0	03	13	4	01	01	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 69- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Unknown. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1- Yes; 2- No

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Ran off Road Left; 09- Ran off Road Right; 10- Separation of Units; 11- Spill (Non-Hazardous Mat.); 12- Other Non-collision; 13- Unk. Non-collision

Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Eqp./Veh.; 30- Animal (Deer Only); 31- Animal (All Other); 32- Motor Veh. (In Transport); 33- Motor Veh. (Stopped); 34- Motor Veh. (Other Roadway); 35- Unk. Moveable Object; 36- Other Moveable Object; 37- Motor Veh. (Parked); 38- Pedalcycle

Collision: Fixed Object: 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other Fixed Object; 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Wall, Building, Tunnel, Etc.; 69- Other; 99- Unk.

Event 1 / Event 2 / Event 3 / Event 4 / Most Harmful / 1st Harmful: 22 / 23 / 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed: 17 / 12

Undeformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Railway Train; 30- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 99- Other; Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 19- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Test Refused; 2- Test Taken; A: 1- Gave; 2- Refused; 3- Motion; 4- Residents; 5- Breath; 6- Shoulder; 7- Sidewalk; 8- Curb; 9- Unk.; B: 1- Yes; 2- No; 9- Unk.

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: D1- ; D2- ; D3- ; 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1 6

Extent of Deformity: 1 2 3; 0- None/Minor; 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk.

Trafficway: 4

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; Road Character: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.; Road Surface Condition: 1

01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Yield Sign; 05- Officer or Flagman; 06- School Crossing; 07- Railroad Crossing; 08- Other; 09- Unk.; Traffic Control Type: 03

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Blowing Sand, Oil, Dirt or Snow; 7- Severe Crosswinds; 8- Snow; 9- Unk.: 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights): 1

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.: 08

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Action; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Others:

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 45- Other; 49- Unk.

Non-Motorist: 50- Instantine; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 69- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

DPS Use Only: 10040668 | Page 1 of 1 | # Of Units: 3 | Amended - Attach Copy of Original Report | Corrected | Notified: 1805 | Arrived: 1815

Date: 04-08-2010 | Time: 1800 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): 385 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business | Miles: 4.5 | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: 1 G | Dir. N E S W | Distance Offset: .01 Miles Feet | Direction N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): 146 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: Ramp Only N E S W 1 - Entrance 2 - Exit | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): 85 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | Latitude: 34° 49' 44.10" | Longitude: 82° 17' 38.20"

Z-327682

Driver/Pedestrian's Full Name: Christian - Daniel E

Unit #: 1 | Sex: M | Race: W | Street: 321 Greenbriar Dr | Birth Date: 08-11-1985 | City, State, & Zip: Simpsonville, SC 29680

State: SC | Driver's License #: 01169915 (D) | Insurance Company: State Farm

Year: 1998 | Body: 4S | Vehicle Make: Honda | VIN #: 1HGCG5648WA114154

State: SC | Year: 2011 | License Plate #: ECT 719 | Owner's D.L. #: 01169915 (D)

Home Telephone: (864) 915-0842 | Owner's Full Name: Christian - Daniel E

Bus. Telephone: ( ) N/A | Street: 321 Greenbriar Dr

Contributed To Collision: Yes / No | City, State, & Zip: Simpsonville, SC 29680

Estimated Speed: 15 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: E473235 | Code: 71 | Summons #: N/A | Code: | Towed By: Gossetts (Tow)

Z-327683

Driver/Pedestrian's Full Name: Adams - JaKayla Denice

Unit #: 2 | Sex: F | Race: B | Street: 616 Timber Walk Dr | Birth Date: 05-09-1987 | City, State, & Zip: Simpsonville, SC 29681

State: SC | Driver's License #: 01168897 (D) | Insurance Company: State Farm

Year: 2004 | Body: 4S | Vehicle Make: Toyt | VIN #: 1NXBL32E54Z200617

State: SC | Year: 2010 | License Plate #: FES 614 | Owner's D.L. #: N/A

Home Telephone: (864) 901-0876 | Owner's Full Name: Brown - Darlene

Bus. Telephone: ( ) N/A | Street: 616 Timber Walk Dr

Contributed To Collision: Yes / No | City, State, & Zip: Simpsonville, SC 29681

Estimated Speed: 3 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code: | Summons #: N/A | Code: | Towed By: N/A

Z-327684

Driver/Pedestrian's Full Name: Whitt - Deanne Harvey

Unit #: 3 | Sex: F | Race: W | Street: 3106 Bethel Rd Unit 35 | Birth Date: 10-25-1973 | City, State, & Zip: Simpsonville, SC 29681

State: SC | Driver's License #: 004202700 (D) | Insurance Company: State Farm

Year: 2005 | Body: 4S | Vehicle Make: Acur | VIN #: 3H4CL96865C015970

State: SC | Year: 2011 | License Plate #: DAH 868 | Owner's D.L. #: 004202700(D)

Home Telephone: (864) 313-0182 | Owner's Full Name: Whitt - Deanne Harvey

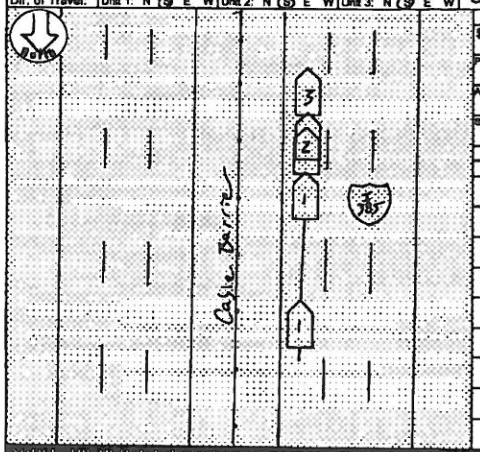
Bus. Telephone: ( ) N/A | Street: 3106 Bethel Rd Unit 35

Contributed To Collision: Yes / No | City, State, & Zip: Simpsonville, SC 29681

Estimated Speed: 0 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code: | Summons #: N/A | Code: | Towed By: N/A

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 750	$ 300	$ N/A	$ N/A

Property Owner/Witness: N/A | Address: | State | Zip | Phone

Property Owner/Witness: N/A | Address: | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

Unit #1 was traveling south on I-385. Unit #2 and Unit #3 were stopped due to another collision. Unit #1 was traveling too fast for conditions, and struck Unit #2 in the rear. Unit #2 was forced into Unit #3.

APR 27 2010

NOTICE: THE DRIVER OF ANY VEHICLE INVOLVED IN AN ACCIDENT RESULTING IN INJURY TO OR DEATH OF ANY PERSON OR TOTAL PROPERTY DAMAGE TO THE APPARENT VALUE OF $1,000.00 OR MORE SHALL REPORT SUCH ACCIDENT AS REQUIRED BY LAW (SECTION 56-5-1270).

Investigating Officer's Name: Lee - CL | Rank: TPR | Badge #: 320 | Code: HP03 | Date: 04-08-2010 | Reviewed | Rank: Col. | Internal Agency Code: 10 GC 035 500

Unit	Date of Birth	Sex	Race	INJ	Sent	RSD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	08-11-1985	M	W	0	01	13	43	1	1	2			
2	05-09-1987	F	B	0	01	13	43	1	1	2			
3	10-25-1973	F	W	0	01	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury 1-Yes 2-No

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontraining); 51- Other Unenclosed Area (nontraining); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk /NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

Air Bag Deployment / Switch: a) 1-Deployed Front 4-Not Deployed 2-Deployed Side 7-Not Applicable 3-Deployed Both 9-Deployment Unk; b) 1- Switch in On Position 3- No Switch 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected; 2- Part Ejected; 3- Tot Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (non-Vehicular); 13- Vehicle Fell (Elevator); 14- Other Non-collision; 15- Unk. Non-collision

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Railway Veh; 26- Work Zone Maint. Equip; 27- Pedestrian; 28- Pedalcycle; 29- Other Movable Object; 30- Unk Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Wire; 64- Unk Fixed Object; 65- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear-to-Rear; 20- Rear End; 30- Head On; 40- Angle (<); 41- Angle (>); 42- Angle (→|←); 43- Angle (↗|↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed | Most Deformed

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Limousine; 29- Other; 30- Animal Drawn Veh; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Other; 41- Pedestrian; 99- Unk. (Hit and Run Only)

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Trailer w/Other; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twn Trailers; F- Other

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other; 9- Unk

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other; 9- Unk

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- Unk

Special Use Only: 1 2 3 4 5 6 7

Undermide/Overide: 1 6

Extent of Deformity: 1 2 3 4 5 6 7

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- One-Way; 4- Drive; 5- Median; 6- Shoulder; 7- Sidewalk; 8- Other; A- Island; B- X-walk; C- Bicycle Lane; D- Outside Trafficway; 9- Unk

1st Harmful Event Loc: 1-24 & 50-57

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 9- Unk

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Stop Sign; 04- Yield Sign; 05- Officer or Flagman; 06- Oncoming Emergency Vehicle; 07- Pavement Markings (only); 08- Railroad Sign; 09- Railroad Flashing Signal; 10- Railroad Gate; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 98- None; 99- Unk

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

School Bus Involved: 1- Yes 2- No

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

Work Zone Type:

Workers Present: 1- Yes 2- No

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 21- Unk

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 49- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk

Environmental: 62- Obstruction; 63- Weather Cond; 66- Animal in Road; 67- Glare; 68- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

Others:

ORIGINAL

D.P.S. USE ONLY: 10044017 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 2157 | Arrived: 2207

Date: 04-25-2010 | Time: 2132 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name): S 385 | 0- Main 1- Alternate 2- Alternate 3- Business 5- Spur 6- Connection 7- Business 8- Connection 9- Other | Miles: 4.5 | Dir. N E S W | +/-/= Near City or Town of: Greenville

Lane # / Dir.: # 3 | Of 6 | S W | Distance Offset: Miles .4 Feet | N E S W | Direction: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 Woodruff Rd | 0- Main 1- Alternate 2- Alternate 3- Alternate 5- Spur 6- Connection 7- Business 8- Connection 9- Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): To 85 | Latitude: 34 49 6201 | Longitude: 82 17 5891

B-331012

Driver/Pedestrian's Full Name: Fernandez Kelvin Nogel

Unit # 1 | Sex: M | Race: H | Street/R.F.D.: 2627 Pennsett Hwy Apt 64 | Birth Date: 05-21-1991 | City, State, & Zip: Greenville SC 29609

State: SC | Driver's License #: 101801030 (D) | Insurance Company: Encompass Indemnity

Year: 2008 | Body: @ DIR | Vehicle Make: Hond | VIN #: 2HGFG1B66AH509142

State: SC | Year: 2010 | License Plate #: EXM 634 | Owner's D.L. #: N/A

Home Telephone: (864) 371-2485 | Owner's Full Name: Torres Jeannette | Street/R.F.D.: 52 Traction ST

Bus. Telephone: ( ) N/A | City, State, & Zip: Greenville SC 2961

Contributed To Collision: Yes | No | Estimated Speed: 05 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: Latimer | OR

B-331013

Driver/Pedestrian's Full Name: Dr Jesus Juan Raul

Unit # 2 | Sex: M | Race: H | Street/R.F.D.: 110 E Decatur ST | Birth Date: 05-29-1991 | City, State, & Zip: Greenville SC 29617

State: SC | Driver's License #: 101149364 (D) | Insurance Company: Geico

Year: 1999 | Body: 2dR | Vehicle Make: Toyt | VIN #: TE316240047

State: SC | Year: 2010 | License Plate #: FNE 849 | Owner's D.L. #: 101149364 (D)

Home Telephone: (864) 243-8976 | Owner's Full Name: Dr Jesus Juan Raul

Bus. Telephone: ( ) N/A | Street/R.F.D.: 110 E Decatur ST

Contributed To Collision: Yes | No | City, State, & Zip: Greenville SC 29617

Estimated Speed: 15 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: E109793 | Code: 43 | Summons #: N/A | Code | Towed By: Latimer | OR

B-331014

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

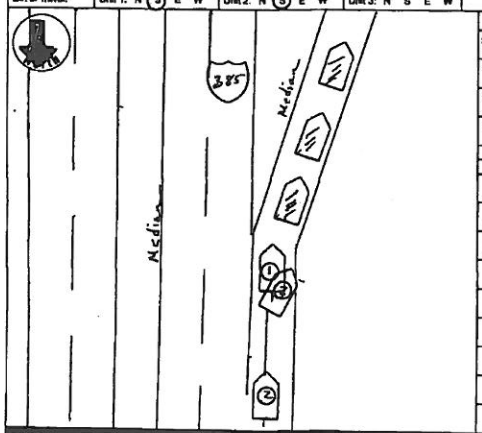
Contributed To Collision: Yes | No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

MAY 04 2010

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3500.00	$ 4000.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photo: Y (N)

Describe What Happened (Refer to Units by Number)

Unit #1 and 2 were traveling south on I-385. Unit #1 slowed down due to traffic. The driver of Unit #2, following to closely struck Unit #1.

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION, AND BELIEF COVERING THE COLLISION BUT NOT WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: Marlow T W | Rank: SGT | Badge #: 509 | Code: 11 | Date: 04-26-2010 | Reviewer's Name: Taylor T.J. | Rank: CPL | Internal Agency Code: 10GV04177

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	Lic	Trap
1	05-21-1991	M	H	0	01	13	4	1	1	2
1	01-08-1989	F	H	0	03	13	4	1	1	2
2	05-24-1991	M	H	0	01	13	4	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Skater/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Cross Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Mat.); 13- Spill (Hazardous Mat.); 14- Other Non-collision; 15- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip; 30- Other Moveable Object; 99- Unk. Moveable Object

Collision: Fixed Object: 40- Embankment; 41- Bridge Pier or Support; 42- Bridge Rail; 43- Bridge Rail End; 44- Culvert; 45- Curb; 46- Ditch; 47- Entrance/Exit; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Tree; 60- Other; 69- Unk.

Events: 1st Harmful: 22; Most Harmful: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 80- Unknown

1st / Most Deformed: 07 / 11

Deformed Area

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Motorbike; 27- Pedalcycle; 28- Other Motorbike; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; Trafficway: 3

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Underride/Override: 1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 6- None; 8- Unk.

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Extent of Deformity: 3

Road Character: 2 (1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest)

Road Surface Condition: 1 (1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.)

Traffic Control Type: 31 (01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None)

School Bus Involved: 3 (1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.)

Work Zone: 2 (1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other; 9- Unk.)

Work Zone: 1- Yes 2- No | Workers Present: 1- Yes 2- No | Work Zone Type

Weather Condition: 1 (1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Severe Crosswinds; 8- Snow; 9- Unk.)

Light Condition: 7 (1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights))

Junction Type: 17 (01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.)

Primary: 08

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 61- Glare; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

O.P.D. USE ONLY: 10044047 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev 01-2010) | # of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 0329 | Arrived: 0329

Date: 03-27-2010 | Time: 0339 | County: 23 | Collision Location (Rt. # / Name): 385 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur | Miles: 3 | Dir. N E S W | Inf/ Near City or Town of: Greenville

Lane # / Dir.: # NA | Dir. N E S W | Distance Offset: 15 Miles Feet | Direction N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid

R.R. Id. NA | From: N E S W 1- Entrance 2- Exit | To: N E S W 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 85 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Latitude: 34 19 2006 | Longitude: 82 17 2150

B-704809 | Driver/Pedestrian's Full Name: Ryll- Paul T.

Unit # 1 | Sex: M | Race: W | Street/R.F.D.: 411 Rogers AVE. | Birth Date: 05-15-1982 | City, State, & Zip: Greenville SC 29617

State: SC | Driver's License #: 100127330 COD | Insurance Company: USAA

Year: 2001 | Body: SUV | Vehicle Make: Chev. | VIN #: 1GNDS13S24 2340749

Direction: SE | Year: 2008 | License Plate #: X80 1273 | Owner's D.L. #: 100127330

Home Telephone: (864) 553-6136 | Owner's Full Name: Ryll-Paul T

Bus. Telephone: NA | Street/R.F.D.: 411 Rogers AVE.

Contributed To Collision: Yes | City, State, & Zip: Greenville SC 29617

Estimated Speed: 60 | Speed Limit: 35 | C.D.L. Req: Yes No | T/S B Req: Yes No | Alc/Drg into (see back): Yes No

Summons #: E408550 | Code: 96 | Summons #: E408551 | Code: 99 | Towed By: City Towing

B-704811 | Driver/Pedestrian's Full Name

Unit # NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

B-704810 | Driver/Pedestrian's Full Name

Unit # NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S B Req: Yes No | Alc/Drg into (see back): Yes No | Summons # | Code | Towed By

State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

MAY 04 2010

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S B Req: Yes No | Alc/Drg into (see back): Yes No | Summons # | Code | Towed By

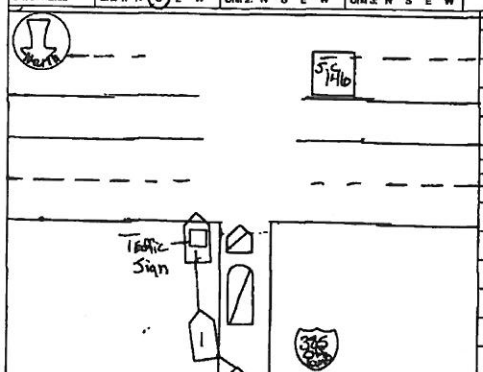
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ NA	$ NA	$ 500	$ NA

Property Owner/Witness: SCDOT | Property Owner/Witness: NA

Address: 3 Soluda Dunnrd. | Address

State: SC | Zip: 29611 | Phone: 864-241-1234 | State | Zip | Phone

Photo: Y N | Describe Witness Statement (Refer to Units by Number)



Unit #1 was traveling south on I-385 off ramp. The driver of Unit # 1 was driving under the influence. Unit #1 struck a curb with the left front, then struck a traffic sign with the center front.

NOTICE: THE CODES FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: William S - S.M. | Rank: Tpr | Badge #: 376 | Code: HA03 | Date: 03-27-2010 | Reviewer's Name: K. Allman | Rank: Sgt | Internal Agency Code: 1CGV02071

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran
1	05-15-1982	M	W	C	01	13	4	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 9- Deployment Unk. | b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown | b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 81- Lighting

Sequence of Events: Monitoring ER Unit: City of Greenville Report ID: 20 Rec'd: Printed: 04/29/10

Event 1: 52 | Event 2: 52 | Event 3 | Event 4 | Most Harmful: 52 | 1st Most: 45

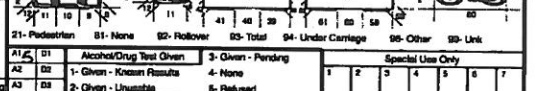
Non-Collision: 04- Equipment Failure, 05- Fire/Explosion, 06- Overturn/Rollover, 07- Jackknife, 08- Cross Median/Center Line, 09- Downhill Runaway, 10- Immersion, 11- Ran off Road Left, 12- Ran off Road Right

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. in Transport, 23- Motor Veh. (Stopped), 24- Motor Veh. Other Related, 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object, 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Culvert, 44- Curb, 45- Ditch, 46- Embankment, 47- Guardrail End, 48- Guardrail Face, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 69- Other, 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area: 1st Deformed: 1 2 3 | Most Deformed: 4 2 3



21- Pedestrian, 81- None, 82- Rollover, 83- Total, 84- Under Carriage, 98- Other, 99- Unk.

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh., 29- Animal (All Other), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 68- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping in Traffic, 10- Turning Left, 11- Turning Right, 99- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1- Refused, A2-, A3-

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Aggressive Operation of Vehicle, 12- Over-correcting/Over-steering, 13- Swerving to Avoiding Object, 14- Under the Influence, 15- Wrong Side or Wrong Way, 16- Cell Phone, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 29- Other Improper Action, 29- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk., 67- Other Person Under the Influence, 68- Under the Infl., 69- Unk.

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond., 69- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 85- Other, 89- Unk.

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagmen, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 86- None, 99- Unk.

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Special Use Only: 1 2 3 4 5 6 7

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 5- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other, 0- None/Minor, 1- Functional Damage, 2- Disabling Damage, 3- Destroyed, 4- Severe/Totaled, 5- Not Applicable

Underride/Override: 0

Intrusion: 1- Under- Compartment, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 9- Unk.

Extent of Deformity: 2, 9- Unk.

Trafficway: 1

Event Loc.: 1st Harmful: 4 | 1st Event: 2 | Y 2-N 8-U | Ft: | In: | Ft: | In:

Work Zone: 1- Yes 2- No

Work Zone Location: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Long Closure

Workers Present: 1- Yes 2- No

School Bus Involved: 3

Others:

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

D.P.S. USE ONLY: 10048084 | Page # 1 Of 1 | # Of Units: 3 | Amended - Attach Copy of Original Report | Corrected | Notified: 0735 | Arrived: 0747

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Near City or Town of:
04/27/2010	0730	23	5 385	3	N E S W	Greenville

Lane # / Dir.: 1 / 4 (N E S W) | Distance Offset: .5 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): 146 | ASRU code | MP/Grid

R.R. Id.: N/A | From: Ramp Only | To | Second Intersection (Rt. # / Name): 107 | Latitude: 34° 48' 35.20" | Longitude: 82° 17' 07.80"

A- 086716 — Driver/Pedestrian's Full Name: Lambert - Norman - Ward

Unit #: 1 | Sex: M | Race: W | Street: 111 Rockberry Ter.
Birth Date: 08-26-1962 | City, State, & Zip: Simpsonville, SC, 29681
State: SC. | Driver's License #: 008149401 (A) | Insurance Company: State Farm
Year: 2008 | Body: 4S | Vehicle Make: Lexs | VIN #: JTHBF30G430106427
State: SC. | Year: 2011 | License Plate #: CQI 483 | Owner's D.L. #: 008149401 (A)
Home Telephone: (864) 235-5335 | Owner's Full Name: Lambert - Norman - Ward
Bus. Telephone: (864) 313-0403 | Street: 111 Rockberry Ter.
Contributed To Collision: No | City, State, & Zip: Simpsonville, SC, 29681
Estimated Speed: 15 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)
Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

A- 086717 — Driver/Pedestrian's Full Name: Autrey - Jason - Derrick

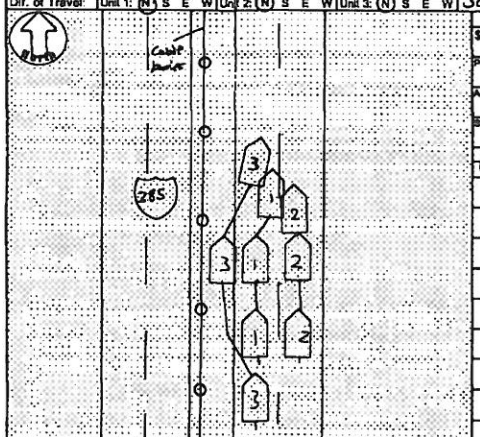
Unit #: 2 | Sex: M | Race: W | Street: 6 Ramapo ct.
Birth Date: 11-11-1976 | City, State, & Zip: Simpsonville, SC, 29681
State: SC. | Driver's License #: 007496924 (A) | Insurance Company: State Farm
Year: 2007 | Body: 4S | Vehicle Make: Toyt | VIN #: 4T1BE46K07U699008
State: SC. | Year: 2010 | License Plate #: CHJ 492 | Owner's D.L. #: 007496924 (A)
Home Telephone: (864) 363-1665 | Owner's Full Name: Autrey - Jason - Derrick
Bus. Telephone: (864) 233-7650 | Street: 6 Ramapo ct.
Contributed To Collision: Yes | City, State, & Zip: Simpsonville, SC, 29681
Estimated Speed: 15 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)
Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

A- 086718 — Driver/Pedestrian's Full Name: Unknown

Unit #: 3 | Sex | Race | Street
Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
Home Telephone | Owner's Full Name
Bus. Telephone | Street
Contributed To Collision: Yes / No | City, State, & Zip
Estimated Speed: 30 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)
Summons # | Code | Summons # | Code | Towed By: N/A

MAY 13 2010

Dir. of Travel: Unit 1: (N) S E W | Unit 2: (N) S E W | Unit 3: (N) S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500 00	$ 1500 00	$ 200 00	$ N/A	$ N/A

Property Owner/Witness | Address | City, State, Zip, Phone

Photo: (Y) N | Describe What Happened (Refer to Units by Number):

Unit # 1, 2 and 3 were traveling North on I 385. Unit #2 traveling North too fast for conditions lost Control slid off road left then back into the road forcing unit #1 into unit #2. Unit #2 then fled the scene.

I HAVE THE RIGHT TO STATE THAT IT REPORTING PERSONS DATA AND STATEMENTS OF THE OFFICER SHALL NOT BE USED AS EVIDENCE IN ANY CRIMINAL ACTION AND THAT I HAVE CONSULTED THE COLLISION REPORT MANUAL AND I STATE IN GOOD FAITH THAT I HAVE NOT WILLFULLY VIOLATED THE LAW IN COMPLETING THIS REPORT.

Investigating Officer's Name: Gambrell - J.C. | Rank: Tpr | Badge #: 257 | Code: H/P03 | Date: 04/27/2010 | Reviewer's Name: Bellenger - D.L. | Rank: Sgt. | Internal Agency Code: 06V042147

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Ejct	Ext	Trns	Name	Street Address	Zip Code
1	08-26-1962	M	W	2	01	13	7-3	1	1	2			
2	11-11-1976	M	W	9	01	13	7-3	1	1	2			
3	Unknown	U	U	0	01	99	7-7	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

Air Bag Deployment / Switch: a) 1-Deployed Front 4-Not Deployed 7-Not Applicable; b) 2-Deployed Side 3-Deployed Both 8-Deployment Unk; 1-Switch in On Position 3- No Switch; 2- Switch in Off Position 8- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal
b) Motorcycle Only: Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown
b) By: 1- EMS 2- Police 8- Other 9- Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk
Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Overturn/Rollover; 07- Jackknife; 08- Overturn/Rollover; 09- Run off Road Left; 10- Run off Road Right
Collision Not Fixed Object: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 30- Other Movable Object; 38- Unk. Movable Object
Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment

Unit #	1st Harmful	10
1	22	
2	22	
3	22	

11- Separation of Units; 12- Spill (Non-Motorized Veh.); 18- Other Non-Collision; 19- Unk. Non-Collision

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (↘↙); 41- Angle (→|←); 42- Angle (↗↙); 43- Angle (↗|↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
1st Deformed: 1 5 | 2 | 3 5 | Most Deformed: 5 | 2 | 5

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 99- Unk (Hit and Run Only)
Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian
Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unreadable; 3- Given - Pending; 4- None; 5- Refused
Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other
Drug Results: 1- Amphetamines; 2 Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other
Alc Test Results: A1-; A2-; A3-

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk
Underride/Override: 1 2 3 4 5 6 7
Extent of Deformity: 0 1 2 3 4 5 6 7 8 9 10
Trafficway: 3
1st Harmful Event Loc.: 5 | 2
Road Character: 1
Road Surface Condition: 1
Traffic Control Type: 98

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.
(Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Dirt, Dirt or Snow; 8- Severe Crosswinds; 9- Unk
Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)
Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscurement (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.
Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk
Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 57- Wrong Side of Road; 66- Under the Influence; 67- Other Person Under Influence
Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk
Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 78- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

Others: 01 02 03 04 05 06 07 08

Control Device: 1- Yes 2- No
Work Zone: 2
Work Zone Location:
Work Zone Type:
Workers Present: 1- Yes 2- No

Police Agency Notified: 1- Yes 2- No: 2
School Bus Involved: 3

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

ORIGINAL

D.P.S. USE ONLY **10051880** | Page 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report / Corrected | Notified 1410 | Arrived 1419

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	—Inv/ Near City or Town of:
08/06/2010	1400	23	385	1	N E S W	GREENVILLE

Lane # / Dir.: 1 / 01 (N E S W) | Distance Offset: .01 Miles / Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

R.R. Id. N/A | From: Ramp Only N E S W, I Entrance, To: N E S W, 2 - Exit | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt. # / Name) From: 146 | Second Intersection (Rt. # / Name) Toward: 85 | 0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 9- Other

ASRU code | MP/Grid | Latitude 34 49 25 40 | Longitude 82 17 25 00

B-332134

Driver/Pedestrian's Full Name: LINE BERGER-TAMMY-S | Unit # 1 | Sex F | Race W | Street/R.F.D. 132 BRIDGETON DR.

Birth Date 10-26-1964 | City, State, & Zip GREENVILLE SC 29615

State SC | Driver's License # 604161575 (D) | Insurance Company STATE AUTO

Year 2007 | Body 4DR | Vehicle Make TAURUS | VIN # 1FAHP25W27G127917

State SC | Year 2010 | License Plate # FPV587 | Owner's D.L. # 604161575(D)

Home Telephone (864) 297-4421 | Owner's Full Name LINE BERGER-TAMMY-S

Bus. Telephone (864) 363-1576 | Street/R.F.D. 132 BRIDGETON DR.

Contributed To Collision: Yes / No | City, State, & Zip GREENVILLE SC 29615

Estimated Speed 0 | Speed Limit 55 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg Info (see back): Yes / No

Summons # N/A | Code | Summons # N/A | Code | Towed By N/A

B-332135

Driver/Pedestrian's Full Name: HEINRICH- DONN-T | Unit # 2 | Sex M | Race W | Street/R.F.D. 27 SHERMAN PLACE

Birth Date 11-21-1967 | City, State & Zip FLANDERS NJ 07836

State NJ | Driver's License # H2289174831167 2 (D) | Insurance Company NJ MANUFACTURERS

Year 2001 | Body VN | Vehicle Make HONDA | VIN # 2HKRL185116061622

State NJ | Year 2010 | License Plate # UOT81H | Owner's D.L. # N/A

Home Telephone (973) 598-0727 | Owner's Full Name HEINRICH- PAMELA-J

Bus. Telephone (973) 927-0374 | Street/R.F.D. 27 SHERMAN PLACE

Contributed To Collision: Yes / No | City, State, & Zip FLANDERS NJ 07836

Estimated Speed 25 | Speed Limit 55 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg Info (see back): Yes / No

Summons # 22 | Code | Summons # 22 | Code | Towed By N/A

B-332136

Driver/Pedestrian's Full Name | Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. # MAY 21 2010

Home Telephone | Owner's Full Name

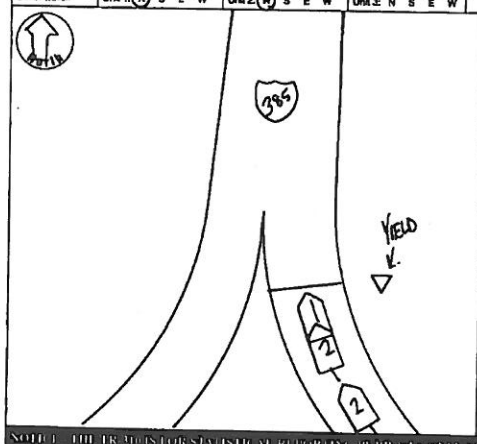
Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg Info (see back): Yes / No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 2000	$	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

UNIT #1 WAS STOPPED IN TRAFFIC ON THE RAMP FROM JC 14 TO INTERSTATE 385 HEADED NORTH. UNIT #2 TRAVELING NORTH, TOO FAST FOR CONDITIONS, STRUCK UNIT #1 IN THE REAR.

NOTICE: THE DIAGRAM IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT A DEPICTION OF THE OFFICER'S FIRST KNOWLEDGE, OPINION, AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE LEGAL ACCURACY THEREOF.

Investigating Officer's Name: CARTER-G.L. | Rank: SGT | Badge #: 329 | Code: H903 | Date: 08/06/2010 | Reviewer's Name: Barone-D.L. | Rank: SGT | Internal Agency Code: 10CV045422

Unit	Date of Birth	Sex	Race	INJ	Seat	Rest'd	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	10-26-1964	F	W	0	01	13	3	1	1	2			
2	11-21-1967	M	W	0	01	13	3	1	1	2			
2	10-13-1968	F	W	0	03	13	3	1	1	2			
2	11-25-2006	F	W	0	06	21	7	1	1	2			
2	6-19-2008	F	W	0	09	21	7	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, W - Caucasian, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal. b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 8- Deployment Unk. b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22				22	22
23				23	

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Trip (Non-Vehicle Unk.), 13- Other Non-collision, 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. in Transport, 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object, 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Dam, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 69- Other, 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st Deformed | Most Deformed | Deformed Area

Vehicle Type: 01- Automobile, 02- Pickup/Truck, 03- Truck Tractor, 04- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh., 29- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 69- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian, 99- Unk.

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopped in Traffic, 10- Turning Left, 11- Turning Right, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working, 99- Other / Unk.

Alc Test Results: A1-, A2-, A3-

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Primary 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Operating Defective Equipment, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Cell Phone, 29- Other Improper Action, 99- Unk.

Roadway: 30- Debris, 31- Non-Highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk., 66- Under the Infl., 67- Other Person Under the Influence

Environmental: 60- Obstruction, 61- Glare, 62- Animal in Road, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Others:

Special Use Only

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 5- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other, 0- None/Minor

Underride/Override: 16

Extent of Deformity: 1- Functional Damage, 2- Disabling Damage, 4- Severe/Totaled, 5- Not Applicable, 9- Unk. 32

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other: 4

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest: 5

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.: 1

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagmen, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 99- None: 43

School Bus Involved: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.: 3

Work Zone: 1- Yes 2- No: 2

Work Zone Location: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

Workers Present: 1- Yes 2- No

1st Harmful Event Loc.: A: 1- Gore, 2- Median, 3- Roadway, 4- Roadside, 5- Shoulder, 6- Median, 7- Sidewalk, 8- Ditch, 9- Unk. B: 1- Island, 2- Roadside, 3- Shoulder, 4- Median, 5- Outside Trafficway, 6- Unk. X- unit: 1- Y 2- N 9- U: 5 12

ORIGINAL

O.P.S. USE ONLY: 10054273 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR310 (Rev. 01/2001) | # of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 1610 | Arrived: 1635

Date: 5-16-10 | Time: 1600 | County: 23 | Collision Location (Ft. # / Name): & I 385 | Miles: .4 | Dir. N E S W: S | In / Near City or Town of: Greenville

Lane # / Dir.: 1 | Dir. N E S W: W | Distance Offset: .01 Miles Feet | Direction N E S W: S | Base Intersection (Rt. # / Name): From SC 146 | ASRU code | MP/Grid

R.R. Id.: n/a | From N E S W: | Ramp Only | To N E S W: | Second Intersection (Rt. # / Name): Towards S-107 | Latitude: 34°48'5490 | Longitude: 82°17'2340

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other 7- Business 8- Connection 9- Other

B-424075

Driver/Pedestrian's Full Name: Roy - Stephanie A | Unit # 1 | Sex F | Race W | Street/R.F.D.: 32 Sycamore Dr | Birth Date: 4-12-86 | City, State, & Zip: Greenville SC 29607

State: SC | Driver's License #: 10053919 (D) | Insurance Company: Geico

Year: 01 | Body: 4D | Vehicle Make: Chev | VIN: 1G1SC52461225117 7

State: SC | Year: 10 | License Plate #: SXY 812 | Owner's D.L. #: 10053919 (D)

Home Telephone: 864 325-4438 | Owner's Full Name: Roy - Stephanie A

Bus. Telephone: ( ) | Street/R.F.D.: 32 Sycamore Dr

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29607

Estimated Speed: 60 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons #: n/a | Code | Summons #: n/a | Code | Towed By: n/a

B-424076

Driver/Pedestrian's Full Name | Unit # n/a | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

B-424077

Driver/Pedestrian's Full Name | Unit # n/a | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name: MAY. 27. 2010

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

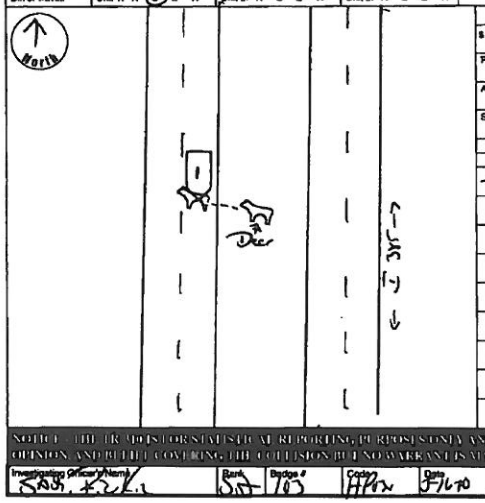
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2800	$ n/a	$ n/a	$ n/a	$ n/a

Property Owner/Witness: n/a | Address | State | Zip | Phone

Property Owner/Witness: n/a | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Veh 1 was traveling South on I 385. A deer ran out in front of veh 1.



NOTICE - THE INFORMATION ON THIS REPORT IS SUBMITTED FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: SADL. K.L. | Rank: Sgt | Badge #: 103 | Code: HP | Date: 5-16-10 | Reviewer's Name | Rank | Initials/Approval Code: 10-05/9/28

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	04-12-86	F	W	O	01	13	4	1	1	2			
1	09-17-15	F	W	O	03	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 04 05 06 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Unknown. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Matl.); 13- Other Non-collision; 14- Unk. Non-collision

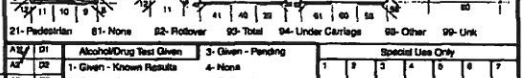
Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 31- Animal (All Other); 32- Motor Veh. on Transport; 33- Motor Veh. (Stopped); 34- Motor Veh. (Other Roadway); 35- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Support; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Guardrail End; 48- Guardrail Face; 49- Highway Traffic Sign Post; 50- Impact Attenuator/Crash Cushion; 51- Light/Luminaire Support; 52- Mail Box; 53- Median Barrier; 54- Other Fixed Object; 55- Overhead Sign Support; 56- Pole; 57- Tree; 58- Utility Pole; 59- Work Zone Maint. Equipment; 60- Other; 61- Unk.

Events: 1st Event, 2nd Event, 3rd Event, Most Harmful; 1st Event: 20

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 1 / 2 / 3; Most Deformed: 1 / 2 / 3



Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 06- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Transport Passengers; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 8- Not Applicable; 9- Unk.

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Access: 1- Core; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Beneath; 8- Unk.; 9- Outside Trafficway

Dr. Yr. walk: 1- Y 2- N

1st Harmful Event Loc.: 3 2

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminants; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes; 2- No

Workers Present: 1- Yes; 2- No

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: 60

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran on Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 49- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Others: 57- Wrong Side of Road; 58- Darting; 67- Other Person Under the Influence

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

O.P.S. USE ONLY 10054871 | Page # 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2009) | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 2040 | Arrived 2055

Date 05-10-2010 | Time 2030 | County 23 | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Collision Location (Rt. # / Name) 385 | 1-Main 2-Alternate 5-Spur 6-Connection 7-Business | Miles: Dir. N E S W | Feet Near City or Town of: Greenville

Lane # / Dir. 3 3 | Distance Offset .01 Miles Feet | Direction N E S W | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Base Intersection (Rt. # / Name) 146 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid | Latitude 34 ° 49 29.10 | Longitude 82 ° 17 37.14

R.R. Id. NA | From N E S W | Ramp Only 1-Entrance 2-Exit | To N E S W | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Toward | Second Intersection (Rt. # / Name) 85 | 0-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other

Z-327406

Driver/Pedestrian's Full Name: Martin-Timothy Spicer

Unit # 1 | Sex M | Race W | Street 490 Lynwood Rd. Apt. F102

Birth Date 07-30-1980 | City, State, & Zip Greenville, SC 29607

State SC | Driver's License # 007721072 (D) | Insurance Company Allstate

Year 2007 | Body 4-Dr | Vehicle Make Toyota | VIN # JTDBT923X71018991

State SC | Year 2011 | License Plate # EAN 104 | Owner's D.L. # 007721072 (D)

Home Telephone (864) 320-0382 | Owner's Full Name Martin-Timothy Spicer

Bus. Telephone ( ) NA | Street 490 Lynwood Rd. Apt. F102

Contributed To Collision Yes | City, State, & Zip Greenville, SC 29607

Estimated Speed 0 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # NA | Code | Summons # NA | Code | Towed By NA

Z-327407

Driver/Pedestrian's Full Name: Davis-Linda

Unit # 2 | Sex F | Race W | Street 1006 Calumet Ct.

Birth Date 12-30-1986 | City, State, & Zip Piedmont, SC 29673

State SC | Driver's License # 100197204 (D) | Insurance Company Nationwide

Year 2007 | Body 4-Dr | Vehicle Make Honda | VIN # 1HGCM66467A09417

State SC | Year 2011 | License Plate # GDS 363 | Owner's D.L. # 100197204 (D)

Home Telephone (864) 634-3188 | Owner's Full Name Davis-Linda

Bus. Telephone ( ) NA | Street 1006 Calumet Ct.

Contributed To Collision No | City, State, & Zip Piedmont, SC 29673

Estimated Speed 20 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # F413544 | Code 21 | Summons # NA | Code | Towed By NA

Z-327408

Driver/Pedestrian's Full Name:

Unit # N/A | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

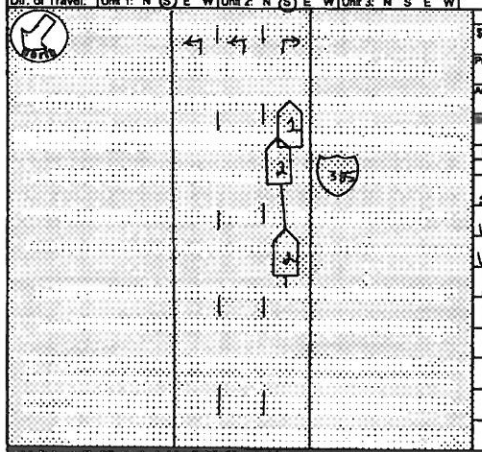
Bus. Telephone ( ) | Street

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500.00	$ 500.00	$ NA	$ NA	$ NA

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and Unit #2 were traveling South on the ramp from I-385 to SC 146. Unit #1 stopped in traffic. The driver of Unit #2 was driving too fast for conditions, causing Unit #2 to strike Unit #1.

MAY 28 2010

YOU ARE TO REPORT ON THIS FORM ONLY THE FACTS AS YOU KNOW THEM TO BE. DO NOT GIVE OPINION AND DRAW CONCLUSIONS. THE COLLISION REPORT IS NOT ADMISSIBLE IN COURT AS EVIDENCE.

Investigating Officer's Name: Abercrombie - B.K. | Rank Tfc | Badge # 633 | Code HP03 | Date 05-10-2010 | Reviewer's Name TAYLOR - T.J. | Rank CPL. | Internal Agency Code 10GV047047

Unit	Date of Birth	Sex	Race	INJ	Seat	R/S/D	A.S.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	07-30-1980	M	W	0	01	13	43	1	1	2			
2	12-30-1986	F	W	0	01	13	43	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, I - Alaskan Native or American Indian, W - Caucasian, H - Hispanic, O - Other, U - Unk

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian, 30- Towing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nonbaiting), 51- Other Unenclosed Area (nontraiting), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk

Air Bag Deployment / Switch: a) 1-Deployed Front, 2-Deployed Side, 3-Deployed Both, 4-Not Deployed, 7-Not Applicable, 8-Deployment Unk., 9-Unk; b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown

b) By: 1- EMS, 2- Police, 8- Other, 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 61- Lighting

Sequence of Events

1st Event	2nd Event	3rd Event	4th Event	Most Harmful Event
23	23			22

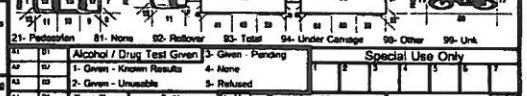
Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Non-Motor Veh.), 13- Other Non-Collision, 19- Unk Non-Collision

Collision Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. (In Transport), 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh, 29- Work Zone Maint. Equip, 30- Other Movable Object, 39- Unk. Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 69- Other, 99- Unk.

Manner of Collision (Struck Veh.): 10- Not Coll. W/ Motor Veh., 1st Harmful; 1- Rear End, 2- Head On, 3- Rear-to-Rear, 4- Angle, 5- Sideswipe Same Dir., 6- Sideswipe Opposite Dir., 7- Backed Into, 8- Angle, 9- Unknown

Most Deformed Area: 1st / Most Deformed



Vehicle Type: 01- Automobile, 02- Pickup Truck, 03- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Other, 29- Animal Drawn Veh., 30- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian, 99- Unk. (Hit and Run Only)

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopped in Traffic, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1-, A2-, A3-

Alcohol / Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other, 0- None/Minor, 2- Functional Damage, 3- Disabling Damage, 4- Severed/Totaled, 5- Not Applicable, 9- Unk

Special Use Only: 1 2 3 4 5 6 7

Undertide/Overtide: 6

Intrusion: 1- Under- Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- M/V in Transport, 5- Over- Other Vehicle, 6- None, 9- Unk.

Extent of Deformity: 2

Damage Scale: 1 2 3

Traffic Control Type: 98

Traffic Way: 4

B- X-walk: X

1st Harmful Event Loc: 5

1- Dirt 2- Gravel 3- Median 4- Roadside 5- Roadway 6- Shoulder 7- Sidewalk 8- Outside Trafficway 9- Unk

1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Character: 1

1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk

Road Surface Condition: 2

01- Stop and Go Light, 02- Flashing Traffic Signal, 03- Stop Sign, 04- Yield Sign, 05- Flashing Beacon, 06- School Zone Sign, 07- Railroad Crossbuck, 08- Railroad Flashers, 09- Railroad Gate, 10- Officer or Flagman, 11- RR (X-bucks Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 20- Other Warning Sign, 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Sign, 98- None, 99- Unk

Traffic Control Type: 98

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk

Light Condition: 5 — 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No lights)

Junction Type: 13 — 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Work Zone Location: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk

Work Zone: 1- Yes 2- No

Workers Present: 1- Yes 2- No

School Bus Involved: 3

Primary Contributing Factors: 09

Driver: 01- Disregarded Signs, Signals, Etc, 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Operating Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Cell Phone, 20- Other Improper Action, 29- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (Ice, Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (Ie., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R of W, 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk., 86- Under the Influence, 87- Other Person Under Influence

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10061036 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM (TR-310) (Rev. 01/01/01) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1640 | Arrived: 1710

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Int/ Near City or Town of:
06-02-2010	1655	23	385	5	S	Greenville

Lane # / Dir.: 1 / 4 / S W | Distance Offset: .1 Miles/Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt. # / Name): From 146 / Woodruff Rd. | 6- Main 7- Business 8- Other 9- Connection | ASRU code | MP/Grid

R.R. Id.: n/a | Ramp Only: From N E S W, To N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Second Intersection (Rt. # / Name): Toward 107 / Butler Road | Latitude: 34 ° 49 ' 22.10 | Longitude: 82 ° 17 ' 29.70

B-086374

Driver/Pedestrian's Full Name: Hendricks- Zachary Pierce

Unit # 1 | Sex: M | Race: W | Street/R.F.D.: 912 Thomas Mill Rd | Birth Date: 02-15-1991 | City, State, & Zip: Easley SC 29640

State: SC | Driver's License #: 100559231 (D) | Insurance Company: Citi Financial

Year: 2001 | Body: 2S | Vehicle Make: Mitsu | VIN #: 4A3AC44G01E071775

State: SC | Year: 2010 | License Plate #: CFV 173 | Owner's D.L. #: n/a

Home Telephone: (864) 855-8746 | Owner's Full Name: Hendricks- Franklin Taft

Bus. Telephone: (864) 508-4196 | Street/R.F.D.: 912 Thomas Mill Rd.

Contributed To Collision: No | City, State, & Zip: Easley SC 29646

Estimated Speed: 45 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: F 522429 | Code: 22 | Summons #: n/a | Code: | Towed By: Dobsons (DR)

B-086375

Driver/Pedestrian's Full Name: Yanns- Brian Paul

Unit # 2 | Sex: M | Race: W | Street/R.F.D.: 10704 Leesa Dr | Birth Date: 08-27-1973 | City, State, & Zip: Mckinney TX 75070

State: TX | Driver's License #: 26087553 (C) | Insurance Company: Mollie

Year: 2010 | Body: 4D | Vehicle Make: Nissan | VIN #: 3N1BC1CP1AL448625

State: NC | Year: 2011 | License Plate #: CDC 4274 | Owner's D.L. #: n/a

Home Telephone: (214) 218-7103 | Owner's Full Name: Hertz Veh

Bus. Telephone: ( ) n/a | Street/R.F.D.: 20 Oak Hollow Ste 350

Contributed To Collision: Yes (No) | City, State, & Zip: Southfield MI 48083

Estimated Speed: 45 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: n/a | Code: | Summons #: n/a | Code: | Towed By: JR (DR)

B-086376

Driver/Pedestrian's Full Name:

Unit # n/a | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

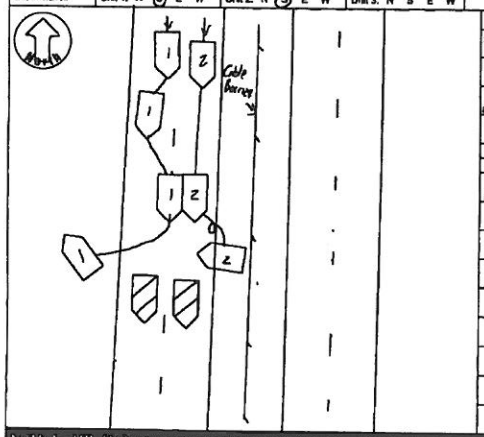
Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed By:

JUN 14 2010

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3800.00	$ 4500.00	$ n/a	$ n/a	$ n/a

Property Owner/Witness: Brian - Heather N | Property Owner/Witness: n/a

Address: 6367 Cedar Springs Dr Simpsonville | Address: n/a

State: SC | Zip: 29681 | Phone: (864) 918-8339 | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number): Unit #1 and Unit #2 were both on I-385 Unit #1 made an improper lane change and struck Unit #2 spun to the right shoulder Unit #2 spun into the grass median.

NOTICE - THE TR-310 FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINIONS AND BELIEF CONCERNING THE COLLISION. IT IS NOT A WARRANT IS MADE AS TO THE TRUTH ACCURACY THEREOF.

Investigating Officer's Name: Edwards- C. M. | Rank: Cpl | Badge #: 546 | Code: H103 | Date: 06-04-2010 | Reviewer's Name: A. R. Wm | Rank: Sgt | Internal Agency Code: 1DGV057008

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	Lal	Trap
1	02-15-1991	M	W	01	01	13	4	1	1	2
2	08-27-1973	M	W	01	01	13	4	1	1	2
2	08-27-1973	F	W	01	03	13	4	1	2	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Usage: 1- Yes; 2- No; 3- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unk.

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1- Yes; 2- No

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22	1	1	1	22	22
22	2	2	2		
	3	3	3		

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Wheeled Unit); 13- Other Non-collision; 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (Unpowered); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Powered); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pompat End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 11 23 3 | Most Deformed: 11 23 3

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk.

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 68- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 9- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: D1- 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV In Transport; 5- Over- Other Vehicle; 8- None; 9- Unk.

Underride/Override: 0

Extent of Deformity: 3

0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 8- Not Applicable; 9- Unk.

Trafficway: 3

Access: 1- Drive; 2- Interst; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Cross Trafficway; 9- Unk.

Bi- traffic: Y 2-N 9-U

1st Harmful Event: 54

Extent of Damage: 3

Road Character: 1

Road Surface Condition: 1

Traffic Control Type: 98

School Bus Involved: 3

Work Zone: 2

Work Zone Location

Work Zone Type

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

1- Yes 2- No

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10063566 | Page # 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 Rev. 01/2008 | # Of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1740 | Arrived: 1754

Date: 06-02-2010 | Time: 1735 | County: 23 | Collision Location (Rt. # / Name): 385 | Miles: 1 | Dir.: N E S W | Nearest City or Town of: Greenville

Lane # / Dir.: # 1 | Dir. SW | Distance Offset: .01 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): 146 | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only | To: N E S W | Second Intersection (Rt. # / Name): 85 | Latitude: 34°49'34.00" | Longitude: 82°17'33.80"

A-618370 — Driver/Pedestrian's Full Name: McPherson - Phillip-Michael

Unit #: 1 | Sex: M | Race: W | Street: 111 Hawkesbury Rd.
Birth Date: 05-05-1979 | City, State, & Zip: Simpsonville SC 29681
State: SC | Driver's License #: 00767468S (D) | Insurance Company: Allstate
Year: 2000 | Body: 4S | Vehicle Make: Mits | VIN #: 4A3AA36GXYE168568
State: SC | Year: 2010 | License Plate #: 626-BDL | Owner's D.L. #: 00767468S
Home Telephone: (864)918-3047 | Owner's Full Name: McPherson - Phillip-Michael
Bus. Telephone: (864)688-2396 | Street: 111 Hawkesbury Rd
Contributed To Collision: Yes | City, State, & Zip: Simpsonville SC 29681
Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)
Summons #: N/A | Code: N/A | Towed By: (OR) Hawkins

A-618371 — Driver/Pedestrian's Full Name: Vaughan - Walter - Reynolds

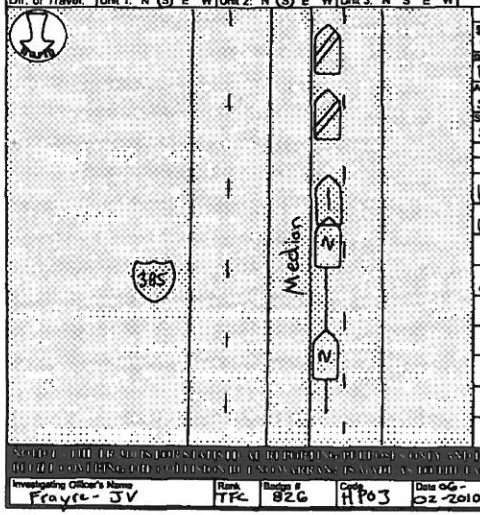
Unit #: 2 | Sex: M | Race: W | Street: 804 Spring Meadow CT.
Birth Date: 09-19-1989 | City, State, & Zip: Simpsonville SC 29680
State: SC | Driver's License #: 10061980I (D) | Insurance Company: State Farm
Year: 1998 | Body: TK | Vehicle Make: Dodg | VIN #: 3B7HC13YXWG161025
State: SC | Year: 2011 | License Plate #: P21867 | Owner's D.L. #: N/A
Home Telephone: (864)420-5923 | Owner's Full Name: Vaughan - W E Sales South LLC
Bus. Telephone: (864)270-1341 | Street: 804 Spring Meadow CT
Contributed To Collision: Yes | City, State, & Zip: Simpsonville SC 29680
Estimated Speed: 65 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)
Summons #: N/A | Code: E4793318 | Towed By: (OR) 21 JR Towing

A-618372 — Driver/Pedestrian's Full Name:

Unit #: N/A | Sex | Race | Street | Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
Home Telephone | Owner's Full Name | Bus. Telephone | Street | Contributed To Collision: Yes No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

JUN 16 2010

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$6500.00	$5000.00	$ N/A	$ 0.	$ .0

Property Owner/Witness: Bruce-Malcolm- | Property Owner/Witness: N/A
Address: 513 Fairview Lake Way Simpsonville | Address:
State: SC | Zip: 29680 | Phone: 864-905-9763 | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

Unit #1 was slowing in traffic headed South on Interstate 385. Unit #2 was traveling South on interstate 385, too fast for conditions, and struck unit #1

NOTICE: THE DEPARTMENT OF PUBLIC SAFETY RELEASES THIS REPORT ONLY AS A RECORD OF THE OFFICER'S INVESTIGATION AND DOES NOT WARRANT THE CORRECTNESS OF ANY OPINIONS AND DECISIONS OF THE OFFICER BUT EXPRESSLY DISCLAIMS ANY SUCH WARRANTY.

Investigating Officer's Name: Frayer - JV | Rank: TFC | Badge #: 826 | Code: HP03 | Date: 06-02-2010 | Reviewer's Name: BANISTER - D.L. | Rank: SGT. | Internal Agency Code: 10GV056311

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	05-05-1979	M	W	C	01	13	43	1	1	2			
2	09-19-1989	M	W	O	01	13		1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk
a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal
Seating Loc: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trading Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior
Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 99- Unk; 71- Child Safety Seat; 88- Other
Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 8-Deployment Unk; 9- Unk; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch
Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk
b) Motorcycle Only: Head Injury: 1-Yes 2-No; Helmet: 1- Yes 2- No 3- Unknown
Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown
a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk
Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

1	2	3	4	5	6
22					
22	22				

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Other Non-Collision
Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. Unattended (Stopped); 24- Motor Veh. (Other Roadway); 25- Pedalcycle; 26- Railway Veh; 27- Pedestrian; 28- Work Zone Maint. Equip; 29- Other Non-Collision
Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Fender; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail Face; 49- Guardrail End; 50- Impact Attenuator/Crash Cushion; 51- Concrete Traffic Barrier; 52- Other Post, Pole or Support; 53- Other Traffic Sign Post; 54- Overhead Sign Support; 55- Mail Box; 56- Median Barrier; 57- Tree; 58- Other Post, Pole or Support Hit; 59- Other Fixed Object; 60- Unk
Manner of Collision (Struck Veh.): 10- Not Coll. W/ Motor Veh.; 11- First Collision; 12- Subsequent Collision; 10- Rear-to-Rear; 11- Angle (↘↙); 12- Angle (→|←); 13- Angle (↗|↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown
1st / Most Deformed Area; 1st Deformed; Most Deformed

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 30- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 83- Other; 99- Unk. (Hit and Run Only)
Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pend. rq; 4- None; 5- Refused
Special Use Only
Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian
Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other
1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk; Undermide/Overmide
Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other
Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 6- None/Minor; 8- Other; 9- Unk
1- None; 2- Functional Damage; 3- Disabling Damage; 4- Severed/Totaled; 5- Not Applicable; 8- Unk; Extent of Deformity
Alc Test Results: A1- ; A2- ; A3-
Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.
Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working
1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other; Trafficway
1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; Road Character
1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.; Road Surface Condition
D1- Stop and Go Light; 21- Officer or Flagman; 02- Flashing Traffic Signal; 22- Oncoming Emergency Vehicle; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 88- None; 99- Unk; Traffic Control Type
Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk
Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)
1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.; School Bus Involved:
1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No; Work Zone:
Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-junction; 99- Unk
Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk
Work Zone Type: 1- Yes 2- No; Workers Present:

Primary Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Action; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Unk.
Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk
Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 60- Under the Influence; 67- Other Person Under Influence
Environmental: 80- Animal in Road; 81- Weather Cond.; 82- Obstruction; 83- Other; 89- Unk.
Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.
Others:

ORIGINAL

D.P.S. USE ONLY: 10063995 | Page 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2011) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1450 | Arrived: 1459

Date: 08-11-2010 | Time: 1450 | County: 23 | Collision Location (Rt. # / Name): 385 | Main | Connection | Alternate | Business | Spur | Other | Miles: 1 | Dir. N E S W | Int-Near City or Town of: Greenville

Lane # / Dir.: 2 4 S | Distance Offset: .15 Miles Feet | Direction: S | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | Second Intersection (Rt. # / Name): Toward 107 | ASRU code | MP/Grid | Latitude: 34° 49 1680 | Longitude: 82° 17 2930

R.R. Id.: N/A | From/To: Ramp Only N E S W 1- Entrance 2- Exit

B-423937

Driver/Pedestrian's Full Name: Gunter-Dalton D

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 1901 Woodruff Rd Apt 7212 | Birth Date: 08-28-1995 | City, State, & Zip: Greenville SC 29607 | State: SC | Driver's License #: 000 76 75 76 (D) | Insurance Company: Nationwide | Year: 1995 | Body: PK | Vehicle Make: Dodg | VIN #: 3B7MC33W3SM129229 | State: SC | Year: 2010 | License Plate #: 973882 | Owner's D.L. #: 000 76 75 76 | Home Telephone: 864 988-0595 | Owner's Full Name: Gunter-Dalton D | Bus. Telephone: ( ) N/A | Street/R.F.D.: 1901 Woodruff Rd Apt 7212 | Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29607 | Estimated Speed: 40 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: N/A | Code | Summons # | Code | Towed By: M+J (Reg)

B-423938

Driver/Pedestrian's Full Name: Hurtado-Anick Hernandez

Unit #: 2 | Sex: F | Race: H | Street/R.F.D.: 105 Belcrass Dr | Birth Date: 12-13-1990 | City, State, & Zip: Simpsonville SC 29681 | State: SC | Driver's License #: 10162269 7 (D) | Insurance Company: Allstate | Year: 2002 | Body: 4S | Vehicle Make: FORD | VIN #: 1FAHP34342W243286 | State: SC | Year: 2011 | License Plate #: EFB 146 | Owner's D.L. #: N/A | Home Telephone: 864 901-9761 | Owner's Full Name: Rodriguez-Jamie Hernandez | Bus. Telephone: ( ) N/A | Street/R.F.D.: 103 Belcrass Dr | Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville SC 29681 | Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: 4324900 | Code: 21 | Summons # N/A | Code | Towed By: Mills (Rot)

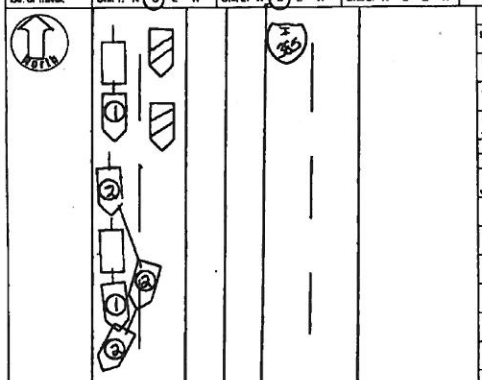
B-423939

Driver/Pedestrian's Full Name

Unit #: 3 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

JUN 1 8 2010

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3000	$ 3000	$	$ N/A	$ N/A

Property Owner/Witness: Estes-Mike | Address: 4 McBee St Greenville | Phone: 864-444-8810 | State: SC | Zip: 29601

Property Owner/Witness: Colstrom-Scott and Jillian | Address: 319 Parkside Dr Simpsonville | State: SC | Zip: 29681 | Phone: 864-735-9212

Photo: (Y)N | Describe What Happened (Refer to Units by Number):

Unit #1 and 2 were traveling south on I-385. Driver of Unit #2 attempting to make a lane change lost control and traveled into the path of Unit #1. Unit #1 struck Unit #2 Driver of Unit #2 was too fast for conditions

NOTICE: THE DPS HAS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A COMPILATION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION. IT IS NOT A WARRANTY AND IS MADE AS TO THE TRUTH AND ACCURACY THEREOF.

Investigating Officer's Name: ATKINS-T | Rank: TPC | Badge #: 420 | Code: 11A03 | Date: 08-11-2010 | Reviewed Name: R. BUNN | Rank: Cpl | Internal Agency Code: 10GV059948

Unit	Date of Birth	Sex	Race	Inj	Seat	H/Rest	A.I.S.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	08-28-1995	M	W	0	01	B	3	1	1	2			
1	01-07-1970	M	W	0	03	B	3	1	1	2			
2	12-13-1990	F	W	0	01	B	3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 99- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 81- Lighting

Sequence of Events: Most Harmful Event: 1 2 3 4 5 6

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Overturn/Rollover; 07- Cross Median/Center Line; 08- Immersion; 09- Ran off Road Left; 10- Ran off Road Right; 11- Downhill Runaway; 12- Jackknife

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Backpost); 24- Motor Veh. (Other Reason); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Work Zone Maint. Equip.; 29- Other Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pumpost End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 80- Unknown

1st Most Deformed: 12 06 | Most Deformed: 12 06

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 89- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian; 99- Unk.

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Camper Trailer; 7- Boat Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Special Use Only

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- M/V in Transport; 5- Over- Other Vehicle; 9- Unk.

Underride/Override: 6

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 8- Not Applicable; 9- Unk.

Extent of Deformity: 3

Road Character: 1

Road Surface Condition: 1

Traffic Control Type: 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Dst, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non/Junction; 99- Unk.

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

01- Stop and Go Light; 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 3

Work Zone: 2

Work Zone Location: ----------

Work Zone Type: ----------

Workers Present: ----------

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 26- Other Improper Action; 29- Unk.; 18- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

JAN 24 2010

D.P.S. USE ONLY **10150672** | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01-2001) | # of Units 2 | Amended - Attach Copy of Original Report / Corrected | Notified 1746 | Arrived 1758

Date 12-17-2010 | Time 1754 | County 23 | Collision Location (Ft. # / Name) 385 | Miles | Dir. N E S W | Int./ Near City or Town of: Greenville

Lane # / Dir. 1 2 | Distance Offset .05 Miles Feet | Direction N E S W | Base Intersection (Ft. # / Name) From 85 | Second Intersection (Ft. # / Name) Toward 146 | ASRU code | MP/Grid | Latitude 34 49 3200 | Longitude 82 17 3380

R.R. Id. N/A | From: Ramp Only 1- Entrance 2- Exit | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Connection 9- Other

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B-602449

Driver/Pedestrian's Full Name: Gray - Channie Amanda

Unit # 1 | Sex F | Race B | Street/R.F.D. 1 Woodmont Ln.

Birth Date 10-23-1985 | City, State, & Zip Greenville, SC 29605

State SC | Driver's License # 011484667 (D) | Insurance Company Allstate

Year 2001 | Body 4S | Vehicle Make CADI | VIN # 1G6KF5791UU118628

State SC | Year 2011 | License Plate # DWB 457 | Owner's D.L. # N/A

Home Telephone (864) 457-0108 | Owner's Full Name Anderson - Wilbur Jr.

Bus. Telephone ( ) N/A | Street/R.F.D. 317 Boling Rd.

Contributed To Collision (Yes) No | City, State, & Zip Taylors, SC 29687

Estimated Speed 15 | Speed Limit 65 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # E755469 | Code 48 | Summons # N/A | Code | Towed By N/A

B-602450

Driver/Pedestrian's Full Name: Vandevbracke - Michael Curtis

Unit # 2 | Sex M | Race W | Street/R.F.D. 15 Southfield Dr.

Birth Date 01-13-1980 | City, State, & Zip Greenville, SC 29607

State SC | Driver's License # 10154195 3 (M) | Insurance Company Mush USA

Year 2010 | Body 4S | Vehicle Make BMW | VIN # WBAUC758AVK96413

State SC | Year 2011 | License Plate # ASF 334 | Owner's D.L. # N/A

Home Telephone (864) 238-2240 | Owner's Full Name BMW MANFG CORP

Bus. Telephone ( ) N/A | Street/R.F.D. 1400 Hwy 101

Contributed To Collision (No) | City, State, & Zip Greer, SC 29651

Estimated Speed 5 | Speed Limit 65 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # N/A | Code | Summons # N/A | Code | Towed By N/A

B-602451

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 500	$ N/A	$ N/A	$ N/A

Property Owner/Witness N/A | Property Owner/Witness N/A

Address | Address

State | Zip | Phone | State | Zip | Phone

Photos Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and Unit #2 were traveling south on the exit ramp from I-385 to S. 146. Unit #1 was following too closely and struck Unit #2 in the rear.

NOTICE: THE DRAWING IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO ITS TOTAL ACCURACY THEREOF.

Investigating Officer's Name Perry - L.D. | Bank 1A | Badge 784 | Code HP03 | Date 12-17-2010 | Reviewer's Name | Rank SGT | Incident Agency Code 11GB/190566

Unit	Date of Birth	Sex	Race	INJ	Seat	R/S/D	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	10-23-1985	F	B	0	01	13	4 4 2	1	1	2			
2	01-13-1980	M	W	0	01	13	7 1	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Pedestrian, Motorcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 03- Cross Median/Cross Line; 05- Downhill Runaway; 04- Equipment Failure; 06- Fire/Explosion; 07- Jackknife; 08- Immersion; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Mat.); 13- Tire Failure/Debris; 14- Other Non-collision; 15- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Dam; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Pier); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed

Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Deer Van); 29- Animal (All Other); 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Property; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other; 9- Unk.

Drug Results: D1- ; D2- ; D3- ; 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 6- Other; 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Undercride/Override: 1 0

Extent of Deformity: 1 0 2 0 3

Event Loc.: 1- Under Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Ft. & mult.: 1st Harmful Event Loc. 5 2

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes; 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes; 2- No

Workers Present: 1- Yes; 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Others: 19- Cell Phone

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Instantiive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Other; 57- Wrong Side of Road; 58- Unk.; 59- Darting; 87- Other Person Under the Influence; 88- Other; 89- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 69- Other; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheels; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY: 10064388 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2010) | # of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 0810 | Arrived: 0825

Date: 06-02-2010 | Time: 0757 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): 385 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business | Miles: 1 | Dir. N E S W | Int/ Near City or Town of: Greenville

Lane # / Dir.: # N/A, Dir. N/A | Distance Offset: .10 Miles, Dir. N E S W | Direction: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W, Ramp Only, To: N E S W | 1- Entrance 2- Exit | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 107 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Latitude: 3449 15.60 | Longitude: 82 17 28.10

B-332587

Driver/Pedestrian's Full Name: Anderson- Karen Denise

Unit #: 1 | Sex: F | Race: B | Street/R.F.D.: 304 Havendale Drive | City, State, & Zip: Fountain Inn, SC 29644 | Birth Date: 01-21-1983

State: SC | Driver's License #: 011160956 (D) | Insurance Company: Nationwide

Year: 2003 | Body: 4S | Vehicle Make: Acura | VIN #: 19UUA56643A076070

State: SC | Year: 2010 | License Plate #: 9627EG | Owner's D.L. #: 011160856 (D)

Home Telephone: (864) 283-5207 | Owner's Full Name: Anderson- Karen Denise

Bus. Telephone: (864) 283-5207 | Street/R.F.D.: 304 Havendale Drive

Contributed To Collision: Yes | City, State, & Zip: Fountain Inn, SC 29644

Estimated Speed: 50 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons #: E472144 | Code: 21 | Summons #: N/A | Code | Towed By: Elite (GR)

B-332588

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

B-332589

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

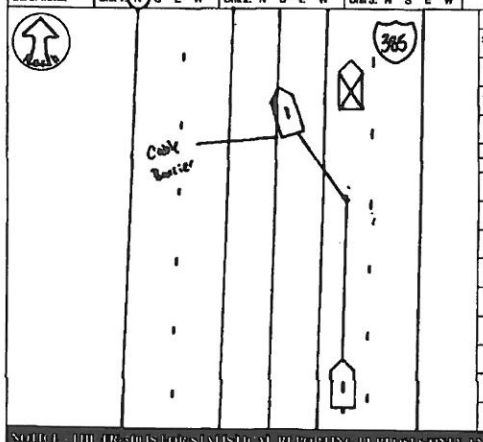
Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

JUN 21 2010

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3500	$ N/A	$ N/A	$ 0	$ N/A

Property Owner/Witness: N/A | Property Owner/Witness: N/A

Address | Address

State | Zip | Phone | State | Zip | Phone

Photos Y N | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling Northbon I-385. Vehicles ahead were stopped due to traffic congestion. Unit #1 was traveling too fast for conditions and ran off the left hand side of the road and into the median. Unit #1 struck the cable barriers. No damage to the cable barriers.

NOTICE: THE DESCRIPTIONS AND STATISTICAL REPORTING PERTAIN SOLELY AND EXCLUSIVELY TO THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Andis-DC | Rank: Officer | Badge #: 712 | Code: HP03 | Date: 06-02-2010 | Reviewer's Name: M.A. Rank: Cpt | Internal Agency Code: 106V 05E075

Unit	Date of Birth	Sex	Race	IMJ	Seat	RAS	A.B.D.	Eject	LAI	Tran
1	01-21-1983	F	B	0	01	13	49	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander, B - African American, I - Alaskan Native or American Indian, W - Caucasian, H - Hispanic, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only: Helmet Worn: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./N/A

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 5- Deployment Unk.; b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 8- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 8- Unk.

Head Injury: 1- Yes 2- No

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Sequence of Events: Maximum of 4 Events Shown in Sequence for Each Unit (See Page 2 for Additional Events)

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
99	56			56	56

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Non-Hazmat Veh.), 13- Other Non-collision, 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Work Zone Maint. Equip., 23- Motor Veh. in Transport, 24- Motor Veh. (Other Powered), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Worker, 30- Other Movable Object, 31- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Bridge Pier or Abutment, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area

1st Deformed: 12 | Most Deformed: 12

21- Pedestrian, 81- None, 82- Rollover, 83- Total, 84- Under Carriage, 88- Other, 99- Unk.

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 69- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Alc Test Results: A1- , A2- , A3-

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other, 0- None/Minor, 1- Functional Damage, 2- Disabling Damage, 3- Severe/Fatal, 5- Not Applicable

Special Use Only

Underride/Override: 6

Action Prior to Impact: 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping, 10- Turning Left, 11- Turning Right, 12- Changing Lanes, 13- Merging, 14- Successful Avoidance, 15- Swerving, 16- Other, 17- Unk., 18- Stopped in Traffic

(Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 88- Other, 99- Unk., 27- Working

Extent of Deformity: 3

Trafficway: 3

1st Harmful Event Loc.: 56

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Soil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Road Character: 1

Road Surface Condition: 2

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (No Lights), 7- Dark (No Lights), 8- Dark (Street Lamp Not Lit)

Traffic Control Type: 98

01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagmen, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 88- None, 99- Unk.

School Bus Involved: 3

Work Zone: 3

Work Zone Location: ----------

Work Zone Type: ----------

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

13

1- Yes Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination, Area

1- Yes 2- No

1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

1- Yes 2- No Workers Present:

Primary: 03

Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Aggressive Operation of Vehicle, 12- Over-correcting/Over-steering, 13- Swerving to Avoiding Object, 14- Wrong Side or Wrong Way, 15- Under the Influence, 16- Vision Obscured (Within Unit), 17- Improper Lane Usage/Change, 18- Other Improper Action, 19- Cell Phone, 20- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 39- Other, 40- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk., 67- Other Person Under the Influence

Environmental: 62- Obstruction, 63- Animal in Road, 64- Glare, 65- Other, 66- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 99- Unk.

Others:

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310

DPS USE ONLY: 10064427 | Page # 1 Of: 1 | # Of Units: 1 | Attempted - Attach Copy of Original Report | Corrected | Notified: 1730 | Arrived: 1740

Date: 06-07-2010 | Time: 1720 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): 385 | 6- Connector 7- Business 8- Other | Miles: 1 | Dir.: S | Nr / Near City or Town of: Greenville

Lane # / Dir.: N/A / WA | Distance Offset: 50 Miles Feet | Direction: S | Base Intersection (Rt. # / Name): 146 | ASRU code | MP/Grid

R.R. Id.: N/A | From: Ramp Only | To: 4 Secondary | Toward: 107 | Second Intersection (Rt. # / Name) | Latitude: 34° 48' 45.40" | Longitude: 82° 17' 17.50"

Z-327223 — Driver/Pedestrian's Full Name: Rios-Palacios-Dulce

Unit #: 1 | Sex: F | Race: H | Street: 208 Pepper Ln.

Birth Date: 08-20-1983 | City, State, & Zip: Simpsonville SC 29680

State: SC | Driver's License #: None | Insurance Company: Access Insurance Co

Year: 1991 | Body: SUV | Vehicle Make: Ford | VIN #: FMDU32X1MUA52197

State: SC | Year: 2010 | License Plate #: FP6158 | Owner's D.L. #: N/A

Home Telephone: (864) 208-5219 | Owner's Full Name: Rios Palacios-Dulce

Bus. Telephone: ( ) N/A | Street: 208 Pepper Tree Ln

Contributed To Collision: No | City, State, & Zip: Simpsonville, SC 29680

Estimated Speed: 60 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/G S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E479491 | Code: 27 | Summons #: E479492 | Code: 97 | Towed By: Bruce's (NOT)

Z-327224 — Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name

Bus. Telephone | Street

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/G S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Z-327225 — Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

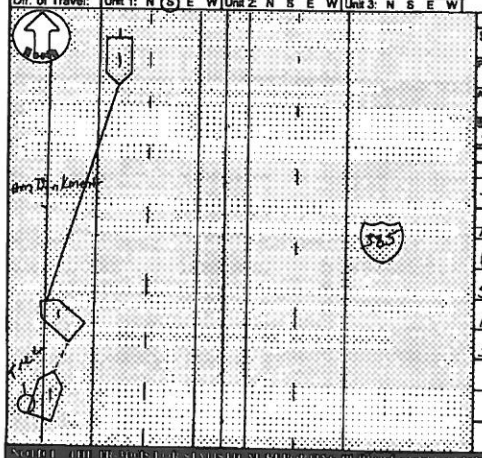
Year | Body | Vehicle Make | VIN #

JUN 21 2010

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/G S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1,500.00	$ N/A	$ N/A	$ N/A	$ N/A

Property Owner/Witness: Access Terri Cannady | Address: 203 Jonesville Rd Simpsonville | State: SC | Zip: 29681 | Phone: (864) 303-3613

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

Unit 1 was traveling South on I-385 Traffic in front of unit 1 began to slow. The driver of unit 1 was driving too fast for conditions and swerved to avoid striking this other traffic. Unit 1 then left the right side of the roadway, struck an embankment and a tree.

NOTICE: THE DATA ON THIS FORM IS FURNISHED FOR INFORMATIONAL PURPOSES ONLY AND IS NOT A DETERMINATION OF THE LEGAL LIABILITY OF ANY PERSON OR ENTITY. THE DEPARTMENT ASSUMES NO LIABILITY FOR THE USE OR INTERPRETATION OF THE DATA CONTAINED HEREIN.

Investigating Officer's Name: Sgt. J.C. | Unit #: 842 | Badge #: 842 | Code: 97/03 | Date: 06-07-2010 | Reviewer's Name: Traylor T.J. | Rank: CPL. | Internal Agency Code: 10064427

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	ASD	Eject	LAI	Tran	Name	Street Address	Zip Code
1	08-20-1983	F	H	0	01	13	7	1	1	2			
1	08-24-1977	F	H	0	05	13	7	1	1	2			
1	05-24-1993	F	H	0	04	13	7	1	1	2			
1	05-07-1969	M	H	0	05	12	7	1	1	2			
1	04-25-2001	M	H	0	05	12	7	1	1	2			
1	09-24-2004	M	H	0	06	13	7	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Restraint/Safety Device: 00- None Used; 01- Shoulder Belt Only; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 04- Child Safety Seat; 05- Other; 06- Unk; Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 42- Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Not Deployed 3-Deployed Both 4-Deployment Unk.; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk

Sequence of Events

1	2	3	4
10	45	60	47

1st Harmful: 47

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous); 13- Other Non-collision; 14- Unk Non-collision

Collision Not Fixed: 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 30- Animal (Deer Only); 31- Animal (All Other); 32- Motor Veh. (In Transport); 33- Motor Veh. (Stopped); 34- Motor Veh. (Other Roadway); 35- Other Movable Object; 36- Unk. Movable Object; 25- Motor Veh. (Parked); 26- Pedalcycle

Collision Fixed Object: 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Work Zone Maint. Vehicle; 64- Bridge Overhead Structure; 65- Bridge Pier or Abutment; 66- Bridge Rail; 67- Culvert; 68- Curb; 69- Ditch; 70- Pedestrian; 71- Pedalcycle; 72- Railway Vehicle; 73- Ran off Road Right; 74- Ran off Road Left; 75- Snow Bank; 76- Tree; 77- Utility Pole; 78- Other Fixed Object; 79- Unk. Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (<90°); 41- Angle (>90°); 42- Angle (<90°); 43- Angle (>90°); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 12; Most Deformed: 12

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Railway Train; 29- School Bus; 30- Animal Drawn Veh.; 31- Animal (Ridden); 32- Passenger Bus; 33- Other; 41- Pedestrian; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 06- Transport Passengers; 07- Transport Property; 08- Military; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Merging; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Other; 99- Unk.

(Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc. Test Results: A1- ; A2- ; A3-

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3 Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Special Use Only

Undernet/Overnde: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 2

Traffic Way: 3

Road Character: 2

Road Surface Condition: 2

Traffic Control Type: 98

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-junction; 99- Unk

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Under the Influence; 15- Wrong Side or Wrong Way; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 57- Wrong Side of Road; 86- Under the Influence; 87- Other Person Under Influence

Environmental: 82- Obstruction; 60- Animal in Road; 61- Glare; 62- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

School Bus Involved: 3

Work Zone: 2 (1- Yes 2- No)

Work Zone Location: ----------

Work Zone Type: ----------

1- Yes 2- No Workers Present:

ORIGINAL

JUL 06 2010

O.R.I. USE ONLY: 10070510 | Page # 1 Ct: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev 01-2010) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 14:36 | Arrived 1507

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	In/ Near City or Town of:
06-24-2010	1430	23	& 385	4.6	N S W	GREENVILLE

County: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County

Lane # / Dir.: 3 3 N E S W | Distance Offset: 30 Miles Feet | Direction: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146/WOODRUFF RD | Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid | Latitude 34 49 28.80

R.R. Id.: N/A | From: Ramp Only 1- Entrance 2- Exit | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 85 | Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | Longitude 82 17 37.00

B-087517

Driver/Pedestrian's Full Name: CHIGUE-AMORVE-SERGIO

Unit #: 1 | Sex: M | Race: H | Street/R.F.D.: 111 ASHLEY OAK DR

Birth Date: 05-13-1976 | City, State, & Zip: SIMPSONVILLE SC 29680

State: N/A | Driver's License #: NONE | Insurance Company: AAMCO

Year: 1998 | Body: TK | Vehicle Make: CHEV | VIN #: 1GCGK29R2WE244220

State: SC | Year: 2011 | License Plate #: CTV315 | Owner's D.L. #: N/A

Home Telephone: 864 820-8425 | Owner's Full Name: PALMETTO STONES

Bus. Telephone: 864 967-1000 | Street/R.F.D.: 9101-A WARREN H ABERNATHY HWY

Contributed To Collision: No | City, State, & Zip: SPARTANBURG SC 29301

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes

Summons #: E524680 | Code: 87 | Summons #: N/A | Code: N/A | Towed By: N/A

B-087518

Driver/Pedestrian's Full Name: HARDAWAY-KATHRYN SELF

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 58 W AVONDALE DR

Birth Date: 12-5-1972 | City, State, & Zip: GREENVILLE SC 29609

State: SC | Driver's License #: 00401344 6 (D) | Insurance Company: WEST AMERICAN

Year: 2006 | Body: VN | Vehicle Make: TOYT | VIN #: 5TDZA22C95S300017

State: SC | Year: 2010 | License Plate #: AKB340 | Owner's D.L. #: 00401344 6 (D)

Home Telephone: 864 313-6871 | Owner's Full Name: HARDAWAY-KATHRYN SELF

Bus. Telephone: 864 313-6871 | Street/R.F.D.: 58 W AVONDALE DR

Contributed To Collision: Yes | City, State, & Zip: GREENVILLE SC 29609

Estimated Speed: 15 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes

Summons #: E524689 | Code: 91 | Summons #: N/A | Code: N/A | Towed By: N/A

B-087519

Driver/Pedestrian's Full Name: N/A

Unit #: N/A | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Home Telephone: ( ) | Owner's Full Name:

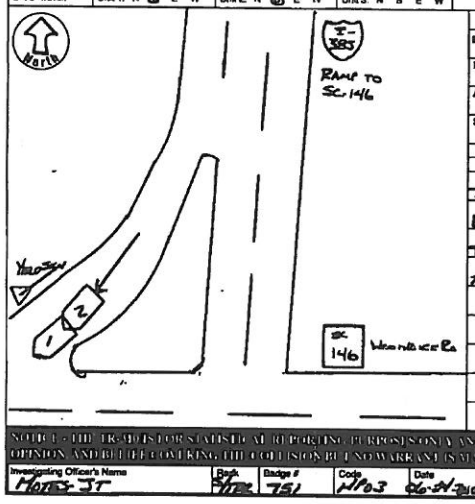
Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N E S W | Unit 2: N E S W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 2000	$	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y N | Describe What Happened (Refer to Units by Number)

UNIT #1 STOPPED ON THE EXIT RAMP FROM I-385 TO SC-146 WAITING TO ENTER SC-146 UNIT #2 WAS TRAVELING SOUTH ON THE EXIT RAMP TOO FAST FOR CONDITIONS AND STRUCK UNIT #1 IN THE REAR

NOTICE - THE INFORMATION ON THIS REPORT IS FOR STATISTICAL AND REPORTING PURPOSES ONLY AND IS NOT A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NEVERTHELESS IS MADE AS TO THE BEST OF THE OFFICER'S ABILITY.

Investigating Officer's Name	Badge #	Code	Date	Reviewer's Name	Code	Date	Internal Agency Code
MOTES JT	751	N03	06-24-2010	TAYLOR - T.J.	CPL		10GV 0619979

Unit	Date of Birth	Sex	Race	DU	Seat	R/SD	A.S.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	05-13-1976	M	H	0	01	13	4/3	1	1	2			
1	07-05-1982	M	H	0	03	13	4/3	1	1	2			
1	01-07-1957	M	H	0	02	13	4/3	1	1	2			
2	12-15-1972	F	W	0	01	13	4/3	1	1	2			
2	01-01-2007	F	W	0	05	21	7/3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only: Helmet Used: 1- Yes 2- No 3- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09. 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 99- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front 2- Deployed Side 3- Deployed Both 4- Not Deployed 7- Not Applicable 9- Deployment Unk. b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1- Yes 2- No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Injury
33				22	

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Two-Wheeled Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Free Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Guardrail End; 48- Guardrail Face; 49- Impact Attenuator/Crash Cushion; 50- Highway Traffic Sign Post; 51- Overhead Sign Post; 52- Pole or Support; 53- Culvert; 54- Light/Luminaire Support; 55- Mail Box; 56- Traffic Signal Support; 57- Tree; 58- Utility Pole; 59- Other Post, Pole, Support; 60- Other Fixed Object; 61- Unk. Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Deformed Area: 1st / Most: 1st Deformed 1 / 3; Most Deformed 1 / 3

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Constructor/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Knows Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 6

Extent of Deformity: 2

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk.

0- None/Minor; 1- Functional Damage; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 4. 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Event Loc.: 32. 1- On; 2- Median; 3- Shoulder; 4- Roadside; 5- Roadway; 6- Outside Trafficway; 7- Sidewalk; 8- Unk.

1st Harmful: 4. 1- X- traffic; 2- Y 2-N 6-U; 3- Y 2-N 6-U

Road Character: 5. 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1. 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 45. 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 3. 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 2. 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present:

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 13. 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Cell Phone; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Others: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Roadway: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Non-Motorist: 60- Under the Infl.; 61- Glare; 74- Lights; 75- Signals; 87- Other Person Under the Influence

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

JUL 1 9 2010

D.P.S. USE ONLY: 10075851 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 01 2007) | # of Units 1 | Amended - Attach Copy of Original Report Corrected | Notified EMS 1450 | Arrived 1456

Date 07-20-2010 | Time 1450 | County 23 | Collision Location (Rt. # / Name): S 385 | Miles: 200 | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: 1 | Of 4 | N E S W | Distance Offset: .01 Miles Feet | Direction N E S W | Base Intersection (Rt. # / Name): From 14Ce | ASRU code | MP/Grid

R.R. Id. N/A | From: Ramp Only NE SW | To NE SW | Second Intersection (Rt. # / Name): Toward 385 | Latitude 35 49 28.80 | Longitude 82 19 38.60

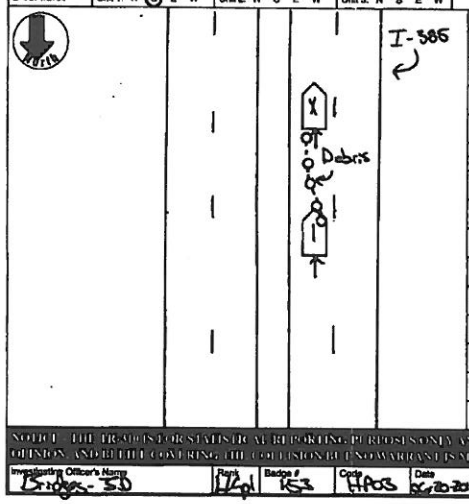
1 - Interstate 2 - US Primary 3 - SC Primary 4 - Secondary 5 - County 6 - Other | Main Alternate Business Connection Spur Other

Unit 1
B-053716 | Driver/Pedestrian's Full Name: Williams Daphne Denise
Unit # 1 | Sex F | Race W | Street/R.F.D. 207 Buckboard Ln.
Birth Date 08-28-1980 | City, State, & Zip Simpsonville SC 29681
State SC | Driver's License # 011356157 DL | Insurance Company Allstate
Year 1998 | Body 2D | Vehicle Make Chev | VIN # 1G1WV32G6W5117044
State FL | Year 2011 | License Plate # 997 TKY | Owner's D.L. # N/A
Home Telephone 828-660-4886 | Owner's Full Name Vibratech Inc.
Bus. Telephone N/A | Street/R.F.D. 6136 Donegal W
Contributed To Collision: Yes (No) | City, State, & Zip Lakeland FL 33813
Estimated Speed 55 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/S 6 Req: Yes (No) | Alc/Drg Info (see back): Yes (No)
Summons # N/A | Code A | Summons # N/A | Code A | Towed By N/A

Unit 2
B-053717 | Driver/Pedestrian's Full Name
Unit # N/A | Sex | Race | Street/R.F.D.
Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
State | Year | License Plate # | Owner's D.L. #
Home Telephone ( ) | Owner's Full Name
Bus. Telephone ( ) | Street/R.F.D.
Contributed To Collision: Yes No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S 6 Req: Yes No | Alc/Drg Info (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

Unit 3
B-053718 | Driver/Pedestrian's Full Name
Unit # N/A | Sex | Race | Street/R.F.D.
Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
State | Year | License Plate # | Owner's D.L. #
Home Telephone ( ) | Owner's Full Name
Bus. Telephone ( ) | Street/R.F.D.
Contributed To Collision: Yes No | City, State, & Zip
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S 6 Req: Yes No | Alc/Drg Info (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dem. 1	Prop. Dem. 2
$ 3000.00	$ N/A	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Describe What Happened (Refer to Units by Number):

Unit #1 traveling south on Interstate 385. Unit #1 was struck by a metal object that was in the roadway and also struck by an unknown vehicle that was also traveling south. The object struck the front and side windshield.

NOTICE: THE PURPOSE OF STATISTICAL REPORTING PURPOSES ONLY AND IS NOT TO EXPRESS THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Bridges-3D | Rank: Cpl | Badge #: 163 | Code: HPOS | Date: 07-20-2010 | Reviewed Name: [illegible] | Rank: Cpl | Internal Agency Code: 10GVDC0736

Unit	Date of Birth	Sex	Race	Inj	Seat	Rest	A.B.D.	Eject	Lic	Trim	Name	Street Address	Zip Code
1	08-28-1980	F	W	a: 0 b:	01	B	A: B:	1	L	a: 2 b:			
				a: b:			A: B:			a: b:			
				a: b:			A: B:			a: b:			
				a: b:			A: B:			a: b:			
				a: b:			A: B:			a: b:			
				a: b:			A: B:			a: b:			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0 - Not Injured; 1 - Possible; 2 - Non-Incapacitating; 3 - Incapacitating; 4 - Fatal
b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20 - Pedestrian; 30 - Trailing Unit; 40 - Bus or Van (4th row or Higher); 50 - Other Enclosed Area (nonrailing); 51 - Other Unenclosed Area (nonrailing); 60 - Sleeper of Cab; 70 - Riding on Unit Exterior; 80 - Lap; 89 - Unk./NA

Restraint/Safety Device: 00 - None Used; 11 - Shoulder Belt Only; 12 - Lap Belt Only; 13 - Shoulder & Lap Belt; 21 - Child Safety Seat; 99 - Unk.

Air Bag Deployment / Switch: 1 - Deployed Front; 2 - Deployed Side; 3 - Deployed Both; 4 - Not Deployed; 7 - Not Applicable; 8 - Deployment Unk.; 1 - Switch in On Position; 2 - Switch in Off Position; 3 - No Switch; 9 - Unknown

Ejection: 1 - Not Ejected; 2 - Part. Ejected; 3 - Tot. Ejected; 7 - Not App.; 9 - Unk.

Location After Impact: 1 - Not Trapped; 2 - Extricated (Mechanical Means); 3 - Freed (non-mech.); 4 - Not Applicable; 9 - Unknown

a) Transported to Medical Facility: 1 - Yes; 2 - No; 3 - Unknown
b) By: 1 - EMS 2 - Police; 8 - Other; 9 - Unk.

Pedestrian, Motor/Pedalcycle Only: 31 - Helmet; 41 - Protective Pads; 51 - Reflective Clothing; 61 - Lighting

Sequence of Events

Non-Collision: 01 - Cargo/Equip Loss or Shift; 02 - Cross Median/Center Line; 03 - Downhill Runaway; 04 - Equipment Failure; 05 - Fire/Explosion; 06 - Immersion; 07 - Jackknife; 08 - Overturn/Rollover; 09 - Ran off Road Left; 10 - Ran off Road Right; 11 - Separation of Units; 12 - Spill (Non-Hazardous Matl.); 13 - Spill (Hazardous Matl.); 14 - Other Non-Collision; 15 - Unk. Non-Collision

Collision: Not Fixed: 20 - Animal (Not Driver); 21 - Animal (All Other); 22 - Motor Veh. on Transport; 23 - Motor Veh. (Stopped); 24 - Motor Veh. (Other Roadway); 25 - Motor Veh. (Parked); 26 - Pedalcycle; 27 - Pedestrian; 28 - Railway Veh.; 29 - Work Zone Maint. Equip.; 30 - Other Movable Object

Collision: Fixed Object: 40 - Bridge Overhead Structure; 41 - Bridge Pier or Abutment; 42 - Bridge Rail; 43 - Culvert; 44 - Curb; 45 - Ditch; 46 - Embankment; 47 - Guardrail End; 48 - Guardrail Face; 49 - Highway Traffic Sign Post; 50 - Impact Attenuator/Crash Cushion; 51 - Light/Luminaire Support; 52 - Median Barrier; 53 - Overhead Sign Support; 54 - Pole (Not Power); 55 - Shrubbery; 56 - Traffic Signal Support; 57 - Tree; 58 - Utility Pole; 59 - Work Zone Maint. Equipment; 60 - Other Fixed Object; 99 - Unk.

Manner of Collision (Struck Veh.): 00 - Not Coll. W/Motor Veh.; 10 - Rear End; 20 - Head On; 30 - Rear-to-Rear; 40 - Angle; 41 - Angle; 42 - Angle; 43 - Angle; 50 - Sideswipe Same Dir.; 60 - Sideswipe Opposite Dir.; 70 - Backed Into; 99 - Unknown

1st / Most Deformed Area

Vehicle Type: 01 - Automobile; 12 - Pickup/Truck; 13 - Truck Tractor; 14 - Other Truck; 15 - Full Size Van; 16 - Mini Van; 17 - Sport Utility; 25 - Motorcycle; 26 - Other Motorbike; 27 - Pedalcycle; 28 - Animal Drawn Veh.; 39 - Animal (Ridden); 41 - Pedestrian; 51 - Train; 61 - School Bus; 62 - Passenger Bus; 69 - Other; 99 - Unk. (Hit and Run Only)

Vehicle Use Code: 01 - Personal; 02 - Driver Training; 03 - Construction/Maint.; 04 - Ambulance; 05 - Military; 06 - Transport Passengers; 07 - Transport Property; 08 - Farm Use; 09 - Wrecker or Tow; 10 - Police; 11 - Government; 12 - Fire Fighting; 13 - Logging; 18 - Other; 41 - Pedestrian

Vehicle Attachment: 1 - None; 2 - Mobile Home; 3 - Semi-Trailer; 4 - Utility Trailer; 5 - Farm Trailer; 6 - Camper Trailer; 8 - Towed Motor Vehicle; 9 - Petroleum Tanker; A - Cowboy Trailer; B - Autocarrier Trailer; C - Other Tanker; D - Flat Bed; E - Twin Trailers; F - Other

Action Prior to Impact: (Vehicle) 01 - Backing; 02 - Changing Lanes; 03 - Entering Traffic Lane; 04 - Leaving Traffic Lane; 05 - Making U-turn; 06 - Movements Essentially Straight Ahead; 07 - Overtaking/Passing; 08 - Parked; 09 - Slowing or Stopped in Traffic; 10 - Turning Left; 11 - Turning Right; 99 - Other, Unk. (Non-motorist) 21 - Approaching/Leaving Vehicle; 22 - Entering/Crossing Location; 23 - Playing/Working on Vehicle; 24 - Pushing Vehicle; 25 - Standing; 26 - Walking, Playing, Cycling; 27 - Working

Alc Test Results: A1 - ; A2 - ; A3 - ; A: 1 - Conv. 2 - Median 3 - Roadway 4 - Roadside 5 - Shoulder 6 - Gore 7 - Separator 8 - Outside Trafficway 9 - Unk.; B: X - Initial Point; 1 - Y 2 - N 9 - U

Weather Condition: 1 - Clear (no adverse conditions); 2 - Rain; 3 - Cloudy; 4 - Sleet, Hail; 5 - Snow; 6 - Fog, Smog, Smoke; 7 - Blowing Sand, Oil, Dirt or Snow; 8 - Severe Crosswinds; 9 - Unk.

Light Condition: 1 - Daylight; 2 - Dawn; 3 - Dusk; 4 - Dark (Lighting Unspecified); 5 - Dark (Street Lamp Lit); 6 - Dark (Street Lamp Not Lit); 7 - Dark (No Lights)

Junction Type: 01 - Crossover; 02 - Driveway; 03 - Five/More Points; 04 - Four-way Intersection; 05 - Railway Grade Crossing; 06 - Shared Use Paths or Trail; 07 - T-Intersection; 08 - Traffic Circle; 09 - Unk.; 10 - Y-Intersection; 11 - Nonjunction

Trafficway: 1 - Two-way, Not Divided; 2 - Two-way, Divided, Unprotected Median; 3 - Two-way, Divided, Barrier; 4 - One-way; 8 - Other

Road Character: 1 - Straight - Level; 2 - Straight - On Grade; 3 - Straight - Hillcrest; 4 - Curve - Level; 5 - Curve - On Grade; 6 - Curve - Hillcrest

Road Surface Condition: 1 - Dry; 2 - Wet; 3 - Snow; 4 - Slush; 5 - Ice; 6 - Contaminate; 7 - Water (Standing, etc.); 8 - Other; 9 - Unk.

Traffic Control Type: 01 - Stop and Go Light; 02 - Flashing Traffic Signal; 11 - RR (X-bucks, Lights & Gates); 12 - RR (X-bucks & Lights); 13 - RR (X-bucks Only); 21 - Officer or Flagman; 22 - Oncoming Emergency Vehicle; 31 - Pavement Markings (only); 41 - Stop Sign; 42 - School Zone Sign; 43 - Yield Sign; 44 - Work Zone; 45 - Other Warning Signs; 51 - Flashing Beacon; 98 - None; 99 - Unk.

School Bus Involved: 1 - Yes, Directly; 2 - Yes, Indirectly; 3 - No; 9 - Unk.

Work Zone: 1 - Before 1st Sign; 2 - Advanced Warning Area; 3 - Transition Area; 4 - Activity Area; 5 - Termination Area; 1 - Shoulder/Median Work; 2 - Lane Shift/Crossover; 3 - Intermittent/Moving Work; 4 - Lane Closure; 8 - Other; 9 - Unk.

Work Zone Location; Work Zone Type; Workers Present: 1 - Yes 2 - No

Primary Contributing Factors: Driver: 01 - Disregarded Signs, Signals, Etc.; 02 - Distracted/Inattention; 03 - Driving Too Fast for Conditions; 04 - Exceeded Authorized Speed Limit; 05 - Failed to Yield Right of Way; 06 - Ran off Road; 07 - Fatigued/Asleep; 08 - Followed Too Closely; 09 - Made an Improper Turn; 10 - Medical Related; 11 - Cell Phone; 12 - Aggressive Operation of Vehicle; 13 - Over-correcting/Over-steering; 14 - Swerving to Avoiding Object; 15 - Wrong Side or Wrong Way; 16 - Under the Influence; 17 - Vision Obscured (Within Unit); 18 - Improper Lane Usage/Change; 28 - Other Improper Action; 29 - Unk.

Others: Roadway: 30 - Debris; 31 - Non-Highway Work; 32 - Obstruction in Roadway; 33 - Road Surface Condition (i.e., Wet); 34 - Rut, Holes, Bumps; 35 - Shoulders (None, Low, Soft, High); 36 - Traffic Control Device (i.e., Missing); 37 - Work Zone (Constr./Maint./Utility); 38 - Worn, Travel-Polished Surface; 46 - Other; 49 - Unk.

Non-Motorist: 50 - Inattentive; 51 - Lying &/or Illegally in Roadway; 52 - Failure to Yield R. of W.; 53 - Not Visible (Dark Clothing); 54 - Disregard Signs, Signals, Etc.; 55 - Improper Crossing; 56 - Darting; 57 - Wrong Side of Road; 58 - Other; 59 - Unk.; 68 - Under the Influ.; 69 - Unk.

Environmental: 60 - Animal in Road; 61 - Glare; 62 - Obstruction; 63 - Weather Cond.; 68 - Other; 69 - Unk.

Vehicle Defect: 70 - Brakes; 71 - Steering; 72 - Power Plant; 73 - Tires/Wheel; 74 - Lights; 75 - Signals; 76 - Windows/Shield; 77 - Restraint System; 78 - Truck Coupling; 79 - Cargo; 80 - Fuel System; 89 - Other; 99 - Unk.

67 - Other Person Under the Influence

ORIGINAL

DEC 27 2010

D.P.S. USE ONLY: 10078730 | Page # 1 Of. 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 1 | Amended - Attach Copy of Original Report | Corrected | Notified 2000 | Arrived 2020

Date: 12/11/2010 | Time: 1950 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): S 385 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business | Miles: 1 | Dir: N E S W | -mi/ Near City or Town of: Greenville

Lane # / Dr.: N/A / N/A | Distance Offset: .1 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 107 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Latitude: 34° 41' 15.30" | Longitude: 82° 13' 00.10"

B-423643 (Driver/Pedestrian's Full Name: Ramirez-Cruz - Nicolas)

Unit #: 1 | Sex: M | Race: H | Street/R.F.D.: 3946 Charleston Hwy Lot 65 | City, State, & Zip: West Columbia, SC., 29172 | Birth Date: 09-11-1981

State: - | Driver's License #: None | Insurance Company: All State

Year: 1999 | Body: CP | Vehicle Make: Ford | VIN #: 1FAFP4043XF142212

State: SC. | Year: 2011 | License Plate #: 2098CP | Owner's D.L. #: N/A

Home Telephone: 843 847-7346 | Owner's Full Name: Cruz - Nicolas - Ramirez

Bus. Telephone: ( ) N/A | Street/R.F.D.: 3946 Charleston Hwy. Lot 65

Contributed To Collision: Yes | City, State, & Zip: West Columbia, S.C., 29172

Estimated Speed: 50 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: ES330077 | Code: 21 | Summons #: ES330078 | Code: 87 | Towed By: Howards (Rot)

B-423644 (Driver/Pedestrian's Full Name)

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

B-423645 (Driver/Pedestrian's Full Name)

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

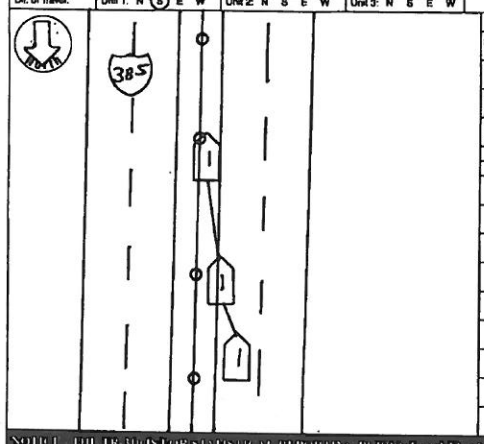
Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000.00	$	$	$ 2000.00	$ N/A

Property Owner/Witness: SCDOT | Property Owner/Witness:

Address: 13 Falcon Dam Rd., Greenville | Address:

State: SC. | Zip: 29611 | Phone: 864-241-1234 | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling South on S 385 too fast for conditions. Unit #1 ran off road left, and struck the median burrier.

NOTICE: THE INFORMATION ON THIS FORM IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RECITATION OF THE OFFICER'S BEST KNOWLEDGE OPINION, AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Crumbrell - J. G. | Rank: IFC | Badge #: 257 | Code: HP23 | Date: 12/11/2010 | Reviewed By Name: | Rank: SGT | Internal Agency Code: 10GV 0720 29

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D	Eject	Ext	Trap	Name	Street Address	Zip Code
1	09-11-1981	M	H	0	01	13	1 1 1	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 90- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Reflective Clothing; 51- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9-Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 03- Cross Median/Center Line; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular Matl.); 13- Other Non-collision; 99- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Restraint); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Support; 42- Bridge Rail; 43- Bridge Rail or Abutment; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 89- Other; 99- Unk.

Event	Event	Event	Event	Most Harmful	1st Harmful
09	56			56	09

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (<90°); 42- Angle (>90°); 43- Angle (=90°); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 15 17 19 21 33 34 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 74 75 77 79 81

Most Deformed: 1 2 3

Vehicle Type: 01- Automobile; 10- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motor/bike; 27- Pedalcycle; 28- Motorcycle; 29- Animal (Driven); 30- Other; 31- Train; 32- Passenger Bus; 99- Unk. (Hit and Run Only); 81- School Bus

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Low/Boy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 88- Other

Alc Test Results: A1- ; A2- ; A3- ; 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Alcohol/Drug Test Given: D1 / A1 / A2 / A3

Test Type: D1 / D2 / D3; 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: D1 / D2 / D3; 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.; Under/Over/Override

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

A: 1- Curb 2- Ditch 3- Median 4- Pavement 5- Roadway 6- Shoulder 7- Sidewalk 8- Outside Trafficway 9- Unk.

B: X- walk: Y- 2-N 9-U

1st Harmful Event: 4

Event Loc.: 4

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 99- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Other; 39- Unk.

Non-Motorist: 48- Other; 49- Unk.

Environmental: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Others: 62- Obstruction; 63- Weather Cond.; 69- Other; 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

60- Animal in Road; 61- Glare

Vehicle Defect: 99- Unk.

School Bus Involved: 9

Work Zone: 2- No

Work Zone Location

Work Zone Type

1- Yes 2- No Workers Present:

ORIGINAL

SEP 27 2010

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001)

D.P.S. USE ONLY: 10079109 | Page # 1 Of 1 | # of Units: 2 | Amended / Touch Copy of Original Report | Corrected | Notified: 1751 | Arrived: 1804

Date: 07-06-2010 | Time: 1740 | County: 23 | Collision Location (Rt. # / Name): S 385 | Miles: 3 | Dir.: N E S W | Near City or Town of: Greenville

Lane # / Dir.: 1 2 | Dir.: N E S W | Distance Offset: .05 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146/ Woodruff Rd | Second Intersection (Rt. # / Name): Toward 85 | 0- Main 1- Interstate 2- Alternate 3- SC Primary 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude: 34 49 26.30 | Longitude: 82 17 26.10

R.R. Id.: N/A | From: Ramp Only N E S W 1- Entrance 2- Exit | To: N E S W 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

B-041791 (Driver/Pedestrian's Full Name)

Farnum - Jessica Christen

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 211 Dalton Ave

Birth Date: 06-24-1978 | City, State, & Zip: Greer SC 29650

State: SC | Driver's License #: 007653359 (D) | Insurance Company: State Farm

Year: 2000 | Body: 2S | Vehicle Make: Chev | VIN #: 1GNJC1945YJ116114

State: SC | Year: 2009 | License Plate #: CIC 651 | Owner's D.L. #: N/A

Home Telephone: (864) 663-4256 | Owner's Full Name: Farnum - Bruce A Jr

Bus. Telephone: ( ) N/A | Street/R.F.D.: 49 Burns Rd

Contributed To Collision: Yes No | City, State, & Zip: Travelers Rst SC 29690

Estimated Speed: 20 | Speed Limit: 45 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # / Code: 89 | Towed By: HADKINS (COR)

B-041792 (Driver/Pedestrian's Full Name)

Morrison - Jesse Edward E

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 121 Acres Ct

Birth Date: 03-06-1987 | City, State, & Zip: Pickens SC 29671

State: SC | Driver's License #: 011761 173 (D) | Insurance Company: State Farm

Year: 2002 | Body: JS | Vehicle Make: Ford | VIN #: 3FAFP31372R213259

State: SC | Year: 2011 | License Plate #: RTL 603 | Owner's D.L. #: 011761173

Home Telephone: (864) 750-5850 | Owner's Full Name: Morrison - Jesse Edward E

Bus. Telephone: ( ) N/A | Street/R.F.D.: 121 Acres Ct

Contributed To Collision: No | City, State, & Zip: Pickens SC 29671

Estimated Speed: 15 | Speed Limit: 45 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # / Code: 44 | Towed By: N/A

B-041793 (Driver/Pedestrian's Full Name)

Unit #: N/A | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

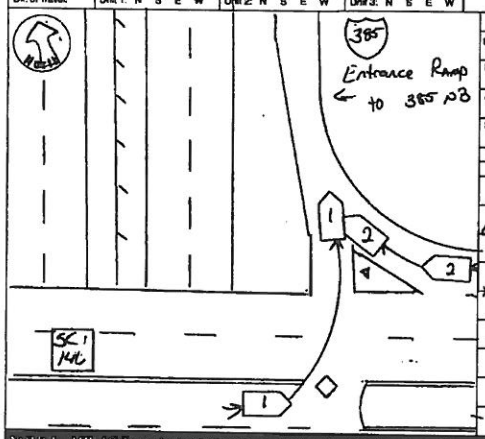
Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # / Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3000.00	$ 1000.00	$	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number):

Unit #1 was entering the entrance ramp from SC 146 east to I-385 NB. Unit #2 was entering the entrance ramp from SC 146 west to I-385 NB. Unit #2 failed to yield the right of way and struck by unit #1 in the right rear.

NOTICE: THE DRIVER'S STATEMENTS AT REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH OF ANY FACT WITHIN THE REPORT.

Investigating Officer's Name: BUSK - TF | Rank: TFC | Badge #: 7698 | Code: 11103 | Date: 07-6-2010 | Reviewer's Name: BARNETTE - D.L. | Rank: SGT. | Internal Agency Code: 10GV 070768

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	EXT	Trap	Name	Street Address	Zip Code
1	06-24-1978	F	W	a	01	13	a	1	1	2	Driver Unit #1		
2	03-06-1987	M	W	0	01	13	a	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, W - Caucasian, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Seating Loc.: 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 85- Other, 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 61- Lighting

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown

b) By: 1- EMS, 2- Police, 8- Other, 9- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 8- Deployment Unk.; b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 8- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 8- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful Event	1st Harmful Event
32				32	32
32				32	

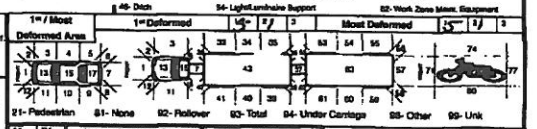
Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Non-Wheeled Veh.), 13- Struck Object Not Fixed, 14- Other Non-Collision, 15- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. (In Transport), 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object, 31- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 99- Other, 69- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle (<), 42- Angle (>), 43- Angle (X), 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area



Most Deformed: 15 2 3

21- Pedestrian, 81- None, 82- Rollover, 83- Total, 84- Under Carriage, 88- Other, 99- Unk

Vehicle Type: 01- Automobile, 02- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Railway Veh., 29- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 69- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Cowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Actions Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

Actions Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 06- T-Intersection, 07- Shared Use Paths or Trail, 08- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Alc Test Results: A1- / A2- / A3-

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 5- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

1- Under- Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 6- None, 9- Unk.

Underride/Override: 0- None/Minor, 1- Functional Damage, 2- Severe/Totaled, 3- Disabling Damage, 9- Unk., 8- Not Applicable

Extent of Deformity: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

Trafficway: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Character: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Road Surface Condition: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagmen, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 98- None, 99- Unk.

Traffic Control Type: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area

School Bus Involved: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

Work Zone: 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure

Work Zone Type: 8- Other 9- Unk.

Workers Present: 1- Yes 2- No

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Other Improper Action, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Cell Phone, 20- Other Improper Action, 21- Unk.

Roadway: 30- Debris, 31- Non-Highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (Ice, Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (Inop., Missing), 37- Work Zone (Const./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk., 07- Other Person Under the Influence

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction in Road, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Primary: 05

Others: 12

ORIGINAL

DEC 27 2010

D.P.S. USE ONLY: 10079147 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev 01/2004) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1600 | Arrived: 1635

Date: 07-14-2010 | Time: 1545 | County: 23 | Collision Location (Rt. # / Name): S 385 | Miles: .5 | Dir. N E S W | Near City or Town of: Greenville

Lane # / Dir.: 2 2 | Distance Offset: .02 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | D-Main 1-Alternate 2-Spur 5-Connection 6-Business 7-Business 8-Other 9-Other | ASRU code | MP/Grid | Latitude: 34 49 26 50 | Longitude: 82 17 26 00

R.R. Id: N/A | From: Ramp Only N E S W, D-Entrance 1-Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 85 | D-Main 1-Alternate 2-Spur 5-Connection 6-Business 7-Business 8-Other 9-Other

B-087595 | Driver/Pedestrian's Full Name: Pierson - Jean Holt

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 208 Southwood ct.
Birth Date: 05-25-1969 | City, State, & Zip: Fletcher NC, 28732
State: NC | Driver's License #: 29876327 (C) | Insurance Company: Va. Farm Auto
Year: 2009 | Body: 4S | Vehicle Make: Ford | VIN #: 19XFA165J9E021962
State: NC | Year: 2011 | License Plate #: YVD 3049 | Owner's D.L. #: N/A
Home Telephone: 828 329-7102 | Owner's Full Name: Pierson - Jean Holt
Bus. Telephone: 828 277-4412 | Street/R.F.D.: 208 Southwood ct.
Contributed To Collision: Yes | City, State, & Zip: Fletcher NC, 28732
Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No
Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

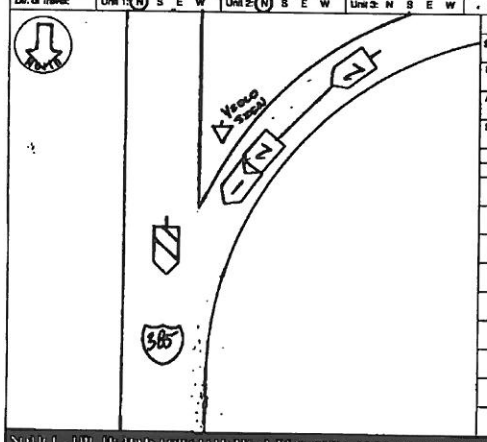
B-087596 | Driver/Pedestrian's Full Name: Smith - Kelly Ann

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 212 Frank st
Birth Date: 09-13-1991 | City, State, & Zip: Greenville SC 29601
State: SC | Driver's License #: 19113575 (C) | Insurance Company: Progressive
Year: 1997 | Body: 4S | Vehicle Make: Toyt | VIN #: 4T1BG22K2VU117301
State: SC | Year: 2011 | License Plate #: FZI 136 | Owner's D.L. #: N/A
Home Telephone: 864 201-9405 | Owner's Full Name: Smith-Steven Anthony
Bus. Telephone: 864 346-6863 | Street/R.F.D.: 212 Kingsmiller Dr.
Contributed To Collision: No | City, State, & Zip: Piedmont SC 29673
Estimated Speed: 15 | Speed Limit: 55 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No
Summons #: E531129 | Code: 21 | Summons #: N/A | Code | Towed By: N/A

B-087597 | Driver/Pedestrian's Full Name

Unit #: 3/4 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2,500	$ 1500	$	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

Units #1 and #2 were traveling North on Interstate 385. unit #1 stopped for on coming traffic. unit 2, while traveling too fast for conditions struck unit 1 in the rear.

NOTICE - THE PURPOSE OF STATISTICAL REPORTING IS PREVENTION ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OF ANY OF THE FACTS

Investigating Officer's Name: Harris - 05 | Rank: Ptl | Badge #: 841 | Comp #: 10103 | Date: 07-14-2010 | Reviewer's Name: H. Hiers | Rank: Sgt | Internal Agency Code: 10079147

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	EXT	Trans
1	05-25-1969	F	W	0	01	13	4	1	1	2
1	03-17-1988	F	W	0	03	13	4	1	1	2
2	09-13-1991	F	W	0	01	13	4	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal
b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt Only Safety Seat; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 8- Unknown; 9- Unk.

Ejection: 0- Not Ejected; 1- Part. Ejected; 2- Tot. Ejected; 3- Not Trapped; 4- Not Applicable; 7- Not App.; 9- Unknown

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: a) 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events: Mail Copy To: Office of Highway Safety, P.O. Box 191, Columbia, SC 29202

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Mat.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Unspecified); 24- Motor Veh. (Non-Motorist); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 40- Embankment; 41- Bridge Overhead Structure; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Landmarks Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 99- Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 51- Train; 31- School Bus; 32- Passenger Bus; 39- Other

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 08- Transport Passengers; 07- Transport Property; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian; 99- Unk. (Hit and Run Only)

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 28- Other

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 8- Dark (Street Lamp Not Lit); 9- Unk.

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Alc Test Results: A1- 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 4

A: 1- Conc. 2- Blktop 3- Median 4- Roadway 5- Shoulder 6- Unk. 7- Sidewalk 8- Curb 9- Other

B: X- walk: 1st Harmful Event: 3 | 1-Y 2-N 8-U

Road Character: 5

Road Surface Condition: 1

Traffic Control Type: 43

School Bus Involved: 3

Work Zone: 2

Work Zone Location

Work Zone Type

Workers Present:

Primary: 05

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 21- Unk.

Others: Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 39- Other; 40- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Vehicle Defect: 82- Obstruction; 83- Weather Cond.; 88- Other; 89- Unk.

ORIGINAL

OCT 27 2010

D.R.S. USE ONLY: 10079187 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1824 | Arrived: 1908

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Mile / Near City or Town of:
10-12-2010	1815	23	385	4.6	S W	GREENVILLE

Lane # / Dir.: 3 3 N E S W | Distance Offset: 45 Miles Feet | Direction: E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146/WOODRUFF RD | Main 2- Alternate 5- Spur 8- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude: 34 49 39.60 | Longitude: 82 17 37.50

R.R. Id.: N/A | From: N E W | Ramp Only: 1- Entrance Exit | To: N S W | Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 85 | Main 2- Alternate 5- Spur 8- Connection 7- Business 9- Other

B-041305

Driver/Pedestrian's Full Name: HUFF- JOICELYN

Unit #: 1 | Sex: F | Race: B | Street/R.F.D.: 251 FINCH RD | Birth Date: 08-18-1986 | City, State, & Zip: WELLFORD SC 29385

State: SC | Driver's License #: 00851116400 (D) | Insurance Company: STATE FARM

Year: 2001 | Body: SU | Vehicle Make: CADT | VIN #: 1GYEK13N12R309043

State: SC | Year: 2010 | License Plate #: BUZ207 | Owner's D.L. #: 00851116400 (D)

Home Telephone: 864 444 2081 | Owner's Full Name: HUFF- JOICELYN

Bus. Telephone: 864 444 2081 | Street/R.F.D.: 251 FINCH RD

Contributed To Collision: No | City, State, & Zip: WELLFORD SC 29385

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-041306

Driver/Pedestrian's Full Name: DENAYES- PAUL G JR

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 276 BATTLEGROUND RD | Birth Date: 08-01-1983 | City, State, & Zip: CONVENS SC 29330

State: SC | Driver's License #: 01183128 (D) | Insurance Company: ACE AMERICAN

Year: 1999 | Body: TK | Vehicle Make: CHEV | VIN #: 1K8EC41R1XJ001497

State: SC | Year: 2011 | License Plate #: PBS872 | Owner's D.L. #: N/A

Home Telephone: 864 398-8555 | Owner's Full Name: ENGLEHARD SURFACE TECHNOLOGIES

Bus. Telephone: 864 486-9311 | Street/R.F.D.: 199 RIDGEVIEW CIR

Contributed To Collision: No | City, State, & Zip: DUNCAN SC 29334

Estimated Speed: 5 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: E607383 | Code: 21 | Summons #: N/A | Code | Towed By: N/A

B-041307

Driver/Pedestrian's Full Name: N/A

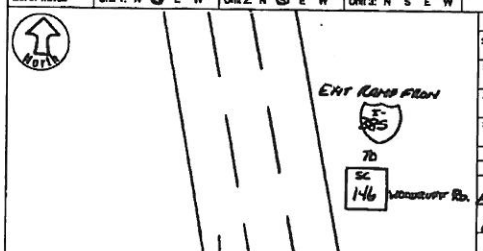
Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Home Telephone: ( ) | Owner's Full Name | Bus. Telephone: ( ) | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 75	$	$ N/A	$ N/A



Property Owner/Witness | Address | City | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number):

UNIT #1 WAS STOPPED ON THE EXIT RAMP FROM I-385 TO SC-146 WAITING FOR TRAFFIC. UNIT #2 WAS TRAVELING SOUTH ON THE EXIT RAMP TOO FAST FOR CONDITIONS AND STRUCK UNIT #1 IN THE REAR.

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT A DETERMINATION OF THE OFFICER'S PERSONAL OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
HAYES-JT	SGT	754	N703	10-27-2010	TAYLOR-T.J.	CPL.	10607033SC

Unit	Date of Birth	Sex	Race	INJ	Seat	MVD	M.A.I.S.	Eject	Ext.	Trap	Name	Street Address	Zip Code
1	08-18-1986	F	B	O	01	13	4	1	1	2			
1	10-18-1971	F	B	O	03	13	4	1	1	2			
1	08-01-1983	M	B	O	04	13	4	1	1	2			
2	06-[illegible]-1982	M	W	O	01	13	7	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 99- Unk.; 98- Other

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 03- Downhill Runaway; 08- Immersion; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular Cargo); 13- Other Non-Collision; 14- Unk. Non-Collision

Collision: Not Fixed: 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 31- Animal (Deer Only); 32- Animal (All Other); 33- Motor Veh. In Transport; 34- Motor Veh. (Struck Motor Veh.); 35- Motor Veh. (Struck Object); 36- Unk. Moveable Object; 37- Motor Veh. (Stopped); 38- Motor Veh. (Parked); 39- Pedalcycle

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Median Barrier; 56- Mail Box; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 66- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 38- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 62- Passenger Bus; 68- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- Unk.

Alcohol Test Results: A1- ; A2- ; A3-

1- Under Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underride/Override

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 5- Not Applicable

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Event Loc.: 1- Driveway; 2- Intersection; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Gore; 8- Separate Trailer; 9- Unk.; B- K-rail; U- Other Unknown

1st Harmful Event Loc.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary: 03

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 19- Cell Phone; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence; 68- Under the Infl.; 69- Animal in Road; 75- Signals

Environmental: 62- Obstruction; 63- Weather Cond.; 61- Glare; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others:

ORIGINAL

DATE 07 04 2011

D.P.S. USE ONLY: 10082680 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2011) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1620 | Arrived: 1625

Date: 07-25-2010 | Time: 1545 | Collision Location (Ft. # / Name): 385 | Miles: 2.0 | Dir. N E S W | Near City or Town of: Greenville

Lane # / Dir.: 6 12 S | Distance Offset: 20.0 Feet | Direction: N S | Base Intersection (Ft. # / Name): From 146 | ASRU code | MP/Grid

R.R. Id.: N/A | From: Ramp Only | To: N E S W | Second Intersection (Ft. # / Name): Toward 85 | Latitude: 34 49 29.50 | Longitude: 82 17 35.20

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Connection 7- Business 8- Other 9- Other | 0- Main | 1- Entrance 2- Exit

B-332329 — Driver/Pedestrian's Full Name: Stafford - Zachary Isbell

Unit # 1 | Sex: M | Race: W | Street/R.F.D.: 49 Orchard Park DR Apt 114 | Birth Date: 02-12-1991 | City, State, & Zip: Greenville SC 29615

State: SC | Driver's License #: 101113693 (D) | Insurance Company: State Farm

Year: 2009 | Body: 4S | Vehicle Make: Honda | VIN #: 1HGCP26449A145718

State: SC | Year: 2012 | License Plate #: OIX 237 | Owner's D.L. #: UNKNOWN

Home Telephone: (864) 346-4113 | Owner's Full Name: Stafford - Stephanie Renee

Bus. Telephone: (864) 329 2962 | Street/R.F.D.: 49 Orchard Park DR Apt 114

Contributed To Collision: No | City, State, & Zip: Greenville SC 29615

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes | No | T/B S Req: Yes | No | Alc/Drg info (see back): Yes | No

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-332330 — Driver/Pedestrian's Full Name: Fincannon - Karen Trotter

Unit # 2 | Sex: F | Race: W | Street/R.F.D.: 101 Eastwood CT | Birth Date: 01-01-1955 | City, State, & Zip: Easley SC 29640

State: SC | Driver's License #: 00486574 78 (D) | Insurance Company: GEICO

Year: 2005 | Body: PK | Vehicle Make: Dodg | VIN #: 1D7HA18D25S583241

State: SC | Year: 2011 | License Plate #: AIN 222 | Owner's D.L. #: 00486574 78 (D)

Home Telephone: (864) 850 1607 | Owner's Full Name: Fincannon - Karen Trotter

Bus. Telephone: (864) 551 1398 | Street/R.F.D.: 101 Eastwood CT

Contributed To Collision: Yes | City, State, & Zip: Easley SC 29640

Estimated Speed: 10 | Speed Limit: 55 | C.D.L. Req: Yes | No | T/B S Req: Yes | No | Alc/Drg info (see back): Yes | No

Summons #: E605861 | Code: 82 | Summons #: N/A | Code | Towed By: N/A

B-332331 — Driver/Pedestrian's Full Name:

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

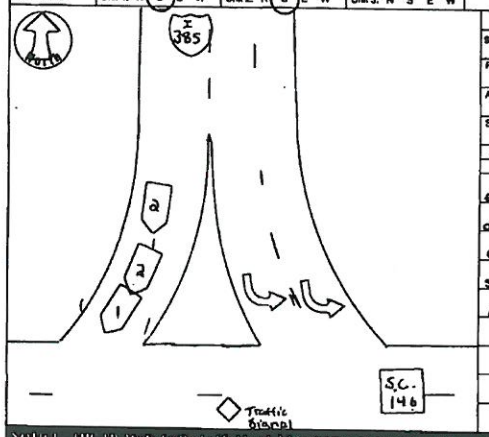
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500 00	$ 500 00	$	$ N/A	$ N/A

Property Owner/Witness: N/A | Property Owner/Witness: N/A

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: N | Describe What Happened (Refer to Units by Number):

Both units were stopped on the off ramp from I-385 to SC-146, unit 1 pulled forward and stopped again for other traffic. The driver of unit 2, making a improper start from stop struck unit 1 in the rear with the front of unit 2.

NOTICE: THE ABOVE IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS THE OFFICER'S LEGAL OPINION AND IS NOT COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewed by	Rank	Internal Agency Code
Ledbetter - DAU	TFC	304	HP03	07-25-2010		SGT	10GV0078592

Unit	Date of Birth	Sex	Race	Inj	Seat	R/SD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	02-12-1991	M	W	0	01	13	43	1	1	2			
2	01-01-1955	F	W	0	01	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet; Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22				22	22
23					

Non-Collision: 01- Cargo/Equip Loss or Shift; 03- Cross Median/Center Line; 05- Downhill Runaway; 04- Equipment Failure; 06- Immersion; 07- Jackknife; 08- Fire/Explosion; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular Matl.); 19- Other Non-collision; 99- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 39- Other Movable Object; 30- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Entrance/Exit Ramp; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Most Deformed: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Transit Bus; 29- Intercity Bus; 30- Animal (Driven Veh.); 39- Animal (Ridden); 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Stopping or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary: 04

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Cell Phone; 99- Unk.

Others: Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence; 68- Under the Infl.

Environmental: 80- Animal in Road; 81- Glare; 82- Obstruction; 83- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 1- Yes; 2- No; 3- Unknown; 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Deformed Area: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Special Use Only: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Alcohol/Drug Test Given: Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other. Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 5- Not Applicable

Underride/Override: 1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 6- None

Extent of Deformity: 1- Minor; 2- Moderate; 3- Severe; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other. Ac: 1- Conc. 2- Island 3- Median 4- Roadside 5- Shoulder 6- Curb 7- Sidewalk 8- Guardrail 9- Unk. Dr. K- walk: 1- Y 2-N 8-U

1st Harmful Event Loc.: 1- Y 2-N 8-U

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present: 1- Yes 2- No

Road Character: 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 31

Mis-wrote date as 07/28, corrected to 07/25

ORIGINAL

AUG 0 9 2010

O.P.S. USE ONLY: 10083903 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1505 | Arrived: 1535

Date: 07-28-2010 | Time: 1500 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): 385 | 0- Main 3- Alternate 5- Spur 6- Connection 7- Business | Miles: 1 | Dir. N E S W | Jct. / Near City or Town of: Greenville

Lane # / Dir.: 1 1 N E S W | Distance Offset: Miles .10 Feet | Direction N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid

Latitude: 34 49 25.70

R.R. Id.: N/A | From Ramp Only N E W 1- Entrance 2- Exit S W | To N E 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 564 | 0- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other

Longitude: 82 17 25.40

B-052213

Driver/Pedestrian's Full Name: Owings- Nancy Augusta

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 1330 Walnut Grove Road

Birth Date: 09-19-1966 | City, State, & Zip: Roebuck, SC 29376

State: SC | Driver's License #: 00855165 46 (p) | Insurance Company: State Farm

Year: 2004 | Body: SU | Vehicle Make: Dodge | VIN #: 1D8HB48D24F177536

State: SC | Year: 2011 | License Plate #: AAW 381 | Owner's D.L. #: N/A

Home Telephone: (864) 576-3860 | Owner's Full Name: Owings- Darryl Franklin

Bus. Telephone: (864) 576-3860 | Street/R.F.D.: 1330 Walnut Grove Road

Contributed To Collision: No | City, State, & Zip: Roebuck, SC 29376

Estimated Speed: 30 | Speed Limit: 35 | C.D.L. Req: Yes | No | T/S S Req: Yes | No | Alc/Drg info (see back): Yes | No

Summons #: ES29980 | Code: 4B | Summons #: N/A | Code: | Towed By: N/A

B-052214

Driver/Pedestrian's Full Name: Martens- Jacob (N)

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 637 Meresa Road

Birth Date: 03-22-1977 | City, State, & Zip: Lexington RS, ON N8H3W8

State: 04 | Driver's License #: M0687-38107-70322 | Insurance Company: Zurich

Year: 2007 | Body: SU | Vehicle Make: Chev | VIN #: 1GNDU33W97D152163

State: ON | Year: 2010 | License Plate #: ADKJ 309 | Owner's D.L. #: N/A

Home Telephone: 519 326 0519 | Owner's Full Name: GMAC Lease Co Corp

Bus. Telephone: ( ) N/A | Street/R.F.D.: 477 Highway 77

Contributed To Collision: Yes | No | City, State, & Zip: Lexington, ON N8H3V6

Estimated Speed: 0 | Speed Limit: 35 | C.D.L. Req: Yes | No | T/S S Req: Yes | No | Alc/Drg info (see back): Yes | No

Summons #: N/A | Code: | Summons #: N/A | Code: | Towed By: N/A

B-052215

Driver/Pedestrian's Full Name: N/A

Unit #: N/A | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

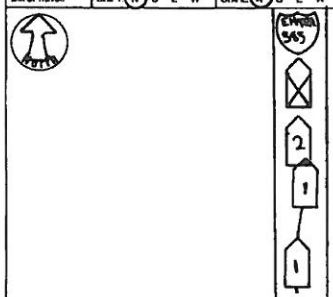
State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 2500	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Address: | State | Zip | Phone:

Property Owner/Witness: N/A | Address: | State | Zip | Phone:

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and Unit #2 were both traveling North on I-385 Entrance Ramp. Unit #2 was forced to stop, due to stopped traffic ahead. Unit #1 was following too closely and struck the rear of Unit #2.

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: Andis - JC | Badge #: 7612 | Code: AP03 | Date: 07-28-2010 | Reviewer's Name: A. H. Wm | Rank: Sgt | Internal Agency Code: 10GUO 79782

Unit	Date of Birth	Sex	Race	Inj	Seat	R/ED	A.B.D.	Eject	Ext	Tran	Name	Street Address	Zip Code
1	09-19-1966	F	W	0	01	13	4	1	1	2			
2	03-22-1977	M	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, I - Alaskan Native or American Indian, H - Hispanic, W - Caucasian, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only: 01 02 03 / 04 05 06 / 07 08 09

Seating Loc.: 20- Pedestrian, 60- Sleeper of Cab, 30- Trailing Unit, 70- Riding on Unit Exterior, 40- Bus or Van (4th row or Higher), 80- Lap, 50- Other Enclosed Area (nontrailing), 99- Unk./NA, 51- Other Unenclosed Area (nontrailing)

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 19- Unk., 21- Child Safety Seat, 99- Other

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 81- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 9- Deployment Unk. | b) 1- Switch In On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Head Injury: 1- Yes, 2- No

e) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown

b) By: 1- EMS, 2- Police, 8- Other, 9- Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Event
23	1	1	1	23	22
22	2	2	2	22	
	3	3	3		

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Down Hill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Two-Wheeled Veh.), 13- Struck Object, 14- Other Non-collision, 15- Unk. Non-collision

Collision: Not Fixed: 77- Pedestrian, 20- Animal (Deer Only), 21- Animal (All Other), 29- Work Zone Maint. Equip., 25- Motor Veh. (Stopped), 26- Motor Veh. (Driverless), 23- Motor Veh. (Parked), 28- Railway Veh., 35- Other Movable Object, 36- Unk. Movable Object

Collision: Fixed Object: 47- Embankment, 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 48- Equipment, 49- Median Barrier, 56- Mail Box, 57- Overhead Sign Support, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Other Post, Pole, Support, Etc.), 58- Other (Wall, Building, Tunnel, Etc.), 59- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 69- Other, 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area

1st Deformed: 1 2 6 3 | Most Deformed: 1 2 6 3

Vehicle Type: 01- Automobile, 12- Pickup Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Other Motorbike, 33- Animal Drawn Veh., 39- Animal (Ridden), 41- Pedestrian, 51- Train, 99- Unk. (Hit and Run Only), 61- School Bus, 62- Passenger Bus, 69- Other

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Cowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact: (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopped in Traffic, 10- Turning Left, 11- Turning Right, 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working, 28- Other

Alc Test Results: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 9- Other

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unreadable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Special Use Only: 1- Under-Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 9- Unk.

Underride/Override: 1 6

Extent of Deformity: 1 2 0 3 | 0- None/Minor, 1- Functional Damage, 2- Disabling Damage, 3- Severe, 4- Totaled, 5- Not Applicable, 9- Unk.

Trafficway: 4 | 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 9- Other

A: 1- Gore, 2- Island, 3- Median, 4- Roadside, 5- Shoulder, 6- Roadway, 7- Sidewalk, 8- Unk., 9- Outside Trafficway

B: X- walk: X | 1st Harmful Event Loc.: 5 2 | 1- Y 2-N 9-U

Road Character: 1 | 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1 | 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Traffic Control Type: 98 | 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Sign, 51- Flashing Beacon, 98- None

School Bus Involved: 3 | 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

Work Zone: 2 | 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area, 1- Yes, 2- No

Work Zone Location: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

Work Zone Type: 1- Yes, 2- No

Workers Present: 1- Yes, 2- No

Weather Condition: 1 | 1- Clear (no adverse conditions), 2- Rain, 3- Snow, 4- Sleet, Hail, 5- Cloudy, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1 | 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 13 | 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Non-junction, 99- Unk.

Primary: 08

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Operating Defective Equipment, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Cell Phone, 20- Other Improper Action, 21- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk., 67- Other Person Under the Influence, 68- Under the Infl.

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond., 66- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

ORIGINAL

AUG 09 2010

D.P.S. USE ONLY: 10084120 | Page 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev 01-2001) | # of Units: 2 | Amended - Attach Copy of Original Report: Corrected | Notified: 0804 | Arrived: 0805

Date: 07-21-2010 | Time: 0804 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision on (Rt. # / Name): S 385 | 1- Main 2- Alternate 5- Spur 6- Connection 7- Business | Miles: 4.7 | Dir. N E S W | And Near City or Town of: Greenville

Lane # / Dir.: 1 / 2 | Distance Offset: .1 Miles | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 / Woodruff Rd | 1- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude: 34° 49 4250 | Longitude: 82 17 4210

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Road 6939 / Tanner Rd

B-042415

Driver/Pedestrian's Full Name: Speed Amy Douglas

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 100 Lake Lennoy DR | City, State, & Zip: Simpsonville SC 29681

Birth Date: 05-21-1963 | Driver's License #: SC 004000871 (D) | Insurance Company: Liberty Mutual

Year: 2000 | Body: SEV | Vehicle Make: Honda | VIN #: 5HLRJ18774C057652

State: SC | Year: 2010 | License Plate #: FTE 412 | Owner's D.L. #: N/A

Home Telephone: (864) 428-4688 | Owner's Full Name: Speed Denise W.

Bus. Telephone: ( ) N/A | Street/R.F.D.: 100 Lake Lennoy DR

Contributed To Collision: Yes No | City, State, & Zip: Simpsonville SC 29681

Estimated Speed: 0 | Speed Limit: 25 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-042416

Driver/Pedestrian's Full Name: Kunz Rebecca Lynn

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 13 Donegal CT | City, State, & Zip: Simpsonville SC 29681

Birth Date: 12-24-1973 | Driver's License #: 102852775 (D) | Insurance Company: Travelers

Year: 2007 | Body: 4DR | Vehicle Make: Ford | VIN #: 1FAFP34N07W277628

State: SC | Year: 2011 | License Plate #: BKS529 | Owner's D.L. #: N/A

Home Telephone: (864) 297-6419 | Owner's Full Name: Kunz Margaret A

Bus. Telephone: ( ) N/A | Street/R.F.D.: 13 Donegal CT

Contributed To Collision: Yes No | City, State, & Zip: Simpsonville SC 29681

Estimated Speed: 10 | Speed Limit: 25 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: ELOTH42 | Code: TR | Summons #: N/A | Code | Towed By: N/A

B-042417

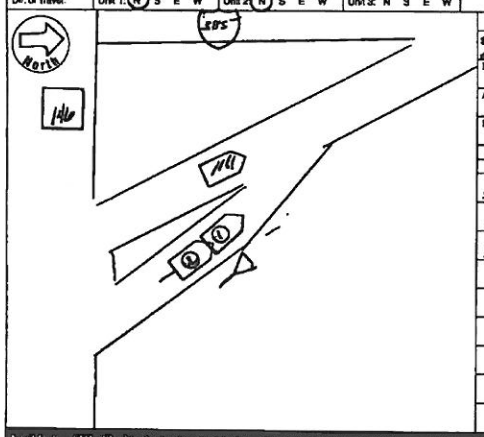
Driver/Pedestrian's Full Name: N/A

Unit #: N/A | Sex | Race | Street/R.F.D. | City, State, & Zip | Birth Date | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dr. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000.00	$ 4500.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Property Owner/Witness: N/A

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number): Unit #1 and 2 were traveling north on sc 146. The driver of Unit #1 stopped due to traffic. The driver of Unit #2 following too closely struck the rear of Unit #1.

NOTICE - THE PURPOSE OF THIS REPORT IS FOR STATISTICAL REPORTING. IT REPRESENTS ONLY AN INVESTIGATION OF THE OFFICER'S BEST KNOWN FACT OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Marlow F.W | Rank: Lt/Sgt | Badge #: 599 | Code: TMS | Date: 07-21-2010 | Reviewer's Name: H. Rider | Rank: Sgt | Internal Agency Code: 10 60 076 785

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Ejct	LAI	Tran
1	05-21-1963	M	W	D	01	13	4	8	1	1
1	12-15-1963	F	W	D	03	13	4	8	1	1
2	12-24-1973	F	W	D	01	13	4	8	1	1

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal, 9- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 8- Deployment Unk., 1- Switch In On Position, 2- Switch In Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Motorcycle Only: Helmet Injury: 1-Yes 2-No

Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown | By: 1- EMS 2- Police 8- Other 9- Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. in Transport, 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 29- Pedalcycle

Collision: Fixed Object: 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object, 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Bridge Rail End, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail Face, 51- Guardrail End, 52- Highway Traffic Sign Post, 53- Mail Box, 54- Light/Luminaire Support, 55- Median Barrier, 56- Other Post, Pole, Support, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 66- Other, 69- Unk.

Event 1 / Event 2 / Event 3 / Most Harmful: 22 / 23 / 23

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area: 1st Deformed: 17 | Most Deformed: 17

21- Pedestrian, 81- None, 82- Rollover, 83- Total, 84- Under Carriage, 88- Other, 99- Unk.

Vehicle Type: 01- Automobile, 02- Pickup Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Other, 31- Train, 33- Animal Drawn Veh., 39- Animal (Ridden), 41- Pedestrian, 51- Bus (16+ and Rural Only), 61- School Bus, 62- Passenger Bus, 99- Unk. (Hit and Run)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1- | A2- | A3-

Test Type: 1- Urine, 2- Blood, 3- Breath (Alc. Only), 4- Serum, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Alcohol/Drug Results: 0- None/Minor, 1- Functional Damage, 2- Disabling Damage, 4- Severe/Totaled, 5- Not Applicable, 9- Unk.

Extent of Deformity: 1

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other | 3

1st Harmful Event: A: 1- Curb, 2- Ditch, 3- Embankment, 4- Fence, 5- Guardrail, 6- Median, 7- Pedestrian, 8- Shoulder, 9- Unk., 10- Other Trafficway | 1st Harmful Event Loc.: 5

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest | 2

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk. | 1

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 88- None, 99- Unk. | 15

School Bus Involved: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk. | 3

Work Zone: 1- Yes 2- No | 2

Work Zone Location: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Dark (Street Lamp Not Lit), 6- Snow, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk. | 1

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights) | 1

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Non-Junction, 99- Unk. | 12

Primary Contributing Factors: 08

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Non-Motorist, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Cell Phone, 20- Other Improper Action, 99- Unk.

Roadway: 30- Debris, 31- Non-Highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 57- Wrong Side of Road, 58- Other, 59- Unk., 87- Other Person Under the Influence

Environmental: 62- Obstruction, 63- Weather Cond., 69- Other, 89- Unk., 60- Animal in Road, 61- Glare

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

ORIGINAL

AUG 0 9 2010

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

D.P.S. USE ONLY: 10084142 | Page # 1 Of 1 | # Of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 2240 | Arrived 2245

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Mile/Near City or Town of:
07-28-2010	2230	23	385	1	S	Greenville

Lane # / Dir.: 2 S | Qty: 4 | Distance Offset: .2 | Direction: S | Base Intersection (Rt. # / Name): 146 | ASRU code | MP/Grid

R.R. Id.: NA | From/To: Ramp Only | Second Intersection (Rt. # / Name): 107 | Latitude: 34° 49' 17.00" | Longitude: 82° 17' 29.00"

Z-340042

Driver/Bicyclist's Full Name: Jensen - Gerald Keith

Unit #: 1 | Sex: M | Race: W | Street: 601 River Walk Dr.

Birth Date: 11-13-1946 | City, State, & Zip: Simpsonville, SC 29681

State: SC | Driver's License #: 007297353 (D) | Insurance Company: Allstate

Year: 2007 | Body: 4dr | Vehicle Make: Suzu | VIN #: KL5JD56Z97K544965

State: SC | Year: 2010 | License Plate #: FZV 232 | Owner's D.L. #: 007297353

Home Telephone: (864) 963-0255 | Owner's Full Name: Jensen - Gerald Keith

Bus. Telephone: (864) 630-2896 | Street: 601 River Walk Dr.

Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville, SC 29681

Estimated Speed: 65 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: NA | Code | Summons #: NA | Code | Towed By: NA

Z-340043

Driver/Bicyclist's Full Name: Guthrie - Thomas Ashley

Unit #: 2 | Sex: M | Race: W | Street: 127 Prairie Ct.

Birth Date: 07-27-1978 | City, State, & Zip: Gray Court, SC 29645

State: SC | Driver's License #: 100744404 (D) | Insurance Company: State Farm

Year: 2006 | Body: PKP | Vehicle Make: Dodg | VIN #: 1D7HA18256S655830

State: SC | Year: 2010 | License Plate #: GGE 268 | Owner's D.L. #: 100744404

Home Telephone: (864) 573-3361 | Owner's Full Name: Guthrie - Thomas or Julie

Bus. Telephone: ( ) NA | Street: 127 Prairie Ct.

Contributed To Collision: (Yes) No | City, State, & Zip: Gray Court, SC 29645

Estimated Speed: 65 | Speed Limit: 65 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: EG081155 | Code: 82 | Summons #: NA | Code | Towed By: NA

Z-340044

Driver/Pedestrian's Full Name

Unit #: NA | Sex | Race | Street

Birth Date | City, State, & Zip

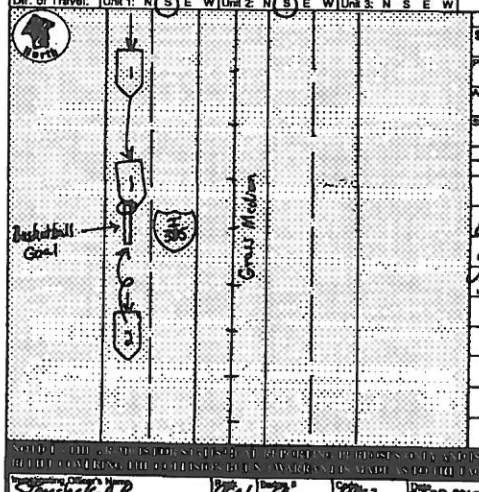
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1,500	$ 0	$	$ NA	$ NA

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photos: (N) | Describe What Happened (Refer to Units by Number):

Veh.'s 1 and 2 were traveling south on I 385. Driver 2 was carrying a basketball goal in the bed of the truck. The goal fell from the truck, striking veh. 1 on the right front.

NOTICE: THE STATE FORBIDS THE USE OF REPORTS OR PORTIONS OF REPORTS FOR PURPOSES OF TRADE OR SOLICITATION OF ANY KIND. ANY PERSON VIOLATING THIS PROVISION IS GUILTY OF A MISDEMEANOR AND SHALL BE FINED NOT LESS THAN ONE HUNDRED DOLLARS NOR MORE THAN FIVE HUNDRED DOLLARS.

Investigating Officer's Name: Simchek-D.R. | Badge #: 491 | Dept. #: 28 | Code: 11003 | Date: 07-29-2010 | Reviewed By: | Rank: Sgt | Investigating Officer's Phone: 1080411968

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.S.U.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	11-13-1946	M	W	0	01	13	4.3	1	1	2			
2	07-27-1978	M	W	0	01	13	4.3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 5-Not Applicable 6-Deployment Unk.; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 8- Unknown

Ejection: 1- Not Ejected; 2- Part Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

1st Event	2nd Event	3rd Event	4th Event	Most Harmful
1	2	3	2	1
2	2	2	2	01
3	3	3	1	38

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 08- Immersion; 09- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right

Collision: Not Fixed: 27- Pedestrian; 28- Animal (Deer Only); 29- Work Zone Maint. Equip.; 30- Other Mobile Object; 31- Struck Object; 39- Unk. Moveable Object; 26- Pedalcycle; 28- Railway Veh.

Collision: Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Bridge Pier or Abutment; 50- Bridge Rail; 51- Guardrail End; 52- Guardrail Face; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Other Post, Pole Support, Etc.; 58- Tree; 59- Other (Wall, Building, Tunnel Etc.); 44- Culvert; 45- Curb; 46- Ditch; 60- Bridge Overhead Structure; 61- Bridge Parapet End; 62- Bridge Rail; 63- Bridge Rail End; 64- Culvert; 65- Curb; 66- Ditch

Manner of Collision (Struck Veh.): 00- Not Collision; 03- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed 1 2 (87); Most Deformed 1 2 (87); 21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 98- Other; 99- Unk

Vehicle Type: 01 (01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Train; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 99- Unk. (Hit and Run Only))

Vehicle Use Code: 01 (01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian)

Vehicle Attachment: 1 (1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Tipster w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Auxocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other)

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 3- Given - Pending; 1- Given - Known Results; 2- Given - Unusable; 4- None; 5- Refused

Special Use Only

Test Type: 3- Urine; 1- Breath (Alc Only); 4- Serum; 2- Blood; 8- Other

Drug Results: 3- Marijuana; 1- Amphetamines; 4- Opiates; 2- Cocaine; 5- PCP; 8- Other

Undamde/Overrids: 6

Extent of Deformity: 2

Trafficway: 3 (1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other)

1- Curb; 3- Median; 5- Roadway; 7- Sidewalk; 9- Unk; B- X-walk; 1- Y 2 N 9- U; 2- Island; 4- Roadside; 6- Shoulder; 8- Outside Trafficway; Y/N; 1st Harmful Event Loc: 12

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Character: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk

Road Surface Condition: 1

Traffic Control Type: 98 (01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk)

Weather Condition: 1 (1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk)

Light Condition: 7 (1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights))

School Bus Involved: 8 (1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.)

Junction Type: 13 (01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk)

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

Work Zone Type

Workers Present: 1- Yes 2- No

Primary Contributing Factors: 79

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (Ie., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying And/or Illegally in Roadway; 52- Failure to Yield R of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Influence; 67- Other Person Under Influence

Environmental: 43- Obstruction; 60- Animal in Road; 61- Glare; 62- Weather Cond; 68- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

ORIGINAL

AUG 2 8 2010

D.P.S. USE ONLY 10092949 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 3 | Amended - Attach Copy of Original Report Corrected | Notified 2030 | Arrived 2030

Date 8-18-10 | Time 2015 | County 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name) I-385 | 5 | 1- Main 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Miles: 4 | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir. 1 4 S W | Distance Offset .01 Feet N S E W | Base Intersection (Rt. # / Name) From SC 146 | ASRU code | MP/Grid

R.R. Id. n/A | From: Ramp Only N E S W 1- Entrance 2- Exit | To N E S W | Second Intersection (Rt. # / Name) Towards I-85 | Latitude 34 49 5040 | Longitude 82 17 4120

B-698116 | Driver/Pedestrian's Full Name: Kelly - Eric L

Unit # 1 | Sex M | Race W | Street/R.F.D. 411 Winding Brook CT | Birth Date 6-10-78 | City, State, & Zip Greenville SC 29617

State SC | Driver's License # 037385912 | Insurance Company All State

Year 05 | Body Cd | Vehicle Make Nis | VIN # 1N4AL11DX5C192476

State SC | Year 11 | License Plate # 549358 | Owner's D.L. #

Home Telephone 864 915-5453 | Owner's Full Name Kelly - Eric L

Bus. Telephone ( ) | Street/R.F.D. 260 Duncan Chapel Rd 302A

Contributed To Collision Yes (No) | City, State, & Zip Greenville SC 29617

Estimated Speed 55 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # n/A | Code | Summons # n/A | Code | Towed By n/A

B-698117 | Driver/Pedestrian's Full Name: unknown

Unit # 2 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company unknown

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name unknown

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes (No) | City, State, & Zip

Estimated Speed 55 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # n/A | Code | Summons # n/A | Code | Towed By n/A

B-698118 | Driver/Pedestrian's Full Name

Unit # n/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1 (N) S E W | Unit 2: (N) S E W | Unit 3: N S E W

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

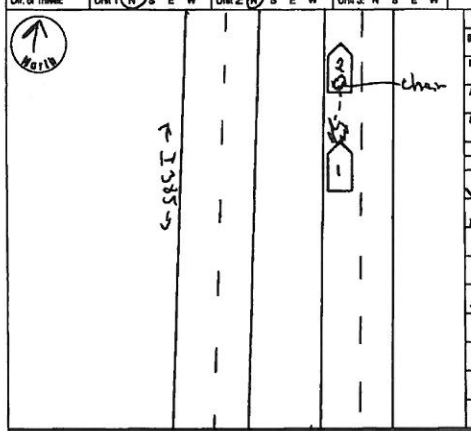
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam 2
$ 1300	$ 0	$ n/A	$ n/A	$ n/A

Property Owner/Witness n/A | Address | State | Zip | Phone

Property Owner/Witness n/A | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)



Veh# 1 and Veh# 2 were traveling north on I-385. A chair fell out of the back of Veh# 2 and struck Veh# 1. The driver of Veh# 2 left the scene of the accident.

NOTICE: THE DRIVER'S STATISTICAL REPORTING PURPOSES ONLY AND IS A RELATION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name: Bass, Kick | Rank: Sgt | Badge #: 183 | Report #: N10310 | Date: 8-17-10 | Reviewed By Name: | Rank: Sgt | Internal Agency Code: 10CV089633

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trim	Name	Street Address	Zip Code
1	6-10-78	M	W	0	01	13	9	1	1	2			
2	unknown												

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Lighting; 61- Reflective Clothing

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Down Hill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Other Non-collision; 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Embankment; 41- Bridge Overhead Structure; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Fence; 48- Equipment; 49- Guardrail End; 50- Guardrail Face; 51- Highway Traffic Sign Post; 52- Impact Attenuator/Crash Cushion; 53- Impact Attenuator Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Unk. Fixed Object; 99- Unk.

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
26	24			22	
22	72				

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Railway Veh.; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Auxocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Erratically; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Straight Ahead; 99- Unk.; (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Soil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Not Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran on Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 26- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 58- Other; 59- Unk.

Environmental: 60- Obstruction in Road; 61- Glare; 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 80- Animal in Road; 88- Other; 89- Unk.

Vehicle Defect: 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Alc Test Results: A1- ; A2- ; A3- ; A: 1- Given 2- Refused 3- Medical 4- Refusal 5- Test Failure 6- Not Given 7- Blood 8- Urine 9- Unk.; B: X- traffic; Y- 2-N B-U; 1- Yes 2- No

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 6- Other; 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

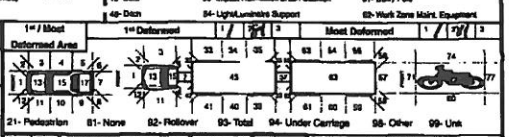
1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.; Underride/Override

Extent of Deformity: 1- Minor; 2- Moderate; 3- Disabling; 4- Severe; 9- Unk.

Most Deformed: 1 / 11 3

1st Deformed: 1 / 11 3

Deformed Area



21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Trafficway: 3

1st Harmful Event: 24

1st Harmful Event Loc.: 56

Road Character: 1

Road Surface Condition: 1

Traffic Control Type: 99

School Bus Involved: 3

Work Zone: 2

Work Zone Location:

Work Zone Type:

Workers Present:

ORIGINAL

AUG 2 8 2010

D.P.S. USE ONLY: 10092954 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1810 | Arrived 1811

Date: 08-18-2010 | Time: 1705 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): 5 385 | 0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Miles: 1.0 | Dir. N E S W | +/-/ Near City or Town of: GREENVILLE

Lane # / Dir.: 1 / 4 (N E S W) | Distance Offset: 0.50 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | 0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude 34°49'1676

R.R. ID: N/A | From: Ramp Only N E S W | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 107 | 0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | Longitude 82°17 2890

B-042571

Driver/Pedestrian's Full Name: Hobson - Christine E.

Unit # 1 | Sex: F | Race: W | Street/R.F.D.: 3 Treaty Point Dr.

Birth Date: 07-11-1968 | City, State, & Zip: Fountain Inn, SC. 29644

State: SC | Driver's License #: 00440323 19(D) | Insurance Company: State Farm

Year: 2005 | Body: Tdr | Vehicle Make: Ford | VIN #: 1FAFP53245A165072

State: SC | Year: 2011 | License Plate #: AGE 808 | Owner's D.L. #: 00440231 9(D)

Home Telephone: 864 862 5128 | Owner's Full Name: Hobson - Christine E.

Bus. Telephone: 864 676 7786 | Street/R.F.D.: 3 Treaty Point Dr.

Contributed To Collision: Yes (No) | City, State, & Zip: Fountain Inn, SC. 29644

Estimated Speed: 5 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Issued: N/A | Code | Towed By: N/A

B-042572

Driver/Pedestrian's Full Name: Schultz-Christopher M.

Unit # 2 | Sex: M | Race: W | Street/R.F.D.: 208 Harbor Crest Dr.

Birth Date: 07-19-1978 | City, State, & Zip: Wateree, SC. 29384

State: SC | Driver's License #: 10356412 (D) | Insurance Company: Progressive

Year: 1999 | Body: Tdr | Vehicle Make: Buic | VIN #: 1G4CW54K4X1662145

State: SC | Year: 2010 | License Plate #: JRS 346 | Owner's D.L. #: 10356412 (D)

Home Telephone: 864 577 2459 | Owner's Full Name: Schultz-Christopher M.

Bus. Telephone: 864 369 9420 | Street/R.F.D.: 208 Harbor Crest Dr.

Contributed To Collision: Yes (No) | City, State, & Zip: Wateree, SC. 29384

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: EG11716 | Code: 21 | Issued: N/A | Code | Towed By: N/A

B-042573

Driver/Pedestrian's Full Name: N/A

Unit # | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

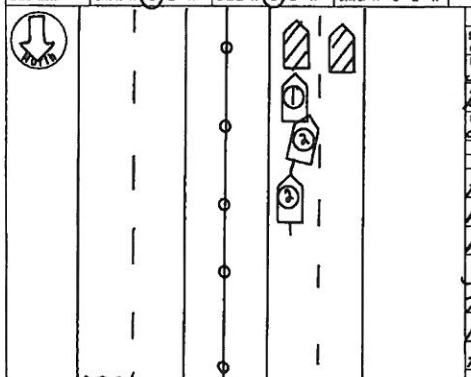
Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes (No) | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Issued | Code | Towed By

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 600.00	$ 800.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: Stephanie Johnson | Property Owner/Witness:

Address: 623 Abercrombie Rd Anderson | Address:

State: SC | Zip: 29624 | Phone: (864) 337 6458 | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and #2, in Lane #1 were traveling South on Interstate 385 in heavy traffic. Near the Thirty-Five Mile marker, the driver of Unit #1 slowed quickly due to stopping traffic. The driver of Unit #2, driving too fast for conditions, (Inattentive) was unable to stop. The left Front of Unit #2 Struck the Right Rear of Unit #1.

NOTICE - THE DATA IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF OVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE DAYTIME OF RACY THEREOF.

Investigating Officer's Name: TEASTER T.K. | Badge #: 1004 | Badge #: 89 | Code: 1003 | Date: 08-19-2010 | Reviewer's Name: Lt. K | Rank: Sgt | Internal Agency Code: 10CV 089565

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	04-18-1968	F	W	0	01	13	3	1	1	2			
2	07-19-1978	M	W	0	01	13	1	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.; Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployment Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Fixed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Matl.); 13- Spill (Hazardous Matl.); 14- Other Non-collision; 15- Unk. Non-collision

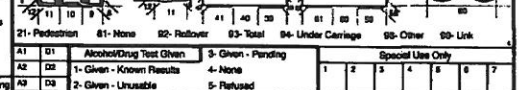
Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 39- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Overhit (Pass. Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other

Event 1 / Event 2 / Event 3 / Event 4 / Most Harmful: 23 / 24 / 22 / 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↘↙↗↖); 42- Angle (→|←); 43- Angle (↳↱↰↲); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 1 7 1 3; Most Deformed: 1 7 1 3



21- Pedestrian; 61- None; 62- Rollover; 63- Total; 64- Under Carriage; 98- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Horse Veh.); 29- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Livestock Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Changing Speed; 99- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Underride/Override: 6

Extent of Deformity: 0

Functional Damage: 1- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Trafficway: 3

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 31

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 18- RR (X-bucks & Lights); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

1st Harmful Event Loc.: 5 3

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone: 1- Yes 2- No

Workers Present: 1- Yes 2- No

School Bus Involved: 3

Work Zone: 2

Primary: 03

Contributing Factors

Driver: 02

Others:

01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Other; 57- Wrong Side of Road; 58- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

SEP. 13. 2010

D.P.S. USE ONLY: 10098855 | Page 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/01/01) | # of Units: 2 | Amended - Attach Copy of Original Report / Corrected | Notified: 1611 | Arrived: 1615

Date: 07-05-2010 | Time: 1600 | County: 23 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Collision Location (Rt. # / Name): S 385 | 1- Main 6- Connection 2- Alternate 7- Business 5- Spur | Miles: 1 | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: 1 / 4 S | Distance Offset: 0.30 Feet N E S W | Direction: 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name): From 146 | 1- Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid | Latitude: 34 49 3400

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Second Intersection (Rt. # / Name): Toward 85 | 1- Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | Longitude: 82 17 3320

B-712804

Driver/Pedestrian's Full Name: Trick- Joshua Craig

Unit # 1 | Sex: M | Race: W | Street/R.F.D.: 10 Chantilly Ave Ct | Birth Date: 03-12-1982 | City, State, & Zip: Simpsonville SC 29681

State: SC | Driver's License #: 10644438 (D) | Insurance Company: State Farm

Year: 07 | Body: 4S | Vehicle Make: Ford | VIN #: 3FAHP06237R173841

State: SC | Year: 11 | License Plate #: CAX744 | Owner's D.L. #: Same

Home Telephone: (864) 701-9606 | Owner's Full Name: Trick- Joshua Craig

Bus. Telephone: (864) 455-7185 | Street/R.F.D.: 1409 Roper Mtn Rd Apt 332

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29615

Estimated Speed: 10 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-712805

Driver/Pedestrian's Full Name: Foale- Adam Lawton

Unit # 2 | Sex: M | Race: W | Street/R.F.D.: 3419 Shillings Bridge Rd | Birth Date: 08-03-1985 | City, State, & Zip: Cope SC 29038

State: SC | Driver's License #: 100624364 (D) | Insurance Company: Farm Bureau

Year: 05 | Body: 4S | Vehicle Make: Niss | VIN #: 3N1CB51D35L475841

State: SC | Year: 11 | License Plate #: CZX192 | Owner's D.L. #: N/A

Home Telephone: (803) 536-4805 | Owner's Full Name: Foale- David Larue

Bus. Telephone: (803) 837-2117 | Street/R.F.D.: 3419 Shillings Bridge Rd

Contributed To Collision: Yes (No) | City, State, & Zip: Cope SC 29038

Estimated Speed: 35 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E210910 | Code: 21 | Summons # | Code | Towed By: N/A

B-712806

Driver/Pedestrian's Full Name: N/A

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

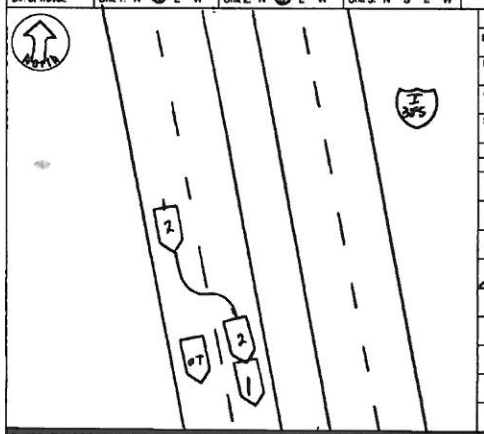
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1200.00	$ 1000.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photo: Yes | Describe What Happened (Refer to Units by Number): Units #1 and #2 were traveling South on I-385. Unit #1 slowed for other traffic. The driver of unit #2, while driving too fast for conditions

NOTICE: THE CRASH INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RELATION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: Watson-RA. | Rank: SGT | Badge #: 65 | Code: 420300 | Date: 07-05-2010 | Reviewing Officer | Rank: Cpl. | Internal Agency Code: 097109

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trim	Name	Street Address	Zip Code
1	03-12-1982	M	W	0	01	13	4	1	1	2			
2	08-03-1985	M	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 80- Sleeper of Cab, 90- Riding on Unit Exterior, 95- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Air Bag Deployment / Ejection: 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 8- Deployment Unk., 9- Unknown | 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 8- Unk. | Head Injury: 1- Yes, 2- No

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

e) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown | b) By: 1- EMS, 2- Police, 8- Other, 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 81- Lighting

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful Event
22	1	1	1	22
22	2	2	2	22
	3	3	3	

Non-Collision: 01- Cargo/Equip. Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Non-Hazardous Matl.), 13- Other Non-collision, 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. in Transport, 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Railway Veh., 27- Pedestrian, 28- Pedalcycle, 29- Work Zone Maint. Equip., 30- Other Movable Object, 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 69- Other, 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area

1st Deformed: 7 | Most Deformed: 7 1

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh., 29- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 69- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Cowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping in Traffic, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1-, A2-, A3-

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 5- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 0- None/Minor, 1- Under - Compartment Intrusion, 2- Under - No Intrusion, 3- Under - Unknown, 4- Over - MV in Transport, 5- Over - Other Vehicle, 9- Unk.

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Severe/Totaled, 3- Disabling Damage, 9- Unk.

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

Bt. X- walk: 1- Bike, 2- Moped, 3- Motor, 4- Roadside, 5- Shoulder, 6- Sidewalk, 7- Sidewalk, 8- Unk. | 1st Harmful Event Loc.: 5

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 88- None, 99- Unk.

School Bus Involved: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

Work Zone: 1- Before 1st Sign, 2- Advance Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area, 1- Yes, 2- No

Work Zone Location: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

Work Zone Type: 1- Yes, 2- No

Workers Present:

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 06- T-Intersection, 07- Shared Use Paths or Trail, 08- Traffic Circle, 12- Y-Intersection, 13- Non-Junction, 99- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Other, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 26- Other Improper Action, 29- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (Le., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (Le., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Other, 59- Unk.

Environmental: 62- Obstruction, 63- Weather Cond., 69- Other, 89- Unk.

Others: 60- Animal in Road, 61- Glare

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

57- Wrong Side of Road, 58- Other, 67- Other Person Under the Influence

ORIGINAL

SEP 30 2010

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 07/2001)

D.P.S. USE ONLY: 10106082 | Page # 1 Of 1 | # of Units 2 | Amended - Attach Copy of Original Report / Corrected | Notified 1655 | Arrived 1713

Date	Time	County	Interstate / US Primary / SC Primary	Collision Location (Rt. # / Name)	Main / Alternate / Spur	Connection / Business	Miles	Dir.	In / Near City or Town of:
09-28-2010	1150	23	3 - SC Primary	385	2 - Alternate	7 - Business	2	NW	Greenville

Lane # / Dir.	Dist. Offset Miles / Feet	Direction	Base Intersection (Rt. # / Name)	Main / Alternate / Spur	Connection / Business	ASRU code	MP/Grid
4 / 7	.01	SW	From 146	2 - Alternate	7 - Business	Latitude	34° 48' 25.98"
R.R. Id.	From Ramp Only	To	Second Intersection (Rt. # / Name)	Main / Alternate / Spur	Connection / Business	Longitude	82° 16' 53.00"
n/a	NW 2 Exit	SW 5	Toward 107	5 - Spur	9 - Other		

B-052297 — Driver/Pedestrian's Full Name: Metz - Mary Rachel

Unit # 1 | Sex: F | Race: W | Street/R.F.D.: 3200 Grandview Dr lot 134 | Birth Date: 12-11-1971 | City, State, & Zip: Simpsonville SC 29680 | State: SC | Driver's License #: 10-067-0629 (F) | Insurance Company: Geico | Year: 1996 | Body: 4dr | Vehicle Make: Mitsu | VIN #: 4A3AT46G4TE357733 | State: SC | Year: 2010 | License Plate #: NF1378 | Owner's D.L. #: 10-067-0629 | Home Telephone: (864) 968-2328 | Owner's Full Name: Metz - Mary Rachel | Bus. Telephone: n/a | Street/R.F.D.: 3200 Grandview Dr lot 134 | Contributed To Collision: No | City, State, & Zip: Simpsonville SC 29680 | Estimated Speed: 15 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons #: E671851 | Code: 48 | Summons #: E671852 | Code: 99 | Towed By: n/a

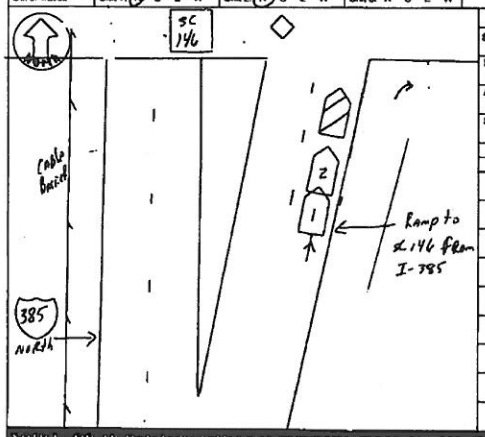
B-052298 — Driver/Pedestrian's Full Name: Evans - Santeka Leshay

Unit # 2 | Sex: F | Race: B | Street/R.F.D.: 9 Rosehill Pl | Birth Date: 12-16-1991 | City, State, & Zip: Ft. Inn SC 29644 | State: SC | Driver's License #: 101384511 (D) | Insurance Company: Nationwide | Year: 1992 | Body: 4dr | Vehicle Make: Isuzu | VIN #: JT8VK13T5N0028538 | State: SC | Year: 2011 | License Plate #: NF1378 | Owner's D.L. #: n/a | Home Telephone: (864) 968-9048 | Owner's Full Name: Leake - Christina E | Bus. Telephone: (864) 551-5747 | Street/R.F.D.: 9 Rosehill Pl | Contributed To Collision: Yes | City, State, & Zip: Ft. Inn SC 29644 | Estimated Speed: 10 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No) | Summons #: n/a | Code | Summons #: n/a | Code | Towed By: n/a

B-052299 — Driver/Pedestrian's Full Name:

Unit # n/a | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Dir. of Travel | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800.00	$ 800.00	$ n/a	$ n/a	$ n/a

Property Owner/Witness: n/a | Address | State | Zip | Phone

Property Owner/Witness: n/a | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit # 2 was slowing for traffic on the ramp to SC 146 from I-385 south. Unit #1, following too closely, struck the rear of unit # 2.

NOTICE - THE INFORMATION ON THIS ACCIDENT REPORT IS FOR STATISTICAL PURPOSES ONLY AND IS NOT A DETERMINATION OF FAULT OR LEGAL OPINION. ANY FAULT DETERMINATION IS MADE BY THE COURTS BUT NO WARRANT IS MADE AS TO THE CORRECTNESS OF ANY OF THE DATA.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Edwards - C.M.	Cpl	546	1103	09-28-2010	Traylor - T.J.	Cpl.	106V104537

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	12-11-1971	F	W	0	01	13	1	1	1	2			
2	12-28-1991	F	B	01	01	13	1	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0 - Not Injured; 1 - Possible; 2 - Non-Incapacitating; 3 - Incapacitating; 4 - Fatal

b) Motorcycle Only: Helmet: 1 - Yes 2 - No; Head Injury: 1 - Yes 2 - No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20 - Pedestrian; 30 - Trailing Unit; 40 - Bus or Van (4th row or Higher); 50 - Other Enclosed Area (nontrailing); 51 - Other Unenclosed Area (nontrailing); 60 - Sleeper of Cab; 70 - Riding on Unit Exterior; 80 - Lap; 89 - Unk./NA

Restraint/Safety Device: 00 - None Used; 11 - Shoulder Belt Only; 12 - Lap Belt Only; 13 - Shoulder & Lap Belt; 21 - Child Safety Seat; 89 - Other; 99 - Unk.

Air Bag Deployment / Switch: a) 1 - Deployed Front; 2 - Deployed Side; 3 - Deployed Both; 4 - Not Deployed; 7 - Not Applicable; 9 - Deployment Unk. b) 1 - Switch in On Position; 2 - Switch in Off Position; 3 - No Switch; 9 - Unknown

Ejection: 1 - Not Ejected; 2 - Part. Ejected; 3 - Tot. Ejected; 7 - Not App.; 9 - Unk.

Location After Impact: 1 - Not Trapped; 2 - Extricated (Mechanical Means); 3 - Freed (non-mech.); 4 - Not Applicable; 9 - Unknown

a) Transported to Medical Facility: 1 - Yes; 2 - No; 3 - Unknown

b) By: 1 - EMS; 2 - Police; 8 - Other; 9 - Unk.

Pedestrian, Motor/Pedalcycle Only: 31 - Helmet; 51 - Reflective Clothing; 41 - Protective Pads; 61 - Lighting

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful
22	1	1	1	22
24	0	0	0	24
0	3	3	3	

1st Event: 22

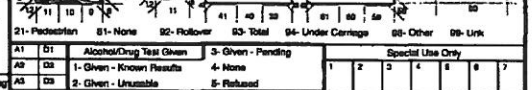
Non-Collision: 04 - Equipment Failure; 05 - Fire/Explosion; 06 - Immersion; 07 - Jackknife; 08 - Overturn/Rollover; 09 - Run off Road Left; 10 - Run off Road Right; 11 - Separation of Units; 12 - Spill (Non-Wheeled Veh.); 13 - Other Non-Collision

Collision: Not Fixed: 20 - Animal (Dom Only); 21 - Animal (All Other); 22 - Motor Veh. (In Transport); 23 - Motor Veh. (Stopped); 24 - Motor Veh. (Other Roadway); 25 - Motor Veh. (Parked); 26 - Pedalcycle; 27 - Pedestrian; 28 - Railway Veh.; 29 - Work Zone Maint. Equip.; 30 - Other Moveable Object; 30 - Unk. Moveable Object

Collision: Fixed Object: 40 - Bridge Overhead Structure; 41 - Bridge Pier or Abutment; 42 - Bridge Rail; 43 - Culvert; 44 - Curb; 45 - Ditch; 46 - Embankment; 47 - Guardrail End; 48 - Guardrail Face; 49 - Fence; 50 - Mail Box; 51 - Highway Traffic Sign Post; 52 - Impact Attenuator/Crash Cushion; 53 - Light/Luminaire Support; 54 - Other Post, Pole, Support, Etc.; 55 - Shrubbery; 56 - Traffic Signal Support; 57 - Overhead Sign Support; 58 - Tree; 59 - Other (Wall, Building, Tunnel, Etc.)

Manner of Collision (Struck Veh.): 00 - Not Coll. W/Motor Veh.; 10 - Rear End; 20 - Head On; 30 - Rear-to-Rear; 41 - Angle; 42 - Angle; 43 - Angle; 50 - Sideswipe Same Dir.; 60 - Sideswipe Opposite Dir.; 70 - Backed Into; 99 - Unknown

1st / Most Deformed Area: 1st Deformed: 1 | Most Deformed: 1 2 7 3



21 - Pedestrian; 81 - None; 82 - Rollover; 83 - Total; 84 - Under Carriage; 88 - Other; 89 - Unk.

Vehicle Type: 01 - Automobile; 12 - Pickup/Truck; 13 - Truck Tractor; 14 - Other Truck; 15 - Full Size Van; 16 - Mini Van; 17 - Sport Utility; 25 - Motorcycle; 26 - Other Motorbike; 27 - Pedalcycle; 28 - Other; 38 - Animal (Driven Veh.); 39 - Animal (Ridden); 41 - Pedestrian; 51 - Train; 61 - School Bus; 62 - Passenger Bus; 99 - Unk. (Hit and Run Only)

Vehicle Use Code: 01 - Personal; 02 - Driver Training; 03 - Constructon/Maint.; 04 - Ambulance; 05 - Military; 07 - Transport Property; 08 - Farm Use; 09 - Wrecker or Tow; 10 - Police; 11 - Government; 12 - Fire Fighting; 13 - Logging; 18 - Other; 41 - Pedestrian

Vehicle Attachment: 1 - None; 2 - Mobile Home; 3 - Semi-Trailer; 4 - Utility Trailer; 5 - Farm Trailer; 6 - Trailer w/Boat; 7 - Camper Trailer; 8 - Towed Motor Vehicle; 9 - Petroleum Tanker; A - Lowboy Trailer; B - Autocarrier Trailer; C - Other Tanker; D - Flat Bed; E - Twin Trailers; F - Other

Action Prior to Impact (Vehicle): 01 - Backing; 02 - Changing Lanes; 03 - Entering Traffic Lane; 04 - Leaving Traffic Lane; 05 - Making U-turn; 06 - Movements Essentially Straight Ahead; 07 - Overtaking/Passing; 08 - Parked; 09 - Slowing or Stopped in Traffic; 10 - Turning Left; 11 - Turning Right; 88 - Other; 99 - Unk.

Action Prior to Impact (Non-motorist): 21 - Approaching/Leaving Vehicle; 22 - Entering/Crossing Location; 23 - Playing/Working on Vehicle; 24 - Pushing Vehicle; 25 - Standing; 26 - Walking, Playing, Cycling; 27 - Working

Alc/Test Results: A1 - ; A2 - ; A3 -

Alcohol/Drug Test Given: 1 - Given - Known Results; 2 - Given - Unusable; 3 - Given - Pending; 4 - None; 5 - Refused

Test Type: 1 - Breath (Alc. Only); 2 - Blood; 3 - Urine; 4 - Serum; 8 - Other

Drug Results: 1 - Amphetamines; 2 - Cocaine; 3 - Marijuana; 4 - Opiates; 5 - PCP; 8 - Other; 0 - None/Minor; 2 - Functional Damage; 3 - Disabling Damage; 4 - Severe/Totaled; 5 - Not Applicable; 9 - Unk.

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1 4

Extent of Deformity: 1 0

Trafficway: 1 - Two-way, Not Divided; 2 - Two-way, Divided, Unprotected Median; 3 - Two-way, Divided, Barrier; 4 - One-way; 8 - Other

A: 1 - Conc. 2 - Asphalt 3 - Interst 4 - Roadway 5 - Roadway 6 - Shoulder 7 - Sidewalk 8 - Outside Trafficway 9 - Unk.

B: X - walk; Y - Y 2-N 9-U

1st Harmful Event: 5 2

Event Loc.: 5

Road Character: 1 - Straight - Level; 2 - Straight - On Grade; 3 - Straight - Hillcrest; 4 - Curve - Level; 5 - Curve - On Grade; 6 - Curve - Hillcrest

Road Surface Condition: 1 - Dry; 2 - Wet; 3 - Snow; 4 - Slush; 5 - Ice; 6 - Contaminate; 7 - Water (Standing, etc.); 8 - Other; 9 - Unk.

Traffic Control Type: 01 - Stop and Go Light; 02 - Flashing Traffic Signal; 11 - RR (X-bucks, Lights & Gates); 12 - RR (X-bucks & Lights); 13 - RR (X-bucks Only); 21 - Officer or Flagman; 22 - Oncoming Emergency Vehicle; 31 - Pavement Markings (only); 41 - Stop Sign; 42 - School Zone Sign; 43 - Yield Sign; 44 - Work Zone; 45 - Other Warning Signs; 98 - None; 99 - Unk.

School Bus Involved: 1 - Yes, Directly; 2 - Yes, Indirectly; 3 - No; 9 - Unk.: 3

Work Zone: 1 - Before 1st Sign; 2 - Advanced Warning Area; 3 - Transition Area; 4 - Activity Area; 5 - Termination Area; 1 - Yes 2 - No: 2

Work Zone Location: 1 - Shoulder/Median Work; 2 - Lane Shift/Crossover; 3 - Intermittent/Moving Work; 4 - Lane Closure; 8 - Other 9 - Unk.

Work Zone Type:

1 - Yes 2 - No Workers Present:

Weather Condition: 1 - Clear (no adverse conditions); 2 - Rain; 3 - Cloudy; 4 - Sleet, Hail; 5 - Snow; 6 - Fog, Smog, Smoke; 7 - Blowing Sand, Oil, Dirt or Snow; 8 - Severe Crosswinds; 9 - Unk.: 1

Light Condition: 1 - Daylight; 2 - Dawn; 3 - Dusk; 4 - Dark (Lighting Unspecified); 5 - Dark (Street Lamp Lit); 6 - Dark (Street Lamp Not Lit); 7 - Dark (No Lights): 1

Junction Type: 01 - Crossover; 02 - Driveway; 03 - Five/More Points; 04 - Four-way Intersection; 05 - Railway Grade Crossing; 07 - Shared Use Paths or Trail; 08 - T-Intersection; 09 - Traffic Circle; 12 - Y-Intersection; 13 - Nonjunction; 99 - Unk.: 08

Primary Contributing Factors

Driver: 01 - Disregarded Signs, Signals, Etc.; 02 - Distracted/Inattension; 03 - Driving Too Fast for Conditions; 04 - Exceeded Authorized Speed Limit; 05 - Failed to Yield Right of Way; 06 - Ran off Road; 07 - Fatigued/Asleep; 08 - Followed Too Closely; 09 - Made an Improper Turn; 10 - Medical Related; 12 - Aggressive Operation of Vehicle; 13 - Over-correcting/Over-steering; 14 - Swerving to Avoiding Object; 15 - Wrong Side or Wrong Way; 16 - Under the Influence; 17 - Vision Obscured (Within Unit); 18 - Improper Lane Usage/Change; 28 - Other Improper Action; 29 - Unk.

Roadway: 30 - Debris; 31 - Non-Highway Work; 32 - Obstruction in Roadway; 33 - Road Surface Condition (Ice, Wet); 34 - Rut, Holes, Bumps; 35 - Shoulders (None, Low, Soft, High); 36 - Traffic Control Device (Ie., Missing); 37 - Work Zone (Constr./Maint./Utility); 38 - Worn, Travel-Polished Surface; 48 - Other; 49 - Unk.

Non-Motorist: 50 - Inattentive; 51 - Lying &/or Illegally in Roadway; 52 - Failure to Yield R. of W.; 53 - Not Visible (Dark Clothing); 54 - Disregard Signs, Signals, Etc.; 55 - Improper Crossing; 56 - Darting; 57 - Wrong Side of Road; 58 - Other; 59 - Unk.

Environmental: 60 - Animal in Road; 61 - Glare; 62 - Obstruction in Roadway; 63 - Weather Cond.; 68 - Other; 69 - Unk.

Vehicle Defect: 70 - Brakes; 71 - Steering; 72 - Power Plant; 73 - Tires/Wheel; 74 - Lights; 75 - Signals; 76 - Windows/Shield; 77 - Restraint System; 78 - Truck Coupling; 79 - Cargo; 80 - Fuel System; 88 - Other; 89 - Unk.

ORIGINAL

OCT 13 2010

D.P.S. USE ONLY: 10110731 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01-2010) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1545 | Arrived 1605

Date: 09-28-2010 | Time: 1540 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name): S 385 | 0- Main 1- Connection 2- Alternate 7- Business 5- Spur | Miles: 0 | Dir: N E S W | In Mile-City or Town of: Greenville

Lane # / Dir.: 1 S | OL: 5 | Dir: N E S W | Distance Offset: .10 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | 0- Main 1- Connection 2- Alternate 3- Spur 7- Business 9- Other | ASRU code | MP/Grid | Latitude: 34° 49' 44.50 | Longitude: 82° 17' 37.40

R.R. Id.: NA | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 85 | 0- Main 1- Connection 2- Alternate 3- Spur 7- Business 9- Other

B-225184

Driver/Pedestrian's Full Name: Funches - Selma Ledonis

Unit #: 1 | Sex: F | Race: B | Street/R.F.D.: 14 Chelsea brook ct | Birth Date: 07-21-1957 | City, State, & Zip: Mauldin SC 29662

State: SC | Driver's License #: 004828747 (D) | Insurance Company: Omni Insurity

Year: 2002 | Body: 4DS | Vehicle Make: Acura | VIN #: JH4KA96682C008157

State: SC | Year: 2010 | License Plate #: 748481M | Owner's D.L. #: 004828747

Home Telephone: 864 236-7444 | Owner's Full Name: Funches - Selma Ledonis

Bus. Telephone: 864 918-0619 | Street/R.F.D.: 14 Chelsea brook ct

Contributed To Collision: Yes (No) | City, State, & Zip: Mauldin SC 29662

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: NA | Code | Towed By: NA

B-225185

Driver/Pedestrian's Full Name: Wilson - Shanesta Shenee

Unit #: 2 | Sex: F | Race: B | Street/R.F.D.: 26 Gatling Ave | Birth Date: 05-29-1984 | City, State, & Zip: Greenville SC 29605

State: SC | Driver's License #: 011422911 (D) | Insurance Company: Bristol West

Year: 1998 | Body: Util | Vehicle Make: Kia | VIN #: KNDJA7232W5552533

State: SC | Year: 2010 | License Plate #: DFA157 | Owner's D.L. #: NA

Home Telephone: 864 263-0307 | Owner's Full Name: Martin - Doris P

Bus. Telephone: 864 436-0005 | Street/R.F.D.: 26 Gatling Ave

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29605

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: EG 1468 HB | Code | Summons #: NA | Code | Towed By: NA

B-225186

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

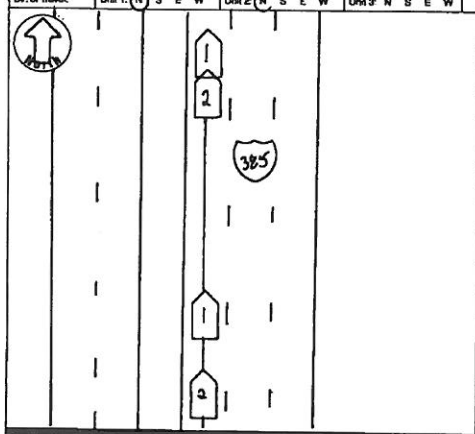
Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 800	$ 800	$ NA	$ NA	$ NA

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Units 1 and 2 were traveling north on I-385. Traffic infront of unit 1 began to decrease speed. The driver of Unit 1 began to decrease her speed. The driver of unit 2 was following Unit 1 too closely and struck Unit 1 in the rear with Unit 2.

NOTICE: THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT THE BASIS OF THE OFFICER'S PRESENT KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OR ACCURACY THEREOF

Investigating Officer's Name: Woodley - SC | Rank: Sgt | Badge #: 842 | Code: HP03 | Date: 09-29-2010 | Reviewer's Name: Traylor - T.J. | Rank: SGT. | Internal Agency Code: 106V1081167

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	07-21-1957	F	B	D	01	13	43	1	1	2			
2	05-29-1984	F	B	D	01	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 09- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front 2- Deployed Side 3- Deployed Both 4- Not Deployed 7- Not Applicable 9- Deployment Unk.; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected 2- Part. Ejected 3- Tot. Ejected 7- Not App. 9- Unk.

Location After Impact: 1- Not Trapped 2- Extricated (Mechanical Means) 3- Freed (non-mech.) 4- Not Applicable 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet 51- Reflective Clothing 41- Protective Pads 61- Lighting

Sequence of Events

1st Event: 22	2nd Event: 22	3rd Event	4th Event	Most Harmful Event: 22

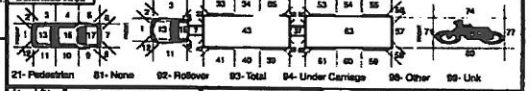
Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Down/Jt Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Intersection; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Non-Motored); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Passport End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Embankment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Tree; 99- Unk.

Manner of Collision (Struck Veh.): 10 — 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↖a↗); 42- Angle (←b→); 43- Angle (↙c↘); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 2 / Most Deformed: 2



Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Railway Veh.; 38- Animal (Deer); 39- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 19- Other; 21- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Working; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Alc Test Results: A1- ; A2- ; A3- ; 1- Alcohol/Drug Test Given; 2- Given - Known Results; 3- Given - Pending; 4- None; 5- Refused; Special Use Only

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- PCP; 6- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 6- Other; 0- None/Minor; 1- Functional Damage; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Underride/Override: 6

Extent of Deformity: 0 1 0 3

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 3

Event Loc.: 1st Harmful: 8; 1- Y 2- N; B- U: 1

Road Character: 2 — 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 2 — 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 98 — 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 3 — 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 2 — 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.; 1- Yes 2- No

Work Zone Location

Work Zone Type

Workers Present:

Weather Condition: 3 — 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Soil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Blowing Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1 — 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 8- Dark (Street Lamp Not Lit)

Junction Type: 13 — 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: Driver: 18

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 20- Other Improper Action; 99- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 02- Obstruction; 03- Weather Cond.; 04- Animal in Road; 61- Glare; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 78- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

67- Other Person Under the Influence

ORIGINAL

OCT 13 2010

D.P.S. USE ONLY: 10110742 | Page 1 / Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1950 | Arrived: 1800

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	Mi. Near City or Town of:
09-30-2010	1945	23	8 385	2	N E S W	Greenville

Lane # / Dir.: 4 S | Of: 5 | Distance Offset: 15 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt. # / Name): From 146 | Second Intersection (Rt. # / Name): Toward 85 | Main / Alternate / Spur / Connection / Business / Ramp / Exit

ASRU code: | MP/Grid: | Latitude: 34° 49' 18.80 | Longitude: 82° 17' 11.80

R.R. Id.: n/a | From: Ramp Only 1- Entrance 2- Exit | To: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

B-052330

Driver/Pedestrian's Full Name: Wolfe - Anthony Blake

Unit # 1 | Sex: M | Race: W | Street/R.F.D.: 2225 Sevierville Rd

Birth Date: 07-07-1977 | City, State, & Zip: Maryville TN 37804

State: TN | Driver's License #: 114937835 (D) | Insurance Company: Acuity

Year: 1999 | Body: SW | Vehicle Make: Audi | VIN #: WAUDA24B1XN086743

State: TN | Year: 2010 | License Plate #: 682425 | Owner's D.L. #: 114937835

Home Telephone: 984) 564-6147 | Owner's Full Name: Wolfe - Anthony Blake

Bus. Telephone: ( ) n/a | Street/R.F.D.: 2225 Sevierville Rd

Contributed To Collision: No | City, State, & Zip: Maryville TN 37804

Estimated Speed: 10 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: 1799113 | Code | Summons # | Code | Towed By: n/a

B-052331

Driver/Pedestrian's Full Name: Culbertson - Christopher S.

Unit # 2 | Sex: M | Race: W | Street/R.F.D.: 4 Fieldmont Cir

Birth Date: 12-26-1985 | City, State, & Zip: Simpsonville SC 29681

State: SC | Driver's License #: 011525253 (D) | Insurance Company: Allstate

Year: 1995 | Body: 2S | Vehicle Make: Mitsu | VIN #: JA3AM54T6SY022193

State: SC | Year: 2011 | License Plate #: 6EA890 | Owner's D.L. #: 011525253

Home Telephone: 864) 525-8599 | Owner's Full Name: Culbertson - Christopher S

Bus. Telephone: 864) 281-0929 | Street/R.F.D.: 4 Fieldmont Cir

Contributed To Collision: Yes | City, State, & Zip: Simpsonville SC 29681

Estimated Speed: 0 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: n/a | Code | Summons # | Code | Towed By: n/a

B-052332

Driver/Pedestrian's Full Name:

Unit # n/a | Sex | Race | Street/R.F.D.:

Birth Date | City, State, & Zip:

State | Driver's License # | Insurance Company:

Year | Body | Vehicle Make | VIN #

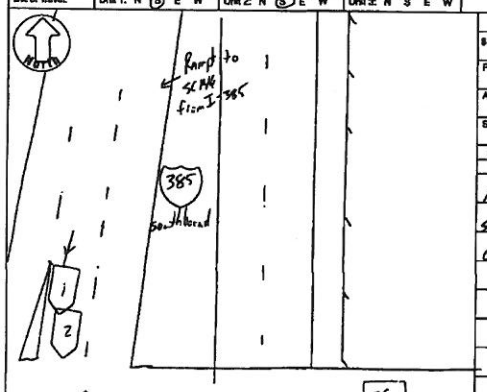
Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2300.00	$ 1200.00	$ n/a	$ n/a	$ n/a

Property Owner/Witness: n/a | Address | State | Zip | Phone

Property Owner/Witness: n/a | Address | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

Unit # 2 was stopping for a red light on the ramp from I-385 south to SC 146. Unit #1, following too closely, struck unit # 2.

NOTICE: THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT A DETERMINATION OF THE OFFICER'S PERSONAL OPINION AND/OR BELIEF CONCERNING THE COLLISION. IT SHALL NOT BE USED AS AN ADMISSION AS TO THE LEGAL ACCEPTANCE OF FAULT OR LIABILITY.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Pablo Ds - C.M.	Cpl	546	NHS	09-30-2010	K. L.	Sgt	10CV108029

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Trav	Name	Street Address	Zip Code
1	07-07-1977	M	W	0	01	13	4	1	1	2			
2	12-26-1985	M	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, W - Caucasian, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./N/A

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 86- Other, 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 1- Yes 2- No 3- Unknown | a) Transported to Medical Facility | b) By: 1- EMS 2- Police 8- Other 9- Unk.

31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 81- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 9- Deployed Unk. | b) 1- Switch In On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
23				23	23
24	22			22	

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Non-Vehicular), 18- Other Non-collision, 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. (In Transport), 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object, 99- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Basement, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 89- Other, 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle (↘↙), 41- Angle (→|←), 42- Angle (↗|↖), 43- Angle (↗|↙), 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most: 1= Deformed 1 2 6 3 | Most Deformed 1 2 6 3

Deformed Area

21- Pedestrian, 81- None, 82- Rollover, 83- Total, 84- Under Carriage, 89- Other, 99- Unk.

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Mini Van, 29- Sport Utility, 38- Animal (Ridden), 41- Pedestrian, 51- Train, 81- School Bus, 82- Passenger Bus, 88- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Cowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopped in Traffic, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1- , A2- , A3-

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 06- T-Intersection, 07- Shared Use Paths or Trail, 08- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Other, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 28- Other Improper Action, 29- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 82- Obstruction, 83- Weather Cond., 84- Animal in Road, 85- Glare, 88- Other, 89- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Trafficway: 1

Road Character: 2

Road Surface Condition: 2

Traffic Control Type: 01

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1 6

Alcohol/Drug Test Given: 3- Given - Pending | 1- Given - Known Results | 2- Given - Unusable | 4- None | 5- Refused

Test Type: 3- Urine | 1- Breath (Alc. Only) | 4- Serum | 2- Blood | 8- Other

Drug Results: 3- Marijuana | 1- Amphetamines | 4- Opiates | 2- Cocaine | 5- PCP | 8- Other

1- Under-Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 6- None, 9- Unk. 2 6 3

Extent of Deformity: 1 2 3

9- None/Minor, 2- Functional Damage, 3- Disabling Damage, 4- Severe/Totaled, 5- Not Applicable, 9- Unk. 3 2 3

Event Loc.: 5 3

1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

A: 1- Lane 2- Island 3- Median 4- Roadside 5- Roadway 6- Shoulder 7- Sidewalk 8- Outside Trafficway 9- Unk.

B: X- walk: Y Z N 9-U | 1st Harmful Event Loc.: Y Z-N 9-U

1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminants, 7- Water (Standing, etc.), 8- Other, 9- Unk.

01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 98- None, 99- Unk.

School Bus Involved: 3

1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

Work Zone: 2

1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination, Area ----------, 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

Work Zone Location: ----------

Work Zone Type: ----------

Workers Present: 1- Yes 2- No

ORIGINAL

OCT 21 2019

D.P.S. USE ONLY **10115039** Page # 01 of 02

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM (DPS-TR-1) Rev. 2018.01

Of Units: 2

Amended - Attach Copy of Original Report: Corrected

Notified: 0843

Arrived: 0858

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	In / Near City or Town of:
10-05-2019	0834	23	385	4.0	S	Greenville

Lane # / Dir.: 3 / 6

Distance Offset: .50 Miles / Feet — Direction: S

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Rt. # / Name): 146

1- Main 2- Alternate 3- Spur 6- Connection 7- Business 9- Other

ASRU code:

MP/Grid:

Latitude: 34 49 34.78

Longitude: 82 17 30.19

R.R. Id.: NA

From: S — To: S

1 - Entrance 2 - Exit 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- Other

Second Intersection (Rt. # / Name): 85

1- Main 2- Alternate 3- Spur 6- Connection 7- Business 9- Other

A-608047

Driver/Pedestrian's Full Name: Mahaffey - Gordana

Unit #	Sex	Race	Street
1	F	W	413 S Franklin Rd

Birth Date: 09-03-1942 — City, State, & Zip: Greenville SC 29609

State	Driver's License #	Insurance Company
SC	007509424 (D)	Honda Msn

Year	Body	Vehicle Make	VIN #
2006	4DR	Kia	KNAGD126165464787

State	Year	License Plate #	Owner's D.L. #
SC	2011	ESM 298	007509424

Home Telephone: (864) 498-5885 — Owner's Full Name: Mahaffey - Gordana

Bus. Telephone: (864) 421-3228 — Street: 413 S. Franklin Rd

Contributed To Collision: Yes — City, State, & Zip: Greenville SC 29609

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B S Req: Yes (No)	Alc/Drg info (see back): Yes (No)
40	55			

Summons #	Code	Summons #	Code	Towed By
NA		NA		NA

A-608048

Driver/Pedestrian's Full Name: Dimmo - Christopher James

Unit #	Sex	Race	Street
2	M	W	617 Richardson St Apt 18A

Birth Date: 05-10-1982 — City, State, & Zip: Simpsonville SC 29680

State	Driver's License #	Insurance Company
SC	102335875 (D)	Progressive

Year	Body	Vehicle Make	VIN #
1998	4DR	Pontiac	1G2WE52T0WM756824

State	Year	License Plate #	Owner's D.L. #
SC	2011	FBL617	102335875

Home Telephone: (864) 881-0185 — Owner's Full Name: Dimmo - Christopher James

Bus. Telephone: (864) 553-0184 — Street: 617 Richardson St Apt 18A

Contributed To Collision: Yes — City, State, & Zip: Simpsonville SC 29680

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B S Req: Yes (No)	Alc/Drg info (see back): Yes (No)
50	55			

Summons #	Code	Summons #	Code	Towed By
FL23244	31	NA		Dan Page Higgins

A-608049

Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street
N/A			

Birth Date: — City, State, & Zip:

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

Home Telephone: ( ) — Owner's Full Name:

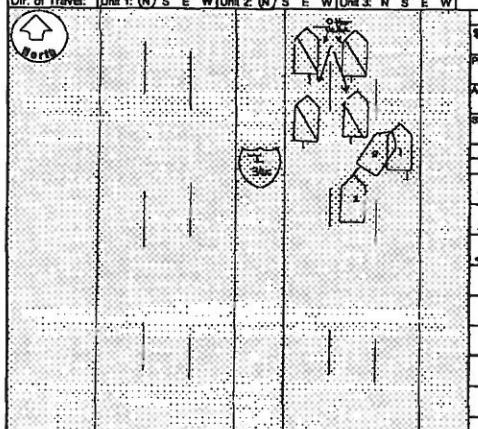
Bus. Telephone: ( ) — Street:

Contributed To Collision: Yes / No — City, State, & Zip:

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/B S Req: Yes No	Alc/Drg info (see back): Yes No

Summons #	Code	Summons #	Code	Towed By

Dir. of Travel: Unit 1: (N) S E W — Unit 2: (N) S E W — Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2500.00	$ 3000.00	$ NA	$ NA	$ NA

Property Owner/Witness	Property Owner/Witness
NA	NA
Address	Address
State / Zip / Phone	State / Zip / Phone

Photo: (Y) (N) — Describe What Happened (Refer to Units by Number)

Units #1 and #2 traveling north on 385. Driver of unit #2 suddenly approached slow-moving traffic. Unit #2 swerved & hit right striking #1 left side of unit #1 with the right front.

SOUTH CAROLINA LAW REQUIRES YOU TO REPORT THIS COLLISION TO THE POLICE IF IT RESULTS IN INJURY OR DEATH, AND REQUIRES YOU TO GIVE YOUR NAME AND ADDRESS AND THE NAME AND ADDRESS OF THE OWNER OF ANY PROPERTY DAMAGED IN THIS COLLISION. PROOF OF FINANCIAL RESPONSIBILITY MUST BE SHOWN TO ANY PERSON INJURED OR THE OWNER OF ANY PROPERTY DAMAGED IN THIS COLLISION.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Frank - MA	Ofc	138	HP0300	10-05-2019		Sgt	10 Gv 11170

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.S.B.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	09-03-1942	F	W	C	01	13	43	1	1	1			
2	05-10-1982	M	W	C	01	13	43	1	1	1			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 8-Switch In Position; 9-No Switch; 0-Unknown

Ejection: 1- Not Ejected; 2- Part Ejected; 3- Tot Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk /NA

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

Pedestrian Motor-Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Non-Collision: 01- Jackknife; 02- Fire/Explosion; 03- Overturn/Rollover; 04- Cross Median; 05- Cross Center Line; 06- Ran off Road Left; 07- Downhill Runaway; 08- Ran off Road Right; 09- Other Non-Collision

Collision Not Fixed: 10- Animal (Deer); 11- Animal (Other); 12- Motor Veh (Unspecified); 13- Motor Veh (Stopped); 14- Motor Veh (Other Roadway); 15- Motor Veh (Parked); 16- Pedalcycle; 17- Train; 18- Other Non-Collision; 19- Unk Non-Collision

Collision Fixed Object: 27- Pedestrian; 28- Railway Veh; 29- Work Zone Equip; 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Fence; 48- Guardrail End; 49- Guardrail Face; 50- Highway Traffic Sign Post; 51- Mail Box; 52- Median Barrier; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Other (Post, Pole, Support, Etc.); 56- Other (Wall, Building, Tunnel, Etc.); 57- Overhead Sign Support; 58- Tree; 59- Utility Pole; 60- Work Zone Maint. Equipment; 61- Other Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (<90°); 42- Angle (90°); 43- Angle (>90°); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1° Most Deformed Area

1° Deformed: 1 2 3 4 5 6 7

Most Deformed: 1 2 3 4 5 6 7

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 30- Animal Drawn Veh; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint; 04- Ambulance; 06- Military; 07- Transport Property; 08- Transport Passengers; 09- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Tractor; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact — (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk

Undermide/Override

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Other Warning Sign; 44- Work Zone; 98- None; 99- Unk

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other

1- Conc 2- Island 3- Median 4- Roadside 5- Roadway 6- Shoulder 7- Sidewalk 8- Outside Trafficway 9- Unk

Event Loc: 1- Harmful; 2- X-walk; 3- X-walk (HJ)

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights); 8- Dark (Street Lamp Not Lit)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Path or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

Work Zone Type

Workers Present: 1- Yes 2- No

Primary: 03

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 66- Under the Influence; 67- Other Person Under Influence

Environmental: 62- Obstruction; 63- Animal on Road; 64- Glare; 83- Weather Cond.; 88- Other; 89- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Officer's:

ORIGINAL

NOV 12 2010

O.P.S. USE ONLY: 10124017 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 2050 | Arrived 2054

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	4mi / Near City or Town of:
10-14-2010	2045	23	5 385	3	N E S W	Greenville

Lane # / Dir.: 4 9 S W | Distance Offset: 25 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 146 | 0- Main 1- Connection 2- Alternate 3- Business 5- Spur 9- Other | ASRU code | MP/Grid

R.R. Id.: N/a | From: Ramp Only N E S W 1- Entrance 2- Exit | To: N E S W 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 85 | 0- Main 1- Connection 2- Alternate 3- Business 5- Spur 9- Other | Latitude 34° 49' 26.10" | Longitude 82° 17' 25.76"

B-052351

Driver/Pedestrian's Full Name: Kwasnik- Breana Lynn

Unit #	Sex	Race	Street/R.F.D.
1	F	W	124 Hemes Pond Ln

Birth Date: 12-16-1993 | City, State, & Zip: Taylors SC 29687

State	Driver's License #	Insurance Company
SC	161918871 (D)	Progressive

Year	Body	Vehicle Make	VIN #
2002	4S	Nissan	4A3AA36662E157716

State	Year	License Plate #	Owner's D.L. #
SC	2010	ERF 342	N/a

Home Telephone: (845) 380-5926 | Owner's Full Name: Kwasnik - Bryan

Bus. Telephone: (845) 525-6583 | Street/R.F.D.: 40 Freedom Ct.

Contributed To Collision: No | City, State, & Zip: Easley SC 29650

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B S Req: Yes (No)	Alc/Drg info (see back): Yes (No)
10	35	Summons # E747655	Code N/a	Summons # N/a	Code	Towed By N/a

B-052352

Driver/Pedestrian's Full Name: Hassell- Haley Middle

Unit #	Sex	Race	Street/R.F.D.
2	F	W	2727 Northampton Way

Birth Date: 10-07-1988 | City, State, & Zip: Lansing MI 48912

State	Driver's License #	Insurance Company
MI	H653 298 603 772	Travelers

Year	Body	Vehicle Make	VIN #
2010	4S	Dodge	2B3CA3CV2AH 128001

State	Year	License Plate #	Owner's D.L. #
SC	2010	ENK 8794	N/a

Home Telephone: (517) 290-5509 | Owner's Full Name: Ean Holdings LLC

Bus. Telephone: ( ) N/a | Street/R.F.D.: 24698 Sperry Dr

Contributed To Collision: Yes | City, State, & Zip: Westlake OH 44145

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/B S Req: Yes (No)	Alc/Drg info (see back): Yes (No)
5	35	Summons # N/a	Code	Summons # N/a	Code	Towed By N/a

B-052353

Driver/Pedestrian's Full Name: N/a

Unit #	Sex	Race	Street/R.F.D.
N/a			

Birth Date | City, State, & Zip

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

State	Year	License Plate #	Owner's D.L. #

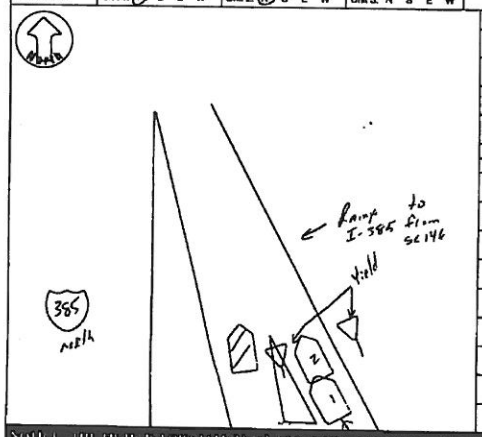
Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/B S Req: Yes No	Alc/Drg info (see back): Yes No
		Summons #	Code	Summons #	Code	Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500.00	$ 500.00	$ N/a	$ N/a	$ N/a

Property Owner/Witness: N/a | Property Owner/Witness: N/a

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #2 was yielding to another vehicle on the ramp to I-385 from SC 146. Unit #1, following too closely, struck the rear of unit #2.

SCDPS - THE DRAWING IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Edwards- T.M.	Cpl	546	HP03	10-09-2010	[illegible]	Sgt	1064112413

Unit	Date of Birth	Sex	Race	INJ	Seat	R/S/D	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	12-16-1993	F	W	0	01	13	4	1	1	2			
2	10-07-1988	F	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, I - Alaskan Native or American Indian, W - Caucasian, H - Hispanic, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal. b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09. 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nonrailing), 51- Other Unenclosed Area (nonrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 90- Unk./NA, 99- Unk.

Restraint/Safety Device: 00- None Used, 01- Shoulder Belt Only, 02- Lap Belt Only, 03- Shoulder & Lap Belt, 04- Child Safety Seat, 05- Other, 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 9- Deployment Unk. b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 8- Unk.

Head Injury: 1- Yes, 2- No

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown. By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 51- Reflective Clothing, 41- Protective Pads, 81- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Non-Hazmat Veh.), 13- Tire Failure, 14- Other Non-Collision, 15- Unk. Non-Collision

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. in Transport, 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object, 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Bridge Parapet End, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Guardrail Face, 49- Guardrail End, 50- Impact Attenuator/Crash Cushion, 51- Concrete Traffic Barrier, 52- Other Post, Pole or Support, 53- Other Traffic Sign Post, 54- Light/Luminaire Support, 55- Utility Pole, 56- Other Pole, 57- Other Sign Support, 58- Tree, 59- Other (Wall, Building, Tunnel, Etc.), 60- Unk.

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22	1	2	3	22	22
22	2	3	3	22	22
3	3	3	3		

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle (↖a|A↗), 42- Angle (←b|A→), 43- Angle (↙B|A↗), 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 21

Most Deformed: 1 2 3 4 5 6 7 8 9 10 11 12 21

21- Pedestrian, 81- None, 82- Rollover, 83- Total, 84- Under Carriage, 89- Other, 99- Unk.

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh., 29- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 69- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian, 99- Unk.

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Cowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopped in Traffic, 10- Turning Left, 11- Turning Right, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Blowing Sand, Oil, Dirt or Snow, 6- Fog, Smog, Smoke, 7- Severe Crosswinds, 8- Snow, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 06- T-Intersection, 07- Shared Use Paths or Trail, 08- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Alc Test Results: A1-, A2-, A3-. 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other. Trafficway: 2

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Special Use Only: 1 2 3 4 5 6 7

1- Under-Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 6- None, 9- Unk. Underride/Override: 6

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Severe/Totaled, 3- Disabling Damage, 9- Unk., 5- Not Applicable. 1 0 2 0 3

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other. 2

A: 1- Store, 2- Mobile Home, 3- Roadway, 4- Residence, 5- Shoulder, 6- Bridge Structure, 7- Sidewalk, 8- Unk. B: X- traffic, Y- 2-N 8-U. 1st Harmful Event Loc.: X 57 Y

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest. Z

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk. 1

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 03- RR (X-bucks, Lights & Gates), 04- RR (X-bucks & Lights), 05- RR (X-bucks Only), 06- Yes, Directly, 07- Believe 1st Sign, 08- Advanced Warning Area, 09- Shoulder/Median Work, 10- Lane Shift/Crossover, 11- Flagman, 12- Officer or Flagman, 13- Oncoming Emergency Vehicle, 14- Pavement Markings (only), 15- Stop Sign, 16- School Zone Sign, 17- Work Zone, 18- Other Warning Signs, 19- Yes, Indirectly, 20- No, 21- Transition Area, 22- Activity Area, 23- Termination, 24- Intermittent/Moving Work, 25- Lane Closure, 26- Other, 27- Unk. 03

School Bus Involved: 1- Yes 2- No 3

Work Zone: 1- Yes 2- No 2

Work Zone Location: Area

Work Zone Type: 1- Advance Warning, 2- Transition, 3- Activity Area, 4- Termination

Workers Present: 1- Yes 2- No

Primary Contributing Factors: 05

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Aggressive Operation of Vehicle, 12- Over-correcting/Over-steering, 13- Swerving to Avoiding Object, 14- Wrong Side or Wrong Way, 15- Under the Influence, 16- Vision Obscured (Within Unit), 17- Improper Lane Usage/Change, 18- Other Improper Action, 19- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 62- Obstruction, 63- Weather Cond., 68- Other, 69- Unk., 60- Animal in Road, 61- Glare

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

NOV 24 2010

ORIGINAL

SOUTH CAROLINA DPS/OHS & DMV USE ONLY **10129588** | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

Of Units: 02 | Amended - Attach Copy of Original Report | Corrected | Notified: 1750 | Arrived: 1808

2010003890

Date	Time of Collision	Code	Collision Location (Rt. # / Name)	Miles	Dir.	In (Near) City or Town of:
11-12-2010	1740	23	385	.29	N E S W	GREENVILLE

Code: 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-PP | Main 5-Connection 2-Alternate 7-Business 3-Spur 8-Spur

Lane #	Dir. Of	Distance Offset	Miles/Feet	Direction	Distance Code
1	S	.08	Feet	N E S W	1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other

R.R. Id. | From Ramp Only | To | Code: 1-Entrance 2-Exit | N E S W | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other

Base Intersection (Rt # / Name): From 140 WOODRUFF RD | Main 5-Connection 2-Alternate 7-Business 5-Spur 8-Other

Second Intersection (Rt. # / Name): Toward 385 | Main 5-Connection 2-Alternate 7-Business 5-Spur 8-Other

GPS COORDINATES 00 00' 00.00" — DEGREES MINUTES SECONDS

Latitude: 34 49 42.78

Longitude: 82 17 37.75

E-045955

Driver/Pedestrian's Full Name: HOWE JR MICHAEL LEONA

Unit # 01 | # Occ 1 | Sex M | Race W | Street/R.F.D. 134 RIVERDALE RD | Birth Date 01-17-1991 | City, State, & Zip SIMPSONVILLE SC 296867745

State SC | Driver's License # 101558934 | Class D | Insurance Company ALLSTATE

Year 2007 | Body VN | Vehicle Make HOND | VIN # 5FNRL38607B137573

State SC | Year 2010 | License Plate # FEQ409 | Owner's D.L. #

Home Telephone (864) 2777727 | Owner's Full Name HOWE MICHAEL LEONARD

Bus. Telephone (864) 8810552 | Street/R.F.D. 11 NORMAN PL

Contributed To Collision: Yes (No) | City, State, & Zip GREENVILLE SC 296156077

Estimated Speed 0 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # | Code | Summons # | Code | Towed (Yes) No

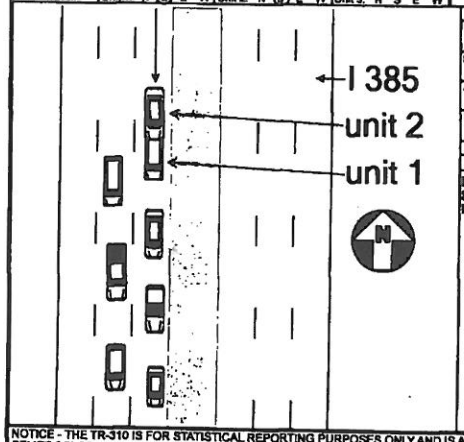
Driver/Pedestrian's Full Name

Unit # | Sex | Race | Street/R.F.D. | # Occ | Birth Date | City, State, & Zip

State | Driver's License # | Class | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



E-045956

Driver/Pedestrian's Full Name: D'ARRIGO LEONARD

Unit # 02 | # Occ 2 | Sex M | Race W | Street/R.F.D. 282 PEBBLE SPRINGS DR | Birth Date 02-05-1946 | City, State, & Zip TAYLORS SC 296875789

State SC | Driver's License # 011682383 | Class D | Insurance Company GEICO

Year 1998 | Body 4S | Vehicle Make FORD | VIN # 2FAFP74W4WX121286

State SC | Year 2011 | License Plate # 16357W | Owner's D.L. #

Home Telephone (864) 8018995 | Owner's Full Name D'ARRIGO JUDITH ANN

Bus. Telephone (864) 4191694 | Street/R.F.D. 282 PEBBLE SPRINGS DR

Contributed To Collision: (Yes) No | City, State, & Zip TAYLORS SC 296875789

Estimated Speed 55 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # E784786 | Code 21 | Summons # | Code | Towed BUDDYS OR | Yes (No)

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed | Yes No

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000	$ 3000	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | City | Address | City

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

BOTH UNITS WERE TRAVELING SOUTH ON I 385. UNIT 1 SLOWED TO A STOP IN TRAFFIC. UNIT 2, DRIVING TOO FAST FOR CONDITIONS, STRUCK UNIT 1

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
GENCO - T J	S/TRP	T443	HP03	11-23-2010	WESLEY HIOTT	SGT	10GV126029

2010003890

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A,B,D	Eject	LAI	Tran	Name	Street Address	Zip Code
01	01-17-1991	M	W	0	01	13	4 3	1	1	2	HOWE JR MICHAEL LEONA	134 RIVERDALE RD SIMPSONVIL SC	296867745
02	02-05-1946	M	W	0	01	13	4 3	1	1	2	D'ARRIGO LEONARD	282 PEBBLE SPRINGS DR TAYLORS SC	296875789
02	05-16-1931	F	W	0	03	13	4 3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2-Non-Incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicles: Head Injury 1-Yes 2-No; Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 — 20-Pedestrian; 30-Trailing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nonrailing); 51-Other Unenclosed Area (nonrailing); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 80-Lap; 99-Unk./NA

a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown

b) By: 1-EMS 2-Police 8-Other 9-Unk.

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 85-Other; 99-Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet; 41-Protective Pads; 51-Reflective Clothing; 61-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 8-Deployment Unk; 9-Unknown. b) 1-Switch in On Position; 2-Switch in Off Position; 3-No Switch; 9-Unknown

Ejection: 1-Not Ejected; 2-Part. Ejected; 3-Tot. Ejected; 7-Not App.; 9-Unk.

Non-Collision: 01-Cargo/Equip Loss or Shift; 02-Cross Median/Center; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Overturn/Rollover; 09-Ran off Road Left; 10-Ran off Road Right; 11-Separation of Units; 12-Spill (Non-Vehicular); 13-Other Non-collision; 99-Unk. Non-collision

Collision: Fixed Object: 37-Pedestrian; 38-Railway Veh.; 39-Work Zone Maint. Equip.; 40-Bridge Overhead Structure; 41-Bridge Pier or Abutment; 42-Bridge Rail; 43-Bridge Parapet End; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Equipment; 49-Fence; 50-Guardrail End; 51-Guardrail Face; 52-Highway Traffic Sign Post; 53-Impact Attenuator/Crash Cushion; 54-Light/Luminaire Support; 55-Mail Box; 56-Median Barrier; 57-Overhead Sign Support; 58-Other (Post, Pole, Support, Etc.); 59-Other (Wall, Building, Tunnel, Etc.); 60-Tree; 61-Utility Pole; 62-Work Zone Maint. Equipment; 99-Other

Collision: Not Fixed: 20-Animal (Deer Only); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 26-Ped.; 27-Train; 28-Other Movable Object; 29-Unk. Movable Object

Sequence of Events: Event 1, Event 2, Event 3, Event 4, Most Harm

Event 1	Event 2	Event 3	Event 4	Most Harm	1st Harm
22	3	2	2	22	22
23	3	2	2	23	
3	3	3	3		

Manner of Collision (Struck Veh.): 00-Not Coll. w/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 40-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

1st / Most Deformed Area | 1st Deformed 17 24 3 | Most Deformed 17 21 3



Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 28-Animal Drawn Veh; 29-Animal (Ridden); 41-Pedestrian; 51-Train; 61-School Bus; 62-Passenger Bus; 69-Other; 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Military; 07-Transport Property; 08-Wrecker or Tow; 09-Transport Passengers; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 18-Other; 41-Pedestrian

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Lowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Action Prior to Impact: (Vehicle) 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk. (Non-motorist) 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working

Alc Test Results: A1- ; A2- ; A3-

Drug Results: 0-None/Minor; 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 6-Other; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk.

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unreported; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 5-Other

1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV in transport; 5-Over-Other Vehicle; 6-None; 9-Unk.

Undamaged/Override: 6

Extent of Deformity: 1 2 3

Special Use Only: 1 2 3 4 5 6 7

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk. — 1

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights) — 1

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk. — 13

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 5-One-Way; 6-Other — 3

1-Gore 2-Island 3-Median 4-Roadside 5-Roadway 6-Shoulder 7-Sidewalk 8-Unk. 9-Exterior Trafficway — 6

X: 1-Yr 2-Yr 3-U

1st Harmful Event Loc: 6 2

Road Character: 1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - On grade; 5-Curve - Level; 6-Curve - Hillcrest — 1

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk. — 1

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 88-None; 99-Unk. — 88

School Bus Involved: 1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk. — 3

Work Zone: 1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area — 2

Work Zone Location: ——

Work Zone Type: ——

Workers Present: 1-Yes 2-No

Contributing Factors — Driver: 01-Disregarded Signs, Signals, Etc; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 12-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper lane Usage/Change; 19-Cell Phone; 20-Texting; 26-Other Improper Action; 29-Unk.

Primary: 03

Others: 1 2 3

Roadway: 30-Debris; 31-Non-Highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i.e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W.; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc.; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 69-Under the Influence; 97-Other Person Under Influence

Environmental: 60-Animal in Road; 61-Glare; 62-Obstruction; 63-Weather Cond.; 88-Other; 89-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 89-Unk.

ORIGINAL

DEC 03 20

D.P.S. USE ONLY: 10131756 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 10-2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 0801 | Arrived 0834

Date: 11/27/2010 | Time: 0758 | Day: 23 | Collision Location (Rt. # / Name): 5 385 | Miles: .7 | Dir. N E S W: S | In / Near City or Town of: Greenville

Lane # / Dir.: M/A | Of: N E S W | Distance Offset: .21 | Direction: N E S W | Base Intersection (Rt. # / Name): From 146 | ASRU code | MP/Grid

R.R. Id.: N/A | From: Ramp Only NE 1 - Entrance SW 2 - Exit | To NE 2- US Primary 3- SC Primary SW 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 85 | Latitude: 34 49 31.3 | Longitude: 82 17 32.2

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | 0- Main 1- Alternate 2- Spur 6- Connection 7- Business 8- Other 9- Unk.

B-227041 — Driver/Pedestrian's Full Name: Garber - Erin Leigh

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 201 Pine St. Apt. 15 | Birth Date: 12/06/1987 | City, State, & Zip: Clemson, SC 29631

State: SC | Driver's License #: 102145502 (O) | Insurance Company: Liberty Mutual

Year: 2008 | Body: Hdr. | Vehicle Make: Hyundai | VIN #: KMHDU46D28U332187

State: PA | Year: 2011 | License Plate #: HBH5826 | Owner's D.L. #: 102145502

Home Telephone: 724-994-5042 | Owner's Full Name: Garber- Erin L.

Bus. Telephone: ( ) | Street/R.F.D.: 160 Garden Way

Contributed To Collision: Yes / No | City, State, & Zip: Wexford, Pa 15090

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons # | Code | Towed By: (OA) Carolina Towing

B-227042 — Driver/Pedestrian's Full Name: Unknown

Unit #: 2 | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone | Owner's Full Name: Unknown

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit: 55 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons # | Code | Towed By

B-227043 — Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

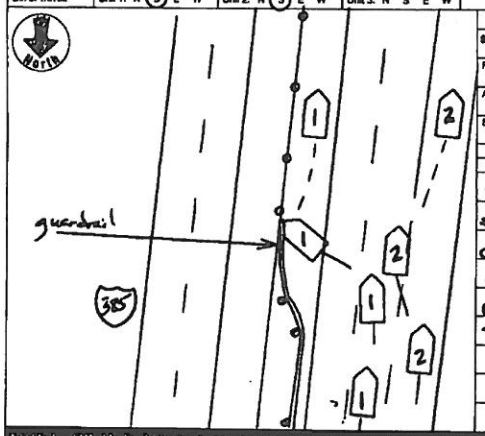
Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons # | Code | Towed By

Direction of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3000 DS	$ 0	$	$ 0	$

Property Owner/Witness: N/A | Address | State | Zip | Phone

Property Owner/Witness: N/A | Address | State | Zip | Phone

Photo: Y / N

Describe What Happened (Refer to Units by Number):

Unit 1 & 2 were traveling south on I 385. Unit #1 in lane #2, unit 2 in lane #3. Unit 2 shifted lanes unlawfully causing unit #1 to swerve to the left and strike a guard rail. There was no contact between unit #1 & 2. The guardrail was not damaged.

NOTE: THE TRAFFIC INFORMATION REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO ITS ACCURACY THEREOF.

Investigating Officer's Name: Dotson - Tc | Rank: Cpl | Badge #: A707 | Code: HP0300 | Date: 11/27/2010 | Reviewer's Name | Rank: Cpl. | Internal Agency Code: 10 GV 122335

Unit	Date of Birth	Sex	Race	DU	East	RSD	A.I.S.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	12/06/1987	F	W	C	01	B	3	1	1	2			
2	Unknown	U	U	O	01	99	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt & Lap Belt; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 83- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Bicyclist/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 08- Immersion; 09- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right

Collision: Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 28- Railway Veh.; 21- Animal (All Other); 29- Work Zone Maint. Equip.; 22- Motor Veh. in Transport; 30- Other Moveable Object; 23- Motor Veh. (Stopped); 12- Ran off Road Right; 24- Motor Veh. (Other Roadway); 13- Separation of Units; 25- Motor Veh. (Parked); 14- Other Non-collision; 26- Pedalcycle; 15- Unk. Non-collision

Collision: Fixed Object: 47- Embankment; 40- Bridge Overhead Structure; 48- Equipment; 41- Bridge Parapet End; 49- Fence; 42- Bridge Pier or Abutment; 50- Guardrail End; 43- Bridge Rail; 51- Guardrail Face; 44- Culvert; 52- Highway Traffic Sign Post; 45- Curb; 53- Impact Attenuator/Crash Cushion; 46- Ditch; 54- Light/Luminaire Support; 55- Mail Box; 56- Other Post, Pole, Support; 57- Overhead Sign Support; 58- Overhead End; 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Median Barrier; 64- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed | Most Deformed

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 98- Other; 99- Unk.

Vehicle Type: 15- Full Size Van; 27- Pedalcycle; 61- School Bus; 01- Automobile; 16- Mini Van; 28- Animal Drawn Veh.; 62- Passenger Bus; 12- Pickup Truck; 17- Sport Utility; 30- Animal (Ridden); 63- Other; 13- Truck Tractor; 29- Motorcycle; 41- Pedestrian; 99- Unk. (Hit and Run Only); 14- Other Truck; 28- Other Motorbike; 51- Train

Vehicle Use Code: 04- Ambulance; 08- Farm Use; 12- Fire Fighting; 01- Personal; 05- Military; 09- Wrecker or Tow; 13- Logging; 02- Driver Training; 06- Transport Passengers; 10- Police; 18- Other; 03- Construction/Maint.; 07- Transport Property; 11- Government; 41- Pedestrian

Vehicle Attachment: 4- Utility Trailer; 8- Towed Motor Vehicle; C- Other Tanker; 1- None; 5- Farm Trailer; 9- Petroleum Tanker; D- Flat Bed; 2- Mobile Home; 6- Trailer w/Boat; A- Lowboy Trailer; E- Twin Trailers; 3- Semi-Trailer; 7- Camper Trailer; B- Autocarrier Trailer; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 06- Parked; 02- Changing Lanes; 09- Slowing or; 03- Entering Traffic Lane; Stopped in Traffic; 04- Leaving Traffic Lane; 10- Turning Left; 05- Making U-turn; 11- Turning Right; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ~; A2- ; A3- ; At: 1- Cure 2- Minor 3- MedCon 4- Passenger 5- Paralysis 6- Skull 7- Sidewalk 8- Shoulder 9- Outside Trafficway 9- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underride/Override

Extent of Deformity: 1- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Special Use Only: 1 2 3 4 5 6 7

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

1st Harmful Event; Event Loc.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - On Grade; 5- Curve - Level; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Officer or Flagman; 04- Oncoming Emergency Vehicle; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Stop Sign; 31- Pavement Markings (only); 41- Slop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2-No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

Work Zone Type

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 19- Cell Phone; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Other; 57- Other Person Under the Influence; 58- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Glare; 66- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others:

ORIGINAL

DEC 07 2011

D.P.S. USE ONLY: 10132921 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 07-2011) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1342 | Arrived: 1357

Date	Time	Daylt	Collision Location (Rt. # / Name)	Miles	Dir.	Near City or Town of:
11-10-2010	1335	23	1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Connection 7-Business 8 385	3.2	N E S W	Greenville

Lane # / Dir.: 1 4 S | Distance Offset: .5 Miles Feet N E S W | Direction: N E S W | R.R. Id. | From: Ramp Only 1-Entrance 2-Exit | To: 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other 7-Connection 8-Business 9-Other

Base Intersection (Rt. # / Name): From 196 / Woodruff Rd

Second Intersection (Rt. # / Name): Toward 85

ASRU code | MP/Grid | Latitude 34° 49.5520 | Longitude 82° 17 6481

B-373351

Driver/Student/Name Full Name: Latimore Frank

Unit # 1 | Sex: M | Race: B | Street/R.F.D.: 16 Julian ST | Birth Date: 01-25-1935 | City, State, & Zip: Greenville SC 29611

State: SC | Driver's License #: 008650119(D) | Insurance Company: Allstate

Year: 1994 | Body: 4DR | Vehicle Make: OLDS | VIN #: 1G3HN52L4R4819480

State: SC | Year: 2011 | License Plate #: FET259 | Owner's D.L. #: 008650119(D)

Home Telephone: (864) 242-4771 | Owner's Full Name: Latimore Frank

Bus. Telephone: ( ) N/A | Street/R.F.D.: 16 Julian ST

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29611

Estimated Speed: 65 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # N/A | Code | Summons # N/A | Code | Towed By N/A

B-373352

Driver/Pedestrian's Full Name: Chapman Bruce A

Unit # 2 | Sex: M | Race: W | Street/R.F.D.: 7711 Indian Mound Rd | Birth Date: 01-09-1952 | City, State, & Zip: Waterloo SC 29384

State: SC | Driver's License #: 001946940 (D) | Insurance Company: State Farm

Year: 2007 | Body: PKT | Vehicle Make: Chev | VIN #: 2GCEC13C971734658

State: SC | Year: 2010 | License Plate #: FMJ3750 | Owner's D.L. #: 001946940 (D)

Home Telephone: (864) 861-2654 | Owner's Full Name: Chapman Bruce A

Bus. Telephone: ( ) N/A | Street/R.F.D.: 7711 Indian Mound Rd

Contributed To Collision: Yes (No) | City, State, & Zip: Waterloo SC 29384

Estimated Speed: 55 | Speed Limit: 60 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # N/A | Code | Summons # N/A | Code | Towed By N/A

B-373353

Driver/Pedestrian's Full Name:

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

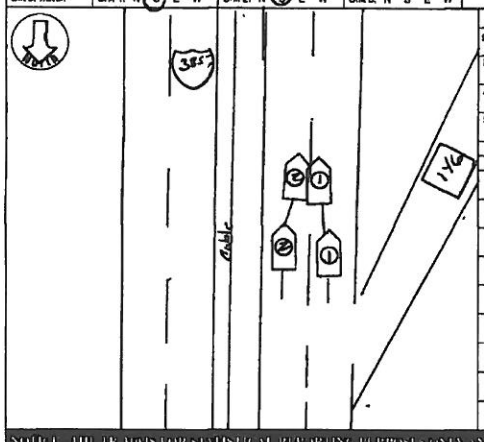
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500.00	$ 5500.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | Property Owner/Witness: N/A | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and 2 were traveling south on I-385. The driver of Unit #1 said that Unit #2 changed lanes improperly and struck him. Unit #2 said that Unit #1 changed lanes improperly and struck him. No charges were made due to conflicting stories.

NOTICE: THE PURPOSE OF STATISTICAL REPORTING IS ONLY AND EXACTLY THE COLLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINIONS, AND BELIEF COVERING THE COLLISION BEING WARRANTS MADE AS TO THE TRUTH OF ANY STATEMENT THEREOF.

Investigating Officer's Name: Marlow T W | Rank: SGT | Badge #: 599 | Code: 11805 | Date: 11-10-2010 | Reviewed's Name: [signature] | Rank: SGT | Internal Agency Code: 10[illegible]6192

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	01-25-1935	M	B	a. b.	01	13	4	1	1	2			
1	11-13-1945	F	B	a. b.	03	13	4	1	1	2			
1	09-12-1950	F	B	a. b.	05	13	4	1	1	2			
1	04-27-1968	F	B	a. b.	04	13	4	1	1	2			
2	01-09-1952	M	W	a. b.	01	13	4	1	1	2			
2	08-21-1938	M	W	a. b.	03	13	4	1	1	2			
2	11-27-1955	M	W	a. b.	05	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 31- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 99- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Tire Failure/Debris; 14- Other Non-collision; 15- Unk. Non-collision

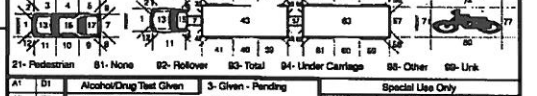
Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminary Support; 55- Mail Box; 56- Median Barrer; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Unk.

Event	Event	Event	Event	Most Harmful	1st Harmful
22	22			22	22
22	20			22	

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 11 12 3; Most Deformed: 11 12 3



Vehicle Types: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 30- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Codes: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 16- Other; 41- Pedestrian; 99- Unk. (Hit and Run Only)

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Logging Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Parked; 07- Slowing or Stopped in Traffic; 08- Turning Left; 09- Turning Right; 10- Movements Essentially Straight Ahead; 11- Overtaking/Passing; 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 99- Unk.; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk.

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: D1 D2 D3; 1- Amphetamines; 2- Cocaine; 3- Manijuana; 4- Opiates; 5- PCP; 8- Other

Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

1st Harmful Event Loc.: A: 1- Core; 2- Inland; 3- Median; 4- Roadway; 5- Shoulder; 6- Outside Trafficway; 7- Sidewalk; 8- Gore; 9- Unk. B: X- walk; 1- Y 2-N 9-U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes 2- No

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary: 18

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Cell Phone; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Others: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Le., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (Le., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Roadway: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Non-Motorist: 68- Under the Infl.; 69- Other

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

DEC 1 0 2010

D.P.S. USE ONLY: 10134578 | Page 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT TR-310 (Rev. 01/2001) | # of Units: 3 | Amended / Attach Copy of Original Report / Corrected | Notified: 0836 | Arrived: 0841

Day: 11-16-2010 | Time: 0925 | County: 23 | Interstate / 2- US Primary / 3- SC Primary / 4- Secondary / 5- County / 6- Other | Collision Location (Rt. # / Name): 5 385 | 1- Main / 2- Alternate / 5- Spur / 6- Connection / 7- Business | Miles: 1 | Dir.: N E S W | Mile / Near City or Town of: Greenville

Lane # / Dir.: 1 / 4 / S W | Distance Offset: .02 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): From N6 | ASRU code | MP/Grid | Latitude: 34° 49 23.80

R.R. Id.: N/A | From: Ramp Only N E S W | To: 1 - Entrance / 2 - Exit | Interstate / 2- US Primary / 3- SC Primary / 4- Secondary / 5- County / 8- Other | Second Intersection (Rt. # / Name): Toward 85 | Main / 2- Alternate / 5- Spur / 6- Connection / 7- Business / 8- Other | Longitude: 82° 17 23.50

B-571012

Driver/Pedestrian's Full Name: Morcom - Stephanie Odessa

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 16 Centerbrooke Ct.

Birth Date: 12-28-1979 | City, State, & Zip: Fountain Inn SC 29644

State: SC | Driver's License #: 087824928(D) | Insurance Company: Kemper

Year: 2006 | Body: UTL | Vehicle Make: Chev | VIN #: 1GNDT13S362345682

State: SC | Year: 2011 | License Plate #: ADP 326 | Owner's D.L. #: 087824928(D)

Home Telephone: 864 862 6618 | Owner's Full Name: Morcom - Stephanie Odessa

Bus. Telephone: N/A | Street/R.F.D.: 16 Centerbrooke Ct.

Contributed To Collision: Yes (No) | City, State, & Zip: Fountain Inn SC 29644

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # / Code: N/A | Towed By: N/A

B-571013

Driver/Pedestrian's Full Name: Rader - Alexys Sandia Ann

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 104 Shaleyn Ln.

Birth Date: 05-28-1992 | City, State, & Zip: Greenville SC 29607

State: SC | Driver's License #: 101571348(D) | Insurance Company: State Farm

Year: 1999 | Body: CP | Vehicle Make: Honda | VIN #: 1HGCG325&XA023841

State: SC | Year: 2011 | License Plate #: ASN 878 | Owner's D.L. #: N/A

Home Telephone: 864 552-0264 | Owner's Full Name: Rader - Jeff Lawrence

Bus. Telephone: ( ) N/A | Street/R.F.D.: 104 Shaleyn Ln.

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville SC 29607

Estimated Speed: 15 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # / Code: E782446 / 21 | Towed By: Quality (Rot)

B-571014

Driver/Pedestrian's Full Name: Pray - Deban Monke

Unit #: 3 | Sex: M | Race: B | Street/R.F.D.: 20 Fox Den Ln.

Birth Date: 06-25-1965 | City, State, & Zip: Simpsonville SC 29681

State: SC | Driver's License #: 160682128(D) | Insurance Company: USAA

Year: 2006 | Body: 4S | Vehicle Make: Dodg | VIN #: 1B3AL46T46N253471

State: SC | Year: 2011 | License Plate #: GAA 802 | Owner's D.L. #: 160682128(D)

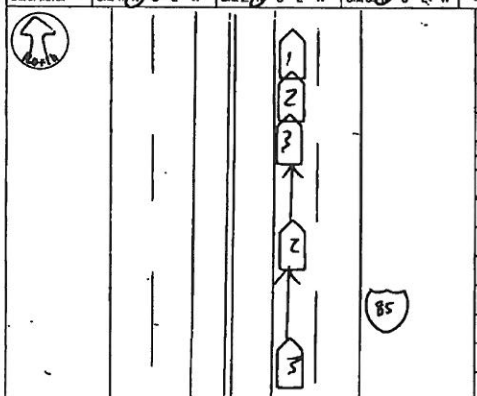
Home Telephone: 803 951-2038 | Owner's Full Name: Pray - Deban Monke

Bus. Telephone: ( ) N/A | Street/R.F.D.: 20 Fox Den Ln.

Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville SC 29681

Estimated Speed: 15 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons # / Code: E782447 / 21 | Towed By: N/A

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 2500	$ 2500	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo | Describe What Happened (Refer to Units by Number): Units #1, #2 and #3 were traveling north on I-385. Unit #1 came to a stop due to traffic. Unit #2 was traveling too fast for conditions and struck Unit #1 in the rear. Unit #3 was traveling too fast for condition and struck Unit #2 in the rear.

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE LEGAL ACCURACY THEREOF.

Investigating Officer's Name: Lyman - JM | Rank: TPR | Badge #: 231 | Code: 44008 | Date: 11-16-2010 | Reviewer's Name: R. Hewitt | Rank: Sgt | Internal Agency Code: 10GV127157

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	12-28-1979	F	W	0	01	18	4 3	1	1	2			
1	11-04-2010	M	U	0	04	21	4 3	1	1	2			
2	05-28-1992	F	W	0	01	18	4 3	1	1	2			
3	06-25-1965	M	B	0	01	18	4 3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Used: 01 02 03; Not Used: 04 05 06; Unk: 07 08 09

Seating Loc.: 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 65- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 9- Unknown; a) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1- Yes; 2- No

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22				22	22

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Down/Off Roadway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Other Non-Collision

Collision: Not Fixed: 21- Animal (Dead Only); 22- Animal (All Other); 23- Motor Veh. (In Transport); 24- Motor Veh. (Other Person); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 99- Unk.; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Tree

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Dom. Veh.); 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 63- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 99- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- PCP; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.; Underride/Override

0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.; Extent of Deformity

1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 5- Other; Trafficway

1- Gore; 2- Median; 3- Roadway; 4- Roadside; 5- Shoulder; 6- Median; 7- Sidewalk; 8- Unk.; B: X- traffic; 1- Y 2-N B-U; 1st Harmful Event Loc.

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; Road Character

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.; Road Surface Condition

01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None; Traffic Control Type

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.; School Bus Involved:

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No; Work Zone:

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other; 9- Unk.; Work Zone Location; Work Zone Type; 1- Yes 2- No Workers Present:

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.; Others: 18- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

DEC 16 2016

D.P.S. USE ONLY: 10137814

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001)

Page # 1 Of: 1 | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified | Arrived: 1110 | 1130

Date: 11-16-2016 | Time: 1100 | County: 23 | Collision Location (Rt. # / Name): S 385 EXIT RAMP | Miles: 5 | Dir.: NE SW | Near City or Town of: GREENVILLE

Lane # / Dir.: 3 SC SW | Distance Offset: .01 Miles Feet | Direction: S | From: 146 | To: 183 | ASRU code | MP/Grid | Latitude: 34 49 2870 | Longitude: 82 17 3570

R.R. Id.: N/A | From: NE SW 2 Exit | To: SW

B-373036 | Driver/Pedestrian's Full Name: DALEY - IAN S.

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 8 ASHEWOOD DR

Birth Date: 08-20-1974 | City, State, & Zip: SIMPSONVILLE SC 29680

State: SC | Driver's License #: 00772742 CW | Insurance Company: ALLSTATE

Year: 1997 | Body: 4DR | Vehicle Make: TOYOTA | VIN #: 4T1BG22K5VU101206

State: SC | Year: 2014 | License Plate #: 977SCY | Owner's D.L. #: 00772742

Home Telephone: 864) 399-3546 | Owner's Full Name: DALEY - IAN S.

Bus. Telephone: ( ) N/A | Street/R.F.D.: 8 ASHEWOOD DR

Contributed To Collision: No | City, State, & Zip: SIMPSONVILLE SC 29680

Estimated Speed: 00 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-373037 | Driver/Pedestrian's Full Name: SCHAEFFER - CHRISTOPHER R.

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 2901 STATE PARK RD #A

Birth Date: 01-10-1982 | City, State, & Zip: GREENVILLE SC 29609

State: SC | Driver's License #: 01644853 CW | Insurance Company: HORACE MANN

Year: 1998 | Body: 4DR | Vehicle Make: DODGE | VIN #: 1G2AJ55M6W6366572

State: SC | Year: 2011 | License Plate #: AVE 552 | Owner's D.L. #: 01644853

Home Telephone: 864) 252-6981 | Owner's Full Name: SCHAEFFER - CHRISTOPHER R.

Bus. Telephone: ( ) N/A | Street/R.F.D.: 2901 STATE PARK RD #A

Contributed To Collision: Yes | City, State, & Zip: GREENVILLE SC 29609

Estimated Speed: 03 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E785162 | Code: 12 | Summons #: N/A | Code | Towed By: N/A

B-373038 | Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N (E) W | Unit 2: N (S) E W | Unit 3: N S E W

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500.	$ 1500.	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photos: (N)

Describe What Happened (Refer to Units by Number)

VEH#1 AND VEH#2 WERE STOPPED ON I385 EXIT RAMP. VEH#2 STARTED IMPROPERLY, STRUCK VEH#1 IN THE REAR.

NOTICE: THE PURPOSE OF STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH OF ALL OF SAID FACTS HEREIN.

Investigating Officer's Name: ROGERS - CP | Badge #: 178 | Code: HPD | Date: 11/16/2016 | Reviewed By Name | Rank: SGT | Internal Agency Code: 16CU137204

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SO	A.B.D.	Eject	EJ	Tran	Name	Street Address	Zip Code
1	08-20-1974	M	W	0	01	13	4	1	1	2			
2	01-10-1982	M	W	0	01	13	4	1	1	3			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 1 - Possible; 2 - Non-Incapacitating; 3 - Incapacitating; 4 - Fatal; 5 - Not Injured; 9 - Unk.

b) Motorcycle Only: Helmet: 1 - Yes; 2 - No; 3 - Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20 - Pedestrian; 30 - Trailing Unit; 40 - Bus or Van (4th row or Higher); 50 - Other Enclosed Area (nontrailing); 51 - Other Unenclosed Area (nontrailing); 60 - Sleeper of Cab; 70 - Riding on Unit Exterior; 80 - Lap; 99 - Unk./N/A

Restraint/Safety Device: 00 - None Used; 11 - Shoulder Belt Only; 12 - Lap Belt Only; 13 - Shoulder & Lap Belt; 21 - Child Safety Seat; 85 - Other; 99 - Unk.

Air Bag Deployment / Switch: a) 1 - Deployed Front; 2 - Deployed Side; 3 - Deployed Both; 4 - Not Deployed; 7 - Not Applicable; b) 1 - Switch in On Position; 2 - Switch in Off Position; 3 - No Switch; 9 - Unknown

Ejection: 1 - Not Ejected; 2 - Part. Ejected; 3 - Tot. Ejected; 7 - Not App.; 9 - Unk.

Head Injury: 1 - Yes; 2 - No

Location After Impact: 1 - Not Trapped; 2 - Extricated (Mechanical Means); 3 - Freed (non-mech.); 4 - Not Applicable; 9 - Unknown

a) Transported to Medical Facility: 1 - Yes; 2 - No; 3 - Unknown

b) By: 1 - EMS; 2 - Police; 8 - Other; 9 - Unk.

Pedestrian, Motor/Pedalcycle Only: 31 - Helmet; 41 - Protective Pads; 51 - Reflective Clothing; 61 - Lighting

Sequence of Events: Event 1: 22; Event 2: 23; Most Harmful Event: 22

Non-Collision: 04 - Equipment Failure; 01 - Cargo/Equip. Loss or Shift; 02 - Fire/Explosion; 03 - Overturn/Rollover; 05 - Downhill Runaway; 06 - Immersion; 07 - Jackknife; 08 - Ran off Road Left; 09 - Ran off Road Right; 10 - Ran off Road Ahead; 11 - Separation of Units; 12 - Spill (Non-Motorist Veh.); 13 - Other Non-Collision; 14 - Motor Veh. (Other Motorist Object); 15 - Motor Veh. (Parked); 16 - Pedalcycle; 17 - Motor Veh. (Stopped); 18 - Motor Veh. (In Traffic); 19 - Unk. Non-Collision

Collision: Not Fixed: 20 - Animal (Deer Only); 21 - Animal (All Other); 22 - Motor Veh. (In Transport); 23 - Motor Veh. (Stopped); 24 - Motor Veh. (Other Motorist Object); 25 - Motor Veh. (Parked); 26 - Pedalcycle; 27 - Pedestrian; 28 - Railway Veh.; 29 - Work Zone Maint. Equip.; 30 - Struck Object; 31 - Struck Motorcycle; 32 - Struck Pedestrian; 33 - Struck Railway Veh.; 34 - Struck Work Zone Maint. Equip.; 35 - Struck Other Object

Collision: Fixed Object: 40 - Bridge Overhead Structure; 41 - Bridge Parapet End; 42 - Bridge Pier or Abutment; 43 - Bridge Rail; 44 - Culvert; 45 - Curb; 46 - Ditch; 47 - Embankment; 48 - Guardrail Face; 49 - Guardrail End; 50 - Impact Attenuator/Crash Cushion; 51 - Concrete Traffic Barrier; 52 - Other Traffic Barrier; 53 - Other Post, Pole or Support; 54 - Other Traffic Sign Post; 55 - Other Utility Pole; 56 - Mail Box; 57 - Other Sign Support; 58 - Other (Post, Pole, Support, Etc.); 59 - Other (Wall, Building, Tunnel, Etc.); 60 - Tree; 61 - Utility Pole; 62 - Work Zone Maint. Equipment; 69 - Other; 99 - Unk.

Manner of Collision (Struck Veh.): 00 - Not Coll. W/Motor Veh.; 10 - Rear End; 20 - Head On; 30 - Rear-to-Rear; 40 - Angle (↘ ↙); 41 - Angle (→ ↲); 42 - Angle (↗ ↖); 43 - Angle (↗ ↰); 50 - Sideswipe Same Dir.; 60 - Sideswipe Opposite Dir.; 70 - Backed Into; 99 - Unknown

1st / Most Deformed: 1 7 3

Deformed Area

21 - Pedestrian; 91 - None; 92 - Rollover; 93 - Total; 94 - Under Carriage; 98 - Other; 99 - Unk.

Vehicle Type: 01 - Automobile; 02 - Pickup/Truck; 03 - Truck Tractor; 04 - Other Truck; 15 - Full Size Van; 16 - Mini Van; 17 - Sport Utility; 25 - Motorcycle; 26 - Other Motorbike; 27 - Pedalcycle; 28 - Railway Veh.; 29 - Work Zone Maint. Equip.; 30 - Struck Object; 31 - Struck Motorcycle; 32 - Struck Pedestrian; 33 - Struck Railway Veh.; 34 - Struck Work Zone Maint. Equip.; 35 - Struck Other Object; 51 - Train; 81 - School Bus; 82 - Passenger Bus; 99 - Other; 98 - Unk. (Hit and Run Only)

Vehicle Use Code: 01 - Personal; 02 - Driver Training; 03 - Construction/Maint.; 04 - Ambulance; 05 - Military; 06 - Transport Passengers; 07 - Transport Property; 08 - Farm Use; 09 - Wrecker or Tow; 10 - Police; 11 - Government; 12 - Fire Fighting; 13 - Logging; 19 - Other; 41 - Pedestrian

Vehicle Attachment: 1 - None; 2 - Mobile Home; 3 - Semi-Trailer; 4 - Utility Trailer; 5 - Farm Trailer; 6 - Trailer w/Boat; 7 - Camper Trailer; 8 - Towed Motorcycle; 9 - Petroleum Tanker; A - Cowboy Trailer; B - Autocarrier Trailer; C - Other Tanker; D - Flat Bed; E - Twin Trailers; F - Other

Action Prior to Impact: (Vehicle) 01 - Backing; 02 - Changing Lanes; 03 - Entering Traffic Lane; 04 - Leaving Traffic Lane; 05 - Making U-turn; 06 - Movements Essentially Straight Ahead; 07 - Overtaking/Passing; 08 - Parked; 09 - Slowing or Stopping in Traffic; 10 - Turning Left; 11 - Turning Right; 88 - Other; 99 - Unk.

(Non-motorist): 21 - Approaching/Leaving Vehicle; 22 - Entering/Crossing Location; 23 - Playing/Working on Vehicle; 24 - Pushing Vehicle; 25 - Standing; 26 - Walking, Playing, Cycling; 27 - Working

Alc Test Results: A1 - ; A2 - ; A3 - ; D1 - Alcohol/Drug Test Given; D2 - Test Type; D3 - Drug Results; 1 - Given - Known Results; 2 - Given - Unussable; 3 - Given - Pending; 4 - None; 5 - Refused; 1 - Breath (Alc. Only); 2 - Blood; 3 - Urine; 4 - Serum; 5 - Other; 1 - Marijuana; 2 - Cocaine; 3 - Amphetamines; 4 - Opiates; 5 - PCP; 8 - Other; 0 - None/Minor; 1 - Functional Damage; 2 - Disabling Damage; 3 - Severe/Totaled; 5 - Not Applicable; 9 - Unk.

Special Use Only: 1 2 3 4 5 6 7

1 - Under - Compartment Intrusion; 2 - Under - No Intrusion; 3 - Under - Unknown; 4 - Over - MV in Transport; 5 - Over - Other Vehicle; 6 - None; 8 - Unk.; 9 - Lighting

Underride/Override: 6

Extent of Deformity: 2

Trafficway: 4 (1 - Two-way, Not Divided; 2 - Two-way, Divided, Unprotected Median; 3 - Two-way, Divided, Barrier; 4 - One-way; 8 - Other)

B: X-width: ; 1st Harmful Event Loc.: 32

Road Character: 1 (1 - Straight - Level; 2 - Straight - On Grade; 3 - Straight - Hillcrest; 4 - Curve - Level; 5 - Curve - On Grade; 6 - Curve - Hillcrest)

Road Surface Condition: 2 (1 - Dry; 2 - Wet; 3 - Snow; 4 - Slush; 5 - Ice; 6 - Contaminate; 7 - Water (Standing, etc.); 8 - Other; 9 - Unk.)

Traffic Control Type: 43 (01 - Stop and Go Light; 02 - Flashing Traffic Signal; 11 - RR (X-bucks, Lights & Gates); 12 - RR (X-bucks & Lights); 13 - RR (X-bucks Only); 21 - Officer or Flagman; 22 - Oncoming Emergency Vehicle; 31 - Pavement Markings (only); 41 - Stop Sign; 42 - School Zone Sign; 43 - Yield Sign; 44 - Work Zone; 45 - Other Warning Signs; 51 - Flashing Beacon; 88 - None; 99 - Unk.)

Weather Condition: 2 (1 - Clear (no adverse conditions); 2 - Rain; 3 - Cloudy; 4 - Sleet, Hail; 5 - Snow; 6 - Fog, Smog, Smoke; 7 - Blowing Sand, Oil, Dirt or Snow; 8 - Severe Crosswinds; 9 - Unk.)

Light Condition: 1 (1 - Daylight; 2 - Dawn; 3 - Dusk; 4 - Dark (Lighting Unspecified); 5 - Dark (Street Lamp Lit); 6 - Dark (Street Lamp Not Lit); 7 - Dark (No Lights))

1 - Yes, Directly; 2 - Yes, Indirectly; 3 - No; 9 - Unk. School Bus Involved: 3

1 - Before 1st Sign; 2 - Advanced Warning Area; 3 - Transition Area; 4 - Activity Area; 5 - Termination Area

1 - Yes 2 - No Work Zone: 2

Work Zone Location:

1 - Shoulder/Median Work; 2 - Lane Shift/Crossover; 3 - Intermittent/Moving Work; 4 - Lane Closure; 8 - Other; 9 - Unk.

Work Zone Type:

1 - Yes 2 - No Workers Present:

Junction Type: 01 - Crossover; 02 - Driveway; 03 - Five/More Points; 04 - Four-way Intersection; 05 - Railway Grade Crossing; 07 - Shared Use Paths or Trail; 08 - T-Intersection; 09 - Traffic Circle; 12 - Y-Intersection; 13 - Nonjunction; 99 - Unk.

Primary Contributing Factors: 28

Driver: 01 - Disregarded Signs, Signals, Etc.; 02 - Distracted/Inattention; 03 - Driving Too Fast for Conditions; 04 - Exceeded Authorized Speed Limit; 05 - Failed to Yield Right of Way; 06 - Ran off Road; 07 - Fatigued/Asleep; 08 - Followed Too Closely; 09 - Made an Improper Turn; 10 - Medical Related; 11 - Aggressive Operation of Vehicle; 12 - Over-correcting/Over-steering; 13 - Swerving to Avoiding Object; 14 - Wrong Side or Wrong Way; 15 - Under the Influence; 16 - Vision Obscured (Within Unit); 17 - Improper Lane Usage/Change; 18 - Other Improper Action; 19 - Cell Phone

Other: 30 - Debris; 31 - Non-Highway Work; 32 - Obstruction in Roadway; 33 - Road Surface Condition (i.e., Wet); 34 - Rut, Holes, Bumps; 35 - Shoulders (None, Low, Soft, High); 36 - Traffic Control Device (i.e., Missing); 37 - Work Zone (Const./Maint./Utility); 38 - Worn, Travel-Polished Surface; 48 - Other; 49 - Unk.

Non-Motorist: 50 - Inattentive; 51 - Lying &/or Illegally in Roadway; 52 - Failure to Yield R. of W.; 53 - Not Visible (Dark Clothing); 54 - Disregard Signs, Signals, Etc.; 55 - Improper Crossing; 56 - Darting; 57 - Wrong Side of Road; 58 - Other; 59 - Unk.; 67 - Other Person Under the Influence

Environmental: 62 - Obstruction; 63 - Weather Cond.; 68 - Other; 69 - Unk.

Vehicle Defect: 70 - Brakes; 71 - Steering; 72 - Power Plant; 73 - Tires/Wheel; 74 - Lights; 75 - Signals; 76 - Windows/Shield; 77 - Restraint System; 78 - Truck Coupling; 79 - Cargo; 80 - Fuel System; 88 - Other; 89 - Unk.

ORIGINAL

DEC 22 2019

2010006741

SOUTH CAROLINA DPS/OHS & DMV USE ONLY: 10140515

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM — TR - 310 (Rev. 7/2010)

Page # 1 Of 1 | # Of Units 02 | Amended - Agency Copy or Original Report | Corrected | Notified 2158 | Arrived 2207

Date: 12-02-2010 | Time of Collision: 2107 | County: 23

Collision Location (Rt. # / Name): 385 / EXIT RAMP | Miles: .37 | Dir. N E S W | In (Near) City or Town of: GREENVILLE

Lane # / Dir.: 2 | Of: 2 | N E S W | Distance Offset: 24 Feet | Direction N E S W

Base Intersection (Rt # / Name): 14 / WOODRUFF RD | From | Toward

Second Intersection (Rt. # / Name): 69

GPS COORDINATES 00 00' 00 00" — DEGREES MINUTES SECONDS

Latitude: 34 49 27.48

Longitude: 82 17 34.48

R.R. Id. | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6 - Other

D-Main 1-Alternate 5-Spur 6-Connection 7-Business 8-Other

U-Main 1-Alternate 5-Spur 6-Connection 7-Business 8-Other

E-046170 — Driver/Pedestrian's Full Name: SCOTT JEANNE M

Unit # 01 | # Occ 2 | Sex F | Race W | Street/R.F.D.: 104 RAPIDAN CT

Birth Date: 04-10-1964 | City, State, & Zip: SIMPSONVILLE SC 296813382

State: SC | Driver's License #: 004308433 | Class: D | Insurance Company: STATE FARM

Year: 2005 | Body: SU | Vehicle Make: HYUN | VIN #: KM8SC13EX5U984713

State: SC | Year: 2011 | License Plate #: BZT437 | Owner's D.L. #: 004308433

Home Telephone: (864) 3259304 | Owner's Full Name: SCOTT JEANNE M

Bus. Telephone: (864) 2283892 | Street/R.F.D.: 104 RAPIDAN CT

Contributed To Collision: Yes | City, State, & Zip: SIMPSONVILLE SC 296813382

Estimated Speed: 0 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # | Code | Summons # | Code | Towed: Yes (No)

Driver/Pedestrian's Full Name

Unit # | # Occ | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Class | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W

E-046171 — Driver/Pedestrian's Full Name: GEARY JENNIFER LYNN

Unit # 02 | # Occ 2 | Sex F | Race W | Street/R.F.D.: 1121 ALICE DR APT 52

Birth Date: 07-19-1982 | City, State, & Zip: SUMTER SC 291501601

State: SC | Driver's License #: 101572619 | Class: D | Insurance Company: STATE FARM

Year: 2006 | Body: PK | Vehicle Make: CHEV | VIN #: 2GCEC13T061236436

State: SC | Year: 2011 | License Plate #: DTF723 | Owner's D.L. #: UNK

Home Telephone: (864) 8178653 | Owner's Full Name: REYES JUAN

Bus. Telephone: ( ) | Street/R.F.D.: 708 HIGHCREST DR

Contributed To Collision: (Yes) No | City, State, & Zip: GREENVILLE SC 29617

Estimated Speed: 10 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E765272 | Code: 82 | Summons # | Code | Towed: Yes (No)

State | Year | License Plate # | Owner's D.L. #

Home Telephone: ( ) | Owner's Full Name

Bus. Telephone: ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed | Yes No

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dem. 1	Prop. Dem. 2
$900	$900	$	$	$

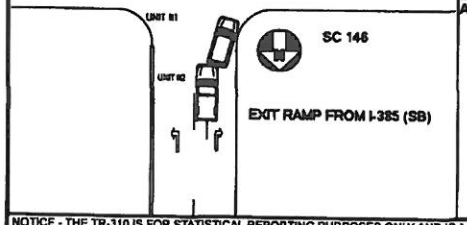
Property Owner/Witness | Property Owner/Witness

Address | City | Address | City

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

UNITS #1 & #2 WERE STOPPED ON THE EXIT RAMP FROM I-385 (SB). UNIT #2 THOUGHT UNIT #1 HAD PULLED OFF AND IMPROPERLY STARTED BY BEGINNING TO ACCELERATE, AND STRUCK UNIT #1 IN THE REAR.



NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
PURSLEY - D. W.	LCPL	T843	HP03	12-09-2019	WESLEY HIOTT	SGT	10GV134629

2010006741

Unit	Date of Birth	Sex	Race	INJ:	Seat	R/SD	A.B.D	Eject	LAI:	Trim:	Name	Street Address	Zip Code
01	04-10-1964	F	W	0	01	13	4 3	1	1	2	SCOTT JEANNE M	104 RAPIDAN CT SIMPSONVIL SC	296813382
02	07-19-1982	F	W	0 2	01	13	4 3	1	1	2	GEARY JENNIFER LYNN	1121 ALICE DR APT 52 SUMTER SC	291501601
01	12-31-1985	F	W	0	03	13	4 3	1	1	2			
02	09-17-1972	M	H	0 2	03	13	4 3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2-Non-incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle: Head Injury 1-Yes 2-No; Location After Impact: 1-Not Trapped; 2-Ejected (Mechanical Means); 3-Fried (non-mech.); 9-Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20-Pedestrian; 30-Trailing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nontrailing); 51-Other Unenclosed Area (nontrailing); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 99-Unk./NA

a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown

b) By: 1-EMS 2-Police 8-Other 9-Unk.

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 88-Other; 99-Unk.

Pedestrian, Motorr/Pedalcycle Only: 31-Helmet; 41-Protective Pads; 51-Reflective Clothing; 61-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 7-Not Applicable 9-Deployment Unk; b) 1-Switch In On Position 2-Switch In Off Position 3-No Switch 9-Unknown

Ejection: 1-Not Ejected; 2-Part. Ejected; 3-Tot. Ejected; 7-Not App.; 9-Unk.

Sequence of Events

Non-Collision: 01-Cargo/Equip Loss or Shift; 02-Cross Median/Centerline; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Overturn/Rollover; 09-Ran off Road Left; 10-Ran off Road Right; 11-Separation of Units; 12-Spill (Non-Hazardous Mat.); 13-Spill (Hazardous Mat.); 14-Other Non-collision; 15-Unk. Non-collision

Collision: Not Fixed: 20-Animal (Deer Only); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 26-Pedalcycle; 27-Pedestrian; 28-Railway Veh.; 29-Work Zone Maint. Equip.; 30-Other Movable Object; 38-Unk. Movable Object

Collision: Fixed Object: 40-Bridge Overhead Structure; 41-Bridge Pier or Abutment; 42-Bridge Rail; 43-Bridge Parapet End; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Equipment; 49-Fence; 50-Guardrail Face; 51-Guardrail End; 52-Highway Traffic Sign Post; 53-Impact Attenuator/Crash Cushion; 54-Light/Luminaire Support; 55-Median Barrier; 56-Mail Box; 57-Overhead Sign Support; 58-Pole; 59-Other Post, Pole, Support, Etc.; 60-Tree; 61-Utility Pole; 62-Work Zone Maint. Equipment; 63-Other Fixed Object; 69-Unk.

Event 1 / Event 2 / Event 3 / Event 4 / Most Harm: 1 22 / 2 23 / 3 / 22

Manner of Collision (Trucks Veh.): 1 99-Not Coll. w/ Motor Veh. | 2 10-Rear End | 3 20-Head On | 30-Rear-to-Rear | 41-Angle | 42-Angle | 43-Angle | 50-Sideswipe Same Dir. | 60-Sideswipe Opposite Dir. | 70-Backed Into | 99-Unknown

1st / Most Deformed Area: 1st Deformed: 1 2 2 3; Most Deformed: 1 6 2 2 3



21-Pedestrian; 81-None; 82-Rollover; 83-Total; 84-Under Carriage; 98-Other; 99-Unk.

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 28-Emergency; 29-Farm; 30-Animal (Ridden); 31-Pedestrian; 51-Train; 81-School Bus; 82-Passenger Bus; 83-Other; 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Military; 06-Transport Passengers; 07-Transport Property; 08-Farm Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 18-Other; 41-Pedestrian

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Cowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Action Prior to Impact (Vehicles): 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk.

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights); 8-Dark (Street Lamp Not Lit)

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 06-Shared Use Paths or Trail; 07-T-Intersection; 08-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk

Contributing Factors — Primary: 28

Driver: 01-Disregarded Signs, Signals, Etc; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 11-Aggressive Operation of Vehicle; 12-Over-correcting/Over-steering; 13-Swerving to Avoiding Object; 14-Under the Influence; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper line Usage/Change; 19-Cell Phone; 20-Texting; 28-Other Improper Action; 29-Unk.

Roadway: 30-Debris; 31-Non-Highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (I e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (I e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W.; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 69-Under the Influence; 97-Other Person Under Influence

Environmental: 62-Obstruction; 63-Weather Cond.; 64-Animal in Road; 65-Glare; 66-Other; 69-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 99-Unk.

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 8-Other

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other; 0-None/Minor; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk

Alc Test Results: A1-; A2-; A3-

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 0 6

Intrusion: 1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV in Transport; 5-Over-Other Vehicle; 6-None; 8-Unk.

Extent of Deformity: 1 0; 2 0; 3

Trafficway: 4

B. Xwalk: X

1st Harmful Event Loc: 5 2

Road Character: 2

Road Surface Condition: 1

Traffic Control Type: 01

School Bus involved: 3

Work Zone: 2

Work Zone Location

Work Zone Type

Workers Present:

01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 88-None; 99-Unk.

1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - On grade; 5-Curve - Level; 6-Curve - Hillcrest; 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Contaminate; 6-Other; 7-Water (Standing, etc.); 9-Unk.

1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk.

1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area; 1-Yes 2-No

1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 5-Other; 9-Unk.

1-Yes 2-No

ORIGINAL

DEC 2 9 2010

SOUTH CAROLINA DPS/OHS & DMV USE ONLY

10141125

Page # 1 of 1

Of Units 02

Amended - Attach Copy of Original Report: Corrected

Notified 0819

Arrived 0834

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

2010004205

Date of Collision: 11-18-2010

Time of Collision: 0818

County: 23

Collision Location (Rt # / Name): S 385

1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-PP

Main 2-Alternate 5-Spur 6-Connection 7-Business

Miles: .29

Dir. N E S W

In (Near) City or Town of: GREENVILLE

Lane # / Dir.: 3

Of: 6

N E S W

Distance Other: .20 Miles Feet

Direction: 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6 - Other

Base Intersection (Rt # / Name): From 146 WOODRUFF RD

Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other

GPS COORDINATES 00 00' 00.00"

DEGREES MINUTES SECONDS

Latitude: 34 49 42.78

Longitude: 82 17 37.72

R.R. Id.

From: N E S W

Ramp Only: 1 - Entrance 2 - Exit

To: N E S W

Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6 - Other

Toward: 95

Second Intersection (Rt. # / Name)

E-049112

Driver/Pedestrian's Full Name: CLARK TORIE MORGAN

Unit #: 01 # Occ: 1

Sex: F Race: W

Street/R.F.D.: 102 SWINDON CIR

Birth Date: 07-31-1990

City, State, & Zip: GREENVILLE SC 296152429

State: SC Driver's License #: 101081134 Class: D Insurance Company: TRAVELERS

Year: 1998 Body: SUV Vehicle Make: FORD VIN #: 1FMZU34E1WUA88612

State: SC Year: 2011 License Plate #: AEJ183 Owner's D.L. #: UNKNOWN

Home Telephone: (864) 2445766 Owner's Full Name: SHEALY MARY ELIZABETH

Bus. Telephone: (864) 4200907 Street/R.F.D.: 102 SWINDON CIRCLE

Contributed To Collision: Yes (No) City, State, & Zip: GREENVILLE SC 29616

Estimated Speed: 55 Speed Limit: 0

C.D.L. Req: Yes (No) T/S Req: Yes (No) Alc/Drg Info (see back): Yes (No)

Summons #: Code: Summons #: Code: Towed: Yes (No)

Driver/Pedestrian's Full Name:

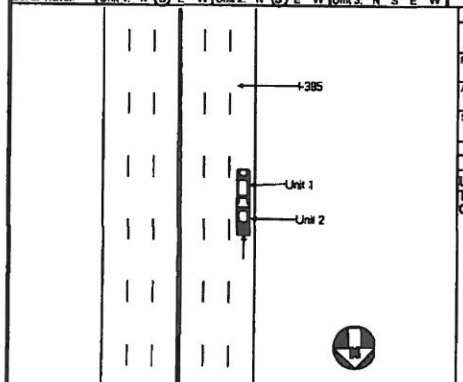
Unit #: # Occ: Sex: Race: Street/R.F.D.:

Birth Date: City, State, & Zip:

State: Driver's License #: Class: Insurance Company:

Year: Body: Vehicle Make: VIN #:

Dir. of Travel: Unit 1: N (S) E W Unit 2: N (S) E W Unit 3: N S E W



E-049113

Driver/Pedestrian's Full Name: ANDERSON DAVID

Unit #: 02 # Occ: 1

Sex: M Race: W

Street/R.F.D.: 1926 HIGHWAY 108

Birth Date: 09-24-1981

City, State, & Zip: COLUMBUS NC 28722-7729

State: NC Driver's License #: 8544525 Class: C Insurance Company: NATIONWIDE

Year: 2002 Body: PKP Vehicle Make: DODG VIN #: 1B7HL48N12S688373

State: NC Year: 2011 License Plate #: NXM2573 Owner's D.L. #: 8544525

Home Telephone: (828) 8648058 Owner's Full Name: ANDERSON DAVID

Bus. Telephone: (770) 8466759 Street/R.F.D.: 1926 HIGHWAY 108

Contributed To Collision: Yes (No) City, State, & Zip: COLUMBUS NC 28722-7729

Estimated Speed: 20 Speed Limit: 55

C.D.L. Req: Yes (No) T/S Req: Yes (No) Alc/Drg Info (see back): Yes (No)

Summons #: E673131 Code: 21 Summons #: Code: Towed: (Yes) No SMITH AUTO (ROT)

State: Year: License Plate #: Owner's D.L. #:

Home Telephone: ( ) Owner's Full Name:

Bus. Telephone: ( ) Street/R.F.D.:

Contributed To Collision: Yes No City, State, & Zip:

Estimated Speed: Speed Limit: C.D.L. Req: Yes No T/S Req: Yes No Alc/Drg Info (see back): Yes No

Summons #: Code: Summons #: Code: Towed: Yes No

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 2000	$	$	$

Property Owner/Witness: Address: City: State: Zip: Phone:

Property Owner/Witness: Address: City: State: Zip: Phone:

Photo: Y (N)

Describe What Happened (Refer to Units by Number)

UNIT 1 WAS STOPPED, FACING SOUTH ON I385. UNIT 2 WAS TRAVELING SOUTH ON I385. TRAVELING TOO FAST FOR CONDITIONS, UNIT 2 STRUCK UNIT 1 IN THE REAR.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
DOTSON - T L	CPL	A107	HP03	12-05-2010	THOMAS DOTSON	CPL	10GV127896

2010004205

Unit:	Date of Birth	Sex:	Race	Inj:	Seat:	R/SD	A	B	C	Eject	Lal:	Tran:	Name	Street Address		Zip Code
01	07-31-1990	F	W	0	01	13	4	3	1	1	2		CLARK TORIE MORG	102 SWINDON CIR	GREENVILLE SC	296152429
02	09-24-1981	M	W	0	01	13	4	3	1	1	2	9	ANDERSON DAVID	1926 HIGHWAY 108	COLUMBUS NC	28722-7729

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, W - Caucasian, O - Other, U - Unk.

a) Injury Status: 0-Not Injured, 1-Possible Injury, 2-Non-Incapacitating, 3-Incapacitating, 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20-Pedestrian, 30-Trailing Unit, 40-Bus or Van (4th row or Higher), 50-Other Enclosed Area (nonrenting), 51-Other Unenclosed Area (nonrenting), 60-Sleeper of Cab, 70-Riding on Unit Exterior, 80-Lap, 99-Unk./NA

Restraint/Safety Device: 00-None Used, 11-Shoulder belt, 12-Lap Belt Only, 13-Shoulder & Lap Belt, 21-Child Safety Seat, 88-Other, 99-Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet, 41-Protective Pads, 51-Reflective Clothing, 61-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front, 2-Deployed Side, 3-Deployed Both, 4-Not Deployed, 7-Not Applicable, 8-Deployment Unk; b) 1-Switch in On Position, 2-Switch in Off Position, 3-No Switch, 9-Unknown

Ejection: 1-Not Ejected, 2-Part. Ejected, 3-Tot. Ejected, 7-Not App., 9-Unk.

Head Injury: 1-Yes, 2-No

Location After Impact: 1-Not Trapped, 2-Extricated (Mechanical Means), 3-Fixed (non-mech.), 4-Not Applicable, 9-Unknown

a) Transported to Medical Facility: 1-Yes, 2-No, 3-Unknown

b) By: 1-EMS, 2-Police, 8-Other, 9-Unk.

Sequence of Events

Non-Collision: 04-Equipment Failure; 05-Fire/Explosion; 06-Overturn/Rollover; 07-Immersion; 08-Ran off Road Left; 09-Ran off Road Right; 10-Cross Median; 11-Cross Center Line; 12-Downhill Runaway; 13-Cargo/Equip Loss or Shift; 14-Other Non-Collision

Collision Not Fixed: 20-Pedestrian; 21-Pedalcycle; 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Railway Veh.; 26-Aircraft (Air Only); 27-Work Zone Maint. Equip.; 28-Other Movable Object; 29-Unk. Movable Object

Collision: Fixed Object: 40-Bridge Overhead Structure; 41-Bridge Pier or Abutment; 42-Bridge Rail; 43-Bridge Fence; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Guardrail Face; 49-Guardrail End; 50-Impact Attenuator/Crash Cushion; 51-Concrete Traffic Barrier; 52-Other Traffic Barrier; 53-Utility Pole; 54-Light/Luminaire Support; 55-Mail Box; 56-Other Post, Pole, Support; 57-Overhead Sign Support; 58-Tree; 59-Other (Wall, Building, Tunnel, Etc.); 60-Unk.

Event 1	Event 2	Event 3	Event 4	Most Harmful
22	1	1	1	1st Harmful: 22
23	2	2	2	23
	3	3	3	

Manner of Collision (Struck Veh.): 00-Not Coll. w/ Motor Veh., 10-Rear End, 20-Head On, 30-Rear-to-Rear, 41-Angle, 42-Angle, 43-Angle, 50-Sideswipe Same Dir., 60-Sideswipe Opposite Dir., 70-Backed Into, 99-Unknown

Vehicle Type: 01-Automobile, 02-Pickup Truck, 03-Truck Tractor, 04-Other Truck, 15-Full Size Van, 16-Mini Van, 17-Sport Utility, 25-Motorcycle, 26-Other Motorbike, 27-Pedalcycle, 38-Animal Drawn Veh., 39-Animal (Rider), 41-Pedestrian, 51-Train, 61-School Bus, 82-Passenger Bus, 88-Other, 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal, 02-Driver Training, 03-Construction/Maint., 04-Ambulance, 05-Military, 06-Transport Passengers, 07-Transport Property, 08-Farm Use, 09-Wrecker or Tow, 10-Police, 11-Government, 12-Fire Fighting, 13-Logging, 18-Other, 41-Pedestrian

Vehicle Attachment: 1-None, 2-Mobile Home, 3-Semi-Trailer, 4-Utility Trailer, 5-Farm Trailer, 6-Trailer w/Boat, 7-Camper Trailer, 8-Towed Motor Vehicle, 9-Petroleum Tanker, A-Low/Boy Trailer, B-Auto-carrier Trailer, C-Other Tanker, D-Flat Bed, E-Twin Trailers, F-Other

Action Prior to Impact (Vehicle): 01-Backing, 02-Changing lanes, 03-Entering traffic lane, 04-Leaving traffic lane, 05-Making U-turn, 06-Movements Essentially Straight Ahead, 07-Overtaking/passing, 08-Parked, 09-Slowing or Stopped in traffic, 10-Turning left, 11-Turning right, 88-Other

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle, 22-Entering/Crossing Location, 23-Playing/Working on Vehicle, 24-Pushing Vehicle, 25-Standing, 26-Walking, Playing, Cycling, 27-Working, 99-Unk.

Weather Condition: 1-Clear (no adverse conditions), 2-Rain, 3-Cloudy, 4-Sleet, Hail, 5-Snow, 6-Fog, Smog, Smoke, 7-Blowing Sand, Oil, Dirt or Snow, 8-Severe Crosswinds, 9-Unk.

Light Condition: 1-Daylight, 2-Dawn, 3-Dusk, 4-Dark (Lighting Unspecified), 5-Dark (Street Lamp Lit), 6-Dark (Street Lamp Not Lit), 7-Dark (No lights)

Junction Type: 01-Crossover, 02-Driveway, 03-Five/More Points, 04-Four-way Intersection, 05-Railway Grade Crossing, 07-Shared Use Paths or Trail, 08-T-Intersection, 09-Traffic Circle, 12-Y-Intersection, 13-Nonjunction, 99-Unk.

Primary: 03

Contributing Factors: Driver: 01-Disregarded Signs, Signals, Etc., 02-Distracted/Inattention, 03-Driving Too Fast for Conditions, 04-Exceeded Authorized Speed Limit, 05-Failed to Yield Right of Way, 06-Ran off Road, 07-Fatigued/Asleep, 08-Followed Too Closely, 09-Made an Improper Turn, 10-Medical Related, 12-Aggressive Operation of Vehicle, 13-Over-correcting/Over-steering, 14-Swerving to Avoiding Object, 15-Wrong Side or Wrong Way, 16-Under the Influence, 17-Vision Obscured (Within Unit), 18-Improper lane Usage/Change, 19-Cell Phone, 20-Texting, 26-Other Improper Action, 29-Unk.

Others:

Roadway: 30-Debris, 31-Non-highway Work, 32-Obstruction in Roadway, 33-Road Surface Condition (i e., Wet), 34-Rut, Holes, Bumps, 35-Shoulders (None, Low, Soft, High), 36-Traffic Control Device (i e., Missing), 37-Work Zone (Const./Maint./Utility), 38-Worn, Travel-Polished Surface, 48-Other, 49-Unk

Non-Motorist: 50-Inattentive, 51-Lying &/or Illegally in Roadway, 52-Failure to Yield R. of W., 53-Not Visible (Dark Clothing), 54-Disregard Signs, Signals, Etc., 55-Improper Crossing, 56-Darting, 57-Wrong Side of Road, 58-Other, 59-Unk

Environmental: 60-Animal in Road, 61-Glare, 62-Obstruction, 63-Weather Cond., 88-Other, 89-Unk.

Vehicle Defect: 70-Brakes, 71-Steering, 72-Power Plant, 73-Tires/Wheel, 74-Lights, 75-Signals, 76-Windows/Shield, 77-Restraint System, 78-Truck Coupling, 79-Cargo, 80-Fuel System, 88-Other, 89-Unk.

1st / Most Deformed Area

1st Deformed: 1Y 2 10 3

Most Deformed: 1Y 2 10 3

21-Pedestrian, 81-None, 82-Rollover, 93-Total, 94-Under Carriage, 98-Other, 99-Unk.

Alcohol / Drug Test Given: 1-Given - Known Results, 2-Given - Unavailable, 3-Given - Pending, 4-None, 5-Refused

Special Use Only

Test Type: 1-Breath (Alc Only), 2-Blood, 3-Urine, 4-Serum, 8-Other

Drug Results: 1-Amphetamines, 2-Cocaine, 4-Opiates, 5-PCP, 8-Other, 9-None/Minor, 2-Functional Damage, 3-Disabling Damage, 4-Severe/Totaled, 5-Not Applicable, 9-Unk.

Alc Test Results: A1-, A2-, A3-

1-Under-Compartment Intrusion, 2-Under-No Intrusion, 3-Under-Unknown, 4-Over-MV in Transport, 5-Over-Other Vehicle, 9-Unk.

Underride/Override

Extent of Deformity: 1-Disabling, 2-Functional, 3-Minor, 4-None, 9-Unk.

Trafficway: 1-Two-way, Not Divided, 2-Two-way, Divided, Unprotected Median, 3-Two-way, Divided, Barrier, 4-One-Way, 8-Other, 9-Unk.

1-Door, 2-Inland, 3-Median, 4-Roadside, 5-Roadway, 6-Shoulder, 7-Sidewalk, 8-Outside Trafficway, 9-Unk.

B: X-axis, Y: 1-Y 2-N 9-U

1st Harmful Event Loc: 5 2

1-Straight - Level, 2-Straight - On grade, 3-Straight - Hillcrest, 4-Curve - Level, 5-Curve - On grade, 6-Curve - Hillcrest

Road Character: 2

1-Dry, 2-Wet, 3-Snow, 4-Slush, 5-Ice, 6-Contaminate, 7-Water (Standing, etc.), 8-Other, 9-Unk.

Road Surface Condition: 1

01-Stop and Go Light, 02-Flashing Traffic Signal, 11-RR (X-bucks, Lights & Gates), 12-RR (X-bucks & Lights), 13-RR (X-bucks Only), 21-Officer or Flagman, 22-Oncoming Emergency Vehicle, 31-Pavement Markings (only), 41-Stop Sign, 42-School zone Sign, 43-Yield Sign, 44-Work Zone, 45-Other Warning Signs, 51-Flashing Beacon, 88-None, 99-Unk.

Traffic Control Type: 45

1-Yes, Directly, 2-Yes, Indirectly, 3-No, 9-Unk.

School Bus Involved: 3

1-Before 1st Sign, 2-Advanced Warning Area, 3-Transition Area, 4-Activity Area, 5-Termination Area, 1-Yes 2-No

Work Zone: 2

Work Zone Location

1-Shoulder/Median Work, 2-Lane Shift/Crossover, 3-Intermittent/Moving Work, 4-Lane Closure, 8-Other, 9-Unk.

Work Zone Type

1-Yes 2-No

Workers Present

ORIGINAL

JAN 04 2011

SOUTH CAROLINA DPS/OHS & DMV USE ONLY: 10143324

Page # 1 Of 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

20100078351

Date	Time of Collision	County	Collision Location (Rt # / Name)	Miles	Dir.	In (Near) City or Town of:
12-15-2010	1729	23	S 385	.31	N S	GREENVILLE

Lane # / Dir.: 3 S — Distance Offset: .85 Feet — Direction: S W — Base Intersection (Rt # / Name): 146 WOODRUFF RD — From — GPS COORDINATES 00 00' 00.00" DEGREES MINUTES SECONDS: Latitude 34 49 41.02; Longitude 82 17 35.91

R.R. Id. — From: N E S W — Ramp Only — To: N E S W — Toward: 85 — Second Intersection (Rt. # / Name)

Unit #	Driver/Pedestrian's Full Name	Sex	Race	Street/R.F.D.	City, State, & Zip
E-058418	YETTER CHRISTOPHER JON	M	W	202 PLAYER WAY	SIMPSONVILLE SC 290814008
01	Birth Date: 09-02-1966				

State	Driver's License #	Class	Insurance Company
SC	007765170	DM	PENNSYLVANIA NATIONAL

Year	Body	Vehicle Make	VIN #
2010	SU	FORD	1FMEU6DE8AUA68804

State	Year	License Plate #	Owner's D.L. #
SC	2011	FZ8263	UNKNOWN

Home Telephone: (864) 9638979 — Owner's Full Name: HOLDER ELECTRIC

Bus. Telephone: ( ) — Street/R.F.D.: 431 PLEASANTBURG DR

Contributed To Collision: Yes (No) — City, State, & Zip: GREENVILLE SC 29607

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
5	55	Summons #	Code	Summons # / Code / Towed Yes (No)

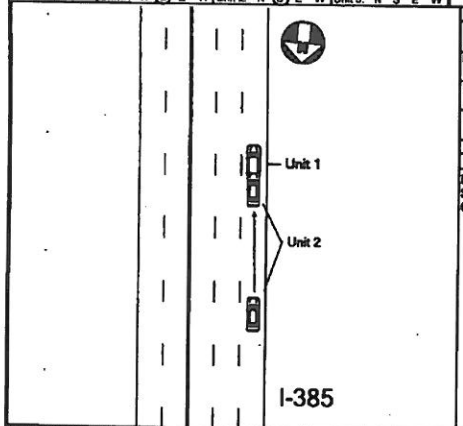
Driver/Pedestrian's Full Name

Unit #	Sex	Race	Street/R.F.D.
# Occ	Birth Date		City, State, & Zip

State	Driver's License #	Class	Insurance Company

Year	Body	Vehicle Make	VIN #

Dir. of Travel: Unit 1: N (S) E W — Unit 2: N (S) E W — Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 250	$ 1450	$	$	$

Property Owner/Witness — Address — City — State — Zip — Phone

Photo: Y (N) — Describe What Happened (Refer to Units by Number)

UNITS 1 AND 2 WERE SOUTHBOUND ON I-385. UNIT 1 SLOWED FOR TRAFFIC. UNIT 2, TRAVELING TOO FAST FOR CONDITIONS, STRUCK UNIT 1.

Unit #	Driver/Pedestrian's Full Name	Sex	Race	Street/R.F.D.	City, State, & Zip
E-058419	RITTERBUSCH SARAH J	F	W	101 N CHANCELOR DR	SIMPSONVILLE SC 290815403
02	Birth Date: 08-14-1986				

State	Driver's License #	Class	Insurance Company
SC	011627786	D	STATE FARM

Year	Body	Vehicle Make	VIN #
2008	4S	NISS	1N4DL01D2YC116200

State	Year	License Plate #	Owner's D.L. #
SC	2011	A8F742	011627786

Home Telephone: (864) 4381052 — Owner's Full Name: RITTERBUSCH JOHN DEAN

Bus. Telephone: ( ) — Street/R.F.D.: 101 N CHANCELOR DR

Contributed To Collision: Yes (No) — City, State, & Zip: SIMPSONVILLE SC 290815403

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
35	55	Summons # E7582232	Code 21	Summons # / Code / Towed Yes (No)

State	Driver's License #	Class	Insurance Company

Year	Body	Vehicle Make	VIN #

Home Telephone: ( ) — Owner's Full Name

Bus. Telephone: ( ) — Street/R.F.D.

Contributed To Collision: Yes No — City, State, & Zip

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/S Req: Yes No	Alc/Drg Info (see back): Yes No
		Summons #	Code	Summons # / Code / Towed Yes No

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
LADUE - C J	TFC	T336	HP03	12-15-2010	WESLEY HIOTT	SGT	10GV139577

20100078351

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A B D	Eject	LAI	Trans	Name	Street Address	Zip Code
01	09-02-1966	M	W	0	01	13	4 9	1	1	2	YETTER CHRISTOPH JON	202 PLAYER WAY	SIMPSONVIL SC 290814008
02	08-14-1986	F	W	0	01	13	4 9	1	1	2	RITTERBUS SARAH J	101 N CHANCELOR DR	SIMPSONVIL SC 290815403

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2-Non-Incapacitating; 3-Incapacitating; 4-Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20-Pedestrian; 30-Trailing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nontrailing); 61-Other Unenclosed Area (nontrailing); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 80-Lap; 99-Unk./NA

Restrains/Safety Device: 00-None Used; 01-Child; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 88-Other; 99-Unk.

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk. — b) 1-Switch in On Position; 2-Switch in Off Position; 3-No Switch; 9-Unknown

Ejection: 1-Not Ejected; 2-Part Ejected; 3-Tot. Ejected; 7-Not App.; 9-Unk.

b) 2 or 3 Wheel Motorized Vehicle: Head Injury 1-Yes 2-No

Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown

b) By: 1-EMS 2-Police 8-Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet; 51-Reflective Clothing; 41-Protective Pads; 61-Lighting

Sequence of Events

Non-Collision: 04-Equipment Failure; 01-Cargo/Equip Loss or Shift; 05-Fire/Explosion; 09-Overturn/Rollover; 02-Cross Median/Center; 06-Immersion; 09-Ran off Road Left; 03-Downhill Runaway; 07-Jackknife; 10-Ran off Road Right; 11-Separation of Units; 12-Spill (Non-Vehicular); 18-Other Non-collision; 19-Unk. Non-collision

Collision: Not Fixed: 27-Pedestrian; 25-Animal (Does Only); 29-Railway Veh.; 21-Animal (All Other); 23-Work Zone Maint. Equip.; 22-Motor Veh. (In Transport); 26-Other Movable Object; 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 28-Unk. Movable Object; 29-Pedalcycle

Collision: Fixed Object: 47-Embankment; 48-Bridge Overhead Structure; 49-Bridge Pier or Abutment; 42-Bridge Parapet End; 43-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 50-Mail Box; 51-Guardrail Face; 52-Highway Traffic Sign Post; 53-Impact Attenuator/Crash Cushion; 54-Light/Luminaire Support; 55-Median Barrier; 56-Overhead Sign Support; 57-Fence; 58-Guardrail End; 59-Other Post, Pole, Support, Etc.; 60-Other (Wall, Building, Tunnel, Etc.); 61-Tree; 62-Utility Pole; 63-Work Zone Maint. Equipment; 99-Other

Unit	Event 1	Event 2	Event 3	Event 4	Most Harmful Event	1st Harmful Event
1	22				22	22
2	22	2	2	2		
3	3	3	3			

Manner of Collision (Struck Veh.): 00-Not Coll. w/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 41-Angle; 42-Angle; 43-Angle; 40-Sideswipe Same Dir.; 50-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

1st / Most Deformed Area — 1st Deformed: 7 2 3 — Most Deformed: 7 2 3

21-Pedestrian; 81-None; 82-Rollover; 83-Total; 84-Under Carriage; 98-Other; 99-Unk.

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 30-Animal Drawn Veh.; 39-Animal (Ridden); 41-Pedestrian; 51-Train; 81-School Bus; 82-Passenger Bus; 88-Other; 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 07-Transport Property; 08-Transport Passengers; 09-Wrecker or Tow; 10-Police; 11-Government; 05-Farm Use; 13-Logging; 18-Other; 41-Pedestrian; 12-Fire Fighting

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Lowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Alc Test Results: A1- ; A2- ; A3- — 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Special Use Only

Test Type: 1-Urine; 2-Breath (Alc Only); 3-Blood; 4-Serum; 8-Other

1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV in Transport; 5-Over-Other Vehicle; 8-None; 9-Unk.

Undermide/Override

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other; 0-None/Minor; 1-Functional Damage; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 8-Not Applicable; 9-Unk.

Extent of Deformity

Action Prior to Impact (Vehicle): 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk.

(Non-motorist): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other

A: 1-Dirt 2-Gravel 3-Concrete 4-Asphalt 5-Brick/Block 6-Slag/Gravel 7-Shale/Clay 8-Other Hard Surface 9-Unk.

B: X-traffic; 1-Y 2-H 3-U 4-U

1st Harmful Event Loc.

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights)

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-Traffic Circle; 09-Unk.; 10-T-Intersection; 11-Nonjunction; 12-Y-Intersection

Road Character: 1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk.

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 88-None; 99-Unk.

School Bus Involved: 1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk.

Work Zone: 1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area — 1-Yes 2-No

Work Zone Location: 1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure

Work Zone Type: 8-Other 9-Unk.

Workers Present: 1-Yes 2-No

Primary: 03

Contributing Factors — Driver: 01-Disregarded Signs, Signals, Etc; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 11-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper lane Usage/Change; 19-Cell Phone; 20-Texting; 28-Other Improper Action; 29-Unk

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W.; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.

Others: 66-Under the Influence; 67-Other Person Under Influence

Environmental: 62-Obstruction; 63-Weather Cond.; 64-Glare; 65-Other; 99-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 85-Other; 99-Unk.

ORIGINAL

JAN 25 2011

SOUTH CAROLINA DPS/OHS & DMV USE ONLY
10151221

Page # 1 Of: 1

Of Units: 02

Amended - Attach Copy of Original Report

Corrected

Notified: 1915

Arrived: 1930

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

20100108251

Date	Time of Collision	County	Collision Location (Rt. # / Name)	Miles	Dir.	In (Near) City or Town of:
12-29-2010	1910	23	385/ RAMP 0914	.37	N E S W	GREENVILLE

1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other 7-Business 8-PP

Q-Main 2-Alternate 5-Spur 6-Connection

Lane # / Dir.	Of		Distance Offset Miles	Direction	From	Base Intersection (Rt # / Name)	Toward
1	1	N E S W	30 Feet	N E S W	14#	WOODRUFF RD	85

R.R. Id.

From Ramp Only To: 1-Entrance 2-Exit

Second Intersection (Rt. # / Name)

GPS COORDINATES 00 00' 00.00"

	DEGREES	MINUTES	SECONDS
Latitude	34	46	27.46
Longitude	82	17	34.40

E-042579

Driver/Pedestrian's Full Name: SANDHU HARPREET SINGH

Unit #	Sex	Race	Street/R.F.D.
01	M	O	9 RAIN FLOWER DR
# Occ. 4	Birth Date 05-15-1972		City, State, & Zip GREENVILLE SC 296156729

State	Driver's License #	Class	Insurance Company
SC	102493391	D	GEICO

Year	Body	Vehicle Make	VIN #
2008	SU	KIA	KNDJJ741085021829

State	Year	License Plate #	Owner's D.L. #
SC	2011	GIV418	102493391

Home Telephone: (864) 7355494 — Owner's Full Name: SANDHU HARPREET SINGH

Bus. Telephone: ( ) — Street/R.F.D.: 9 RAIN FLOWER DR

Contributed To Collision: Yes (No) — City, State, & Zip: GREENVILLE SC 296156729

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/S S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
0	55	Summons #	Code	Summons #	Code	Towed: Yes (No)

Driver/Pedestrian's Full Name

Unit #	Sex	Race	Street/R.F.D.
# Occ.	Birth Date		City, State, & Zip

State	Driver's License #	Class	Insurance Company

Year	Body	Vehicle Make	VIN #

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W

E-042580

Driver/Pedestrian's Full Name: BATES ANGELA MARIE

Unit #	Sex	Race	Street/R.F.D.
02	F	W	115 SNOW ST
# Occ. 2	Birth Date 06-23-1984		City, State, & Zip GREER SC 295513001

State	Driver's License #	Class	Insurance Company
SC	011509709	D	PROGRESSIVE

Year	Body	Vehicle Make	VIN #
2003	SU	MITS	JA4LZ31G83U046271

State	Year	License Plate #	Owner's D.L. #
SC	2011	FFD135	011509709

Home Telephone: (864) 3560405 — Owner's Full Name: BATES ANGELA MARIE

Bus. Telephone: ( ) — Street/R.F.D.: 115 SNOW ST

Contributed To Collision: (Yes) No — City, State, & Zip: GREER SC 295513001

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/S S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
5	55	Summons # E832084	Code 02	Summons #	Code	Towed: Yes (No)

Driver/Pedestrian's Full Name

Unit #	Sex	Race	Street/R.F.D.
# Occ.	Birth Date		City, State, & Zip

State	Driver's License #	Class	Insurance Company

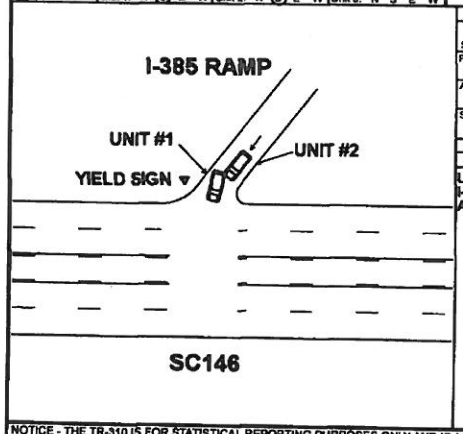
Year	Body	Vehicle Make	VIN #

Home Telephone: ( ) — Owner's Full Name

Bus. Telephone: ( ) — Street/R.F.D.

Contributed To Collision: Yes / No — City, State, & Zip

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/S S Req: Yes No	Alc/Drg Info (see back): Yes No
		Summons #	Code	Summons #	Code	Towed: Yes No



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$500	$500	$	$	$

Property Owner/Witness: — Address: — City: — State: — Zip: — Phone:

Property Owner/Witness: — Address: — City: — State: — Zip: — Phone:

Photo Y (N) — Describe What Happened (Refer to Units by Number)

UNIT 1 AND UNIT 2 WERE STOPPED FOR TRAFFIC ON THE I-385 SOUTHBOUND RAMP. UNIT 2 STARTED IMPROPERLY AND STRUCK UNIT 1 IN THE REAR.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
JOHNSON - M C	S/TRP	T440	HP03	01-04-2011	WESLEY HIOTT	SGT	10GV145711

20100108252

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B	D.	Eject	Lal	Trap	Name	Street Address	Zip Code
01	05-15-1972	M	O	0	01	13	4	3	1	1	2	SANDHU HARPREET SINGH	9 RAIN FLOWER DR GREENVILLE SC	296156729
02	06-23-1984	F	W	0	01	13	4	3	1	1	2	BATES ANGELA MARIE	115 SNOW ST GREER SC	295513001
01	05-10-1973	F	O	0	03	13	4	3	1	1	2	SANDHU SAMRITA	9 RAIN FLOWER DR GREENVILLE SC	296156729
01	07-29-2001	F	O	0	04	13	7	3	1	1	3			
01	10-21-2006	M	O	0	06	13	7	3	1	1	2			
02	11-16-1983	F	W	0	03	13	4	3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2-Non-Incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle: Head Injury: 1-Yes 2-No; Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09

20-Pedestrian; 30-Trailing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nonriailing); 51-Other Unenclosed Area (nonraiting); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 80-Lap; 88-Unk; NA

a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown

b) By: 1-EMS 2-Police 8-Other 9-Unk.

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 88-Other; 99-Unk.

Pedestrian, Moter/Pedalcycle Only: 31-Helmet; 41-Protective Pads; 51-Reflective Clothing; 61-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 8-Deployment Unk. b) 1-Switch In On Position; 2-Switch In Off Position; 3-No Switch; 8-Unknown; 9-Unk.

Ejection: 1-Not Ejected; 2-Part. Ejected; 3-Tot. Ejected; 7-Not App.; 9-Unk.

Non-Collision: 01-Cargo/Equip Loss or Shift; 02-Over Median/Center; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Overturn/Rollover; 09-Ran off Road Left; 10-Ran off Road Right; 11-Separation of Units; 12-Spill (Non-Hazmat Veh.); 13-Other Non-collision; 99-Unk. Non-collision

Collision Not Fixed: 20-Animal (Deer Only); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 26-Pedalcycle; 27-Pedestrian; 28-Railway Veh.; 29-Work Zone Maint. Equip.; 30-Other Movable Object; 38-Unk. Movable Object

Collision: Fixed Object: 40-Embankment; 41-Bridge Overhead Structure; 42-Bridge Pier or Abutment; 43-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Guardrail Face; 49-Guardrail End; 50-Impact Attenuator/Crash Cushion; 51-Concrete Traffic Barrier; 52-Other Post, Pole or Support; 53-Other Traffic Sign Post; 54-Other Wall; 55-Fire Hydrant; 56-Shrubbery; 57-Tree; 58-Utility Pole; 59-Other Fixed Object

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful Event
23	1	1	1	22
23	2	2	2	23
2	3	3	3	22

Manner of Collision (Struck Vehicle): 00-Not Coll. w/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 40-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 80-Other; 99-Unknown

1st / Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

2nd Deformed: 3 33 34 35 83 84 85 93 94 95 74

Most Deformed: 17 21 3

21-Pedestrian; 81-None; 82-Rollover; 83-Total; 84-Under Carriage; 88-Other; 99-Unk.

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 04-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 28-Animal (Ridden); 41-Pedestrian; 51-Train; 61-School Bus; 62-Passenger Bus; 63-Other; 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Military; 06-Transport Passengers; 07-Transport Property; 08-Farm Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 18-Other; 41-Pedestrian

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Lowboy Trailer; B-Auto-carrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Action Prior to Impact (Vehicle): 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk.

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working; 88-Other; 99-Unk.

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 8-Other

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other

Special Use Only: Underride/Override; Extent of Deformity; 9-Unk.

1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other; Trafficway

A 1-Lane 2-Island; B 3-Median 4-Roadway 5-Shoulder; V 6-Ditch 7-Sidewalk 8-Unk 9-Outside Trafficway; 1st Harmful Event Loc

1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest; Road Character

1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Sand/Mud/Dirt/Gravel; 7-Water (Standing, etc.); 8-Other; 9-Unk.; Road Surface Condition

01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 88-None; 99-Unk.; Traffic Control Type

1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk.; School Bus Involved

1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area; 1-Yes 2-No; Work Zone:

1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk.; Work Zone Location; Work Zone Type

1-Yes 2-No; Workers Present

Primary 28

Contributing Factors — Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 11-Over-correcting/Over-steering; 12-Aggressive Operation of Vehicle; 13-Swerving to Avoiding Object; 14-Under the Influence; 15-Wrong Side or Wrong Way; 16-Improper lane Usage/Change; 17-Vision Obscured (Within Unit); 18-Cell Phone; 19-Texting; 20-Other Improper Action; 88-Other; 99-Unk.

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i.e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R of W; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc.; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 68-Under the Influence; 87-Other Person Under Influence

Environmental: 62-Obstruction; 63-Weather Cond; 64-Animal in Road; 65-Glare; 88-Other; 99-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 99-Unk.

ORIGINAL

FEB 01 2011

D.P.S. USE ONLY: 10153860 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2011) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0851 | Arrived: 0858

Date: 12-28-2010 | Time: 0846 | County: 23 | Collision Location (Rt. # / Name): 5 385 / Exit 35 Ramp | Miles: 6.60 | Dir.: NE | Near City or Town of: Greenville

Lane # / Dir.: 1 OL 3 | Distance Offset: .045 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): From 146 | ASRU code | MP/Grid

R.R. Id.: NA | From: Ramp Only NE SW | To: 1 - Entrance 2 - Exit | Second Intersection (Rt. # / Name): Toward 85 | Latitude: 34° 49 24.00 | Longitude: 82° 17 20.00

B-602875 | Driver/Pedestrian's Full Name: Smith - Pamela E.

Unit # 1 | Sex: F | Race: B | Street/R.F.D.: 300 Watkins Rd. | Birth Date: 7-9-1976 | City, State, & Zip: Greenville, SC 29617

State: SC | Driver's License #: 007382950 (D) | Insurance Company: State Auto Mutual

Year: 2000 | Body: 4DS | Vehicle Make: Niss | VIN #: JN1CA31D91T753696

State: SC | Year: 2010 | License Plate #: CFQ 875 | Owner's D.L. #: 007382950

Home Telephone: 864 838-3698 | Owner's Full Name: Smith - Pamela E.

Bus. Telephone: 864 246-6339 | Street/R.F.D.: 300 Watkins Rd.

Contributed To Collision: Yes | City, State, & Zip: Greenville, SC 29617

Estimated Speed: 0 | Speed Limit: 35 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons #: NA | Code | Summons #: NA | Code | Towed By: NA

B-602876 | Driver/Pedestrian's Full Name: Gaspar - Miguel - Hector

Unit # 2 | Sex: M | Race: H | Street/R.F.D.: 11 Kerns Ave. Lot 17 | Birth Date: 4-15-1982 | City, State, & Zip: Greenville, SC 29609

State: SC | Driver's License #: 32387736 (Cust No.) | Insurance Company: Access Ins

Year: 1994 | Body: 4DS | Vehicle Make: Hond | VIN #: JHMCD5641RC015206

State: SC | Year: 2011 | License Plate #: GFB 162 | Owner's D.L. #: 32387736

Home Telephone: 864 298-7517 | Owner's Full Name: Gaspar - Miguel - Hector

Bus. Telephone: ( ) NA | Street/R.F.D.: 11 Kerns Ave. Lot 17

Contributed To Collision: No | City, State, & Zip: Greenville, SC 29609

Estimated Speed: 10 | Speed Limit: 35 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes

Summons #: E792655 | Code: 21 | Summons #: E792656 | Code: 87 | Towed By: NA

B-602877 | Driver/Pedestrian's Full Name

Unit # NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

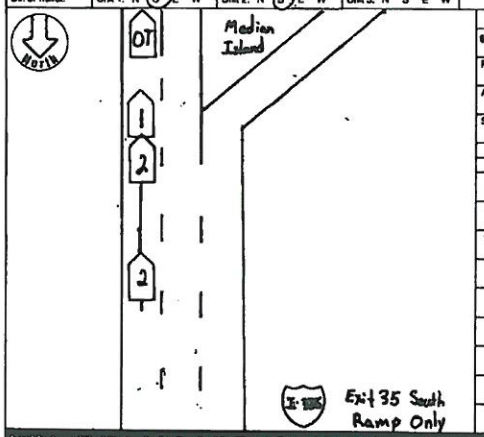
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 1500	$	$ NA	$ NA

Property Owner/Witness: NA | Property Owner/Witness: NA

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y N | Describe What Happened (Refer to Units by Number)

Unit's #1 and #2 were traveling South on I-385 Exit 35 ramp. Unit #2, Driving Too Fast for Conditions, struck Unit #1 in the rear.

NOTICE: THE DRIVER'S LICENSE, ACCIDENT REPORTING, PURPOSES ONLY AND IS NOT A DETERMINATION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OF ANY STATEMENT THEREIN

Investigating Officer's Name: Kesling - SG | Badge #: 319 | Date: 12-28-2010 | Rank: Sgt | Internal Agency Code: 1064745074

Unit	Date of Birth	Sex	Race	Seat	Ejection	Trim
1	7-9-1976	F	B	01	1	2
2	4-15-1982	M	H	01	1	2
2	8-26-1983	F	H	06	1	2
2	10-1-2010	M	H	05	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal, 9- Unk.

b) Motorcycle Only

Seating Loc.: 01 02 03, 04 05 06, 07 08 09 | 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 88- Unk./N/A

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 8- Switch in On Position, 9- Switch in Off Position, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Head Injury: 1- Yes, 2- No

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown

b) By: 1- EMS, 2- Police, 8- Other, 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Trip-Tow (Towed Unit), 13- Other Non-collision, 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. in Transport, 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object, 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Curb, 44- Culvert, 45- Ditch, 46- Embankment, 47- Guardrail Face, 48- Impact Attenuator/Crash Cushion, 49- Concrete Traffic Barrier, 50- Other Post, Pole, Support, Etc., 51- Other Traffic Sign Post, 52- Other Traffic Signal Post, 53- Tree, 54- Utility Pole, 55- Work Zone Maint. Equipment, 56- Mail Box, 57- Median Barrier, 58- Overhead Sign Support, 59- Other Fixed Object, 60- Other, 99- Unk.

1st Event	2nd Event	3rd Event	4th Event	Most Harmful	1st Harmful
22				22	22
23				23	

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 80- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile, 12- Pickup Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal Drawn Veh., 29- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 88- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 08- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping in Traffic, 10- Turning Left, 11- Turning Right, 12- Changing Lanes, 13- Merging, 14- Successful Avoidance Maneuver, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1- , A2- , A3- , 1- Yes, 2- No, 3- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 4- Urine, 5- Serum, 8- Other

Drug Results: D1- Amphetamines, D2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Special Use Only

Underride/Override

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Severe/Totaled, 3- Disabling Damage, 9- Unk., 5- Not Applicable

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 98- None, 99- Unk.

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Work Zone: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination, Area, 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 1- Yes, 2- No, 8- Other, 9- Unk.

Work Zone Location

Work Zone Type

Workers Present: 1- Yes, 2- No

School Bus Involved: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

Primary: 63

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Operating Defective Equipment, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Cell Phone, 20- Other Improper Action, 21- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 39- Other, 40- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Citation: 1- Yes, 2- No

Mis-placed, was showing on NB
Now corrected

ORIGINAL

FEB 03 2011

20100005705

SOUTH CAROLINA DPS/CHS & DMV USE ONLY: 10154941

Page # 1 Of 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

Of Units: 02

Amended - Attach Copy of Original Report | Corrected

Notified: 1802 | Arrived: 1915

Date: 11-30-2010 | Time of Collision: 1800 | Day: 23

1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-PP

Collision Location (Rt. # / Name): On 8914/ I-385 EXIT RAMP

1-Main 2-Alternate 5-Spur 6-Connection 7-Business

Miles: .38 | Dir. N E S W

In (Near) City or Town of: GREENVILLE

Lane # / Dir.: 2 | Of: 3 | N E S W

Distance Offset: .08 Miles Feet | Direction: N E S W

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6 - Other

Base Intersection (Rt # / Name): 14/ WOODRUFF RD

1-Main 2-Alternate 5-Spur 6-Connection 7-Business 8-Connection 9-Other

GPS COORDINATES 00 00' 00.00"

DEGREES MINUTES SECONDS

Latitude: 34 49 31.73

Longitude: 82 17 33.90

R.R. Id.

From: N E S W | Ramp Only | To: 1 Entrance 2 Exit | N E S W

Second Intersection (Rt. # / Name): 85

Driver/Pedestrian's Full Name

E-045289 — JULIAN MICHEAL ALEXANDER

Unit # 01 | # Occ 1 | Sex: M | Race: W

Street/R.F.D.: 137 FAIRGROUND RD

Birth Date: 10-17-1993

City, State, & Zip: SIMPSONVILLE SC 296806806

State: SC | Driver's License #: 102168302 | Class: D | Insurance Company: MONTGOMERY

Year: 2005 | Body: 4DR | Vehicle Make: FORD | VIN #: 1FAFP53U35A101439

State: SC | Year: 2011 | License Plate #: 9671B2 | Owner's D.L. #: UNKNOWN

Home Telephone: (864) 2433746 | Owner's Full Name: JULIAN APRIL C

Bus. Telephone: (864) 3179592 | Street/R.F.D.: 137 FAIRGROUND RD

Contributed To Collision: Yes | City, State, & Zip: SIMPSONVILLE SC 296806806

Estimated Speed: 30 | Speed Limit: 35 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes

Summons #: E746014 | Code: 21 | Summons #: | Code: | Towed: Yes

Driver/Pedestrian's Full Name

E-045290 — CHLODNICKI ADAM IV

Unit # 02 | # Occ 1 | Sex: M | Race: W

Street/R.F.D.: 521 WALDEN CREEK WAY

Birth Date: 12-01-1983

City, State, & Zip: GREENVILLE SC 29615

State: SC | Driver's License #: 102388897 | Class: D | Insurance Company: STATE FARM

Year: 2001 | Body: 4DR | Vehicle Make: BMW | VIN #: WBSDE93431BZ97516

State: SC | Year: 2011 | License Plate #: GCY360 | Owner's D.L. #: 102388897

Home Telephone: (978) 3717516 | Owner's Full Name: CHLODNICKI ADAM IV

Bus. Telephone: ( ) | Street/R.F.D.: 521 WALDEN CREEK WAY

Contributed To Collision: No | City, State, & Zip: GREENVILLE SC 29615

Estimated Speed: 0 | Speed Limit: 35 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes

Summons #: | Code: | Summons #: | Code: | Towed: Yes

Driver/Pedestrian's Full Name

Unit # | # Occ | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Class | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed: Yes No

Owner/Pedestrian's Full Name

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed: Yes No

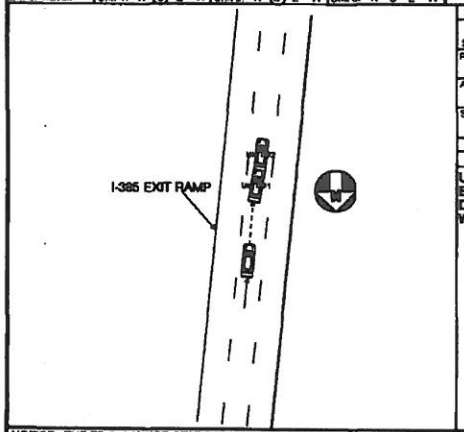
Direction of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$1000	$1000	$	$	$

Property Owner/Witness | Address | City | State | Zip | Phone

Property Owner/Witness | Address | City | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)



UNITS #1 AND #2 WERE TRAVELING SOUTH ON THE I-385 EXIT RAMP. UNIT #2 STOPPED FOR OTHER TRAFFIC. THE DRIVER OF UNIT #1, DRIVING TOO FAST FOR CONDITIONS, WAS UNABLE TO STOP AND STRUCK THE REAR OF UNIT #2.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
BRADLEY - J H	CPL	A49	HP03	12-21-2010	WESLEY HIOTT	SGT	10GV123691

20100005705

Unit:	Date of Birth	Sex:	Race	INJ:	Seat:	R/SD	AUTO	Eject	LAI:	Trans:	Name	Street Address	Zip Code
01	10-17-1993	M	W	0	01	13	4	1	1	2	JULIAN MICHEAL ALEXA	137 FAIRGROUND RD SIMPSONVIL SC	296806806
02	12-01-1983	M	W	0	01	13	4	1	1	2	CHLODNICKADAM IV	521 WALDEN CREEK WAY GREENVILLE SC	29615

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0-Not Injured; 1-Possible injury; 2-Non-incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20-Pedestrian; 30-Trashing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nontrailing); 61-Other Unenclosed Area (nontrailing); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 80-Lap; 90-Unk./NA

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 99-Other; 99-Unk.

Pedestrian, Motor/Pedalcycle Only: 21-Helmet; 61-Reflective Clothing; 41-Protective Pads; 81-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk. | b) 1-Switch In On Position; 2-Switch In Off Position; 3-No Switch; 9-Unknown

Ejection: 1-Not Ejected; 2-Part. Ejected; 3-Tot. Ejected; 7-Not App; 9-Unk.

Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

Head Injury: 1-Yes; 2-No

a) Transported to Medical Facility: 1-Yes; 2-No; 3-Unknown

b) By: 1-EMS; 2-Police; 8-Other; 9-Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4
22	1	1	1
22	2	2	2
3	3	3	3

Most Harmful Event: 22

1st Harmful Event: 22

Non-Collision: 01-Cargo/Equip Loss or Shift; 02-Cross Median/Centerline; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Overturn/Rollover; 09-Ran off Road Left; 10-Ran off Road Right; 11-Separation of Units; 12-Spill (non-cargo); 13-Other Non-collision; 19-Unk. Non-collision

Collision: Not Fixed: 20-Animal (Ridden); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 26-Pedalcycle; 27-Pedestrian; 28-Railway Veh; 29-Work Zone Maint. Equip; 30-Other Movable Object; 39-Unk. Movable Object

Collision: Fixed Object: 40-Bridge Overhead Structure; 41-Bridge Pier or Abutment; 42-Bridge Parapet End; 43-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Equipment; 49-Fence; 50-Guardrail End; 51-Guardrail Face; 52-Highway Traffic Sign Post; 53-Impact Attenuator/Crash Cushion; 54-Light/Luminaire Support; 55-Mail Box; 56-Median Barrier; 57-Overhead Sign Support; 58-Other (Post, Pole, Support, Etc.); 59-Other (Wall, Building, Tunnel, Etc.); 60-Tree; 61-Utility Pole; 62-Work Zone Maint. Equipment; 69-Other; 99-Unk.

Manner of Collision (Struck Veh.): 1 - 00-Not Coll. w/ Motor Veh.; 2 - 10-Rear End; 3 - 20-Head On; 30-Rear-to-Rear; 41-Angle; 42-Angle; 43-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir; 70-Backed Into; 99-Unknown

1st / Most Deformed Area: 1st Deformed: 1 | 27 | 3; Most Deformed: 1 | 27 | 3

21-Pedestrian; 81-None; 82-Rollover; 83-Total; 84-Under Carriage; 89-Other; 99-Unk.

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 26-Motorcycle; 27-Pedalcycle; 28-Motorcycle; 29-Animal Drawn Veh; 30-Animal (Ridden); 31-Pedestrian; 81-Train; 82-Passenger Bus; 88-Other; 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Military; 06-Transport Passengers; 07-Transport Property; 08-Fire Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 41-Pedestrian

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Cowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Alc Test Results: A1- ; A2- ; A3- ; 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 8-Other

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other; 0-None/Minor; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk.

Special Use Only

1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV in Transport; 5-Over-Other Vehicle; 9-Unk.

Underride/Override

Extent of Deformity

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other

1st Harmful Event Loc: 1-On Roadway; 2-Shoulder; 3-Median; 4-Roadside; 5-Gore; 6-Separate Roadway; 7-Sidewalk; 8-Off Roadway; 9-Unk.; X-Traffic Way; 1-Y 3-N 9-U

Road Character: 1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminants; 7-Water (Standing, etc.); 8-Other; 9-Unk.

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 03-Stop Sign; 04-Yield Sign; 05-Flashing Beacon; 06-School Zone; 07-Railroad Crossing; 08-None; 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 99-Unk.

School Bus Involved: 1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk.

Work Zone: 1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area; 1-Yes 2-No

Work Zone Location: 1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk.

Work Zone Type

Workers Present: 1-Yes 2-No

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights)

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk.

Primary Contributing Factors — Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 12-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper Lane Usage/Change; 19-Cell Phone; 20-Texting; 28-Other Improper Action; 29-Unk.

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i.e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W.; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc.; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 66-Under the Influence; 67-Other Person Under Influence

Environmental: 62-Obstruction; 63-Animal in Road; 64-Glare; 83-Weather Cond.; 88-Other; 89-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 85-Other; 89-Unk.

ORIGINAL

D.P.S. USE ONLY **10015088** | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1840 | Arrived 1902

Date 02-12-2010 | Time 1815 | County 23 | (1-) Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Collision Location (Rt. # / Name) 385 | (0-) Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | Miles: 8 | Dir. N E S W | In / Near City or Town: GREENVILLE

Lane # / Dir. 1 / 6 S | Of N E S W | Distance Offset .01 Miles Feet N E S W | Direction (1-) Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name) From 85 | (0-) Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid

R.R. Id. N/A | From N E S W 1- Entrance 2- Exit | Ramp Only | To N E S W 1- Interstate 2- US Primary 3- SC Primary | (4-) Secondary 5- County 6- Other | Toward Second Intersection (Rt. # / Name) 193 | (0-) Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | Latitude 34 ° 49 ' 28.50 | Longitude 82 ° 17 ' 34.60

B-700573

Driver/Pedestrian's Full Name: BLEDSOE- DARIN MICKEAL

Unit # 1 | Sex M | Race B | Street/R.F.D. 400 GOLDEN PAINT WAY | Birth Date 02-06-1991 | City, State, & Zip SIMPSONVILLE, SC 29680

State SC | Driver's License # 101173238 (D) | Insurance Company USAA

Year 1998 | Body 4S | Vehicle Make HOND | VIN # 1YVGF22C1W5718999

State SC | Year 2010 | License Plate # 351LDD | Owner's D.L. # N/A

Home Telephone 864) 228- 0177 | Owner's Full Name BLEDSOE- LOUIS MICKEAL

Bus. Telephone 864) 296- 3016 | Street/R.F.D. 400 GOLDEN PAINT WAY

Contributed To Collision Yes (No) | City, State, & Zip SIMPSONVILLE, SC 29680

Estimated Speed 5 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # N/A | Code | Summons # | Code | Towed By N/A

B-700574

Driver/Pedestrian's Full Name: HALLWAY- JEREMY FOSTER

Unit # 2 | Sex M | Race W | Street/R.F.D. 1005 DAVENPORT ROAD | Birth Date 12-09-1979 | City, State, & Zip SIMPSONVILLE, SC 29680

State SC | Driver's License # 00757096O (D) | Insurance Company STATE FARM

Year 2002 | Body 4S | Vehicle Make PONT | VIN # 2G2WP552561107429

State SC | Year 2010 | License Plate # GWQ 878 | Owner's D.L. # 00757096O (D)

Home Telephone 864) 877-1946 | Owner's Full Name HALLWAY- JEREMY FOSTER

Bus. Telephone 864) 862-2379 | Street/R.F.D. 1005 DAVENPORT ROAD

Contributed To Collision (No) | City, State, & Zip SIMPSONVILLE, SC 29680

Estimated Speed 30 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # E0871648 | Code 21 | Summons # N/A | Code | Towed By N/A

B-700575

Driver/Pedestrian's Full Name: N/A

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

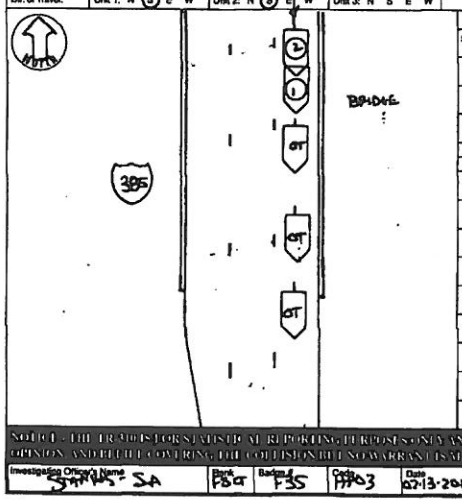
Home Telephone ( ) | Owner's Full Name FEB 23 2010

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000.-	$ 2500.-	$	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

WITNESS #1 AND #2 WERE BOTH TRAVELING SOUTH ON I-385. UNIT #1 SLOWED FOR OTHER TRAFFIC. THE DRIVER OF UNIT #2, DRIVING TOO FAST FOR CONDITIONS, STRUCK UNIT #1 IN THE REAR END WITH THE FRONT END OF UNIT #2.

NOTICE - THE INFORMATION CONTAINED IN THIS REPORT IS ONLY AN ESTIMATION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: STARNES- SA | Dept. PSC | Badge # 735 | Code 11103 | Date 02-13-2010 | Reviewer's Name: STARNES- SA | Dept. PSC | Internal Agency Code 10GJ015696

Unit	Date of Birth	Sex	Race	Inj	Seat	R/S/D	A.B.D.	Eject	Lal	Tran	Name	Street Address	Zip Code
1	02-06-1991	M	B	O	01	13	4	1	1	2			
2	12-09-1979	M	W	O	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA; 81- Other Unenclosed Area (nontrailing)

Restraint/Safety Device: 00- None Used; 01- Child Safety Seat; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 03- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Cargo); 13- Spill (Hazardous Cargo); 14- Other Non-collision; 15- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Motorized Unit); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Equipment; 48- Fence; 49- Guardrail End; 50- Guardrail Face; 51- Highway Traffic Sign Post; 52- Impact Attenuator/Crash Cushion; 53- Mail Box; 54- Light/Luminaire Support; 55- Median Barrier; 56- Other Post, Pole, Support; 57- Overhead Sign Support; 58- Tree; 59- Utility Pole; 60- Other Fixed Object; 61- Unk.; 62- Work Zone Maint. Equipment; 63- Other (Wall, Building, Tunnel, Etc.)

Event 1: 22 | Event 2: 22 | Most Harmful Event: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 18- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 30- Bus; 31- Train; 41- Pedestrian; 99- Unk. (Hit and Run Only); 61- School Bus; 62- Passenger Bus; 63- Other

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Logging Trailer; B- Auxiliary Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Other; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 3

Test Type: 1- Urine; 2- Breath (Alc. Only); 3- Blood; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 8- Unk.

Underride/Override: 6

Extent of Deformity: 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

Work Zone Type:

1- Yes 2- No Workers Present:

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 49- Other; 99- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 59- Other; 89- Unk.

Environmental: 60- Animal in Road; 61- Glare; 65- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 85- Other; 89- Unk.

Others: 67- Other Person Under the Influence

ORIGINAL

JUL 09 2010

O.P.S. USE ONLY: 10072085 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT - RM TR 310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1315 | Arrived: 1320

Date: 07-02-2010 | Time: 1310 | County: 23 | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County | Collision Location (Rt. # / Name): 385 | 6-Main 7-Business 8-Connection 5-Spur | Miles: 1.0 | Dir. N E S W | Mile/Near City or Town of: Greenville

Lane # / Dir.: 2 | Of: 3 | N E S W | Distance Offset: .05 Miles Feet | Direction: N E S W | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 8-Other | Base Intersection (Rt. # / Name): From 85 | 6-Main 7-Business 8-Connection 5-Spur | ASRU code | MP/Grid | Latitude: 34 49 32.30

R.R. Id.: N/A | From: N E S W | Ramp Only: 1-Entrance 2-Exit | To: N E S W | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 8-Other | Second Intersection (Rt. # / Name): Toward 146 | 6-Main 7-Business 8-Connection 5-Spur | Longitude: 82 17 33.70

B-718348 | Driver/Pedestrian's Full Name: CHAVEZ-EDGAR

Unit #: 1 | Sex: M | Race: H | Street/R.F.D.: 2 Belgrade DR | Birth Date: 06-10-1991 | City, State, & Zip: Greenville SC 29615 | State: SC | Driver's License #: 101918273 (D) | Insurance Company: Travelers | Year: 1996 | Body: PU | Vehicle Make: TOYT | VIN #: JT4TN12D7T0019847 | State: SC | Year: 2010 | License Plate #: CTK290 | Owner's D.L. #: N/A | Home Telephone: 864 201-3362 | Owner's Full Name: CHAVEZ-PORFIRIO | Bus. Telephone: 864 201-3362 | Street/R.F.D.: 2 Belgrade DR | Contributed To Collision: No | City, State, & Zip: Greenville SC 29615

Estimated Speed: 10 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: E 4001179 | Code: 27 | Summons #: N/A | Code: | Towed By: N/A

B-718349 | Driver/Pedestrian's Full Name: WADDELL-PATSY KAY

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 330 Westmoreland Rd | Birth Date: 09-15-1969 | City, State, & Zip: Woodruff SC 29388 | State: SC | Driver's License #: 085752945 (D) | Insurance Company: Nationwide | Year: 2000 | Body: YDE | Vehicle Make: CHEV | VIN #: 2GWH55K7Y9240358 | State: SC | Year: 2010 | License Plate #: CWF308 | Owner's D.L. #: N/A | Home Telephone: 864 476-0191 | Owner's Full Name: WADDELL-JOEY VAN | Bus. Telephone: 864 399-5886 | Street/R.F.D.: 330 Westmoreland Rd | Contributed To Collision: Yes (No) | City, State, & Zip: Woodruff SC 29388

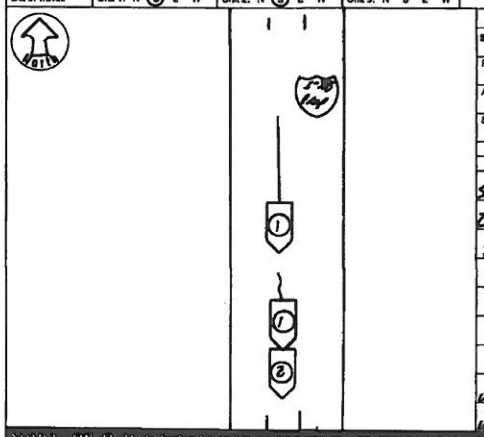
Estimated Speed: 0 | Speed Limit: 35 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: N/A | Code: | Summons #: N/A | Code: | Towed By: N/A

B-718350 | Driver/Pedestrian's Full Name:

Unit #: N/A | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip: | State: | Driver's License #: | Insurance Company: | Year: | Body: | Vehicle Make: | VIN #: | Home Telephone: ( ) | Owner's Full Name: | Bus. Telephone: ( ) | Street/R.F.D.: | Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: | Unit 1: N (E) S W | Unit 2: N (S) E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 500	$	$ N/A	$ N/A

Property Owner/Witness: N/A | Property Owner/Witness: N/A

Address: N/A | Address:

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number): Unit #2 was Southbound, and Unit #1 was Stopped Southbound E-385 Ramp to SC 146. Driver #2 Driving too Fast for Conditions Struck #2 center rear with center front.

Unit #1: 9BW16442110 11

Unit #2: 6139A027647

NOTICE - THE DATA FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RECITATION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: Moon. T.J | Badge #: 196 | Badge #: 1993 | Date: 7-02-2010 | Reviewer's Name: L.A. Wynn | Rank: Sgt. | Internal Agency Code: YCSO 2892

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	06-10-1991	M	H	0	01	13	Y	1	1	2			
1	09-06-1988	M	B	0	03	13	Y	1	1	2			
2	09-15-1969	F	W	0	01	13	Y	1	1	2			
2	07-08-1989	F	W	0	03	13	Y	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 30- Helmet; 31- Reflective Clothing; 40- Protective Pads; 51- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Trip (Non-Vehicle); 13- Other Non-Collision; 14- Unk. Non-collision

Collision: Not Fixed: 25- Pedestrian; 26- Railway Veh.; 27- Work Zone Maint. Equip.; 28- Other Moveable Object; 29- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Culvert; 44- Curb; 45- Ditch; 46- Embankment; 47- Guardrail End; 48- Impact Attenuator/Crash Cushion; 49- Bridge Parapet End; 50- Guardrail Face; 51- Highway Traffic Sign Post; 52- Light/Luminaire Support; 53- Motor Veh. (Parked); 54- Other Fixed Object; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Pole; 59- Other (Post, Pole, Support, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Deformed Area: 1st / Most Deformed; 1st Deformed; Most Deformed

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other Motorbike; 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Underride/Override: 0- None/Minor; 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 5- Not Applicable; 9- Unk.

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 12- Unknown

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 88- Other; 99- Unk.; 27- Working

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Traffic Flow: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 1- Not Divided; 2- Divided, Unprotected Median; 3- Divided, Barrier; 4- One-way; 5- Other

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Sand, Mud, Dirt, Oil, Gravel; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Officer or Flagman; 04- Oncoming Emergency Vehicle; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure

Work Zone Type: 1- Yes 2- No

Workers Present: 1- Yes 2- No

Primary: 03

Contributing Factors - Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 68- Under the Infl.; 69- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 65- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

JAN 20 2011

SOUTH CAROLINA DPS/OHS & DMV USE ONLY

10149700

Page # 1 Of 1

Of Units 02

Amended - Attach Copy of Original Report

Corrected

Notified 2024

Arrived 2028

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

20100100980

Date of Collision	Time of Collision	County	Collision Location (Rt. # / Name)	Main / Alternate / Spur	Connection / Business	Miles	Dir.	In Near City or Town of:
12-19-2010	2028	23	146/ WOODRUFF RD					GREENVILLE

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Lane # / Dir.	Distance Offset	Direction	Base Intersection (Rt # / Name)	Main / Alternate / Spur	Connection / Business
3	10 Miles Feet	N E S W	385		

GPS COORDINATES 00 00' 00.00" (DEGREES MINUTES SECONDS)

Latitude 34 49 27.52

Longitude 82 17 34.30

R.R. Id.	From	Ramp Only	To	Second Intersection (Rt. # / Name)	Main / Alternate / Spur	Connection / Business
	N E S W	1 - Entrance 2 - Exit	N E S W	/ SMITH HINES RD		

1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

E-055609

Driver/Pedestrian's Full Name: PINEIRO STEVEN DARREN

Unit #	Sex	Race	Street/R.F.D.
01	M	W	127 RIDGEWAY DR

# Occ	Birth Date	City, State, & Zip
1	10-03-1988	GREENVILLE SC 296073227

State	Driver's License #	Class	Insurance Company
SC	161848132	D	FEDERAL INS CO

Year	Body	Vehicle Make	VIN #
2003	TK	CHEV	1GCEK14T73Z136788

State	Year	License Plate #	Owner's D.L. #
SC	2011	FYS802	UNKNOWN

Owner's Full Name: EMERDYNE LTD.LLC

Home Telephone: (864) 5679950

Bus. Telephone: ( )

Street/R.F.D.: 127 RIDGEWAY DR

City, State, & Zip: GREENVILLE SC 29607

Contributed To Collision: Yes (No)

Estimated Speed	Speed Limit	C.D.L. Req.	T/S 5 Req.	Alc/Drg Info (see back):
45	45	Yes (No)	Yes (No)	Yes (No)

Summons #	Code	Summons #	Code	Towed	
				HALES (NOL)	(Yes) No

Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street/R.F.D.

# Occ	Birth Date	City, State, & Zip

State	Driver's License #	Class	Insurance Company

Year	Body	Vehicle Make	VIN #

E-055610

Driver/Pedestrian's Full Name: CAUTHEN DAVID EARL

Unit #	Sex	Race	Street/R.F.D.
02	M	W	103 CLANCY CT

# Occ	Birth Date	City, State, & Zip
1	10-26-1980	SIMPSONVILLE SC 296811901

State	Driver's License #	Class	Insurance Company
SC	008024858	D	SC FARM BUREAU

Year	Body	Vehicle Make	VIN #
2004	4S	TOYT	ATI@E32K94U917567

State	Year	License Plate #	Owner's D.L. #
SC	2011	DZA675	008024858

Owner's Full Name: CAUTHEN DAVID EARL

Home Telephone: (864) 8639215

Bus. Telephone: ( )

Street/R.F.D.: 103 CLANCY CT

City, State, & Zip: SIMPSONVILLE SC 296811901

Contributed To Collision: Yes (No)

Estimated Speed	Speed Limit	C.D.L. Req.	T/S 5 Req.	Alc/Drg Info (see back):
5	45	Yes (No)	Yes (No)	Yes (No)

Summons #	Code	Summons #	Code	Towed	
E753469	42			HOWARDS (NOL)	Yes (No)

Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street/R.F.D.

# Occ	Birth Date	City, State, & Zip

State	Driver's License #	Class	Insurance Company

Year	Body	Vehicle Make	VIN #

Owner's Full Name:

Street/R.F.D.:

City, State, & Zip:

Contributed To Collision: Yes No

Estimated Speed	Speed Limit	C.D.L. Req.	T/S 5 Req.	Alc/Drg Info (see back):
		Yes No	Yes No	Yes No

Summons #	Code	Summons #	Code	Towed	
					Yes No

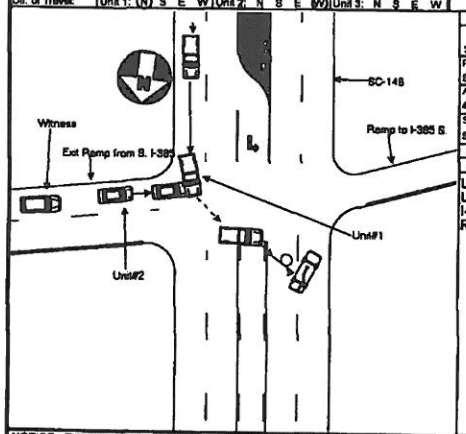
Dir. of Travel: Unit 1: (N) S E W Unit 2: N S E (W) Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$7000	$4000	$	$	$

Property Owner/Witness	Property Owner/Witness
STEVENS STACY	
Address: 405 PENOBSCOT CT	Address:
City: SIMPSONVI	City:
State: SC	Zip: 29681
Phone: 8642546223	Phone:

Photo: Y (N)

Describe What Happened (Refer to Units by Number)



UNIT#1 WAS TRAVELING NORTH ON SC-146 IN THE #3 LANE. UNIT #2 WAS TURNING LEFT FROM THE EXIT RAMP FROM I-385 SOUTH TO SC-146. DRIVER OF UNIT #2 DISREGARDED A RED LIGHT AND STRUCK UNIT#1 WITH UNIT#2.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
QUINN - M J	S/TRP	T786	HP03	12-28-2010	WESLEY HIOTT	SGT	10GV141347

20100100980

Unit	Date of Birth	Sex	Race	INJ:	Seat	R/SD	A.B.D.	Eject	LAI:	Tran:	Name	Street Address	Zip Code
01	10-03-1988	M	W	0	01	13	4	3 1	1	2	PINEIRO STEVEN DARRE	127 RIDGEWAY DR GREENVILLE SC	296073227
02	10-26-1980	M	W	0	01	13	1	3 1	1	2	CAUTHEN DAVID EARL	103 CLANCY CT SIMPSONVIL SC	296811901

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2-Non-Incapacitating; 3-Incapacitating; 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle: Head Injury 1-Yes 2-No

Seating Loc: 01 02 03 / 04 05 06 / 07 08 09; 20-Pedestrian; 30-Trailing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nontrailing); 61-Other Unenclosed Area (nontrailing); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 80-Lap; 99-Unk./NA

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 88-Other; 99-Unk.; Pedestrian, Motor/Pedalcycle Only: 31-Helmet; 41-Protective Pads; 51-Reflective Clothing; 61-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 8-Deployment Unk. b) 1-Switch in On Position; 2-Switch in Off Position; 3-No Switch; 8-Unknown

Ejection: 1-Not Ejected; 2-Part. Ejected; 3-Tot. Ejected; 7-Not App.; 9-Unk

Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown

b) By: 1-EMS 2-Police 8-Other 9-Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful
22				22
22	2	2	2	22
3	3	3	3	

Non-Collision: 01-Carpe/Equip Loss or Shift; 02-Cross Median/Center; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Overturn/Rollover; 09-Ran off Road Left; 10-Ran off Road Right; 11-Separation of Units; 12-Spill (Non-Motor Veh.); 13-Other Non-collision; 19-Unk. Non-collision

Collision: Hit Fixed Object: 40-Embankment; 41-Bridge Parapet End; 42-Bridge Pier or Abutment; 43-Bridge Rail; 44-Culvert; 45-Curb; 46-Ditch; 47-Fence; 48-Guardrail End; 49-Guardrail Face; 50-Mail Box; 51-Sign Support; 52-Highway Traffic Sign Post; 53-Impact Attenuator/Crash Cushion; 54-Light/Luminaire Support; 55-Median Barrier; 56-Overhead Sign Support; 57-Pedestrian; 58-Railway Veh.; 59-Work Zone Maint. Equip.; 60-Bridge Overhead Structure; 61-Tree; 62-Utility Pole; 63-Work Zone Maint Equipment; 64-Other Fixed Object; 65-Other (Post, Pole, Support, Etc.); 66-Other (Mail, Building, Tunnel, Etc.); 99-Unk.

Collision: Fixed Object: 26-Pedestrian; 27-Pedalcycle; 28-Railway Veh.; 29-Animal (Dom. Only); 30-Animal (All Other); 31-Work Zone Maint. Equip.; 32-Motor Veh. (In Transport); 33-Motor Veh. (Stopped); 34-Motor Veh. (Other Roadway); 35-Motor Veh. (Parked); 36-Unk. Mendtr Object; 37-Pedalcycle; 38-Other Movable Object; 39-Unk. Non-collision

Collision: Not Fixed: 01-Head On; 02-Rear-to-Rear; 03-Sideswipe Same Dir.; 04-Sideswipe Opposite Dir.; 05-Rear End; 06-Angle (↘↗); 07-Angle (→←); 08-Angle (↗↖); 09-Backed Into; 10-Other Non-collision; 11-Not Collision Between Two Vehicles

Manner of Collision (Struck Veh.): 1-Not Coll. w/ Motor Veh.; 2-Head On; 3-Rear End; 4-Angle; 5-Sideswipe Same Dir.; 6-Sideswipe Opposite Dir.; 7-Backed Into; 8-Other; 9-Unknown

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 04-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 28-Animal Drawn Veh.; 29-Animal (Ridden); 41-Pedestrian; 51-Train; 61-School Bus; 62-Passenger Bus; 98-Other; 99-Unk (Hit and Run Only)

Vehicle Use Code: 04-Ambulance; 05-Military; 06-Transport Passengers; 07-Transport Property; 08-Farm Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 18-Other; 41-Pedestrian

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Lowboy Trailer; B-Autocarrier Trailer; C-Other Trailer; D-Flat Bed; E-Twin Trailers; F-Other

Action Prior to Impact (Vehicle): 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 98-Other; 99-Unk.

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights)

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk

Primary Contributing Factors

Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 11-Aggressive Operation of Vehicle; 12-Over-correcting/Over-steering; 13-Swerving to Avoiding Object; 14-Wrong Side or Wrong Way; 15-Under the Influence; 16-Vision Obscured (Within Unit); 17-Improper lane Usage/Change; 18-Cell Phone; 19-Texting; 20-Other Improper Action; 21-Unk

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (i.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (i.e., Missing); 37-Work Zone (Const./Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W.; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 85-Under the Influence; 87-Other Person Under Influence

Environmental: 82-Obstruction; 83-Weather Cond; 88-Other; 89-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 89-Unk.

1st / Most Deformed Area

1st Deformed: 13 12 3

Most Deformed: 1 82 21 3

21-Pedestrian; 81-None; 82-Rollover; 83-Total; 84-Under Carriage; 88-Other; 99-Unk

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 8-Other

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other; 0-None/Minor; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk

Alc Test Results: A1- ; A2- ; A3-

Special Use Only

Underride/Override: 1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV in transport; 5-Over-Other Vehicle; 6-None; 9-Unk.

Extent of Deformity: 0-None/Minor; 1-Functional Damage; 2-Severe/Totaled; 3-Disabling Damage; 4-Not Applicable; 9-Unk

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other

Road Character: 1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk.

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 88-None; 89-Unk.

School Bus Involved: 1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk.

Work Zone: 1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area; 1-Yes 2-No

Work Zone Location: 1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk.

Work Zone Type

Workers Present: 1-Yes 2-No

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JAN 1 9 2011

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SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

Page # 1 Of 1 | # Of Units: 03 | Amended - Attach Copy of Original Report | Corrected | Notified: 2055 | Arrived: 2120

2010009968

Date	Time of Collision	County	Collision Location (Rt. # / Name)	Miles	In (Near) City or Town of
12-22-2010	2050	23	146/ WOODRUFF RD	.41	GREENVILLE

1- Interstate 4- Secondary | 2- US Primary 5- County | 3- SC Primary 8- PP

Main 4-Connection 7-Business | Alternate 5-Spur 8-Other

Lane # / Dir.: 1 | Of: 4 | N E S (W) | Distance Offset: .01 Miles Feet | Direction: N E S (W)

Base Intersection (Rt # / Name): From 385 RAMP 8914

GPS COORDINATES 00 00' 00.00" (DEGREES MINUTES SECONDS)

Latitude: 34 49 28.51

Longitude: 82 17 32.17

R.R. Id.: N/A | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6 - Other

Second Intersection (Rt. # / Name): Toward: 385 RAMP 8913

E-051033

Driver/Pedestrian's Full Name: TOLBERT KIM AILEEN

Unit # 01 | # Occ 2 | Sex: F | Race: W | Street/R.F.D.: 212 SQUIRES CREEK RD

Birth Date: 05-21-1968 | City, State, & Zip: SIMPSONVILLE SC 296817263

State: SC | Driver's License #: 007480316 | Class: D | Insurance Company: STATE FARM

Year: 2004 | Body: PK | Vehicle Make: FORD | VIN #: 1FTRW21P74EC61150

State: SC | Year: 2011 | License Plate #: FWI734 | Owner's D.L. #: 007480316

Home Telephone: (864) 5698697 | Owner's Full Name: TOLBERT KIM AILEEN

Bus. Telephone: (864) 7527420 | Street/R.F.D.: 212 SQUIRES CREEK RD

Contributed To Collision: Yes (No) | City, State, & Zip: SIMPSONVILLE SC 296817263

Estimated Speed: 0 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S 6 Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed: Yes (No)

E-051034

Driver/Pedestrian's Full Name: MILLER TIMOTHY GEORGE

Unit # 02 | # Occ 1 | Sex: M | Race: W | Street/R.F.D.: 4 PARKHAVEN WAY

Birth Date: 04-07-1970 | City, State, & Zip: GREENVILLE SC 296075485

State: SC | Driver's License #: 007745332 | Class: D | Insurance Company: ALLSTATE

Year: 2004 | Body: 4S | Vehicle Make: KIA | VIN #: KNAGD128648297325

State: SC | Year: 2011 | License Plate #: EA269 | Owner's D.L. #: 007745332

Home Telephone: (864) 6270725 | Owner's Full Name: MILLER TIMOTHY GEORGE

Bus. Telephone: (864) 3630740 | Street/R.F.D.: 4 PARKHAVEN WAY

Contributed To Collision: Yes (No) | City, State, & Zip: GREENVILLE SC 296075485

Estimated Speed: 5 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S 5 Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed: QUALITY NOL

E-051035

Driver/Pedestrian's Full Name: WOODS FRED WALLACE

Unit # 03 | # Occ 1 | Sex: M | Race: B | Street/R.F.D.: 1105 PENDLETON ST

Birth Date: 11-05-1969 | City, State, & Zip: GREENVILLE SC 296812318

State: GA | Driver's License #: 055553032 | Class: C | Insurance Company: SAFE AUTO

Year: 2010 | Body: 4S | Vehicle Make: TOYT | VIN #: 4T1BF3EK3AU016413

Dir. of Travel: Unit 1: N S (E) W | Unit 2: N S (E) W | Unit 3: N S (E) W

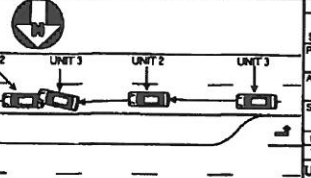
Home Telephone: (864) 4643161 | Owner's Full Name: WOODS FRED WALLACE

Bus. Telephone: (864) 2985111 | Street/R.F.D.: 1105 PENDLETON ST

Contributed To Collision: (Yes) No | City, State, & Zip: GREENVILLE SC 296012318

Estimated Speed: 20 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S 5 Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E791521 | Code: 21 | Summons #: N/A | Code | Towed: (Yes) No: TOYT GVILLE OR



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$1000	$4500	$3300	N/A	N/A

Property Owner/Witness | Address | City | State | Zip | Phone

Property Owner/Witness | Address | City | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

UNITS 1, 2, AND 3 WERE TRAVELING EAST ON SC 146. THE DRIVER OF UNIT 1 STOPPED BEHIND OTHER TRAFFIC. THE DRIVER OF UNIT 2 WAS STOPPING BEHIND UNIT 1. THE DRIVER OF UNIT 3 WAS DRIVING TOO FAST FOR THE CONDITIONS AND STRUCK UNIT 2 IN THE REAR. THIS COLLISION PUSHED UNIT 2 INTO THE REAR OF UNIT 1.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
WARDLAW - J C	L/CPL.	T842	HP03	12-28-2010	WESLEY HIOTT	SGT	10GV142768

2010009968

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A B D	Eject	Ext	Trap	Name	Street Address	Zip Code
01	05-21-1968	F	W	0	01	13	4 3 1	1	1	2	TOLBERT KIM AILEEN	212 SQUIRES CREEK RD SIMPSONVIL SC	296817263
02	04-07-1970	M	W	0	01	13	4 3 1	1	1	2	MILLER TIMOTHY GEOR	4 PARKHAVEN WAY GREENVILLE SC	296075485
03	11-05-1969	M	B	0	01	13	4 3 1	1	1	2	WOODS FRED WALLA	1105 PENDLETON ST GREENVILLE SC	296812318
01	03-27-2002	F	W	0	04	13	7 3 1	1	1	2			

Race: A - Asian/Pacific Islander | B - African American | H - Hispanic | I - Alaskan Native or American Indian | W - Caucasian | O - Other | U - Unk

a) Injury Status: 1-Not Injured | 2-Non-incapacitating | 3-Incapacitating | 4-Fatal

b) 2 or 3 Wheel Motorized Vehicle: Helmet Usage 1-Yes 2-No

Seating Loc.: D1 02 03 | 04 05 06 | 07 08 09

20-Pedestrian | 30-Trailing Unit | 40-Bus or Van (4th row or Higher) | 50-Other Enclosed Area (nontrailing) | 81-Other Unenclosed Area (nontrailing) | 60-Sleeper of Cab | 70-Riding on Unit Exterior | 80-Lap | 99-Unk./NA

Restraint/Safety Device: 00-None Used | 11-Shoulder belt | 12-Lap Belt Only | 13-Shoulder & Lap Belt | 21-Child Safety Seat | 88-Other | 99-Unk. | 31-Helmet | 51-Reflective Clothing | 41-Protective Pads | 61-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front | 2-Deployed Side | 3-Deployed Both | 4-Not Deployed | 7-Not Applicable | 9-Deployment Unk. | b) 1-Switch in On Position | 2-Switch in Off Position | 3-No Switch | 9-Unknown

Ejection: 1-Not Ejected | 2-Part. Ejected | 3-Tot. Ejected | 7-Not App. | 9-Unk.

Head Injury: 1-Yes | 2-No

Location After Impact: 1-Not Trapped | 2-Extricated (Mechanical Means) | 3-Freed (non-mech.) | 4-Not Applicable | 9-Unknown

Transported to Medical Facility: a) 1-Yes | 2-No | 3-Unknown | b) By: 1-EMS | 2-Police | 8-Other | 9-Unk.

Pedestrian, Motor/Pedalcycle Only

Sequence of Events

1	2	3	4	Most Harm
22				1st Harm: 22
22	23			
22				

Non-Collision: 01-Cargo/Equip Loss or Shift | 02-Crash Modifier/Carrier | 03-Downhill Runaway | 04-Equipment Failure | 09-Immersion | 07-Jackknife | 08-Fire/Explosion | 09-Other/Unknown

Collision: Not Fixed: 20-Pedestrian | 21-Animal (All Other) | 22-Motor Veh. (In Transport) | 23-Motor Veh. (Stopped) | 24-Motor Veh. (Other Parallelway) | 25-Motor Veh. (Parked) | 26-Pedalcycle | 27-Railway Veh. | 28-Non-1 Zone Maint. Equip. | 29-Other Movable Object | 30-Unk. Movable Object

Collision: Fixed Object: 41-Embankment | 42-Equipment | 43-Fence | 44-Guardrail End | 45-Guardrail Face | 46-Highway Traffic Sign Post | 47-Mail Box | 48-Other | 49-Bridge Overhead Structure | 50-Bridge Pier or Abutment | 51-Bridge Rail | 52-Bridge Support | 53-Culvert | 54-Light/Luminaire Support | 55-Median Barrier | 56-Other (Post, Pole, Support, Etc.) | 57-Overhead Sign Support | 58-Other (Wall, Building, Tunnel, Etc.) | 59-Tree | 61-Utility Pole | 62-Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 1-Not Coll. w/ Motor Veh. | 2-Rear End | 3-Head On | 30-Rear-to-Rear | 41-Angle | 42-Angle | 43-Angle | 50-Sideswipe Same Dir. | 60-Sideswipe Opposite Dir. | 70-Backed Into | 99-Unknown

1st / Most Deformed Area

1st Deformed: 17 | 27 | 31 | Most Deformed: 17 | 21 | 31

Vehicle Type: 11-Full Size Van | 12-Pickup Truck | 13-Truck Tractor | 14-Other Truck | 15-Full Size Van | 16-Mini Van | 17-Sport Utility | 18-Other Motorbike | 27-Pedalcycle | 28-Motorcycle | 29-Other | 31-Tram | 61-School Bus | 62-Passenger Bus | 69-Other | 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal | 02-Driver Training | 03-Construction/Maint | 04-Ambulance | 05-Military | 06-Transport Passengers | 07-Transport Property | 08-Farm Use | 09-Wrecker or Tow | 10-Police | 11-Government | 12-Fire Fighting | 13-Logging | 14-Other | 41-Pedestrian | 99-Unk.

Vehicle Attachment: 1-None | 2-Mobile Home | 3-Semi-Trailer | 4-Utility Trailer | 5-Farm Trailer | 7-Camper Trailer | 8-Towed Motor Vehicle | 9-Petroleum Tanker | A-Lowboy Trailer | B-Autocarrier Trailer | C-Other Tanker | D-Flat Bed | E-Twin Trailers | F-Other

Alc. Test Results: A1- | A2- | A3-

Drug Results: 1-Amphetamines | 2-Cocaine | 3-Marijuana | 4-Opiates | 5-PCP | 8-Other | 0-None/Minor | 1-Functional Damage | 2-Disabling Damage | 4-Severe/Totaled | 5-Not Applicable | 9-Unk.

Alcohol / Drug Test Given: 1-Given - Known Results | 2-Given - Unusable | 3-Given - Pending | 4-None | 5-Refused

Test Type: 1-Breath (Alc Only) | 2-Blood | 3-Urine | 4-Serum | 5-Other

Special Use Only

Underride/Override

1-Under-Compartment Intrusion | 2-Under-No Intrusion | 3-Under-Unknown | 4-Over-MV in Transport | 5-Over-Other Vehicle | 8-None | 9-Unk.

Extent of Deformity: 0-None/Minor | 1-Functional Damage | 2-Disabling Damage | 3-Severe/Totaled | 4-Unk. | 5-Not Applicable

Action Prior to Impact (Vehicle): 01-Backing | 02-Changing lanes | 03-Entering traffic lane | 04-Leaving traffic lane | 05-Making U-turn | 06-Movements Essentially Straight Ahead | 07-Overtaking/passing | 08-Parked | 09-Slowing or Stopped in traffic | 10-Turning left | 11-Turning right | 88-Other | 99-Unk.

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle | 22-Entering/Crossing Location | 23-Playing/Working on Vehicle | 24-Pushing Vehicle | 25-Standing | 26-Walking, Playing, Cycling | 27-Working

Weather Condition: 1-Clear (no adverse conditions) | 2-Rain | 3-Cloudy | 4-Sleet, Hail | 5-Snow | 6-Fog, Smog, Smoke | 7-Blowing Sand, Oil, Dirt or Snow | 8-Severe Crosswinds | 9-Unk

Light Condition: 1-Daylight | 2-Dawn | 3-Dusk | 4-Dark (Lighting Unspecified) | 5-Dark (Street Lamp Lit) | 6-Dark (Street Lamp Not Lit) | 7-Dark (No lights)

Junction Type: 01-Crossover | 02-Driveway | 03-Five/More Points | 04-Four-way Intersection | 05-Railway Grade Crossing | 07-Shared Use Paths or Trail | 08-T-Intersection | 09-Traffic Circle | 12-Y-Intersection | 13-Nonjunction | 99-Unk

Primary Contributing Factors: 03

Driver: 01-Disregarded Signs, Signals, Etc | 02-Distracted/Inattention | 03-Driving Too Fast for Conditions | 04-Exceeded Authorized Speed Limit | 05-Failed to Yield Right of Way | 06-Ran off Road | 07-Fatigued/Asleep | 08-Followed Too Closely | 09-Made an Improper Turn | 10-Medical Related | 12-Aggressive Operation of Vehicle | 13-Over-correcting/Over-steering | 14-Swerving to Avoiding Object | 15-Wrong Side or Wrong Way | 16-Under the Influence | 17-Vision Obscured (Within Unit) | 18-Improper lane Usage/Change | 19-Cell Phone | 20-Texting | 28-Other Improper Action | 29-Unk.

Roadway: 30-Debris | 31-Non-Highway Work | 32-Obstruction in Roadway | 33-Road Surface Condition (Ice, Wet) | 34-Rut, Holes, Bumps | 35-Shoulders (None, Low, Soft, High) | 36-Traffic Control Device (I.e., Missing) | 37-Work Zone (Const./Maint./Utility) | 38-Worn, Travel-Polished Surface | 48-Other | 49-Unk.

Non-Motorist: 50-Inattentive | 51-Lying &/or Illegally in Roadway | 52-Failure to Yield R. of W | 53-Not Visible (Dark Clothing) | 54-Disregard Signs, Signals, Etc. | 55-Improper Crossing | 56-Darting | 57-Wrong Side of Road | 58-Other | 59-Unk. | 68-Under the Influence | 67-Other Person Under Influence

Environmental: 80-Animal in Road | 81-Glare | 82-Obstruction | 83-Weather Cond. | 88-Other | 89-Unk.

Vehicle Defect: 70-Brakes | 71-Steering | 72-Power Plant | 73-Tires/Wheel | 74-Lights | 75-Signals | 76-Windows/Shield | 77-Restraint System | 78-Truck Coupling | 79-Cargo | 80-Fuel System | 88-Other | 89-Unk.

Traffic Control Type: 01-Stop and Go Light | 02-Flashing Traffic Signal | 11-RR (X-bucks, Lights & Gates) | 12-RR (X-bucks & Lights) | 13-RR (X-bucks Only) | 21-Officer or Flagman | 22-Oncoming Emergency Vehicle | 31-Pavement Markings (only) | 41-Stop Sign | 42-School zone Sign | 43-Yield Sign | 44-Work Zone | 45-Other Warning Signs | 51-Flashing Beacon | 88-None | 99-Unk

Trafficway: 1-Two-way, Not Divided | 2-Two-way, Divided, Unprotected Median | 3-Two-way, Divided, Barrier | 4-One-Way | 8-Other

Road Character: 1-Straight - Level | 2-Straight - On grade | 3-Straight - Hillcrest | 4-Curve - Level | 5-Curve - On grade | 6-Curve - Hillcrest

Road Surface Condition: 1-Dry | 2-Wet | 3-Snow | 4-Slush | 5-Ice | 6-Contaminate | 7-Water (Standing, etc) | 8-Other | 9-Unk

School Bus Involved: 1-Yes, Directly | 2-Yes, Indirectly | 3-No | 9-Unk

Work Zone: 1-Before 1st Sign | 2-Advanced Warning Area | 3-Transition Area | 4-Activity Area | 5-Termination Area | 1-Yes 2-No

Work Zone Location: 1-Shoulder/Median Work | 2-Lane Shift/Crossover | 3-Intermittent/Moving Work | 4-Lane Closure | 5-Other | 9-Unk.

Work Zone Type

Workers Present: 1-Yes 2-No

ORIGINAL

JAN 07 2011

2010007075

SOUTH CAROLINA DPS/OHS & DMV USE ONLY: 10145462 | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

Of Units: 02 | Amended - Attach Copy of Original Report | Corrected | Notified: 2020 | Arrived: 2029

Date: 12-10-2010 | Time of Collision: 1900 | Class: 23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 8- PP)

Collision Location (Rt. # / Name): 5 / 146 / WOODRUFF RD | (1-Main 2-Alternate 5-Spur 6-Connection 7-Business) | Miles: .40 | Dir.: N E S W | In (Near) City or Town of: GREENVILLE

Lane # / Dir.: # 2 | Of 5 | N E S W

Distance Offset: .10 (Miles / Feet) | Direction: N E S W | (1-Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other)

Base Intersection (Rt # / Name): 385 | (1-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other)

GPS COORDINATES 00 00' 00 00" DEGREES MINUTES SECONDS: Latitude 34 40 25.89 | Longitude 82 17 33.11

R.R. Id.

From: Ramp Only | N E S W | 1 - Entrance 2 - Exit | N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6 - Other

To: Toward | Second Intersection (Rt. # / Name): / PARK WOODRUFF DR | (1-Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other)

Driver/Pedestrian

E-045996 | Driver/Pedestrian's Full Name: CLAVON PHILLIP BRANDON

Unit # 01 | # Occ 2 | Sex: M | Race: B | Street/R.F.D.: 741 WOODRUFF RD APT 2125

Birth Date: 09-10-1985 | City, State, & Zip: GREENVILLE SC 296076807

State: SC | Driver's License #: 011519737 | Class: D | Insurance Company: ALLSTATE

Year: 2003 | Body: 4D | Vehicle Make: CHEV | VIN #: 2G1WH52K239412017

State: SC | Year: 2010 | License Plate #: FPX214 | Owner's D.L. #: 011618756

Home Telephone: (478) 3420317 | Owner's Full Name: BEATY KATRINA NATISHA

Bus. Telephone: (864) 4213763 | Street/R.F.D.: 1733 EAGLES PLACE APT A203

Contributed To Collision: Yes / No | City, State, & Zip: ROCK HILL SC 29732

Estimated Speed: 46 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S 5 Req. Yes (No) | Alc/Drg Info (see back). Yes (No)

Summons # | Code | Summons # | Code | Towed: Yes (No)

Driver/Pedestrian

E-045997 | Driver/Pedestrian's Full Name: EDWARDS JONATHAN PAUL

Unit # 02 | # Occ 1 | Sex: M | Race: W | Street/R.F.D.: 202 COLE RD

Birth Date: 09-24-1974 | City, State, & Zip: GREENVILLE SC 296115516

State: SC | Driver's License #: 004182130 | Class: D | Insurance Company: NONE

Year: 2004 | Body: PK | Vehicle Make: NISS | VIN #: 1N6ED26Y54C480808

State: PA | Year: 2010 | License Plate #: YYF7208 | Owner's D.L. #: 004182130

Home Telephone: (864) 9780038 | Owner's Full Name: EDWARDS JONATHAN PAUL

Bus. Telephone: ( ) | Street/R.F.D.: 202 COLE RD

Contributed To Collision: (Yes) / No | City, State, & Zip: GREENVILLE SC 296115516

Estimated Speed: 10 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S 5 Req. Yes (No) | Alc/Drg Info (see back). Yes (No)

Summons # E784830 | Code 44 | Summons # E784832 | Code 17 | Towed: (Yes) No | COTHRANS OR

Driver/Pedestrian

Unit #: | # Occ: | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Class: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes / No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S 5 Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed: Yes No

Dir. of Travel: Unit 1: N S (E) W | Unit 2: N S E (W) | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000	$ 800	$	$	$

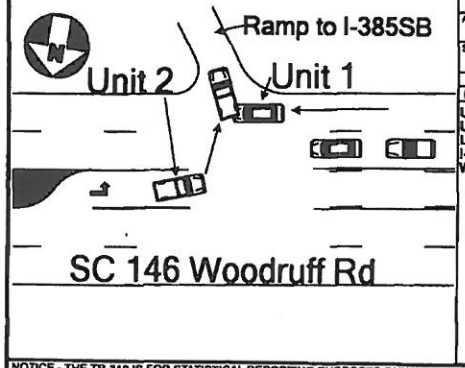
Property Owner/Witness | Address | City | State | Zip | Phone

Property Owner/Witness | Address | City | State | Zip | Phone

Photo: (Y) N

Describe What Happened (Refer to Units by Number)

UNIT 1 WAS TRAVELING EAST ON SC 146 WOODRUFF ROAD. UNIT 2 WAS TRAVELING WEST ON SC 146 WOODRUFF ROAD. UNIT 2, ATTEMPTING TO TURN LEFT ONTO THE RAMP TO I-385 SOUTHBOUND, FAILED TO YIELD RIGHT OF WAY AND WAS STRUCK BY UNIT 1.



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Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
GENCO - T J	S/TRP	T443	HP03	12-11-2010	WESLEY HIOTT	SGT	10GV137644

2010007075

Unit:	Date of Birth	Sex:	Race	INJ:	Seat:	R/SD	A B D	Eject.	LAI:	Trap:	Name	Street Address		Zip Code
01	09-10-1985	M	B	0	01	13	4 3	1	1	2	CLAVON PHILLIP BRAND	741 WOODRUFF RD APT	GREENVILLE SC	296076807
02	09-24-1974	M	W	0	01	13	4 3	1	1	2	EDWARDS JONATHAN PAUL	202 COLE RD	GREENVILLE SC	296115516
01	08-14-1986	F	B	1	03	13	4 3	1	1	1	8 BEATY KATRINA NATIS	2051 BLYTHEWOOD	BLYTHEWOO SC	29016

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, W - Caucasian, U - Unk.

a) Injury Status: 0-Not Injured, 1-Possible Injury, 2-Non-incapacitating, 3-Incapacitating, 4-Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20-Pedestrian, 30-Trailing Unit, 40-Bus or Van (4th row or Higher), 50-Other Enclosed Area (nontrailing), 51-Other Unenclosed Area (nontrailing), 60-Sleeper of Cab, 70-Riding on Unit Exterior, 80-Unk, 99-Unk/NA

Restraint/Safety Device: 00-None Used, 11-Shoulder belt, 12-Lap Belt Only, 13-Shoulder & Lap Belt, 21-Child Safety Seat, 66-Other, 99-Unk, Pedestrian, Motor/Pedalcycle Only: 31-Helmet, 41-Protective Pads, 51-Reflective Clothing, 61-Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front, 2-Deployed Side, 3-Deployed Both, 4-Not Deployed, 7-Not Applicable, 9-Deployment Unk. b) 1-Switch In On Position, 2-Switch In Off Posson, 3-No Switch, 9-Unknown

Ejection: 1-Not Ejected, 2-Part Ejected, 3-Tot. Ejected, 7-Not App., 9-Unk.

Head Injury: 1-Yes, 2-No

Location After Impact: 1-Not Trapped, 2-Extricated (Mechanical Means), 3-Freed (non-mech.), 4-Not Applicable, 9-Unknown

b) 2 or 3 Wheel Motorized Vehicle

a) Transported to Medical Facility: 1-Yes, 2-No, 3-Unknown

b) By: 1-EMS, 2-Police, 8-Other, 9-Unk

Sequence of Events

Non-Collision	Collision: Not Fixed	Collision: Fixed Object
01-Cargo/Equip Loss or Shift, 02-Cross Median/Center, 03-Downhill Runaway, 04-Equipment Failure, 05-Fire/Explosion, 06-Immersion, 07-Jackknife, 08-Overturn/Rollover, 09-Ran off Road Left, 10-Ran off Road Right, 11-Separation of Units, 12-Spill (Non-Hazmat Veh.), 13-Other Non-collision, 19-Unk. Non-collision	20-Animal (Deer Only), 21-Animal (All Other), 22-Motor Veh. (In Transport), 23-Motor Veh. (Stopped), 24-Motor Veh. (Other Roadway), 25-Motor Veh. (Parked), 26-Pedalcycle, 27-Pedestrian, 28-Railway Veh., 29-Work Zone Maint. Equip., 30-Other Moveable Object, 39-Unk. Moveable Object	40-Bridge Overhead Structure, 41-Bridge Parapet End, 42-Bridge Pier or Abutment, 43-Bridge Rail, 44-Culvert, 45-Curb, 46-Ditch, 47-Embankment, 48-Equipment, 49-Fence, 50-Guardrail End, 51-Guardrail Face, 52-Highway Traffic Sign Post, 53-Impact Attenuator/Crash Cushion, 54-Light/Luminaire Support, 55-Mail Box, 56-Median Barrier, 57-Overhead Sign Support, 58-Other (Post, Pole, Support, Etc.), 59-Other (Wall, Building, Tunnel, Etc.), 60-Tree, 61-Utility Pole, 62-Work Zone Maint. Equipment, 66-Other, 99-Unk.

Unit 1: 1st Harmful 22 | Unit 2: 1st Harmful 22 | Unit 3: 1st Harmful 22 | Unit 4: 1st Harmful 22

Manner of Collision (Truck Veh.): 00-Not Coll. w/ Motor Veh., 10-Rear End, 20-Head On, 30-Rear-to-Rear, 41-Angle, 42-Angle, 43-Angle, 50-Sideswipe Same Dir., 60-Sideswipe Opposite Dir., 70-Backed Into, 99-Unknown

1st / Most Deformed Area | 1st Deformed: 1 2 25 3 | Most Deformed: 1 2 25 3

Vehicle Type: 01-Automobile, 02-Pickup Truck, 03-Truck Tractor, 14-Other Truck, 15-Full Size Van, 16-Mini Van, 17-Sport Utility, 18-Limousine, 19-School Bus, 20-Transit Bus, 21-Intercity Bus, 22-Motorcycle, 23-Motor Scooter, 24-Motorized Bicycle, 25-Snowmobile, 26-Other Motorbike, 27-Pedalcycle, 28-Farm Equipment, 29-Unk. Heavy Equipment, 30-Fire Truck, 31-Ambulance, 32-Police, 33-Public Utility, 34-Other Emergency, 35-Construction, 36-Animal Drawn Veh., 37-Train, 38-Other, 39-Unk., 40-Pedestrian, 41-Pedalcyclist, 42-Railway Vehicle, 43-Other, 44-Unk., 45-Other Non-Motorist, 81-School Bus, 82-Passenger Bus, 83-Other, 84-Total, 85-Under Carriage, 86-Other, 99-Unk.

Special Use Only

Vehicle Use Code: 01-Personal, 02-Driver Training, 03-Construction/Maint., 04-Ambulance, 05-Military, 06-Transport Passengers, 07-Transport Property, 08-Farm Use, 09-Wrecker or Tow, 10-Police, 11-Government, 12-Fire Fighting, 13-Logging, 16-Other, 41-Pedestrian, 99-Unk. (Hit and Run Only)

Alcohol / Drug Test Given: 1-Given - Known Results, 2-Given - Unusable, 3-Given - Pending, 4-None, 5-Refused

Test Type: 1-Breath (Alc Only), 2-Blood, 3-Urine, 4-Serum, 5-PCP, 6-Other

Underride/Override: 1-Under-Compartment Intrusion, 2-Under-No Intrusion, 3-Under-Unknown, 4-Over-MV in transport, 5-Over-Other Vehicle, 6-None, 9-Unk.

Drug Results: 1-Amphetamines, 2-Cocaine, 3-Marijuana, 4-Opiates, 5-PCP, 6-Other

Extent of Deformity: 0-None/Minor, 1-Functional Damage, 2-Severe/Disabled, 3-Disabling Damage, 9-Unk, 5-Not Applicable

Vehicle Attachment: 1-None, 2-Mobile Home, 3-Semi-Trailer, 4-Utility Trailer, 5-Farm Trailer, 6-Trailer w/Boat, 7-Camper Trailer, 8-Towed Motor Vehicle, 9-Petroleum Tanker, A-Lowboy Trailer, B-Autocarrier Trailer, C-Other Tanker, D-Flat Bed, E-Two Trailers, F-Other

AIC Test Results: A1- | A2- | A3-

Action Prior to Impact (Vehicle): 01-Backing, 02-Changing lanes, 03-Entering traffic lane, 04-Leaving traffic lane, 05-Making U-turn, 06-Movements Essentially Straight Ahead, 07-Overtaking/passing, 08-Parked, 09-Slowing or Stopped in traffic, 10-Turning left, 11-Turning right, 88-Other, 99-Unk.

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle, 22-Entering/Crossing Location, 23-Playing/Working on Vehicle, 24-Pushing Vehicle, 25-Standing, 26-Walking, Playing, Cycling, 27-Working

Trafficway: 1-Two-way, Not Divided, 2-Two-way, Divided, Unprotected Median, 3-Two-way, Divided, Barrier, 4-One-Way, 8-Other

A: 1-One 2-Inland 4-Roadside 5-Median 6-Roadway 7-Shoulder 8-Outside Trafficway 9-Unk

B: X-walk: 1-Y 2-N; Y: 9th Harmful Event Loc: 5 | 2

Weather Condition: 1-Clear (no adverse conditions), 2-Rain, 3-Cloudy, 4-Sleet, Hail, 5-Snow, 6-Fog, Smog, Smoke, 7-Blowing Sand, Oil, Dirt or Snow, 8-Severe Crosswinds, 9-Unk

Road Character: 1-Straight - Level, 2-Straight - On grade, 3-Straight - Hillcrest, 4-Curve - Level, 5-Curve - On grade, 6-Curve - Hillcrest, 9-Unk

Light Condition: 1-Daylight, 2-Dawn, 3-Dusk, 4-Dark (Lighting Unspecified), 5-Dark (Street Lamp Lit), 6-Dark (Street Lamp Not Lit), 7-Dark (No lights)

Road Surface Condition: 1-Dry, 2-Wet, 3-Snow, 4-Slush, 5-Ice, 6-Contaminants, 7-Water (Standing, etc.), 8-Other, 9-Unk

Junction Type: 01-Crossover, 02-Driveway, 03-Five/More Points, 04-Four-way Intersection, 05-Railway Grade Crossing, 07-Shared Use Paths or Trail, 08-T-Intersection, 09-Traffic Circle, 12-Y-Intersection, 13-Nonjunction, 99-Unk.

Traffic Control Type: 01-Stop and Go Light, 02-Yield Sign, 03-Stop Sign, 04-Warn Zone, 05-Other Warning Signs, 06-Officer or Flagman, 07-Fl. Stop and Go Light, 08-Fl. Yield Sign, 09-Fl. Stop Sign, 10-Fl. Warn Zone, 11-RR (X-bucks, Lights & Gates), 12-RR (X-bucks & Lights), 13-RR (X-bucks Only), 14-Railroad Crossing Ahead, 15-Fl. Railroad Crossing Ahead, 16-Crossing Guard, 17-Fl. Crossing Guard, 18-Fl. Traffic Signal, 19-Traffic Signal, 20-Flashing Traffic Signal, 21-Officer or Flagman, 22-Oncoming Emergency Vehicle, 31-Pavement Markings (only), 41-Stop Sign, 42-School zone Sign, 43-Yield Sign, 44-Work Zone, 45-Other Warning Signs, 66-None, 99-Unk.

School Bus Involved: 1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk.

Work Zone: 1-Before 1st Sign; 2-Advance Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area; 1-Yes 2-No

Work Zone Location: 1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk

Work Zone Type

Workers Present: 1-Yes 2-No

Primary Contributing Factors: 05

Driver: 01-Disregarded Signs, Signals, Etc., 02-Distracted/Inattention, 03-Driving Too Fast for Conditions, 04-Exceeded Authorized Speed Limit, 05-Failed to Yield Right of Way, 06-Ran off Road, 07-Fatigued/Asleep, 08-Followed Too Closely, 09-Made an Improper Turn, 10-Medical Related, 11-Aggressive Operation of Vehicle, 12-Over-correcting/Over-steering, 13-Swerving to Avoiding Object, 14-Wrong Side or Wrong Way, 15-Under the Influence, 16-Vision Obscured (Within Unit), 17-Improper lane Usage/Change, 18-Cell Phone, 19-Texting, 20-Other Improper Action, 21-Unk.

Others: 30-Debris, 31-Non-Highway Work, 32-Obstruction in Roadway, 33-Road Surface Condition (i.e., Wet), 34-Rut, Holes, Bumps, 35-Shoulders (None, Low, Soft, High), 36-Traffic Control Device (i.e., Missing), 37-Work Zone (Const./Maint./Utility), 38-Worn, Travel-Polished Surface, 48-Other, 49-Unk.

Roadway: 50-Inattentive, 51-Lying &/or Illegally in Roadway, 52-Failure to Yield R. of W., 53-Not Visible (Dark Clothing), 54-Disregard Signs, Signals, Etc., 55-Improper Crossing, 56-Darting, 57-Wrong Side of Road, 58-Other, 59-Unk.

Non-Motorist: 60-Animals in Road, 61-Glare, 62-Obstruction, 63-Weather Cond., 66-Other, 69-Unk.

Environmental: 70-Brakes, 71-Steering, 72-Power Plant, 73-Tires/Wheel, 74-Lights, 75-Signals, 76-Windows/Shield, 77-Restraint System, 78-Truck Coupling, 79-Cargo, 80-Fuel System, 88-Other, 99-Unk.

Vehicle Defect

ORIGINAL

DEC 1 0 2010

O.P.S. USE ONLY 10134579 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 3/12/01) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 0725 | Arrived 0756

Day 17-16-2010 | Time 6700 | County 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name) 8 146 | 6- Main 7- Business 8- Connection 9- Other | Miles: 1 | Dir: N E S W | Near City or Town of: Greenville

Lane # / Dir. 3 5 | Distance Offset Miles / Feet 1 | Direction N E S W | Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From 385 | 6- Main 7- Business 8- Connection 9- Other | ASRU code | MP/Grid | Latitude 34° 49 1780 | Longitude 82° 17 1530

R.R. Id. N/A | From: NE SW Ramp Only 1- Entrance 2- Exit To: NE SW | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name) Toward 313 | 6- Main 7- Business 8- Connection 9- Other

B-571009

Driver/Pedestrian's Full Name: Shen-Connie Rock

Unit # 1 | Sex F | Race O | Street/R.F.D. 31 N Garden Cir | Birth Date 02-22-1994 | City, State, & Zip Greenville SC 29615

State SC | Driver's License # 102103685 (D) | Insurance Company Nationwide

Year 2010 | Body 4S | Vehicle Make Toyt | VIN # 1NXBU4EE1AZ184900

State SC | Year 2010 | License Plate # FVI 733 | Owner's D.L. # 102103685 (D)

Home Telephone (864) 430-2587 | Owner's Full Name Shen-Connie Rock

Bus. Telephone (864) 420-5451 | Street/R.F.D. 31 N Garden Cir.

Contributed To Collision: Yes | City, State, & Zip Greenville SC 29615

Estimated Speed 10 | Speed Limit 45 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # N/A | Code | Summons # | Code | Towed By N/A

B-571010

Driver/Pedestrian's Full Name: Davis-Wesley Adam

Unit # 2 | Sex M | Race W | Street/R.F.D. 11 Hawkins Glen Way | Birth Date 08-03-1975 | City, State, & Zip Greenville SC 29617

State SC | Driver's License # 004268839 (D) | Insurance Company State Farm

Year 2004 | Body Pk | Vehicle Make GMC | VIN # 1GTEK19T84E374772

State SC | Year 2011 | License Plate # BGG393 | Owner's D.L. # 004268839 (D)

Home Telephone (864) 346-8111 | Owner's Full Name Davis-Wesley Adam

Bus. Telephone ( ) N/A | Street/R.F.D. 11 Hawkins Glen Way

Contributed To Collision: Yes | City, State, & Zip Greenville SC 29617

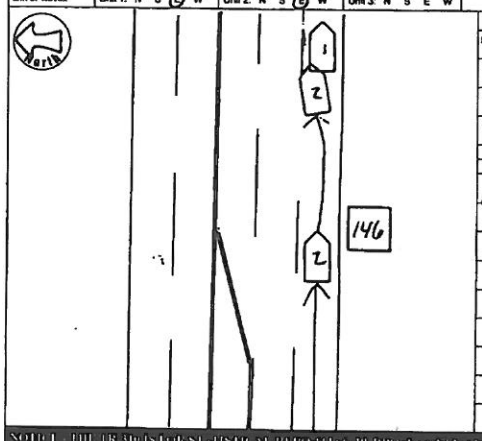
Estimated Speed 20 | Speed Limit 45 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # E782945 | Code 01 | Summons # N/A | Code | Towed By N/A

B-571011

Driver/Pedestrian's Full Name:

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision | City, State, & Zip | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3500	$ 2500	$ N/A	$ N/A	$ N/A

Property Owned/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y/N | Describe What Happened (Refer to Units by Number)

Units #1 and #2 were traveling east On SC-146. Unit #1 slowed for a traffic signal. Unit #2 was traveling too fast for conditions and struck Unit #1 in the rear

NOTICE: THE FACTS ON THIS FORM ARE FOR STATISTICAL REPORTING PURPOSES ONLY AND ARE SUBJECT TO REVISION. THE OFFICER'S INCLUSION OF ANY OPINION AND/OR FAULT COVERING THE COLLISION DOES NOT WARRANT OR STATE AS TO THE FAULT OF ANY PARTY.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Tyner Jon	TFC	281	HP03	11-16-2010	A. Wilson	Sgt	1064/127132

Unit	Date of Birth	Sex	Race	DU	Seat	Rest	A.S.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	02-22-1994	F	O	G	01	13	4:3	1	1	2			
2	08-03-1975	M	W	O	01	13	4:3	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Fixed (non-mech.); 4- Not Applicable; 9- Unknown

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Switch In On Position; 9- Switch In Off Position; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 90- Unk./NA

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 20- Child Safety Seat; 30- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 1- Yes 2- No 3- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9-Unk.

31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events: Unit 1: 1 2 3 4 | Unit 2: 1 22 2 22 3 4 | Most Harmful: 22

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 09- Immersion; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right; 08- Ran off Road Left; 11- Separation of Units; 12- Spill (Non-Hazmat Veh.); 13- Spill (Hazmat Veh.); 14- Other Non-Collision; 15- Unk. Non-Collision

Collision: Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 28- Railway Veh.; 21- Animal (All Other); 29- Work Zone Maint. Equip.; 22- Motor Veh. in Transport; 30- Other Moveable Object; 23- Motor Veh. (Shopping); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle

Collision: Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Equipment; 41- Bridge Parapet End; 50- Fence; 42- Bridge Pier or Abutment; 51- Guardrail End; 43- Bridge Rail; 52- Highway Traffic Sign Post; 44- Culvert; 53- Impact Attenuator/Crash Cushion; 45- Curb; 54- Light/Luminaire Support; 46- Ditch; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 1 2 3; Most Deformed: 1 2 3

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 06- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Oil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Not Lit); 6- Dark (No Lights); 7- Dark (Street Lamp Lit)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Roadway: 1- Straight - Level; 2- Straight - On Grade; 3- Curve - Level; 4- Curve - On Grade; 5- Curve - Hillcrest; 6- Curve - Hillcrest; Road Character: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.; Road Surface Condition: 2

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.; Traffic Control Type: 01

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.; School Bus Involved: 3

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No; Work Zone: 2

Work Zone Location:

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.; Work Zone Type:

1- Yes 2- No Workers Present:

Primary: 03

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Under the Influence; 15- Wrong Side or Wrong Way; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Cell Phone; 20- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Obstruction; 61- Animal in Road; 62- Weather Cond.; 63- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 75- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

Officer's:

ORIGINAL

DEC 07 2010

O.R.S. USE ONLY: 10132027 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1608 | Arrived 1635

Date 11-11-2010 | Time 1605 | County 23 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary | Collision Location (Rt. # / Name) S 146 | Main 6- Connection 2- Alternate 7- Business 5- Spur | Miles 1 | Dir. N E S W | Intersecting Road or Near City or Town of: Greenville

Lane # / Dir. 1 | Of 4 | N E S W | Distance Offset 101 Miles Feet | Direction N E S W | Interstate 4- Secondary US Primary 5- County SC Primary 6- Other | Base Intersection (Rt. # / Name) From 385 | Main 6- Connection 2- Alternate 7- Business 5- Spur 8- Other | ASRU code | MP/Grid | Latitude 34°49'48.80 | Longitude 82°17'10.02

R.R. Id. N/A | From Ramp Only To: N E 1- Entrance S W 2- Exit | Interstate 4- Secondary US Primary 5- County SC Primary 6- Other | Second Intersection (Rt. # / Name) Toward Smith Hines Rd. | Main 6- Connection 2- Alternate 7- Business 5- Spur 8- Other

B-572362

Driver/Pedestrian's Full Name: Lee- Lynda S.

Unit # 1 | Sex F | Race W | Street/R.F.D. 211 S. Craggmore. Dr. | Birth Date 05/31/1949 | City, State, & Zip Salem SC 29676

State SC | Driver's License # 003334023 (D) | Insurance Company Travelers

Year 2006 | Body SW | Vehicle Make STER | VIN # 5G2C2634X65810431

State SC | Year 2004 | License Plate # CRW307 | Owner's D.L. # 003334023 (D)

Home Telephone 864 710-6460 | Owner's Full Name Lee- Lynda S.

Bus. Telephone N/A | Street/R.F.D. 211 S. Craggmore Dr.

Contributed To Collision: Yes (No) | City, State, & Zip Salem SC 29676

Estimated Speed 15 | Speed Limit 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # N/A | Code | Summons # N/A | Code | Towed By N/A

B-572363

Driver/Pedestrian's Full Name: Quinn- Deborah A.

Unit # 2 | Sex F | Race W | Street/R.F.D. 4 Meadow Hill Way | Birth Date 04/02/1959 | City, State, & Zip Taylors SC 29687

State SC | Driver's License # 102545316 (C) | Insurance Company First National

Year 2001 | Body CA | Vehicle Make Toyt. | VIN # 2T1CF22P61C507597

State CT | Year 2010 | License Plate # 942 WLL | Owner's D.L. # 102545316

Home Telephone 860 849-1042 | Owner's Full Name Quinn Deborah A.

Bus. Telephone N/A | Street/R.F.D. 4 Meadow Hill Way

Contributed To Collision: Yes (No) | City, State, & Zip Taylors SC 29687

Estimated Speed 30 | Speed Limit 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # E605048 | Code 4 | Summons # N/A | Code | Towed By N/A

B-572364

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

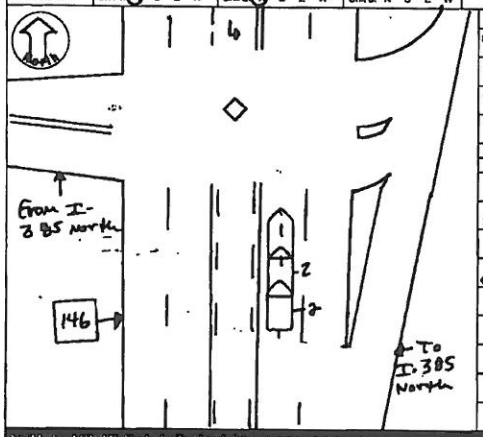
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 100.00	$ 2000.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Address | Property Owner/Witness: N/A | Address

State | Zip | Phone | State | Zip | Phone

Photos Y (N) | Describe What Happened (Refer to Units by Number)

unit's 1 and 2 were traveling north on SC-146. Driver of unit # 1 was stopping for a traffic signal. Driver of unit #2 driving too fast for condition & struck unit # 1 with unit #2.

NOTICE - THE REPORTS OR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COMPRISING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name: Quinn- M.J. | Shift: Strp | Badge #: 786 | Code: HP03 | Date: 11/11/2010 | Reviewer's Name: Stafford - T.J. | Rank: CPL. | Internal Agency Code: 108V125599

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	L/A/	Tran
1	05/31/1949	F	W	0	01	13	4	3	1	2
2	04/02/1959	F	W	0	01	13	4	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unit./N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Unknown; a) 1- Switch In On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown; b)

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1- Yes; 2- No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: a) 1- Yes; 2- No; 3- Unknown; b) By: 1- EMS 2- Police 9- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 32- Reflective Clothing; 41- Protective Pads; 81- Lighting

Sequence of Events: M = Up to 6 Non-Collision Events; C = Up to 4 Collision Events

Event	Event	Event	Event	Most Harmful
1st	1	1	1	22
2nd	2	2	2	
3rd	3	3	3	

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Attached Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 15- Pedalcycle; 16- Railway Veh.; 17- Work Zone Maint. Equip.; 18- Other Moveable Object; 19- Unk. Moveable Object; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedestrian

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Support; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Other Post, Pole, Support; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Deformed Area: 1st / Most: 1st Deformed | Most Deformed

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other Motorbike; 31- Animal Drawn Veh.; 32- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 19- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Other Trailer; 9- Towed Motor Vehicle; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary 05

Contributing Factors: Driver; Others:
01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Censr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alc Test Results: A1-; A2-; A3-

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk.

Underride/Override

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 9- Unk.; 5- Not Applicable

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

School Bus Involved:

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; Work Zone Location

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; Work Zone Type

1- Yes 2- No: Work Zone:

8- Other 9- Unk.: 1- Yes 2- No: Workers Present:

1st Harmful Event Loc.

ORIGINAL

NOV 12 2010

D.P.S. USE ONLY: 10125930 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Completed | Notified 1126 | Arrived 1215

Date 5/22/10 | Time 1120 | County 23 | Collision Location (Rt. # / Name) 385 | Miles: 4 | Dir. S | Near City or Town: Greenville

Lane # / Dir. 22 | Dir. S | Distance Offset 10 Feet | Direction S | Base Intersection (Rt. # / Name) 146 | ASRU code | MP/Grid | Latitude 34 49 27 80 | Longitude 82 17 28 80

R.R.Rd. N/A | From: Ramp Only 1 - Entrance 2 - Exit | To: 1 - Interstate 2 - US Primary 3 - SC Primary 4 - Secondary 5 - County 6 - Other | Second Intersection (Rt. # / Name) 564

B-040768 — Driver/Pedestrian's Full Name: SCHWARTZ, Milton H.

Unit # 1 | Sex M | Race W | Street/R.F.D. 2950 Windmill Dr. | Birth Date 0915-1988 | City, State, & Zip Sumter, SC 29150

State SC | Driver's License # 10025466969 (D) | Insurance Company Central Mutual

Year 2008 | Body SUV | Vehicle Make Chev | VIN # 1GNEC13088R201599

State SC | Year 2008 | License Plate # BLE370 | Owner's D.L. # 10025466969

Home Telephone 1803 236-3010 | Owner's Full Name Schwartz, Milton H.

Bus. Telephone ( ) NA | Street/R.F.D. 2950 Windmill Dr.

Contributed To Collision: Yes | City, State, & Zip Sumter SC 29150

Estimated Speed 20 | Speed Limit 60 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes | Summons # N/A | Code | Towed By N/A

B-040769 — Driver/Pedestrian's Full Name: Harvey, William B.

Unit # 2 | Sex M | Race W | Street/R.F.D. 45 50 Main St Apt A | Birth Date 0528-1951 | City, State, & Zip CLAY City, KY 40312

State KY | Driver's License # 1195-556-305 | Insurance Company Progressive

Year 2007 | Body Pickup | Vehicle Make PTRB | VIN # 1XPSD89X57N671893

State OK | Year 2007 | License Plate # 803-TDN | Owner's D.L. # N/A

Home Telephone 304 443-2017 | Owner's Full Name West Coast TRANS INC.

Bus. Telephone ( ) N/A | Street/R.F.D. 2938 W. ANDREW Johnson Hwy 205

Contributed To Collision: No | City, State, & Zip Morristown TN 37814

Estimated Speed 20 | Speed Limit 60 | C.D.L. Req: No | T/B S Req: Yes | Alc/Drg Info (see back): No | Summons # 266487 | Code 27 | Towed By N/A

B-040770 — Driver/Pedestrian's Full Name:

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By

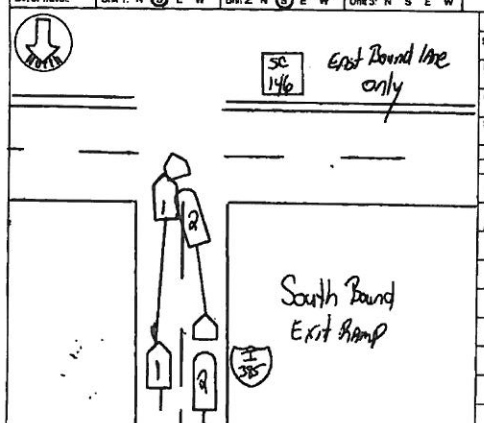
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500.00	$ 500.00	$	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and #2 were traveling on I-385 Exit Ramp to SC 146. Unit #2, changed lanes unlawfully and struck the right side of Unit #1.



NOTICE - THE DPS NOTATION IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OF ANY SUCH OPINION

Investigating Officer's Name | Rank | Badge # | Code | Date | Reviewed By | Rank | Internal Agency Code

Unit	Date of Birth	Sex	Race	INJ	Seat	R/BO	A.B.D.	Eject	Ext	Trap
1	07-15-1988	M	W	0	01	13	49	1	1	2
2	05-28-1951	M	W	0	01	13	49	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only: Head Injury: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 89- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 81- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 31- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Rail End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Other; 64- Tree; 65- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed | Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1-; A2-; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 9- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Tossed; 5- Not Applicable

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 1- Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Tossed; 5- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 85- None; 99- Unk.

School Bus Involved: 1- Yes; 2- No

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Location

Work Zone Type

1- Yes 2- No Workers Present:

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 9- Unk.

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.; 18- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Infl.; 87- Other Person Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

NOV 12 2010

D.P.S. USE ONLY: 10124522 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR 310 (Rev. 01/2010) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1013 | Arrived: 1023

Date: 10-16-2010 | Time: 1050 | County: 23 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary | Collision Location (Rt. # / Name): 8 146 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur | Miles: 1 | Dir. N E S W | Int'l Near City or Town of: Greenville

Lane # / Dir.: 1 | Dir.: S | Distance Offset: 50 Miles Feet | Direction: N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name): From 385 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur 8- Other | ASRU code | MP/Grid | Latitude: 34 49 27.10

R.R. Id.: N/A | From: Ramp Only N E S W | To: 1- Entrance 2- Exit N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Second Intersection (Rt. # / Name) Toward: 504 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur 8- Other | Longitude: 82 17 34.70

B-042730

Driver/Pedestrian's Full Name: Wallace-Christine

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 101 Beulah Ln

Birth Date: 07-02-1949 | City, State, & Zip: Fountain Inn SC 29644

State: SC | Driver's License #: 011731312 (D) | Insurance Company: Travelers

Year: 2008 | Body: CN | Vehicle Make: Pont | VIN #: 1G2ZH36N084284472

State: SC | Year: 2010 | License Plate #: AVC 990 | Owner's D.L. #: N/A

Home Telephone: 864862-0097 | Owner's Full Name: Wallace-Robert Deyarman

Bus. Telephone: ( ) N/A | Street/R.F.D.: 101 Beulah Ln

Contributed To Collision: Yes No | City, State, & Zip: Fountain Inn SC 29644

Estimated Speed: 0 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-042731

Driver/Pedestrian's Full Name: Eveit - Homer Eldon

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 11750 Fourth Ave

Birth Date: 12-02-1978 | City, State, & Zip: Punta Gorda FL 33955

State: FL | Driver's License #: E130 325 78 442-0 | Insurance Company: Allstate

Year: 2010 | Body: 4S | Vehicle Make: Hyun | VIN #: KMHDU4AD9AU977345

State: SC | Year: 2011 | License Plate #: EGN 199 | Owner's D.L. #: N/A

Home Telephone: 941 916-5114 | Owner's Full Name: Dollar Rent A Car

Bus. Telephone: ( ) N/A | Street/R.F.D.: 2479 S. Highway 17

Contributed To Collision: Yes No | City, State, & Zip: Casey SC 29550

Estimated Speed: 15 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: ET52504 | Code: 21 | Summons # | Code | Towed By: N/A

B-042732

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 5000	$	$ N/A	$ N/A

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 and 2 were traveling east on SC-146. Unit #1 was stopped for traffic. Driver of Unit #2 too fast for conditions & struck Unit #1

NOTICE: THE REPORTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Atkins - J.K. | Rank: TPC | Badge #: 920 | Code: HP03 | Date: 10-16-2010 | Supervisor's Name | Rank | Internal Agency Code: HGV115090

Unit	Date of Birth	Sex	Race	TAU	Seat	RSD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	07-02-1949	F	W	0	01	13	43	1	1	2			
2	12-02-1978	M	W	0	01	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontesting); 51- Other Unenclosed Area (nontesting); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front 4- Not Deployed 2- Deployed Side 7- Not Applicable 3- Deployed Both 9- Deployment Unk. b) 1- Switch in On Position 3- No Switch 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected 2- Part. Ejected 3- Tot. Ejected 7- Not App. 9- Unk.

Location After Impact: 1- Not Trapped 2- Extricated (Mechanical Means) 3- Freed (non-mech.) 4- Not Applicable 9- Unknown

Transported to Medical Facility: a) 1- Yes 2- No 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9- Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
22	1	1	1	22	23
23	2	2	2	23	
	3	3	3		

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. on Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Support; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 28- Other

Alc Test Results: A1- ; A2- ; A3-

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Underride/Override

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 8- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Blowing Sand, Soil, Dirt or Snow; 6- Fog, Smog, Smoke; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Lighted Lighting); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary: 03

Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Wrong Side or Wrong Way; 15- Under the Influence; 16- Vision Obscured (Within Unit); 17- Improper Lane Usage/Change; 18- Other Improper Action; 19- Cell Phone; 20- Unk.

Others: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 39- Other; 40- Other; 48- Other; 49- Unk.

Roadway

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

Work Zone: 1- Yes 2- No

Work Zone Location

Work Zone Type

Workers Present: 1- Yes 2- No

School Bus Involved: 3

Harmful Event: 1st 5; Loc. 5

Unit Speed: 1- Stopped in Traffic; 2- Slowed in Traffic; 3- Moving; 4- Speed Unknown

Hit/Run: 1- Yes 2- No

ORIGINAL

NOV 1: 0 2010

D.P.S. USE ONLY: 10122860 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT (SCTR) TR-310 (Rev. 07/2008) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0805 | Arrived: 0810

Date: 10-26-2010 | Time: 0800 | County: 23 (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County) | Collision Location (Rt. # / Name): S 146 | (0- Main 1- Alternate 2- Connection 5- Spur 7- Business 9- Other) | Miles: .77 | Dir: N E S W | Int/ Near City or Town of: Greenville

Lane # / Dir.: 2 | Of: 4 | N E S (W) | Distance Offset: 30 Miles/Feet | Direction: N E S (W) | (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | Base Intersection (Rt. # / Name): From 385 | (0- Main 1- Alternate 2- Connection 5- Spur 7- Business 9- Other) | ASRU code | MP/Grid | Latitude: 34 °49 27 42 | Longitude: 82 °17 3469

R.R. Id.: NA | From: N E S W (1- Entrance 2- Exit Ramp Only) | To: N E S W (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | Toward | Second Intersection (Rt. # / Name): 564

B-226471

Driver/Pedestrian's Full Name: Full- Guenter

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 717 Mossy Ledge Ln | Birth Date: 04-20-1940 | City, State, & Zip: Simpsonville SC 29681

State: SC | Driver's License #: 0073 22783 (D) | Insurance Company: State Farm

Year: 2008 | Body: PK | Vehicle Make: Chev | VIN #: 1GCCS249188227898

State: SC | Year: 2011 | License Plate #: BYP679 | Owner's D.L. #: 0073227783

Home Telephone: (864) 213 5322 | Owner's Full Name: Full- Guenter

Bus. Telephone: ( ) NA | Street/R.F.D.: 717 Mossy Ledge Ln

Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville SC 29681

Estimated Speed: 40 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: NA | Code | Summons #: NA | Code | Towed By: Whitaker OR

B-226472

Driver/Pedestrian's Full Name: Crowson - Cynthia Orr

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 196 Davidson Rd | Birth Date: 09-02-1957 | City, State, & Zip: Greenville SC 29609

State: SC | Driver's License #: 004875527 (D) | Insurance Company: State Farm

Year: 2009 | Body: 4D | Vehicle Make: Dod | VIN #: 1C3LC56R18N298049

State: SC | Year: 2010 | License Plate #: CTY632 | Owner's D.L. #: NA

Home Telephone: (864) 236 8689 | Owner's Full Name: Greenway - Bobby L

Bus. Telephone: (864) 288 9099 | Street/R.F.D.: 123 Pope St Hyde Pk

Contributed To Collision: Yes (No) | City, State, & Zip: Greenwood SC 29649

Estimated Speed: 10 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E751026 | Code: 44 | Summons #: NA | Code | Towed By: Smith Auto Rot

B-226473

Driver/Pedestrian's Full Name: NA

Unit #: NA | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

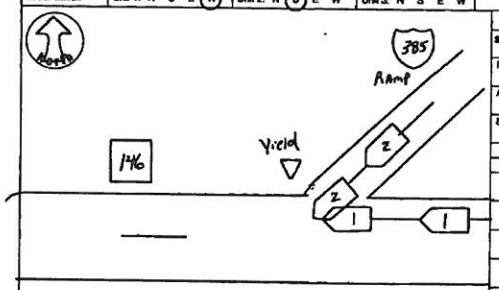
State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E (W) | Unit 2: N (S) E W | Unit 3: N S E W

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2500	$ 2500	$	$ NA	$ NA

Property Owner/Witness | Address | City, State, Zip | Phone

Property Owner/Witness | Address | City, State, Zip | Phone

Phone: Y (N) | Describe What Happened (Refer to Units by Number)

Unit 1 was traveling west on SC146, Unit 2 failed to yield the right of way turning right onto SC146. Unit 1 struck Unit 2 in the driver's side.

NOTICE: THE PURPOSE FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE AND BELIEF CONCERNING THE COLLISION BUT NOT WARRANTS STATED AS TO THE FACTUAL CORRECTNESS THEREOF.

Investigating Officer's Name: Johnson - mc | Rank: Sgt | Badge #: 490 | Code: HP03 | Date: 10-26-2010 | Reviewer's Name: [illegible] | Rank: Sgt | Internal Agency Code: 10 GV 119129

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	LAI	Trap
1	04-20-1940	M	W	O	01	13	4	01	01	2
2	09-02-1957	F	W	O	01	13	4	01	01	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 8- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pompet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Entrailment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other

Event 1 / Event 2 / Event 3 / Most Harmful / 1st Harmful: 1 22 / 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1 / 3 / 21 | Most Deformed: 1 / 3 / 21

21- Pedestrian; 81- None; 82- Rollover; 93- Total; 94- Under Carriage; 98- Other; 99- Unk.

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Livestock Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Unk.; 13- Other

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Test Refused; 2- Test Given, Not Usable; 3- Test Given, Usable

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary 05

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Other; 39- Worn, Travel-Polished Surface; 46- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 65- Under the Influ.; 66- Animal in Road; 67- Other Person Under the Influence; 74- Lights; 75- Signals; 80- Obstruction; 81- Glare; 82- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others: 1

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Damage; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable

Special Use Only: 1 2 3 4 5 6 7

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- Underride/Override: 6; 8- Unk.: 3

Extent of Deformity: 1 3

9- Unk.: 3 3

Trafficway: 2

Road Character: 1

Road Surface Condition: 2

Traffic Control Type: 03

School Bus Involved: 3

Work Zone: 2

Work Zone Location:

Work Zone Type:

Workers Present:

ORIGINAL

NOV 03 2010

O.P.S. USE ONLY: 10120052 | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01/2001)

# of Units	Amended - Attach Copy of Original Report	Corrected	Notified	Arrived
2			1955	2008

Date	Time	County	1- Interstate 2- US Primary 3-SC Primary 4- Secondary 5- County	Collision Location (Rt. # / Name)	0-Main 2- Alternate 3- Spur 6- Connection 7- Business	Miles: 3	Dir. N E S W	Mile / Near City or Town of:
10-14-2010	1950	23		8 146				Greenville

Lane #	Dir.	Distance Offset: Miles Feet	Direction N E S W	1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other	Base Intersection (Rt. # / Name)	0-Main 2- Alternate 3- Spur 6- Connection 7- Business 9- Other	ASRU code	MP/Grid
1	SW	20	S W		From 385		Lat/Lude 34° 49 27.00	

R.R. Id.	From: N E S W	Ramp Only: 1- Entrance 2- Exit	To: N E S W	1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other	Second Intersection (Rt. # / Name)	0-Main 2- Alternate 3- Spur 6- Connection 7- Business 9- Other	Long/tude 82° 17 19.10
n/a					Toward Smith Haines Rd		

B-052369

Driver/Pedestrian's Full Name: White-Cary Adam

Unit #	Sex	Race	Street/R.F.D.
1	M	W	131 Ponderosa Pl.

Birth Date: 01-14-1989 | City, State, & Zip: Taylors SC 29687

State	Driver's License #	Insurance Company
SC	100851130 (D)	State Farm

Year	Body	Vehicle Make	VIN #
2010	CS	Mitsu	4A3AC5GY19E154036

State	Year	License Plate #	Owner's D.L. #
SC	2011	DCX 401	100851130

Home Telephone: (864) 442-7416 | Owner's Full Name: White-Cary Adam

Bus. Telephone: (864) 469-7300 | Street/R.F.D.: 131 Ponderosa Pl.

Contributed To Collision: No | City, State, & Zip: Taylors SC 29687

Estimated Speed: 10 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: E747663 | Code: 21 | Summons #: n/a | Code: | Towed By: n/a

B-052370

Driver/Pedestrian's Full Name: Unknown

Unit #	Sex	Race	Street/R.F.D.
2			

Birth Date: | City, State, & Zip:

State	Driver's License #	Insurance Company
		Unknown

Year	Body	Vehicle Make	VIN #
	SNV		

State	Year	License Plate #	Owner's D.L. #

Home Telephone: ( ) | Owner's Full Name: Unknown

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes | City, State, & Zip:

Estimated Speed: 0 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: n/a | Code: | Summons #: n/a | Code: | Towed By: n/a

B-052371

Driver/Pedestrian's Full Name: n/a

Unit #	Sex	Race	Street/R.F.D.
n/a			

Birth Date: | City, State, & Zip:

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

State	Year	License Plate #	Owner's D.L. #

Home Telephone: ( ) | Owner's Full Name:

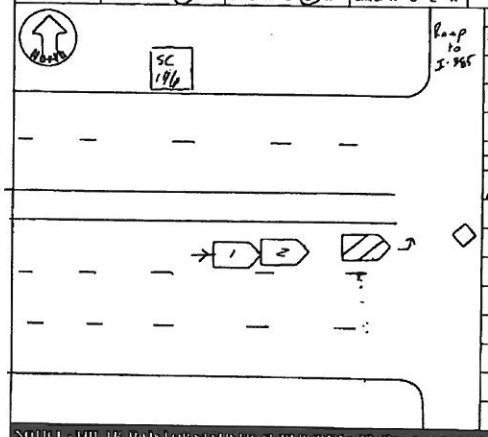
Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S (E) W | Unit 2: N S (E) W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1200.00	$ 800.00	$ n/a	$ n/a	$ n/a

Property Owner/Witness: n/a | Address: | State | Zip | Phone

Property Owner/Witness: n/a | Address: | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #2 was stopped for traffic on SC 146. Unit #1 driving too fast for conditions, struck the rear of unit #2 Unit #1 then left the scene.

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT A DETERMINATION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION OR ANY WARRANTS MADE AS TO THE LIABILITY OF ANY CURVE THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Edwards-C.M.	Pfc	546		11/03		Sgt	106U114390

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	Ext	Tran	Name	Street Address	Zip Code
1	01-14-1989	M	W	0	01	13	4	1	1	2			
1	01-23-1951	F	W	0	01	13	4	1	1	2			
2	Unknown	U	U	0	01	99	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Traiting Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraints/Safety Devices: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 19- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 0- Not Ejected; 1- Part. Ejected; 2- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 0- Not Trapped; 1- Freed (non-mech.); 2- Extricated (Mechanical Means); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events: Most Harmful Event: Place of First Harmful Event in Each Unit: Unit #1 Unit #2

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Immersion; 02- Cross Median/Center Line; 03- Downhill Runaway; 07- Jackknife

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. on Towpath; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Pole; 59- Other (Post, Pole, Support, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Install
23				23	23
22				22	

1st / Most Deformed: 1 2 3 / 1 2 3

Deformed Area: 1st Point of Contact

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↖ ↗); 42- Angle (→ ←); 43- Angle (↙ ↘); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Vehicle Types: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 31- Train; 33- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Negotiating a Curve; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Turning Around; 13- Backing; 14- Going Straight Ahead; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 88- Other; 99- Unk.; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Given - Known Results; 2- Given - Unavailable; 3- Given - Pending; 4- None; 5- Refused

Alcohol/Drug Test Given: D1 D2 D3

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Intrusion: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown

Underride/Override: 1- Over- MV in Transport; 2- Over- Other Vehicle; 8- None; 9- Unk.

Extent of Deformity: 1 0 / 2 9 / 3

0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 8- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-Junction; 99- Unk.

Work Zone: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

School Bus Involved: 1- Yes; 2- No

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; 1- Yes 2- No

Work Zone Location: Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes 2- No

Primary Contributing Factors: Driver

Others: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 26- Other Improper Action; 28- Unk.; 19- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

OCT 14 2010

D.P.S. USE ONLY: 10112224 | Page 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 0255 | Arrived: 0322

Date: 10-05-2010 | Time: 0250 | County: 23 (3-SC Primary) | Collision Location (Ft. # / Name): 6 SC 146 | (6) Main 8- Connection 2- Alternate 7- Business 5- Spur 9- Other | Miles: 150 | Dir. N E S (W) | -mi/ Near City or Town of: GREENVILLE

Lane # / Dir.: 2 | Of: 4 | N E S (W) | Distance Offset: 25 Miles Feet | Direction N E S (W) | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other

Base Intersection (Ft. # / Name): From I-385 | (6) Main 8- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASR/J code | MP/Grid | Latitude: 34 49 2710

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | (4) Secondary 1- Interstate 2- US Primary 3- SC Primary 5- County 6- Other

Second Intersection (Ft. # / Name): Toward S. 564 | (6) Main 8- Connection 2- Alternate 7- Business 5- Spur 9- Other | Longitude: 82 17 3350

B-226846 — Driver/Pedestrian's Full Name: WILDER - GEORGANN DERRICK

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 203 MOLAND CT | Birth Date: 02211957 | City, State, & Zip: GREENVILLE SC 29605

State: SC | Driver's License #: 101270515 (D) | Insurance Company: NATIONWIDE

Year: 2006 | Body: VAN | Vehicle Make: HONDA | VIN #: 5FNRL38701B402451

State: SC | Year: 2011 | License Plate #: 2397 CW | Owner's D.L. #: 101270515 (D)

Home Telephone: 864 293 6316 | Owner's Full Name: WILDER GEORGANN DERRICK

Bus. Telephone: ( ) N/A | Street/R.F.D.: 203 MOLAND CT

Contributed To Collision: No | City, State, & Zip: GREENVILLE SC 29605

Estimated Speed: 40 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: JACKS MARINE

B-226847 — Driver/Pedestrian's Full Name: RILEY - MARIE H J

Unit #: 2 | Sex: F | Race: B | Street/R.F.D.: 105 RIDGEOVER DR | Birth Date: 09221955 | City, State, & Zip: GREENVILLE SC 29617

State: SC | Driver's License #: 09097769 (D) | Insurance Company: ALLSTATE

Year: 2009 | Body: 4 DR | Vehicle Make: SCION | VIN #: JTLKE50EX91074508

State: SC | Year: 2011 | License Plate #: AFC 154 | Owner's D.L. #: N/A

Home Telephone: 864 246 6365 | Owner's Full Name: RILEY - ELLISON H JR

Bus. Telephone: ( ) N/A | Street/R.F.D.: 105 RIDGEOVER DR

Contributed To Collision: No | City, State, & Zip: GREENVILLE SC 29617

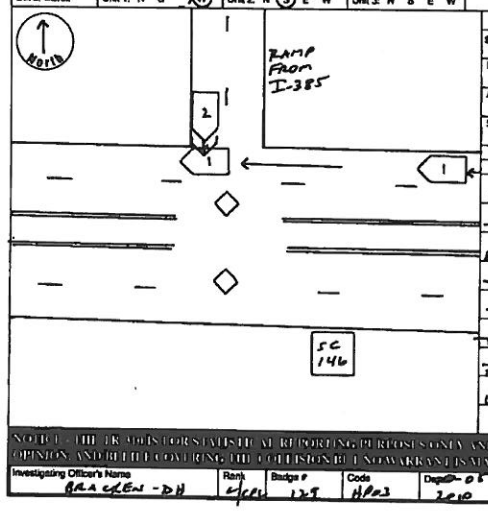
Estimated Speed: 10 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: DALE'S

B-226848 — Driver/Pedestrian's Full Name: N/A

Unit #: N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip | State | Driver's License # | Insurance Company | Year | Body | Vehicle Make | VIN # | Dir. of Travel | Unit 1: N S W | Unit 2: N S E W | Unit 3: N S E W

Home Telephone | Owner's Full Name | Bus. Telephone | Street/R.F.D. | Contributed To Collision: Yes No | City, State, & Zip | Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dem. 1	Prop. Dem. 2
$ 6000	$ 25000	$	$ N/A	$ N/A

Property Owner/Witness: N/A | Property Owner/Witness: N/A

Address | Address

State | Zip | Phone | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

UNIT#1 WAS HEADED WEST ON SC 146. UNIT#2 WAS ON THE RAMP FROM I-385 TO SC 146. THE DRIVER OF UNIT#1 STATED SHE ENTERED THE INTERSECTION WITH A GREEN LIGHT. THE DRIVER OF UNIT#2 STATED SHE ENTERED THE INTERSECTION WITH A GREEN LIGHT. DUE TO CONFLICTING STATEMENTS AND A LACK OF PHYSICAL EVIDENCE OR WITNESSES, IT IS UNCLEAR AS TO WHICH UNIT IS CONTRIBUTED.

NOTICE: THIS REPORT IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: BRACKEN - DH | Rank: CPL | Badge #: 129 | Code: HP03 | Dept: 06 | Date: 2010 | Reviewer's Name: A. ALLEN | Rank: SGT | Internal Agency Code: 10 GV110377

Unit	Date of Birth	Sex	Race	INJ	Seat	Eject	EJ	Trap	Name	Street Address	Zip Code
1	02211957	F	W	0	01	1	1	1			
2	09221955	F	B	0	01	1	1	1			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet: 1- Yes 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 65- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 01- Child Safety Seat; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 69- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 81- Lighting

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1- Yes; 2- No

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Person); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Support; 42- Bridge Rail; 43- Bridge Rail End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Events: 1st Harmful; Most Harmful

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (<); 41- Angle (>); 42- Angle (→); 43- Angle (↖↗); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1- Front; 2- Front Right; 3- Right Side; 4- Rear Right; 5- Rear; 6- Rear Left; 7- Left Side; 8- Front Left; 9- Top; 10- Undercarriage; 11- Windshield; 12- Left Window; 13- Front Window; 14- Right Window; 15- Rear Window; 16- Unknown

Vehicle Type: 01- Automobile; 13- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk.

Underride/Override: 1- Yes; 2- No

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 8- Not Applicable; 9- Unk.

Actions Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Actions Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 3- Dawn; 4- Dark (Lighting Unspecified); 5- Dark; 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 8- Dark (Street Lamp Lit)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- One-way; 8- Other

1st Harmful Event Loc.: 1- On Roadway; 2- Shoulder; 3- Median; 4- Roadside; 5- Off Roadway; 6- Outside Trafficway; X- Unk; 1- Y 2-N 8-U

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Work Zone: 1- Yes; 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type

Workers Present: 1- Yes; 2- No

School Bus Involved: 1- Yes Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 25- Other Improper Action; 29- Unk.

Others: 19- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 62- Obstruction; 63- Weather Cond.; 66- Other; 69- Unk.; 60- Animal in Road; 61- Glare

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

JUL 12 2010

O.R.S. USE ONLY: 10075850 | Page # 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2003) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1425 | Arrived: 1440

Date: 06-30-2010 | Time: 1415 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): S 146 | 0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business | Miles: 2.00 | Dir: N E S W | Near City or Town of: Greenville

Lane # / Dir.: 2 | Of: 4 | N E S W: W | Distance Offset: 20 Miles Feet | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 385 | 0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid | Latitude: 34492880

R.R. Id.: NA | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 564 | Longitude: 82173560

B-053719

Driver/Pedestrian's Full Name: NGUYEN, THUAN DUC

Unit #: 1 | Sex: M | Race: Asian | Street/R.F.D.: 100 Cottonpatch Ct.

Birth Date: 01-01-1974 | City, State, & Zip: Greenville SC 29607

State: SC | Driver's License #: 007584316 (D) | Insurance Company: Allstate

Year: 2008 | Body: PK | Vehicle Make: Nissan | VIN #: 1N6BA07D38N338678

State: SC | Year: 2011 | License Plate #: AWY382 | Owner's D.L. #: 007584316 (D)

Home Telephone: (864) 990-6039 | Owner's Full Name: Nguyen, Thuan Duc

Bus. Telephone: ( ) NA | Street/R.F.D.: 100 Cottonpatch ct

Contributed To Collision: Yes | City, State, & Zip: Greenville, SC 29607

Estimated Speed: 15 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes (No) | Summons #: E530522 | Code: 47 | Towed By: NA

B-053720

Driver/Pedestrian's Full Name: Candler, Randy Hugh

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 327 Gloucester Ferry Rd

Birth Date: 05-27-1976 | City, State, & Zip: Greenville SC 29607

State: SC | Driver's License #: 10148395 8 (D) | Insurance Company: Kemper

Year: 2002 | Body: 4S | Vehicle Make: ACURA | VIN #: 19UUA56652A004875

State: SC | Year: 2011 | License Plate #: ELY839 | Owner's D.L. #: 10148395 8 (D)

Home Telephone: (864) 561-6393 | Owner's Full Name: Candler, Randy Hugh

Bus. Telephone: ( ) NA | Street/R.F.D.: 327 Gloucester Ferry Rd

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville, SC 29607

Estimated Speed: 15 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: NA | Code: NA | Towed By: NA

B-053721

Driver/Pedestrian's Full Name:

Unit #: NA | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: | Code: | Towed By:

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 1200	$ NA	$ NA	$ NA

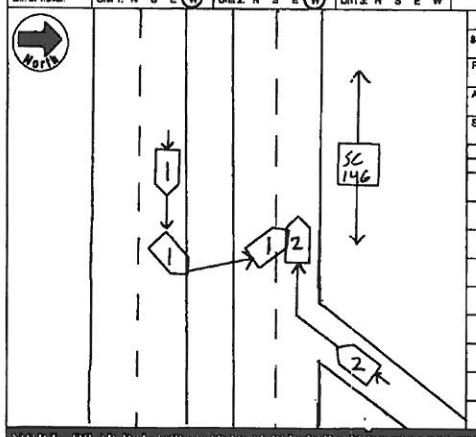
Property Owner/Witness: | Property Owner/Witness:

Address: | Address:

State | Zip | Phone | State | Zip | Phone

Photos Taken (Y) (N) | Describe What Happened (Refer to Units by Number):

Unit #1 was traveling East on S.C. 146. Unit #2 was traveling West on SC 146. Unit #1 made an unlawful U-turn and struck Unit #2 in the drivers side front quarter panel



NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS NOT TO BE CONSTRUED AS AN OFFICER'S BEST KNOWLEDGE OPINION AND/OR LEGAL CONCLUSION AS TO FAULT OR LIABILITY NOR IS IT TO BE USED AS SUCH. NO WARRANTY IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name: Dean - P.A. | Rank: Trp | Badge #: 923 | Code: 1-P03 | Date: 06-30-2010 | Reviewed By: | Rank: Cpl. | Internal Agency Code: 10GV067349

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	Ext	Trav	Name	Street Address	Zip Code
1	01-01-1974	M	A	0	01	13	4	1	1	2			
2	05-27-1976	M	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1- Yes; 2- No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful
22				22
22				22

1st Harmful Event: 22

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Overturn/Rollover; 02- Cross Median/Center Line; 08- Immersion; 09- Ran off Road Left; 03- Downhill Runaway; 07- Jackknife; 10- Ran off Road Right; 11- Separation of Units; 12- Ran off Road Right

Collision: Not Fixed: 27- Pedestrian; 20- Animal (Deer Only); 28- Railway Veh.; 21- Animal (All Other); 29- Work Zone Maint. Equip.; 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 30- Other Movable Object; 24- Motor Veh. (Other Moving); 25- Motor Veh. (Parked); 31- Unk. Movable Object; 26- Pedalcycle

Collision: Fixed Object: 47- Embankment; 48- Bridge Overhead Structure; 49- Bridge Pier or Abutment; 50- Bridge Rail; 51- Guardrail Face; 52- Guardrail End; 53- Concrete Traffic Barrier; 54- Other Traffic Barrier; 55- Utility Pole; 56- Traffic Sign Post; 57- Other Post, Pole or Support; 58- Tree; 59- Boulder; 60- Fire Hydrant; 61- Mail Box; 62- Other Fixed Object; 63- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear-to-Rear; 20- Head On; 30- Rear-to-Side; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Logging Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Alc Test Results: A1- ; A2- ; A3- ; Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: D1- ; D2- ; D3- ; 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

1- Under Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underride/Override: 1 2 3

Extent of Deformation: 1- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Event Loc.: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 5- Other

Trafficway: 2

1st Harmful Event Loc.: 5

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Blowing Sand, Soil, Dirt or Snow; 7- Severe Crosswinds; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

School Bus Involved: 3

Work Zone: 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Workers Present: 1- Yes; 2- No

Primary Contributing Factors: 09

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 19- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

ORIGINAL

D.P.S. USE ONLY: 10030928 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2010) | # of Units: 3 | Amended - Attach Copy of Original Report | Corrected | Notified: 1615 | Arrived: 1640

Date: 03-22-2010 | Time: 1545 | County: 23 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary | Collision Location (Rt. # / Name): 8 146 | 6- Main 8- Connection 2- Alternate 7- Business 5- Spur | Miles: .10 | Dir. N E S W | ...ile / Near City or Town of: Greenville

Lane # | Dir. | Distance Offset: Miles .10 Feet | Direction N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name) From: 385 | 6- Main 8- Connection 2- Alternate 7- Business 3- Spur 9- Other | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Second Intersection (Rt. # / Name) Toward: 333 | 6- Main 8- Connection 2- Alternate 7- Business 5- Spur 9- Other | Latitude: 34° 49 2530 | Longitude: 82° 17 21 40

B-321817

Driver/Pedestrian's Full Name: Blue - John Daniel

Unit # 1 | Sex: M | Race: B | Street/R.F.D.: 903 Staunton Bridge Rd.
Birth Date: 05-04-1988 | City, State, & Zip: Greenville, SC 29611
State: SC | Driver's License #: 004167906 (D) | Insurance Company: Liberty Mutual
Year: 2000 | Body: VN | Vehicle Make: FORD | VIN #: 2FMZA51464YBC09381
State: SC | Year: 2010 | License Plate #: W75470 | Owner's D.L. #: 004167906 (D)
Home Telephone: (864) 220-5107 | Owner's Full Name: Blue - John Daniel
Bus. Telephone: (864) 371-9661 | Street/R.F.D.: 903 Staunton Bridge Rd.
Contributed To Collision: No | City, State, & Zip: Greenville, SC 29611
Estimated Speed: 0 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes
Summons #: N/A | Code: | Summons #: N/A | Code: | Towed By: N/A

B-321818

Driver/Pedestrian's Full Name: Honshell - Benjamin D.

Unit # 2 | Sex: M | Race: W | Street/R.F.D.: 68 Mountainside Way
Birth Date: 05-29-1988 | City, State, & Zip: Greenville, SC 29609
State: SC | Driver's License #: 100371032 (D) | Insurance Company: Allstate
Year: 2009 | Body: UBR | Vehicle Make: KIA | VIN #: KNAGD126X95366807
State: SC | Year: 2010 | License Plate #: 1411ER | Owner's D.L. #: N/A
Home Telephone: (864) 630-2772 | Owner's Full Name: Kain - Timothy C.
Bus. Telephone: (864) 370-2553 | Street/R.F.D.: 5 Starsdale Cir.
Contributed To Collision: Yes | City, State, & Zip: Greenville, SC 29609
Estimated Speed: 0 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes
Summons #: N/A | Code: | Summons #: N/A | Code: | Towed By: N/A

B-321819

Driver/Pedestrian's Full Name: Pena - Carolina

Unit # 3 | Sex: F | Race: H | Street/R.F.D.: 603 Tanacross Way
Birth Date: 05-31-1991 | City, State, & Zip: Greenville, SC 29605
State: SC | Driver's License #: 070932453 (D) | Insurance Company: Allstate
Year: 2001 | Body: 2DR | Vehicle Make: Chev | VIN #: 2G1JC124017105429
State: SC | Year: 2010 | License Plate #: EGJ134 | Owner's D.L. #: N/A
Home Telephone: (864) 905-3863 | Owner's Full Name: Valdes-Zapata - Adriana M.
Bus. Telephone: (864) 395-8713 | Street/R.F.D.: 603 Tanacross Way
Contributed To Collision: No | City, State, & Zip: Greenville, SC 29605
Estimated Speed: 20 | Speed Limit: 40 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes
Summons #: E413118 | Code: 71 | Summons #: N/A | Code: | Towed By: N/A

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

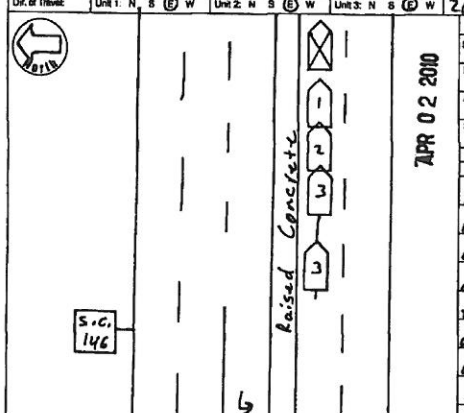
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$100.00	$600.00	$300.00	$ N/A	$ N/A

Property Owner/Witness: | Address: | State | Zip | Phone:

Property Owner/Witness: | Address: | State | Zip | Phone:

Photos: Y N | Describe What Happened (Refer to Units by Number)

Units #1 and #2, east in lane #1 of S.C. Hwy. 146, were stopped near Interstate 385. Unit #3, in lane #4, was traveling eastbound on S.C. Hwy. 146. The driver of unit #3, driving too fast for conditions, was unable to stop before striking the rear of unit #2 with the front of unit #3. As a result of the impact, the front of unit #2 was forced into the rear of unit #1.



APR 02 2010

SECTION 56-5-1270 FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE LEGAL ACCURACY THEREOF.

Investigating Officer's Name: Townsend - S.L. | Rank: TPR | Badge #: 226 | Code: HP03 | Date: 03-22-2010 | Reviewer's Name: Gaylord - T.J. | Rank: CPL. | Internal Agency Code: 106V07 9043

Unit	Date of Birth	Sex	Race	Inj	Seat	R/SD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	05-04-1988	M	B	0	01	13	4	1	1	2			
1	03-14-1989	F	B	0	03	13	4	1	1	2			
2	05-29-1988	M	W	0	01	13	4	1	1	2			
2	11-27-1989	F	W	0	03	13	4	1	1	2			
2	01-23-1989	F	W	0	04	13	4	1	1	2			
2	05-11-1988	M	W	0	06	13	4	1	1	2			
3	05-31-1991	F	H	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Motorcycle Only: Head Injury: 1-Yes 2-No; Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object

Collision: Fixed Object: 40- Embankment; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Entrance/Exit; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Weather Cond.; 65- Other; 66- Unk.

Event: 1st Harmful: 22; Most Harmful: 22; 1st Most: 23

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (Side); 42- Angle (Head); 43- Angle (Side); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Rear End; 89- Unknown

1st / Most Deformed: 17 27 31

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 18- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 38- Animal (Driven Veh.); 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 88- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 1

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Severe Crosswinds; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Snow; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Road Character: 2; Road Surface Condition: 1; Traffic Control Type: 31

01- Stop and Go Light; 02- Flashing Traffic Signal; 03- Officer or Flagman; 04- School Crossing Guard; 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 23- Pedestrian; 24- Railway Crossing; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only)

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.; School Bus Involved: 3

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; 1- Yes 2- No; Work Zone: 2

Work Zone Location: ; Work Zone Type: ; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.; 1- Yes 2- No Workers Present:

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Vehicle Improperly; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Glare; 65- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 78- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Other: 67- Other Person Under the Influence

ORIGINAL

D.P.S. USE ONLY: 10063572 | Page # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR-310 (Rev. 01/2001)

# of Units	Amended - Attach Copy of Original Report	Corrected	Notified	Arrived
2			1296	1346

Date	Time	County	Collision Location (Rt. # / Name)	Main / Alternate / Spur	Connection / Business / Business	Miles:	Dir.	Inter / Near City or Town of:
10-05-2010	1245	23 GC Primary	5 146	0	6	1	E	Greenville

Lane # / Dir.	Of		Distance Offset	Direction	Base Intersection (Rt. # / Name)	Main / Alternate / Spur	Connection / Business / Business	ASRU code	MP/Grid
2	5	S	60 Feet	1 Interstate, 2 US Primary, 3 SC Primary, 4 Secondary, 5 County, 6 Other	From 385	0	6		

R.R. Id.	From	Ramp Only	To	Second Intersection (Rt. # / Name)	Main / Alternate / Spur	Connection / Business / Business	Latitude	3449 24.60
N/A		1 - Entrance, 2 - Exit		Toward Smith Hines Road	0	6	Longitude	8217 26.10

B-332596 — Driver/Pedestrian's Full Name: Moore- Rhonda Gourley

Unit #	Sex	Race	Street/R.F.D.
1	F	W	130 Brookbend Road

Birth Date: 08-01-1956 | City, State, & Zip: Mauldin, SC 29662

State	Driver's License #	Insurance Company
SC	004796639 (D)	State Farm

Year	Body	Vehicle Make	VIN #
2008	4S	Toyt	JTKBR32E932052907

State	Year	License Plate #	Owner's D.L. #
SC	2010	ATN 126	004796639 (D)

Home Telephone: (864) 675-9535 | Owner's Full Name: Moore - Frank Jeffry

Bus. Telephone: (864) 675-9535 | Street/R.F.D.: 130 Brookbend Road

Contributed To Collision: Yes / No | City, State, & Zip: Mauldin, SC 29662

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg Info (see back): Yes / No
10	40	Summons # EW12149	Code 44	Summons # N/A Code

Towed By: Gunnells (OR)

B-332597 — Driver/Pedestrian's Full Name: Joseph- Russell William III

Unit #	Sex	Race	Street/R.F.D.
2	M	W	17 Ossabaw Loop

Birth Date: 01-20-1992 | City, State, & Zip: Simpsonville, SC 29681

State	Driver's License #	Insurance Company
SC	101381039 (D)	State Farm

Year	Body	Vehicle Make	VIN #
2009	2S	Toyt	JTKDE167290289417

State	Year	License Plate #	Owner's D.L. #
SC	2010	CTI 833	N/A

Home Telephone: (864) 616-6564 | Owner's Full Name: Joseph - Russell Willian

Bus. Telephone: (864) 616-6564 | Street/R.F.D.: 17 Ossabaw Loop

Contributed To Collision: Yes | City, State, & Zip: Simpsonville, SC 29681

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg Info (see back): Yes / No
35	40	Summons # N/A	Code	Summons # Code

Towed By: Gunnells (OR)

B-332598 — Driver/Pedestrian's Full Name: N/A

Unit #	Sex	Race	Street/R.F.D.
N/A			

Birth Date | City, State, & Zip

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg Info (see back): Yes / No
		Summons #	Code	Summons # Code

Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 6500	$ 6500	$ N/A	$ 500	$ N/A

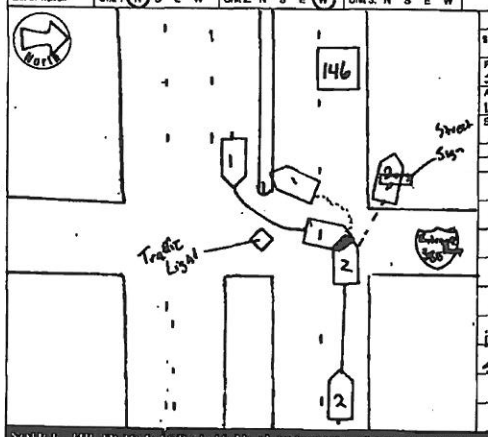
Property Owner/Witness: SC Dept of Transportation | Property Owner/Witness: N/A

Address: 15 Sahuda Dam Rd. Greenville | Address

State: SC | Zip: 29611 | Phone: (864) 291-1226 | State | Zip | Phone

Describe What Happened (Refer to Units by Number)

Unit #1 was traveling North from SC-146, towards I-385 North Entrance Ramp. Unit #2 was traveling West on SC-146. Unit #1 failed to yield right of way when turning left and was struck by Unit # 2. As a result of the impact Unit #2 was forced into a street sign owned by the SCDOT.



NOTICE: THE DRIVER IS OBLIGATED BY LAW TO REPORT ACCURATELY ALL INFORMATION REQUESTED ON THIS FORM. FAILURE TO DO SO MAY RESULT IN THE SUSPENSION OF THE DRIVER'S LICENSE. THE INVESTIGATING OFFICER'S OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OF ANY FACT OR ACCURACY THEREOF.

Investigating Officer's Name	Agency	Badge #	County	Date	Reviewed by Name	Rank	Internal Agency Code
Andis - DC	SPDpr	712	GPD3	10-05-2010	A. H wim	Sgt	056557

Unit	Date of Birth	Sex	Race	INJ	Seat	REST	A.B.D.	Eject	EXT	TRAP	Name	Street Address	Zip Code
1	08-01-1956	F	W	1	01	13	M	1	1	2	Driver Unit #1		
2	01-20-1992	M	W	01	01	13	M	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 1- Switch in On Position; 2- Switch in Off Position; 5- No Switch; 8- Unknown; 9- Unk.

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 03- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 07- Jackknife; 08- Immersion

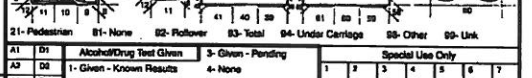
Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Skipped); 24- Motor Veh. (Other Reason); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 69- Work Zone Maint. Equipment; 88- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (Same); 41- Angle (Left); 42- Angle (Right); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Most Deformed: 1 / 2 / 3



21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other; 31- Train; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 99- Unk. (Hit and Run Only); 61- School Bus; 62- Passenger Bus

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Towed; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights); 9- Unk.

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- Traffic Circle; 07- Shared Use Paths or Trail; 08- T-Intersection; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underride/Override: N/A

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk.

Ale Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk.

Trafficway: 2

Number of Lanes: 2

1st Harmful Event: 52

Road Character: 1 — 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1 — 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01 — 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 3 — 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 2 — 1- Yes 2- No

Work Zone Location: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other

Workers Present: 1- Yes 2- No 9- Unk.

Primary Contributing Factors: 05

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 29- Other Improper Action; 99- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 39- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Other; 66- Glare; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others: 67- Other Person Under the Influence

ORIGINAL

O.P.B. USE ONLY: 10049628 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report / Corrected | Notified: 1325 | Arrived: 1342

Date: 05-02-2010 | Time: 1300 | County: 23 | Collision Location (Rt. # / Name): S 146 / WOODRUFF RD | Miles: .45 | Dir. N E S W: S | In / Near City or Town of: GREENVILLE

Lane # / Dir.: 1 S | Ctl: NE SW | Distance Offset (Miles): .03 Feet | Direction: N E S W | Base Intersection (Rt. # / Name): 385 | ASRU code | MP/Grid

R.R. Id.: NA | From: NE SW | Ramp Only: 1-Entrance 2-Exit | To: NE SW | 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other | Second Intersection (Rt. # / Name): 107 | Latitude: 34 49 30 10 | Longitude: 82 17 39 00

B-425074

Driver/Pedestrian's Full Name: Gramany - Joseph C

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 224 Bendinghood Cir

Birth Date: 01-10-1996 | City, State, & Zip: Taylors SC 29687

State: SC | Driver's License #: 002475270 (D) | Insurance Company: STATE FARM

Year: 2005 | Body: SUV | Vehicle Make: Nissan | VIN #: 5N1AR18W36C602204

State: SC | Year: 2010 | License Plate #: FAM308 | Owner's D.L. #: 002475270 (D)

Home Telephone: (864) 630-9393 | Owner's Full Name: Gramany - Joseph C

Bus. Telephone: (864) 630-9393 | Street/R.F.D.: 224 Bendinghood Cir

Contributed To Collision: Yes (No) | City, State, & Zip: Taylors SC 29687

Estimated Speed: 00 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # / Code: NA | Summons # / Code: NA | Towed By: NA

B-425075

Driver/Pedestrian's Full Name: Hileman - Rachel

Unit #: 2 | Sex: F | Race: W | Street/R.F.D.: 952 Fargo ST

Birth Date: 02-17-1991 | City, State, & Zip: Mauldin SC 29662

State: SC | Driver's License #: 101159348 (D) | Insurance Company: Allstate

Year: 2003 | Body: 4DR | Vehicle Make: Honda | VIN #: 2HGES26703H587360

State: SC | Year: 2010 | License Plate #: FLW746 | Owner's D.L. #: 101159348 (D)

Home Telephone: (864) 881-4850 | Owner's Full Name: Hileman - Ed or Diane

Bus. Telephone: (864) 881-4850 | Street/R.F.D.: 952 Fargo ST.

Contributed To Collision: Yes (No) | City, State, & Zip: Mauldin ST 29662

Estimated Speed: 04 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # / Code: NA | Summons # / Code: NA | Towed By: NA

B-425076

Driver/Pedestrian's Full Name: Tummuala - Melissa M

Unit #: 3 | Sex: F | Race: W | Street/R.F.D.: 119 Colonial DR

Birth Date: 01-30-1993 | City, State, & Zip: Pelzer SC 29669

State: SC | Driver's License #: 101744952 (D) | Insurance Company: Travelers

Year: 1998 | Body: 4DR | Vehicle Make: Toyt | VIN #: 4T1BG22K2WU248360

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Home Telephone: (864) 407-0188 | Owner's Full Name: Tummuala - Liliana D

Bus. Telephone: (864) 407-0188 | Street/R.F.D.: 119 Colonial DR

Contributed To Collision: Yes No | City, State, & Zip: Pelzer SC 29669

Estimated Speed: 25 | Speed Limit: 45 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # / Code: P/2 2936 | Summons # / Code: NA | Towed By: NA

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 0	$ 1500	$ 1800	$ NA	$ NA

Property Owner/Witness: NA | Address | Zip | Phone

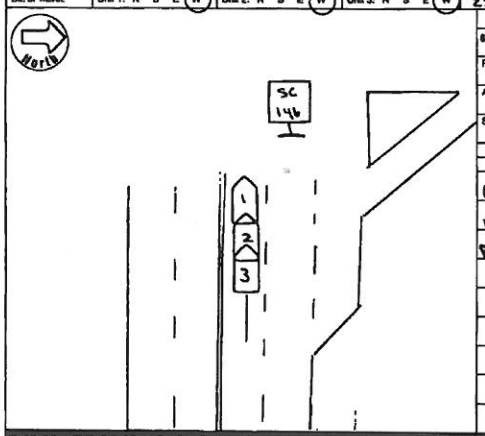
Property Owner/Witness: NA | Address | State | Zip | Phone

Phone: Y (N) | Describe What Happened (Refer to Units by Number)

Unit/s 1 & #3 were traveling West on SC 146, Howevver, Unit #3 struck Unit #2 in the rear, which struck Unit #1 in the rear. Driver #3 was following too closely.

MAY 18 2010

North



SOLELY FOR STATISTICAL REPORTING PURPOSES AND IS NOT A DETERMINATION OF FAULT OR LIABILITY. OPINION AND BELIEF CONCERNING THE COLLISION BETWEEN VEHICLES AND IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: GRIFFIN J.D. | Rank: LCPL | Badge #: 104 | Code: HP03 | Date: 05-02-2010 | Reviewer's Name: A.A. Lee | Rank: Sgt | Internal Agency Code: 10GV043998

Unit	Date of Birth	Sex	Race	INJ	Seat	R/S/D	A.I.S.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	01-10-1996	M	W	0	01	13	4	1	1	2			
2	02-17-1991	F	W	0	01	13	4	1	1	2			
3	01-30-1993	F	W	0	01	13	1	1	1	2			

Race: A - Asian/Pacific Islander; B - Airican American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 90- Unk./NA

Restraint/Safety Devices: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 89- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Unknown. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 8- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Motorist Veh.); 13- Other Non-collision; 19- Unk Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Powered); 25- Motor Veh. (Parked); 26- Railway Veh.; 29- Work Zone Maint. Equip.; 28- Other Movable Object; 29- Unk. Movable Object; 30- Pedalcycle

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Easement; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Pole; 59- Other (Post, Pole, Support, Etc.); 60- Other (Post, Pole, Support, Etc.); 61- Other (Wall, Building, Tunnel, Etc.); 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Events: 1st: 22; 2nd: 23; 3rd: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (<180°); 42- Angle (>180°); 43- Angle (=180°); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

Most Deformed: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

Vehicle Type: 01- Automobile; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 29- Animal (Fiddlen); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: 08

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 99- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Other; 39- Unk.; 40- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 60- Under the Influence; 87- Other Person Under the Influence

Environmental: 62- Obstruction; 63- Weather Cond.; 66- Other; 69- Unk.

Animal in Road: 60- Animal in Road; 61- Glare

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV In Transport; 5- Over- Other Vehicle; 9- Unk.

Underride/Override: 1- Y 2-N 9-U

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Severe/Totaled; 3- Disabling Damage; 4- Not Applicable; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Access: 1- Drive; 2- Median; 3- Roadway; 4- Roadside; 5- Shoulder; 6- Bikelane; 7- Sidewalk; 8- Unk.; 9- Outside Trafficway

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No Workers Present:

ORIGINAL

D.P.S. USE ONLY: 10047096 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 2400 | Arrived: 2410

Date: 04-30-2010 | Time: 2355 | County: 23 (3 SC Primary) | Collision Location (Rt. # / Name): 146 | (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | (0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 8- Other) | Miles: 1 | Dir. (N E S W): E | In / Near City or Town of: Greenville

Lane # / Dir.: 1 / 4 (E S W) | Distance Offset: .03 (Miles Feet) | Direction (N E S W): E | (1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | Base Intersection (Rt. # / Name): 385 | (0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 8- Other) | ASRU code | MPVGrid

R.R. Id.: NA | From: Ramp Only (N E S W) 1- Entrance 2- Exit | To (N E S W) 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | Second Intersection (Rt. # / Name): 85 | (0- Main 1- Alternate 2- Alternate 5- Spur 6- Connection 7- Business 8- Other) | Latitude: 34 ° 49 ' 25 10 | Longitude: 82 ° 17 ' 33 00

B-331594

Driver/Pedestrian's Full Name: Davidson - Brett Anthony

Unit #: 1 | Sex: m | Race: m | Street/R.F.D.: 248 Poole St | Birth Date: 01-07-1981 | City, State, & Zip: Woodruff, SC 29388

State: SC | Driver's License #: 10126207G (D) | Insurance Company: Geico

Year: 2002 | Body: PKP | Vehicle Make: Chev | VIN: 1GCEC14W122193338

State: SC | Year: 2010 | License Plate #: DPW 989 | Owner's D.L. #: 10126207G

Home Telephone: (G6) 822-6806 | Owner's Full Name: Davidson - Brett Anthony

Bus. Telephone: (864) 679-3800 | Street/R.F.D.: 248 Poole St.

Contributed To Collision: Yes | City, State, & Zip: Woodruff, SC 29388

Estimated Speed: 45 | Speed Limit: 45 | C.D.L. Req: Yes | No | T/B S Req: Yes | No | Alc/Drg Info (see back): Yes | No

Summons #: E477125 | Code: 89 | Summons #: NA | Code: | Towed By: NA

B-331595

Driver/Pedestrian's Full Name: Vidal - Yessenia Lucienne

Unit #: 2 | Sex: F | Race: H | Street/R.F.D.: 630 Fairview Rd, Apt. 107 | Birth Date: 04-15-1992 | City, State, & Zip: Simpsonville, SC 29680

State: SC | Driver's License #: 10204078O (D) | Insurance Company: Allstate

Year: 1999 | Body: Mean | Vehicle Make: Ford | VIN: 2FMZA5142XBB 01029

State: SC | Year: 2010 | License Plate #: BEE 331 | Owner's D.L. #: NA

Home Telephone: (864) 757-9348 | Owner's Full Name: Vidal Gonzalez - Maximo J.

Bus. Telephone: (864) 336-4035 | Street/R.F.D.: 630 Fairview Rd, Apt. 193

Contributed To Collision: Yes | City, State, & Zip: Simpsonville, SC 29680

Estimated Speed: 20 | Speed Limit: 45 | C.D.L. Req: Yes | No | T/B S Req: Yes | No | Alc/Drg info (see back): Yes | No

Summons #: E477124 | Code: 89 | Summons #: NA | Code: | Towed By: Latino's (OR)

B-331596

Driver/Pedestrian's Full Name:

Unit #: NA | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Estimated Speed: | Speed Limit: | C.D.L. Req: No | T/B S Req: No | Alc/Drg Info (see back): No

Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3,000	$ 3,000	$	$ NA	$ NA

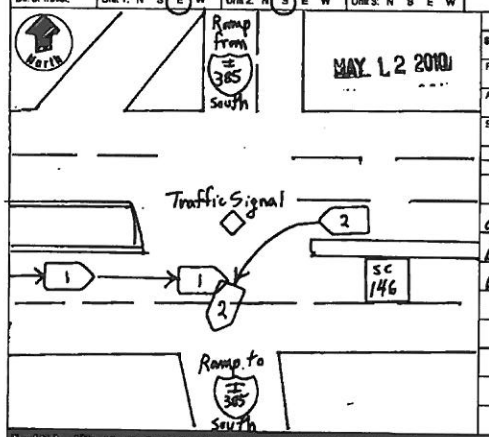
Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: (N) | Describe What Happened (Refer to Units by Number)

Veh. 1 was traveling east on SC 146. Veh. 2 was traveling south on SC 146, attempting a left turn onto I-385 ramp. Driver 2 failed to yield right of way and was struck by veh. 1 on the right rear side.



NOTICE: THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND DID NOT COVER THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: Stanchek - O.R. | Rank: HCpl | Badge #: 28 | Code: 11043 | Date: 04-30-2010 | Reviewer's Name: Taylor - T.J. | Rank: CPL. | Personal Identity Code: 1060943572

Unit	Date of Birth	Sex	Race	Inj	Seat	R/SD	A.S.D.	Eject	Lal	Trap	Name	Street Address	Zip Code
1	07-09-1981	M	W	0	01	13	4 3	1	1	3			
2	01-15-1992	F	H	0	09	13	4 3	1	V	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 04 05 06 07 08 09

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 7- Not Applicable, 9- Unknown; b) 1- Switch In On Position, 2- Switch In Off Position, 3- No Switch, 9- Unk.

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 20- Child Safety Seat, 30- Other, 99- Unk.

Transported to Medical Facility: a) 1- Yes, 2- No, 3- Unknown; b) By: 1- EMS, 2- Police, 8- Other, 9- Unk.

Pedestrian, Moped/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Other Non-Collision

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. in Transport, 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Rail, 43- Bridge Parapet End, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Guardrail Face, 49- Guardrail End, 50- Impact Attenuator/Crash Cushion, 51- Light/Luminaire Support, 52- Other Post, Pole, Support, 53- Sign Post, 54- Tree, 55- Utility Pole, 56- Other Fixed Object

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Damaged Area | 1st Deformed | Most Deformed

Vehicle Type: 01- Automobile, 02- Pickup/Truck, 03- Truck Tractor, 04- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Animal (Driven), 29- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 98- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Alc Test Results: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 9- Other

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unavailable, 3- Given - Pending, 4- None, 5- Refused

Special Use Only

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 5- PCP, 8- Other

Underride/Override: 1- Under - Compartment Intrusion, 2- Under - No Intrusion, 3- Under - Unknown, 4- Over - MV in Transport, 5- Over - Other Vehicle, 6- None, 9- Unk.

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Severe/Totaled, 3- Disabling Damage, 9- Unk., 8- Not Applicable

Trafficway: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Character: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Road Surface Condition

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 03- RR (X-bucks, Lights & Gates), 04- RR (X-bucks & Lights), 05- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 99- None

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Blowing Sand, Soil, Dirt or Snow, 6- Fog, Smog, Smoke, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Nonjunction, 99- Unk.

Work Zone: Yes, Directly; Yes, Indirectly; No; Unk. | Work Zone: Yes; No | Workers Present: Yes; No

Work Zone Location: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

School Bus Involved: 1- Yes Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

Primary: 05

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Operating Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Cell Phone, 28- Other Improper Action, 29- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Other, 59- Unk., 69- Under the Influence

Environmental: 60- Obstruction in Road, 61- Glare, 62- Animal in Road, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint Systems, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 89- Other, 99- Unk.

ORIGINAL

D.P.S. USE ONLY: 10044005 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01-2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1509 | Arrived: 1530

Date: 04-24-2010 | Time: 1520 | County: 23 | Collision Location (Rt. # / Name): S 146 (Woodruff Rd.) | Miles: .30 | Dir. N E S W: N | In / Near City or Town of: Greenville

Lane # / Dir.: 2 S | Distance Offset: .10 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): From 385 | AS/RU code | MP/Grid

R.R. Id.: NA | From: NE 1-Entrance SW 2-Exit | Ramp Only | To: NE 1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-Other SW | Second Intersection (Rt. # / Name): Toward 333 (Yeardin Rd.) | Latitude: 34°49 2600 | Longitude: 82°17 2560

B-329437 | Driver/Pedestrian's Full Name: Houwing - Harry

Unit # 1 | Sex: M | Race: W | Street/R.F.D.: 5 Buckhannon Rd.

Birth Date: 11-15-1939 | City, State, & Zip: Greenville, SC 29607

State: SC | Driver's License #: 002448102 (D) | Insurance Company: State Farm

Year: 2002 | Body: PS | Vehicle Make: Buick | VIN: 2G4WS52JX21197088

Color: SC | Year: 2009 | License State: SC | License Plate #: BRQ1609 | Owner's D.L. #: 002448102 (D)

Home Telephone: 963-288-5858 | Owner's Full Name: Houwing - Harry

Bus. Telephone: 803-841-2507 | Street/R.F.D.: 5 Buckhannon Rd.

Contributed To Collision: Yes | City, State, & Zip: Greenville, SC 29607

Estimated Speed: 40 | Speed Limit: 45 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons #: NA | Code | Summons #: NA | Code | Towed By: NA

B-329438 | Driver/Pedestrian's Full Name: Benthall - Jonathan Neal

Unit # 2 | Sex: M | Race: W | Street/R.F.D.: 5 Briarwood Blvd.

Birth Date: 01-20-1981 | City, State, & Zip: Greenville, SC 29615

State: SC | Driver's License #: 186096 3 (D) | Insurance Company: Progressive

Year: 2010 | Body: PK | Vehicle Make: Toyt. | VIN: 3TMJU4GN3AM092964

Color: SC | Year: 2010 | License State: EXM 375 | Owner's D.L. #: 00786096 3 (D)

Home Telephone: 864-884-8133 | Owner's Full Name: Benthall - Jonathan or Bonnie

Bus. Telephone: 864-244-6752 | Street/R.F.D.: 5 Briarwood Blvd.

Contributed To Collision: No | City, State, & Zip: Greenville, SC 29615

Estimated Speed: 10 | Speed Limit: 45 | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons #: 229898 | Code: NA | Summons #: | Code | Towed By: NA

B-329439 | Driver/Pedestrian's Full Name: NA

Unit # | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

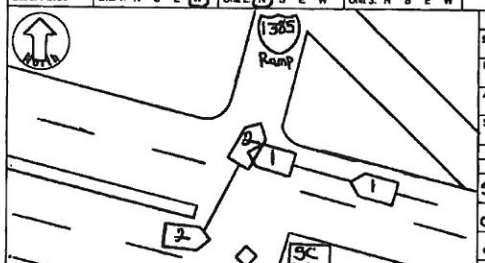
Contributed To Collision | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

MAY 04 2010



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$1500.00	$500.00	$	NA	$

Property Owner/Witness: NA | Address | State | Zip | Phone

Property Owner/Witness: NA | Address | State | Zip | Phone

Photo: Y N | Describe What Happened (Refer to Units by Number)

Unit #1 was traveling West on SC 146. Unit #2 was traveling North across SC 146, attempting to make a left turn onto I 385 entrance Ramp. The driver of Unit #2 failed to yield Right of way and was struck on the Right side by the front of Unit #1.

NOTICE: THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RELLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Taylor - T.J. | Rank: CPL. | Agency: HP03 | Code: HP03 | Date: 04-24-2010 | Reviewer's Name: Taylor - T.J. | Rank: CPL. | Trooper/Officer Badge #: 10608459

Unit	Date of Birth	Sex	Race	Inj	Seat	Rstd	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	11-15-1939	M	W	O	01	13	43	1	1	2			
2	01-20-1981	M	W	O	01	13	43	1	1	2			
2	11-17-1983	F	W	O	03	13	43	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 80- Lap; 99- Unk./N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 86- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1- Yes; 2- No

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spilt (Trip-Wheeled Veh.); 13- Other Non-collision; 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Parked); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Rail End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail Face; 51- Guardrail End; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

1st Deformed; Most Deformed; 1st / Most Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Fenn Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-Junction; 99- Unk.

Primary Driver Contributing Factors: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Citizen: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (Ice, Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Other Roadway; 39- Worn, Travel-Polished Surface; 48- Other; 49- Unk.; 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Lack of Required Lights; 57- Wrong Side of Road; 58- Other; 59- Unk.; 65- Under the Influence; 66- Other Non-Motorist; 67- Other Person Under the Influence; 68- Other; 69- Unk.

Non-Motorist: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Environmental: 02- Obstruction; 60- Animal in Road; 61- Glare; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under-Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.; Underride/Override; Extent of Deformity; 9- Unk.

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 1

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - On Grade; 5- Curve - Level; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area; 1- Yes; 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes; 2- No

Workers Present: 1- Yes; 2- No

ORIGINAL

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR310 Rev. Feb 05

D.P.S. USE ONLY: 10014937 | Page # 1 Of 1 | # Of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 2000 | Arrived: 2020

Date: 02-10-2010 | Time: 1995 | County: 23 (1- Interstate 2- US Primary 3-SC Primary 4- Secondary 5- County 6- Other) | Collision Location (Rt. # / Name): 146 | (0-Main 1-Alternate 2-Alternate 5-Spur 6-Connection 7-Business 9-Other) | Miles: 4.8 | Dir.: N E S W | In / Near City or Town of: Greenville

Lane # / Dir.: 2 | Or.: 4 | N E S W | Distance Offset: 20 (Miles / Feet) | Direction: N E S W | (1-Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other) | Base Intersection (Rt. # / Name): 385 | (0-Main 1-Alternate 2-Alternate 5-Spur 6-Connection 7-Business 9-Other) | ASRU code | MP/Grid | Latitude: 34°49' 2430" | Longitude: 82°17' 2530"

R.R. Id.: N/A | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W | (1- Interstate 2- US Primary 3- SC Primary 4-Secondary 5- County 6- Other) | Toward | Second Intersection (Rt. # / Name): 107 | (0-Main 1-Alternate 2-Alternate 5-Spur 6-Connection 7-Business 9-Other)

Z-327526

Driver/Pedestrian's Full Name: Hosch - Nicole Ann

Unit #: 1 | Sex: F | Race: B | Street: 115 Brookbend Rd

Birth Date: 11-12-1989 | City, State, & Zip: Mauldin, SC 29662

State: SC | Driver's License #: 100719898 (D) | Insurance Company: State Farm

Year: 2002 | Body: 4S | Vehicle Make: Volv | VIN #: YV1VS29532F810680

State: - | Year: - | License Plate #: None | Owner's D.L. #: 100719898 (D)

Home Telephone: (864) 901-9990 | Owner's Full Name: Hosch - Nicole Ann

Bus. Telephone: ( ) N/A | Street: 115 Brookbend Rd

Contributed To Collision: (Yes) No | City, State, & Zip: Mauldin, SC 29662

Estimated Speed: 10 | Speed Limit: 40 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: E320067 | Code: 44 | Summons #: N/A | Code | Towed By: Scotts (Tow)

Z-327527

Driver/Pedestrian's Full Name: McDowell - Sharon M

Unit #: 2 | Sex: F | Race: W | Street: 9 Mauldin Farms Ln

Birth Date: 03-24-1960 | City, State, & Zip: Mauldin, SC 29662

State: SC | Driver's License #: 011143038 (D) | Insurance Company: State Farm

Year: 2001 | Body: 2S | Vehicle Make: Ftrn | VIN #: 1G8ZN12881Z296622

State: SC | Year: 2011 | License Plate #: DEG 848 | Owner's D.L. #: 011143038 (D)

Home Telephone: (864) 275-6317 | Owner's Full Name: McDowell - Sharon M.

Bus. Telephone: ( ) N/A | Street: 9 Mauldin Farms Ln

Contributed To Collision: Yes (No) | City, State, & Zip: Mauldin, SC 29662

Estimated Speed: 40 | Speed Limit: 40 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: Knights (Rot)

Z-327528

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: (N) S E W | Unit 2: N S E (W) | Unit 3: N S E W

Home Telephone | Owner's Full Name: FEB 23 2010

Bus. Telephone | Street

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back) Yes No

Summons # | Code | Summons # | Code | Towed By

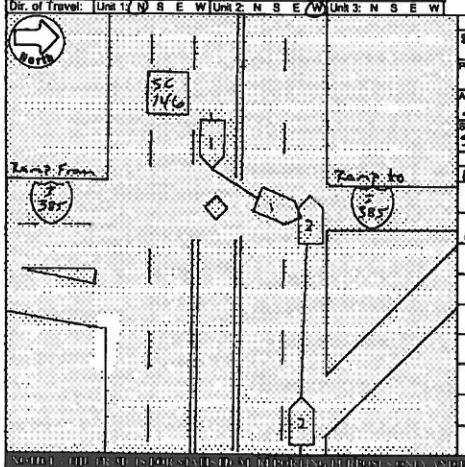
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 1500	$ N/A	$ N/A	$ N/A

Property Owner/Witness: Hawkins - Kristyn | Address: 205 Dove Hill Cir | State: SC | Zip: 29640 | Phone: 864-421-3383

Property Owner/Witness: Wrights - Amber | Address: 5 Irish Moss Ct | State: SC | Zip: 29680 | Phone: 864-991-7667

Photo: (Y) N | Describe What Happened (Refer to Units by Number)

Unit #1 was turning left from SC 146 to the ramp to I-385. Unit #2 was traveling west on SC 146. Unit #1 failed to yield to Unit #2, and struck it in it's side.



NOTICE: THE PURPOSE OF THIS REPORT IS TO AID IN ACCIDENT PREVENTION. IT IS NOT FOR USE IN ANY ACTION SEEKING TO DETERMINE THE CIVIL LIABILITY OF PERSONS OR PARTIES INVOLVED IN A TRAFFIC ACCIDENT.

Investigating Officer's Name: Lee - C.L. | Rank: TPR | Badge #: 920 | Code: HP03 | Date: 02-10-2010 | Reviewer's Name: Chandler - D.L. | Rank: SGT. | Internal Agency Code: 10GV 01490

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	11-12-1989	F	B	0	01	13	43	1	1	2			
2	03-24-1960	F	W	1	01	13	13	1	1	1	Driver of Unit #2		

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet Worn

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Tractor Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 59- Unk /NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front 4-Not Deployed 2-Deployed Side 7-Not Applicable 3-Deployed Both 9-Deployment Unk. 1- Switch in On Position 3- No Switch 2- Switch in Off Position 9- Unknown; b) 1-Deployed Front 4-Not Deployed 2-Deployed Side 7-Not Applicable 3-Deployed Both 9-Deployment Unk. 1- Switch in On Position 3- No Switch 2- Switch in Off Position 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1-Yes 2-No

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful Event	1st Hrmf
22				22	22
22					

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Trailer (Two-Wheeler Veh.); 13- Other Non-collision; 19- Unk. Non-collision

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 23- Motor Veh. (In Transport); 24- Motor Veh. (Stopped); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 35- Other Movable Object; 36- Unk. Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Parapet End; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 61 Utility Pole; 88- Other; 89- Unk.; 90- Tree; 91- Unknown; 92- Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↖ ↗); 42- Angle (→ |←); 43- Angle (↗ |↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st Most Deformed Area: 1st Deformed: 12 | 12 | 0; Most Deformed: 13 | 11 | 0

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Test Results: 1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 6- None; 8- Unk.

Undercide/Override: 6

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Trailer w/Other; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severed/Totaled; 5- Not Applicable; 9- Unk.

Extent of Deformity: 3

Alc Test Results: A1- ; A2- ; A3-

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Trafficway: 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other

1- Two-way, Not Divided; 1- Cone; 2- Island; 3- Median; 4- Reverse; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk.; B- X-walk; 1-Y 2-N 9-U

1st Harmful Event Loc: 3

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 8- Curve - Hillcrest

Road Character: 1

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Road Surface Condition: 1

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Traffic Control Type: 01

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 9

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 2

1- Yes 2- No

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Work Zone Location: ----------

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area

Work Zone Type: ----------

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk

1- Yes 2- No Workers Present:

Primary Contributing Factors: 05

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 19- Unk.; 18- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Devices (Inc., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 66- Under the Influence; 67- Other Person Under Influence

Environmental: 80- Animal in Road; 81- Glare; 82- Obstruction; 83- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

D.P.S. USE ONLY **10009526** | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM (TR-1) (Rev. 01-2001) | # of Units 2 | Amended - Action Copy of Original Report | Corrected | Notified 2137 | Arrived 2155

Date 02/01/2010 | Time 2130 | County 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Collision Location (Rt. # / Name) S 385 | 0- Main 1- Alternate 2- Spur 6- Connection 7- Business | Miles 3 | Dir. (E) S W | +/-nr/ Near City or Town of: Greenville

Lane # / Dir. 1 1 S W | Distance Offset Miles Feet | Direction N E S W | Base Intersection (Rt. # / Name) From 146 | 0- Main 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other 6- Connection 7- Business 8- Connection | ASRU code | MP/Grid

R.R. Id. N/A | From: Ramp Only N E S W 1- Entrance 2- Exit | To 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Toward N E S W | Second Intersection (Rt. # / Name) 85 | 0- Main 1- Alternate 2- Spur 6- Connection 7- Business 8- Connection | Latitude 34° 49 25.90 | Longitude 82° 17 25.20

B-710608 | Driver/Pedestrian's Full Name: Holland - Oonje - Famira

Unit # 1 | Sex F | Race B | Street/R.F.D. 21 6th Ave.
Birth Date 01-19-1986 | City, State, & Zip Greenville, SC. 29609
State SC. | Driver's License # 100165197 (D) | Insurance Company Auto Insurance
Year 1996 | Body 4S | Vehicle Make Cad. | VIN # 1GEK05ZY8TU211864
State SC. | Year 2010 | License Plate # DHI 234 | Owner's D.L. # 100165197 (D)
Home Telephone (864 505-5792 | Owner's Full Name Holland - Oonje - Famira
Bus. Telephone (864 303-6782 | Street/R.F.D. 21 6th Ave.
Contributed To Collision Yes (No) | City, State, & Zip Greenville, SC. 29609
Estimated Speed 0 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)
Summons # N/A | Code | Summons # N/A | Code | Towed By N/A

B-710609 | Driver/Pedestrian's Full Name: Gray - Erica - Evonne - Katrina

Unit # 2 | Sex F | Race B | Street/R.F.D. 207 Shaw St. Apt. 24
Birth Date 05-08-1987 | City, State, & Zip Greenville, SC. 29609
State SC. | Driver's License # 10027 9984 (D) | Insurance Company United
Year 1999 | Body 4S | Vehicle Make Toyt | VIN # 4T1SV34E4KU046840
State SC. | Year 2010 | License Plate # DDG 941 | Owner's D.L. # 100279984 (D)
Home Telephone (864) 248-3289 | Owner's Full Name Gray - Erica - Evonne - Katrina
Bus. Telephone ( ) N/A | Street/R.F.D. 207 Shaw St. Apt. 24
Contributed To Collision Yes (No) | City, State, & Zip Greenville, SC. 29609
Estimated Speed 10 | Speed Limit 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)
Summons # E325830 | Code 21 | Summons # N/A | Code | Towed By N/A

B-710610 | Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.
Birth Date | City, State, & Zip
State | Driver's License # | Insurance Company
Year | Body | Vehicle Make | VIN #
Dir. of Travel | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W
Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No
Summons # | Code | Summons # | Code | Towed By
Owner's Full Name | Home Telephone ( ) | Bus. Telephone ( ) | Street/R.F.D. | City, State, & Zip | Contributed To Collision Yes No

FEB 10 2010

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 500	$	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 was stopped in traffic headed North on the I 385 ramp. Unit #2 traveling North, too fast for conditions, struck Unit #1 in the rear.

NOTICE - THE DRIVERS LICENSE STATUTE AT REPORTING PERSON'S ONLY AND IS NOT TO DENOTE THE OFFICER'S BELIEF OR OPINION AND DOES NOT COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Gambrell - J. G. | Rank: Tpr | Badge #: 257 | Code: HP02 | Date: 02/01/2010 | Reviewer's Name: Bridges-DL | Rank: Sgt. | Internal Agency Code: 10 GV 012385

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	LAI	Trav	Name	Street Address	Zip Code
1	01-19-1986	F	B	0	01	13	4S	1	1	2			
1	03-23-1976	F	B	0	03	13	4S	1	1	2			
1	09-16-2008	F	B	0	04	21	4S	1	1	2			
1	05-28-2002	F	B	0	05	13	4S	1	1	2			
1	12-12-2004	M	B	0	06	21	4S	1	1	2			
2	05-08-1987	F	B	0	01	13	4S	1		2			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; W - Caucasian; H - Hispanic; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 | 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nonrailing); 51- Other Unenclosed Area (nonrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk. | b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 8- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Trapped: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Motorcycle Only: Helmet Injury: 1-Yes 2-No | a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown | b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events

Unit	Event 1	Event 2	Event 3	Event 4	Most Harmful
1	22				22
2	23				

1st Harmful: 22

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular); 13- Other Non-Collision; 14- Unk. Non-Collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Pole; 59- Other (Post, Pole, Support, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1 7 2 3 | Most Deformed: 1 7 2 3

Vehicle Types: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Drawn Veh.); 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 99- Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 88- Other; 99- Unk.

Alc Test Results: A1- ; A2- ; A3- ; A: 1- Over 2- Under 3- Refusal

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 8- Unk.

Underride/Override: 6

Extent of Deformity: 2

Most Damage Extent: 2

Trafficway: 4 (1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other)

1st Harmful Event: 58

Event Loc.: 3

Road Character: 1 (1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest)

Road Surface Condition: 2 (1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.)

Traffic Control Type: 98 (01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.)

School Bus Involved: 3 (1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.)

Work Zone: 2 (1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No)

Work Zone Location: ----------

Work Zone Type: ----------

Workers Present: (1- Yes 2- No)

Weather Condition: 1 (1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.)

Light Condition: 5 (1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights))

Junction Type: 13 (01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.)

Primary Contributing Factor: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 67- Other Person Under the Influence; 68- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Glare; 69- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

CRASH DATA

I-385 BETWEEN WOODRUFF RD & I-85

ORIGINAL

D.P.S. USE ONLY: 10060313 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2010) | # of Units: 3 | Amended - Attach Copy of Original Report | Corrected | Notified: 1736 | Arrived: 1749

Date: 06-02-2010 | Time: 1731 | County: 23 | 1- Interstate 4- Secondary 8- US Primary 5- County 3- SC Primary | Collision Location (Rt. # / Name): 8 365 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur | Miles: 3 | Dir. N E S W | Mile Near City or Town of: Greenville

Lane # / Dir.: # 1 | Dir. N E S W | Distance Offset: .4 Miles Feet | Direction N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name): From 85 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur 8- Other | ASRU code | MP/Grid | Latitude: 34 49 34.30

R.R. Id.: N/A | From: N E S W | Ramp Only 1- Entrance 2- Exit | To: N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Second Intersection (Rt. # / Name): Toward 146 | 0- Main 6- Connection 2- Alternate 7- Business 5- Spur 8- Other | Longitude: 82 17 34.00

B-424855

Driver/Pedestrian Full Name: Woodard- Nichole L

Unit # 1 | Sex: F | Race: W | Street/R.F.D.: 105 Treaty Point Dr.

Birth Date: 06-02-1988 | City, State, & Zip: Fountain Inn SC 29644

State: SC | Driver's License #: 100743466 (D) | Insurance Company: Geico

Year: 2008 | Body: 2DR | Vehicle Make: Ford | VIN #: 1ZVFT80N755163571

State: SC | Year: 2010 | License Plate #: 2121AE | Owner's D.L. #: N/A

Home Telephone: (864) 862-1080 | Owner's Full Name: Woodard- Teresa W

Bus. Telephone: (864) 270-9521 | Street/R.F.D.: 105 Treaty Point Dr.

Contributed To Collision: Yes | City, State, & Zip: Fountain Inn SC 29644

Estimated Speed: 15 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-424856

Driver/Pedestrian Full Name: Golden- MyDaysha Sierk

Unit # 2 | Sex: F | Race: B | Street/R.F.D.: 7 Border Ave

Birth Date: 06-13-1989 | City, State, & Zip: Simpsonville SC 29680

State: SC | Driver's License #: 100588373 (D) | Insurance Company: State Farm

Year: 2004 | Body: SUV | Vehicle Make: Chevy | VIN #: 1GNDS13S142302445

State: SC | Year: 2010 | License Plate #: AFI 839 | Owner's D.L. #: 100588373

Home Telephone: (864) 684-7867 | Owner's Full Name: Golden- MyDaysha S.

Bus. Telephone: ( ) N/A | Street/R.F.D.: 7 Border Ave

Contributed To Collision: No | City, State, & Zip: Simpsonville SC 29680

Estimated Speed: 45 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes

Summons #: E527681 | Code: 21 | Summons #: N/A | Code | Towed By: N/A

B-424857

Driver/Rider/Animal Full Name: Unknown

Unit # 3 | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company: Unknown

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

State | Year | License Plate # | Owner's D.L. #: Unknown

Home Telephone ( ) | Owner's Full Name: Unknown

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes | City, State, & Zip

Estimated Speed: 15 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500.00	$ 2000.00	$ 0	$ N/A	$ N/A

Property Owner/Witness: Bruce- Malcolm | Property Owner/Witness: N/A

Address: 513 Fernview Lake Way, Simpsonville | Address

State: SC | Zip: 29680 | Phone: 864 905-9763 | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Units 1, 2 and 3 were Southbound on I-385. Unit 1 began slowing rapidly for traffic, Unit 2, traveling too fast for conditions, struck unit 1. After unit 2 struck unit 1, unit 3 struck unit 2. Unit 3 left the scene and has not been identified

JUN 1, 1 2010

NOTICE: THE PURPOSE OF STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF COVERING THE COLLISION BUT NO WARRANTIES MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: LeDuc CJ | Rank: TFC | Badge #: 536 | Code: HP03 | Date: 06-02-2010 | Reviewer's Name: A. [illegible] | Rank: Sgt | Internal Agency Code: DGV056324

Unit	Date of Birth	Sex	Race	INJ	Seat	Rstr/SD	A.B.D.	Eject	Lal	Tran	Name	Street Address	Zip Code
1	06-02-1988	F	W	0	01	13	99	1	1	2			
1	01-24-1959	F	W	0	03	13	99	1	1	2			
2	06-13-1989	F	B	0	01	13	99	1	1	2			
3	Unknown	U	U	9	01	99	99	9	9	9			

Race: A - Asian/Pacific Islander, B - African American, I - Alaskan Native or American Indian, W - Caucasian, H - Hispanic, O - Other, U - Unk.

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal

b) Motorcycle Only: Helmet Used: 1- Yes 2- No 3- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Air Bag Deployment / Switch: 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 81- Lighting

Sequence of Events

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 41- Angle, 42- Angle, 43- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

Non-Collision: 04- Equipment Failure, 01- Cargo/Equip Loss or Shift, 05- Fire/Explosion, 02- Cross Median/Center Line, 06- Immersion, 03- Downhill Runaway, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Ran off Road Right, 13- Struck Object Not Fixed, 14- Other Non-collision, 15- Pedalcycle, 16- Railway Vehicle, 17- Animal (Any Other), 18- Motor Vehicle In Transport, 19- Motor Vehicle (Other Parked), 20- Motor Vehicle (Other Moving), 21- Animal (All Other), 22- Motor Veh. (Backing), 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Parked), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Movable Object, 31- Unk. Movable Object

Collision: Not Fixed

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Pier or Abutment, 42- Bridge Parapet End, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Guardrail Face, 49- Guardrail End, 50- Impact Attenuator/Crash Cushion, 51- Concrete Traffic Barrier, 52- Highway/Traffic Sign Post, 53- Overhead Sign Support, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Other Fixed Object, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 99- Unk.

Most Deformed: 1st / Most: 1 7 2 3 1 | 1st Deformed: 1 7 2 3 1

Deformed Area

21- Pedestrian, 81- None, 82- Rollover, 83- Total, 84- Under Carriage, 88- Other, 99- Unk

Vehicle Type: 01- Automobile, 02- Pickup/Truck, 03- Truck Tractor, 04- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 18- Motorcycle, 19- Unk. (Hit and Run Only), 20- Other Motorbike, 21- Train, 27- Pedalcycle, 28- Farm Use, 29- Animal (Drawn Veh.), 30- Animal (Ridden), 31- Pedestrian, 32- Passenger Bus, 33- Other

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Cowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or, 10- Turning Left, 11- Turning Right, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Fog, Smog, Smoke, 6- Snow, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Non-junction, 99- Unk.

Alc Test Results: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

Trafficway: 3

If: X- walk: 1- Y 2- N 9- U | 1st Harmful Event Loc.: 5 6

Alc/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Special Use Only: 1 2 3 4 5 6 7

1- Under- Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 8- None, 9- Unk. | Undercarriage/Override: 1 6

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Disabling Damage, 3- Severe/Totaled, 5- Not Applicable, 9- Unk. | 1 2 3 4 5 6 7 8 9

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest: 1

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, etc.), 8- Other, 9- Unk.: 2

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 88- None, 99- Unk.: 98

School Bus Involved: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.: 3

Work Zone: 1- Yes 2- No: 2

Work Zone Location: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area

Work Zone Type: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other

Workers Present: 1- Yes 2- No 9- Unk.

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Cell Phone, 10- Medical Related, 11- Improper Turn, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 20- Other Improper Action, 99- Unk.

Roadway: 30- Debris, 31- Non-Highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 60- Animal in Road, 61- Glare, 62- Obstruction, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Contributing Factors: Driver, Other

ORIGINAL

JUN 26 2018

D.P.S. USE ONLY: 10066561 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2011) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1725 | Arrived: 1744

Date: 06-17-2018 | Time: 1715 | County: 23 | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary | Collision Location (Rt. # / Name): S 385 | 5- Main 6- Connection 2- Alternate 7- Business 5- Spur | Miles: 1 | Dir. N E S W | ...in / Near City or Town of: Greenville

Lane # / Dir.: 1 | Of: 4 | N E S W | Distance Offset: .04 Miles N E S W | Direction: 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name): From 85 | 5- Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid | Latitude: 34 49 2430

R.R. Id: N/A | From: Ramp Only N E S W 1- Entrance 2- Exit | To: N E S W 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 146 | 5- Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | Longitude: 82 17 3060

B-328726 (Driver/Pedestrian's Full Name: Klinner-Jason Anthony)

Unit #: 1 | Sex: M | Race: W | Street/R.F.D.: 200 Ashby Dr. | Birth Date: 02-08-1977 | City, State, & Zip: Greenville SC 29609

State: SC | Driver's License #: 0875618549 (D) | Insurance Company: Allstate

Year: 2007 | Body: PK | Vehicle Make: Toyt | VIN #: 3TMKU72N47M012206

State: SC | Year: 2011 | License Plate #: EVK 625 | Owner's D.L. #: N/A

Home Telephone: (864) 979-7061 | Owner's Full Name: MSP & Assoc. Surveying Inc.

Bus. Telephone: ( ) N/A | Street/R.F.D.: 301 E Hillcrest Dr.

Contributed To Collision: Yes / No | City, State, & Zip: Greenville SC 29609

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No

Summons #: N/A | Code: | Towed By: N/A

B-328727 (Driver/Pedestrian's Full Name: Unknown)

Unit #: 2 | Sex: | Race: | Street/R.F.D.: | Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company: Un Known

Year: | Body: | Vehicle Make: | VIN #:

State: | Year: | License Plate #: | Owner's D.L. #:

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes / No | City, State, & Zip:

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No

Summons #: N/A | Code: | Towed By: N/A

B-328728 (Driver/Pedestrian's Full Name:)

Unit #: N/A | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Home Telephone: ( ) | Owner's Full Name:

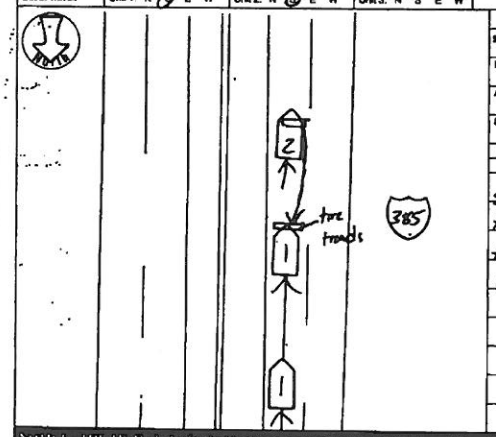
Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes / No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No

Summons #: | Code: | Towed By:

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2600	$ 0	$ N/A	$ N/A	$ N/A

Property Owner/Witness: | Address: | State: | Zip: | Phone:

Property Owner/Witness: | Address: | State: | Zip: | Phone:

Photo: Y/N | Describe What Happened (Refer to Units by Number):

Units #1 and #2 were traveling south on I-385 Unit #2 struck a tire in the roadway, causing the tire to become airborn and the tire struck Unit #1 in the front.

NOTICE: THE INFORMATION ON THIS ACCIDENT REPORT IS FURNISHED SOLELY AND EXCLUSIVELY FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWN FACTS, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name: Grace-Tim | Rank: TPO | Badge #: 781 | Code: H803 | Date: 06-17-2018 | Reviewer's Name: Taylor - T.J. | Rank: CPL. | Internal Agency Code: 106V 0600816

Unit	Date of Birth	Sex	Race	INJ	Seat	R/E/D	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	02-08-1977	M	W	0	01	13	9 9 3	1	1	2			
2	Unknown	U	U	0	01	99	9 9 9	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-incapacitating, 3- Incapacitating, 4- Fatal. b) Motorcycle Only. Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 99- Unk./NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 86- Other, 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 9- Deployment Unk. b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown. b) By: 1- EMS 2- Police 8- Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 41- Protective Pads, 51- Reflective Clothing, 61- Lighting

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Down Hill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Non-Hazardous), 13- Other Non-collision, 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Motor Veh. (In Transport), 23- Motor Veh. (Stopped), 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Work Zone Maint. Equip., 30- Other Moveable Object, 33- Unk. Moveable Object

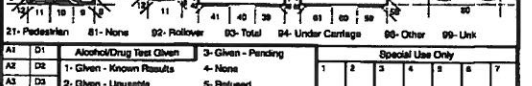
Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 66- Other, 99- Unk.

Most Harmful Event: 36

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle (↘↙↗↖), 41- Angle (→|←), 42- Angle (→|←), 43- Angle (↘|↖), 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed: 1 / 34 | 2nd Deformed: 1 / 35 | 3rd Deformed:

Deformed Area



21- Pedestrian, 81- None, 82- Rollover, 83- Total, 84- Under Carriage, 86- Other, 99- Unk

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 18- Limousine, 19- Bus, 20- Other Motorbike, 21- Motorcycle, 22- Motor Scooter, 23- Motor Bike, 24- Motor Home, 26- Pedalcycle, 27- Pedalcycle, 28- Other, 29- Unk., 31- Farm Equip., 32- Construction Equip., 33- Fire Truck, 34- Police, 35- Ambulance, 36- Other, 37- Unk., 38- Animal (Deer), 39- Animal (Ridden), 41- Pedestrian, 51- Train, 52- Passenger Bus, 53- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal, 02- Driver Training, 03- Construction/Maint., 04- Ambulance, 05- Military, 06- Transport Passengers, 07- Transport Property, 08- Farm Use, 09- Wrecker or Tow, 10- Police, 11- Government, 12- Fire Fighting, 13- Logging, 18- Other, 41- Pedestrian, 99- Unk.

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Cowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 01- Backing, 02- Changing Lanes, 03- Entering Traffic Lane, 04- Leaving Traffic Lane, 05- Making U-turn, 06- Movements Essentially Straight Ahead, 07- Overtaking/Passing, 08- Parked, 09- Slowing or Stopping in Traffic, 10- Turning Left, 11- Turning Right, 12- Changing Lanes, 13- Entering Traffic Lane, 14- Leaving Traffic Lane, 15- Making U-turn, 16- Movements Essentially Straight Ahead, 17- Overtaking/Passing, 88- Other, 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle, 22- Entering/Crossing Location, 23- Playing/Working on Vehicle, 24- Pushing Vehicle, 25- Standing, 26- Walking, Playing, Cycling, 27- Working

Alc Test Results: A1- , A2- , A3- ; 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Special Use Only

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 4- Serum, 8- Other

1- Under-Compartment Intrusion, 2- Under-No Intrusion, 3- Under-Unknown, 4- Over-MV in Transport, 5- Over-Other Vehicle, 6- None, 8- Unk., Underride/Override

Drug Results: D1- , D2- , D3- ; 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Extent of Deformity: 0- None/Minor, 1- Functional Damage, 2- Severe/Totaled, 3- Disabling Damage, 4- Severe/Totaled, 5- Not Applicable, 9- Unk.

Trafficway: 1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

Ac: 1- Curve 3- Median 5- Roadway 7- Sidewalk 9- Unk. / 2- Island 4- Roadside 6- Shoulder 8- Outside Trafficway

Bi: X- walk: 1- Y 2-N 8-U

1st Harmful Event Loc.: 5 2

Road Character: 1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Surface Condition: 1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminants, 7- Water (Standing, etc.), 8- Other, 9- Unk.

Traffic Control Type: 01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 88- None, 99- Unk.

Weather Condition: 1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Snow, 6- Fog, Smog, Smoke, 7- Blowing Sand, Oil, Dirt or Snow, 8- Severe Crosswinds, 9- Unk.

Light Condition: 1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

School Bus Involved: 1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

Work Zone: 1- Before 1st Sign, 2- Advanced Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area, 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 1- Yes 2- No

Work Zone Type:

Workers Present: 1- Yes 2- No 9- Unk.

Junction Type: 01- Crossover, 02- Driveway, 03- Five/More Points, 04- Four-way Intersection, 05- Railway Grade Crossing, 07- Shared Use Paths or Trail, 08- T-Intersection, 09- Traffic Circle, 12- Y-Intersection, 13- Non-junction, 99- Unk.

Primary Contributing Factors: 30

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Operating Defective Equipment, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Other Improper Action, 20- Unk., 88- Cell Phone

Others: Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 58- Other, 59- Unk., 88- Under the Infl., 89- Darting, 57- Wrong Side of Road

Environmental: 82- Obstruction, 83- Weather Cond., 84- Animal in Road, 85- Glare, 86- Other, 89- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

ORIGINAL

AUG 1, 8 2010

D.P.B. USE ONLY **10088952** Pages # 1 Of: 1

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01 JULY 2001)

# of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1620 | Arrived 1621

Date: 08-07-2010 | Time: 1615 | County: 23 | 1-Interstate 4-Secondary 2-US Primary 5-County 3-SC Primary | Collision Location (Rt. # / Name): S 385 | 0-Main 6-Connection 2-Alternate 7-Business 5-Spur | Miles: 3 | Dir. N E S W | On / Near City or Town of: Greenville

Lane # / Dir.: # 1 | Dir. 4 N E S W | Distance Offset: .05 Miles Feet | Direction N E S W | 1-Interstate 4-Secondary 2-US Primary 5-County 3-SC Primary 6-County | Base Intersection (Rt. # / Name): From 85 | 0-Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other | ASRU code | MP/Grid | Latitude 34 49 7550

R.R. Id.: N/A | From N E S W | Ramp Only 1-Entrance 2-Exit | To N E S W | 1-Interstate 4-Secondary 2-US Primary 5-County 3-SC Primary 6-County | Second Intersection (Rt. # / Name): Toward 146 / Woodruff Rd | 0-Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other | Longitude 82 17 3780

B-331294

Driver/Pedestrian's Full Name: Griffin - Aimee Betz

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 211 Aldgate Way

Birth Date: 12-29-1970 | City, State, & Zip: Greer SC 29650

State: SC | Driver's License #: 004113000 (D) | Insurance Company: State Farm

Year: 2006 | Body: SU | Vehicle Make: Buick | VIN #: 3G5DA037X6S577209

State: SC | Year: 2011 | License Plate #: CWZ443 | Owner's D.L. #: 004113000

Home Telephone: 864 275-2653 | Owner's Full Name: Griffin - Aimee Betz

Bus. Telephone: 1864 234-4715 | Street/R.F.D.: 211 Aldgate Betz

Contributed To Collision: Yes | City, State, & Zip: Greer SC 29650

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: N/A | Code | Summons #: N/A | Code | Towed By: N/A

B-331295

Driver/Pedestrian's Full Name: Edwards - Candace Verna

Unit #: 2 | Sex: F | Race: B | Street/R.F.D.: 100 Turtle Creek Dr Apt D48

Birth Date: 11-11-1986 | City, State, & Zip: Greenville SC 29615

State: SC | Driver's License #: 011679679 (D) | Insurance Company: Liberty Mutual

Year: 2005 | Body: VN | Vehicle Make: Chry | VIN #: 3C8FY68BX5T503429

State: SC | Year: 2010 | License Plate #: BBD577 | Owner's D.L. #: N/A

Home Telephone: 864 967-1858 | Owner's Full Name: Edwards - Sandra Anderson

Bus. Telephone: 864 383-6131 | Street/R.F.D.: 5 Grassy Ct

Contributed To Collision: Yes | City, State, & Zip: Greenville SC 29607

Estimated Speed: 50 | Speed Limit: 55 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: EG57627 | Code: 22 | Summons #: N/A | Code | Towed By: N/A

B-331296

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

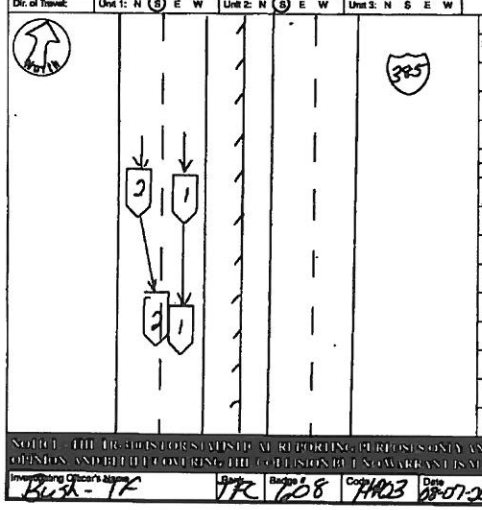
Home Telephone | Owner's Full Name

Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 750.00	$ 250.00	$	$ N/A	$ N/A

Property Owner/Witness | Property Owner/Witness

Address | Address

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Units #1 and #2 were traveling south on I-385. Un.#2 changed lanes unlawfully and sideswiped Unit #1 in the right side.

NOTICE: THE INFORMATION SHOWN ON THIS REPORT IS FURNISHED ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH THEREOF.

Investigating Officer's Name: Bush - TF | Rank: TPR | Badge #: 208 | Code: TPR03 | Date: 08-07-2010 | Reviewer's Name: Bell, T | Rank: Sgt | Internal Agency Code: 1061 884398

Unit	Date of Birth	Sex	Race	Inj	Seat	Rest'd	A.B.D.	Eject	Lic	Tran
1	12-29-1970	F	W	0	01	13	4	1	1	2
2	11-11-1986	F	B	0	01	13	4	1	1	2
2	12-12-2004	F	B	2	03	13	4	1	1	5
2	09-11-2005	F	B	0	06	21	4	1	1	2
2	12-19-2006	F	B	0	04	21	4	1	1	2

Name | Street Address | Zip Code

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: 01 02 03 / 04 05 06 / 07 08 09

Seating Loc.: 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Deployment Unk.; 5- Not Deployed; 7- Not Applicable; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Motorcycle Only: a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Lighting; 61- Reflective Clothing

Sequence of Events

Non-Collision: 04- Equipment Failure

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 39- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Event 1 / Event 2 / Event 3 / Event 4 / Most Harmful / 1st Harmful: 22 / 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle (↖↗); 42- Angle (→|←); 43- Angle (↗|↖); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 4 1/2; Most Deformed: 4 1/2 70



Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Pedestrian; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian; 99- Unk. (Hit and Run Only)

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Test Results: 1- Under - Compartment Intrusion; 2- Under - No Intrusion; 3- Under - Unknown; 4- Over - MV in Transport; 5- Over - Other Vehicle; 6- None; 8- Unk.

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 5- PCP; 8- Other; 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Underride/Override: 6

Extent of Deformity: 0 2 3

Alc Test Results: A1- A2- A3-

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Changing Lanes; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Roadway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

A: 1- Cars; 2- Island; 3- Median; 4- Roadside; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Unk.; B: X- trails; 1- Y 2-N 9-U

Trafficway: 3

1st Harmful Event: 52

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest: 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.: 1

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.: 05

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.: 1

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights): 1

School Bus Involved: 3

Work Zone: 3

Work Zone Location

Work Zone Type

Workers Present:

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 10- Y-Intersection; 13- Non/junction; 99- Unk.: 13

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

1- Yes 2- No

Primary: 18

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Instantree; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 64- Animal in Road; 65- Glare; 88- Other; 99- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 99- Unk.

Others:

ORIGINAL

D.P.S. USE ONLY: 10045217 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01-2010) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1915 | Arrived: 1925

Date: 04-28-2010 | Time: 1900 | County: 23 | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): 385 | 0- Main 1- Alternate 2- Secondary 5- Spur 6- Connection 7- Business | Miles: 1.0 | Dir.: N E S W | of/ Near City or Town of: Greenville

Lane # / Dir.: 1 S | Distance Offset: 0.20 Miles | Direction: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): From 85 | 0- Main 1- Alternate 2- Secondary 5- Spur 6- Connection 7- Business 9- Other | ASRU code | MP/Grid

R.P./Rd.: N/A | From: Ramp Only NE SW | To: NE SW 1- Entrance 2- Exit | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name): Toward 146 | Latitude: 34° 49 34.90 | Longitude: 82° 17 33.70

B-423247

Driver/Pedestrian's Full Name: AR.A.L - Electra Griffis

Unit #: 1 | Sex: F | Race: W | Street/R.F.D.: 6 Jamestown DR.

Birth Date: 09-26-1973 | City, State, & Zip: Greenville, SC. 29615

State: SC | Driver's License #: 8049116774 (D) | Insurance Company: Travelers

Year: 06 | Body: Su | Vehicle Make: JAF | VIN #: JNRDR09X20W211820

State: SC | Year: 2010 | License Plate #: EWK 398 | Owner's D.L. #: 8049116774 (D)

Home Telephone: 864 967 9015 | Owner's Full Name: AR.A.L - Robert or Electra

Bus. Telephone: 864 313 2869 | Street/R.F.D.: 6 Jamestown DR.

Contributed To Collision: Yes (No) | City, State, & Zip: Greenville, SC. 29615

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg into (see back): Yes (No)

Summons #: N/A | Code | Surveyed: N/A | Code | Towed By: N/A

B-423248

Driver/Pedestrian's Full Name: M Grey - Kevin Michael

Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 103 Yonce Ct.

Birth Date: 06-12-1964 | City, State, & Zip: Simpsonville, SC. 29681

State: SC | Driver's License #: 008966297 (D) | Insurance Company: Allstate

Year: 08 | Body: Su | Vehicle Make: Jeep | VIN #: 1J4GA69198L591461

State: SC | Year: 2010 | License Plate #: FDT 642 | Owner's D.L. #: 008166297 (D)

Home Telephone: 864 275 8538 | Owner's Full Name: M Grey - Kevin Michael

Bus. Telephone: 864 235 5577 | Street/R.F.D.: 103 Yonce Ct.

Contributed To Collision: Yes (No) | City, State, & Zip: Simpsonville, SC 29681

Estimated Speed: 50 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg into (see back): Yes (No)

Summons #: E475149 | Code: 21 | Surveyed: N/A | Code | Towed By: N/A

B-423249

Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

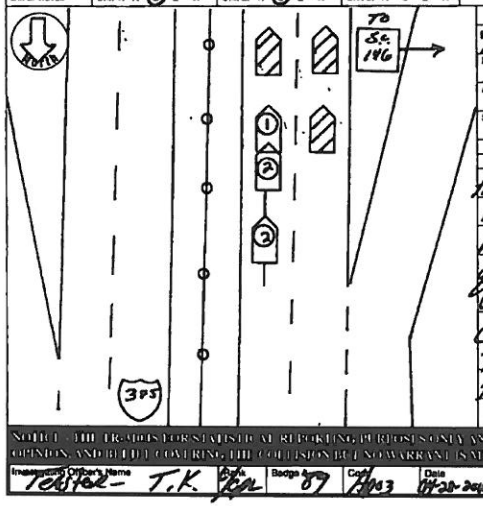
Home Telephone ( ) | Owner's Full Name: MAY 07 2010

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg into (see back): Yes No

Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$1,800.00	$500.00	$ N/A	$ N/A	$ N/A

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Units #1 and #2, in Lane #1, were traveling South on Interstate 385 in heavy traffic. Near SC Hwy. 146, the driver of Unit #1 stopped quickly in traffic. The driver of Unit #2, driving too fast for conditions, was unable to stop. The front of Unit #2 struck the rear of Unit #1.

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: Foster - T.K. | Badge #: 89 | Code: 1003 | Date: 04-28-2010 | Reviewed By Name: A.H.V.M | Rank: Sgt | Internal Approval Code: 10EV092818

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	09-26-1973	F	W	0	01	13	1	1	1				
1	07-20-2005	M	W	0	04	21	1	1	1				
1	01-30-2003	M	W	0	06	21	1	1	1				
2	06-12-1964	M	W	0	01	13	1	1	1				

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nonrailing); 51- Other Unenclosed Area (nonrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motorist/Pedalcyclist Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Down/Jackknife; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife

Collision: Not Fixed: 21- Animal (Not Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Normal); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 29- Animal (Deer Only); 39- Railway Veh.; 39- Work Zone Maint. Equip; 39- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 41- Embankment; 42- Bridge Overhead Structure; 43- Bridge Pier or Abutment; 44- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Fence; 48- Guardrail End; 48- Guardrail Face; 48- Equipment; 49- Highway Traffic Sign Post; 50- Impact Attenuator/Crash Cushion; 50- Mail Box; 50- Median Barrier; 50- Other (Post, Pole, Support, Etc.); 50- Other (Wall, Building, Tunnel, Etc.); 50- Tree; 51- Utility Pole; 54- Light/Luminaire Support; 57- Overhead Sign Support; 59- Unk.; 60- Other; 99- Unk.; 61- Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh; 29- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 07- Transport Property; 08- Transport Passengers; 09- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Tow Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only

Unauthorized/Overrides

Extent of Deformity: 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Severe/Totaled; 4- Not Applicable; 9- Unk.

Alc Test Results

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Action Prior to Impact: (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

(non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Accessed Code

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-Junction; 99- Unk.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

Work Zone Type

Workers Present: 1- Yes 2- No

Primary: 03

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Cell Phone; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 38- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive 88- Under the Infl.; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 88- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others: 07- Followed Too Closely; 67- Other Person Under the Influence

ORIGINAL

DEC 06 2010

D.P.S. USE ONLY: 10132743 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01-2001) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1030 | Arrived: 1049

Date: 11-06-2010 | Time: 1020 | County: 23 | Collision Location (Rt. # / Name): S 385 | Miles: 1 | Dir.: N E S W | Int / Near City or Town of: Greenville

Lane # / Dir.: 2 S | Distance Offset: .02 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): From 85 | ASRU code | MP/Grid | Latitude: 34 49 21 30 | Longitude: 82 17 21 90

R.R. Id.: N/A | From: Ramp Only 1 - Entrance 2 - Exit | To: N E S W | Second Intersection (Rt. # / Name): Toward 146

1 - Interstate 4 - Secondary; 2 - US Primary 5 - County; 3 - SC Primary 6 - Other; 7 - Business; 8 - Connection; 9 - Other; Main; Alternate

B-226957

Driver/Pedestrian's Full Name: Smith - Steve Leroy

Unit # 1 | Sex: M | Race: W | Street/R.F.D.: 3 Ansley Ct.

Birth Date: 06-01-1940 | City, State, & Zip: Simpsonville, SC 29681

State: SC | Driver's License #: 001073853 (D) | Insurance Company: State Farm

Year: 1997 | Body: VN | Vehicle Make: FORD | VIN #: 1FMEE11L0VHA76893

State: SC | Year: 2011 | License Plate #: PZ28538 | Owner's D.L. #: 001073853 (D)

Home Telephone: 864 630-8580 | Owner's Full Name: Smith - Steve Leroy

Bus. Telephone: ( ) N/A | Street/R.F.D.: 3 Ansley Ct.

Contributed To Collision: No | City, State, & Zip: Simpsonville, SC 29681

Estimated Speed: 20 | Speed Limit: 55 | C.D.L. Req: Yes | T/S S Req: Yes | Alc/Drg info (see back): Yes

Summons #: ER78003 | Code: 21 | Summons #: N/A | Code: | Towed By: N/A

B-226958

Driver/Pedestrian's Full Name: Whitehead - Sondra Denise

Unit # 2 | Sex: F | Race: W | Street/R.F.D.: 4 Bryant St.

Birth Date: 03-02-1965 | City, State, & Zip: Greenville, SC 29611

State: SC | Driver's License #: 008313735 (D) | Insurance Company: Statefarm

Year: 2006 | Body: 4S | Vehicle Make: CHRY | VIN #: 1C3EL56R56N172640

State: SC | Year: 2010 | License Plate #: BSE986 | Owner's D.L. #: 008313735 (D)

Home Telephone: 864 304-6968 | Owner's Full Name: Whitehead - Sondra Denise

Bus. Telephone: N/A | Street/R.F.D.: 4 Bryant St.

Contributed To Collision: Yes | City, State, & Zip: Greenville, SC 29611

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes | T/S S Req: Yes | Alc/Drg info (see back): Yes

Summons #: N/A | Code: | Summons #: N/A | Code: | Towed By: N/A

B-226959

Driver/Pedestrian's Full Name:

Unit # N/A | Sex: | Race: | Street/R.F.D.:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 1500	$ N/A	$ N/A	$ N/A

Property Owner/Witness: N/A | Property Owner/Witness: N/A

Address: | Address:

State | Zip | Phone | State | Zip | Phone

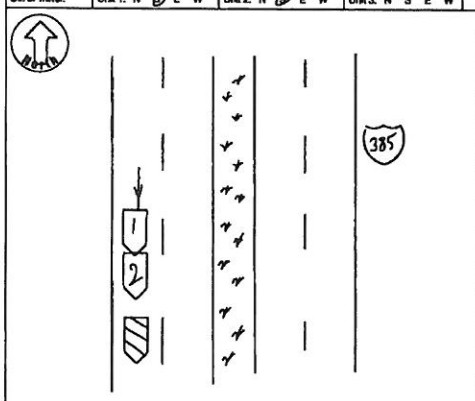


Photo: Y N | Describe What Happened (Refer to Units by Number):

Unit #1 and Unit #2 were traveling south on I385. Unit # 2 stopped due to traffic and Unit #1, driving too fast for conditions, struck Unit #2 in rear.

NOTICE - THE DRIVER'S LICENSE AND INSURANCE INFORMATION REQUESTED ON THIS REPORT IS MANDATORY UNDER SECTION 56-10-230 OF THE SOUTH CAROLINA CODE OF LAWS. FAILURE TO PROVIDE THIS INFORMATION WITHIN FIFTEEN DAYS OF A REQUEST BY THE INVESTIGATING LAW ENFORCEMENT AGENCY WILL RESULT IN THE SUSPENSION OF YOUR DRIVING PRIVILEGE IN THIS STATE. SECTION 56-10-240 PROVIDES THAT THE SUSPENSION SHALL REMAIN IN EFFECT UNTIL YOU HAVE COMPLIED WITH THE REQUIREMENTS OF THE LAW.

THE DRIVER'S LICENSE AND INSURANCE INFORMATION REQUESTED ON THIS REPORT IS MANDATORY UNDER SECTION 56-10-230 OF THE SOUTH CAROLINA CODE OF LAWS. FAILURE TO PROVIDE THIS INFORMATION WITHIN FIFTEEN DAYS OF A REQUEST BY THE INVESTIGATING LAW ENFORCEMENT AGENCY WILL RESULT IN THE SUSPENSION OF YOUR DRIVING PRIVILEGE IN THIS STATE. SECTION 56-10-240 PROVIDES THAT THE SUSPENSION SHALL REMAIN IN EFFECT UNTIL YOU HAVE COMPLIED WITH THE REQUIREMENTS OF THE LAW.

Investigating Officer's Name	Badge	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
Henry - L.D.	Ofc	787	FH03	11-06-2010	A. Hines	Sgt	10BU123556

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.R.I.D.	Ejct	LAI	Trav	Name	Street Address	Zip Code
1	06-01-1940	M	W	0	01	13	99	/	/	2			
2	03-02-1965	F	W	0	01	13	99	/	/	21			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: 1- Helmet; 2- No Helmet; 9- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Reflective Clothing; 51- Reflective Backing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unk.

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 8- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Harmful
23				23	
22	23				

Non-Collision: 01- Cargo/Equip Loss or Shift; 03- Cross Median/Center Line; 05- Downhill Runaway; 04- Equipment Failure; 06- Fire/Explosion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spilt (Two-Wheeled Veh.); 13- Other Non-collision; 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Support; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Gas Pump; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Pole; 59- Rock; 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 63- Wall; 64- Other Fixed Object; 65- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

1st Deformed | Most Deformed

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 85- Other; 99- Unk.

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Motor Home; 29- Animal (Driven Veh.); 30- Animal (Ridden); 31- Pedestrian; 32- Train; 61- School Bus; 62- Passenger Bus; 63- Other; 64- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 14- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other Improper Action; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Officers: 01- Driver; 02- Driver; 03- Driver; 04- Driver; 05- Driver; 06- Driver; 07- Driver; 08- Driver; 09- Driver

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unavailable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 6- None/Minor; 7- Functional Damage; 8- Disabling Damage; 9- Unk.; 4- Severe/Totaled; 5- Not Applicable

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.; Underride/Override; Extent of Deformity

Alc Test Results: A1- A2- A3-

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; A: 1- One 2- Island 3- Median 4- Roadside 5- Roadway 6- Shoulder 7- Sidewalk 8- Curb 9- Unk.; B: X- walk; 1- Y 2- N 9- U; 1st Harmful Event Loc.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.

Work Zone Type:

Workers Present: 1- Yes 2- No

ORIGINAL

DIAN 2.0 2010

SOUTH CAROLINA DPS/OHS & DMV USE ONLY
10149242

Page # 1 of 1

SOUTH CAROLINA
TRAFFIC COLLISION REPORT FORM
TR - 310 (Rev. 7/2010)

Of Units: 02

Amended - Attach Copy of Original Report
Corrected

Notified: 1435
Arrived: 1451

20100009763

Date	Time of Collision	County	Collision Location (Rt. # / Name)	Miles:	Dir.	In (Near) City or Town of:
12-21-2010	1430	23	On 385/	.31	S	GREENVILLE

1-Interstate 2-US Primary 3-SC Primary 4-Secondary 5-County 6-PP
Main 2-Alternate 5-Spur 6-Connecion 7-Business

Lane # / Dir.	Of		Distance Offset	Direction	Base Intersection (Rt # / Name)	GPS COORDINATES 00 00' 00 00"
2	4	S W	.01 Miles / Feet	S	From: mf	DEGREES MINUTES SECONDS
						Latitude: 34 49 28.80
						Longitude: 82 17 37.97

R.R. Id.

From	Ramp Only	To	Second Intersection (Rt # / Name)
N E S W	1 - Entrance 2 - Exit	N E S W	Toward: 140/ WOODRUFF RD.

1- Interstate 2- US Primary 3- SC Primary 4-Secondary 5- County 6 - Other

E-069965

Driver/Pedestrian's Full Name: CLARK KATHRYN DETURK

Unit #	# Occ	Sex	Race	Street/R.F.D.
01	1	F	W	10 CADOGAN DR

Birth Date: 08-29-1979
City, State, & Zip: SIMPSONVILLE SC 296816811

State	Driver's License #	Class	Insurance Company
SC	102074563	D	GEICO

Year	Body	Vehicle Make	VIN #
2006	4S	VOLK	3VWRF81KX6M576432

State	Year	License Plate #	Owner's D.L. #
SC	2011	DL316	102074563

Home Telephone: (732) 3093756
Owner's Full Name: CLARK KATHRYN DETURK
Bus. Telephone: (864) 8787115
Street/R.F.D.: 10 CADOGAN DR
Contributed To Collision: Yes (No)
City, State, & Zip: SIMPSONVILLE SC 296816811

Estimated Speed	Speed Limit	C.D.L. Req	T/B S Req	Alc/Drg Info (see back)
0	55	Yes (No)	Yes (No)	Yes (No)

Summons #	Code	Summons #	Code	Towed
				Yes (No)

Driver/Pedestrian's Full Name

Unit #	# Occ	Sex	Race	Street/R.F.D.

Birth Date: City, State, & Zip

State	Driver's License #	Class	Insurance Company

Year	Body	Vehicle Make	VIN #

Dir. of Travel: Unit 1: N (S) E W Unit 2: N (S) E W Unit 3: N S E W

E-069966

Driver/Pedestrian's Full Name: BLACKWELL HAROLD MARVIN

Unit #	# Occ	Sex	Race	Street/R.F.D.
02	1	M	W	4 TWININGS DR.

Birth Date: 07-05-1976
City, State, & Zip: SIMPSONVILLE SC 29681

State	Driver's License #	Class	Insurance Company
SC	007409389	D	ALLSTATE

Year	Body	Vehicle Make	VIN #
2008	CP	INFI	JNKCV54E38M400875

State	Year	License Plate #	Owner's D.L. #
SC	2012	AEH814	007409389

Home Telephone: (864) 8938161
Owner's Full Name: BLACKWELL HAROLD MARVIN
Bus. Telephone: ( )
Street/R.F.D: 4 TWININGS DR.
Contributed To Collision: Yes (No)
City, State, & Zip: SIMPSONVILLE SC 29681

Estimated Speed	Speed Limit	C.D.L. Req	T/B S Req	Alc/Drg Info (see back)
55	40	Yes (No)	Yes (No)	Yes (No)

Summons #	Code	Summons #	Code	Towed
E745542	21			Yes (No) SMITH AUTO

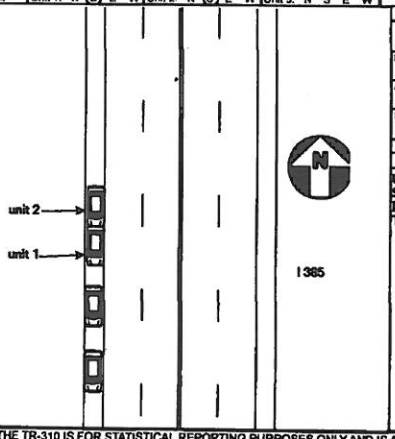
State | Driver's License # | Class | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone: ( )
Owner's Full Name:
Bus. Telephone: ( )
Street/R.F.D.:
Contributed To Collision: Yes No
City, State, & Zip:

Estimated Speed	Speed Limit	C.D.L. Req	T/B S Req	Alc/Drg Info (see back)
		Yes No	Yes No	Yes No

Summons #	Code	Summons #	Code	Towed
				Yes No



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3500	$ 4000	$	$	$

Property Owner/Witness | Address | City | State | Zip | Phone

Property Owner/Witness | Address | City | State | Zip | Phone

Photo Y (N)

Describe What Happened (Refer to Units by Number)

UNIT 1 WAS STOPPED IN TRAFFIC SOUTHBOUND ON THE SHOULDER OF I 385 WAITING TO EXIT ONTO WOODRUFF RD.UNIT 2 DRIVING TOO FAST FOR CONDITIONS HIT UNIT 1 IN THE REAR.

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
MCALHANY - D E	L/CPL	TS09	HP03	12-27-2010	WESLEY HIOTT	SGT	10GVL142140

20100009763

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A B D	Eject	LAI	Trav	Name	Street Address		Zip Code
01	08-29-1979	F	W	0	01	13	4 B 1	1	1	2	CLARK KATHRYN DETUR	10 CADOGAN DR	SIMPSONVIL SC	296816811
02	07-05-1976	M	W	0	01	13	3 B 1	1	1	2	BLACKWEL HAROLD MARVI	4 TWININGS DR.	SIMPSONVIL SC	29681

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; D - Other; U - Unk.

a) Injury Status: 1-Not Injured; 2-Incapacitating; 3-Incapacitating; 4-Fatal; 9-Unk.

b) 2 or 3 Wheel Motorized Vehicle

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20-Pedestrian; 30-Trailing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nonstriking); 51-Other Unenclosed Area (nonstriking); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 80-Lap; 99-Unk /NA

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 88-Other; 99-Unk.

Air Bag Deployment / Switch: a) 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk. b) 1-Switch In On Position; 2-Switch In Off Position; 3-No Switch; 9-Unknown

Ejection: 1-Not Ejected; 2-Part. Ejected; 3-Tot. Ejected; 7-Not App; 9-Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 8-Unknown

a) Transported to Medical Facility: 1-Yes 2-No 3-Unknown

b) By: 1-EMS 2-Police 8-Other 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet; 32-Reflective Clothing; 41-Protective Pads; 42-Lighting

Sequence of Events

Non-Collision: 04-Equipment Failure; 05-Fire/Explosion; 06-Overturn/Rollover; 07-Jackknife; 08-Separation of Units; 09-Ran off Road Left; 10-Ran off Road Right; 11-Downhill Runaway; 12-Spill (Non-Vehicular); 13-Other Non-collision

Collision, Not Fixed: 20-Animal (Deer Only); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Unspecified); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 26-Pedalcycle; 27-Pedestrian; 28-Railway Veh.; 29-Work Zone Maint. Equip.; 30-Other Movable Object

Collision, Fixed Object: 40-Bridge Overhead Structure; 41-Bridge Pier or Abutment; 42-Bridge Rail; 43-Curb; 44-Culvert; 45-Ditch; 46-Embankment; 47-Guardrail Face; 48-Guardrail End; 49-Impact Attenuator/Crash Cushion; 50-Concrete Traffic Barrier; 51-Other Traffic Barrier; 52-Fence; 53-Mail Box; 54-Median Barrier; 55-Object in Water; 56-Overhead Sign Support; 57-Pole or Support; 58-Sign; 59-Tree; 60-Utility Pole; 61-Work Zone Maint. Equipment; 62-Wall; 63-Other Fixed Object

Manner of Collision (Struck Veh.): 10-Not Coll. w/ Motor Veh.; 20-Head On; 30-Rear-to-Rear; 40-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

1st / Most Deformed Area; 1st Deformed; Most Deformed

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 14-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 28-Animal Drawn Veh.; 39-Animal (Ridden); 41-Pedestrian; 51-Train; 81-School Bus; 82-Passenger Bus; 88-Other; 99-Unk. (Hit and Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 05-Military; 06-Transport Passengers; 07-Transport Property; 08-Farm Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 19-Other; 41-Pedestrian

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Tow Dolly; 9-Petroleum Tanker; A-Lowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Twin Trailers; F-Other

Alc Test Results: A1-; A2-; A3-

Drug Results: 0-None/Minor; 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other; 9-Unk.

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unknown; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 4-Serum; 8-Other

Special Use Only: 1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV in transport; 5-Over-Other Vehicle; 9-Unk.

Underride/Override: 1-Underride; 2-Override; 3-None; 9-Unk.

Extent of Deformity: 1-Disabling Damage; 2-Functional Damage; 3-Destroy Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk.

Action Prior to Impact: 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopping in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk.

(Vehicle): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Pushing Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working

(Non-motorist)

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 88-None; 99-Unk.

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other

1st Harmful Event Loc.: 1-Ditch; 2-Inland; 3-Median; 4-Roadside; 5-Roadway; 6-Shoulder; 7-Sidewalk; 8-Unfenced Trafficway; 9-Unk.; B. X-walk; 1-7 2-8 3-9

Road Character: 1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk.

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights)

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 06-T-Intersection; 07-Shared Use Paths or Trail; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk.

Work Zone: 1-Yes 2-No; Work Zone Location; Work Zone Type; 1-Yes 2-No Workers Present

Primary: 03

Contributing Factors

Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 11-Operating Motor Vehicle in Aggressive Manner; 12-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper lane Usage/Change; 19-Cell Phone; 20-Texting; 28-Other Improper Action; 29-Unk.

Others:

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (I e , Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (I.e., Missing); 37-Work Zone (Const /Maint./Utility); 38-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R of W; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc.; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 66-Under the Influence; 67-Other Person Under Influence

Environmental: 62-Obstruction; 63-Weather Cond.; 64-Animal in Road; 65-Glare; 68-Other; 69-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/Shield; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 99-Unk.

ORIGINAL-CORRECTED

APR 05 2010

SOUTH CAROLINA DPS/HS & DMV USE ONLY

10-149242

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM

TR - 310 (Rev. 7/2010)

Page # 1 Of 1 | # Of Units 02 | Accident Attach Copy of Original Report: X Corrected | Notified 1435 | Arrived 1451

20100009763

Date	Time of Collision	County	Collision Location (Rt. # / Name)	Main	Miles	Dir.	In Near City or Town of:
12-21-2010	1430	23	385/	2-Alternate	.31	N E S W	GREENVILLE

Lane # / Dir.: # 2, Of 4, N E S W

Distance Offset: .01 (Miles) Feet

Direction: N E S W

Interstate: 1- Interstate, 2- US Primary, 3- SC Primary, 4- Secondary, 5- County, 6- Other

Base Intersection (Rt # / Name): From 85/

Main: 2-Alternate, 5-Spur; Connection: 6-Connection, 7-Business, 8-Other

GPS COORDINATES 00 00' 00 00" — DEGREES MINUTES SECONDS

Latitude: 34 49 26.66

Longitude: 82 17 37.97

R.R. Id.

From: N E S W — Ramp Only: 1 - Entrance, 2 - Exit

To: N E S W — Interstate: 1- Interstate, 2- US Primary, 3- SC Primary, 4- Secondary, 5- County, 6- Other

Second Intersection (Rt. # / Name): To 144/ WOODRUFF RD.

Main: 2-Alternate, 5-Spur; Connection: 6-Connection, 7-Business, 8-Other

Driver

E-069965

CLARK KATHRYN DETURK

Unit #	Sex	Race	Street/R.F.D.
01	F	W	10 CADOGAN DR

Occ: 1

Birth Date: 05-29-1979

City, State, & Zip: SIMPSONVILLE SC 296816311

State	Driver's License #	Class	Insurance Company
SC	102074583	D	GEICO

Year	Body	Vehicle Make	VIN #
2006	4S	VOLK	3VWRF81K06M75432

State	Year	License Plate #	Owner's D.L. #
SC	2011	DL316	102074583

Home Telephone: (732) 3093756

Owner's Full Name: CLARK KATHRYN DETURK

Bus. Telephone: (864) 6787115

Street/R.F.D.: 10 CADOGAN DR

Contributed To Collision: Yes (No)

City, State, & Zip: SIMPSONVILLE SC 296816311

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
0	55	Summons #	Code	Summons #	Code	Towed Yes (No)

Driver/Pedestrian's Full Name

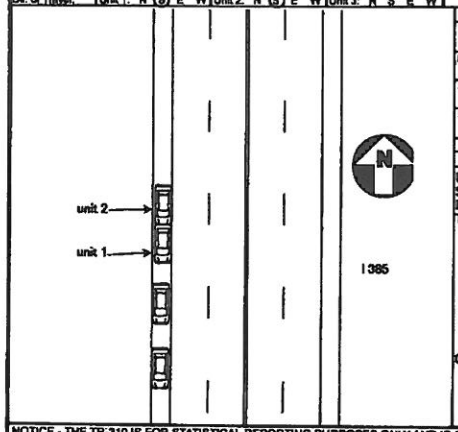
Unit #	Sex	Race	Street/R.F.D.
# Occ			

Birth Date | City, State, & Zip

State	Driver's License #	Class	Insurance Company

Year	Body	Vehicle Make	VIN #

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N S E W



Driver

E-069966

BLACKWELL HAROLD MARVIN

Unit #	Sex	Race	Street/R.F.D.
02	M	W	4 TWININGS DR.

Occ: 1

Birth Date: 07-05-1978

City, State, & Zip: SIMPSONVILLE SC 29681

State	Driver's License #	Class	Insurance Company
SC	007409389	D	ALLSTATE

Year	Body	Vehicle Make	VIN #
2005	CP	INFI	JNKCV54E35M400976

State	Year	License Plate #	Owner's D.L. #
SC	2012	AEH914	007409389

Home Telephone: (864) 5938161

Owner's Full Name: BLACKWELL HAROLD MARVIN

Bus. Telephone: ( )

Street/R.F.D.: 4 TWININGS DR.

Contributed To Collision: (Yes) No

City, State, & Zip: SIMPSONVILLE SC 29681

Estimated Speed	Speed Limit	C.D.L. Req: Yes (No)	T/S Req: Yes (No)	Alc/Drg Info (see back): Yes (No)
55	40	Summons # E7745542	Code 21	Summons #	Code	Towed (Yes) No SMITH AUTO

Driver/Pedestrian's Full Name

State	Year	License Plate #	Owner's D.L. #

Home Telephone: ( )

Owner's Full Name

Bus. Telephone: ( )

Street/R.F.D.

Contributed To Collision: Yes No

City, State, & Zip

Estimated Speed	Speed Limit	Summons #	Code	Summons #	Code	Towed	Yes	No

C.D.L. Req: Yes No | T/S Req: Yes No | Alc/Drg Info (see back): Yes No

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$2500	$4000	$	$	$

Property Owner/Witness | Property Owner/Witness

Address | City | Address | City

State | Zip | Phone | State | Zip | Phone

Photo: Y (N) — Describe What Happened (Refer to Units by Number)

UNIT 1 WAS STOPPED IN TRAFFIC SOUTHBOUND ON THE SHOULDER OF I 385 WAITING TO EXIT ONTO WOODRUFF RD.UNIT 2 DRIVING TOO FAST FOR CONDITIONS HIT UNIT 1 IN THE REAR.

CAD NUMBER CORRECTED

NOTICE - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Jurisdiction Code	Review Date	Reviewer's Name	Rank	Internal Agency Code
MCALHANY - D E	L/CPL	T808	HP03	03-11-2011	WESLEY HIOTT	SGT	10GV142140

SCCATTS PREPARED DOCUMENT

20100009763

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran.	Name	Street Address	Zip Code
01	05-29-1979	F	W	0	01	13	4	P 1	1	2	CLARK KATHRYN DETUR	10 CADOGAN DR SIMPSONVIL SC	296816311
02	07-05-1978	M	W	0	01	13	3	P 1	1	2	BLACKWEL HAROLD MARVI	4 TWININGS DR. SIMPSONVIL SC	29681

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0-Not Injured; 1-Possible Injury; 2 or 3 Wheel Motorized Vehicle; 3-Non-Incapacitating; 4-Fatal; 9-Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09 — 20-Pedestrian; 30-Trailing Unit; 40-Bus or Van (4th row or Higher); 50-Other Enclosed Area (nonraining); 51-Other Unenclosed Area (nonraining); 60-Sleeper of Cab; 70-Riding on Unit Exterior; 99-Unk./NA

Restraint/Safety Device: 00-None Used; 11-Shoulder belt; 12-Lap Belt Only; 13-Shoulder & Lap Belt; 21-Child Safety Seat; 88-Other; 99-Unk.

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; 1-Switch in On Position; 2-Switch in Off Position; 3-No Switch; 9-Unk.

Ejection: 1-Not Ejected; 2-Part. Ejected; 3-Tot. Ejected; 7-Not App.; 9-Unk.

Head Injury: 1-Yes; 2-No

Location After Impact: 1-Not Trapped; 2-Extricated (Mechanical Means); 3-Freed (non-mech.); 4-Not Applicable; 9-Unknown

a) Transported to Medical Facility: 1-Yes; 2-No; 3-Unknown

b) By: 1-EMS; 2-Police; 8-Other; 9-Unk.

Pedestrian, Motor/Pedalcycle Only: 31-Helmet; 41-Protective Pads; 51-Reflective Clothing; 61-Lighting

Sequence of Events

Non-Collision: 01-Cargo/Equip Loss or Shift; 02-Cross Median/Center; 03-Downhill Runaway; 04-Equipment Failure; 05-Fire/Explosion; 06-Immersion; 07-Jackknife; 08-Overturn/Rollover; 09-Ran off Road Left; 10-Ran off Road Right; 11-Separation of Units; 12-Spill (Pre-Impact Veh.); 13-Other Non-collision; 18-Unk. Non-collision

Collision: Not Fixed: 20-Animal (Domesticated); 21-Animal (All Other); 22-Motor Veh. (In Transport); 23-Motor Veh. (Stopped); 24-Motor Veh. (Other Roadway); 25-Motor Veh. (Parked); 28-Pedalcycle; 27-Pedestrian; 29-Railway Veh.; 30-Work Zone Maint. Equip.; 35-Other Movable Object; 38-Unk. Movable Object

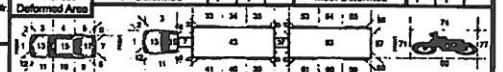
Collision: Fixed Object: 40-Bridge Overhead Structure; 41-Bridge Pier or Abutment; 42-Bridge Rail; 43-Bridge Parapet End; 44-Culvert; 45-Curb; 46-Ditch; 47-Embankment; 48-Equipment; 49-Fence; 50-Guardrail End; 51-Guardrail Face; 52-Highway Traffic Sign Post; 53-Impact Absorption/Crash Cushion; 54-Light/Luminaire Support; 55-Mail Box; 56-Median Barrier; 57-Overhead Sign Support; 58-Pole (Post, Pole, Support, Etc.); 59-Other (Wall, Building, Tunnel, Etc.); 60-Tree; 61-Utility Pole; 62-Work Zone Maint. Equipment; 69-Other; 99-Unk.

Event 1	Event 2	Event 3	Event 4	Most Harmful
23	1	1	1	22
22	2	2	2	22
3	3	3	3	

1st Harmful: 22

Manner of Collision (Struck Veh.): 00-Not Coll. w/ Motor Veh.; 10-Rear End; 20-Head On; 30-Rear-to-Rear; 40-Angle; 50-Sideswipe Same Dir.; 60-Sideswipe Opposite Dir.; 70-Backed Into; 99-Unknown

1st / Most Deformed Area



1st Deformed: 7 2 1 3 — Most Deformed: 7 2 1 3

21-Pedestrian; 81-None; 82-Rollover; 83-Total; 84-Under Carriage; 89-Other; 99-Unk.

Vehicle Type: 01-Automobile; 02-Pickup Truck; 03-Truck Tractor; 04-Other Truck; 15-Full Size Van; 16-Mini Van; 17-Sport Utility; 25-Motorcycle; 26-Other Motorbike; 27-Pedalcycle; 38-Animal Drawn Veh.; 39-Animal (Ridden); 41-Pedestrian; 51-Train; 61-School Bus; 62-Passenger Bus; 69-Other; Run Only)

Vehicle Use Code: 01-Personal; 02-Driver Training; 03-Construction/Maint.; 04-Ambulance; 08-Military; 07-Transport Property; 08-Transport Passengers; 09-Farm Use; 09-Wrecker or Tow; 10-Police; 11-Government; 12-Fire Fighting; 13-Logging; 19-Other; 41-Pedestrian

Vehicle Attachment: 1-None; 2-Mobile Home; 3-Semi-Trailer; 4-Utility Trailer; 5-Farm Trailer; 6-Trailer w/Boat; 7-Camper Trailer; 8-Towed Motor Vehicle; 9-Petroleum Tanker; A-Cowboy Trailer; B-Autocarrier Trailer; C-Other Tanker; D-Flat Bed; E-Town Trailers; F-Other

Alc Test Results: A1- ; A2- ; A3-

Alcohol / Drug Test Given: 1-Given - Known Results; 2-Given - Unusable; 3-Given - Pending; 4-None; 5-Refused

Test Type: 1-Breath (Alc Only); 2-Blood; 3-Urine; 8-Other

Drug Results: 1-Amphetamines; 2-Cocaine; 3-Marijuana; 4-Opiates; 5-PCP; 8-Other; 9-None/Minor; 2-Functional Damage; 3-Disabling Damage; 4-Severe/Totaled; 5-Not Applicable; 9-Unk.

Special Use Only

Underride/Override: 1-Under-Compartment Intrusion; 2-Under-No Intrusion; 3-Under-Unknown; 4-Over-MV in Transport; 5-Over-Other Vehicle; 8-None; 9-Unk.

Excess of Deformity: 0; 1; 2; 3

Action Prior to Impact (Vehicle): 01-Backing; 02-Changing lanes; 03-Entering traffic lane; 04-Leaving traffic lane; 05-Making U-turn; 06-Movements Essentially Straight Ahead; 07-Overtaking/passing; 08-Parked; 09-Slowing or Stopped in traffic; 10-Turning left; 11-Turning right; 88-Other; 99-Unk.

Action Prior to Impact (Non-motorist): 21-Approaching/Leaving Vehicle; 22-Entering/Crossing Location; 23-Playing/Working on Vehicle; 24-Running Vehicle; 25-Standing; 26-Walking, Playing, Cycling; 27-Working

Trafficway: 1-Two-way, Not Divided; 2-Two-way, Divided, Unprotected Median; 3-Two-way, Divided, Barrier; 4-One-Way; 8-Other

A: 1-Conv 2-Interst 3-Median 4-Roadway 5-Roadside 6-Shoulder 7-Smooth 8-Unk. 9-Outside Trafficway

B: X-ssetic 1-Y 2-N 9-U

VP Harmful Event Loc: 5 2

Road Character: 1-Straight - Level; 2-Straight - On grade; 3-Straight - Hillcrest; 4-Curve - Level; 5-Curve - On grade; 6-Curve - Hillcrest

Road Surface Condition: 1-Dry; 2-Wet; 3-Snow; 4-Slush; 5-Ice; 6-Contaminate; 7-Water (Standing, etc.); 8-Other; 9-Unk.

Traffic Control Type: 01-Stop and Go Light; 02-Flashing Traffic Signal; 11-RR (X-bucks, Lights & Gates); 12-RR (X-bucks & Lights); 13-RR (X-bucks Only); 21-Officer or Flagman; 22-Oncoming Emergency Vehicle; 31-Pavement Markings (only); 41-Stop Sign; 42-School zone Sign; 43-Yield Sign; 44-Work Zone; 45-Other Warning Signs; 51-Flashing Beacon; 88-None; 99-Unk.

School Bus Involved: 1-Yes, Directly; 2-Yes, Indirectly; 3-No; 9-Unk

Work Zone: 1-Yes 2-No

Work Zone Location: 1-Before 1st Sign; 2-Advanced Warning Area; 3-Transition Area; 4-Activity Area; 5-Termination Area

Work Zone Type: 1-Shoulder/Median Work; 2-Lane Shift/Crossover; 3-Intermittent/Moving Work; 4-Lane Closure; 8-Other; 9-Unk.

Workers Present: 1-Yes 2-No

Weather Condition: 1-Clear (no adverse conditions); 2-Rain; 3-Cloudy; 4-Sleet, Hail; 5-Snow; 6-Fog, Smog, Smoke; 7-Blowing Sand, Oil, Dirt or Snow; 8-Severe Crosswinds; 9-Unk.

Light Condition: 1-Daylight; 2-Dawn; 3-Dusk; 4-Dark (Lighting Unspecified); 5-Dark (Street Lamp Lit); 6-Dark (Street Lamp Not Lit); 7-Dark (No lights)

Junction Type: 01-Crossover; 02-Driveway; 03-Five/More Points; 04-Four-way Intersection; 05-Railway Grade Crossing; 07-Shared Use Paths or Trail; 08-T-Intersection; 09-Traffic Circle; 12-Y-Intersection; 13-Nonjunction; 99-Unk.

Primary Contributing Factors — Driver: 01-Disregarded Signs, Signals, Etc.; 02-Distracted/Inattention; 03-Driving Too Fast for Conditions; 04-Exceeded Authorized Speed Limit; 05-Failed to Yield Right of Way; 06-Ran off Road; 07-Fatigued/Asleep; 08-Followed Too Closely; 09-Made an Improper Turn; 10-Medical Related; 12-Aggressive Operation of Vehicle; 13-Over-correcting/Over-steering; 14-Swerving to Avoiding Object; 15-Wrong Side or Wrong Way; 16-Under the Influence; 17-Vision Obscured (Within Unit); 18-Improper lane Usage/Change; 19-Cell Phone; 20-Texting; 28-Other Improper Action; 29-Unk.

Roadway: 30-Debris; 31-Non-highway Work; 32-Obstruction in Roadway; 33-Road Surface Condition (I.e., Wet); 34-Rut, Holes, Bumps; 35-Shoulders (None, Low, Soft, High); 36-Traffic Control Device (I e., Missing); 37-Work Zone (Const./Maint./Utility); 39-Worn, Travel-Polished Surface; 48-Other; 49-Unk.

Non-Motorist: 50-Inattentive; 51-Lying &/or Illegally in Roadway; 52-Failure to Yield R. of W.; 53-Not Visible (Dark Clothing); 54-Disregard Signs, Signals, Etc; 55-Improper Crossing; 56-Darting; 57-Wrong Side of Road; 58-Other; 59-Unk.; 66-Under the Influence; 67-Other Person Under Influence

Environmental: 62-Obstruction; 63-Animal in Road; 64-Weather Cond; 65-Glare; 68-Other; 99-Unk.

Vehicle Defect: 70-Brakes; 71-Steering; 72-Power Plant; 73-Tires/Wheel; 74-Lights; 75-Signals; 76-Windows/S/Hold; 77-Restraint System; 78-Truck Coupling; 79-Cargo; 80-Fuel System; 88-Other; 99-Unk.

SCCATTS PREPARED DOCUMENT

CRASH DATA

I-385 BETWEEN I-85 & ROPER MOUNTAIN RD

ORIGINAL

D.P.S. USE ONLY: 10002506 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units: 3 | Amended - Attach Copy of Original Report | Corrected | Notified: 1747 | Arrived: 1756

Date: 1-6-2010 | Time: 1746 | County: 23 | Collision Location (Rt. # / Name): I-385 SOUTH | Miles: | Dir.: N E S W | In / Near City or Town of: GREENVILLE

Lane # / Dir.: 1 | Of: 6 | N E S W | Distance Offset: 238.7 Feet | Direction: N E S W | Base Intersection (Rt. # / Name): I-85 | AS/RU code | MP/Grid

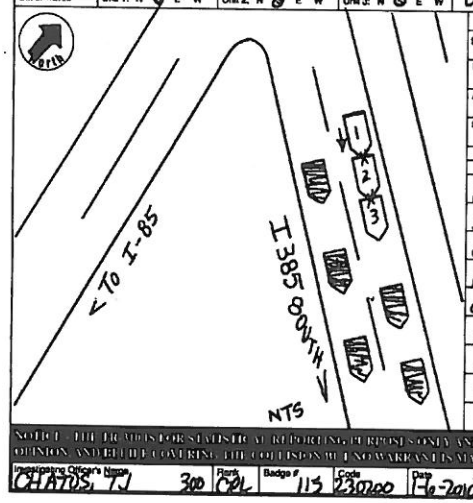
R.R. Id. | From: Ramp Only | To | Second Intersection (Rt. # / Name): ROPER MOUNTAIN RD | Latitude: 109 46 18 | Longitude: 160 85 01

B-361714 | Driver/Pedestrian's Full Name: HENDERSON, DYAMOND D
Unit #: 1 | Sex: F | Race: B | Street/R.F.D.: 223 WALDEN CREEK WAY
Birth Date: 2-13-1980 | City, State, & Zip: GREENVILLE SC 29615
State: SC | Driver's License #: 00766 9308 | D | Insurance Company: HORACE MANN
Year: 2003 | Body: 4S | Vehicle Make: NISSAN | VIN #: 1N4AL11D43C196827
State: SC | Year: 2011 | License Plate #: CFF 317 | Owner's D.L. #: SAME
Home Telephone: 864 420 3144 | Owner's Full Name: SAME
Bus. Telephone: ( ) N/A | Street/R.F.D.: AS
Contributed To Collision: Yes | City, State, & Zip: DRIVER
Estimated Speed: 35 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes
Summons #: 8867857 FB 21 | Code | Summons # | Code | Towed By

B-361715 | Driver/Pedestrian's Full Name: MOORE, RUSSELL T.
Unit #: 2 | Sex: M | Race: W | Street/R.F.D.: 705 SUMMER WOODS DR
Birth Date: 11-5-1968 | City, State, & Zip: MAULDIN SC 29662
State: SC | Driver's License #: 00 862 8537 | D | Insurance Company: HARTFORD
Year: 2006 | Body: VN | Vehicle Make: DODGE | VIN #: 1D4GP25B76B629920
State: SC | Year: 2010 | License Plate #: CYB 658 | Owner's D.L. #: N/A
Home Telephone: 864 607 0652 | Owner's Full Name: HAMES MUSIC LLC
Bus. Telephone: ( ) N/A | Street/R.F.D.: 370 PEACHOID RD
Contributed To Collision: Yes | City, State, & Zip: GAFFNEY SC 29341
Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes
Summons # | Code | Summons # | Code | Towed By

B-361716 | Driver/Pedestrian's Full Name: SANCHEZ-CARDENAS, ALFREDO
Unit #: 3 | Sex: M | Race: H | Street/R.F.D.: 1901 WOODRUFF RD APT 4214
Birth Date: 7-18-1959 | City, State, & Zip: GREENVILLE SC 29607
State: SC | Driver's License #: 100530780 | Insurance Company: ALLSTATE
Year: 2004 | Body: CN | Vehicle Make: CHEV | VIN #: 1C3EL45R84N281702
State: SC | Year: 2011 | License Plate #: FQL 793 | Owner's D.L. #: SAME
Home Telephone: (864) 373-9208 | Owner's Full Name: SAME
Bus. Telephone: ( ) N/A | Street/R.F.D.: AS
Contributed To Collision: No | City, State, & Zip: DRIVER
Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No
Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N E S W | Unit 2: N E S W | Unit 3: N E S W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 1000	$ 700	$	$

Property Owner/Witness | Property Owner/Witness
Address | Address JAN 25 2010
State | Zip | Phone | State | Zip | Phone

Photo Y N | Describe What Happened (Refer to Units by Number)

ACCORDING TO THE DRIVERS OF UNIT-2 AND UNIT-3, THEY WERE STATIONARY IN CONGESTED TRAFFIC ON THE INTERSTATE (I-385 S). THE DRIVER OF UNIT-1 UNABLE TO STOP IN TIME COLLIDED INTO THE REAR OF UNIT-2 SENDING HIM INTO THE REAR OF UNIT-3. NOTE - UNIT-1'S FRONT GOT HOOKED ON THE THE REAR OF UNIT-2'S REARHITCH. BOTH VEHICLES WERE FREED BY USE OF TIRE JACK

NOTICE - THE INFORMATION ON THIS REPORT IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION. NO WARRANTY IS MADE AS TO THE FACTS, AS CLAIMED THEREON

Investigating Officer's Name: CHAVIS, TJ | Rank: CPL | Badge #: 113 | Code: 230700 | Date: 1-6-2010 | Reviewer's Name | Rank | Internal Agency Code: 10-00467

Unit	Date of Birth	Sex	Race	Name	Street Address	Zip Code
1	1980-2-13	F	B			
2	1968-11-5	M	W		[illegible]	
3	1959-7-18	M	H			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 1- Not Injured; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal; 9- Unknown
b) Motorcycle Only: 1- Possible; 2- No
Head Injury: 1- Yes; 2- No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09
20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./NA

Restraint/Safety Devices: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 99- Other; 99- Unk.

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown
b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 8- Unknown; 9- Unk.

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Most
23				23	23
22	2	2	2	22	
23	2	2	2	23	

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Two-Wheeled Veh.); 13- Struck Object (Other Accessory); 14- Other Non-collision; 15- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Disparked); 24- Motor Veh. (Other Accessory); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 31- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (Left); 42- Angle (Right); 43- Angle (Left); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 80- Unknown

Deformed Area: 1st Deformed; Most Deformed

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Motorcycle; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other

Vehicle Use Code: 01- Personal; 02- Driver Training; 09- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Other / Unk.

(Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3- ; 1- Test Refused; 2- Test Performed; 3- Test Results Known; 4- Test Results Unknown

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

1- Under- Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- M/V in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underride/Override: 1 2 3 4 9

Extent of Deformity: 1 2 3 9

Traffic Way: 3

1st Harmful Event Loc.: 5

Road Character: 1

Road Surface Condition: 1

Traffic Control Type: 98

School Bus Involved: 3

Work Zone: 2

Work Zone Location

Work Zone Type

Workers Present: 2

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary: 03

Contributing Factors

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Under the Influence; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 26- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.; 48- Other; 49- Unk.

Environmental: 60- Obstruction; 61- Glare; 62- Animal in Road; 63- Weather Cond.; 69- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 89- Other; 99- Unk.

ORIGINAL

D.P.S. USE ONLY **10002135** | Page # 1 of: | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 1 | Amended - Attach Copy of Original Report | Corrected | Notified 1052 | Arrived 1058

Date 1/25/2010 | Time 1049 | County 23 | (1) Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary | Collision Location (Rt. # / Name) 5 I-385 | (5) Main 8- Connection 2- Alternate 7- Business 5- Spur | Miles: 0 Dir. N E S W | (In) Near (City) or Town of: GREENVILLE

Lat/Lon # / Dir. | Distance Offset # 1 Dir. N E S W Miles Feet 28ft | Direction (1) Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 8- Other | Base Intersection (Rt. # / Name) From I-85 | (5) Main 8- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid | Latitude 109 50 11

R.R. Id. | From: Ramp Only N E S W | To 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name) Toward PATEWOOD DR. | (5) Main 6- Connection 2- Alternate 7- Business 8- Spur 9- Other | Longitude 76 81 14

B-361618

Driver/Pedestrian's Full Name: HENSLEY, AMANDA DEANA

Unit # 1 | Sex F | Race W | Street/R.F.D. 29 BOBBIE AVE | Birth Date 03/24/1990 | City, State, & Zip SIMPSONVILLE, SC 29680

State GA | Driver's License # 55991322 | Insurance Company USAA CASUALTY

Year 2000 | Body 25 | Vehicle Make TOYT | VIN # JTDJT923X75106301

State SC | Year 2011 | License Plate # FLY 102 | Owner's D.L. # SAME

Home Telephone (760 294 5567 | Owner's Full Name AS THE DRIVER

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed 55 | Speed Limit 55 | C.D.L. Req: Yes Veh | T/B S Req: Yes Veh | Alc/Drg Info (see back): Yes No

Summons # N/A | Code | Summons # N/A | Code | Towed By WILLIAMS

B-361619

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

B-361620

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

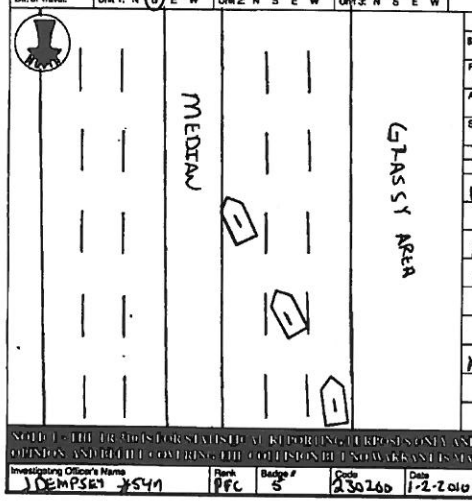
Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision: Yes / No | City, State, & JAN 25 2010

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 4000	$	$	$	$

Property Owner/Witness N/A | Address | State | Zip | Phone

Property Owner/Witness N/A | Address | State | Zip | Phone

Photos: Y (N) | Describe What Happened (Refer to Units by Number)

UNIT 1 WAS TRAVELING IN LANE 2. SHE STATED AN UNKNOWN VEHICLE SWERVED FROM THE EXIT RAMP TOWARDS HER CAUSING HER TO SWERVE AND STRIKE THE WALL.

NO INJURIES REPORTED

JAN 25 2010.

NOTE 1 - THE TR-310 IS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name J DEMPSEY #541 | Rank PFC | Badge # 5 | Code 230260 | Date 1-2-2010 | Reviewer's Name | Rank SGT | Internal Agency Code 162 5353

Unit	Date of Birth	Sex	Race	SU	Seat	R/SD	A.I.S.D.	Eject	LAI	Traf	Name	Street Address	Zip Code
1	03241990	F	W	0	01	13	099	1	1	2			
2													
3													
4													
5													
6													

Race: A - Asian/Pacific Islander, B - African American, H - Hispanic, I - Alaskan Native or American Indian, O - Other, U - Unk., W - Caucasian

a) Injury Status: 0- Not Injured, 1- Possible, 2- Non-Incapacitating, 3- Incapacitating, 4- Fatal. b) Motorcycle Only. Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian, 30- Trailing Unit, 40- Bus or Van (4th row or Higher), 50- Other Enclosed Area (nontrailing), 51- Other Unenclosed Area (nontrailing), 60- Sleeper of Cab, 70- Riding on Unit Exterior, 80- Lap, 98- Unk./NA

Restraint/Safety Device: 00- None Used, 11- Shoulder Belt Only, 12- Lap Belt Only, 13- Shoulder & Lap Belt, 21- Child Safety Seat, 88- Other, 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front, 2- Deployed Side, 3- Deployed Both, 4- Not Deployed, 7- Not Applicable, 9- Deployment Unk. b) 1- Switch in On Position, 2- Switch in Off Position, 3- No Switch, 9- Unknown

Ejection: 1- Not Ejected, 2- Part. Ejected, 3- Tot. Ejected, 7- Not App., 9- Unk.

Location After Impact: 1- Not Trapped, 2- Extricated (Mechanical Means), 3- Freed (non-mech.), 4- Not Applicable, 9- Unknown

Pedestrian, Motor/Pedalcycle Only: 31- Helmet, 32- Reflective Clothing, 41- Protective Pads, 42- Lighting

a) Transported to Medical Facility: 1- Yes, 2- No, 3- Unknown. b) By: 1- EMS, 2- Police, 8- Other, 9- Unk.

Sequence of Events: Mo. Dy. Yr. Time — Type of Event — Sequence for Unit

Non-Collision: 01- Cargo/Equip Loss or Shift, 02- Cross Median/Center Line, 03- Downhill Runaway, 04- Equipment Failure, 05- Fire/Explosion, 06- Immersion, 07- Jackknife, 08- Overturn/Rollover, 09- Ran off Road Left, 10- Ran off Road Right, 11- Separation of Units, 12- Spill (Non-Wheeled Veh.), 13- Other Non-collision, 14- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only), 21- Animal (All Other), 22- Work Zone Maint. Equip., 23- Other Movable Object, 24- Motor Veh. (Other Roadway), 25- Motor Veh. (Parked), 26- Pedalcycle, 27- Pedestrian, 28- Railway Veh., 29- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure, 41- Bridge Parapet End, 42- Bridge Pier or Abutment, 43- Bridge Rail, 44- Culvert, 45- Curb, 46- Ditch, 47- Embankment, 48- Equipment, 49- Fence, 50- Guardrail End, 51- Guardrail Face, 52- Highway Traffic Sign Post, 53- Impact Attenuator/Crash Cushion, 54- Light/Luminaire Support, 55- Mail Box, 56- Median Barrier, 57- Overhead Sign Support, 58- Other (Post, Pole, Support, Etc.), 59- Other (Wall, Building, Tunnel, Etc.), 60- Tree, 61- Utility Pole, 62- Work Zone Maint. Equipment, 63- Other, 99- Unk.

Event 1: 54 | Event 2 | Event 3 | Most Harmful: 1 | 1st Harmful: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh., 10- Rear End, 20- Head On, 30- Rear-to-Rear, 40- Angle, 50- Sideswipe Same Dir., 60- Sideswipe Opposite Dir., 70- Backed Into, 99- Unknown

1st / Most Deformed Area: 1st Deformed 1 2 3 | Most Deformed 1 2 3

Vehicle Type: 01- Automobile, 12- Pickup/Truck, 13- Truck Tractor, 14- Other Truck, 15- Full Size Van, 16- Mini Van, 17- Sport Utility, 25- Motorcycle, 26- Other Motorbike, 27- Pedalcycle, 28- Other, 31- Animal (Domestic), 38- Animal (Ridden), 41- Pedestrian, 51- Train, 61- School Bus, 62- Passenger Bus, 66- Other, 99- Unk. (Hit and Run Only)

Vehicle Use Code: 1

Vehicle Attachment: 1- None, 2- Mobile Home, 3- Semi-Trailer, 4- Utility Trailer, 5- Farm Trailer, 6- Trailer w/Boat, 7- Camper Trailer, 8- Towed Motor Vehicle, 9- Petroleum Tanker, A- Lowboy Trailer, B- Autocarrier Trailer, C- Other Tanker, D- Flat Bed, E- Twin Trailers, F- Other

Action Prior to Impact (Vehicle): 06

Action Prior to Impact (Non-motorist): 1

Weather Condition: 1

Light Condition: 1

Junction Type: 13

Primary Contributing Factors: 14

Driver: 01- Disregarded Signs, Signals, Etc., 02- Distracted/Inattention, 03- Driving Too Fast for Conditions, 04- Exceeded Authorized Speed Limit, 05- Failed to Yield Right of Way, 06- Ran off Road, 07- Fatigued/Asleep, 08- Followed Too Closely, 09- Made an Improper Turn, 10- Medical Related, 11- Operating Vehicle in Manner Causing Collision, 12- Aggressive Operation of Vehicle, 13- Over-correcting/Over-steering, 14- Swerving to Avoiding Object, 15- Wrong Side or Wrong Way, 16- Under the Influence, 17- Vision Obscured (Within Unit), 18- Improper Lane Usage/Change, 19- Cell Phone, 20- Other Improper Action, 21- Unk.

Roadway: 30- Debris, 31- Non-highway Work, 32- Obstruction in Roadway, 33- Road Surface Condition (i.e., Wet), 34- Rut, Holes, Bumps, 35- Shoulders (None, Low, Soft, High), 36- Traffic Control Device (i.e., Missing), 37- Work Zone (Constr./Maint./Utility), 38- Worn, Travel-Polished Surface, 48- Other, 49- Unk.

Non-Motorist: 50- Inattentive, 51- Lying &/or Illegally in Roadway, 52- Failure to Yield R. of W., 53- Not Visible (Dark Clothing), 54- Disregard Signs, Signals, Etc., 55- Improper Crossing, 56- Darting, 57- Wrong Side of Road, 58- Other, 59- Unk.

Environmental: 60- Obstruction, 61- Glare, 62- Animal in Road, 63- Weather Cond., 68- Other, 69- Unk.

Vehicle Defect: 70- Brakes, 71- Steering, 72- Power Plant, 73- Tires/Wheel, 74- Lights, 75- Signals, 76- Windows/Shield, 77- Restraint System, 78- Truck Coupling, 79- Cargo, 80- Fuel System, 88- Other, 89- Unk.

Alc Test Results: A1-, A2-, A3-

Alcohol/Drug Test Given: 1- Given - Known Results, 2- Given - Unusable, 3- Given - Pending, 4- None, 5- Refused

Test Type: 1- Breath (Alc. Only), 2- Blood, 3- Urine, 8- Other

Drug Results: 1- Amphetamines, 2- Cocaine, 3- Marijuana, 4- Opiates, 5- PCP, 8- Other

Special Use Only: 1 2 3 4 5 6 7

1- Under- Compartment Intrusion, 2- Under- No Intrusion, 3- Under- Unknown, 4- Over- MV in Transport, 5- Over- Other Vehicle, 6- None, 9- Unk.

Underride/Override: 1

Extent of Deformity: 2

0- None/Minor, 1- Functional Damage, 2- Severe/Totaled, 3- Disabling Damage, 4- Not Applicable, 9- Unk.

Trafficway: 2

1- Two-way, Not Divided, 2- Two-way, Divided, Unprotected Median, 3- Two-way, Divided, Barrier, 4- One-way, 8- Other

1st Harmful Event Loc.: 54

1- Straight - Level, 2- Straight - On Grade, 3- Straight - Hillcrest, 4- Curve - Level, 5- Curve - On Grade, 6- Curve - Hillcrest

Road Character: 1

1- Dry, 2- Wet, 3- Snow, 4- Slush, 5- Ice, 6- Contaminate, 7- Water (Standing, Moving), 8- Other, 9- Unk.

Road Surface Condition: 1

1- Clear (no adverse conditions), 2- Rain, 3- Cloudy, 4- Sleet, Hail, 5- Fog, Smog, Smoke, 6- Blowing Sand, Soil, Dirt or Snow, 7- Severe Crosswinds, 8- Snow, 9- Unk.

1- Daylight, 2- Dawn, 3- Dusk, 4- Dark (Lighting Unspecified), 5- Dark (Street Lamp Lit), 6- Dark (Street Lamp Not Lit), 7- Dark (No Lights)

Traffic Control Type: 98

01- Stop and Go Light, 02- Flashing Traffic Signal, 11- RR (X-bucks, Lights & Gates), 12- RR (X-bucks & Lights), 13- RR (X-bucks Only), 21- Officer or Flagman, 22- Oncoming Emergency Vehicle, 31- Pavement Markings (only), 41- Stop Sign, 42- School Zone Sign, 43- Yield Sign, 44- Work Zone, 45- Other Warning Signs, 51- Flashing Beacon, 98- None, 99- Unk.

School Bus Involved: 3

1- Yes, Directly, 2- Yes, Indirectly, 3- No, 9- Unk.

Work Zone: 2

1- Before 1st Sign, 2- Advance Warning Area, 3- Transition Area, 4- Activity Area, 5- Termination Area, 1- Yes 2- No

Work Zone Location: ----

1- Shoulder/Median Work, 2- Lane Shift/Crossover, 3- Intermittent/Moving Work, 4- Lane Closure, 8- Other, 9- Unk.

Work Zone Type: ----

1- Yes 2- No

Workers Present: 2

ORIGINAL

D.P.S. USE ONLY: 10009363 | Page # 1 of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 6/08) | # Of Units: 1 | Amended - Attach Copy of Original Report | Corrected | Notified: 1211 | Arrived: 1221

Date: 01-30-10 | Time: 1211 | County: 23 | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County | Collision Location (Rt. # / Name): I-385S | (2) Main 2-Alternate 5-Spur 6-Connection 7-Business | Miles: | Dir. IN E S W | (3) Near City or Town of: Greenville

Lane # / Dir.: #2 S | Distance Offset: .59 Feet | Direction: N E S W | (1) Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name): I-85 | (2) Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | ASRU code | MP/Grid

R.R. Id.: NA | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary (5) County 6- Other | Second Intersection (Rt. # / Name): Roper Mtn. Rd. | (3) Main 2-Alternate 5-Spur 6-Connection 7-Business 9-Other | Latitude: 109° 48' 09" | Longitude: 160° 81' 09"

A-389428 | Driver/Pedestrian's Full Name: Torres Pardo - Eduardo Jose

Unit #: 1 | Sex: M | Race: H | Street: 741 Woodruff Rd Apt 16223 | Birth Date: 07-03-66 | City, State, & Zip: Greenville, SC 29607

State: SC | Driver's License #: 10611763(D) | Insurance Company: Geico

Year: 2001 | Body: PS | Vehicle Make: NISS | VIN #: JNICA31D71T600403

State: SC | Year: 2011 | License Plate #: DPW975 | Owner's D.L. #: Same As Driver

Home Telephone: (415) 205-6607 | Owner's Full Name: Same As Driver

Bus. Telephone: ( ) NA | Street: Same As Driver | Contributed To Collision: (Yes) No | City, State, & Zip: Same As Driver

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/B S Req: Yes (No) | Alc/Drg info (see back): Yes (No) | Summons #: 9674HFB21 | Code: NA | Towed By: Mike's

A-389429 | Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN # | State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street | Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

A-389430 | Driver/Pedestrian's Full Name

Unit #: N/A | Sex | Race | Street | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

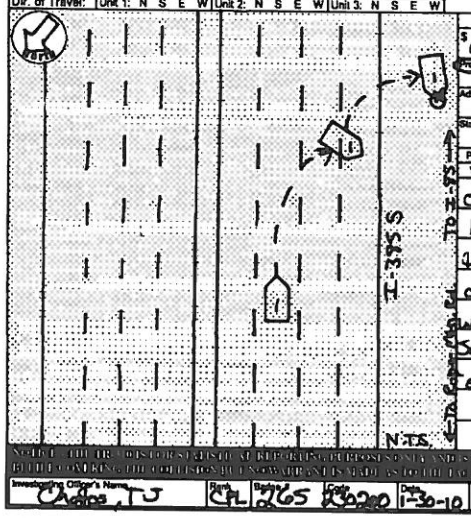
Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street: FEB 1 0 2010 | Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg info (see back): Yes No | Summons # | Code | Towed By

State | Year | License Plate # | Owner's D.L. #

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.: $6000 | Unit 2 Dam.: $ | Unit 3 Dam.: $ | Prop. Dam. 1: $1000 | Prop. Dam. 2: $

Property Owner/Witness: SCDOT | Address | State | Zip | Phone

Property Owner/Witness: Ricky Moore | Address: 190 Oakvale Dr. | State: SC | Zip: 29673 | Phone: (864) 346-6778

Phone: 803-737-2314

Photo: (Y) (N) | Describe What Happened (Refer to Units by Number)

The operator of unit #1 states that he lost control of his vehicle while driving South in lane #2 of I-385 S. and that he spun across the roadway, overturning and coming to rest offroad. Witness Statement is consistent with the statement of unit #1 operator. Subject was treated at the scene for lacerations on his hands and refused EMS. Transport.

NOTICE: THE DRIVER'S SIGNATURE AT REPORTING PURPOSES ONLY AND IS NOT AN ADMISSION OF THE DRIVER'S GUILT KNOWLEDGE OF ANY RULE OF LAW BEING VIOLATED OR ANY OTHER FACTS RELATED TO THE COLLISION. IT DOES NOT WAIVE ANY RIGHTS OF THE DRIVER.

Investigating Officer's Name: Chaffee, TJ | Rank: Cpl | Badge #: 265 | Troop: 20200 | Date: 1-30-10 | Reviewer's Name | Rank: Sgt | Internal Agency Code: 10-08582

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Ejct	LAI	Tran	Name	Street Address	Zip Code
1	07-03-66	M	H	2	01	13		1	1	2	DRIVER 1	[redacted]	

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk/ NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 71- Child Safety Seat; 88- Other; 99- Unk; Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 30- Other Movable Object; 31- Unk. Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier/Support End; 42- Bridge Rail; 43- Bridge Rail End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Other; 61- Utility Pole; 62- Work Zone Maint. Equipment

1st Harmful: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 13; Most Deformed: 13

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 94- Under Carriage; 98- Other; 99- Unk.

Vehicle Type: 01- Automobile; 12- Pickup Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Other Bus; 38- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01; 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Special Use Only

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 8- None; 9- Unk

Underride/Override: 6

Drug Results: 1- Amphetamines; 2 Cocaine; 3- Marijuana; 5- PCP; 8- Other; 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk

Extent of Deformity: 4

Alc Test Results: A1-; A2-; A3-

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Auto-carrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: 02; (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or; 10- Turning Left; 11- Turning Right; 99- Unk.; (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 88- Other

Weather Condition: 3; 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 1; 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Junction Type: 13; 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Non-junction; 99- Unk

Contributing Factors: Primary 03; Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Aggressive Operation of Vehicle; 12- Over-correcting/Over-steering; 13- Swerving to Avoiding Object; 14- Under the Influence; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29-Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Instanding; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 88- Other; 89- Unk

Environmental: 60- Animal in Road; 61- Glare; 62- Weather Cond.; 65- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk

Roadway Character: 1; Road Surface Condition: 5; Traffic Control Type: 98; 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminants; 7- Water (Standing, etc); 8- Other; 9- Unk; 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Sign; 51- Flashing Beacon; 88- None; 99- Unk

Trafficway: 3; 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 5- Other; 1- One; 2- Inland; 3- Median; 4- Roadway; 5- Roadside; 6- Shoulder; 7- Sidewalk; 8- Outside Trafficway; 9- Unk; B- X-walk; 1st Harmful Event Loc: 5

School Bus Involved: 5; 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No Work Zone: 2; Work Zone Location; Work Zone Type; 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

1- Yes 2- No Workers Present: 2

ORIGINAL

D.P.S. USE ONLY **10039619**

SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01-2001)

Page # 1 Of: 1 | # of Units 1 | Amended - Attach Copy of Original Report Corrected | Notified 1537 | Arrived 1556

Date 04-19-2010 | Time 1537 | County 23 | Collision Location (Rt. # / Name) 385 | Main 8- Connection 2- Alternate 7- Business 5- Spur | Miles | Dir. N E S W | In / Near City or Town of: Greenville

Lane # / Dir. 1 | Of 1 | GLE S W | Distance Offset 63 Miles (N) E S W | Direction 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Rt. # / Name) From I-85 | Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid

R.R. Id. | From: Ramp Only (N) E S W Entrance | To 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Rt. # / Name) Toward Roper Mountain Rd. | Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | Latitude 10 94427 | Longitude 16 11 220

B-360436 Driver/Pedestrian's Full Name: Scruggs, Cameron Paul

Unit # 1 | Sex M | Race W | Street/R.F.D. 607 Jackson St.

Birth Date 11-10-1987 | City, State, & Zip Anderson, SC 29625

State SC | Driver's License # 100123467 (DM) | Insurance Company Progressive

Year 2004 | Body MC | Vehicle Make SUZI | VIN # JS1GN7CA642111878

State SC | Year 2002 | License Plate # ZL10834 | Owner's D.L. # same

Home Telephone Bus 221-5130 | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes | City, State, & Zip

Estimated Speed 50 | Speed Limit 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes Clear | Summons # | Code | Towed By

B-360437 Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Towed By

B-360438 Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

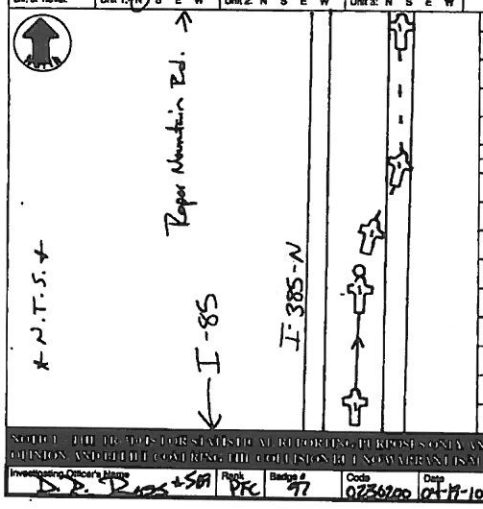
Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No | Summons # | Code | Towed By

Dir. of Travel: Unit 1: (N) S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000	$	$	$	$

Property Owner/Witness: None Reported | Address | State | Zip | Phone

Property Owner/Witness: None Reported | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 states he struck debris in the roadway causing him to collide with the barrier wall. Diagram not to scale.

APR 23 2010

* No Injuries Reported *

NOTICE: THE PURPOSE FOR STATE ACCIDENT REPORTING PURPOSES ONLY AND IS ABSTRACTED FROM THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name: D. P. Bruce #569 | Rank PFC | Badge # 97 | Code 0236200 | Date 04-19-10 | Reviewed Name CS Mott #440 | Rank Cpl | Internal Agency Code 10-2010340337

Unit	Date of Birth	Sex	Race	Inj	Seat	R/S/D	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	11-10-1987	M	W	0	01	00	7	3	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 61- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 90- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 89- Other; 99- Unk.

Air Bag Deployment / Switch: a): 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 7- Not Applicable; 9- Deployment Unk. b): 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS 2- Police; 8- Other; 9- Unk.

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Other Non-Collision

Collision: Not Fixed: 09- Pedestrian; 10- Animal (Deer Only); 11- Animal (All Other); 12- Motor Veh. (In Transport); 13- Motor Veh. (Stopped); 14- Motor Veh. (Other Roadway); 15- Motor Veh. (Parked); 16- Railway Veh.; 17- Work Zone Maint. Equip.; 18- Other Movable Object; 19- Unk. Movable Object

Collision: Fixed Object: 20- Embankment; 21- Bridge Overhead Structure; 22- Bridge Pier or Abutment; 23- Bridge Rail; 24- Culvert; 25- Curb; 26- Ditch; 27- Embankment; 28- Guardrail End; 29- Guardrail Face; 30- Highway Traffic Sign Post; 31- Impact Attenuator/Crash Cushion; 32- Light/Luminaire Support; 33- Median Barrier; 34- Other (Post, Pole, Support, Etc.); 35- Other Fixed Object; 36- Tree; 37- Utility Pole; 38- Work Zone Maint. Equipment

Event 1: 12 | Event 2 | Event 3 | Most Harmful Event: 1 | 1st Harmful Event: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (↱↰ / ↱↱); 41- Angle (↦|↤); 42- Angle (↦|↦); 43- Angle (↱|↰); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Driven Veh.); 33- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 69- Other; 89- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Livestock Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Soil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran-off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Other; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheels; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Sand, Mud, Dirt, Oil, Gravel; 7- Water (Standing, etc.); 8- Contaminants; 9- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 5- Other

Alc Test Results: A1- 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Alcohol/Drug Test Given: A2- Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other

Drug Results: A3- 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 6- Other; 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 3- Destroyed; 4- Severed/Totaled; 5- Not Applicable

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- M/V in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Underride/Override

Extent of Deformity: 0- None; 1- Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Number of Lanes: A: 1- Alone; 2- Median; 3- Roadway; 4- Roadside; 5- Shoulder; 6- Outside Trafficway; 7- Sidewalk; 8- Unk.; B: 1- Y 2-N 9-U

1st Harmful Event: 1- Y 2-N 9-U

Event Loc.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type

Workers Present: 1- Yes 2- No

ORIGINAL

JUL 16 2010

D.P.S. USE ONLY: 10074912 | Page # 1 Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2009) | # Of Units: 2 | Amended - Attach Copy of Original Report | Notified: 2134 | Arrived: 2138

Date: 07/09/2010 | Time: 2135 | County: 23 | Collision Location (Rt. # / Name): S-385N | Miles: 0 | Dir.: N E S W | In/Near City or Town of: Greenville

Lane # / Dir.: 1 / 4 | Distance Offset: .65 Feet | Direction: N E S W | Base Intersection (Rt. # / Name): I-85 | From | Toward | ASRU code | MP/Grid

R.R. Id.: N/A | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W | Second Intersection (Rt. # / Name): Roper Mt. Rd. | Latitude: 109° 31' 97" | Longitude: 160° 75' 15"

1 - Interstate 2 - US Primary 3 - SC Primary 4 - Secondary 5 - County 6 - Connector 7 - Business 8 - Other 9 - Other

A-390214

Driver/Pedestrian's Full Name: Elliott-Mcadaller Cathy

Unit # 1 | Sex: F | Race: B | Street: 106 Melo A.

Birth Date: 12261957 | City, State, & Zip: Simpsonville SC 29680

State: SC | Driver's License #: 137644 8 D | Insurance Company: Allstate

Year: 2005 | Body: 4S | Vehicle Make: Ford | VIN #: 1FAFP53U35A101168

State: SC | Year: 2011 | License Plate #: LRG 000 | Owner's D.L. #: Same

Home Telephone: (864)801-7448 | Owner's Full Name:

Bus. Telephone: ( ) | Street:

Contributed To Collision: No | City, State, & Zip:

Estimated Speed: 60 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: CS1177FE | Code: 21 | Summons #: N/A | Code: | Towed By: N/A

A-390215

Driver/Pedestrian's Full Name: Pistido-James Benjamin Lee

Unit # 2 | Sex: M | Race: W | Street: 105 Traynham Blvd.

Birth Date: 12081987 | City, State, & Zip: Greenville SC 29609

State: SC | Driver's License #: 7060396 D | Insurance Company: Allstate

Year: 1998 | Body: 4S | Vehicle Make: Honda | VIN #: 2HGES6571WH620437

State: SC | Year: 2011 | License Plate #: 959 ESL | Owner's D.L. #: N/A

Home Telephone: (864)521-4376 | Owner's Full Name: Stanley-James Phillip Jr.

Bus. Telephone: (864)552-0902 | Street: 330 Blackbottom Rd.

Contributed To Collision: Yes | City, State, & Zip:

Estimated Speed: 0 | Speed Limit: 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg info (see back): Yes | Summons #: N/A | Code: | Summons #: N/A | Code: | Towed By: N/A

A-390216

Driver/Pedestrian's Full Name:

Unit # N/A | Sex: | Race: | Street:

Birth Date: | City, State, & Zip:

State: | Driver's License #: | Insurance Company:

Year: | Body: | Vehicle Make: | VIN #:

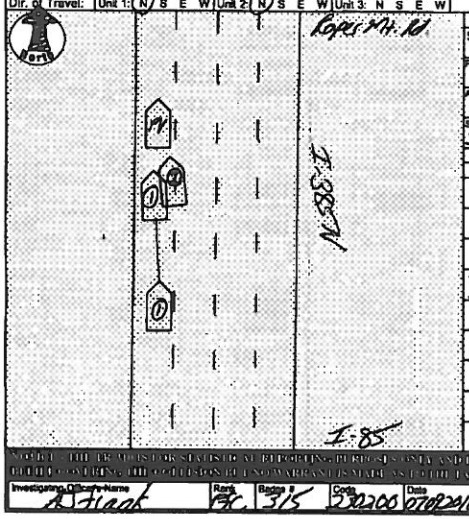
Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street:

Contributed To Collision: Yes / No | City, State, & Zip:

Estimated Speed: | Speed Limit: | C.D.L. Req: Yes / No | T/B S Req: Yes / No | Alc/Drg info (see back): Yes / No | Summons #: | Code: | Summons #: | Code: | Towed By:

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1500	$ 2000	$ N/A	$ N/A	$ N/A

Property Owner/Witness: Huntington - Mark | Address: 4706 Gen St. | City: | State: SC | Zip: 29601 | Phone: 864-271-5933

Property Owner/Witness: N/A | Address: | City: | State: | Zip: | Phone:

Photo: Y N | Describe What Happened (Refer to Units by Number):

Unit 2 slid to a stop behind my patrol vehicle only missing my vehicle by 2ft. As I was speaking to Unit 2 about not paying attention, Unit 1 started to slide. Then off of the roadway to the left and struck Unit 1 & then Unit 2 & then the road.

No Injuries were reported.

Diagram. Not to scale.

NOTICE: THE DATA ON THIS STATISTICAL REPORT IS PERISHABLE AND IS SUBJECT TO CHANGE OR CORRECTION AT ANY TIME. THE DEPARTMENT DOES NOT WARRANT THE ACCURACY OF THE DATA AT ANY TIME.

Investigating Officer's Name: A Staak | Rank: PFC | Badge #: 315 | Code: 3902200 | Date: 07/09/2010 | Reviewer's Name: [illegible] | Rank: Sgt | Internal Agency: 10-38108

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	12261957	F	B	0	01	13	99	1	1	2			
2	12081987	M	W	0	01	13	99	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk; W - Caucasian

a) Injury Status: 0 - Not Injured; 1 - Possible; 2 - Non-incapacitating; 3 - Incapacitating; 4 - Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20 - Pedestrian; 30 - Trailing Unit; 40 - Bus or Van (4th row or Higher); 50 - Other Enclosed Area (nontrailing); 51 - Other Unenclosed Area (nontrailing); 60 - Sleeper of Cab; 70 - Riding on Unit Exterior; 80 - Lap; 99 - Unk /NA

Restraint/Safety Device: 00 - None Used; 11 - Shoulder Belt Only; 12 - Lap Belt Only; 13 - Shoulder & Lap Belt; 21 - Child Safety Seat; 88 - Other; 99 - Unk; Pedestrian, Motor/Pedalcycle Only: 31 - Helmet; 51 - Reflective Clothing; 41 - Protective Pads; 61 - Lighting

Air Bag Deployment / Switch: a) 1-Deployed Front 2-Deployed Side 3-Deployed Both 4-Not Deployed 7-Not Applicable 9-Deployment Unk.; b) 1- Switch in On Position 2- Switch in Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS 2- Police 8- Other 9- Unk

Sequence of Events

Non-Collision: 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Ran off Road Right; 13- Other Non-collision; 19- Unk Non-collision

Collision Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (In Transport); 23- Motor Veh. (Unattended); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh; 29- Work Zone Maint. Equip; 39- Other Movable Object; 39- Unk Movable Object

Collision Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 88- Other; 89- Unk

1st Harmful: 22; 2nd Harmful: 23; 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 2 10; Most Deformed: 3 18

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Motorcycle; 29- Other Motorbike; 31- Tram; 81- School Bus; 82- Passenger Bus; 88- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Non-collision; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 12- Essentially Straight Ahead; 88- Other; (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Alc Test Results: A1-; A2-; A3-

Alcohol / Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Special Use Only

Undermide/Overmide: 99

Extent of Deformity: 2

Weather Condition: 2 — 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Light Condition: 4 — 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Lit); 7- Dark (No lights); 8- Dark (Street Lamp Not Lit)

Junction Type: 13 — 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 06- T-Intersection; 07- Shared Use Paths or Trail; 08- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk

Trafficway: 4 — 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided Barrier; 4- One-Way; 8- Other

1st Harmful Event Loc.: 53

Road Character: 1 — 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 2 — 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Sand, Mud, Dirt, Oil, Gravel; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 98 — 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 3

Work Zone: 2 — 1- Yes 2- No

Work Zone Location:

Work Zone Type:

Workers Present: 3 — 1- Yes 2- No

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 38- Traffic Control Device (i.e., Missing); 37- Work Zone (Const./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 58- Other; 59- Unk.; 57- Wrong Side of Road; 66- Under the Influence; 67- Other Person Under Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 58- Other; 89- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

ORIGINAL

DEC 16 2021

D.P.S. USE ONLY **10074913** | Page # 1/1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM | # Of Vehicles 2 | Amended / Attorney Copy of Original Report Corrected | Notified 2026 | Arrived 2035

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	In / Near City or Town of:
07092021	PD 25	23	1-Interstate 4-Secondary 2-US Primary 5-County 3-SC Primary; 5 I-385 N; 0-Main 6-Connection 2-Alternate 7-Business 5-Spur	0	N E S W	Greenville

Lane # / Dir.	Distance Offset	Direction	Base Intersection (Rt. # / Name)	ASRU code	MP/Grid
#1 N S W	.16 Miles / Feet	N E S W	From: I-85; 1-Interstate 4-Secondary 2-US Primary 5-County 3-SC Primary 6-Other; 0-Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other	Latitude 109° 51' 97"	

R.R. Id.	From Ramp Only	To	Second Intersection (Rt. # / Name)	Toward	Longitude
N/A	N E S W 1 - Entrance 2 - Exit	N E S W 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5 County 6- Other	0-Main 6-Connection 2-Alternate 7-Business 5-Spur 9-Other: Rogers Mt. Rd.		160° 75' 15"

A-390211 — Driver/Pedestrian's Full Name: Tisdale - Cynthia Marjuana

Unit #	Sex	Race	Street
1	F	W	208 Carlington Rd.

Birth Date	City, State, & Zip
04/11/1986	Greenville SC 29617

State	Driver's License #	Insurance Company
SC	11675235 D	Allstate

Year	Body	Vehicle Make	VIN #
2004	4S	Isuz	4TIBE32K14U343495

State	Year	License Plate #	Owner's D.L. #
SC	2010	AZW 199	Same

Home Telephone	Owner's Full Name
864 561-5406	
Bus. Telephone	**Street**
( )	
Contributed To Collision	**City, State, & Zip**
Yes / No	

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg Info (see back): Yes / No
55	55			

Summons #	Code	Towed By
65176EE 21		Williams

A-390212 — Driver/Pedestrian's Full Name: Mclrca Joandria Shaniya

Unit #	Sex	Race	Street
2	F	B	151 Century Dr. Apt. 112F

Birth Date	City, State, & Zip
10021985	Greenville SC 29607

State	Driver's License #	Insurance Company
SC	11507116 D	Liberty Mutual

Year	Body	Vehicle Make	VIN #
2003	4S	Chev	2G1WF52E839397622

State	Year	License Plate #	Owner's D.L. #
SC	2011	DNZ503	Same

Home Telephone	Owner's Full Name
(864) 598-7007	
Bus. Telephone	**Street**
( )	
Contributed To Collision	**City, State, & Zip**
Yes / No	

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg Info (see back): Yes / No
55	55			

Summons #	Code	Towed By
N/A		N/A

A-390213 — Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street
N/A			

Birth Date	City, State, & Zip

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

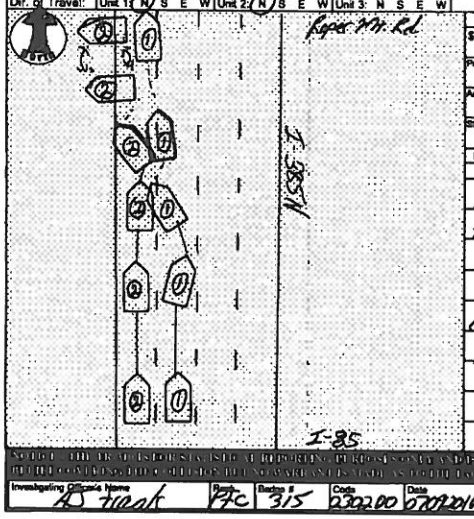
State	Year	License Plate #	Owner's D.L. #

Home Telephone	Owner's Full Name
( )	
Bus. Telephone	**Street**
( )	
Contributed To Collision	**City, State, & Zip**
Yes / No	

Estimated Speed	Speed Limit	C.D.L. Req: Yes / No	T/S S Req: Yes / No	Alc/Drg Info (see back): Yes / No

Summons #	Code	Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 2000	$ 7000	$ N/A	$ N/A	$ N/A

Property Owner/Witness	Property Owner/Witness
N/A	N/A
Address	Address
State Zip Phone	State Zip Phone

Photo: Y / N — Describe What Happened (Refer to Units by Number)

Unit 1 Height Unit 2 was changing lanes from lane 1 to lane 2. Unit 1 jerked the steering wheel causing for vehicle to slide and lose control. Unit 1 then crashed into lane 1 striking Unit 2 causing Unit 2 to slide sideways & then collides and strike the barrier wall.

Diagram not to scale.

SCDPS THE DRIVER IS REQUIRED BY LAW TO REPORT THIS COLLISION TO THE DEPARTMENT OF PUBLIC SAFETY WITHIN TEN DAYS IF THE COLLISION RESULTS IN INJURY OR DEATH OR IF THE TOTAL APPARENT DAMAGE TO THE PROPERTY OF ANY ONE PERSON APPEARS TO BE $500.00 OR MORE. FAILURE TO REPORT IS A MISDEMEANOR.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
D Frank	PFC	315	250200	07092021		Lt	10-38090

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	04111986	F	W	0	01	13	4?	1	1	2			
2	10021985	F	B	2	01	13	3	1	1	1	Mclrca Joandria	151 Century Dr. Apt. 112F	29607

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only — Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 70- Pedestrian; 80- Sleeper of Cab; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Lop; 99- Unk /NA; 70- Riding on Unit Exterior

Restraint/Safety Device: 00- None Used; 10- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: 1-Deployed Front; 2-Deployed Side; 3-Deployed Both; 4-Not Deployed; 7-Not Applicable; 9-Deployment Unk.; 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App; 9- Unk

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown

b) By: 1- EMS; 2- Police; 8- Other; 9- Unk

Sequence of Events

1: 22			
2: 22			22
3:			
4:			

Non-Collision: 04- Equipment Failure; 01- Cargo/Equip Loss or Shift; 05- Fire/Explosion; 02- Cross Median/Center Line; 06- Immersion; 03- Downhill Runaway; 07- Jackknife

Collision Not Fixed: 27 Pedestrian; 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh (In Transport); 23- Motor Veh (Stopped); 24- Motor Veh (Other Roadway); 25- Motor Veh (Parked); 19- Unk Non-collision; 26- Railway Veh; 29- Work Zone Maint Equip; 39 Unk Movable Object; 40- Other Movable Object

Collision Fixed Object: 47 Embankment; 48 Equipment; 49 Fence; 50 Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57 Overhead Sign Support; 58- Other (Post, Pole Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61 Utility Pole; 62 Work Zone Maint. Eq. Involved; 65- Other; 69 Unk

Manner of Collision (Struck Veh.): 00- Not Coll. W/ Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57

1st Deformed: 1 / 13 / 23 — **Most Deformed:** 1 / 13 / 23

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Limousine; 29- Bus; 38- Amtrak/Comm Veh; 39- Amtrak (Rubber); 41- Pedestrian; 51- Train; 81- School Bus; 82- Passenger Bus; 88- Other; 99- Unk (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Cowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact: (Vehicle) 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Negotiating a Curve; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 12- Driving Essentially Straight Ahead; 88- Other; 99- Unk. (Non-motorist) 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Test Type: 1- Breath (Alc Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other

Alc/Drug Test Given: 1- Given - Known Results; 2- Given - Unreadable; 3- Given Pending; 4- None; 5- Refused

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 6 6

Extent of Deformity: 2 4

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 99- None

Traffic Control Type: 98

Traffic Way: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-Way; 8- Other — A: 1- One; 2- Island; 3- Median; 4- Roadside; 5- Shoulder; 6- Outside Traffic Way; B: X-sects.; I-Y 2nd Rd.; 8- Driveway; 9- Unk — Y: Intersect Loc

Traffic Way: 4

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Character: 1

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Sand, Mud, Dirt, Oil, Gravel; 7- Water (Standing, etc.); 8- Other; 9- Unk

Road Surface Condition: 2

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk

Weather Condition: 2

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No lights)

Light Condition: 3

Junction Type: 00- Free/More Points; 01- Crossover; 02- Driveway; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Non-junction; 99- Unk

Junction Type: 13

Primary Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Vehicle Erratically; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29-Unk.

Primary: 03 / 13

Others:

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R of W; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk; 65- Under the Influence; 67- Other Person Under Influence

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 66- Other; 69- Unk

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 89- Other; 99- Unk.

School Bus Involved: 3

Work Zone: 1- Yes 2- No — 2

Work Zone Location:

Work Zone Type:

Workers Present: 1- Yes 2- No — 2

ORIGINAL

JUL 16 2010

D.P.S. USE ONLY 10074916 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 07/2001) | # of Units 2 | Amended - Attach Copy of Original Report | Corrected | Notified 1706 | Arrived 1712

Date	Time	County	Collision Location (Rt. # / Name)	Miles	Dir.	In-Place City or Town of:
7/9/2010	1703	23	S I 385 S.			GREENVILLE

Lane # / Dir.: # 2, Of 3, N E S W | Distance Offset: .51 Miles Feet | Direction: N E S W | Base Intersection (Rt. # / Name): From I 85 | ASRU code | MP/Grid | Latitude 1094952 | Longitude 1607898

R.R. Id. | From: Ramp Only, N E S W | To: 1 - Entrance, 2 - Exit, N E S W | Second Intersection (Rt. # / Name): Toward ROPER MOUNTAIN RD

B-363499

Driver/Pedestrian's Full Name: PRUITT - MATHEW JOSHUA

Unit #	Sex	Race	Street/R.F.D.	Birth Date	City, State, & Zip
1	M	W	2948 CEDAR CREST DR	12/18/1984	LEXINGTON, SC, 29072

State	Driver's License #	Insurance Company
SC	011388402 (D)	MONTGOMERY INS.

Year	Body	Vehicle Make	VIN #
2007	PK	CHEVY	1GBHC24477E162311

State	Year	License Plate #	Owner's D.L. #
SC	2011	BZY546	

Home Telephone: (803) 719-1520 | Owner's Full Name: CAROLINA COMFORT INC.

Bus. Telephone: (n/a) | Street/R.F.D.: 110B SUNBELT BLVD.

Contributed To Collision: No | City, State, & Zip: COLUMBIA, SC 29203

Estimated Speed	Speed Limit	C.D.L. Req: Yes	T/B S Req: Yes	Alc/Drg info (see back): Yes
55	55	Summons # 1928OFG	Code 99	Summons # N/A	Code N/A	Towed By N/A

B-363500

Driver/Pedestrian's Full Name: JOHNSCON - SHARON BATES

Unit #	Sex	Race	Street/R.F.D.	Birth Date	City, State, & Zip
2	F	B	490 LENWOOD RD. APT A202	3/12/1970	GREENVILLE, SC, 29607

State	Driver's License #	Insurance Company
SC	005558184 (D)	GREENVILLE CAS.

Year	Body	Vehicle Make	VIN #
2003	SUV	GMC	1GKDS13S X3226216

State	Year	License Plate #	Owner's D.L. #
SC	2011	BSE572	S

Home Telephone: (864) 449-8112 | Owner's Full Name: A

Bus. Telephone: (864) 606-3477 | Street/R.F.D.: M

Contributed To Collision: Yes | City, State, & Zip: E

Estimated Speed	Speed Limit	C.D.L. Req: Yes	T/B S Req: Yes	Alc/Drg info (see back): Yes
55	65	Summons # n/a	Code n/a	Summons # n/a	Code n/a	Towed By n/a

B-363501

Driver/Pedestrian's Full Name:

Unit #	Sex	Race	Street/R.F.D.	Birth Date	City, State, & Zip
N/A					

State	Driver's License #	Insurance Company

Year	Body	Vehicle Make	VIN #

State	Year	License Plate #	Owner's D.L. #

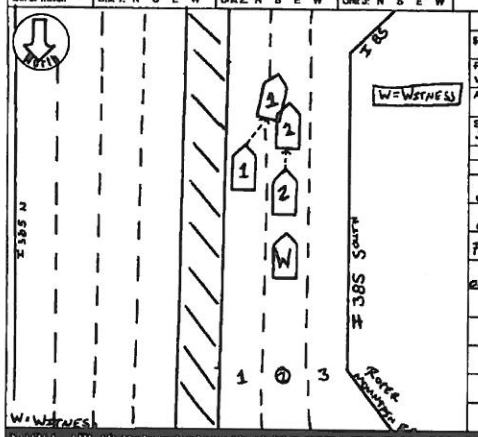
Home Telephone: ( ) | Owner's Full Name:

Bus. Telephone: ( ) | Street/R.F.D.:

Contributed To Collision: Yes / No | City, State, & Zip:

Estimated Speed	Speed Limit	C.D.L. Req: Yes No	T/B S Req: Yes No	Alc/Drg info (see back): Yes No
		Summons #	Code	Summons #	Code	Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 400	$ 700	$	$	$

Property Owner/Witness: WILLIAM SMITH | Property Owner/Witness---

Address: 113 ROBIN DR | Address

State	Zip	Phone
SC	29644	561-6216			

Photo: Describe What Happened (Refer to Units by Number)

Y (N) UNIT 2 WAS TRAVELING FORTHWARD WHEN UNIT 1 ATTEMPTED TO CHANGE LANES CAUSING THE REAR OF UNIT 1 TO STRIKE THE FRONT OF UNIT 2. NO INJURIES REPORTED ON SCENE.

* MAP NOT TO SCALE *

NOTICE - THE FACTS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A RECITATION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE TRUTH OR ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
#641 R. HALL	PFC	127	230200	7/9/2010		SGT	J2 - 58032

Unit	Date of Birth	Sex	Race	INJ	Seat	R/S/D	A.B.D.	Eject	LAI	Trap	Name	Street Address	Zip Code
1	12/18/1984	M	W	0	01	13	4	1	1	2			
2	3/12/1970	F	B	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander, B - African American, I - Alaskan Native or American Indian, W - Caucasian, O - Other, U - Unk.

a) Injury Status: 0 - Not Injured, 1 - Possible, 2 - Non-Incapacitating, 3 - Incapacitating, 4 - Fatal

b) Motorcycle Only: Helmet Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Seating Loc.	
20 - Pedestrian	60 - Sleeper of Cab
30 - Trailing Unit	70 - Riding on Unit Exterior
40 - Bus or Van (4th row or Higher)	80 - Lap
50 - Other Enclosed Area (nontrailing)	99 - Unk./NA
51 - Other Unenclosed Area (nontrailing)	

Restraint/Safety Device: 00 - None Used, 01 - Shoulder Belt Only, 02 - Lap Belt Only, 03 - Shoulder & Lap Belt, 04 - Child Safety Seat, 05 - Other, 99 - Unk.

Pedestrian, Motor/Pedalcycle Only: 10 - Helmet, 11 - Reflective Clothing, 12 - Protective Pads, 13 - Lighting

Air Bag Deployment / Switch: a) 1 - Deployed Front, 2 - Deployed Side, 3 - Deployed Both, 4 - Deployed Unk., 5 - Not Deployed, 6 - Deployed Other, 7 - Not Applicable; b) 1 - Switch in On Position, 2 - Switch in Off Position, 3 - No Switch, 9 - Unknown

Ejection: 1 - Not Ejected, 2 - Part. Ejected, 3 - Tot. Ejected, 7 - Not App., 9 - Unk.

Location After Impact: 1 - Not Trapped, 2 - Extricated (Mechanical Means), 3 - Freed (non-mech.), 4 - Not Applicable, 9 - Unknown

a) Transported to Medical Facility: 1 - Yes, 2 - No, 3 - Unknown; b) By: 1 - EMS, 2 - Police, 8 - Other, 9 - Unk.

Sequence of Events

Event 1	Event 2	Event 3	Event 4	Most Harmful	1st Hard
22	1			22	22
	2				
	3				

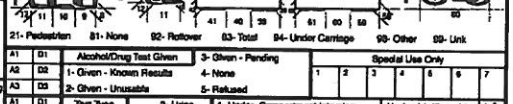
Non-Collision: 04 - Equipment Failure; 01 - Cargo/Equip. Loss or Shift, 02 - Cross Median/Center Line, 03 - Downhill Runaway, 05 - Fire/Explosion, 06 - Immersion, 07 - Jackknife, 08 - Overturn/Rollover, 09 - Ran off Road Left, 10 - Ran off Road Right, 11 - Separation of Units, 12 - Spill (Non-Motorist Veh.), 13 - Other Non-collision, 14 - Pedestrian, 15 - Pedalcycle, 16 - Railway Veh., 17 - Animal (Deer Only), 18 - Animal (All Other), 19 - Motor Veh. in Transport, 20 - Motor Veh. (Unspecified), 21 - Motor Veh. (Other Motorist), 22 - Motor Veh. (Parked), 23 - Unk. Moving Object, 24 - Other Moveable Object, 25 - Motor Veh. (Pedestrian), 26 - Train, 27 - Work Zone Maint. Equip., 28 - Other Non-collision, 99 - Unk. Non-collision

Collision: Not Fixed: 27 - Pedestrian

Collision: Fixed Object: 40 - Bridge Overhead Structure, 41 - Bridge Pier or Abutment, 42 - Bridge Rail, 43 - Bridge Parapet End, 44 - Culvert, 45 - Curb, 46 - Ditch, 47 - Embankment, 48 - Guardrail Face, 49 - Guardrail End, 50 - Highway Traffic Sign Post, 51 - Impact Attenuator/Crash Cushion, 52 - Median Barrier, 53 - Mail Box, 54 - Light/Luminaire Support, 55 - Other (Post, Pole, Support, Etc.), 56 - Other (Wall, Building, Tunnel, Etc.), 57 - Other Fixed Object, 58 - Tree, 59 - Utility Pole, 60 - Work Zone Maint. Equipment

Manner of Collision (Struck Veh.): 30 - Rear-to-Rear, 31 - Rear-to-Side, 32 - Rear-to-Front, 33 - Front-to-Front, 34 - Front-to-Side, 35 - Sideswipe Same Dir., 36 - Sideswipe Opposite Dir., 37 - Backed Into, 38 - Other, 99 - Unknown

1st / Most Deformed Area: 1st Deformed: 12, Most Deformed: 12



Vehicle Type: 01 - Automobile, 12 - Pickup/Truck, 13 - Truck Tractor, 14 - Other Truck, 15 - Full Size Van, 16 - Mini Van, 17 - Sport Utility, 25 - Motorcycle, 26 - Other Motorbike, 27 - Pedalcycle, 28 - Ambulance, 29 - Animal Drawn Veh., 30 - Animal (Fiddan), 41 - Pedestrian, 51 - Train, 61 - School Bus, 62 - Passenger Bus, 88 - Other, 99 - Unk. (Hit and Run Only)

Vehicle Use Code: 01 - Personal, 02 - Driver Training, 03 - Construction/Maint., 04 - Ambulance, 05 - Military, 08 - Transport Passengers, 07 - Transport Property, 08 - Farm Use, 09 - Wrecker or Tow, 10 - Police, 11 - Government, 12 - Fire Fighting, 13 - Logging, 18 - Other

Vehicle Attachment: 1 - None, 2 - Mobile Home, 3 - Semi-Trailer, 4 - Utility Trailer, 5 - Farm Trailer, 6 - Trailer w/Boat, 7 - Camper Trailer, 8 - Towed Motor Vehicle, 9 - Petroleum Tanker, A - Cowboy Trailer, B - Autocarrier Trailer, C - Other Tanker, D - Flat Bed, E - Twin Trailers, F - Other

Action Prior to Impact (Vehicle): 01 - Backing, 02 - Changing Lanes, 03 - Entering Traffic Lane, 04 - Leaving Traffic Lane, 05 - Making U-turn, 06 - Movements Essentially Straight Ahead, 07 - Overtaking/Passing, 08 - Parked, 09 - Slowing or Stopped in Traffic, 10 - Turning Left, 11 - Turning Right, 88 - Other, 99 - Unk.

Action Prior to Impact (Non-motorist): 21 - Approaching/Leaving Vehicle, 22 - Entering/Crossing Location, 23 - Playing/Working on Vehicle, 24 - Pushing Vehicle, 25 - Standing, 26 - Walking, Playing, Cycling, 27 - Working

Weather Condition: 1 - Clear (no adverse conditions), 2 - Rain, 3 - Cloudy, 4 - Sleet, Hail, 5 - Snow, 6 - Fog, Smog, Smoke, 7 - Blowing Sand, Soil, Dirt or Snow, 8 - Severe Crosswinds, 9 - Unk.

Light Condition: 1 - Daylight, 2 - Dawn, 3 - Dusk, 4 - Dark (Lighting Unspecified), 5 - Dark (Street Lamp Lit), 6 - Dark (Street Lamp Not Lit), 7 - Dark (No Lights)

Junction Type: 01 - Crossover, 02 - Driveway, 03 - Five/More Points, 04 - Four-way Intersection, 05 - Railway Grade Crossing, 07 - Shared Use Paths or Trail, 08 - T-Intersection, 09 - Traffic Circle, 12 - Y-Intersection, 13 - Nonjunction, 99 - Unk.

Primary Contributing Factors

Driver: 01 - Disregarded Signs, Signals, Etc., 02 - Distracted/Inattention, 03 - Driving Too Fast for Conditions, 04 - Exceeded Authorized Speed Limit, 05 - Failed to Yield Right of Way, 06 - Ran off Road, 07 - Fatigued/Asleep, 08 - Followed Too Closely, 09 - Made an Improper Turn, 10 - Medical Related, 12 - Aggressive Operation of Vehicle, 13 - Over-correcting/Over-steering, 14 - Swerving to Avoiding Object, 15 - Wrong Side or Wrong Way, 16 - Under the Influence, 17 - Vision Obscured (Within Unit), 18 - Improper Lane Usage/Change, 28 - Other Improper Action, 29 - Unk.

Others: 18

Roadway: 30 - Debris, 31 - Non-Highway Work, 32 - Obstruction in Roadway, 33 - Road Surface Condition (i.e., Wet), 34 - Rut, Holes, Bumps, 35 - Shoulders (None, Low, Soft, High), 36 - Traffic Control Device (i.e., Missing), 37 - Work Zone (Constr./Maint./Utility), 38 - Worn, Travel-Polished Surface, 48 - Other, 49 - Unk.

Non-Motorist: 50 - Inattentive, 51 - Lying &/or Illegally in Roadway, 52 - Failure to Yield R. of W., 53 - Not Visible (Dark Clothing), 54 - Disregard Signs, Signals, Etc., 55 - Improper Crossing, 56 - Darting, 57 - Wrong Side of Road, 58 - Other, 59 - Unk., 66 - Under the Infl., 81 - Glare, 87 - Other Person Under the Influence

Environmental: 62 - Obstruction, 63 - Weather Cond., 65 - Other, 89 - Unk.

Vehicle Defect: 70 - Brakes, 71 - Steering, 72 - Power Plant, 73 - Tires/Wheel, 74 - Lights, 75 - Signals, 76 - Windows/Shield, 77 - Restraint System, 78 - Truck Coupling, 79 - Cargo, 80 - Fuel System, 88 - Other, 89 - Unk.

A1 / D1	Alcohol/Drug Test Given: 1 - Given - Known Results, 2 - Given - Unusable, 3 - Given - Pending, 4 - None, 5 - Refused
A2 / D2	Test Type: 1 - Breath (Alc. Only), 2 - Blood, 3 - Urine, 4 - Serum
A3 / D3	Drug Results: 1 - Amphetamines, 2 - Cocaine, 3 - Marijuana, 4 - Opiates, 5 - PCP, 8 - Other
A1	Alc Test Results
A2	A: 1 - Done, 2 - Refused, 3 - Median, 4 - Possible, 5 - Roadway, 6 - Shoulder, 7 - Ditch, 8 - Traffic Island, 9 - Unk.
A3	

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 6

Extent of Deformity: 2

Trafficway: 4

1st Harmful Event Loc.: 52

Road Character: 1

Road Surface Condition: 1

Traffic Control Type: 98

School Bus Involved: 3

Work Zone: 2

Work Zone Location

Work Zone Type

1 - Straight - Level	3 - Straight - Hillcrest
2 - Straight - On Grade	4 - Curve - Level
5 - Curve - On Grade	6 - Curve - Hillcrest
1 - Dry	2 - Wet
3 - Snow	4 - Slush
5 - Ice	6 - Contaminate
7 - Water (Standing, etc.)	8 - Other
9 - Unk.	

01 - Stop and Go Light	02 - Flashing Traffic Signal
11 - RR (X-bucks, Lights & Gates)	12 - RR (X-bucks & Lights)
13 - RR (X-bucks Only)	21 - Officer or Flagman
22 - Oncoming Emergency Vehicle	31 - Pavement Markings (only)
41 - Stop Sign	42 - School Zone Sign
43 - Yield Sign	44 - Work Zone
45 - Other Warning Signs	51 - Flashing Beacon
98 - None	99 - Unk.

1 - Yes, Directly	2 - Yes, Indirectly
3 - No	9 - Unk.
1 - Before 1st Sign	2 - Advanced Warning Area
3 - Transition Area	4 - Activity Area
5 - Termination Area	1 - Shoulder/Median Work
2 - Lane Shift/Crossover	3 - Intermittent/Moving Work
4 - Lane Closure	5 - Other
9 - Unk.	1 - Yes 2 - No Workers Present:

ORIGINAL

DEC 1 0 20

D.P.S. USE ONLY: 10134840 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 11, 2011) | # of Units: 2 | Amended - Attach Copy of Original Report Corrected | Notified: 1914 | Arrived: 1920

Date: 11/27/2010 | Time: 1914 | County: 23 | Collision Location (Ft. # / Name): S I385 | Main 6- Connection 2- Alternate 7- Business 5- Spur | Miles: | Dir. N E S W | Nr. Near City or Town of: GREENVILLE

Lane # / Dir.: 1 5 | Dir. N E S W | Distance Offset: .10 Miles Feet | Direction N E S W | Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name): From I 85 | Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid | Latitude: 1094134 | Longitude: 1610307

R.R. Id. | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Second Intersection (Rt. # / Name): From CITY SHP / ROPER MTN RD.

B-241687

Driver/Pedestrian's Full Name: GOODNOUGH - CRYSTAL NICOLE

Unit # 1 | Sex: F | Race: W | Street/R.F.D.: 112 HALEY MILL RD.

Birth Date: 06151992 | City, State, & Zip: EASLEY, SC 29640

State: SC | Driver's License #: 10151743 (O) | Insurance Company: AFFIRMATIVE

Year: 2000 | Body: SU | Vehicle Make: NISS | VIN #: 5N1ED28Y5YC593831

State: SC | Year: 2011 | License Plate #: CXF370 | Owner's D.L. #

Home Telephone: 864 325-1819 | Owner's Full Name: GOODNOUGH, LORIAE P.

Bus. Telephone: ( ) | Street/R.F.D.: 112 HALEY MILL RD.

Contributed To Collision: Yes | City, State, & Zip: EASLEY, SC 29640

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes NO | T/B S Req: Yes NO | Alc/Drg Info (see back): Yes NO

Summons #: 5712EFH | Code: 22 | Summons # | Code | Towed By: 1/A

B-241688

Driver/Pedestrian's Full Name: SUTHERLAND - CARA NICOLE

Unit # 2 | Sex: F | Race: W | Street/R.F.D.: 109 SLOAN LN

Birth Date: 07291982 | City, State, & Zip: FOUNTAIN INN, SC 29644

State: SC | Driver's License #: 011132501 (O) | Insurance Company: ALLSTATE

Year: 2008 | Body: SU | Vehicle Make: TOYT | VIN #: JTEES42A182077615

State: SC | Year: 2011 | License Plate #: DEL 705 | Owner's D.L. #: SAME

Home Telephone: 864 409-9386 | Owner's Full Name

Bus. Telephone: 864 984-8564 | Street/R.F.D.

Contributed To Collision: No | City, State, & Zip

Estimated Speed: 55 | Speed Limit: 55 | C.D.L. Req: Yes NO | T/B S Req: Yes NO | Alc/Drg Info (see back): Yes NO

Summons #: N/A | Code | Summons # | Code | Towed By

B-241689

Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D.

Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone | Owner's Full Name

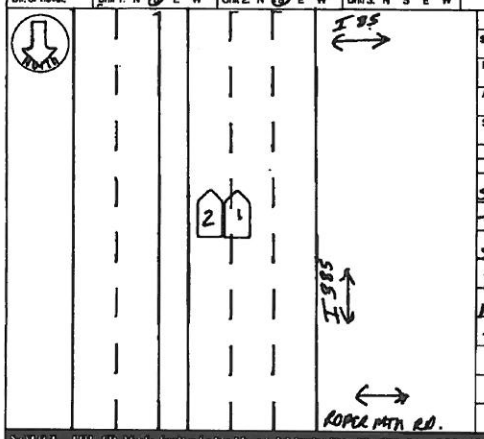
Bus. Telephone | Street/R.F.D.

Contributed To Collision: Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Summons # | Code | Towed By

Dir. of Travel: | Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 1000	$ 1000	$	$	$

Property Owner/Witness | Address | State | Zip | Phone

Property Owner/Witness | Address | State | Zip | Phone

Photo: Describe What Happened (Refer to Units by Number)

UNIT1 WAS IN LANE 2 TRAVELING SOUTH BOUND. UNIT 2 WAS IN LANE 1 TRAVELING SOUTH BOUND. UNIT 1 STATE SHE WAS CHANGING LANES FROM LANE 2 TO LANE 1 TO ALLOW OTHER TRAFFIC TO MERGE. UNIT 1 STRUCK UNIT 2 IN THE PASSENGER SIDE OF THE VEHICLE.

NOTICE - THE ID APPEARS FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A FELLOW'S OPINION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF

Investigating Officer's Name: BARKER, J. C. #291 | Rank: CPL | Badge #: 214 | Code: 230200 | Date: 10/27/2010 | Reviewed's Name | Rank: CPL | Internal Agency Code: 10-91185

Unit	Date of Birth	Sex	Race	INJ	Seat	RMSD	A.B.G.	Eject	LAI	Trav	Name	Street Address	Zip Code
1	06151992	F	W	O	01	13	4:3	1	1	2			
2	07291982	F	W	O	01	13	4:3	1	1	12			

Race: A - Asian/Pacific Islander; B - African American; I - Alaskan Native or American Indian; H - Hispanic; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Head Injury: 1-Yes 2-No

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 89- Unk./NA

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 89- Other; 99- Unk.

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Deployment Unk.; 7- Not Applicable; 8- Deployment Unk. b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Transported to Medical Facility: a) 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.

Pedestrian, Motorist/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Sequence of Events: Event 1 | Event 2 | Event 3 | Event 4 | Most Harm Event | 1st Harmful: 22 | 22 | | | 22

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Crosss Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Vehicular Cargo); 13- Other Non-collision; 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Reason); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Moveable Object; 39- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail Face; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Pole; 59- Other (Post, Pole, Support, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Other (Wall, Building, Tunnel, Etc.); 99- Unk.

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 40- Angle (Same Dir.); 41- Angle (Left); 42- Angle (Right); 43- Angle (Left); 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed: 1 2 3 / 1 2 3

Deformed Area: 1 2 3 4 5 6 / 11 12 13 14 15 16 17 / 21 22 23 24 25 26 27 / 31 32 33 34 35 36 37 / 41 42 43 44 45 46 47 / 51 52 53 54 55 56 57 / 61 62 63 64 65 66 67 / 71 72 73 74 75 76 77 / 81 82 83 84 85 86 87

Vehicle Type: 01- Automobile; 02- Pickup/Truck; 03- Truck Tractor; 04- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 30- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only); 21- Pedestrian; 81- None; 82- Rollover; 93- Total; 94- Under Carriage; 98- Other; 99- Unk

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 08- Military; 09- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Alc Test Results: A1- ; A2- ; A3- ; 1- Test Given; 2- Given - Known Results; 3- Given - Pending; 4- None; 5- Refused

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Marijuana; 2- Cocaine; 3- Amphetamines; 4- Opiates; 5- PCP; 8- Other

Special Use Only: 1 2 3 4 5 6 7

Underride/Override: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- MV in Transport; 5- Over- Other Vehicle; 6- None; 9- Unk.

Extent of Deformity: 1- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Access: 1- Controlled; 2- Limited; 3- Median; 4- Frontage; 5- Roadway; 6- Shoulder; 7- Sidewalk; 8- Curb; 9- Unk.

Int: K- traffic; 1- Y 2-H 8-U

1st Harmful Event Loc.: 52

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Other Warning Signs; 44- Work Zone; 98- None; 99- Unk.

School Bus Involved: 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.

Work Zone: 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other; 9- Unk.

Work Zone Type: 1- Yes 2- No

Workers Present:

Primary: 19

Contributing Factors — Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 20- Other Improper Action; 21- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Traffic Control Device (i.e., Missing); 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheels; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Others:

ORIGINAL

DEC 14 0. 2010

D.P.S. USE ONLY 10134935 | Page # 1 | Of 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2001) | # of Units 1 | Amended - Attach Copy of Original Report | Corrected | Notified 1400 | Arrived 1404

Date 12-21-2010 | Time 1400 | County 23 | Collision Location (Ft. # / Name) 5 1-385 S | Mile: | Dir. N E S W | In / Near City or Town of: GREENVILLE

Lane # / Dir. 1 3 | Of | N E S W | Distance Offset Miles 2333 Feet | Direction N E S W | Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Base Intersection (Ft. # / Name) From 1-85 S | Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other | ASRU code | MP/Grid

R.R. Id. | From: N E S W | Ramp Only: 1- Entrance 2- Exit | To: N E S W | 1- Interstate 2- US Primary 3- SC Primary 4- Secondary 5- County 6- Other | Second Intersection (Ft. # / Name) Toward ROPER MTN RD. | Main 2- Alternate 5- Spur 6- Connection 7- Business 8- Other | Latitude 1094651 | Longitude 1608425

B-199816 | Driver/Pedestrian's Full Name: SMITH, KIMBERLY ANN

Unit # 1 | Sex F | Race W | Street/R.F.D. 212 FRANK ST. | City, State, & Zip GREENVILLE, SC 29601 | Birth Date 4-19-1994

State SC | Driver's License # 102109016 (D) | Insurance Company PROGRESSIVE

Year 1997 | Body SU | Vehicle Make LNDE | VIN # SALVY1243VA718414

State SC | Year 2011 | License Plate # GNK377 | Owner's D.L. #

Home Telephone 864 201-2536 | Owner's Full Name SMITH, STEVEN ANTHONY

Bus. Telephone 864 201-9805 | Street/R.F.D. SAME AS

Contributed To Collision (Yes) No | City, State, & Zip DENVER

Estimated Speed 60 | Speed Limit 55 | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # 36346 EM 21 | Code | Summons # — | Code | Towed By WILKES TOWING

B-199817 | Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

State | Year | License Plate # | Owner's D.L. #

Home Telephone ( ) | Owner's Full Name

Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Towed By

B-199818 | Driver/Pedestrian's Full Name

Unit # N/A | Sex | Race | Street/R.F.D. | Birth Date | City, State, & Zip

State | Driver's License # | Insurance Company

Year | Body | Vehicle Make | VIN #

Home Telephone ( ) | Owner's Full Name

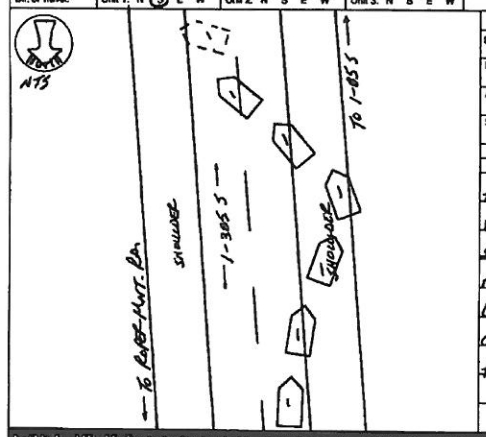
Bus. Telephone ( ) | Street/R.F.D.

Contributed To Collision Yes No | City, State, & Zip

Estimated Speed | Speed Limit | C.D.L. Req: Yes No | T/B S Req: Yes No | Alc/Drg Info (see back): Yes No

Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W



Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 5000	$ —	$ —	$ —	$ —

Property Owner/Witness -N/A- | Address | State | Zip | Phone

Property Owner/Witness -N/A- | Address | State | Zip | Phone

Photo: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 driver stated that as she was traveling south in lane 2 on I-385 her vehicle traveled to and then off the right shoulder. When the vehicle went off of the roadway Unit #1 driver steered back to the left. As she steered the vehicle over corrected causing the vehicle to flip over onto its side then once more to the top of the vehicle.

NOTICE - THE INFORMATION FOR STATISTICAL REPORTING PURPOSES ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE, OPINION, AND BELIEF CONCERNING THE COLLISION BUT NO WARRANT IS MADE AS TO THE FACTUAL ACCURACY THEREOF.

Investigating Officer's Name	Rank	Badge #	Code	Date	Reviewer's Name	Rank	Internal Agency Code
DEAL, M.C.	PFC	356	230200	12-24-10		Sgt	10-90050

Unit	Date of Birth	Sex	Race	Inj	Seat	Rstr'd	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	1-14-1994	F	W	0	01	13	Y	1	1	2			
1	7-24-1994	F	W	0	09	13	Y	1	1	2			
1	7-1-1991	M	W	0	05	13	Y	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet: 1- Yes 2- No 3- Unknown; a) By: 1- EMS 2- Police 8- Other 9- Unk.

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 80- Sleeper of Cab; 90- Riding on Unit Exterior; 95- Unk./NA; 80- Lap

a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9-Unk.

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 69- Other; 99- Unk.

Pedestrian, Motor/Pedicycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 8- Deployment Unk.; b) 1- Switch in On Position; 2- Switch in Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Reason); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Pier or Abutment; 42- Bridge Rail; 43- Bridge Parapet End; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Guardrail End; 49- Guardrail Face; 50- Highway Traffic Sign Post; 51- Impact Attenuator/Crash Cushion; 52- Light/Luminaire Support; 53- Mail Box; 54- Other Post, Pole, Support; 55- Median Barrier; 56- Other Traffic Barrier; 57- Overhead Sign Support; 58- Other (Wall, Building, Tunnel, Etc.); 59- Tree; 60- Utility Pole; 61- Work Zone Maint. Equipment; 69- Other; 99- Unk.

Event	Event	Event	Event	Most Harmful
22	10	00		10

1st Harmful Event

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area

1st Deformed: 12 | Most Deformed: 12

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 99- Unk

Vehicle Type: 01- Automobile; 02- Pickup Truck; 03- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal Drawn Veh.; 39- Animal (Ridden); 41- Pedestrian; 51- Train; 61- School Bus; 62- Passenger Bus; 98- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 18- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopped in Traffic; 10- Turning Left; 11- Turning Right; 88- Other; 99- Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working

Alc Test Results: A1- ; A2- ; A3-

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Snow; 6- Fog, Smog, Smoke; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Not Lit); 6- Dark (Street Lamp Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Primary Contributing Factors: Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Made an Improper Turn; 10- Medical Related; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-Highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Other; 59- Unk.

Environmental: 62- Obstruction; 63- Weather Cond.; 65- Animal in Road; 66- Other; 69- Unk.; 01- Glare

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.; 57- Wrong Side of Road; 58- Darting; 59- Unk.; 67- Other Person Under the Influence

Others:

Trafficway: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other; 9- Unk.

Alc: 1- Conc; 2- Mod; 3- Median; 4- Roadside; 5- Shoulder; 6- Outside Trafficway; 7- Sidewalk; 8- Unk.

Bi: X- walk; Y- 2-N 0-U

1st Harmful Event Loc.: 5

Road Character: 1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest; 9- Unk.

Road Surface Condition: 1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.

Traffic Control Type: 01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 88- None; 89- Unk.

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk. School Bus Involved: 3

1- Before 1st Sign; 2- Advancing Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No Work Zone: 2

Work Zone Location: 1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other

Work Zone Type: 1- Yes 2- No Workers Present:

ORIGINAL

O.P.B. USE ONLY: 10135342 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 01/2011) | # of Units: 2 | Amended - Attach Copy of Original Report | Corrected | Notified: 1910 | Arrived: 1917

Date: 11-16-2010 | Time: 1850 | County: 23 | Collision Location (Rt. # / Name): S 1-385/5 | 1- Main 8- Connection 2- Alternate 7- Business 5- Spur | Miles: | Dir. N E S W | In / Near (City) or Town of: GREENVILLE

Lane # / Dir.: 1 / 3 S | Distance Offset: 3439 Feet N S E W | Direction: 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Base Intersection (Rt. # / Name): From I-85 S | 1- Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | ASRU code | MP/Grid | Latitude: 1095273

R.R. Id. | From: N E S W | Ramp Only: 1 - Entrance 2 - Exit | To: N E S W | 1- Interstate 4- Secondary 2- US Primary 5- County 3- SC Primary 6- Other | Second Intersection (Rt. # / Name): Roper Mountain Rd. | 1- Main 6- Connection 2- Alternate 7- Business 5- Spur 9- Other | Longitude: 1607211

B-199954

Driver/Pedestrian's Full Name: WHITWORTH, ALLIA SANDERS

Unit # 1 | Sex: F | Race: W | Street/R.F.D.: 1303 AUTUMN GLEN CT.

Birth Date: 9-7-1987 | City, State, & Zip: FOUNTAIN INN, SC 29644

State: SC | Driver's License #: 011709316 (D) | Insurance Company: GEICO

Year: 2004 | Body: SD | Vehicle Make: DODG | VIN #: 1D4HB48N14F102319

State: SC | Year: 2010 | License Plate #: DTH 247 | Owner's D.L. #

Home Telephone: 864 979-3786 | Owner's Full Name: WHITWORTH, ROBERT MICHAEL

Bus. Telephone: ( ) | Street/R.F.D.: SAME AS

Contributed To Collision: Yes / No | City, State, & Zip: DAVIS

Estimated Speed: 20 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg info (see back): Yes (No)

Summons # / Code: 90741 ELL | Summons # / Code: 21 9074268 189 | Towed By: —

B-199955

Driver/Pedestrian's Full Name: TYNDALL, ANNA ELIZABETH

Unit # 2 | Sex: F | Race: W | Street/R.F.D.: 146 WOODSIDE RD.

Birth Date: 1-18-1991 | City, State, & Zip: SIMPSONVILLE, SC 29680

State: SC | Driver's License #: 101729999 | Insurance Company: STATE FARM

Year: 2002 | Body: 4S | Vehicle Make: TOYT | VIN #: 4T1BF32KX2U025518

State: SC | Year: 2011 | License Plate #: GFM938 | Owner's D.L. #

Home Telephone: 864 640-2502 | Owner's Full Name: TYNDALL, PATRICK ALLAN

Bus. Telephone: ( ) | Street/R.F.D.: SAME AS

Contributed To Collision: Yes / No | City, State, & Zip: DENVER

Estimated Speed: 5 | Speed Limit: 55 | C.D.L. Req: Yes (No) | T/S S Req: Yes (No) | Alc/Drg Info (see back): Yes (No)

Summons # / Code: — | Summons # / Code: — | Towed By: —

B-199956

Driver/Pedestrian's Full Name: BATHGATE, BOBBIE HOLT

Unit # 3 | Sex: F | Race: W | Street/R.F.D.: 8 TANNAHILL TRL

Birth Date: 1-6-1968 | City, State, & Zip: SIMPSONVILLE, SC 29680

State: SC | Driver's License #: 10106106 68 (D) | Insurance Company: USAA

Year: 2007 | Body: 4S | Vehicle Make: MAZD | VIN #: JM1BK343271711678

State: SC | Year: 2011 | License Plate #: DL1699 | Owner's D.L. #

Home Telephone: 864 631-8778 | Owner's Full Name: SAME

Bus. Telephone: ( ) | Street/R.F.D.: AS

Contributed To Collision: Yes / No | City, State, & Zip: DENVER

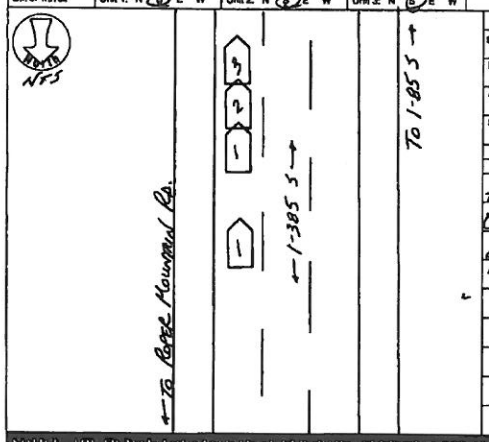
Estimated Speed: — | Speed Limit: — | C.D.L. Req: Yes No | T/S S Req: Yes No | Alc/Drg info (see back): Yes No

Summons # / Code: — | Summons # / Code: — | Towed By: —

Dir. of Travel: Unit 1: N (S) E W | Unit 2: N (S) E W | Unit 3: N (S) E W

Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 500	$ 500	$ 500	$ —	$ —

Property Owner/Witness: -N/A- | Address | Phone | Property Owner/Witness: -N/A- | Address | Phone



Photos: Y (N) | Describe What Happened (Refer to Units by Number)

Unit #1 driver stated that as she was traveling south in lane 1 on 385 S behind Unit #2. As Unit #2 was coming to a stop she was then struck by Unit #3 causing Unit #2 to strike the rear of Unit #3.

*No injuries reported on SCR

NOTICE - THE TRAFFICWAY STATISTICAL REPORTING PURPOSE ONLY AND IS A REFLECTION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF COVERING THE COLLISION BUT NO WARRANT IS MADE AS TO THE LEGAL ACCURACY THEREOF

Investigating Officer's Name: Dean, R.C. *SCR | Rank: AC | Badge #: 256 | Code: 2302000 | Date: 11-17-2010 | Reviewer's Name: — | Rank: Sgt | Internal Agency Code: 10-9612

Unit	Date of Birth	Sex	Race	INJ	Seat	R/SD	A.B.D.	Eject	LAI	Tran	Name	Street Address	Zip Code
1	9-7-1987	F	W	0	01	13	4	1	1	2			
2	1-18-1991	F	W	0	01	13	4	1	1	2			
3	1-6-1968	F	W	0	01	13	4	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; O - Other; U - Unk.; W - Caucasian

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal

b) Motorcycle Only: Helmet: 1- Yes 2- No 3- Unknown; Eye Protection: 1- Yes 2- No 3- Unknown

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09; 20- Pedestrian; 30- Trailing Unit; 40- Bus or Van (4th row or Higher); 50- Other Enclosed Area (nontrailing); 51- Other Unenclosed Area (nontrailing); 60- Sleeper of Cab; 70- Riding on Unit Exterior; 80- Lap; 99- Unk./N/A

Restraint/Safety Device: 00- None Used; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 21- Child Safety Seat; 88- Other; 99- Unk.

Pedestrian, Motor/Pedalcycle Only: a) Transported to Medical Facility: 1- Yes 2- No 3- Unknown; b) By: 1- EMS 2- Police 8- Other 9- Unk.; 31- Helmet; 51- Reflective Clothing; 41- Protective Pads; 61- Lighting

Air Bag Deployment / Switch: a) 1- Deployed Front 2- Deployed Side 3- Deployed Both 4- Not Deployed 7- Not Applicable 9- Deployment Unk.; b) 1- Switch In On Position 2- Switch In Off Position 3- No Switch 9- Unknown

Ejection: 1- Not Ejected 2- Part. Ejected 3- Tot. Ejected 7- Not App. 9- Unk.

Head Injury: 1-Yes 2-No

Location After Impact: 1- Not Trapped 2- Extricated (Mechanical Means) 3- Freed (non-mech.) 4- Not Applicable 9- Unknown

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 02- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Mat.); 13- Other Non-collision; 19- Unk. Non-collision

Collision: Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. (in Transport); 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Roadway); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 99- Unk. Moveable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Ditch; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 89- Other; 99- Unk.

Event 1: 22 | Event 2: 22 | Event 3: 23 | Most Harmful Event: 22 | 1st Harmful Event: 22

Manner of Collision (Struck Veh.): 00- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

1st / Most Deformed Area: 1st Deformed: 1 2 3 4 5 6 7; Most Deformed: 1 2 3 4 5 6 7

Vehicle Type: 01- Automobile; 12- Pickup/Truck; 13- Truck Tractor; 14- Other Truck; 15- Full Size Van; 16- Mini Van; 17- Sport Utility; 25- Motorcycle; 26- Other Motorbike; 27- Pedalcycle; 28- Animal (Deer Only); 29- Animal (Ridden); 31- Train; 61- School Bus; 62- Passenger Bus; 99- Other; 99- Unk. (Hit and Run Only)

Vehicle Use Code: 01- Personal; 02- Driver Training; 03- Construction/Maint.; 04- Ambulance; 05- Military; 06- Transport Passengers; 07- Transport Property; 08- Farm Use; 09- Wrecker or Tow; 10- Police; 11- Government; 12- Fire Fighting; 13- Logging; 15- Other; 41- Pedestrian

Vehicle Attachment: 1- None; 2- Mobile Home; 3- Semi-Trailer; 4- Utility Trailer; 5- Farm Trailer; 6- Trailer w/Boat; 7- Camper Trailer; 8- Towed Motor Vehicle; 9- Petroleum Tanker; A- Lowboy Trailer; B- Autocarrier Trailer; C- Other Tanker; D- Flat Bed; E- Twin Trailers; F- Other

Action Prior to Impact (Vehicle): 01- Backing; 02- Changing Lanes; 03- Entering Traffic Lane; 04- Leaving Traffic Lane; 05- Making U-turn; 06- Movements Essentially Straight Ahead; 07- Overtaking/Passing; 08- Parked; 09- Slowing or Stopping in Traffic; 10- Turning Left; 11- Turning Right; 99- Other / Unk.

Action Prior to Impact (Non-motorist): 21- Approaching/Leaving Vehicle; 22- Entering/Crossing Location; 23- Playing/Working on Vehicle; 24- Pushing Vehicle; 25- Standing; 26- Walking, Playing, Cycling; 27- Working; 99- Unk.

Alc Test Results: A1- ; A2- ; A3- ; Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unreable; 3- Given - Pending; 4- None; 5- Refused; Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 5- Other; Drug Results: 1- Marijuana; 1- Amphetamines; 2- Cocaine; 4- Opiates; 5- PCP; 8- Other; Special Use Only: 1 2 3 4 5 6 7; Underride/Override: 0; Extent of Deformity: 0; 0- None/Minor; 1- Functional Damage; 2- Disabling Damage; 4- Severe/Totaled; 8- Not Applicable; 9- Unk.

Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

Light Condition: 1- Daylight; 2- Dawn; 3- Dusk; 4- Dark (Lighting Unspecified); 5- Dark (Street Lamp Lit); 6- Dark (Street Lamp Not Lit); 7- Dark (No Lights)

Junction Type: 01- Crossover; 02- Driveway; 03- Five/More Points; 04- Four-way Intersection; 05- Railway Grade Crossing; 07- Shared Use Paths or Trail; 08- T-Intersection; 09- Traffic Circle; 12- Y-Intersection; 13- Nonjunction; 99- Unk.

Trafficway: 4; Event Loc.: 5; Road Character: 1; Road Surface Condition: 1; Traffic Control Type: 98

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.

School Bus Involved: 9; Work Zone: 2; Work Zone Location: ; Work Zone Type: ; Workers Present: ; 1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.; 1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination Area; 1- Yes 2- No

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 5- Other; 9- Unk.

Primary Contributing Factors: 03

Driver: 01- Disregarded Signs, Signals, Etc.; 02- Distracted/Inattention; 03- Driving Too Fast for Conditions; 04- Exceeded Authorized Speed Limit; 05- Failed to Yield Right of Way; 06- Ran off Road; 07- Fatigued/Asleep; 08- Followed Too Closely; 09- Improper Turn; 10- Medical Related; 11- Operating Defective Equipment; 12- Aggressive Operation of Vehicle; 13- Over-correcting/Over-steering; 14- Swerving to Avoiding Object; 15- Wrong Side or Wrong Way; 16- Under the Influence; 17- Vision Obscured (Within Unit); 18- Improper Lane Usage/Change; 19- Cell Phone; 28- Other Improper Action; 29- Unk.

Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

Non-Motorist: 50- Inattentive; 51- Lying &/or Illegally in Roadway; 52- Failure to Yield R. of W.; 53- Not Visible (Dark Clothing); 54- Disregard Signs, Signals, Etc.; 55- Improper Crossing; 56- Darting; 57- Wrong Side of Road; 58- Other; 59- Unk.

Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 68- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

67- Other Person Under the Influence

ORIGINAL

JAN 28 2011

O.P.S. USE ONLY 10153527 | Page # 1 Of: 1 | SOUTH CAROLINA TRAFFIC COLLISION REPORT FORM TR-310 (Rev. 07/2009) | # of Units 3 | Amended - Attach Copy of Original Report | Corrected | Dispatched 1809 | Arrived 1876

Date 12/4/2010 | Time 1800 | County 23 | Collision Location (Rt. # / Name) I-385 SOUTH | Miles: | Dir. N E S W | In / Near City or Town of: GREENVILLE

Lane # / Dir. 1 S | Distance Offset 2439 Feet | Direction N E S W | From I-85 | Latitude 109 46 38 | Longitude 160 84 26

R.R. Id. | From N E S W | Ramp Only | To N E S W | Second Intersection (Rt. # / Name) ROPER MOUNTAIN RD

Interstate 1- Main 2- Alternate 3- SC Primary 4- Secondary 5- County 6- Other 7- Business 8- Connection 9- Other | US Primary 2- Main 3- Alternate 5- Spur 6- Connection 7- Business 9- Other | SC Primary 2- Main 3- Alternate 5- Spur 6- Connection 7- Business 9- Other | 1- Entrance 2- Exit | ASRU code | MP/Grid

B-455608 — Driver/Pedestrian's Full Name: COVEL, EVA TIMRUD

Unit # 1 | Sex F | Race W | Street/R.F.D. 512 LANCELOT DR | Birth Date 4-7-1948 | City, State, & Zip SIMPSONVILLE SC 29681

State SC | Driver's License # 10097 1996 D | Insurance Company USAA

Year 2002 | Body VS | Vehicle Make BUICK | VIN # 2G4WY55J021133944

State SC | Year 2011 | License Plate # TBW | Owner's D.L. # SAME

Home Telephone 864-405-9495 | Owner's Full Name SAME

Bus. Telephone N/A | Street/R.F.D. AS

Contributed To Collision: Yes | City, State, & Zip DRIVER

Estimated Speed 50 | Speed Limit 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes | Summons # 16193 FG | Code 21 | Towed By ELGINS

B-455609 — Driver/Pedestrian's Full Name: FOX, MATTHEW PLATT

Unit # 2 | Sex M | Race W | Street/R.F.D. 102 FIRE ISLAND WAY | Birth Date 3-23-1952 | City, State, & Zip GREENVILLE SC 29607

State SC | Driver's License # 101604389 D | Insurance Company AMICA

Year 1999 | Body 4S | Vehicle Make HONDA | VIN # 1HGCD5568RA163290

State SC | Year 2010 | License Plate # AVD406 | Owner's D.L. # SAME

Home Telephone 864-451-7774 | Owner's Full Name SAME

Bus. Telephone | Street/R.F.D. AS

Contributed To Collision: No | City, State, & Zip DRIVER

Estimated Speed 0 | Speed Limit 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes | Summons # | Code | Towed By AAA

B-455610 — Driver/Pedestrian's Full Name: PHILLIPS, DEBBIE SCOTT

Unit # 3 | Sex F | Race W | Street/R.F.D. 109 KEENAN DR | Birth Date 5-7-1962 | City, State, & Zip MOORESVILLE NC 28117

State NC | Driver's License # 34706148 C | Insurance Company STATE FARM

Year 2008 | Body SUV | Vehicle Make KIA | VIN # KNDJC7363756807 19

State NC | Year 2011 | License Plate # ZPT1530 | Owner's D.L. # SAME

Home Telephone 704 6301749 | Owner's Full Name SAME

Bus. Telephone N/A | Street/R.F.D. AS

Contributed To Collision: No | City, State, & Zip DRIVER

Estimated Speed 0 | Speed Limit 55 | C.D.L. Req: Yes | T/B S Req: Yes | Alc/Drg Info (see back): Yes | Summons # | Code | Towed By

Dir. of Travel: Unit 1: N S E W | Unit 2: N S E W | Unit 3: N S E W

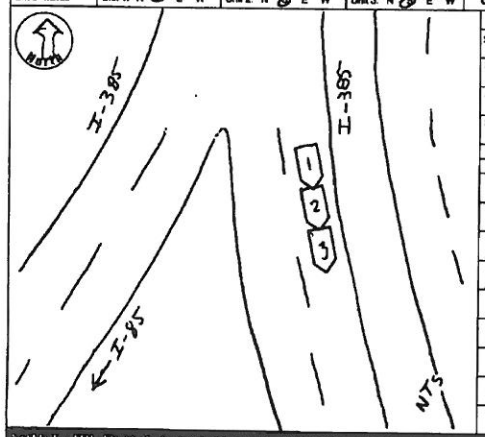
Unit 1 Dam.	Unit 2 Dam.	Unit 3 Dam.	Prop. Dam. 1	Prop. Dam. 2
$ 3000	$ 40000	$ 13000	$	$

Property Owner/Witness | Address | State | Zip | Phone

Photo: | Describe What Happened (Refer to Units by Number)

Y N

UNITS-2&3 WERE STOPPED INTO HEAVY TRAFFIC CONGESTION OF LANE ONE SOUTH ON I-385. UNIT-1 STATED SHE LOOKED AWAY MOMENTARILY AND COLLIDED INTO THE REAR OF UNIT-2 FORCING HIM INTO UNIT-3.



NOTICE: THE DESCRIPTIONS AND STATISTICAL REPORTING PURPOSES ONLY AND IS A VERIFICATION OF THE OFFICER'S BEST KNOWLEDGE OPINION AND BELIEF CONCERNING THE COLLISION BUT NO WARRANTY IS MADE AS TO THE EXACTNESS OF ANY OPINION OR BELIEF.

Investigating Officer's Name: CHATOS, TJ 300 | Rank CPL | Badge # 715 | Code 230200 | Date 12/4/2010 | Reviewer's Name | Rank Sgt | Internal Agency Code 10-103816

Unit	Date of Birth	Sex	Race	INJ	Seat	RSD	A.B.D.	Eject	Ext	Trap	Name	Street Address	Zip Code
1	1948-4-7	F	W	2	01	13	1	1	1	2			
2	1952-3-23	M	W	3	01	13	1	1	1	2			
3	1962-5-7	F	W	0	01	13	1	1	1	2			

Race: A - Asian/Pacific Islander; B - African American; H - Hispanic; I - Alaskan Native or American Indian; W - Caucasian; O - Other; U - Unk.

a) Injury Status: 0- Not Injured; 1- Possible; 2- Non-Incapacitating; 3- Incapacitating; 4- Fatal. b) Motorcycle Only

Seating Loc.: 01 02 03 / 04 05 06 / 07 08 09

Air Bag Deployment / Switch: a) 1- Deployed Front; 2- Deployed Side; 3- Deployed Both; 4- Not Deployed; 7- Not Applicable; 9- Deployment Unk. b) 1- Switch In On Position; 2- Switch In Off Position; 3- No Switch; 9- Unknown

Ejection: 1- Not Ejected; 2- Part. Ejected; 3- Tot. Ejected; 7- Not App.; 9- Unk.

Location After Impact: 1- Not Trapped; 2- Extricated (Mechanical Means); 3- Freed (non-mech.); 4- Not Applicable; 9- Unknown

Head Injury: 1-Yes 2-No

Sequence of Events

Non-Collision: 01- Cargo/Equip Loss or Shift; 03- Cross Median/Center Line; 03- Downhill Runaway; 04- Equipment Failure; 05- Fire/Explosion; 06- Immersion; 07- Jackknife; 08- Overturn/Rollover; 09- Ran off Road Left; 10- Ran off Road Right; 11- Separation of Units; 12- Spill (Non-Hazardous Matl.); 13- Other Non-Collision; 19- Unk. Non-collision

Collision, Not Fixed: 20- Animal (Deer Only); 21- Animal (All Other); 22- Motor Veh. in Transport; 23- Motor Veh. (Stopped); 24- Motor Veh. (Other Person); 25- Motor Veh. (Parked); 26- Pedalcycle; 27- Pedestrian; 28- Railway Veh.; 29- Work Zone Maint. Equip.; 30- Other Movable Object; 39- Unk. Movable Object

Collision: Fixed Object: 40- Bridge Overhead Structure; 41- Bridge Parapet End; 42- Bridge Pier or Abutment; 43- Bridge Rail; 44- Culvert; 45- Curb; 46- Dam; 47- Embankment; 48- Equipment; 49- Fence; 50- Guardrail End; 51- Guardrail Face; 52- Highway Traffic Sign Post; 53- Impact Attenuator/Crash Cushion; 54- Light/Luminaire Support; 55- Mail Box; 56- Median Barrier; 57- Overhead Sign Support; 58- Other (Post, Pole, Support, Etc.); 59- Other (Wall, Building, Tunnel, Etc.); 60- Tree; 61- Utility Pole; 62- Work Zone Maint. Equipment; 69- Unk.

Event 1: 23 | Event 2: 23 | Event 3: 23 | Most Harmful Event: 23 | 1st Harmful Event: 23

Manner of Collision (Struck Veh.): 10- Not Coll. W/Motor Veh.; 10- Rear End; 20- Head On; 30- Rear-to-Rear; 41- Angle; 42- Angle; 43- Angle; 50- Sideswipe Same Dir.; 60- Sideswipe Opposite Dir.; 70- Backed Into; 99- Unknown

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Weather Condition: 1- Clear (no adverse conditions); 2- Rain; 3- Cloudy; 4- Sleet, Hail; 5- Fog, Smog, Smoke; 6- Snow; 7- Blowing Sand, Oil, Dirt or Snow; 8- Severe Crosswinds; 9- Unk.

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Roadway: 30- Debris; 31- Non-highway Work; 32- Obstruction in Roadway; 33- Road Surface Condition (i.e., Wet); 34- Rut, Holes, Bumps; 35- Shoulders (None, Low, Soft, High); 36- Traffic Control Device (i.e., Missing); 37- Work Zone (Constr./Maint./Utility); 38- Worn, Travel-Polished Surface; 48- Other; 49- Unk.

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Environmental: 60- Animal in Road; 61- Glare; 62- Obstruction; 63- Weather Cond.; 69- Other; 69- Unk.

Vehicle Defect: 70- Brakes; 71- Steering; 72- Power Plant; 73- Tires/Wheel; 74- Lights; 75- Signals; 76- Windows/Shield; 77- Restraint System; 78- Truck Coupling; 79- Cargo; 80- Fuel System; 88- Other; 89- Unk.

Restraint/Safety Device: 00- None Used; 01- Child Restraint Used; 02- Lap Belt Only; 03- Shoulder & Lap Belt; 89- Unk.; 11- Shoulder Belt Only; 12- Lap Belt Only; 13- Shoulder & Lap Belt; 89- Unk.

Pedestrian, Motor/Pedalcycle Only: 31- Helmet; 41- Protective Pads; 51- Reflective Clothing; 61- Lighting

a) Transported to Medical Facility: 1- Yes; 2- No; 3- Unknown. b) By: 1- EMS; 2- Police; 8- Other; 9-Unk.

Deformed Area: 1st Deformed; Most Deformed

21- Pedestrian; 81- None; 82- Rollover; 83- Total; 84- Under Carriage; 88- Other; 89- Unk

Alcohol/Drug Test Given: 1- Given - Known Results; 2- Given - Unusable; 3- Given - Pending; 4- None; 5- Refused

Test Type: 1- Breath (Alc. Only); 2- Blood; 3- Urine; 4- Serum; 8- Other

Drug Results: 1- Amphetamines; 2- Cocaine; 3- Marijuana; 4- Opiates; 5- PCP; 8- Other; 0- None/Minor; 2- Functional Damage; 3- Disabling Damage; 4- Severe/Totaled; 5- Not Applicable; 9- Unk.

Special Use Only: 1- Under-Compartment Intrusion; 2- Under- No Intrusion; 3- Under- Unknown; 4- Over- M/V In Transport; 5- Over- Other Vehicle; 8- None; 9- Unk.; Underride/Override; Extent of Deformity

Alc Test Results: 1- Two-way, Not Divided; 2- Two-way, Divided, Unprotected Median; 3- Two-way, Divided, Barrier; 4- One-way; 8- Other

Trafficway: 3

Ac: 1- Conc 2- Inland 3- Median 4- Roadside 5- Roadway 6- Shoulder 7- Sidewalk 8- Unk. 9- Outside Trafficway

Rt: X- traffic; 1- Y 2- N 9- U

1st Harmful Event Loc.: 5

1- Straight - Level; 2- Straight - On Grade; 3- Straight - Hillcrest; 4- Curve - Level; 5- Curve - On Grade; 6- Curve - Hillcrest: Road Character 4

1- Dry; 2- Wet; 3- Snow; 4- Slush; 5- Ice; 6- Contaminate; 7- Water (Standing, etc.); 8- Other; 9- Unk.: Road Surface Condition 1

01- Stop and Go Light; 02- Flashing Traffic Signal; 11- RR (X-bucks, Lights & Gates); 12- RR (X-bucks & Lights); 13- RR (X-bucks Only); 21- Officer or Flagman; 22- Oncoming Emergency Vehicle; 31- Pavement Markings (only); 41- Stop Sign; 42- School Zone Sign; 43- Yield Sign; 44- Work Zone; 45- Other Warning Signs; 51- Flashing Beacon; 98- None; 99- Unk.: Traffic Control Type 98

1- Yes, Directly; 2- Yes, Indirectly; 3- No; 9- Unk.: School Bus Involved: 3

1- Before 1st Sign; 2- Advanced Warning Area; 3- Transition Area; 4- Activity Area; 5- Termination; Area: ---------- Work Zone Location; 1- Yes 2- No: Work Zone: 2

1- Shoulder/Median Work; 2- Lane Shift/Crossover; 3- Intermittent/Moving Work; 4- Lane Closure; 8- Other 9- Unk.: Work Zone Type ----------

1- Yes 2- No: Workers Present: 2

TRAFFIC STUDY
FOR
I-85/I-385 INTERCHANGE IMPROVEMENTS

GREENVILLE COUNTY, SOUTH CAROLINA

APPENDIX B

Prepared for:

South Carolina Department of Transportation

Prepared by:

Florence & Hutcheson
CONSULTING ENGINEERS

501 Huger Street
Columbia, SC 29201
Tel. (803) 254-5800
Fax. (803) 929-0334

February 2012

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Existing Lane Geometry

Proposed Lane Geometry (Woodruff Road Improvements)

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- 2035 No-Build Conditions
- 2015 Alternate 2D Conditions
- 2035 Alternate 2D Conditions
- 2015 Alternate 4A Conditions
- 2035 Alternate 4A Conditions

EXISTING LANE GEOMETRY

EXISTING STOP SIGN CONTROL

EXISTING TRAFFIC SIGNAL CONTROL

EXISTING LANE CONFIGURATION

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CONSULTING ENGINEERS

GREENVILLE COUNTY

I-85/385 EXISTING LANE GEOMETRY AND TRAFFIC CONTROL

NOVEMBER/2011

EXISTING STOP SIGN CONTROL

EXISTING TRAFFIC SIGNAL CONTROL

EXISTING LANE CONFIGURATION

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I-85/385 EXISTING LANE GEOMETRY AND TRAFFIC CONTROL

NOVEMBER/2011

PROPOSED LANE GEOMETRY
(WOODRUFF ROAD IMPROVEMENTS)

EXISTING STOP SIGN CONTROL

EXISTING TRAFFIC SIGNAL CONTROL

EXISTING LANE CONFIGURATION

PROPOSED LANE CONFIGURATION

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GREENVILLE COUNTY

I-85/385 PROPOSED LANE GEOMETRY AND TRAFFIC CONTROL

NOVEMBER/2011

EXISTING STOP SIGN CONTROL

EXISTING TRAFFIC SIGNAL CONTROL

EXISTING LANE CONFIGURATION

PROPOSED LANE CONFIGURATION

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GREENVILLE COUNTY

I-85/385 PROPOSED LANE GEOMETRY AND TRAFFIC CONTROL

NOVEMBER/2011

EXISTING STOP SIGN CONTROL

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NOVEMBER/2011

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I-85/385 PROPOSED LANE GEOMETRY AND TRAFFIC CONTROL

NOVEMBER/2011

TRAFFIC FLOW DIAGRAMS
EXISTING CONDITIONS

MATCH LINE C
SEE SHEET 2

(4483)
4064

(5705)
3028

TO GREENVILLE
I-385

WOODRUFF RD

(2421)
1416

(3284)
1612

(1629)
1654

(2854)
2410

(820)
558

(601)
858

(645)
1107

(787)
853

(1261)
1005

(858)
1559

(2119)
2564

(5609)
5042

(3490)
2478

(1820)
1863

(1000)
1305

(1645)
2412

MATCH LINE A
SEE SHEETS 2 & 3

TO ATLANTA
I-85

(2389)
1440

(2154)
2396

(1510)
975

(1142)
326

(3296)
2722

(2650)
1824

(5946)
4546

MATCH LINE B
SEE SHEET 2

I-85
TO SPARTANBURG

(879)
465

(368)
649

(3929)
2719

(3641)
3263

(1049)
966

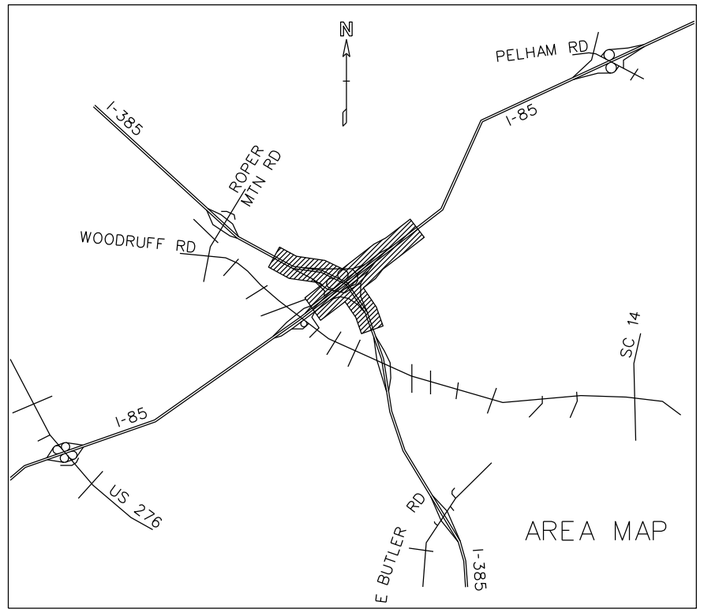
WOODRUFF RD

TO COLUMBIA

(4808)
3184

(4690)
4229

MATCH LINE E
SEE SHEET 3



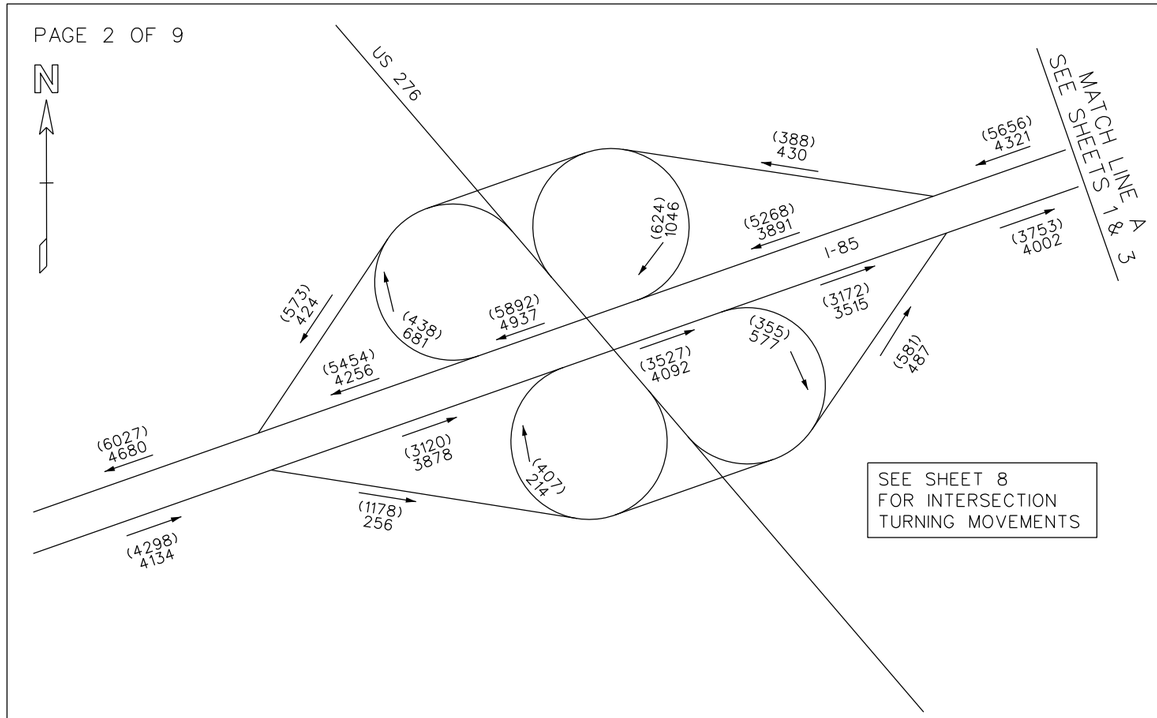
Florence & Hutcheson
CONSULTING ENGINEERS

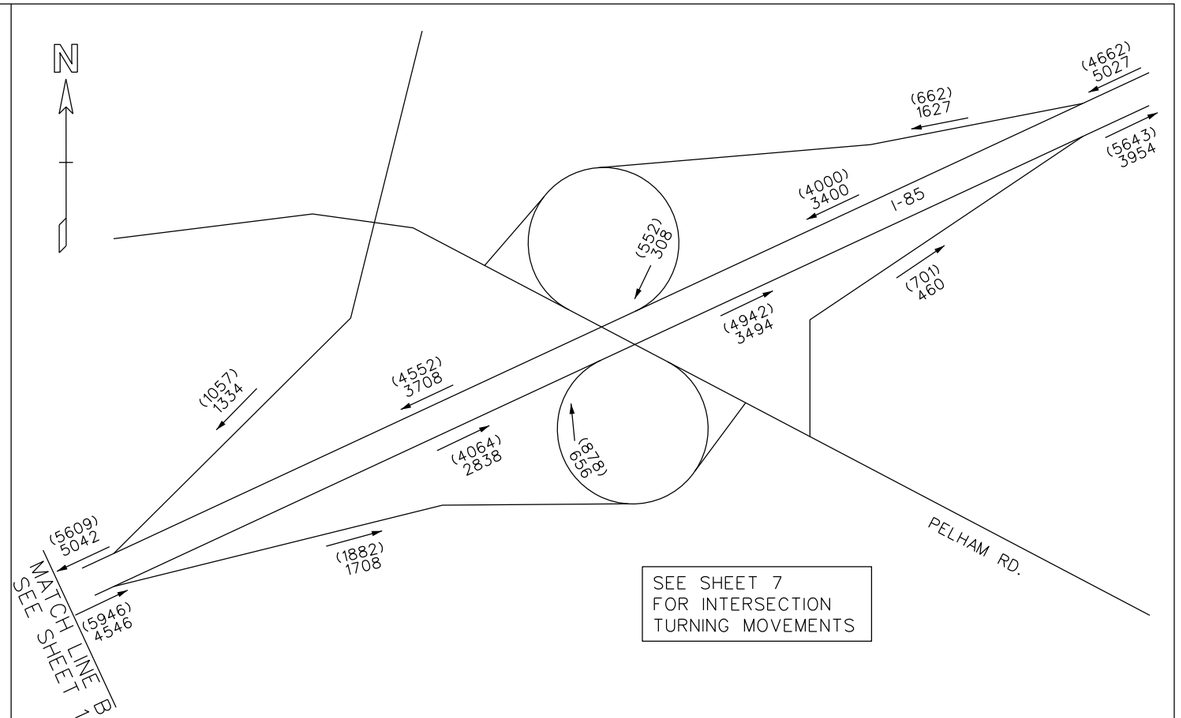
GREENVILLE
COUNTY

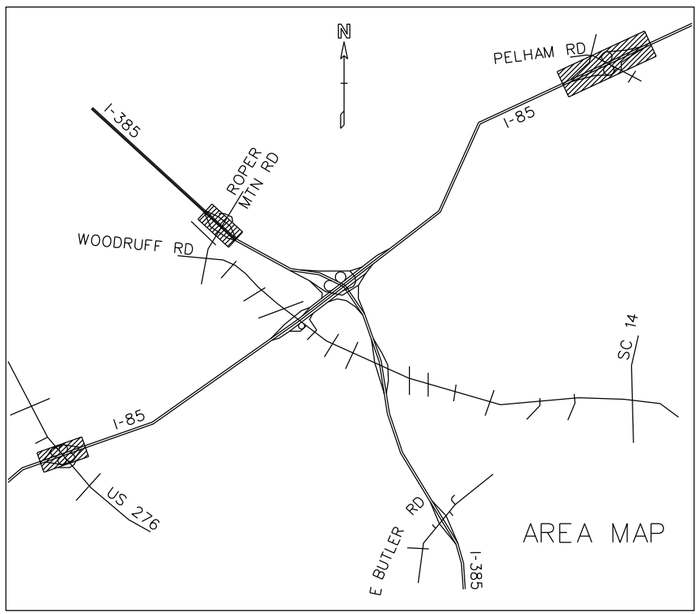
I-85/I-385
EXISTING TRAFFIC

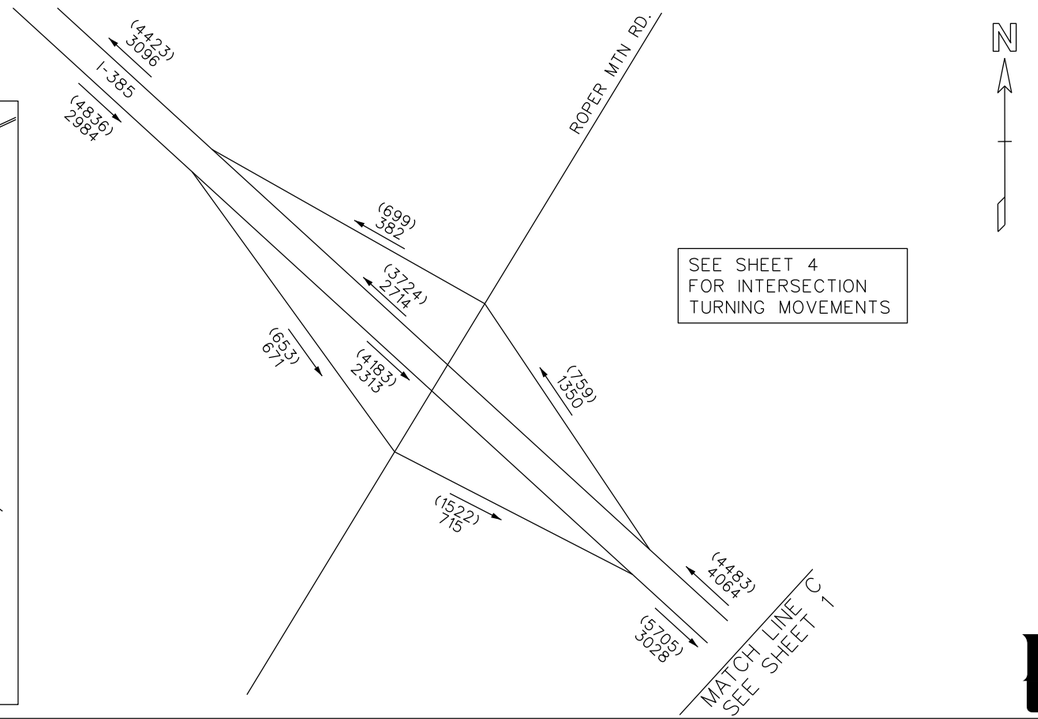
2010 PM DHV = (000)
2010 AM DHV = 000
T = 18%
(SU = 16%
COMB. = 2%)

APRIL/2011









N

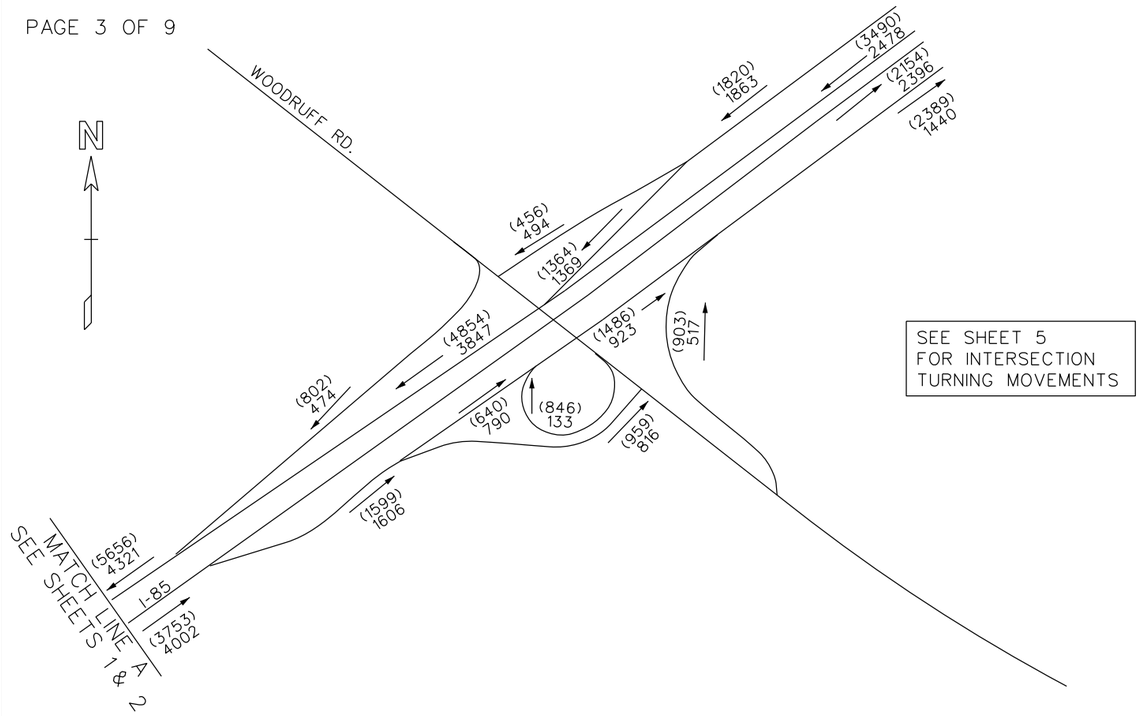
Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE
COUNTY

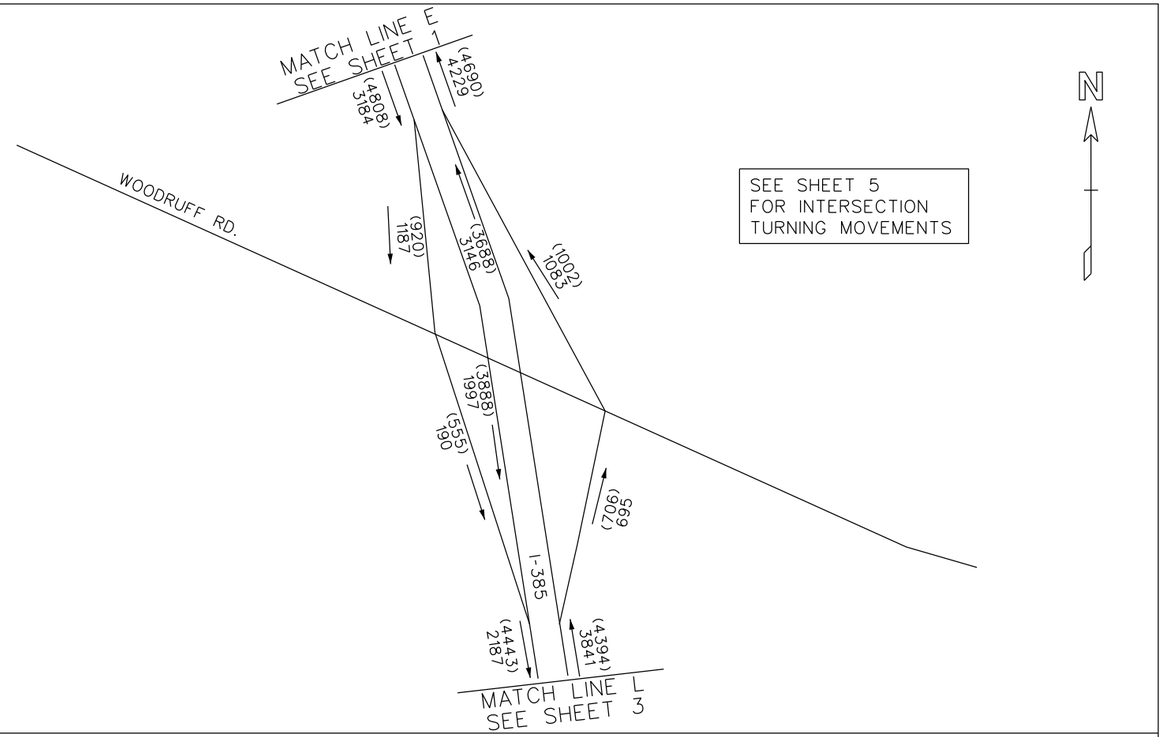
I-85/I-385
EXISTING TRAFFIC

2010 PM DHV = (000)
2010 AM DHV = 000
T = 18%
(SU = 16%
COMB. = 2%)

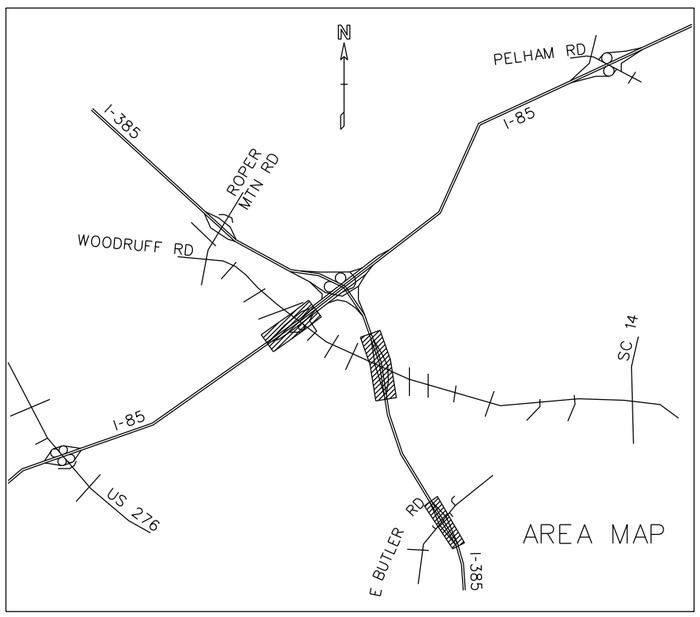
APRIL/2011

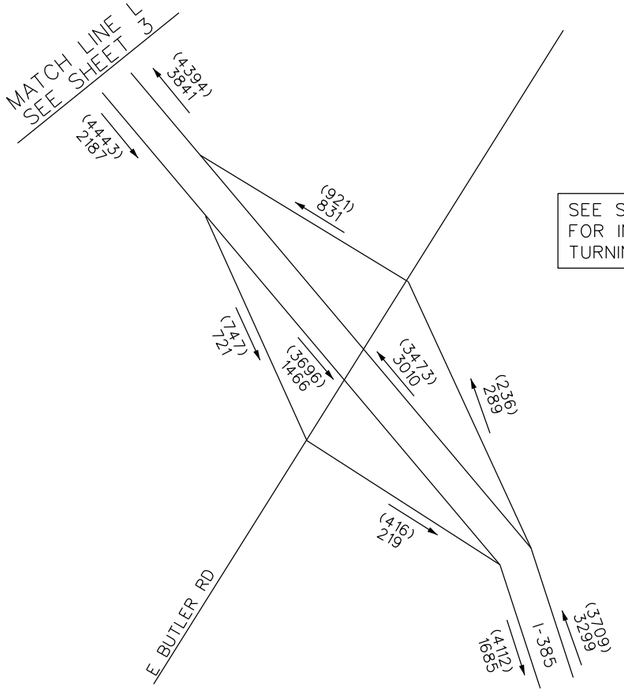


SEE SHEET 5
FOR INTERSECTION
TURNING MOVEMENTS



SEE SHEET 5
FOR INTERSECTION
TURNING MOVEMENTS





SEE SHEET 9
FOR INTERSECTION
TURNING MOVEMENTS

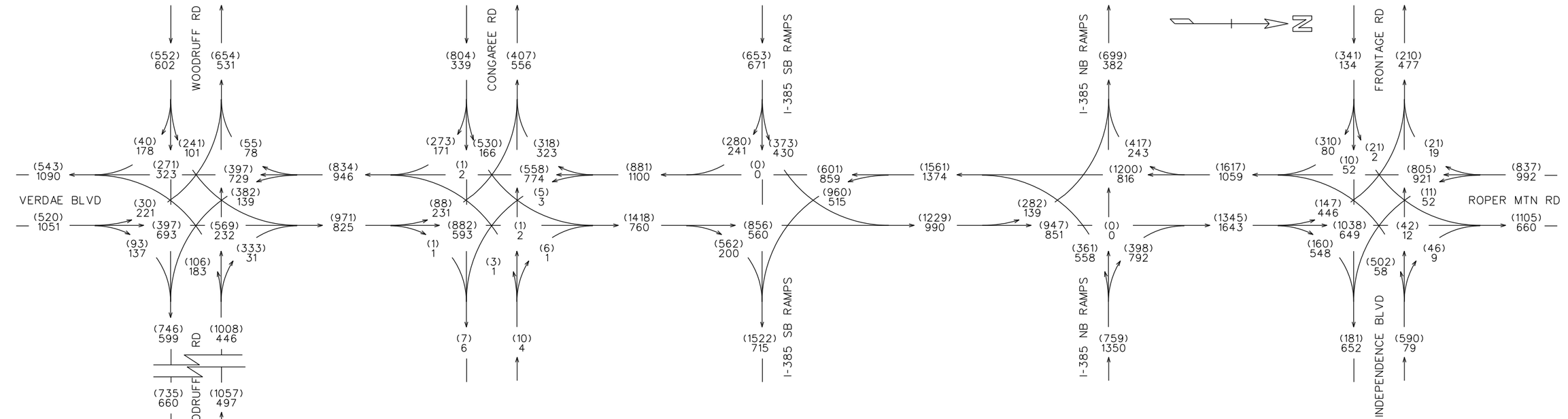
Florence & Hutcheson
CONSULTING ENGINEERS

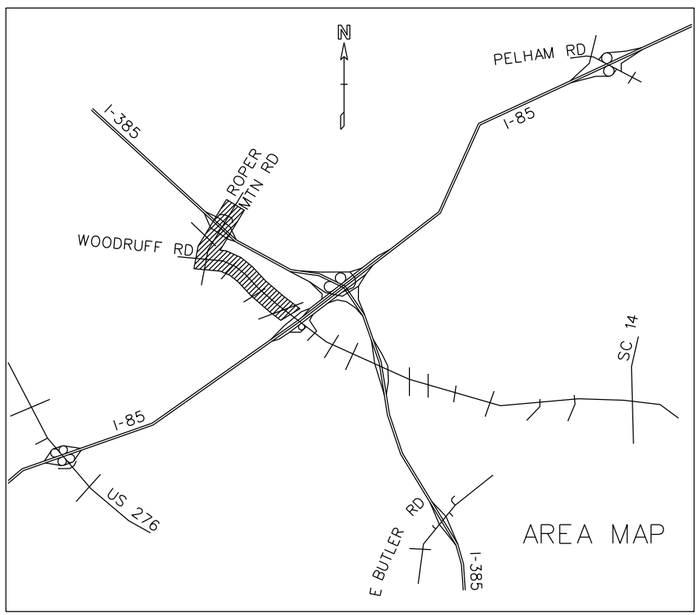
GREENVILLE
COUNTY

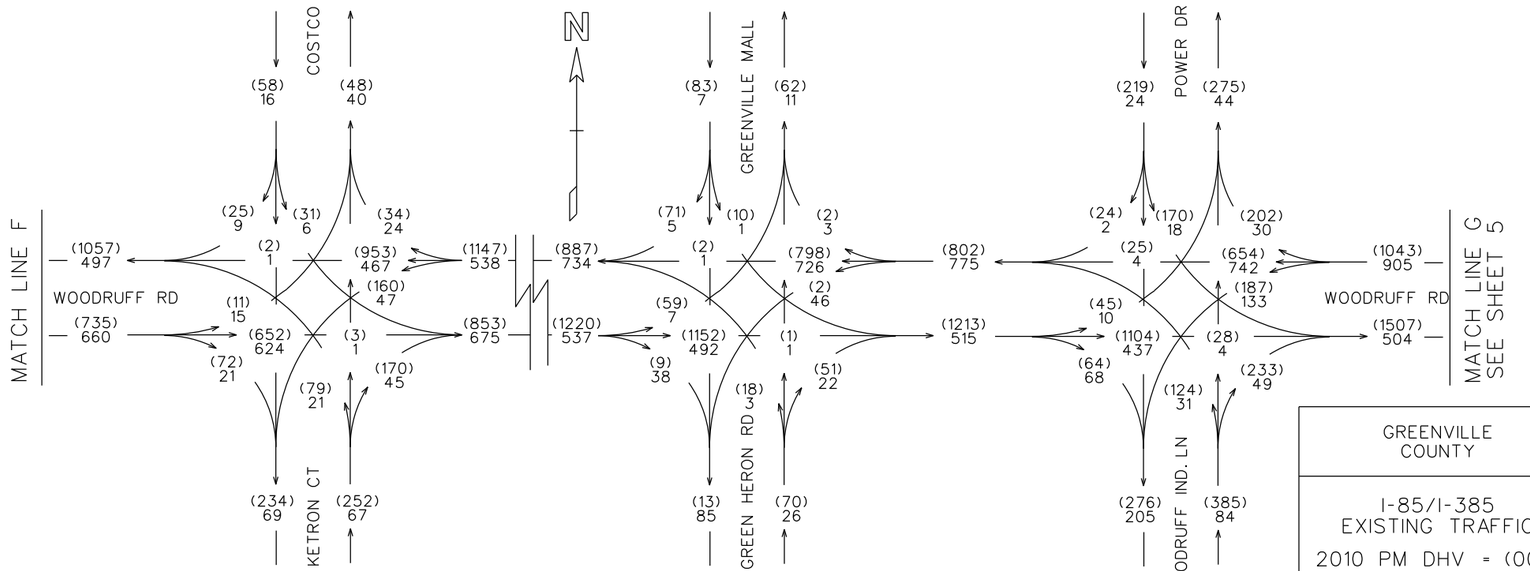
I-85/I-385
EXISTING TRAFFIC

2010 PM DHV = (000)
2010 AM DHV = 000
T = 18%
(SU = 16%
COMB. = 2%)

APRIL/2011







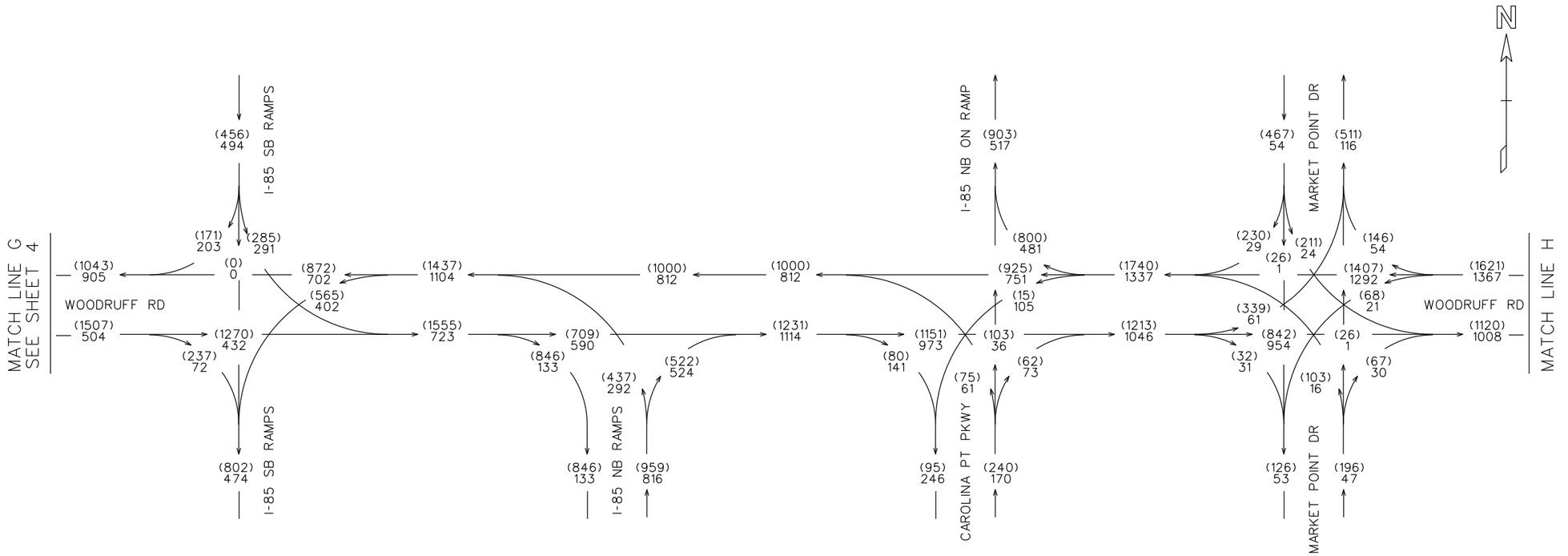
GREENVILLE COUNTY

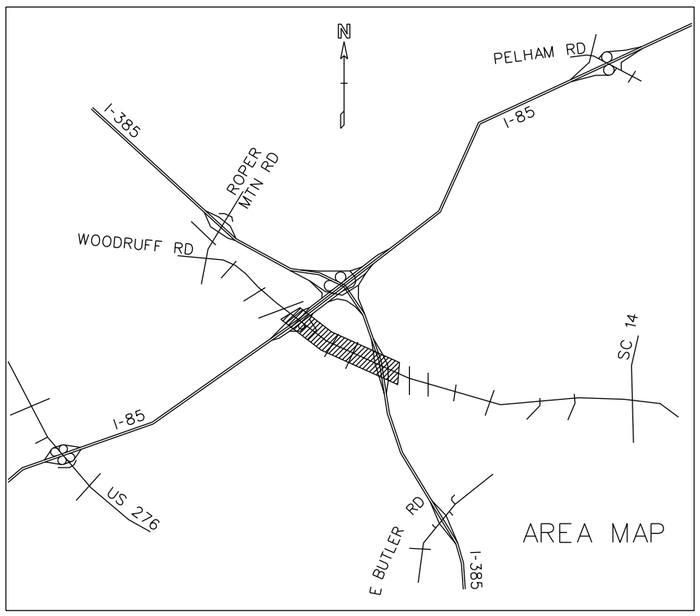
I-85/I-385
EXISTING TRAFFIC

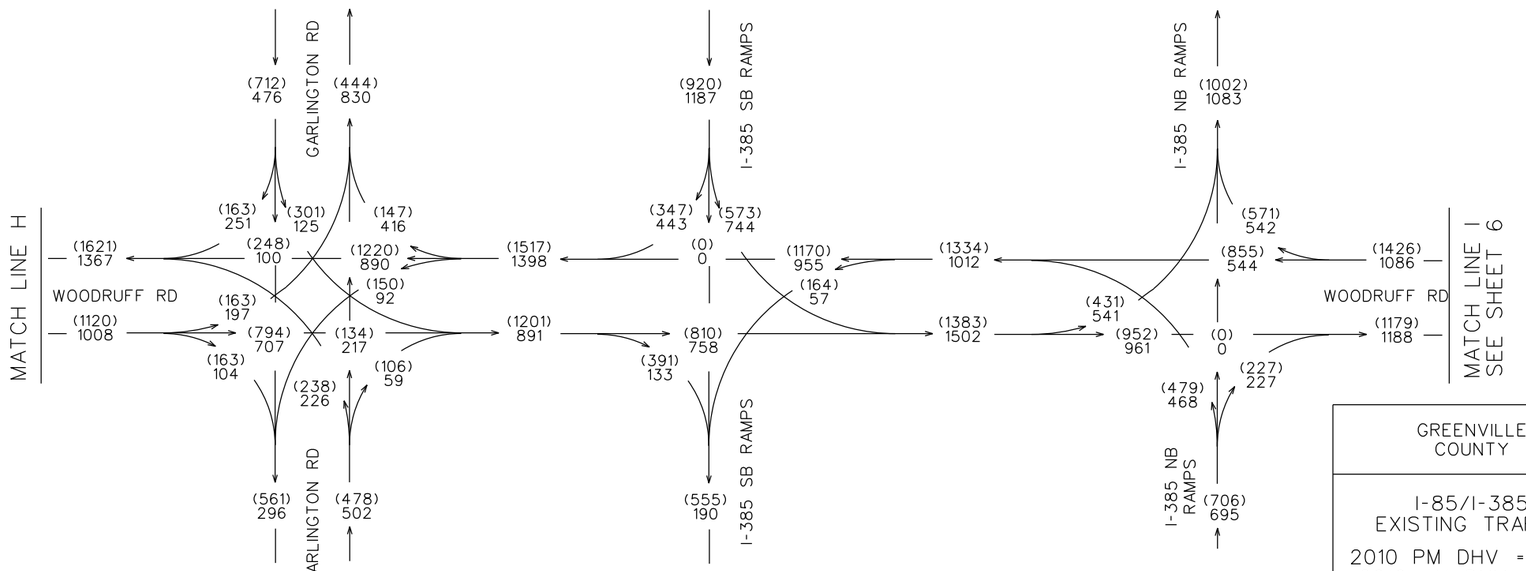
2010 PM DHV = (000)
2010 AM DHV = 000
T = 15%
(SU = 14%
COMB. = 1%)

APRIL/2011

Florence & Hutcheson
CONSULTING ENGINEERS







GREENVILLE COUNTY

I-85/I-385
EXISTING TRAFFIC

2010 PM DHV = (000)
2010 AM DHV = 000
T = 15%
(SU = 14%
COMB. = 1%)

APRIL/2011

Florence & Hutcheson
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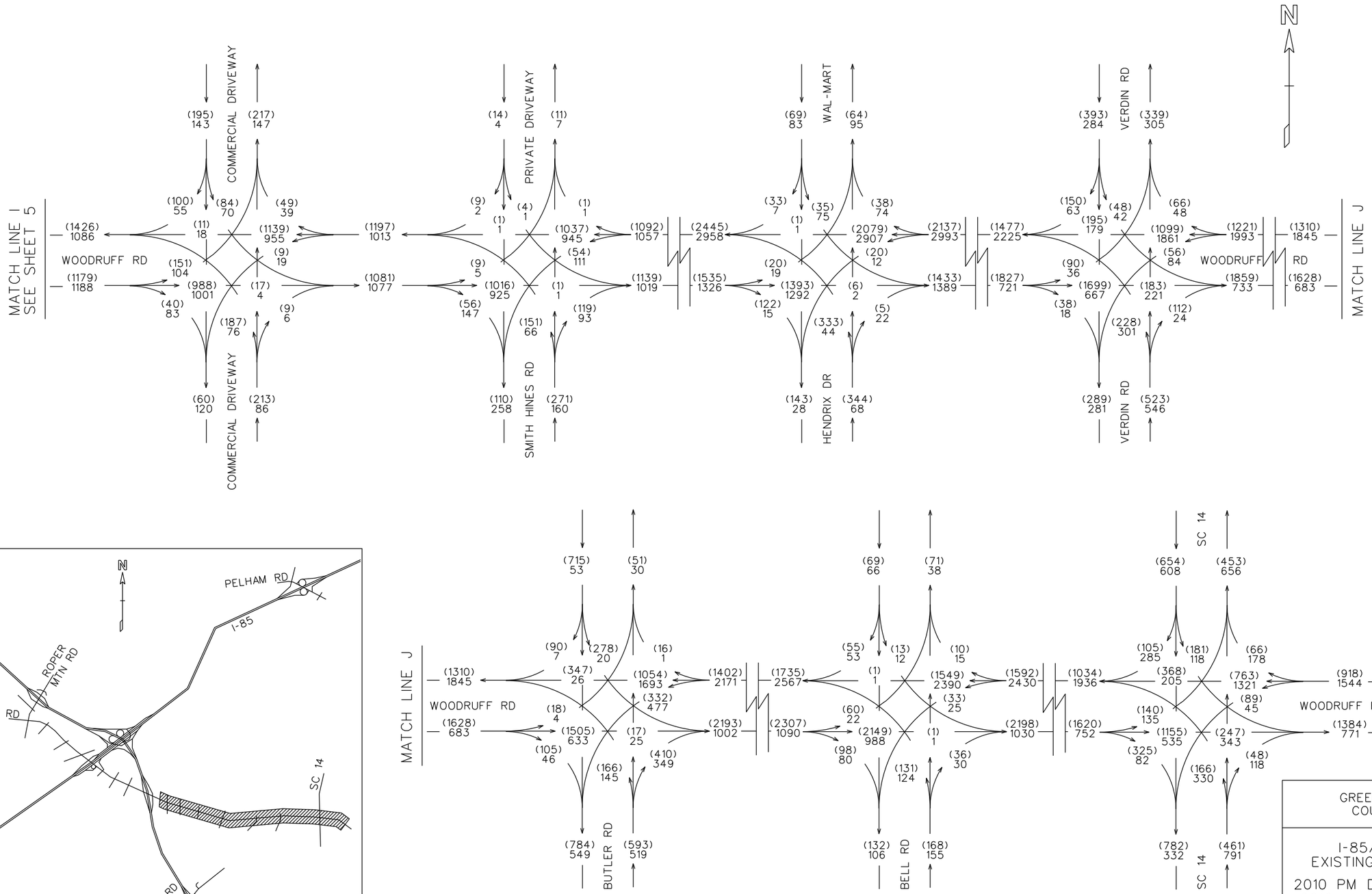

GREENVILLE COUNTY

I-85/I-385
EXISTING TRAFFIC

2010 PM DHV = (000)
2010 AM DHV = 000
T = 15%
(SU = 14%
COMB. = 1%)

APRIL/2011

Florence & Hutcheson
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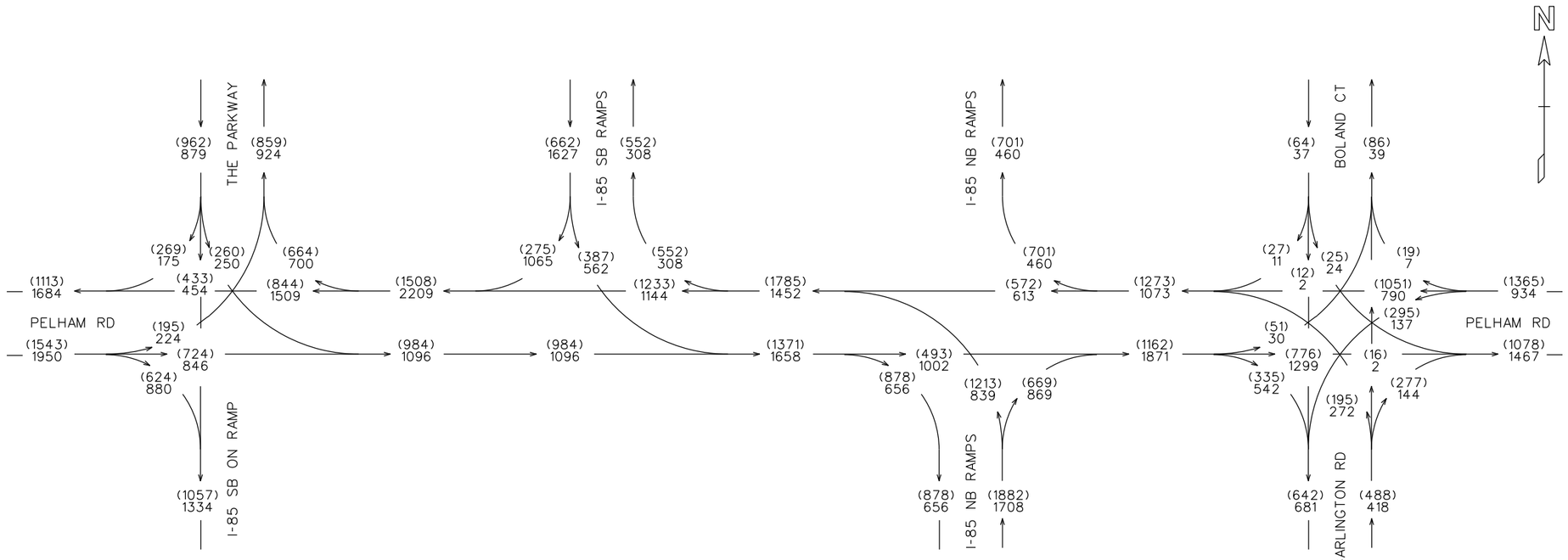

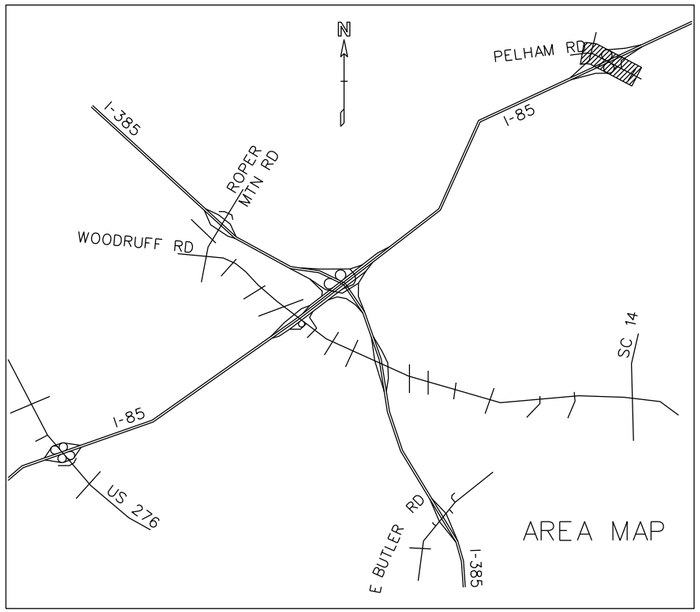

Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE COUNTY

I-85/I-385
EXISTING TRAFFIC

2010 PM DHV = (000)
2010 AM DHV = 000
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(SU = 14%
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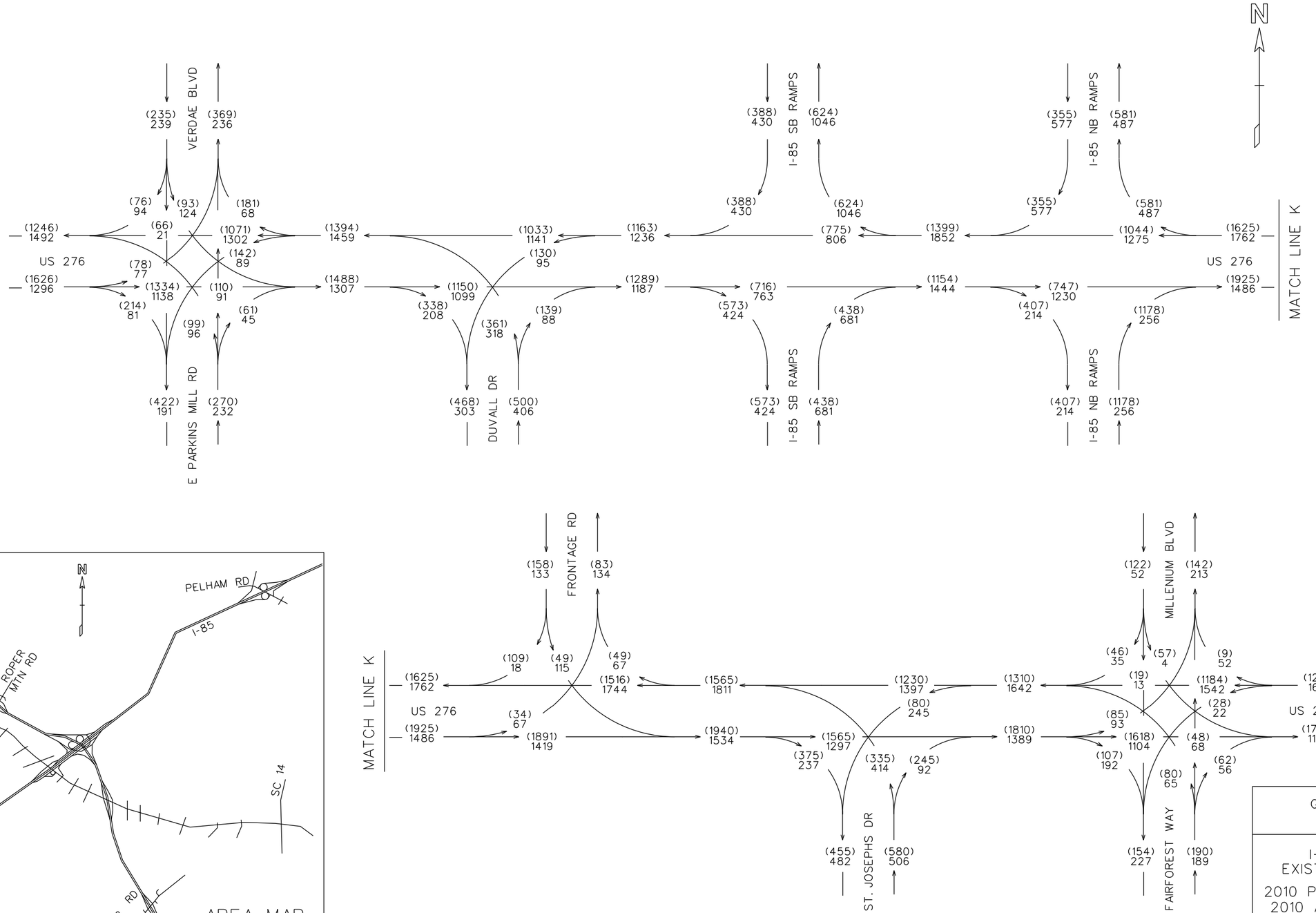
APRIL/2011



Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE COUNTY

I-85/I-385
EXISTING TRAFFIC

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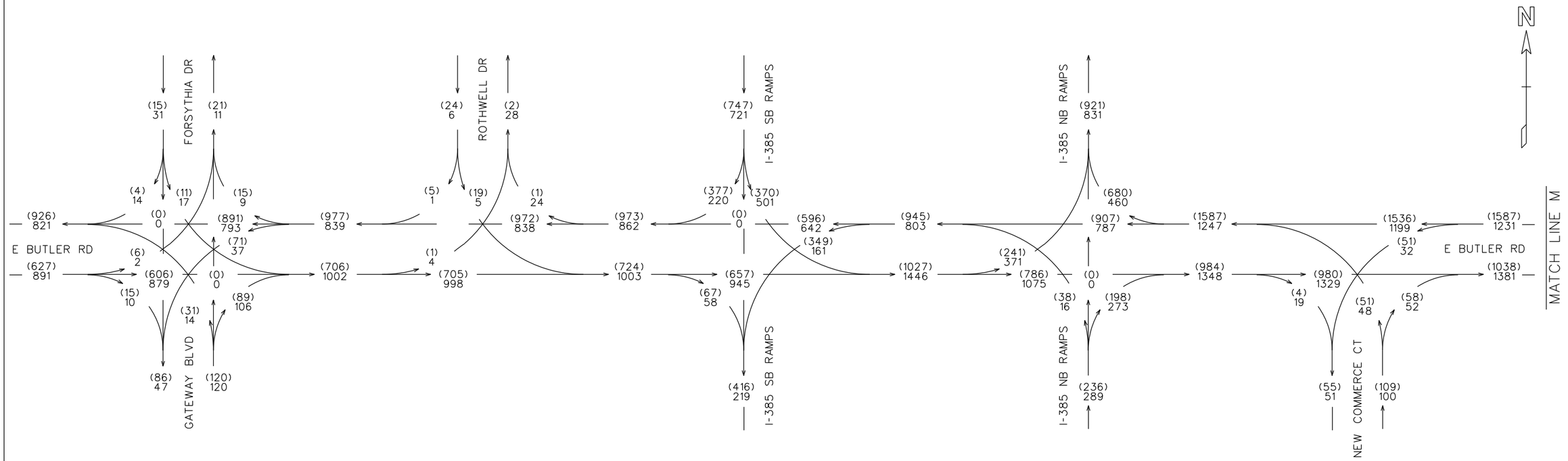
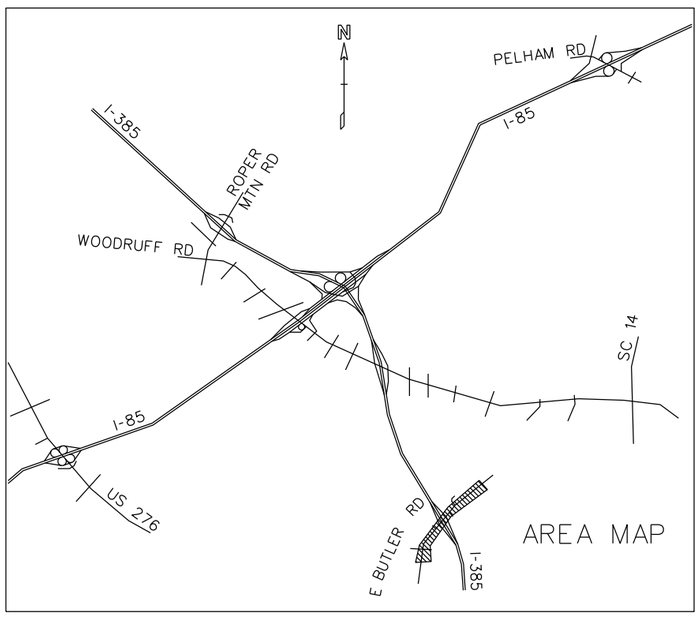
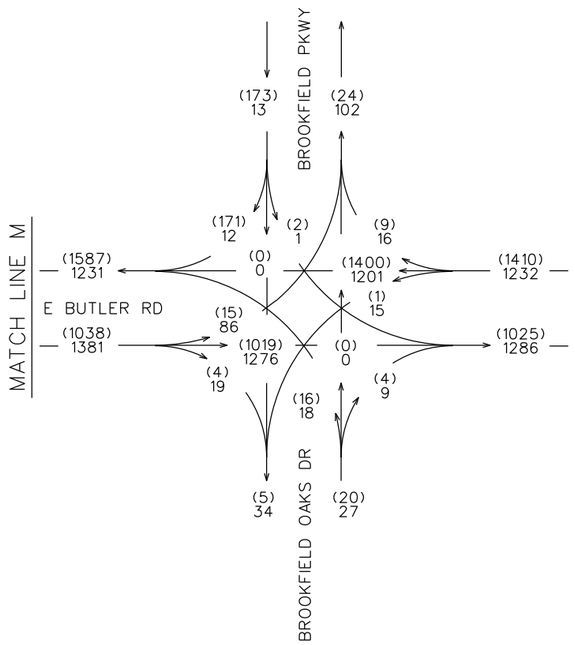
APRIL/2011







Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE COUNTY

I-85/I-385
EXISTING TRAFFIC

2010 PM DHV = (000)
2010 AM DHV = 000
T = 15%
(SU = 14%
COMB. = 1%)

APRIL/2011

TRAFFIC FLOW DIAGRAMS
2015 NO-BUILD CONDITIONS

MATCH LINE C
SEE SHEET 2

TO GREENVILLE
I-385

WOODRUFF RD

(6594)
3548

(5250)
4764

(2730)
1652

(3864)
1896

(1895)
1938

(3355)
2826

(947)
636

(1783)
1016

(830)
919

(750)
1299

(1834)
2747

(1004)
1828

(1471)
1205

(2475)
3033

(6307)
5805

(3832)
2772

(2031)
2084

(1084)
1448

MATCH LINE A
SEE SHEETS 2 & 3

TO ATLANTA
I-85

(2773)
1657

(2375)
2665

(1755)
1122

(1331)
389

(3706)
3054

(2997)
2155

(6703)
5209

MATCH LINE B
SEE SHEET 2

I-85
TO SPARTANBURG

(1018)
535

(4614)
3195

(4185)
3745

(424)
733

(1214)
1139

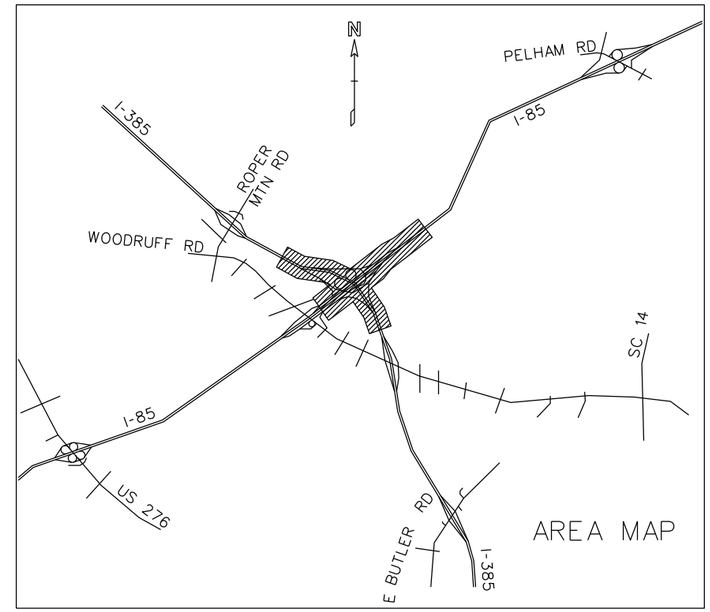
WOODRUFF RD

TO COLUMBIA

(5632)
3730

(5399)
4884

MATCH LINE E
SEE SHEET 3



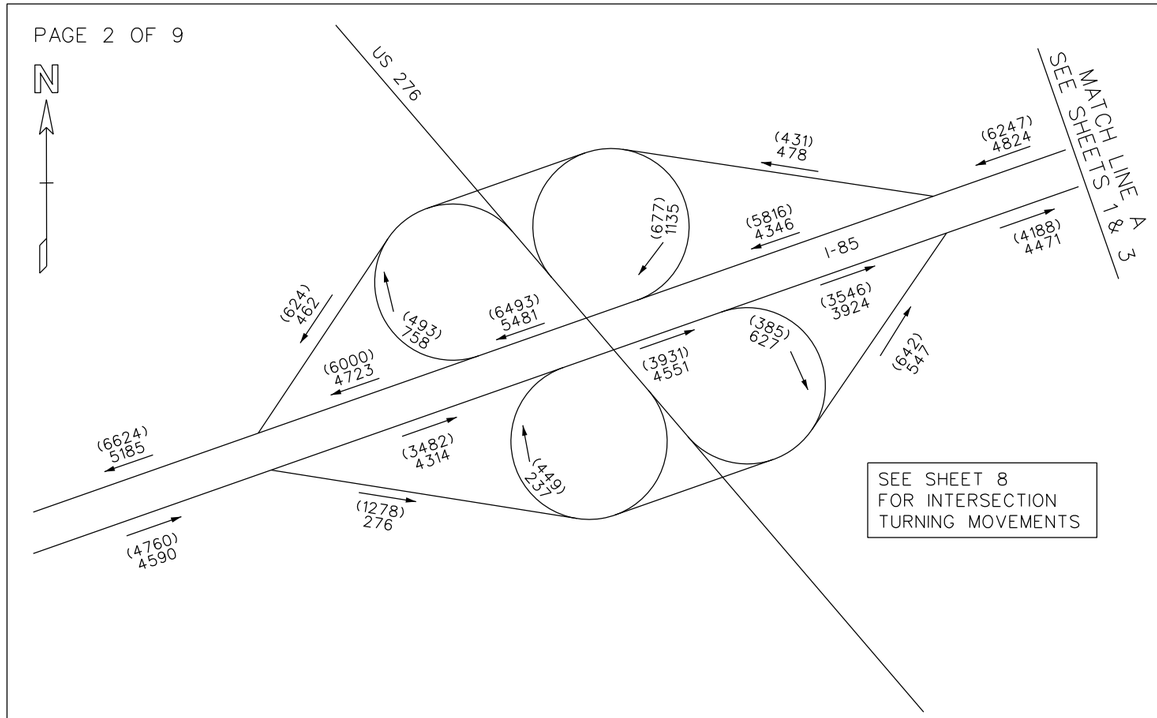
Florence & Hutcheson
CONSULTING ENGINEERS

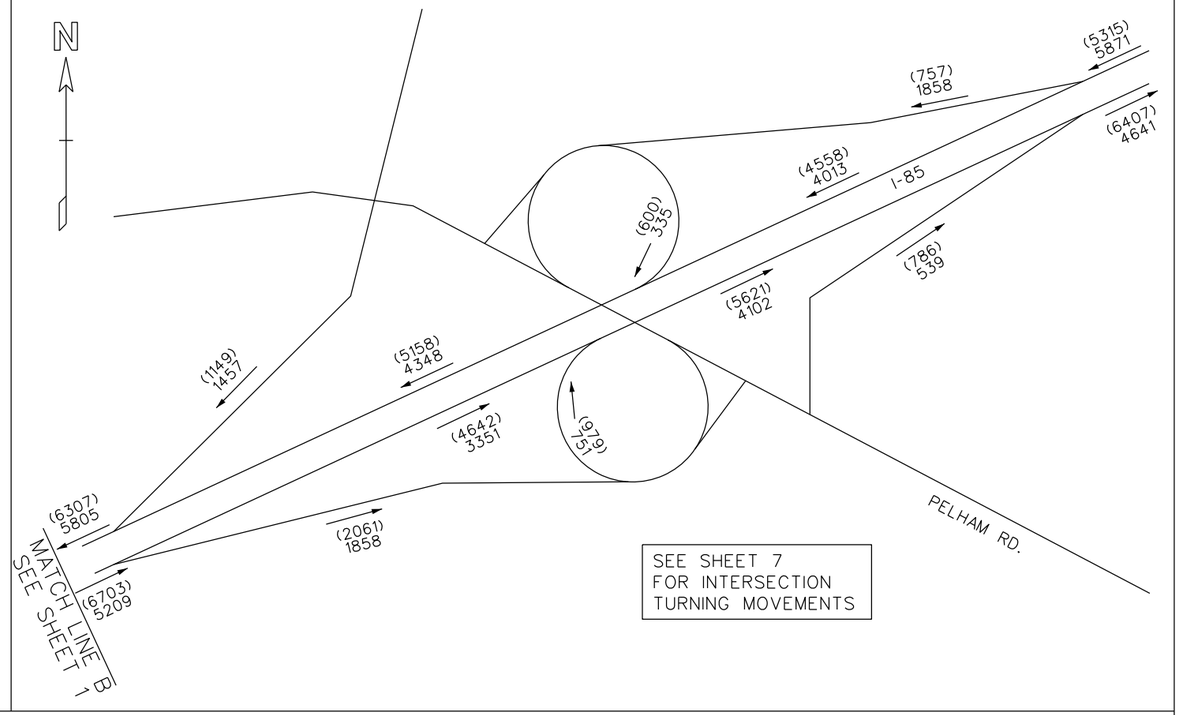
GREENVILLE COUNTY

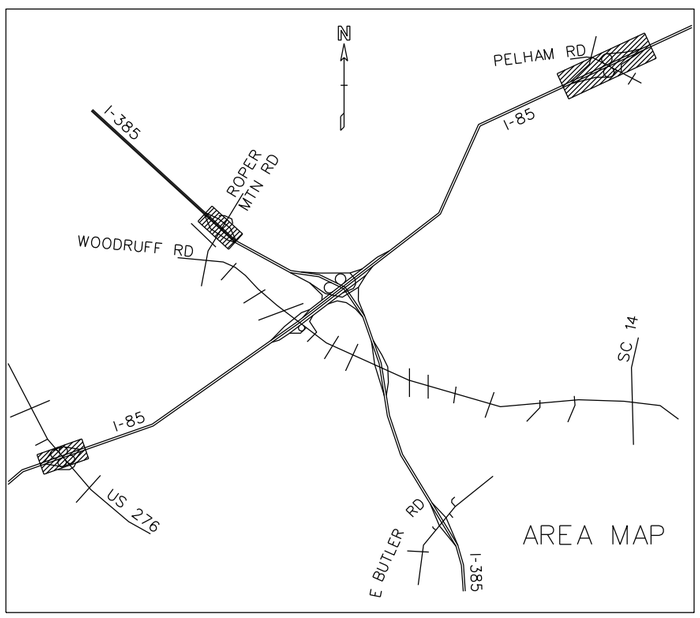
I-85/I-385
NO-BUILD TRAFFIC

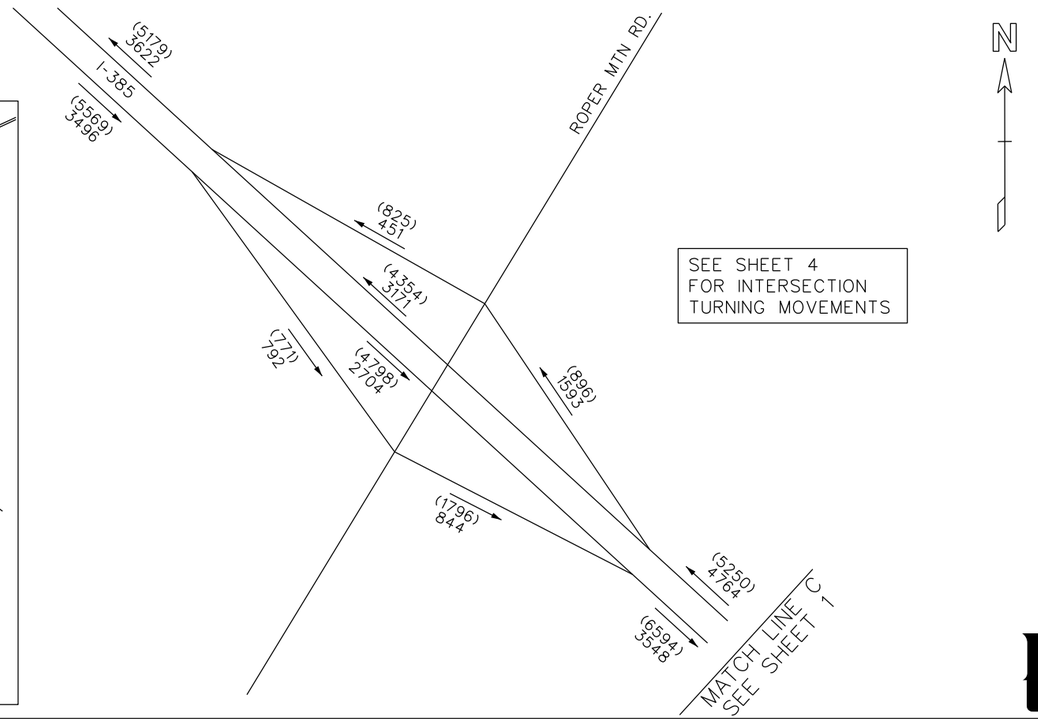
2015 PM DHV = (000)
2015 AM DHV = 000
T = 18%
(SU = 16%
COMB. = 2%)

APRIL/2011









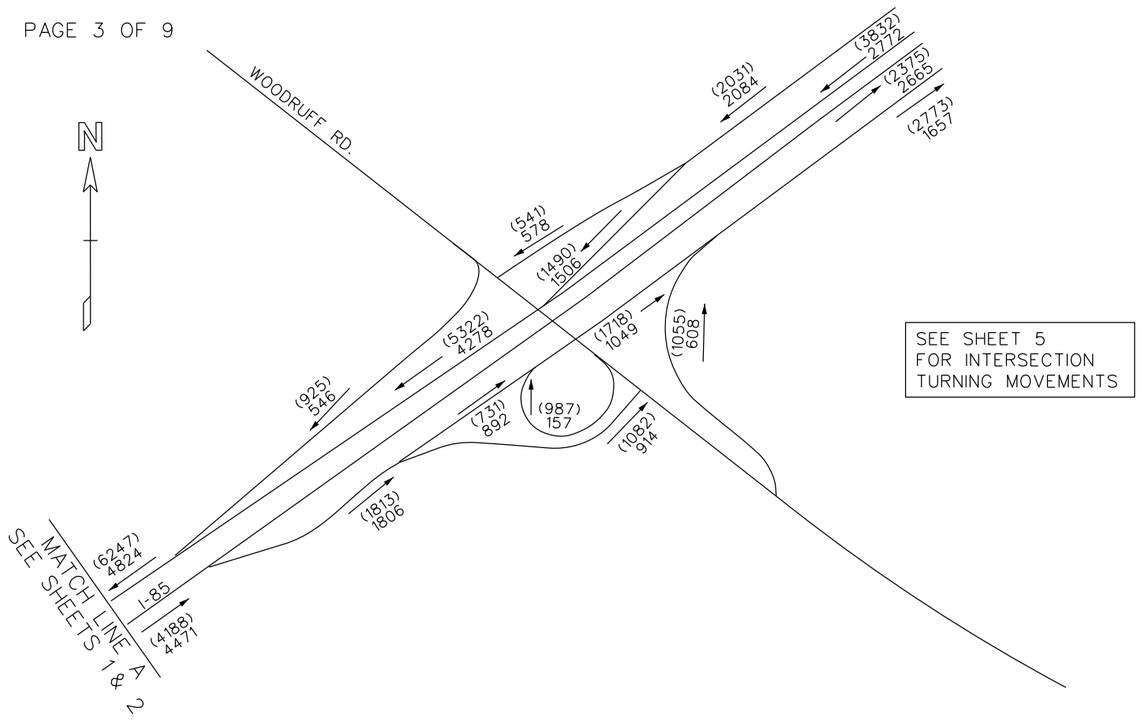
GREENVILLE
COUNTY

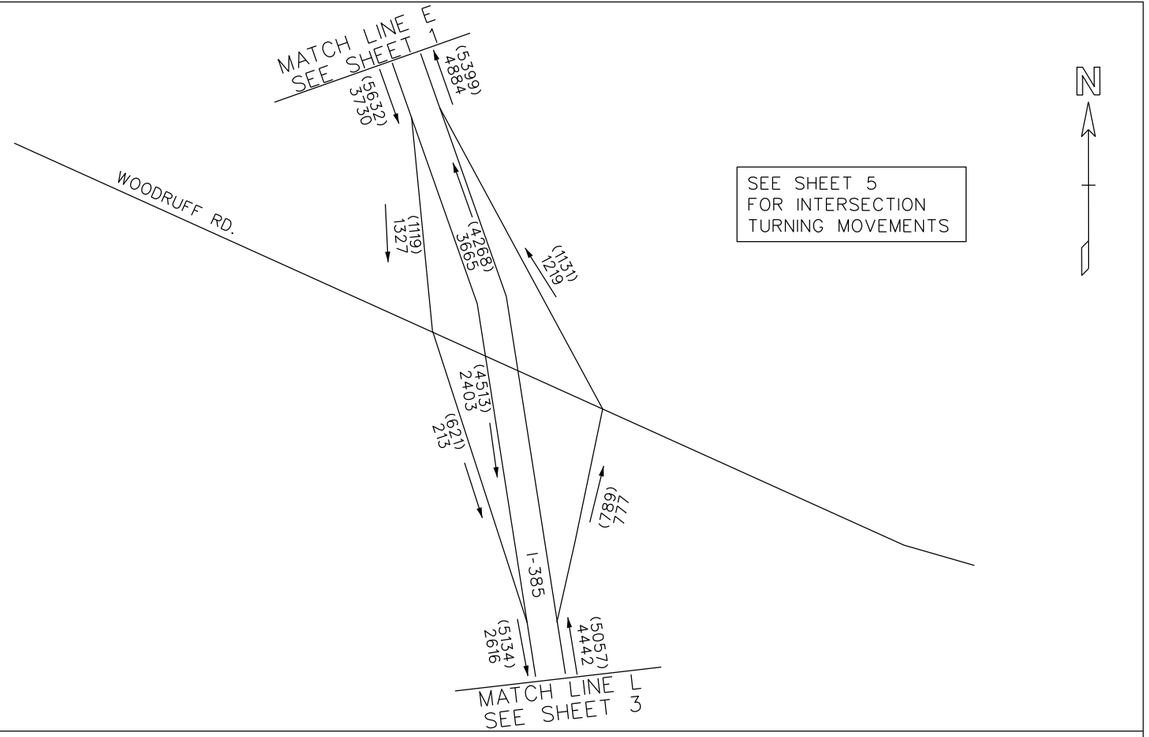
I-85/I-385
NO-BUILD TRAFFIC

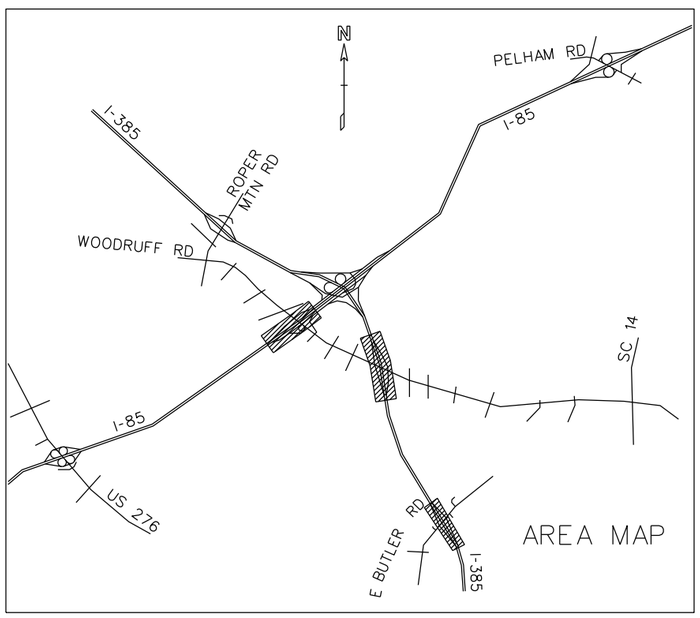
2015 PM DHV = (000)
2015 AM DHV = 000
T = 18%
(SU = 16%
COMB. = 2%)

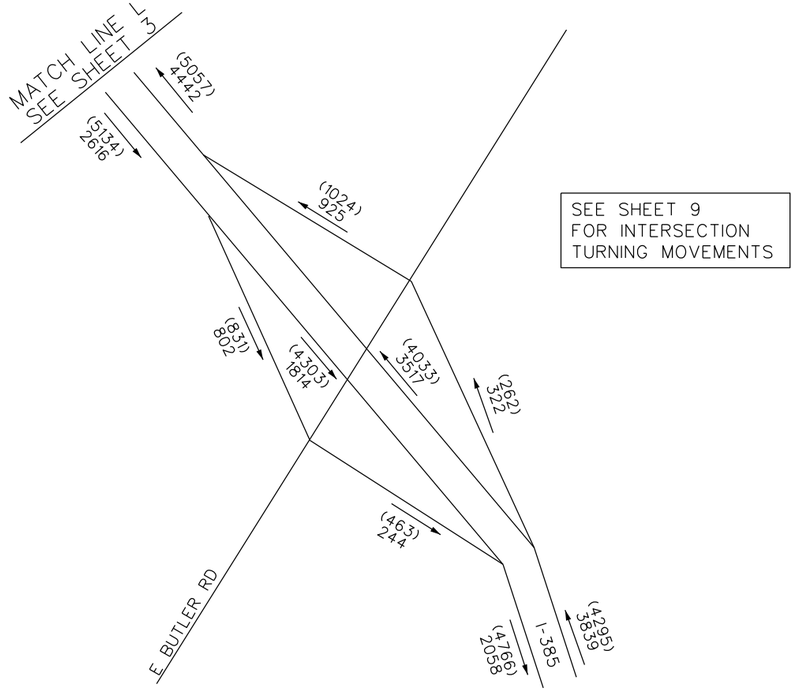
APRIL/2011

Florence & Hutcheson
CONSULTING ENGINEERS











Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE
COUNTY

I-85/I-385
NO-BUILD TRAFFIC

2015 PM DHV = (000)
2015 AM DHV = 000
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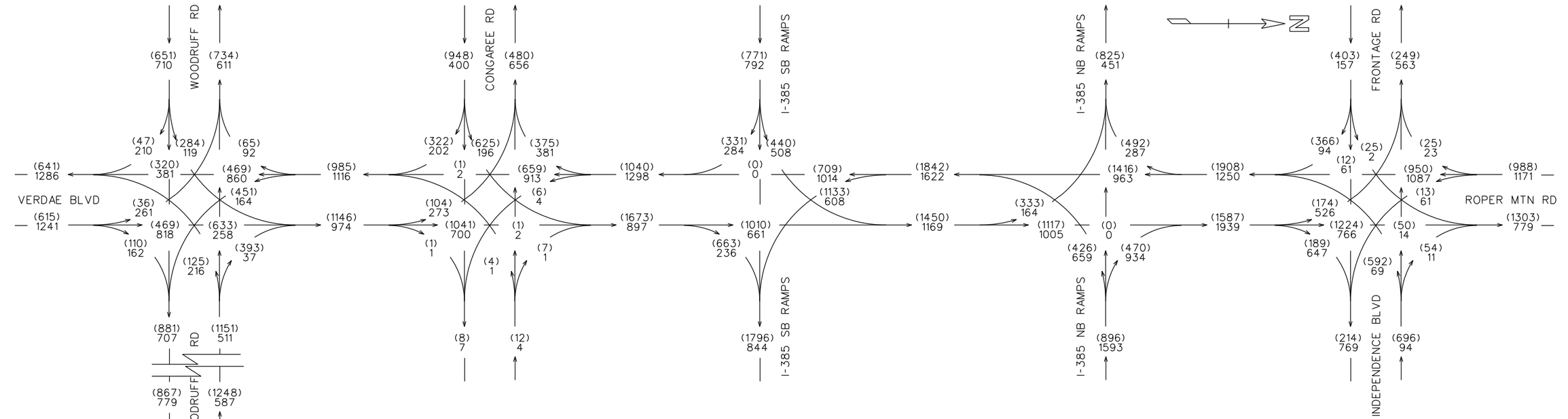
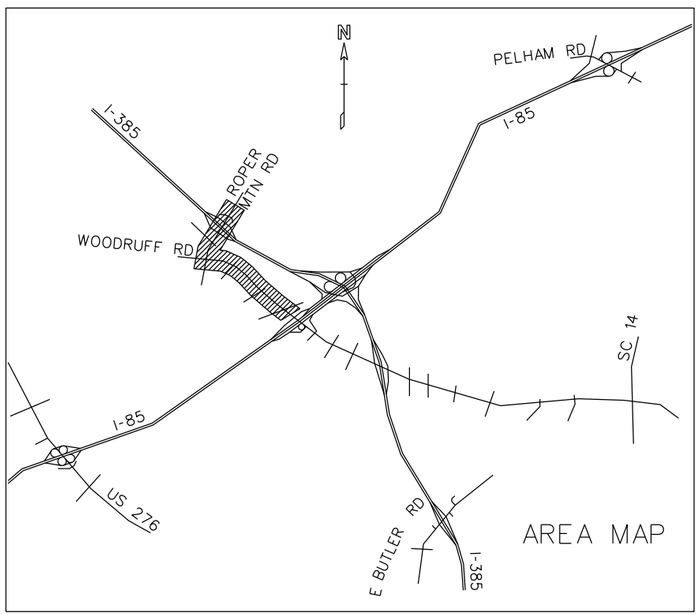
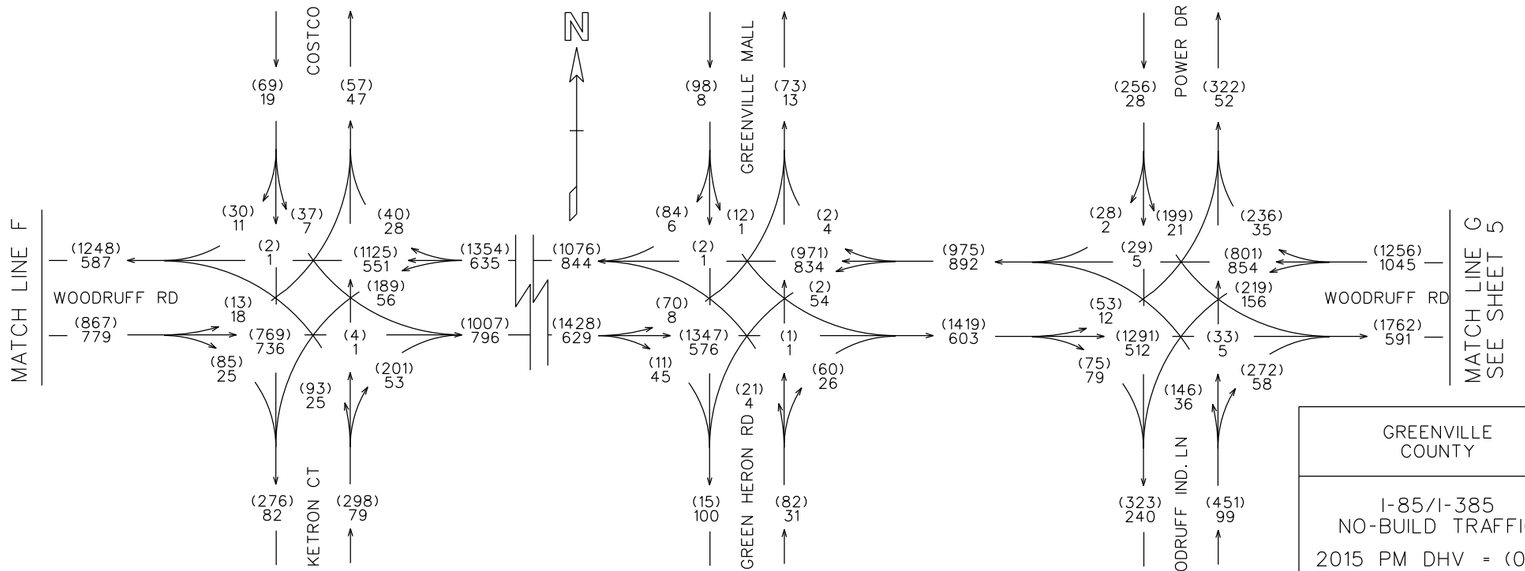
APRIL/2011







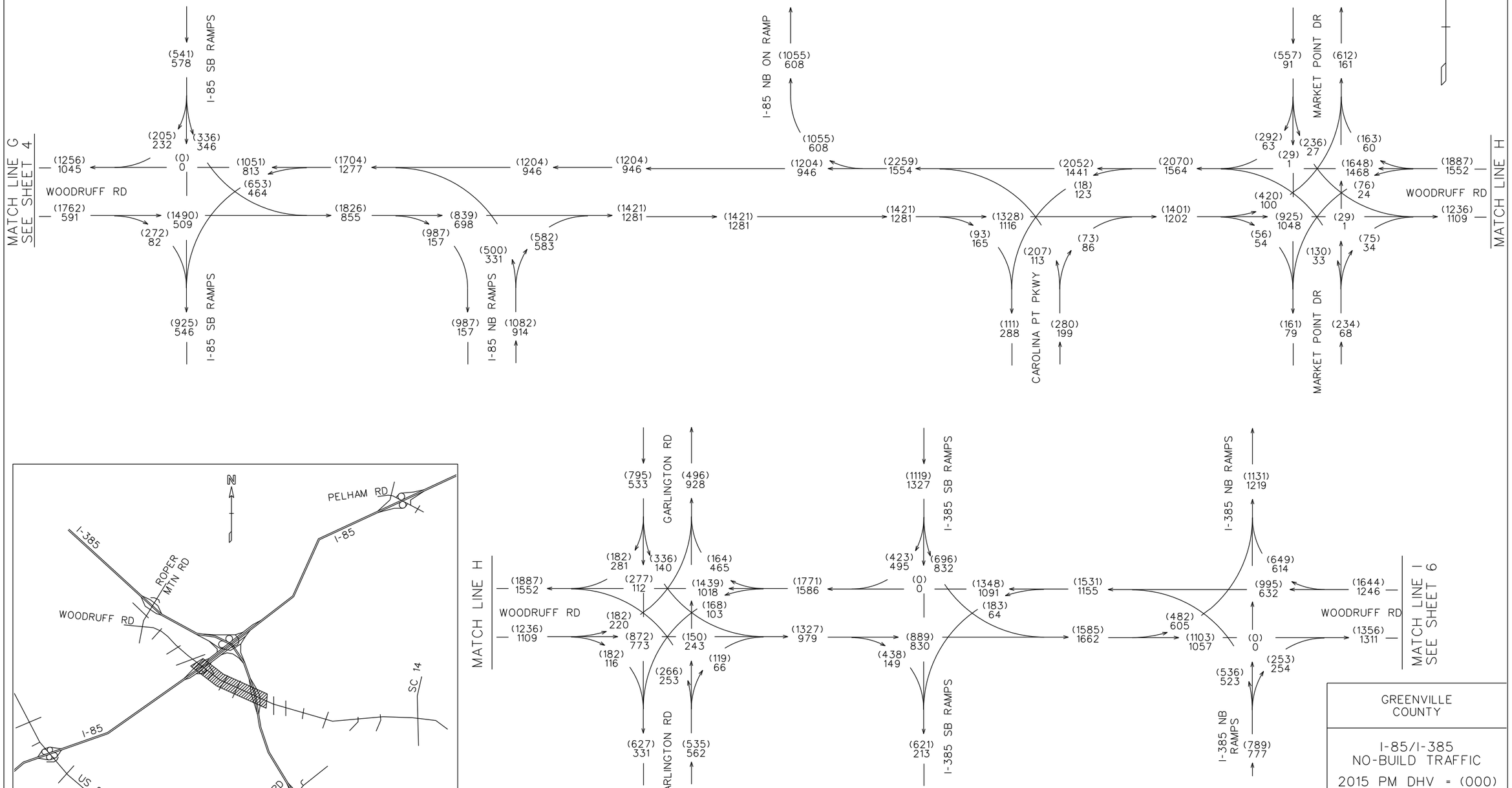
GREENVILLE COUNTY

I-85/I-385
NO-BUILD TRAFFIC

2015 PM DHV = (000)
2015 AM DHV = 000
T = 15%
(SU = 14%
COMB. = 1%)

APRIL/2011

Florence & Hutcheson
CONSULTING ENGINEERS



GREENVILLE COUNTY

I-85/I-385
NO-BUILD TRAFFIC

2015 PM DHV = (000)
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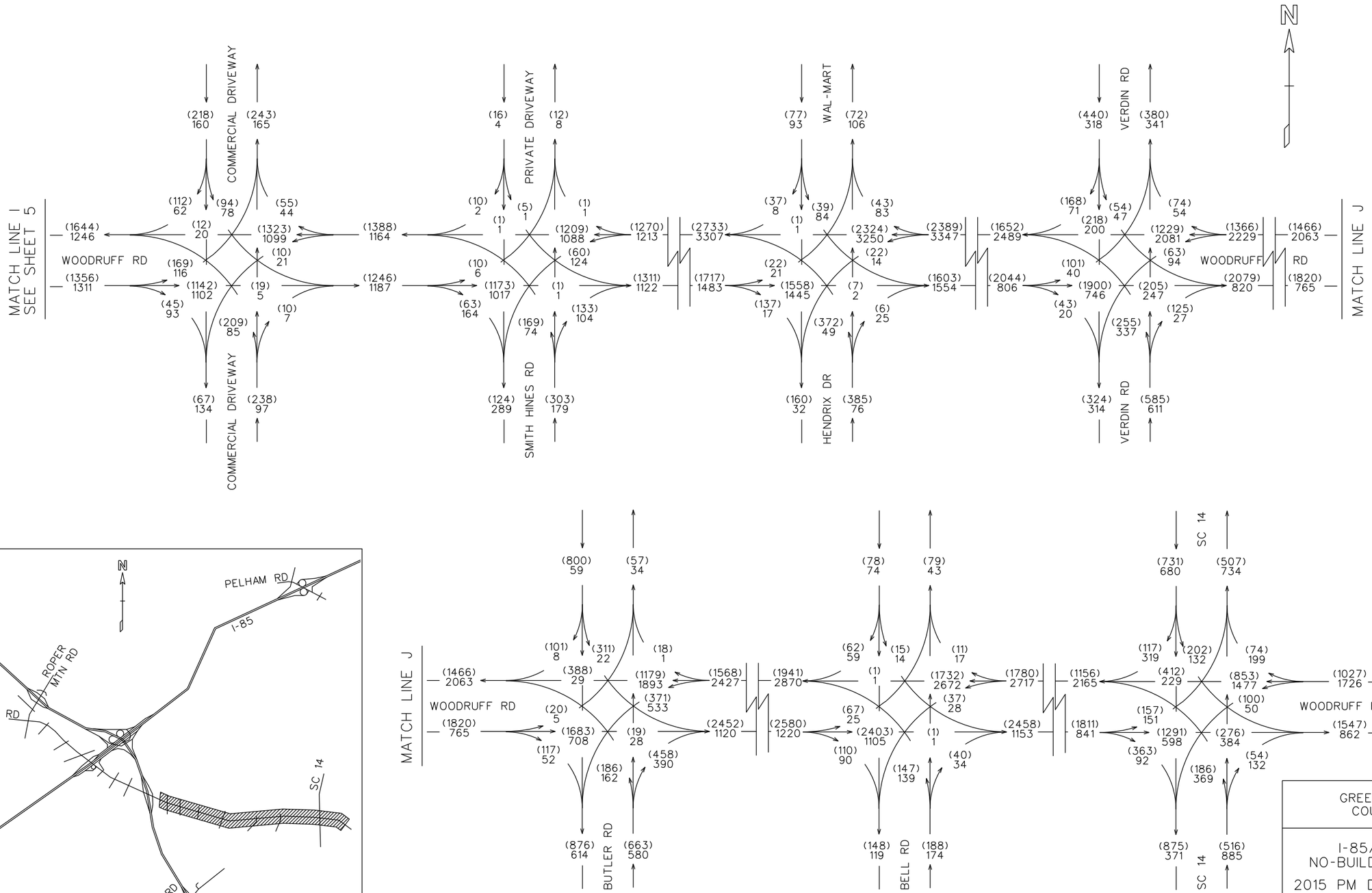
APRIL/2011

Florence & Hutcheson
CONSULTING ENGINEERS



Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE COUNTY

I-85/I-385
NO-BUILD TRAFFIC

2015 PM DHV = (000)
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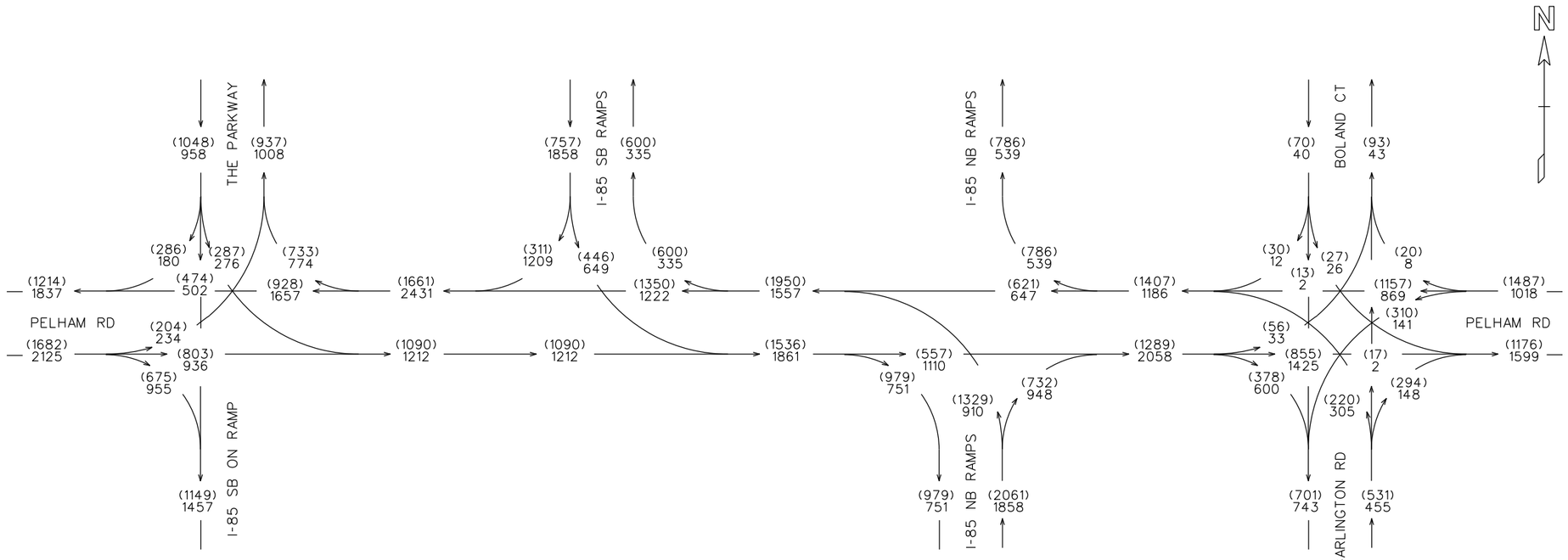
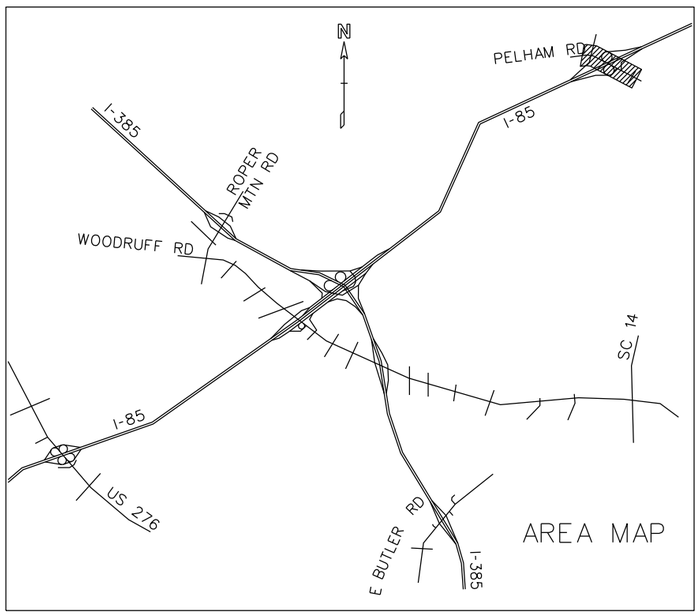
APRIL/2011





Florence & Hutcheson
Consulting Engineers

GREENVILLE COUNTY

I-85/I-385
NO-BUILD TRAFFIC

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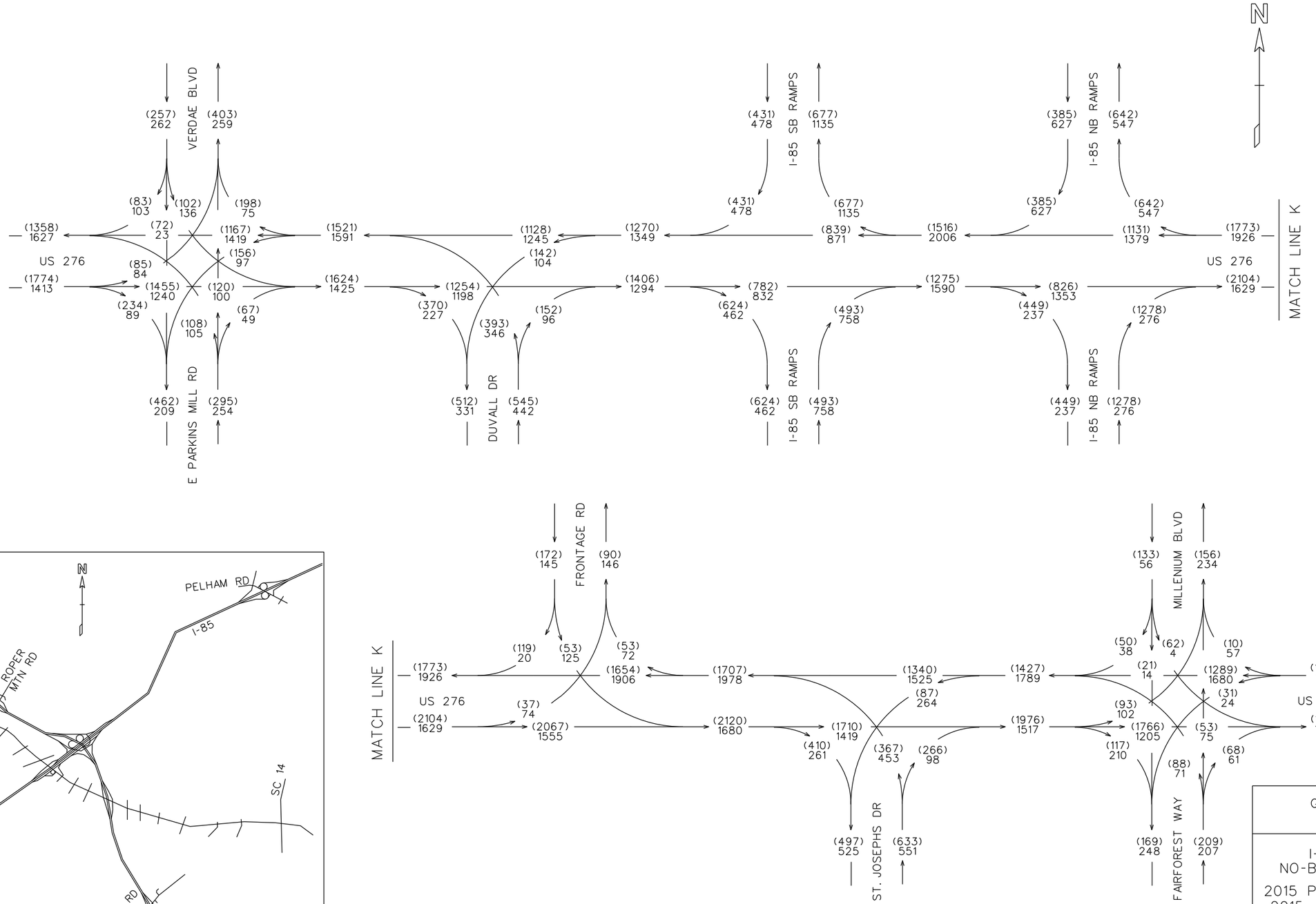

GREENVILLE COUNTY

I-85/I-385
NO-BUILD TRAFFIC

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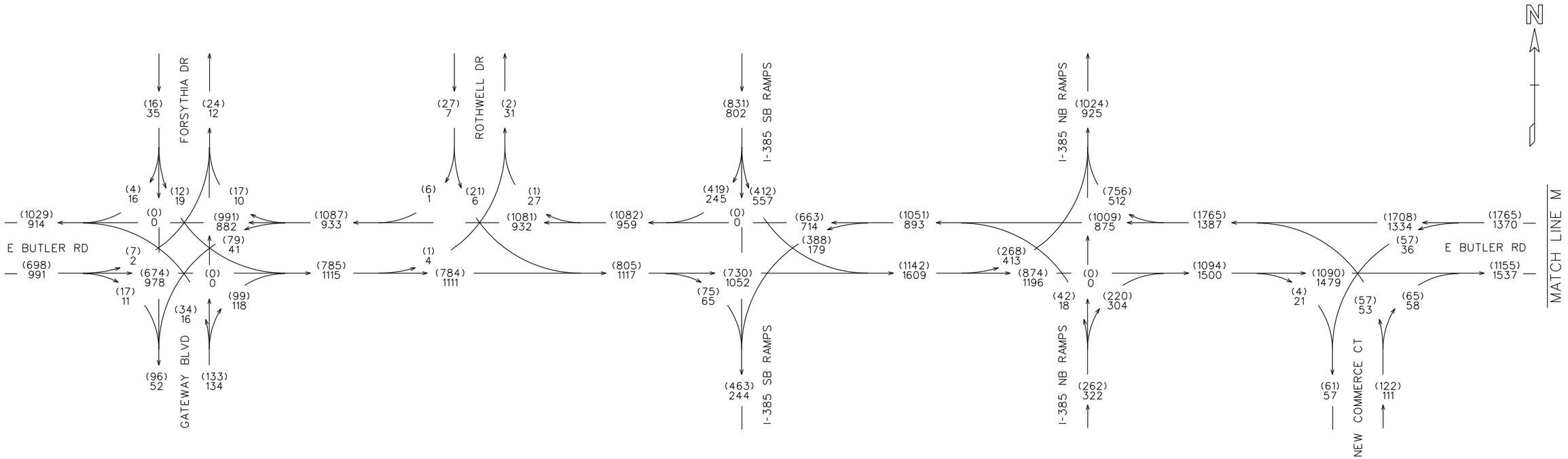
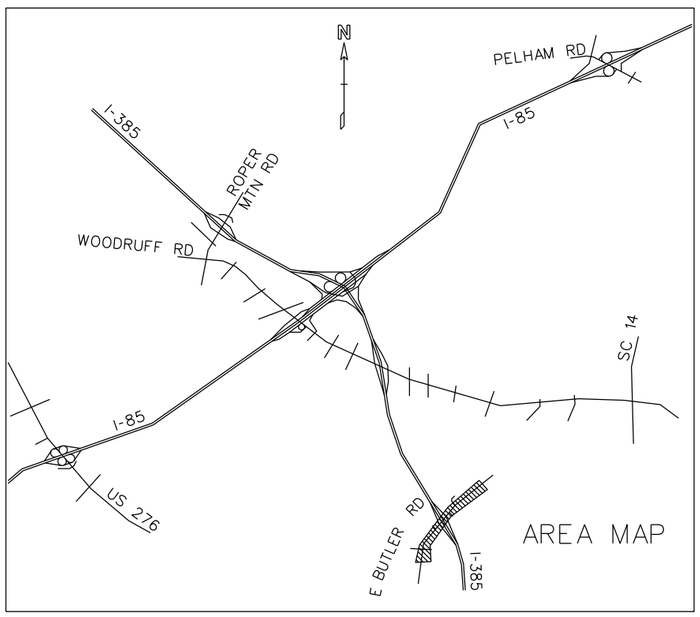
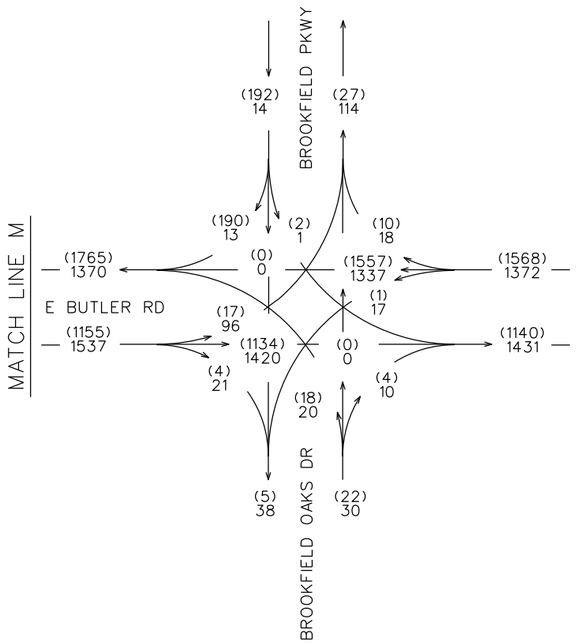
APRIL/2011

Florence & Hutcheson
CONSULTING ENGINEERS







GREENVILLE COUNTY

I-85/I-385
NO-BUILD TRAFFIC

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APRIL/2011

Florence & Hutcheson
CONSULTING ENGINEERS

TRAFFIC FLOW DIAGRAMS
2035 NO-BUILD CONDITIONS

MATCH LINE C
SEE SHEET 2

TO GREENVILLE
I-385

WOODRUFF RD

(10149)
5626

(8318)
7566

(3969)
2596

(6180)
3030

(2960)
3076

(5358)
4490

(2513)
1647

(1456)
949

(1001)
1183

(1172)
2065

(2589)
4087

(1588)
2904

(2311)
2006

(3899)
4910

(5200)
3949

(2873)
2971

(1417)
2022

(9099)
8859

(9734)
7864

MATCH LINE B
SEE SHEET 2

I-85
TO SPARTANBURG

(5346)
4384

(4388)
3480

(2087)
641

(649)
1070

(4308)
2528

(2736)
1711

(3259)
3743

(1572)
817

(7351)
5095

(6359)
5673

(1875)
1833

(8924)
5912

(8234)
7506

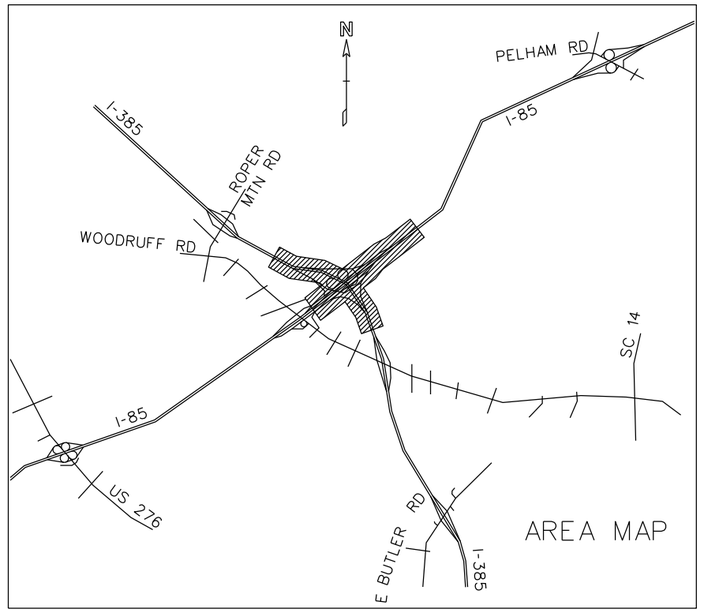
TO COLUMBIA

MATCH LINE E
SEE SHEET 3

MATCH LINE A
SEE SHEETS 2 & 3

TO ATLANTA
I-85

WOODRUFF RD



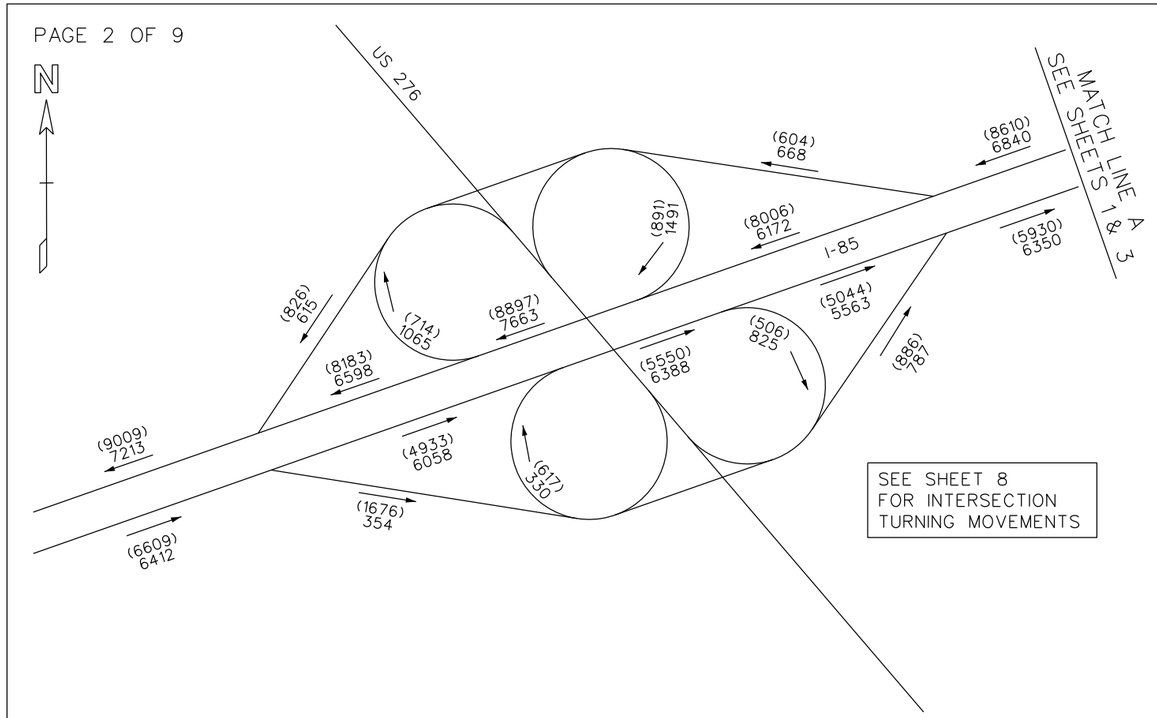
Florence & Hutcheson
CONSULTING ENGINEERS

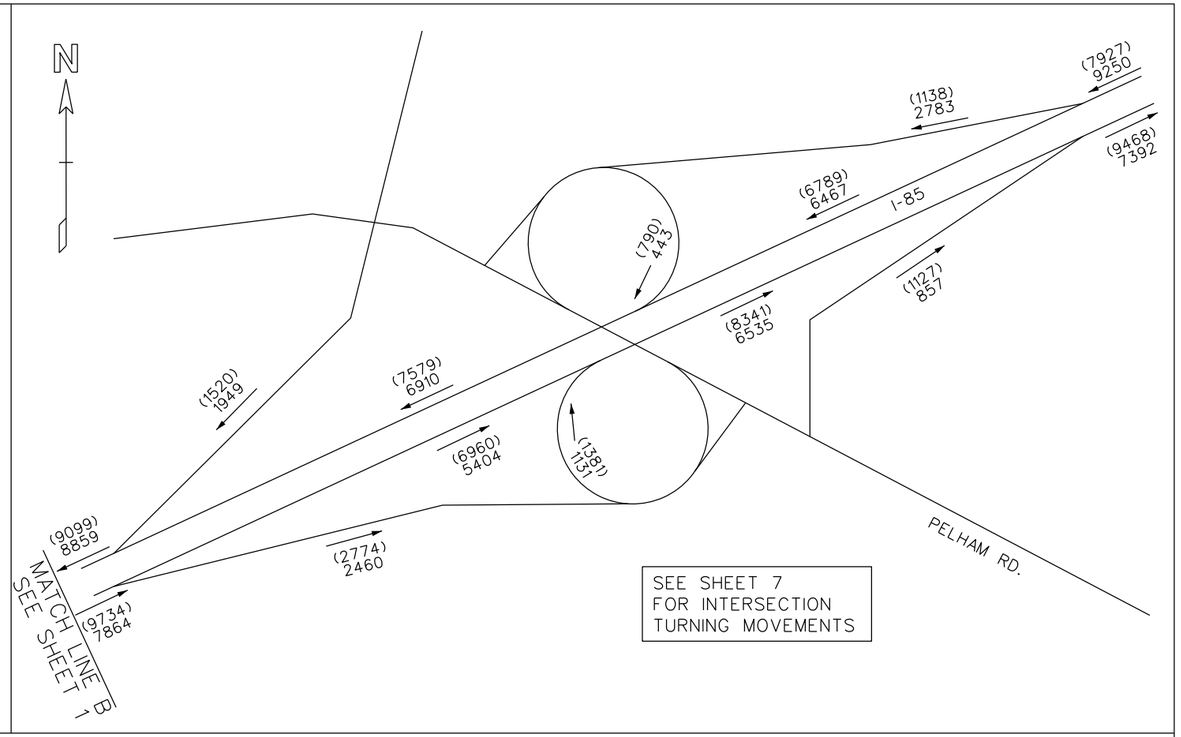
GREENVILLE
COUNTY

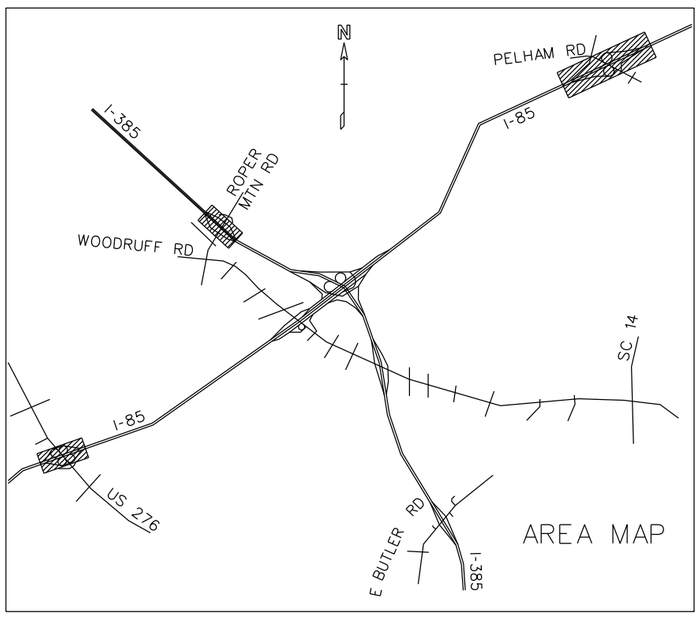
I-85/I-385
NO-BUILD TRAFFIC

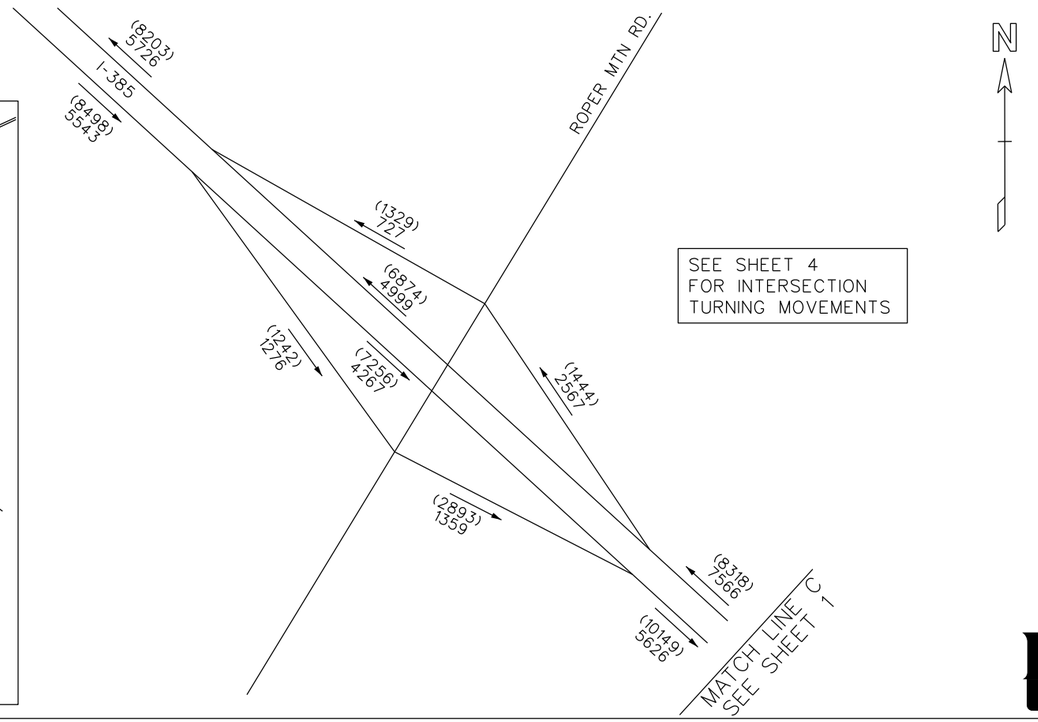
2035 PM DHV = (000)
2035 AM DHV = 000
T = 18%
(SU = 16%
COMB. = 2%)

APRIL/2011









Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE
COUNTY

I-85/I-385
NO-BUILD TRAFFIC

2035 PM DHV = (000)
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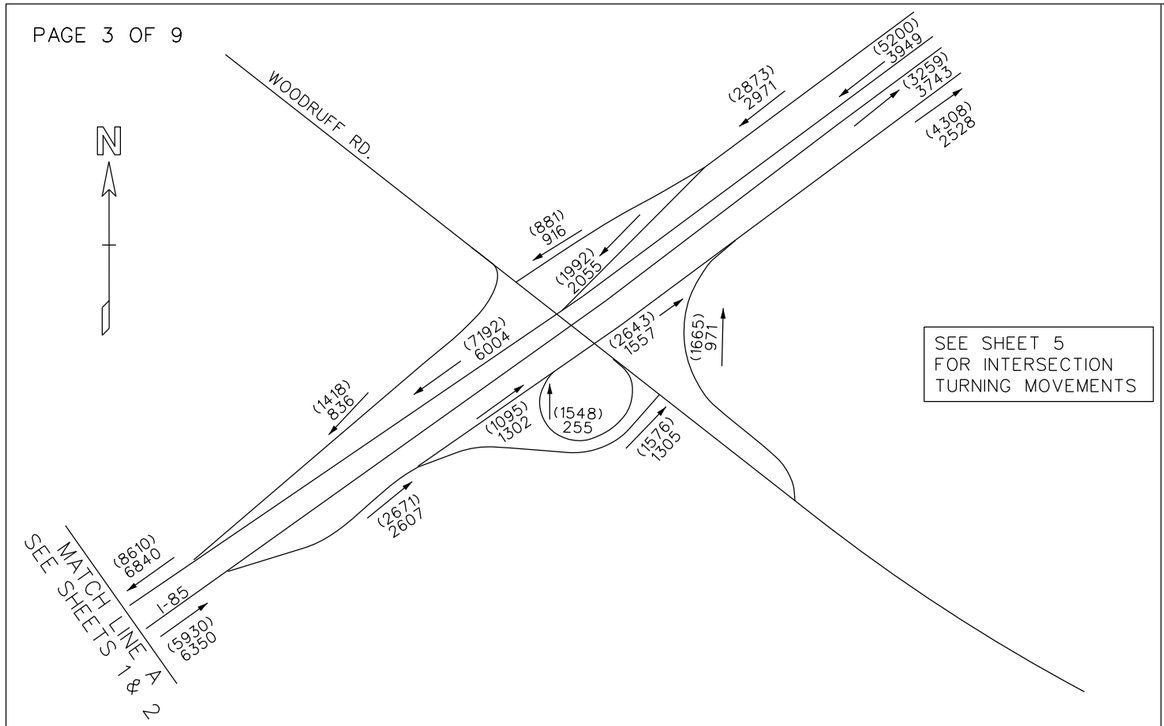
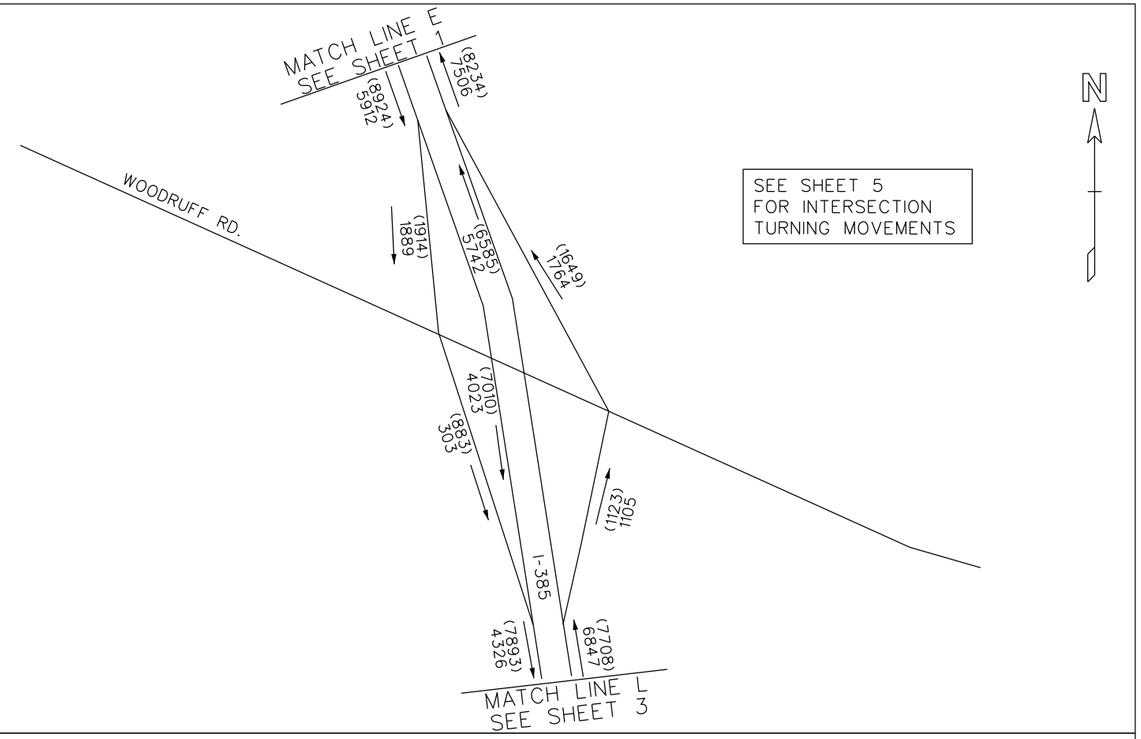
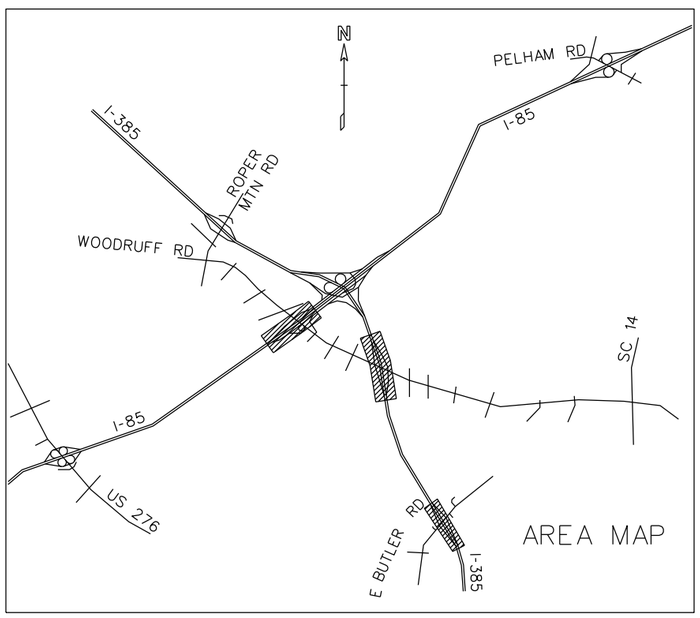
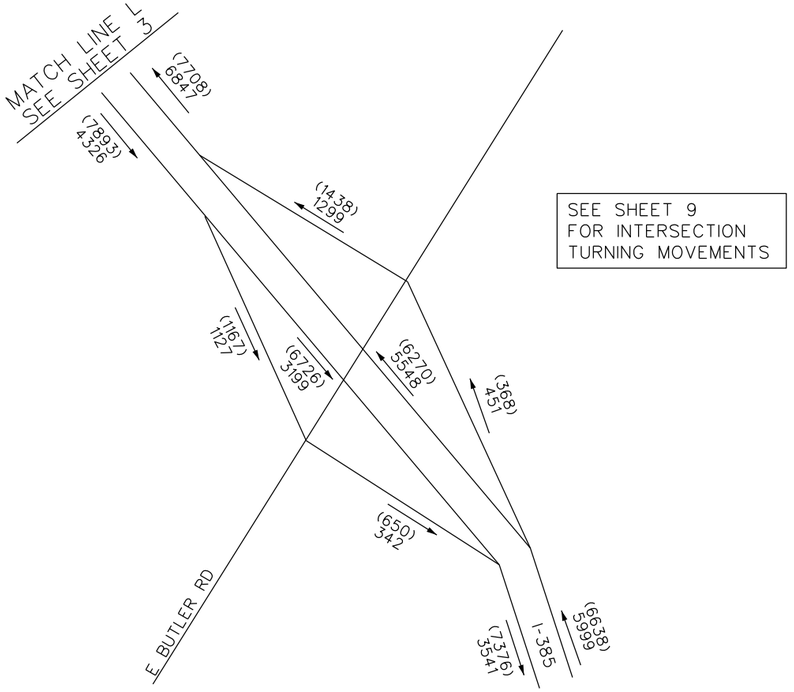
APRIL/2011









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GREENVILLE
COUNTY

I-85/I-385
NO-BUILD TRAFFIC

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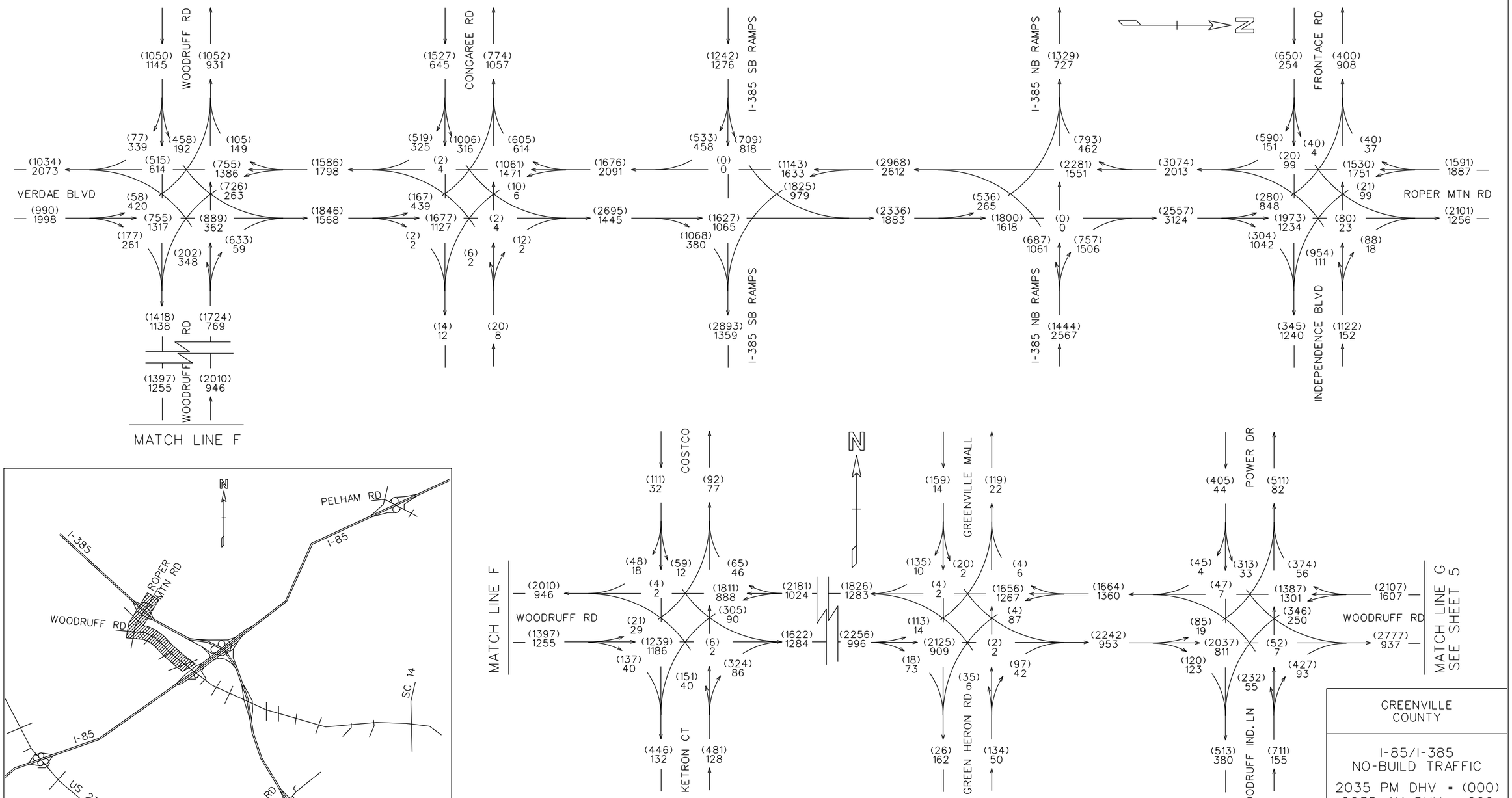
APRIL/2011



GREENVILLE COUNTY

I-85/I-385
NO-BUILD TRAFFIC

2035 PM DHV = (000)
2035 AM DHV = 000
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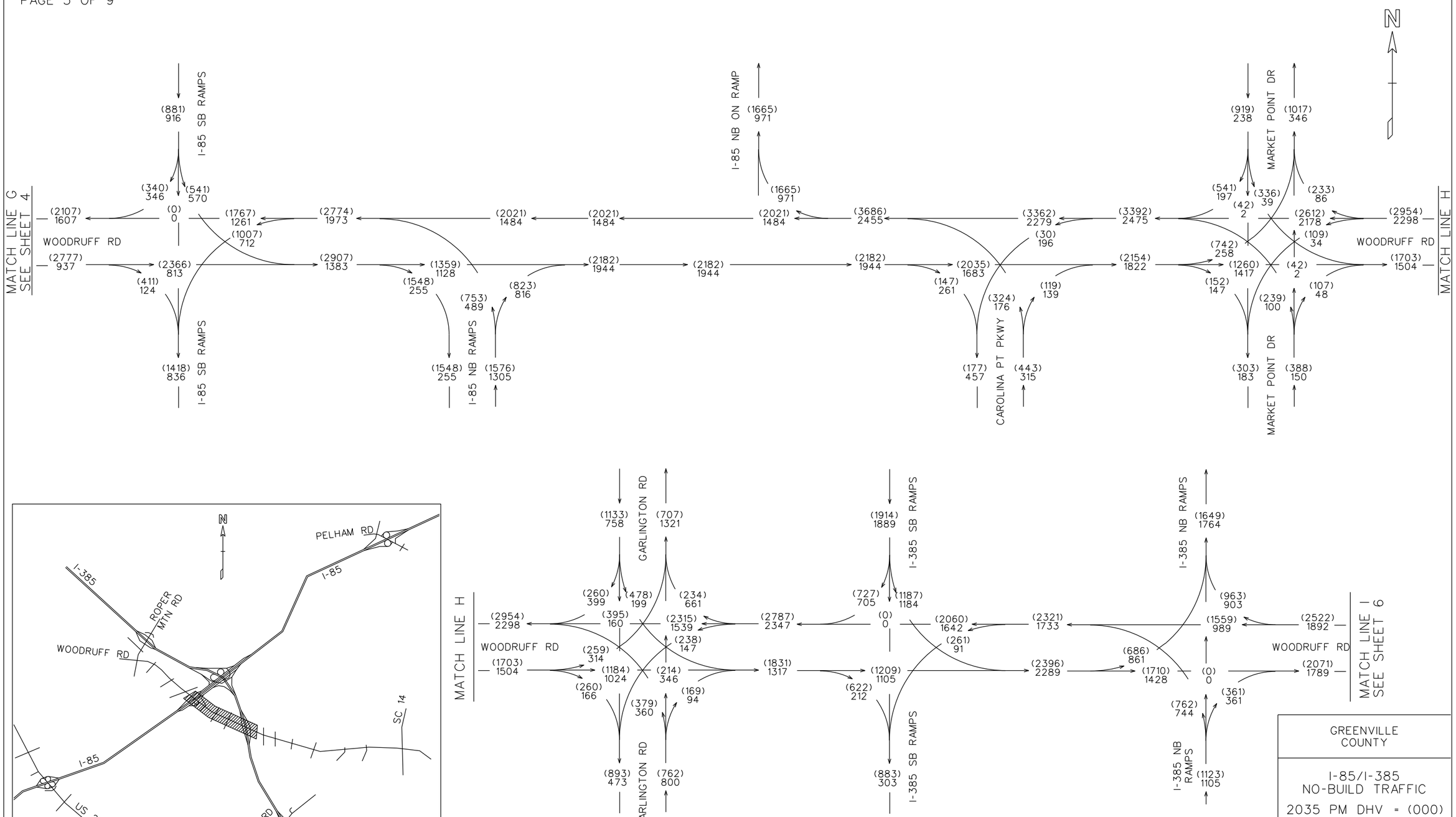
(SU = 14%
COMB. = 1%)

Florence & Hutcheson
CONSULTING ENGINEERS

APRIL/2011



GREENVILLE COUNTY

I-85/I-385
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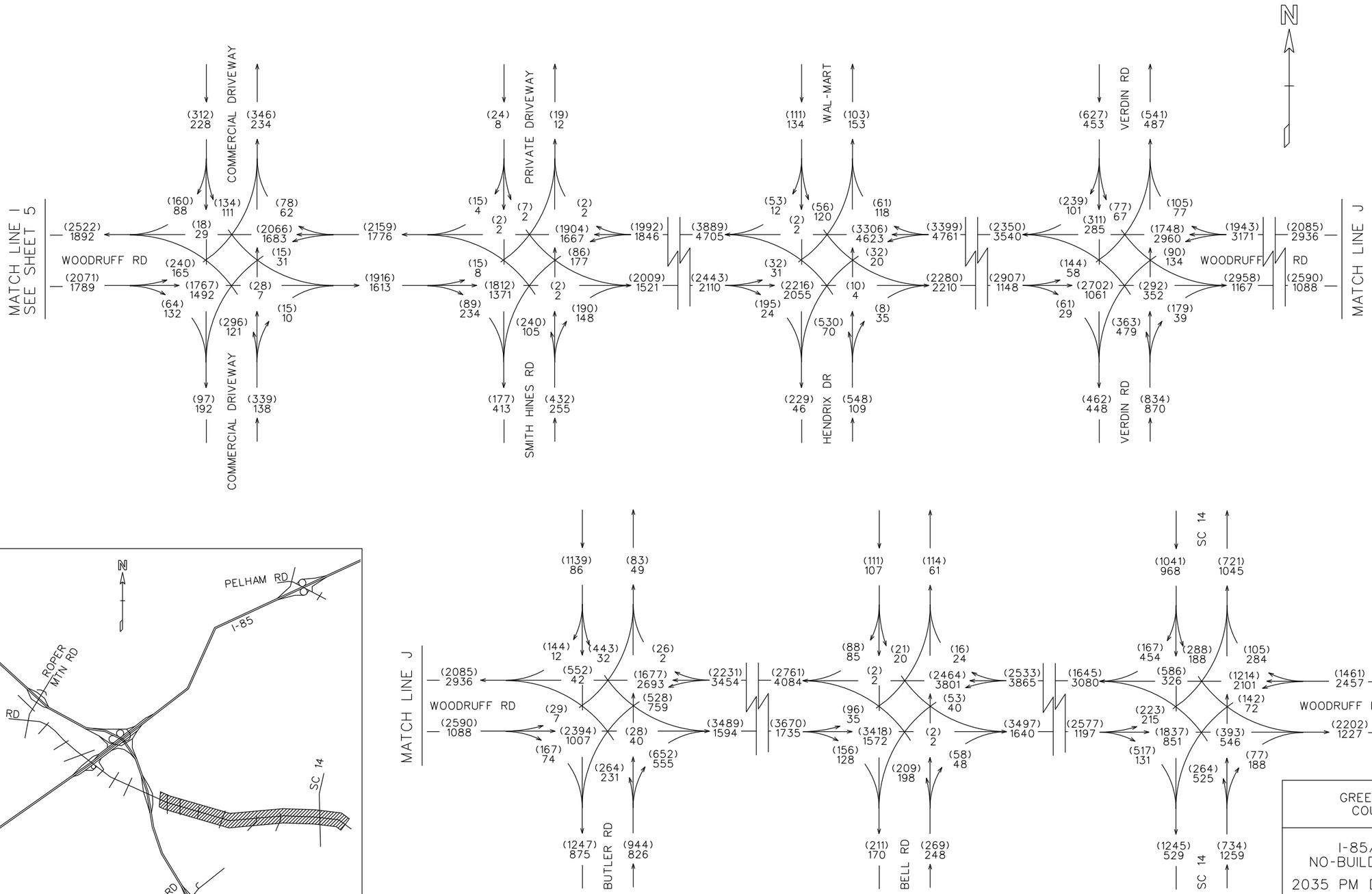
APRIL/2011

Florence & Hutcheson
CONSULTING ENGINEERS



Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE COUNTY

I-85/I-385
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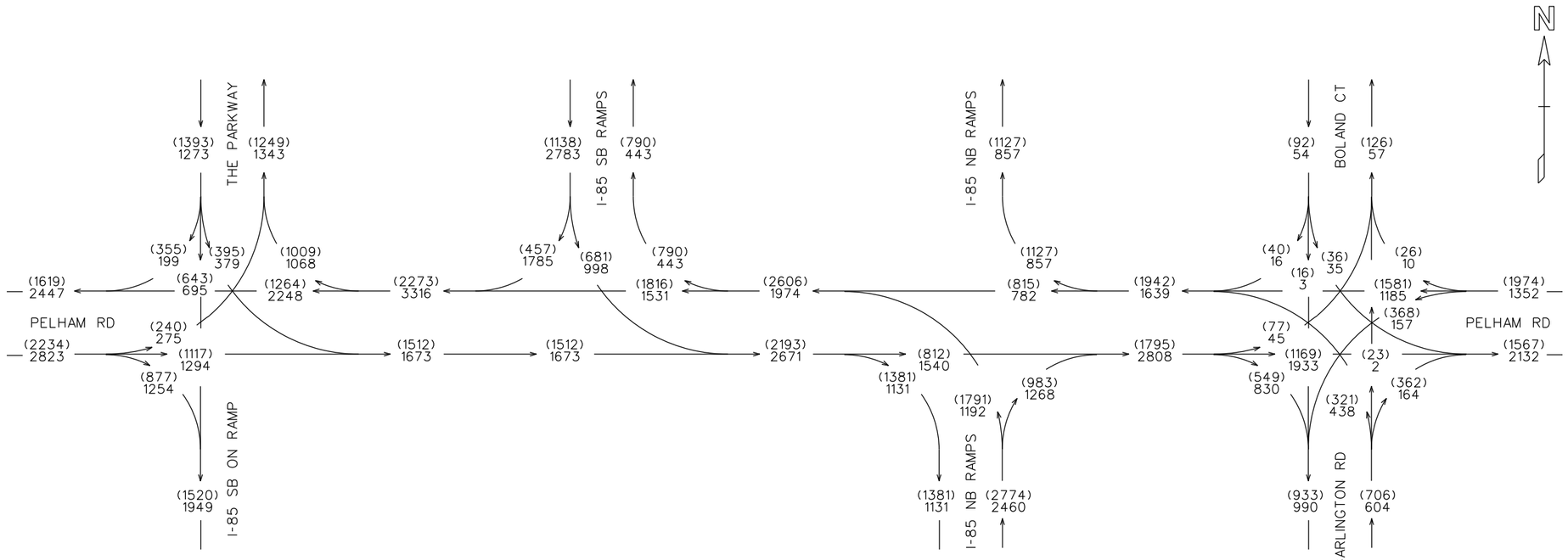

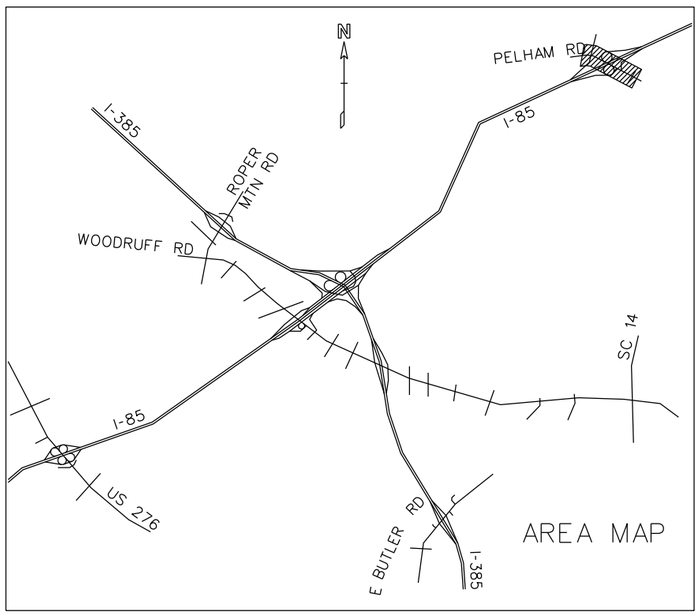

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GREENVILLE COUNTY

I-85/I-385
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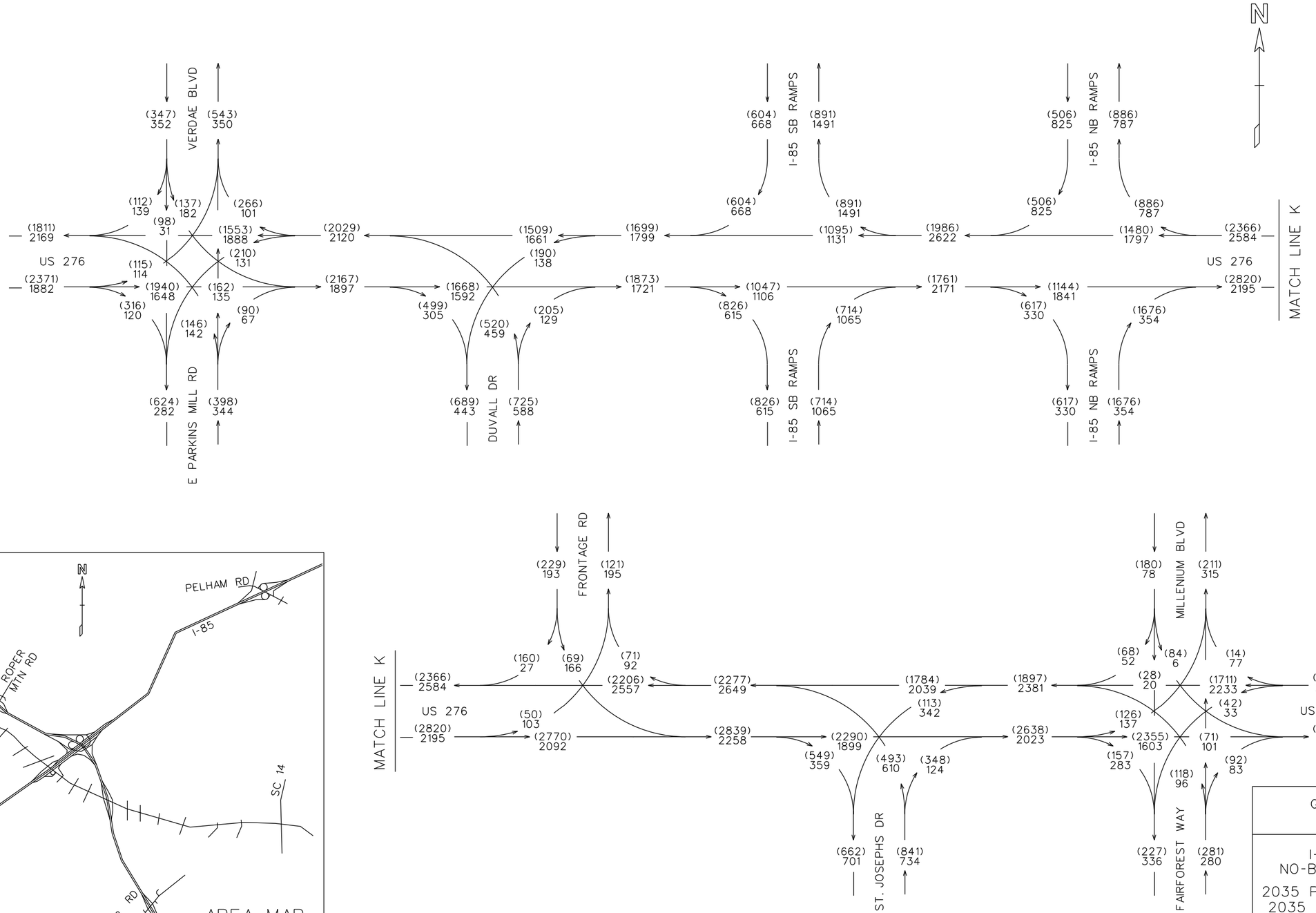

Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE COUNTY

I-85/I-385
NO-BUILD TRAFFIC

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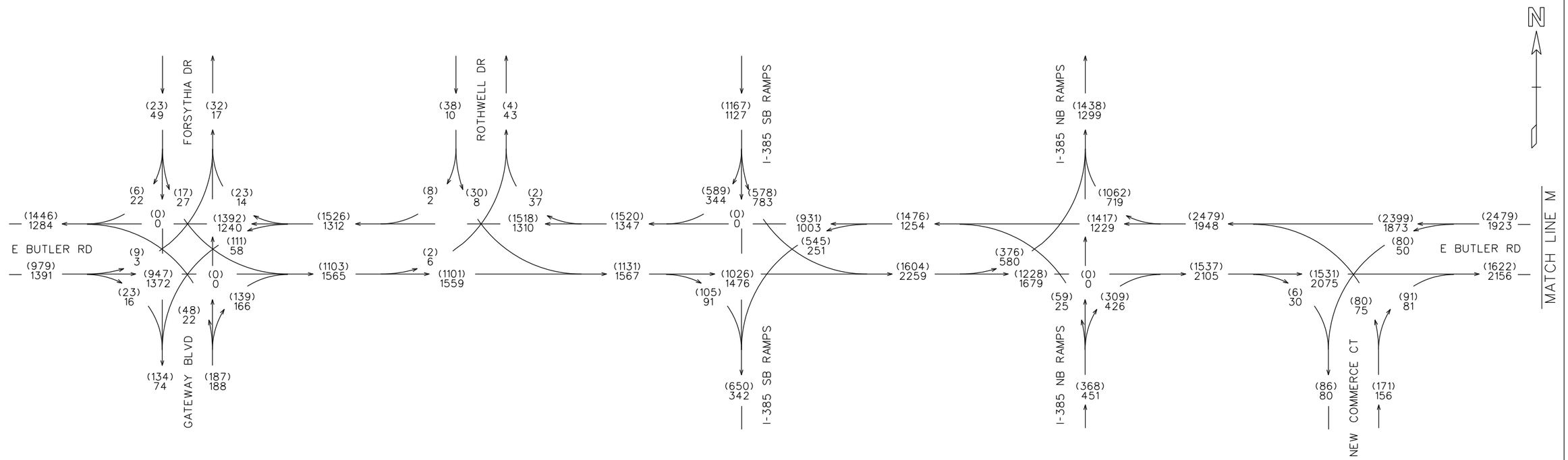

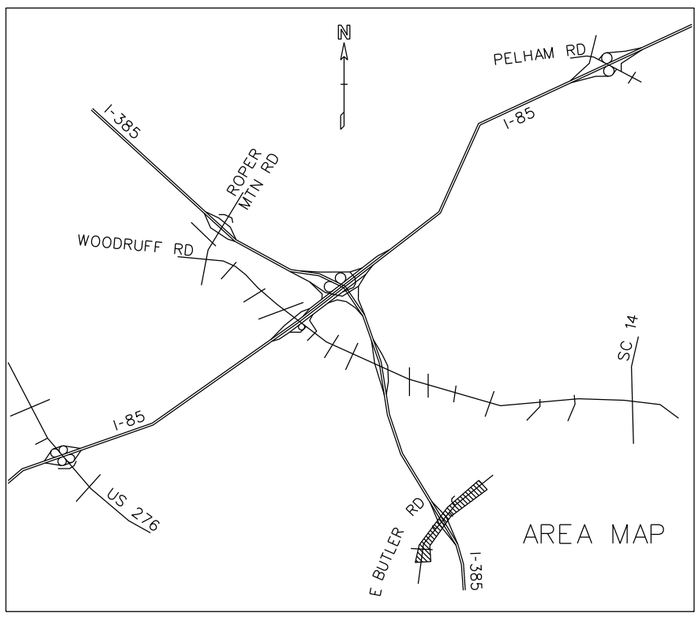

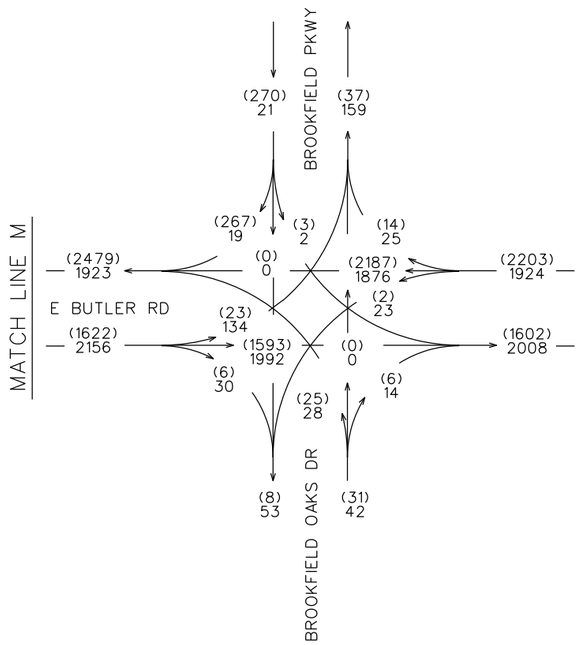

Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE COUNTY

I-85/I-385
NO-BUILD TRAFFIC

2035 PM DHV = (000)
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APRIL/2011

TRAFFIC FLOW DIAGRAMS
2015 ALTERNATE 2D CONDITIONS

MATCH LINE C
SEE SHEET 2

TO GREENVILLE
I-385

WOODRUFF RD

TO ATLANTA
I-85

MATCH LINE A
SEE SHEETS 2 & 3

I-85

(6482)
3528

(5250)
4764

(2506)
1612

(3976)
1916

(1895)
1938

(3355)
2826

(5322)
4278

(1490)
1506

(1471)
1205

(254)
529

(723)
596

(1783)
1016

(866)
523

(830)
919

(750)
1299

(1725)
1734

(317)
538

(63)
9

(767)
910

(3832)
2772

(6307)
5805

(2475)
3033

(2773)
1657

(1755)
1122

(1331)
389

(424)
733

(2997)
2155

(2375)
2665

(1018)
535

(750)
1299

(1616)
1822

(3706)
3054

(6703)
5209

(1214)
1139

MATCH LINE B
SEE SHEET 2

I-85
TO SPARTANBURG

(3110)
1393

(3355)
2826

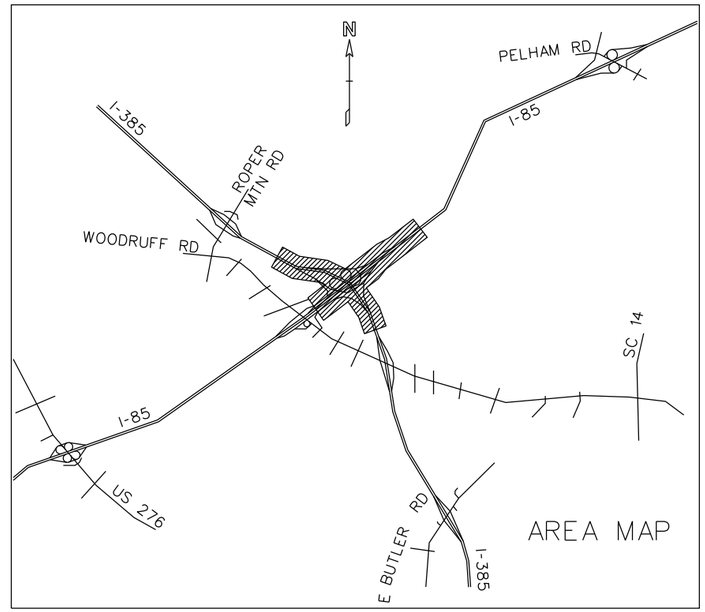
(2634)
2357

(2044)
2058

TO COLUMBIA

WOODRUFF RD

MATCH LINE E
SEE SHEET 3



GREENVILLE COUNTY

I-85/I-385
BUILD ALT 2D TRAFFIC

2015 PM DHV = (000)
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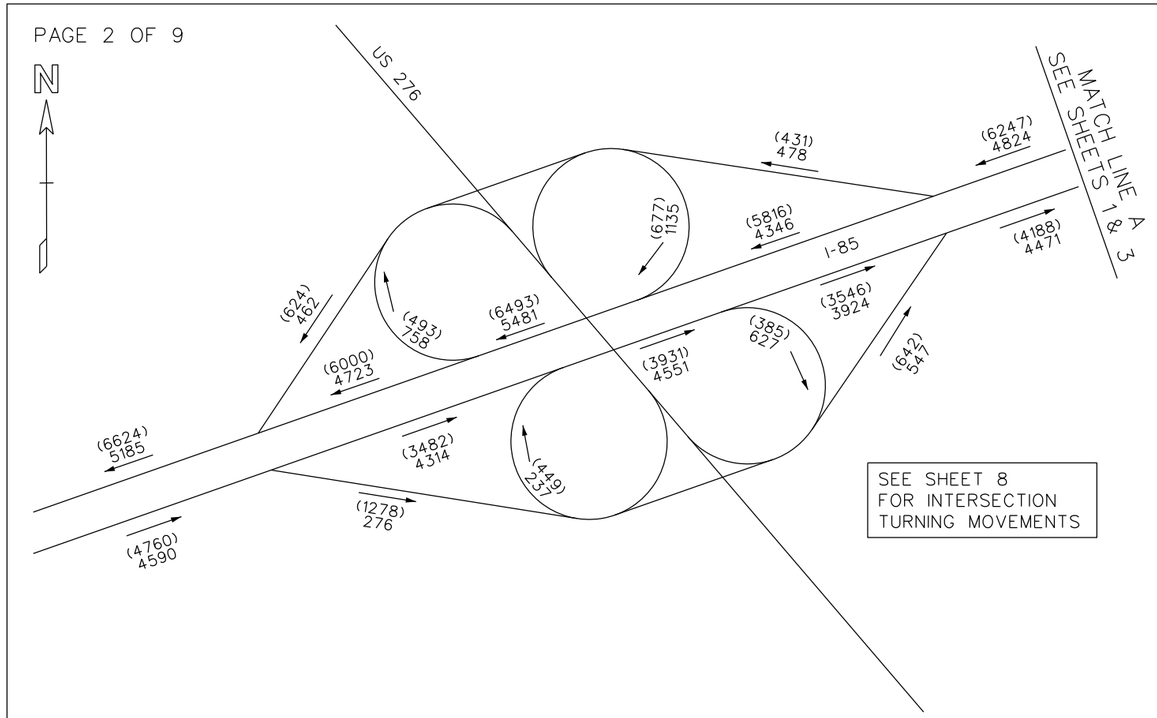
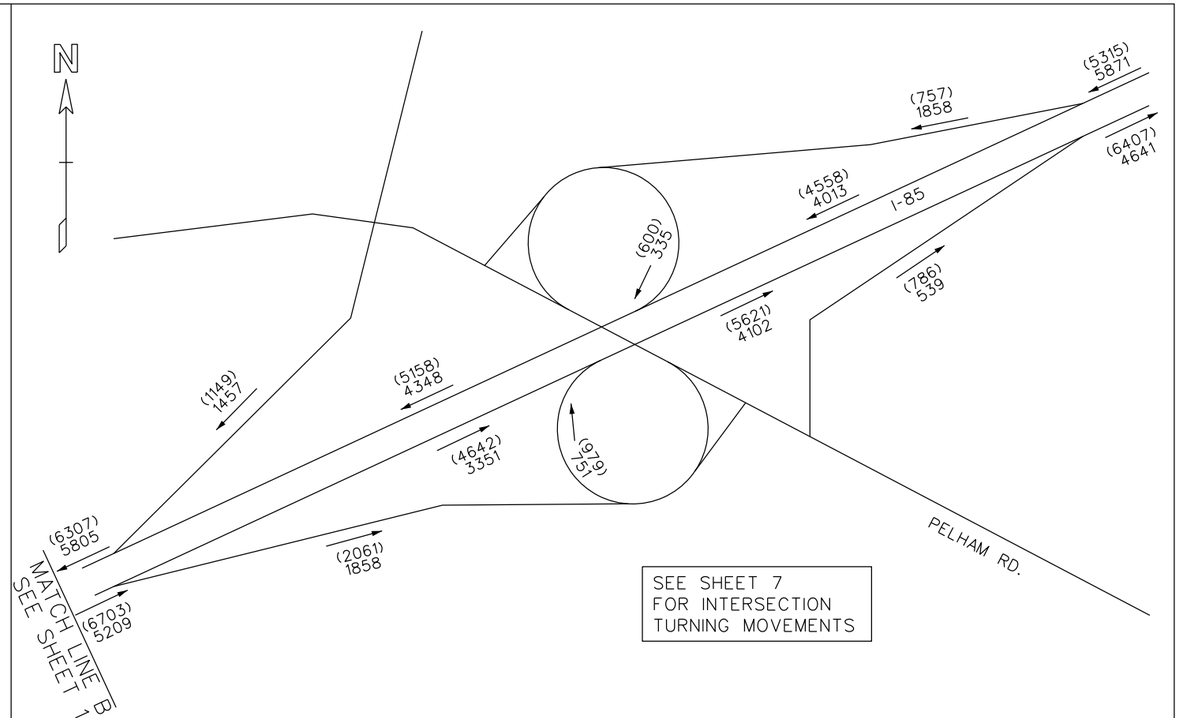
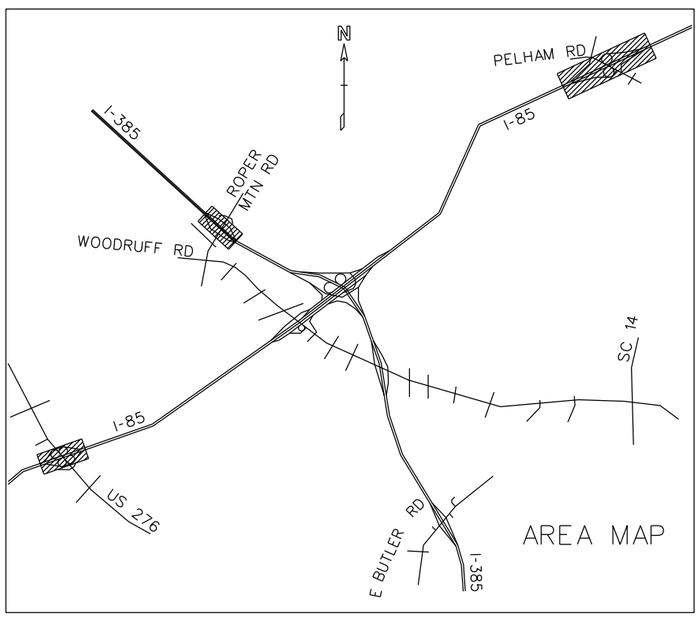
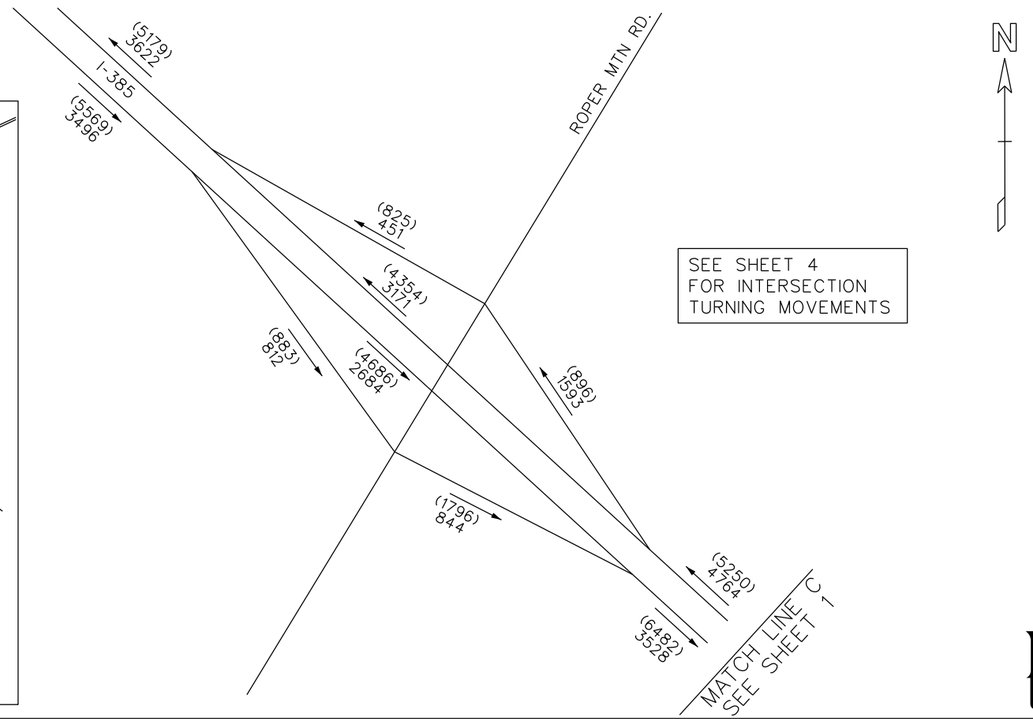
JANUARY/2012

Florence & Hutcheson
CONSULTING ENGINEERS









Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE
COUNTY

I-85/I-385
BUILD ALT 2D TRAFFIC

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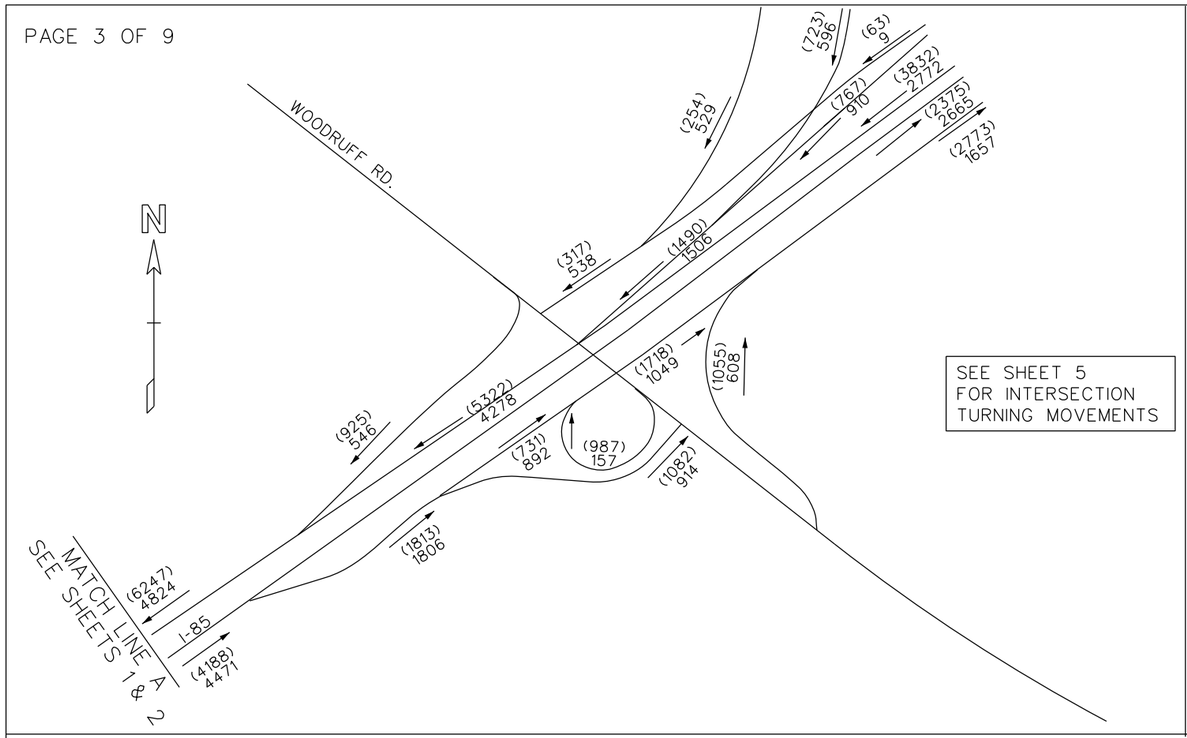
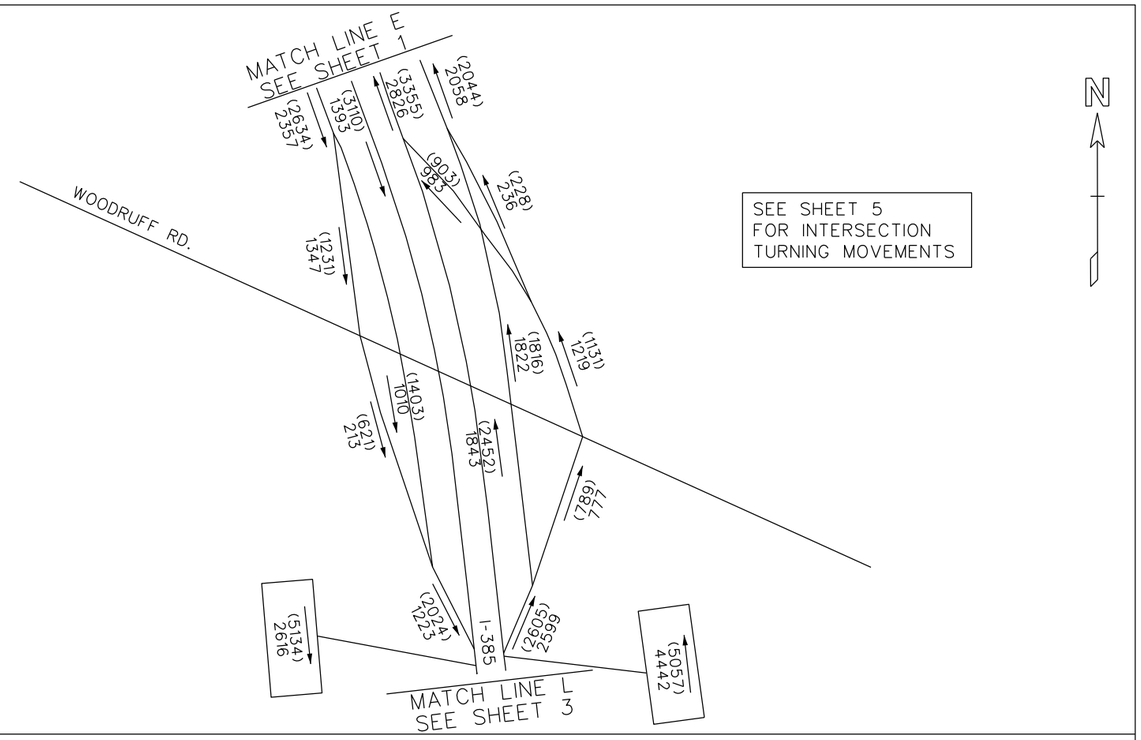
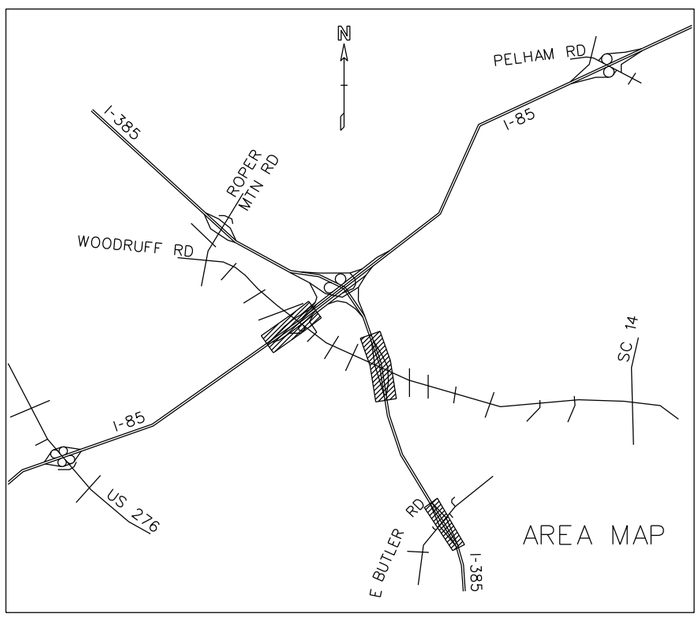
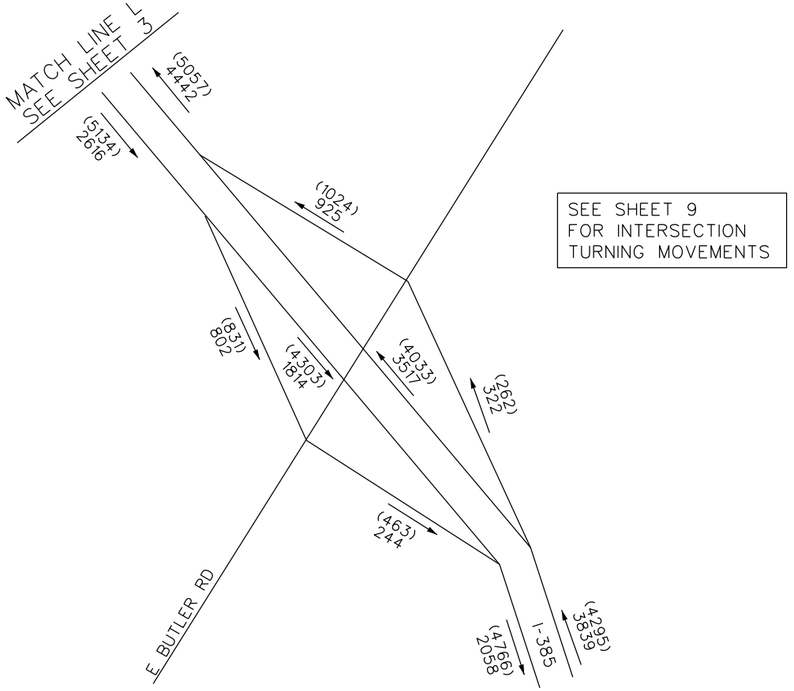
JANUARY/2012











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GREENVILLE
COUNTY

I-85/I-385
BUILD ALT 2D TRAFFIC

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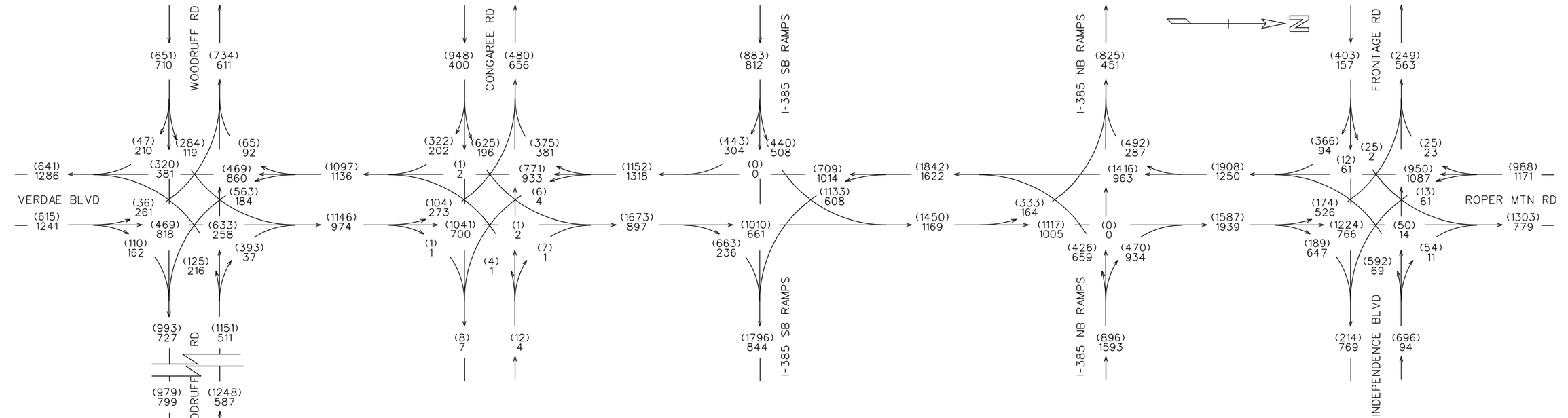

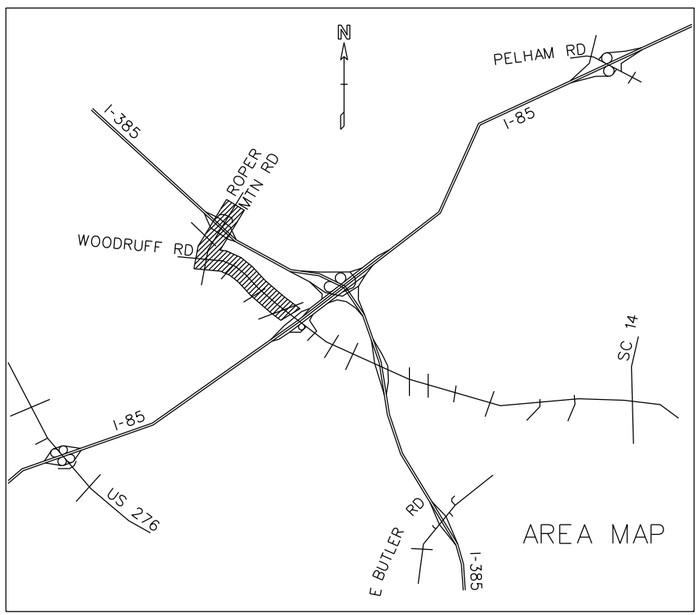

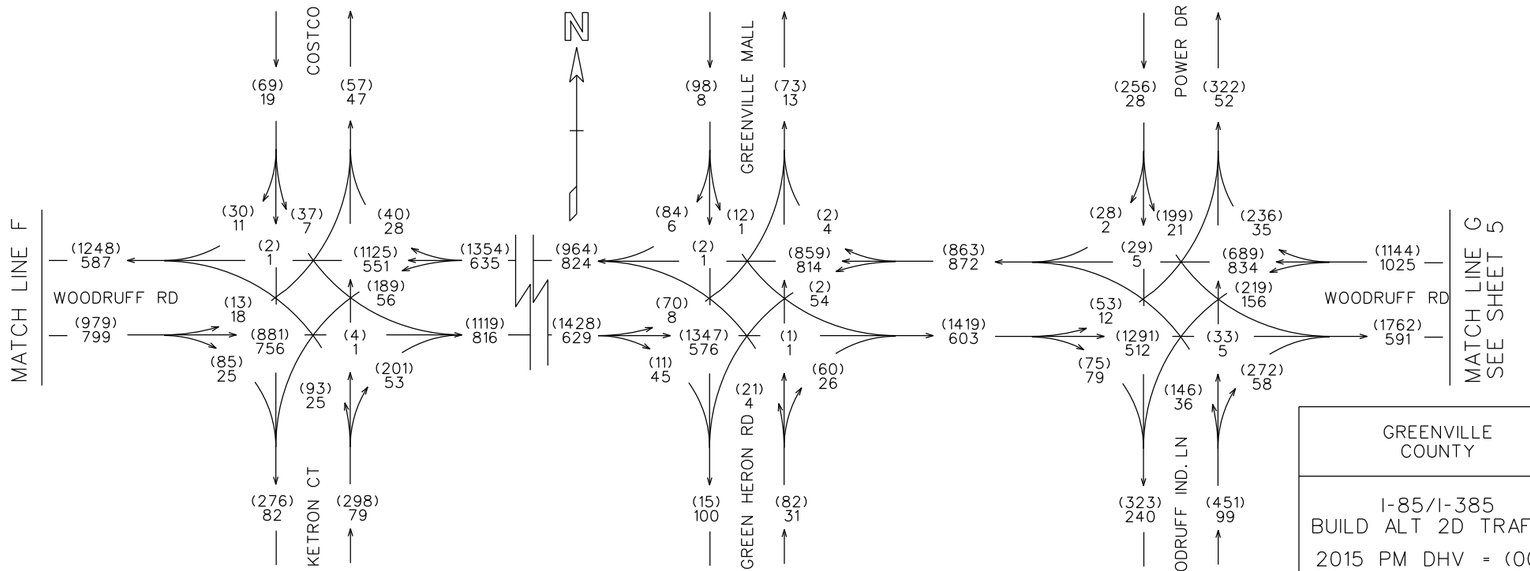

Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE COUNTY

I-85/I-385
BUILD ALT 2D TRAFFIC

2015 PM DHV = (000)
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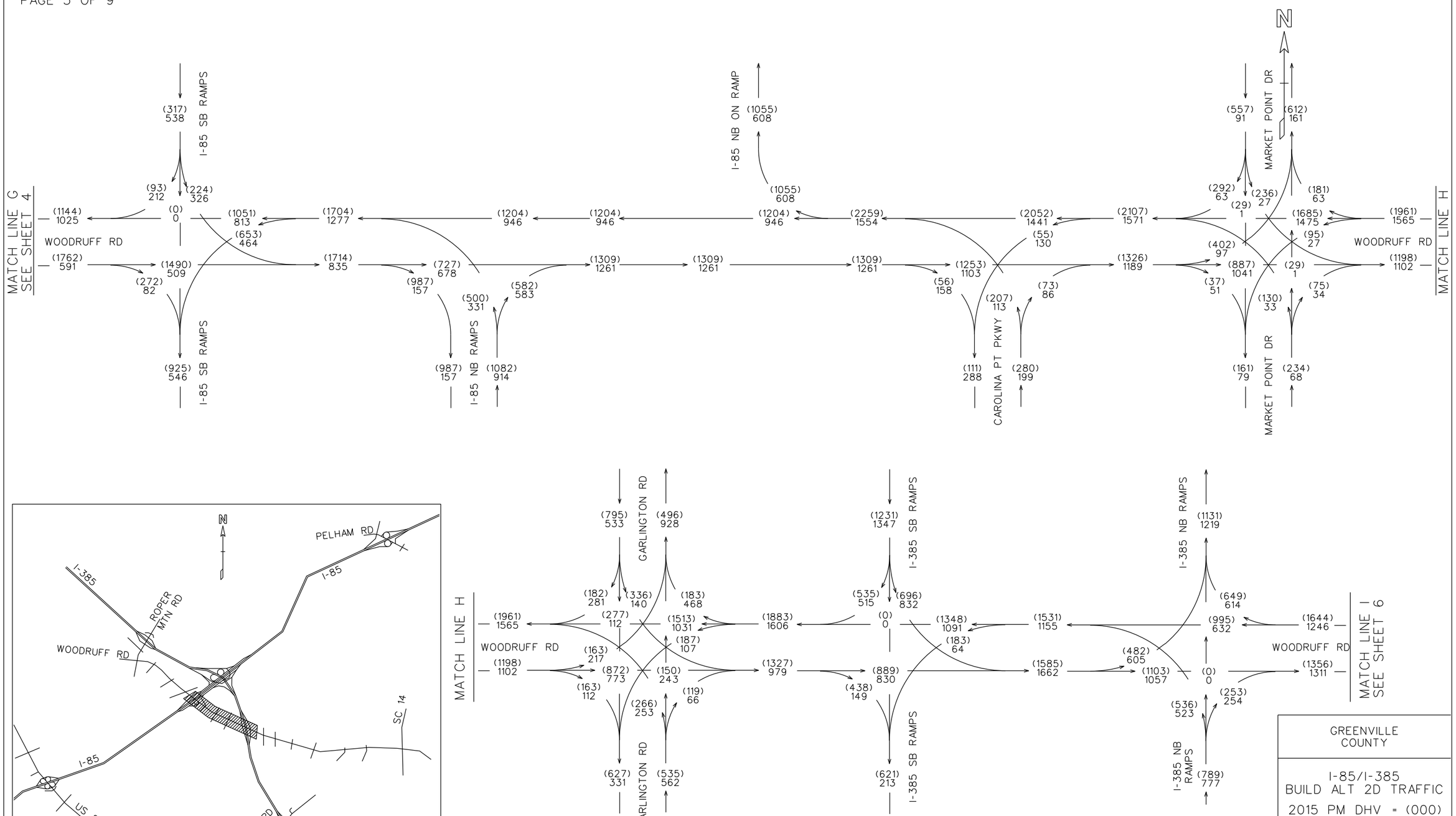
JANUARY/2012



GREENVILLE COUNTY

I-85/I-385
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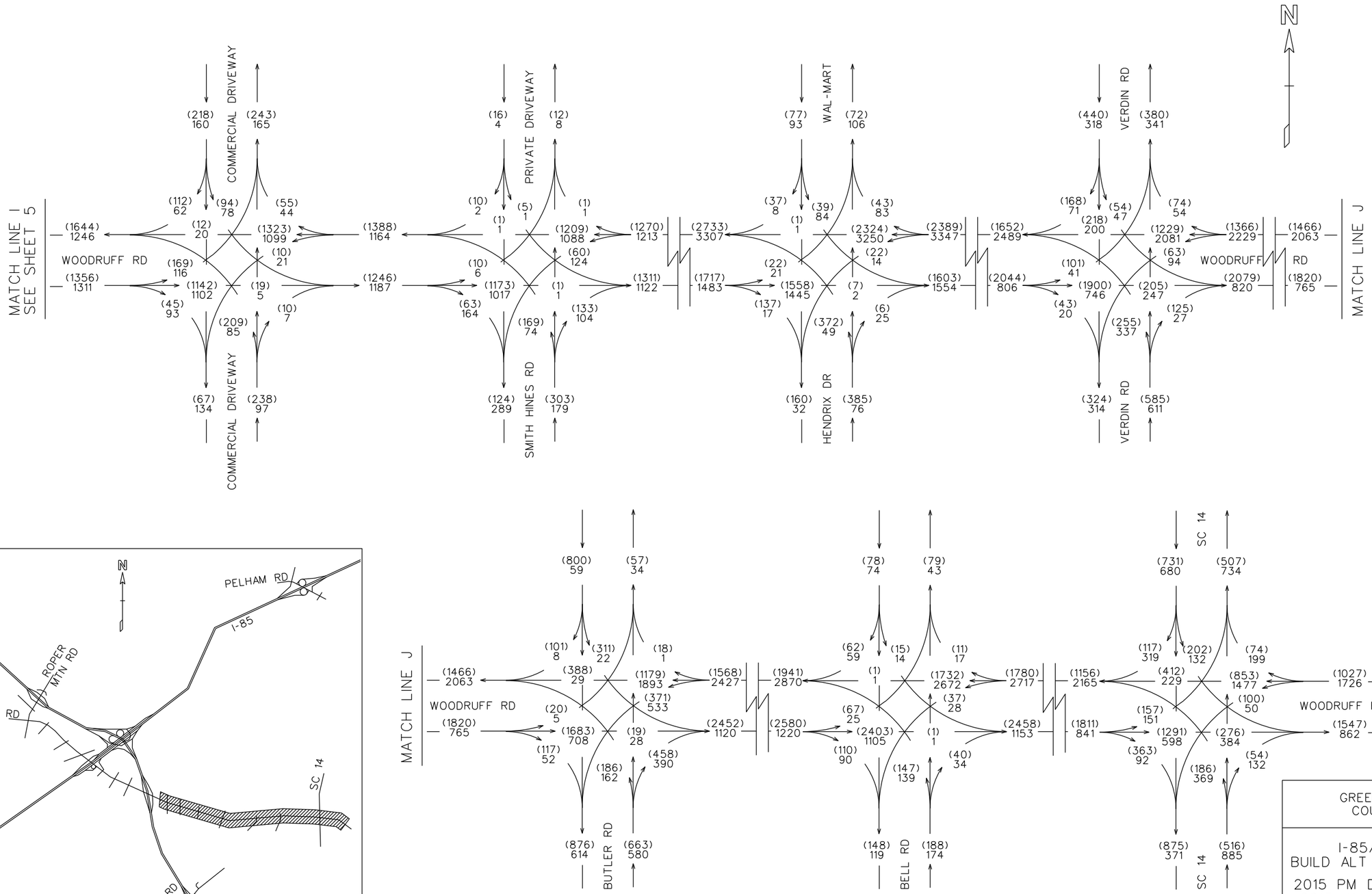
JANUARY/2012

Florence & Hutcheson
CONSULTING ENGINEERS



GREENVILLE COUNTY

I-85/I-385
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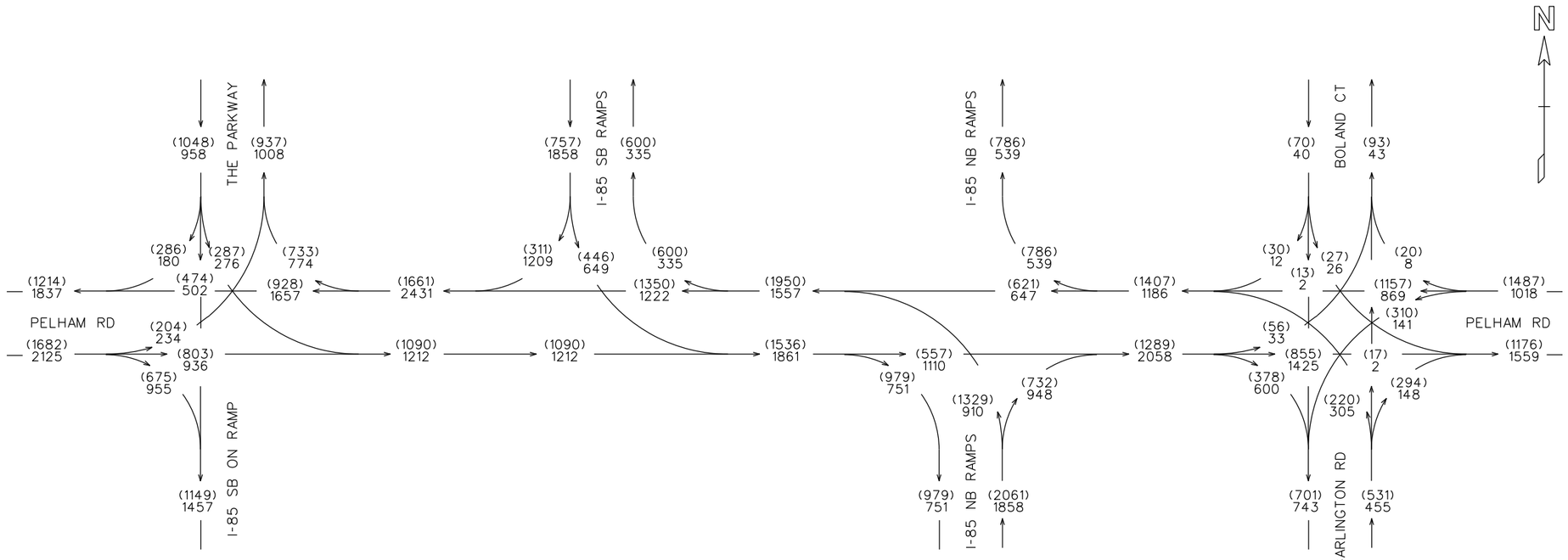
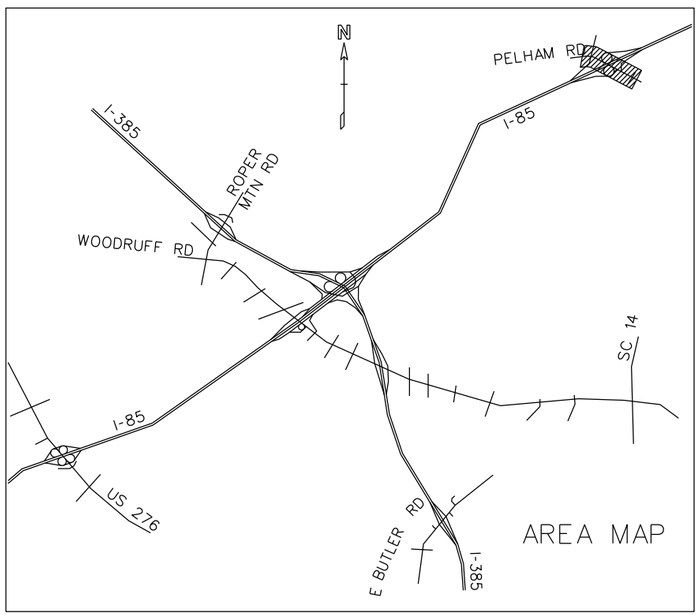
CONSULTING ENGINEERS





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GREENVILLE COUNTY

I-85/I-385
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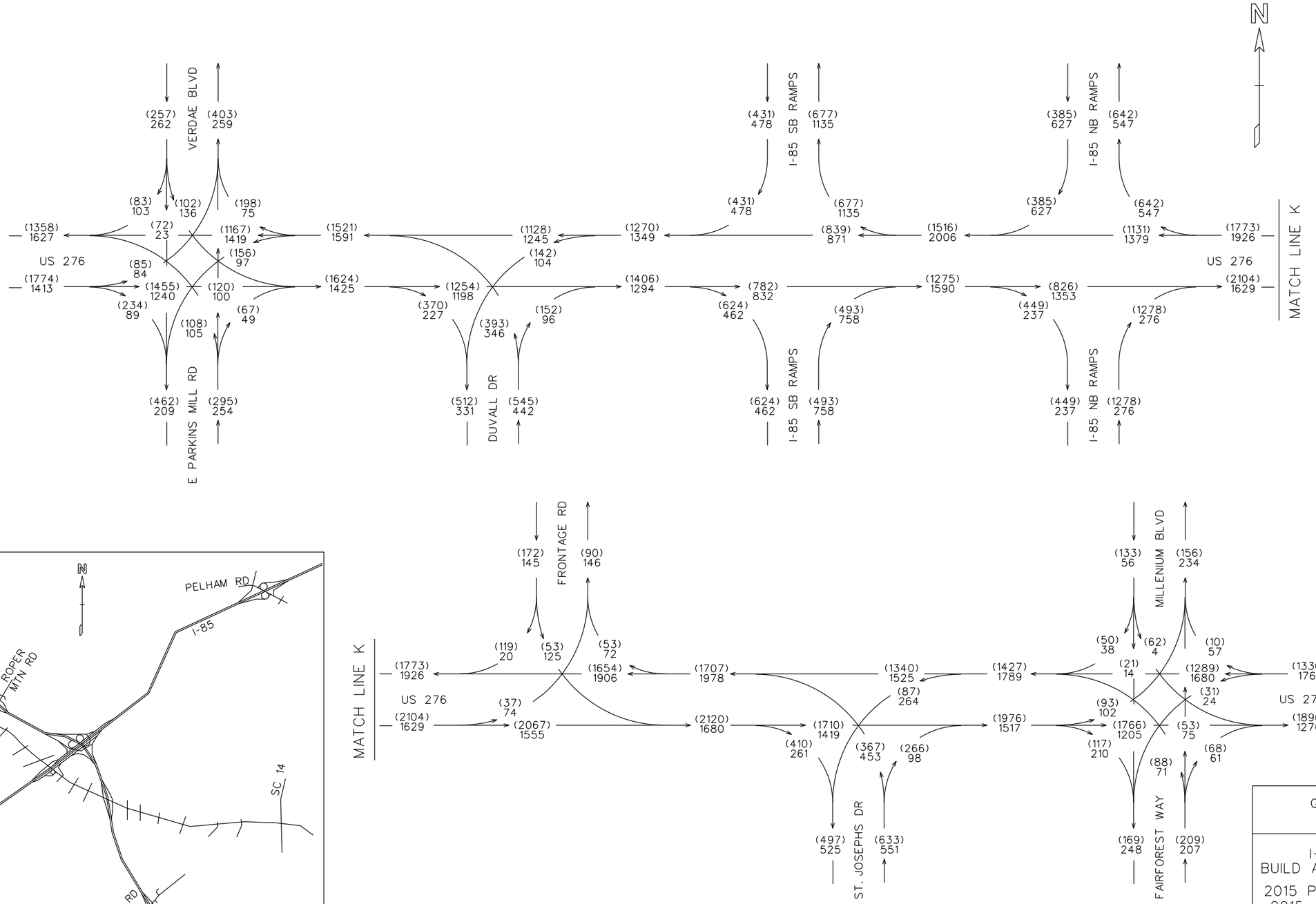

GREENVILLE COUNTY

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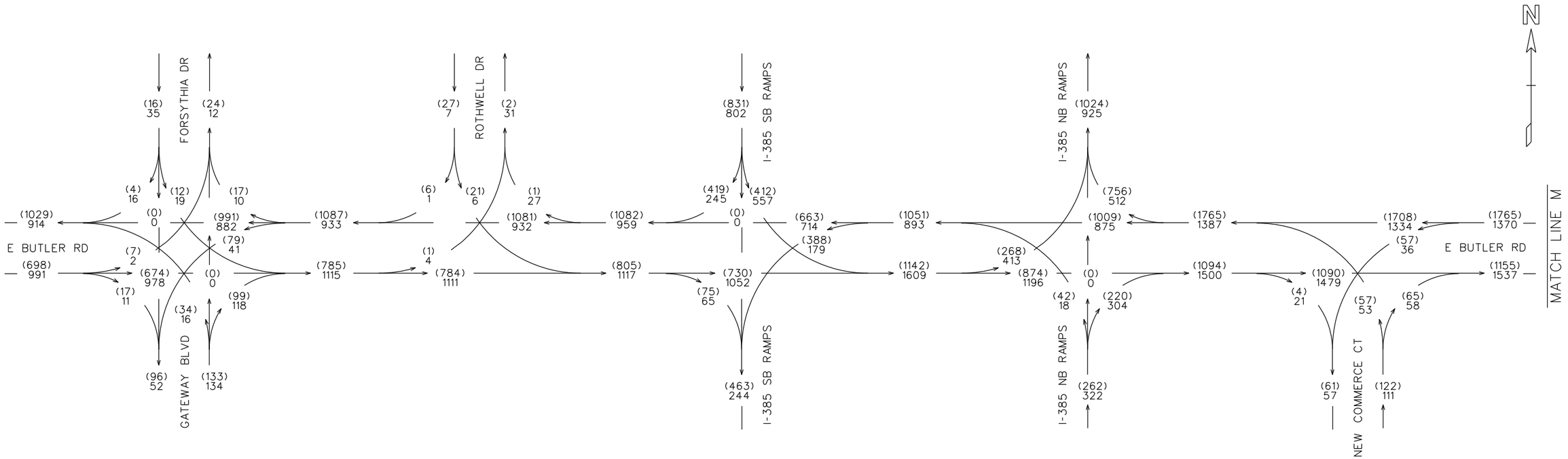

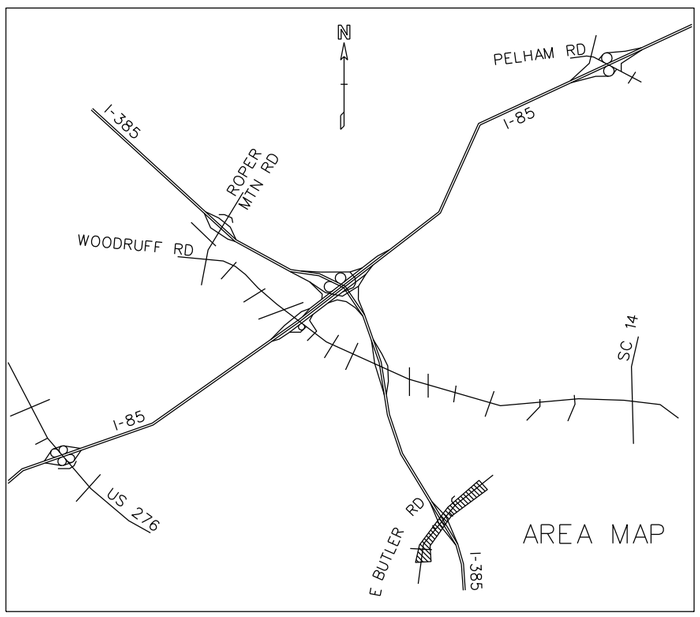

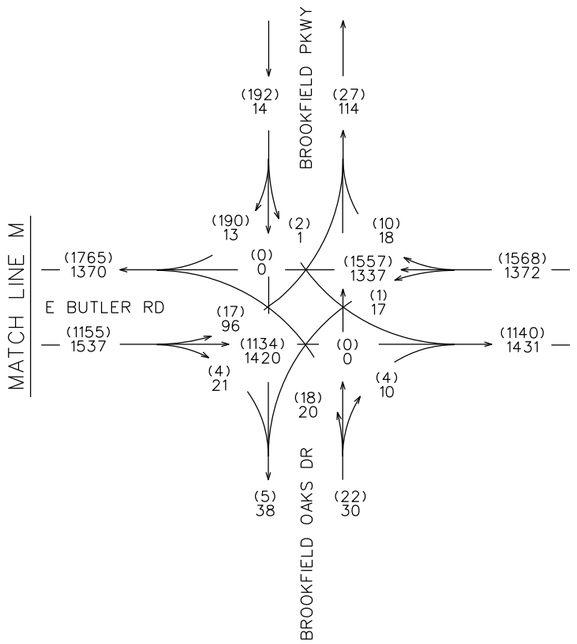

GREENVILLE COUNTY

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JANUARY/2012

Florence & Hutcheson
CONSULTING ENGINEERS

TRAFFIC FLOW DIAGRAMS
2035 ALTERNATE 2D CONDITIONS

MATCH LINE C
SEE SHEET 2

TO GREENVILLE
I-385

WOODRUFF RD

(9977)
5597

(8318)
7566

(3625)
2537

(6352)
3060

(2960)
3076

(5358)
4490

(2311)
2006

(7192)
6004

(1992)
2055

(2513)
1647

(1112)
890

(1312)
818

(416)
839

(1001)
1183

(2727)
2845

(1172)
2065

(5200)
3949

(9099)
8859

(537)
857

(121)
18

(880)
1165

(3899)
4910

TO ATLANTA
I-85

MATCH LINE A
SEE SHEETS 2 & 3

MATCH LINE B
SEE SHEET 2

(4308)
2528

(2736)
1711

(2087)
641

(649)
1070

(4388)
3480

(3259)
3743

(572)
817

(1172)
2065

(2484)
2883

(5346)
4384

(9734)
7864

I-85
TO SPARTANBURG

(1875)
1833

(5040)
2242

(5358)
4490

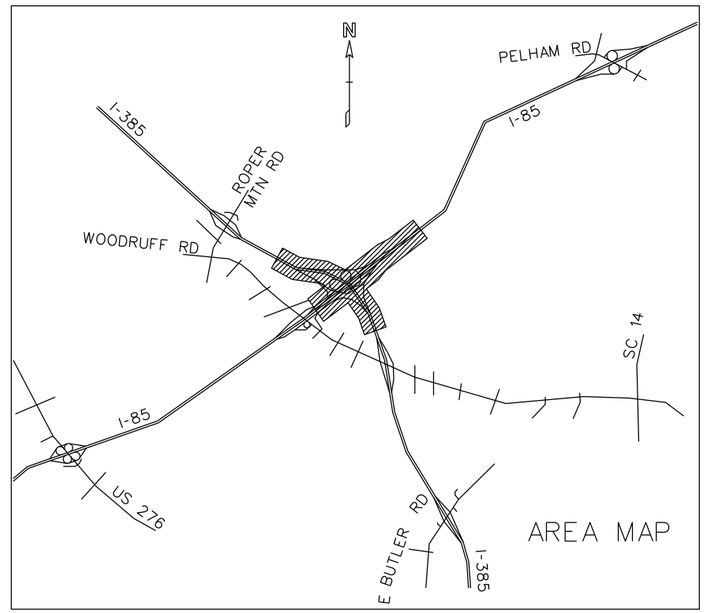
(4056)
3700

(2876)
3016

TO COLUMBIA

WOODRUFF RD

MATCH LINE E
SEE SHEET 3



Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE
COUNTY

I-85/I-385
BUILD ALT 2D TRAFFIC

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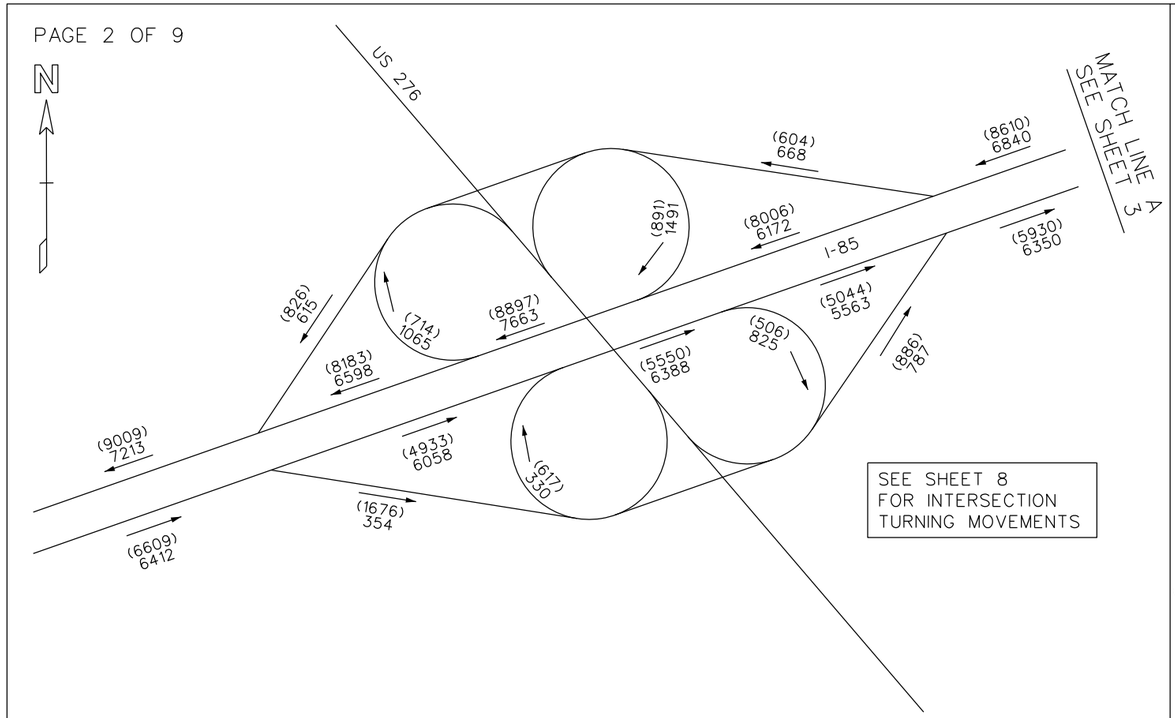
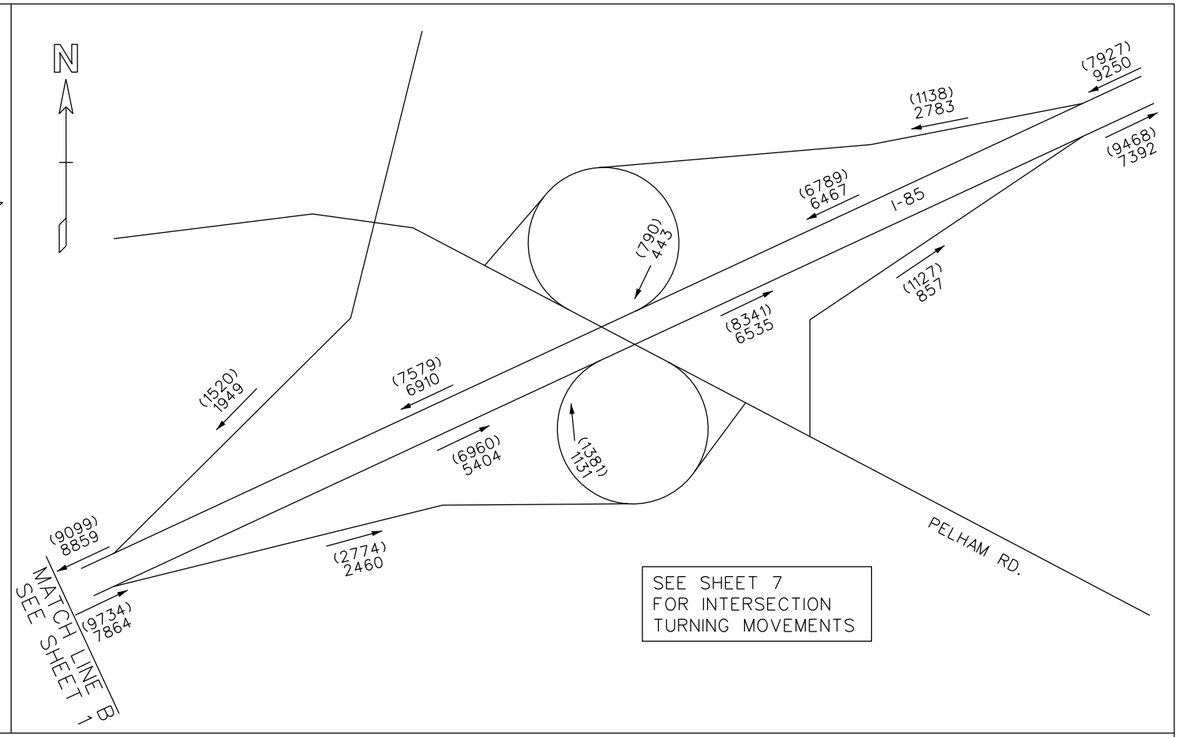
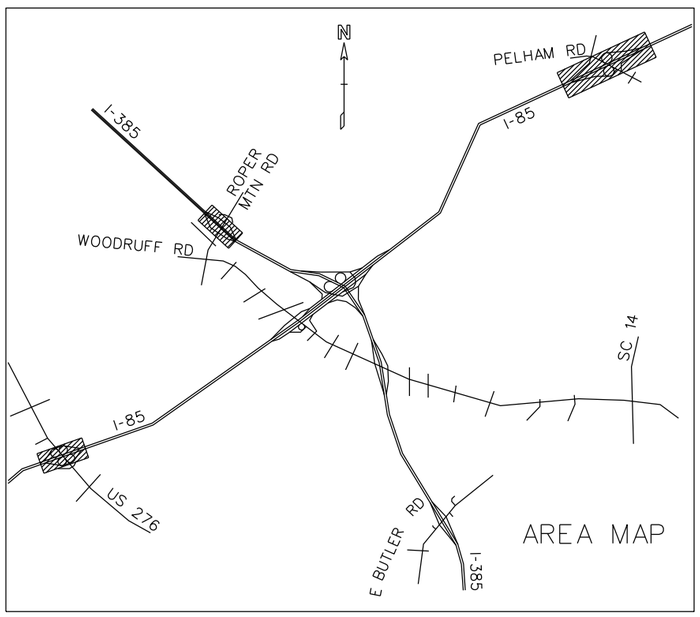
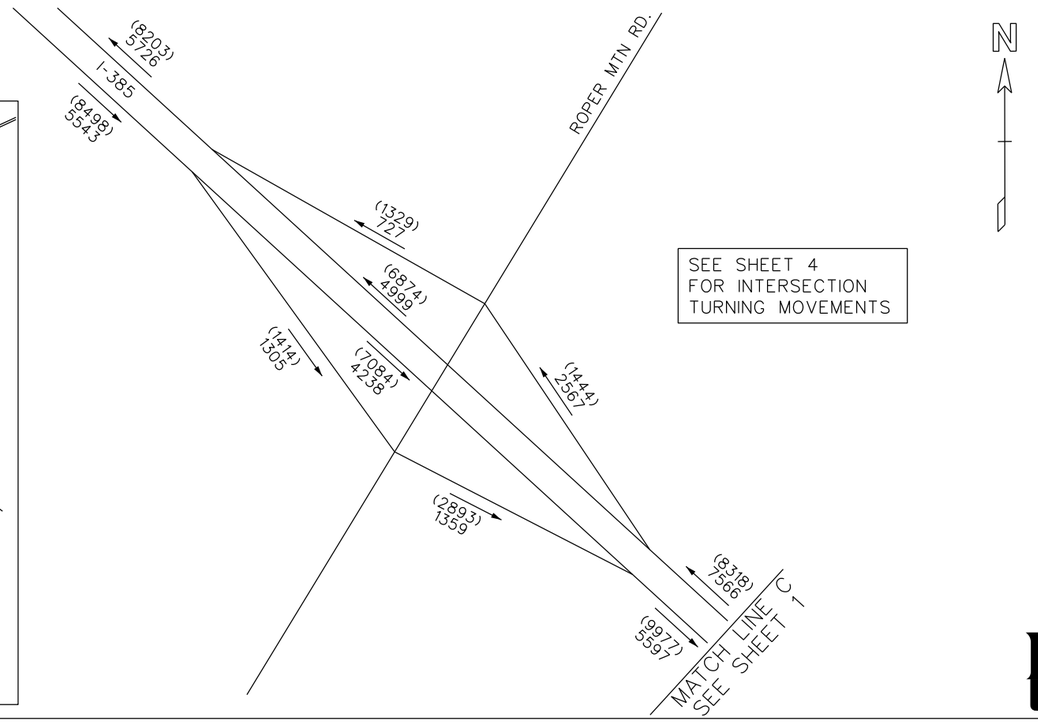
JANUARY/2012









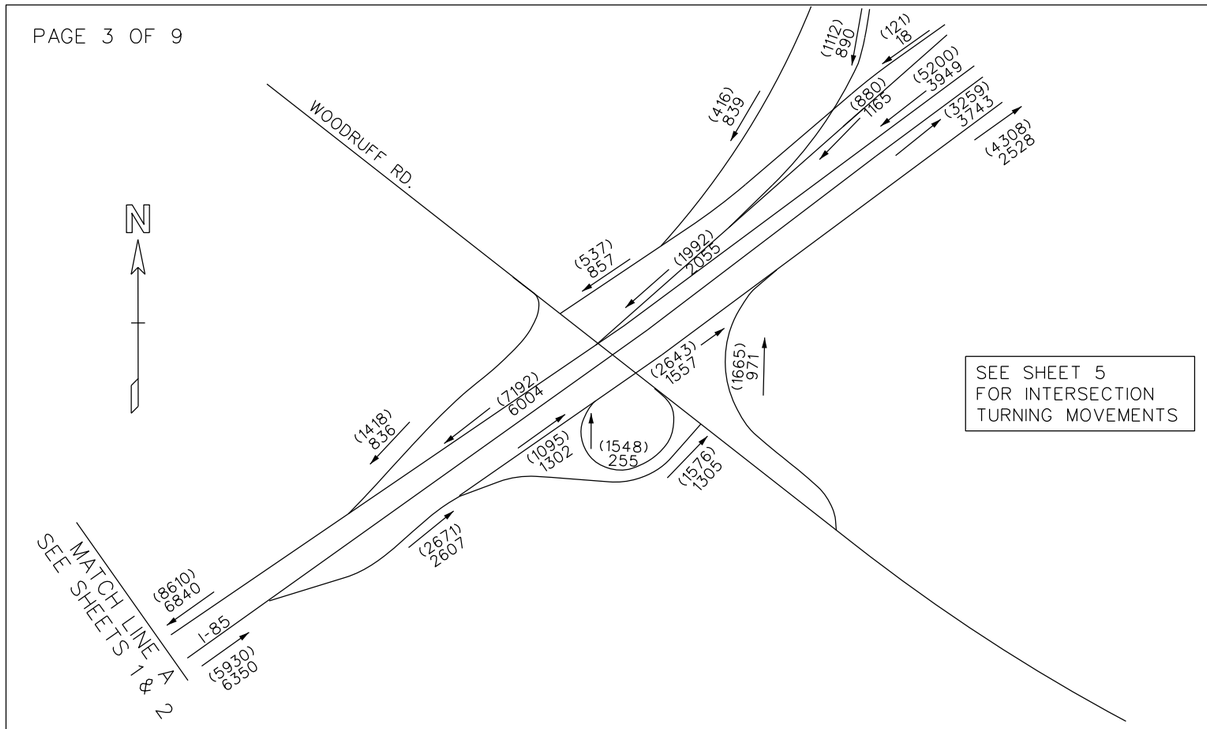
Florence & Hutcheson
CONSULTING ENGINEERS

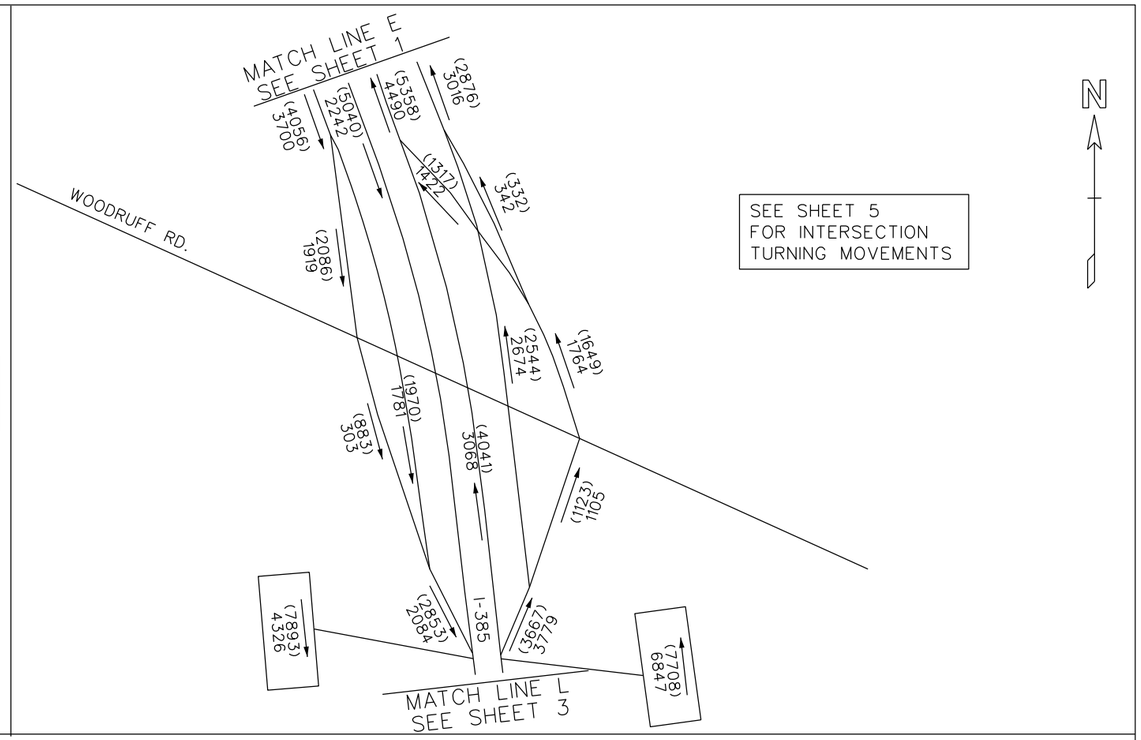
GREENVILLE
COUNTY

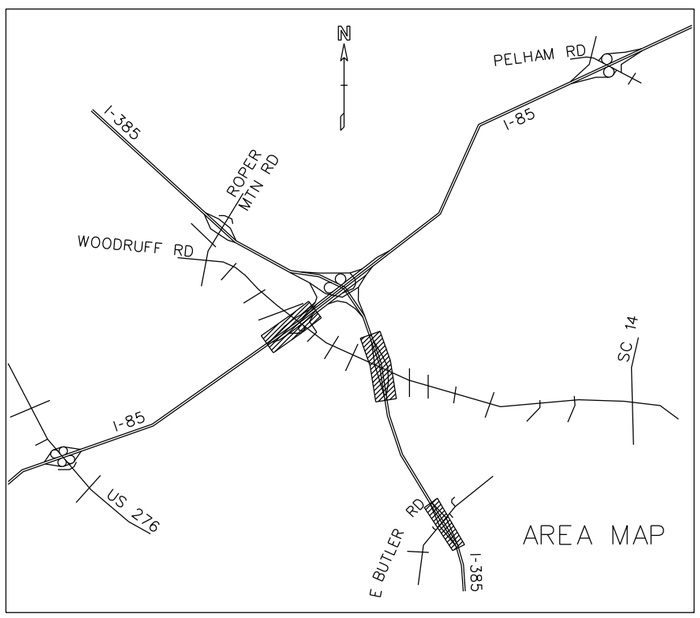
I-85/I-385
BUILD ALT 2D TRAFFIC

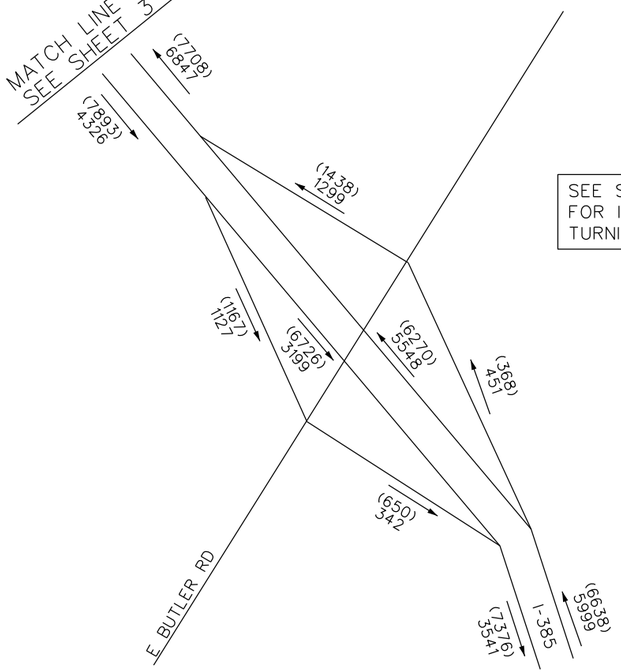
2035 PM DHV = (000)
2035 AM DHV = 000
T = 18%
SU = 16%
(COMB. = 2%)

JANUARY/2012









Florence & Hutcheson
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GREENVILLE
COUNTY

I-85/I-385
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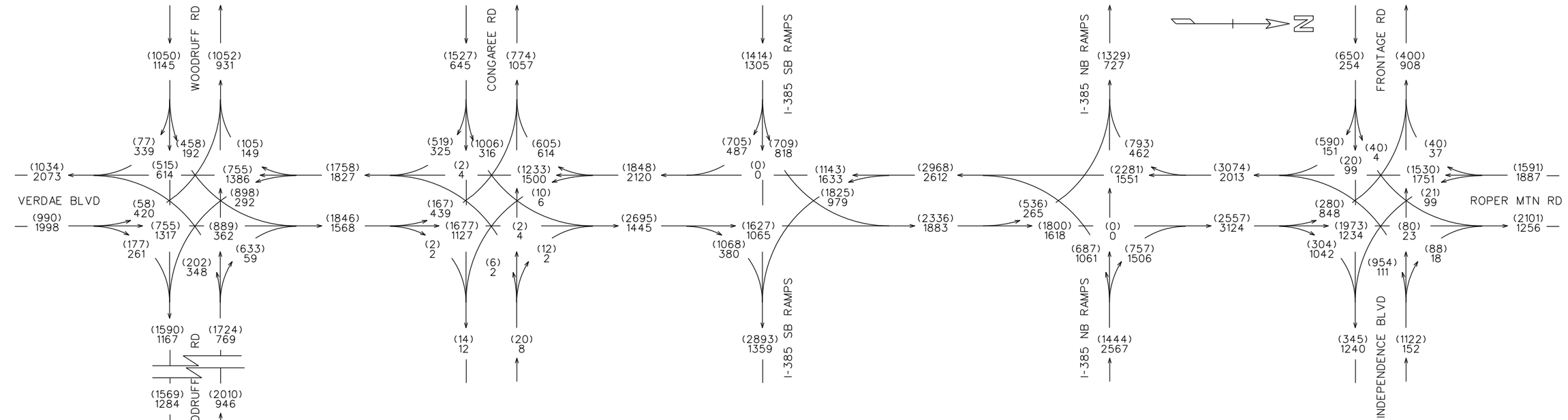

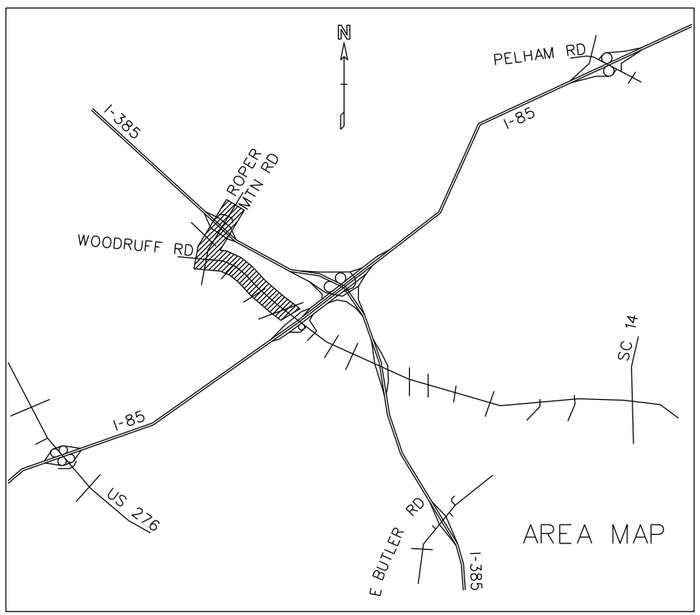

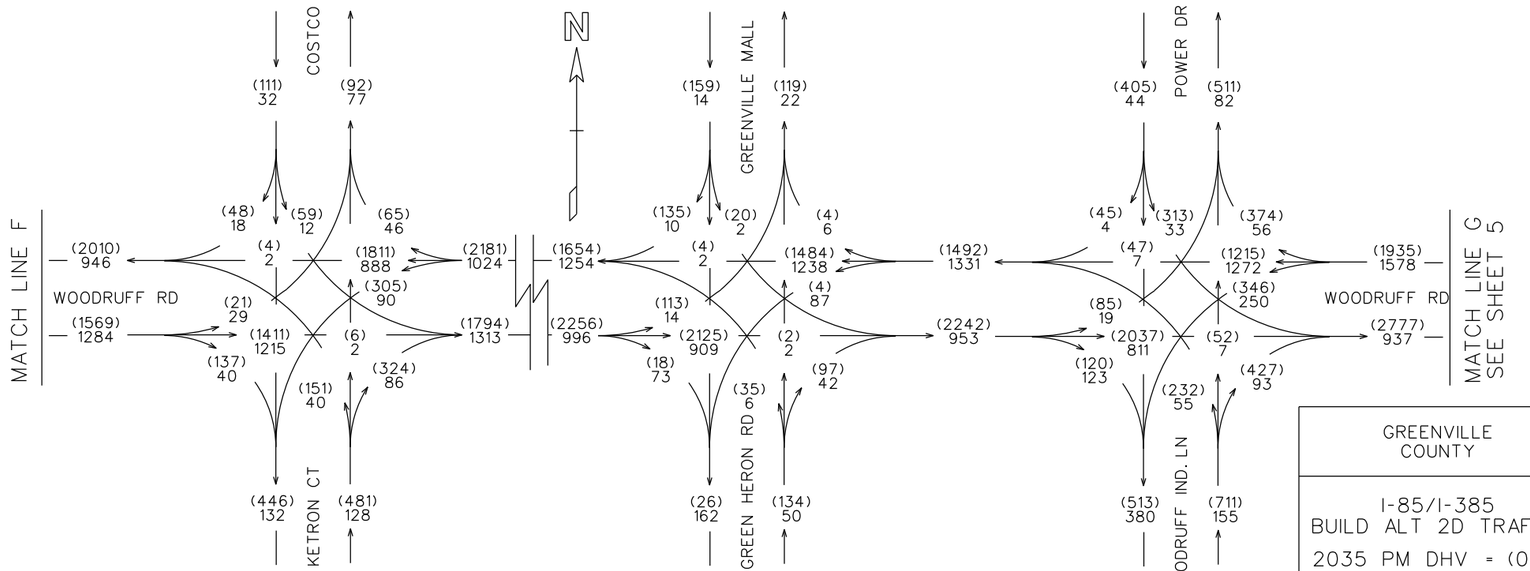

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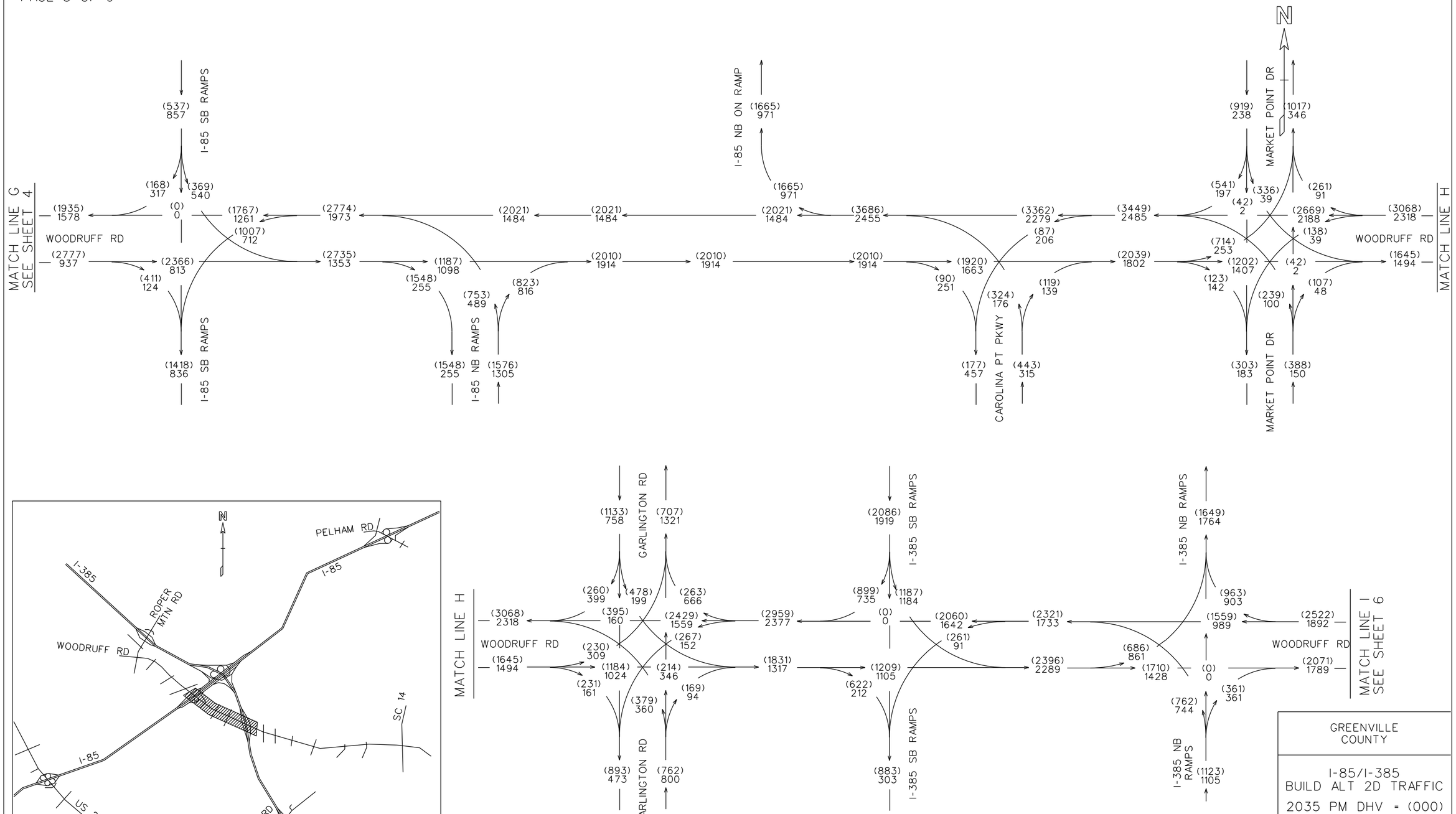
GREENVILLE COUNTY

I-85/I-385
BUILD ALT 2D TRAFFIC

2035 PM DHV = (000)
2035 AM DHV = 000
T = 15%
(SU = 14%
COMB. = 1%)

JANUARY/2012



GREENVILLE COUNTY

I-85/I-385
BUILD ALT 2D TRAFFIC

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JANUARY/2012

Florence & Hutcheson
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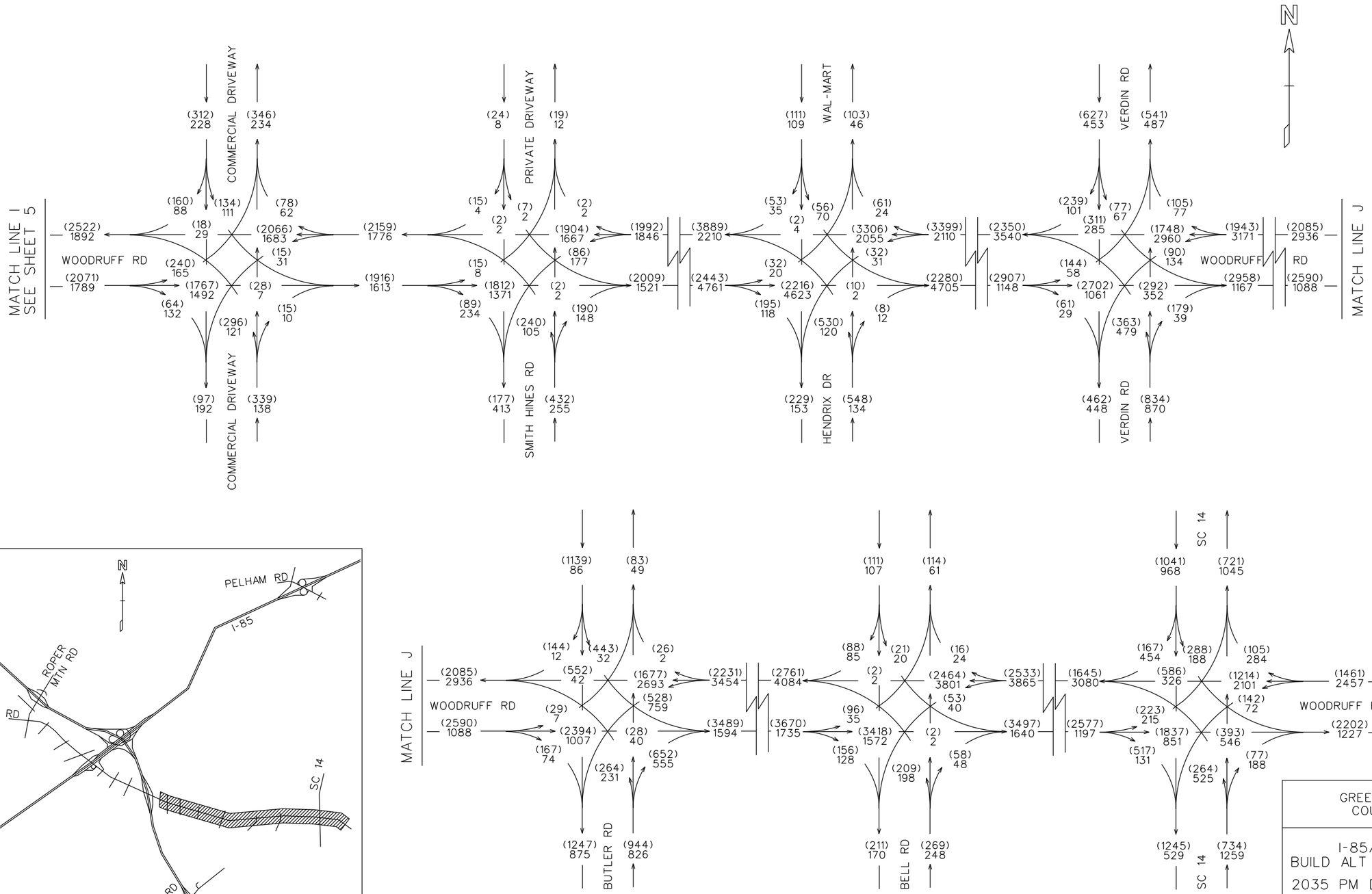

GREENVILLE COUNTY

I-85/I-385
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JANUARY/2012

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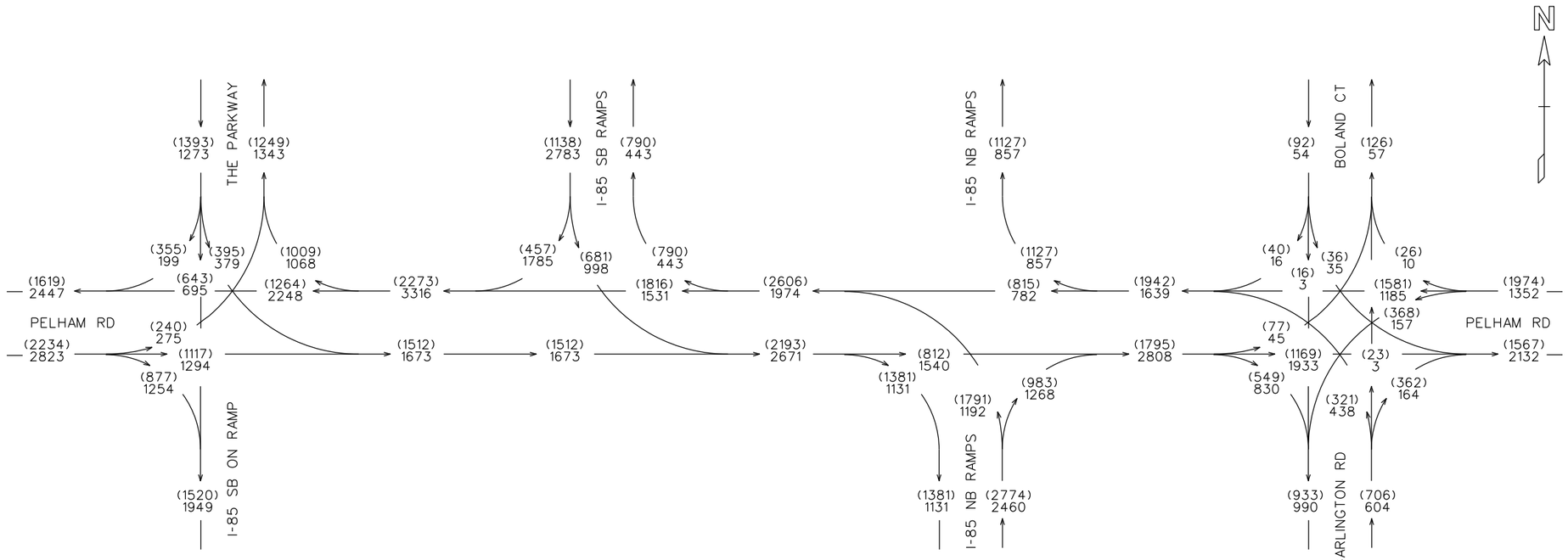

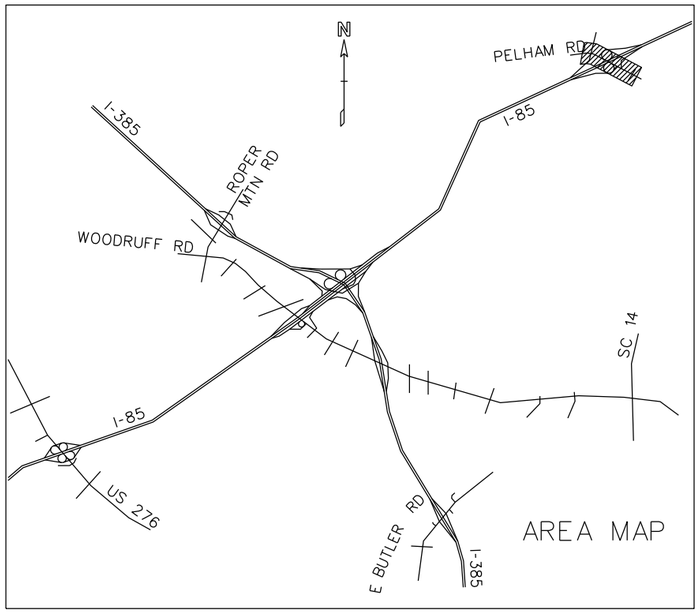

GREENVILLE COUNTY

I-85/I-385
BUILD ALT 2D TRAFFIC

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Florence & Hutcheson
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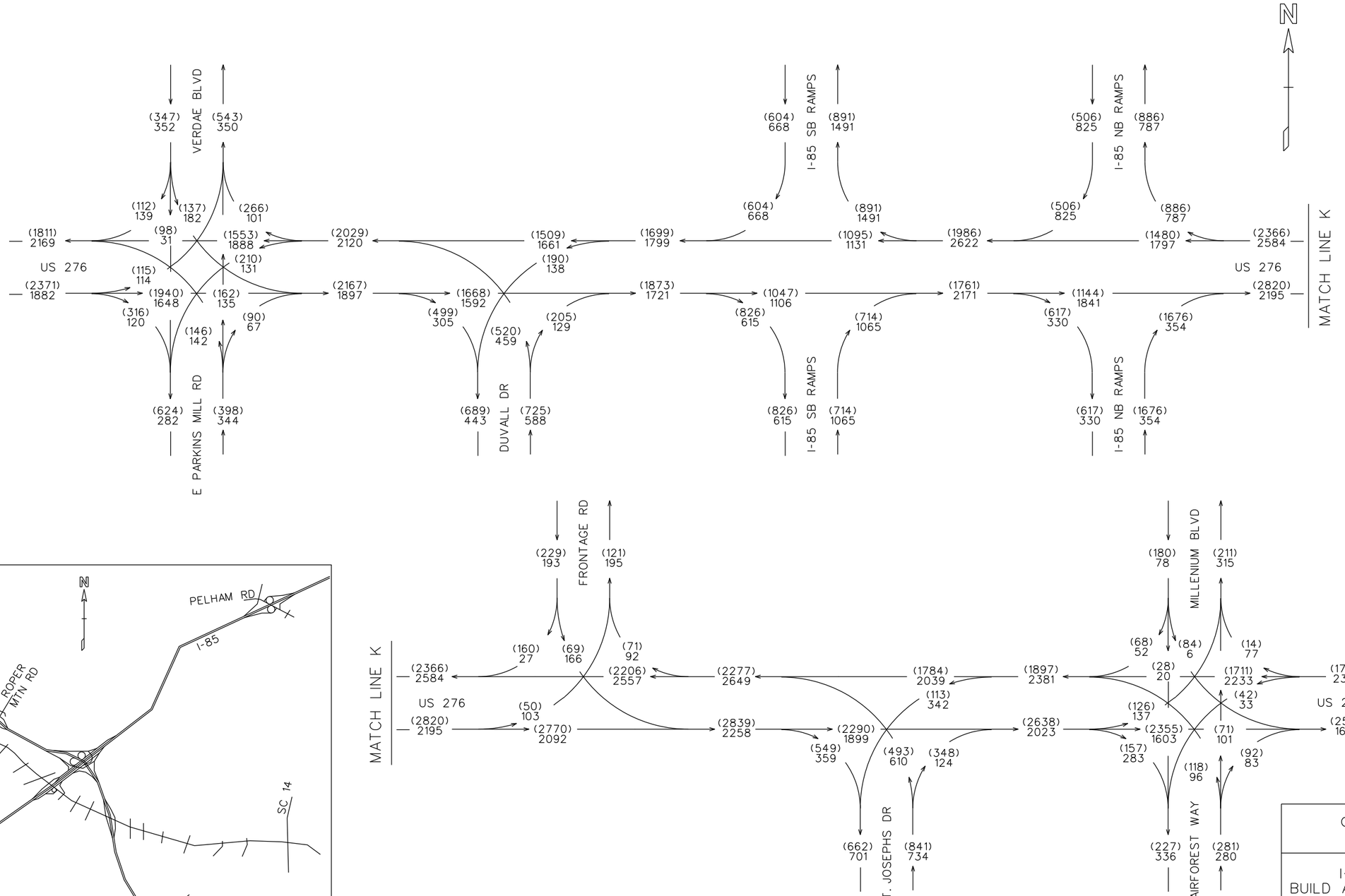

Florence & Hutcheson
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GREENVILLE COUNTY

I-85/I-385
BUILD ALT 2D TRAFFIC

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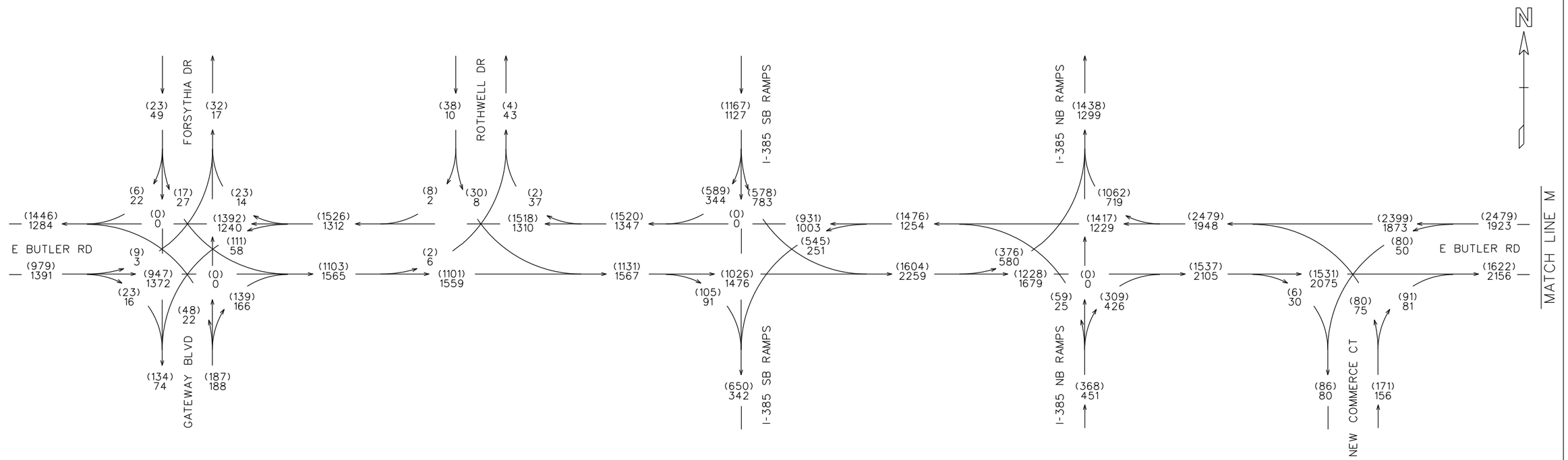

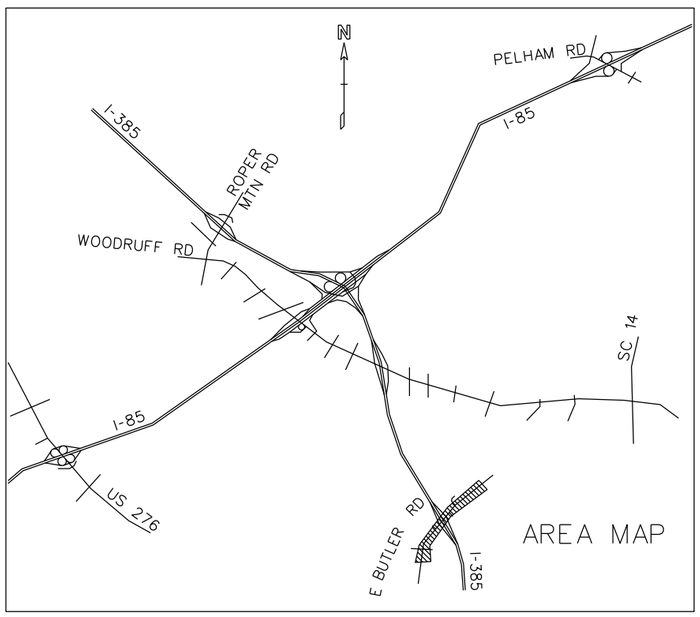

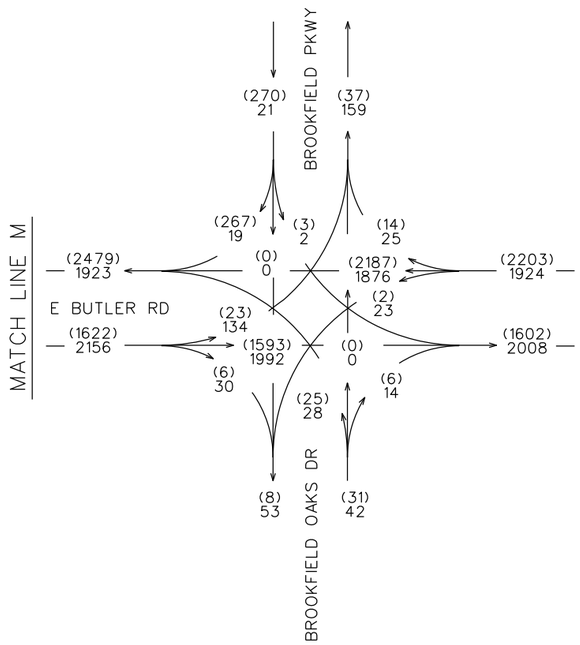

GREENVILLE COUNTY

I-85/I-385
BUILD ALT 2D TRAFFIC

2035 PM DHV = (000)
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COMB. = 1%)

JANUARY/2012

Florence & Hutcheson
CONSULTING ENGINEERS

TRAFFIC FLOW DIAGRAMS
2015 ALTERNATE 4A CONDITIONS

MATCH LINE C
SEE SHEET 2

TO GREENVILLE
I-385

WOODRUFF RD

(6482)
3528

(5250)
4764

(2506)
1612

(3976)
1916

(4826)
4031

(866)
523

(723)
596

(1783)
1016

(5322)
4278

TO ATLANTA
I-85

(254)
529

(767)
910

(1490)
1506

(254)
529

(1471)
1205

(1725)
1734

(750)
1299

(3832)
2772

(2475)
3033

(6307)
5805

MATCH LINE A
SEE SHEETS 2 & 3

MATCH LINE B
SEE SHEET 2

(2773)
1657

(1755)
1122

(1331)
389

(424)
733

(2997)
2155

(2375)
2665

(1018)
535

(750)
1299

(767)
910

(1616)
1822

(1214)
1139

(3706)
3054

(6703)
5209

I-85
TO SPARTANBURG

(3110)
1393

(3355)
2826

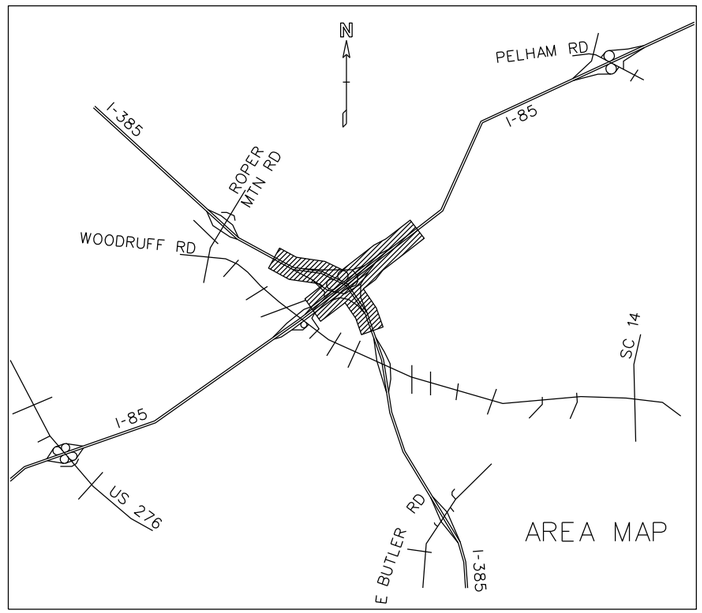
TO COLUMBIA

(2634)
2357

(1981)
2049

WOODRUFF RD

MATCH LINE E
SEE SHEET 3



AREA MAP

GREENVILLE
COUNTY

I-85/I-385
BUILD ALT 4A TRAFFIC

2015 PM DHV = (000)
2015 AM DHV = 000
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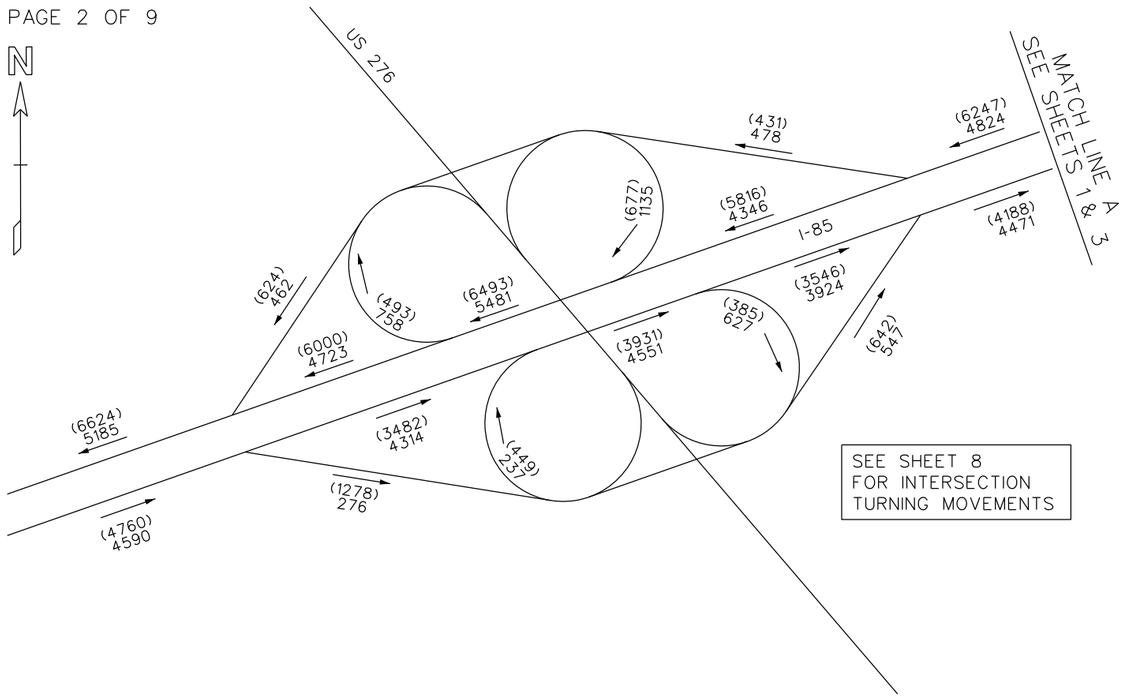
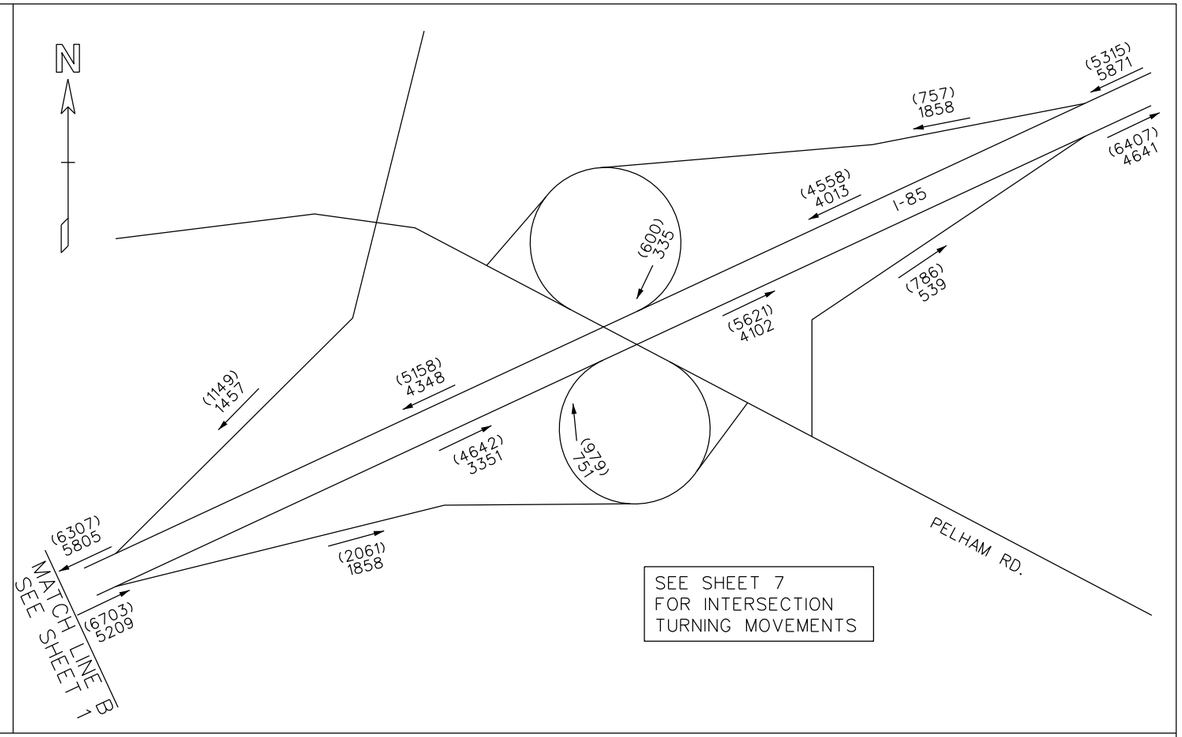
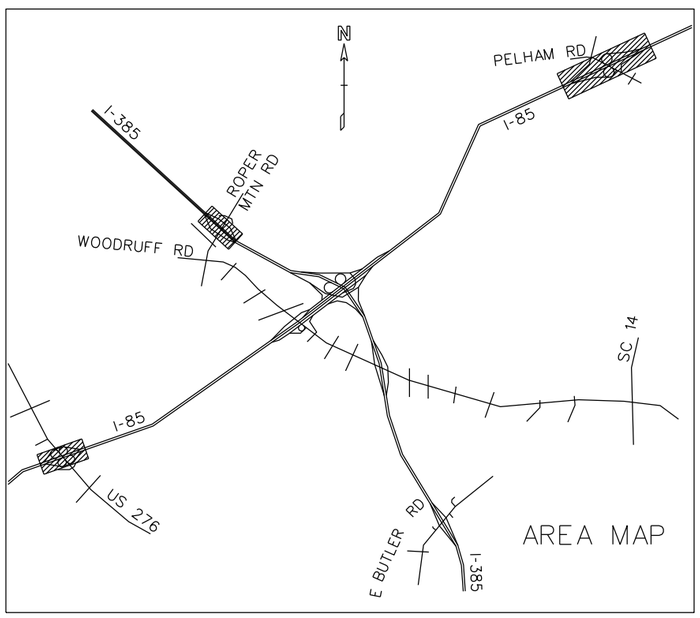
(SU = 16% COMB. = 2%)

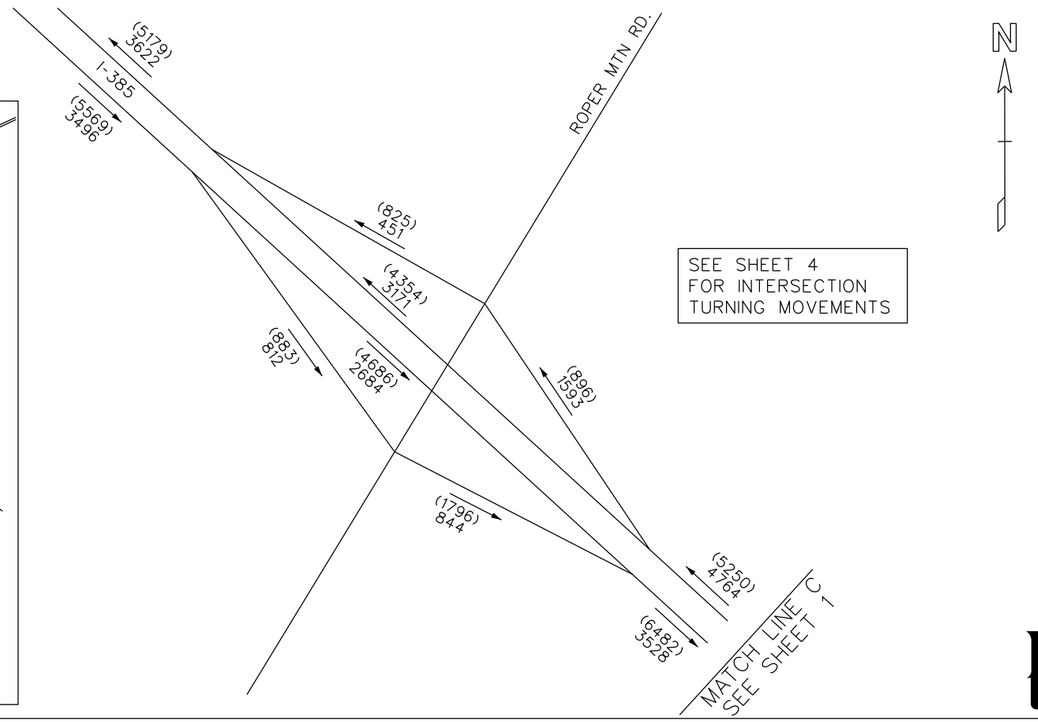
JANUARY/2012

Florence & Hutcheson
CONSULTING ENGINEERS









Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE
COUNTY

I-85/I-385
BUILD ALT 4A TRAFFIC

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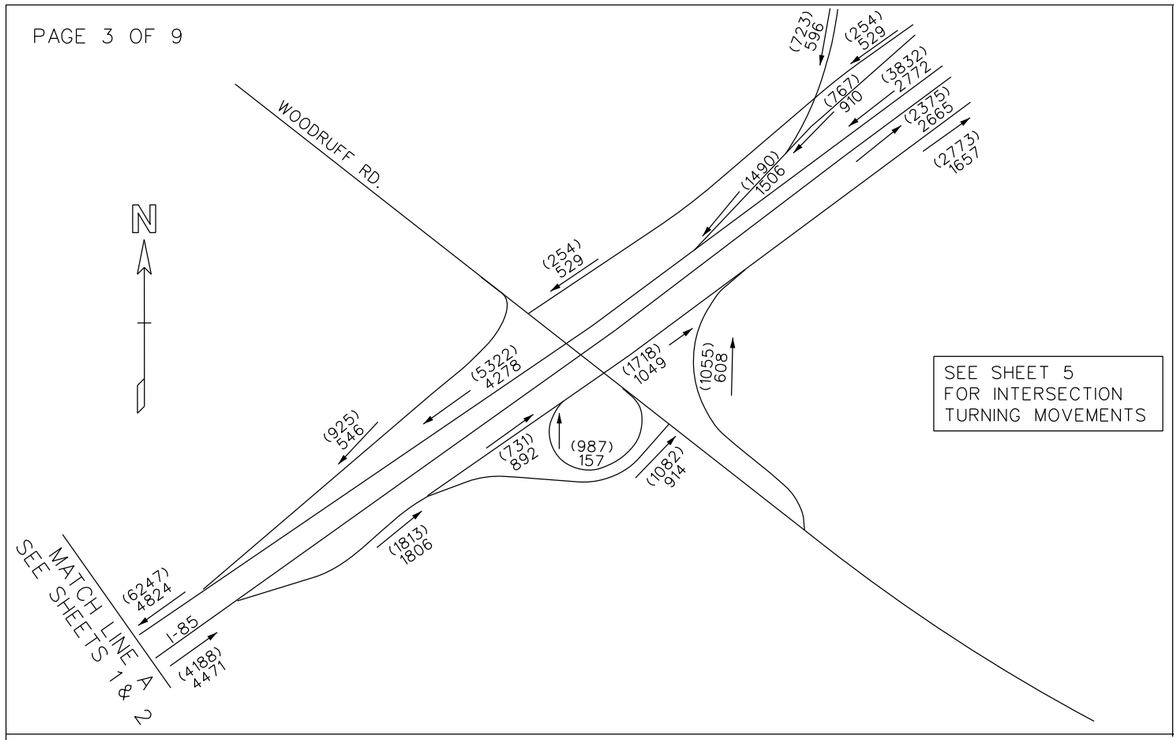

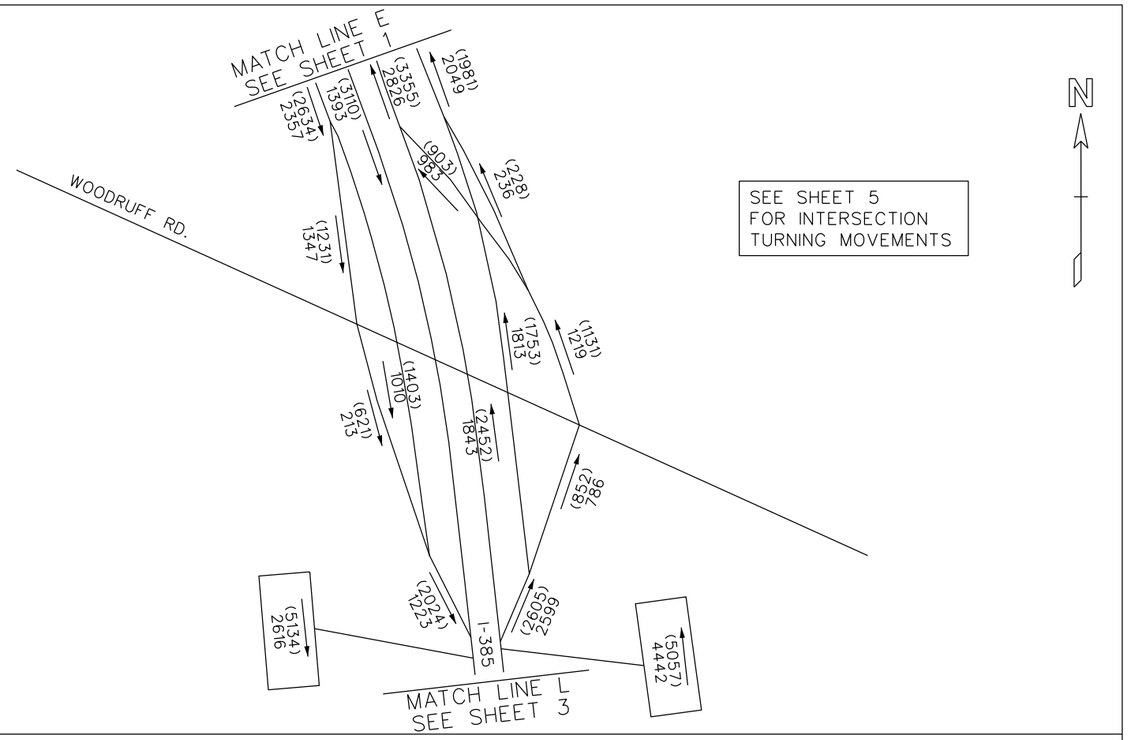

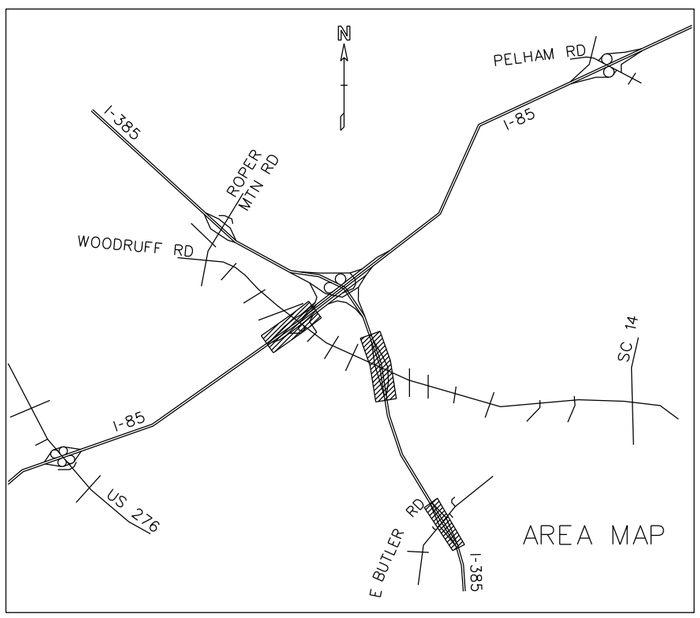

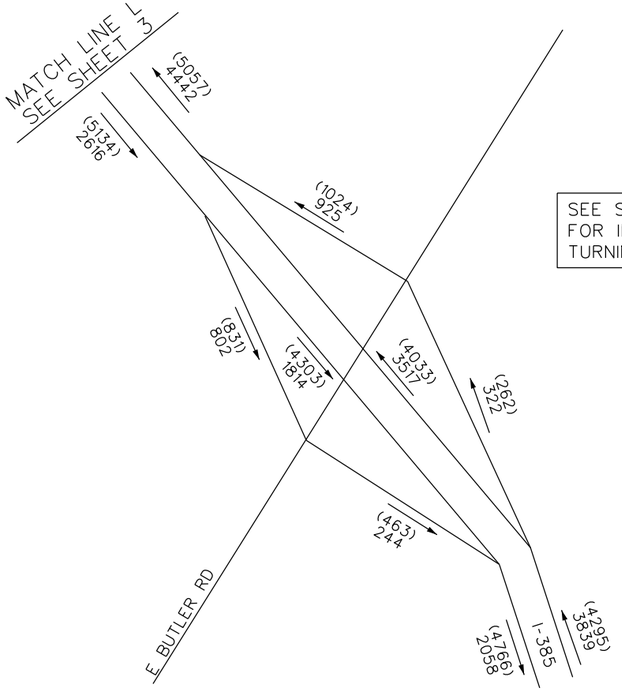



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GREENVILLE
COUNTY

I-85/I-385
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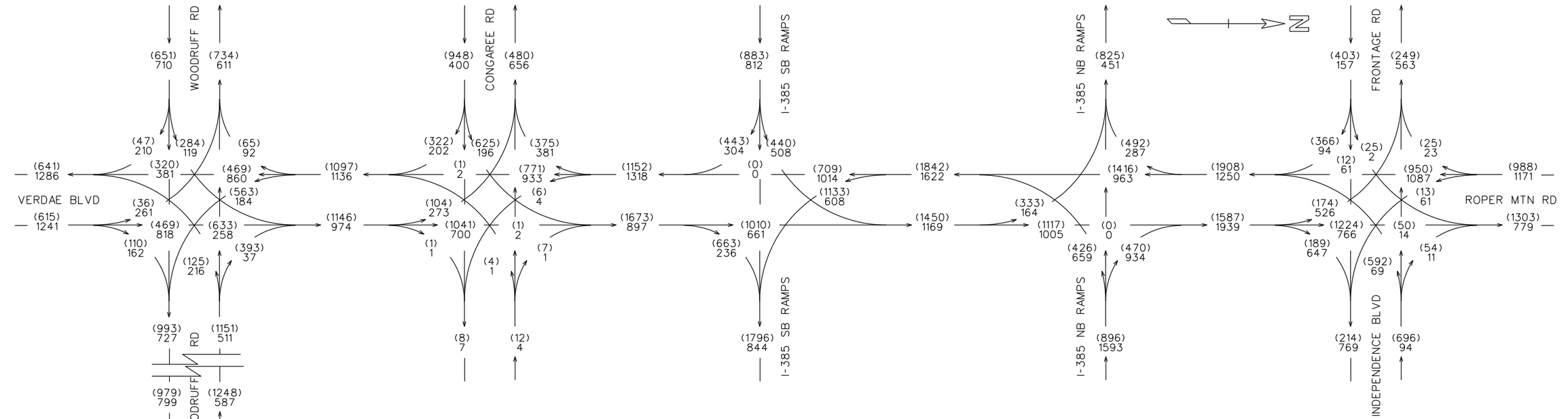

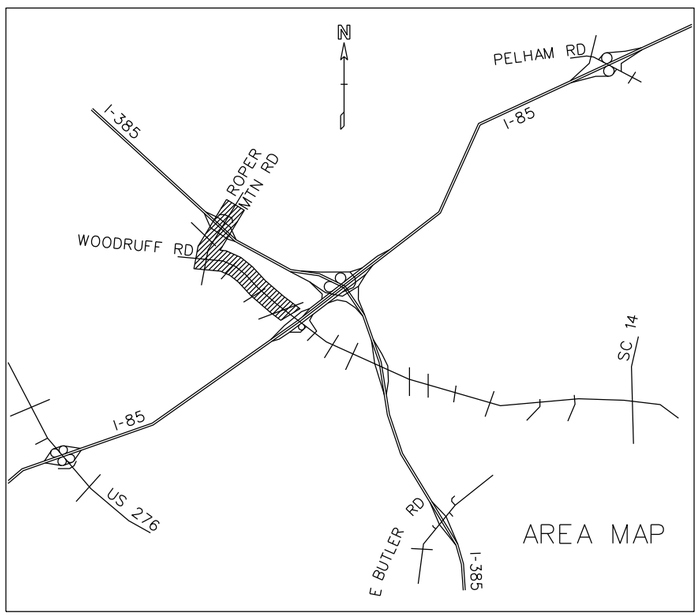

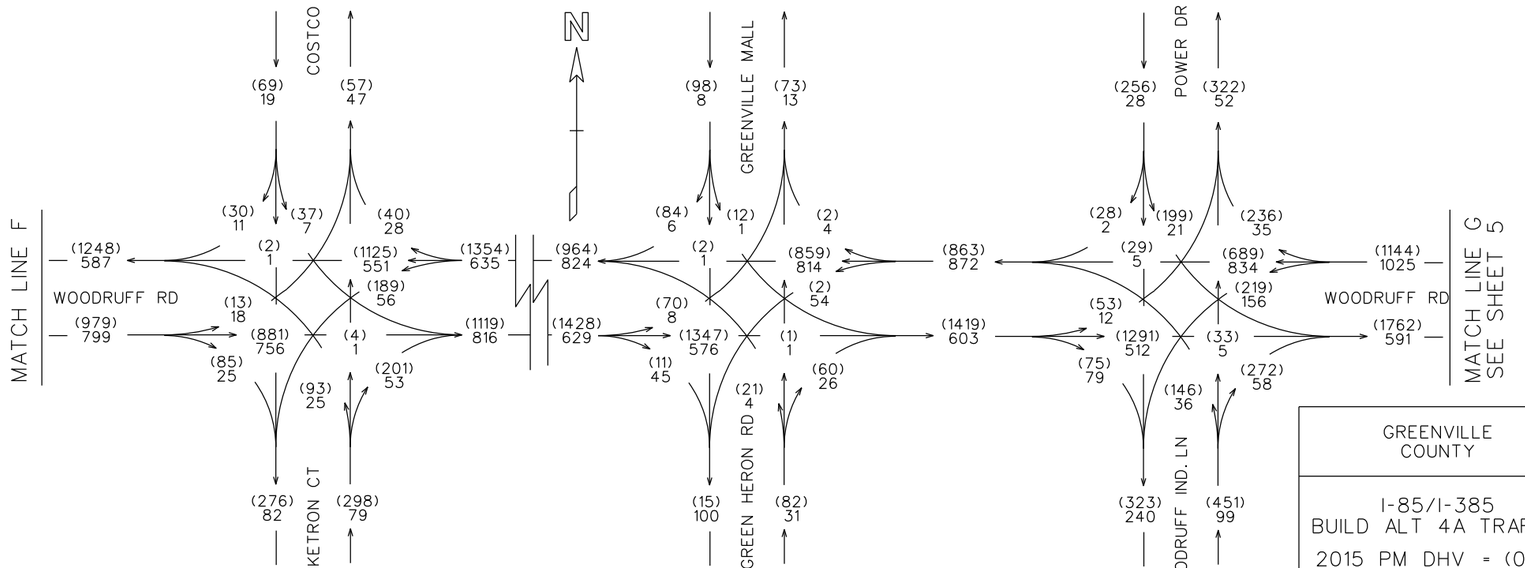

Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE COUNTY

I-85/I-385
BUILD ALT 4A TRAFFIC

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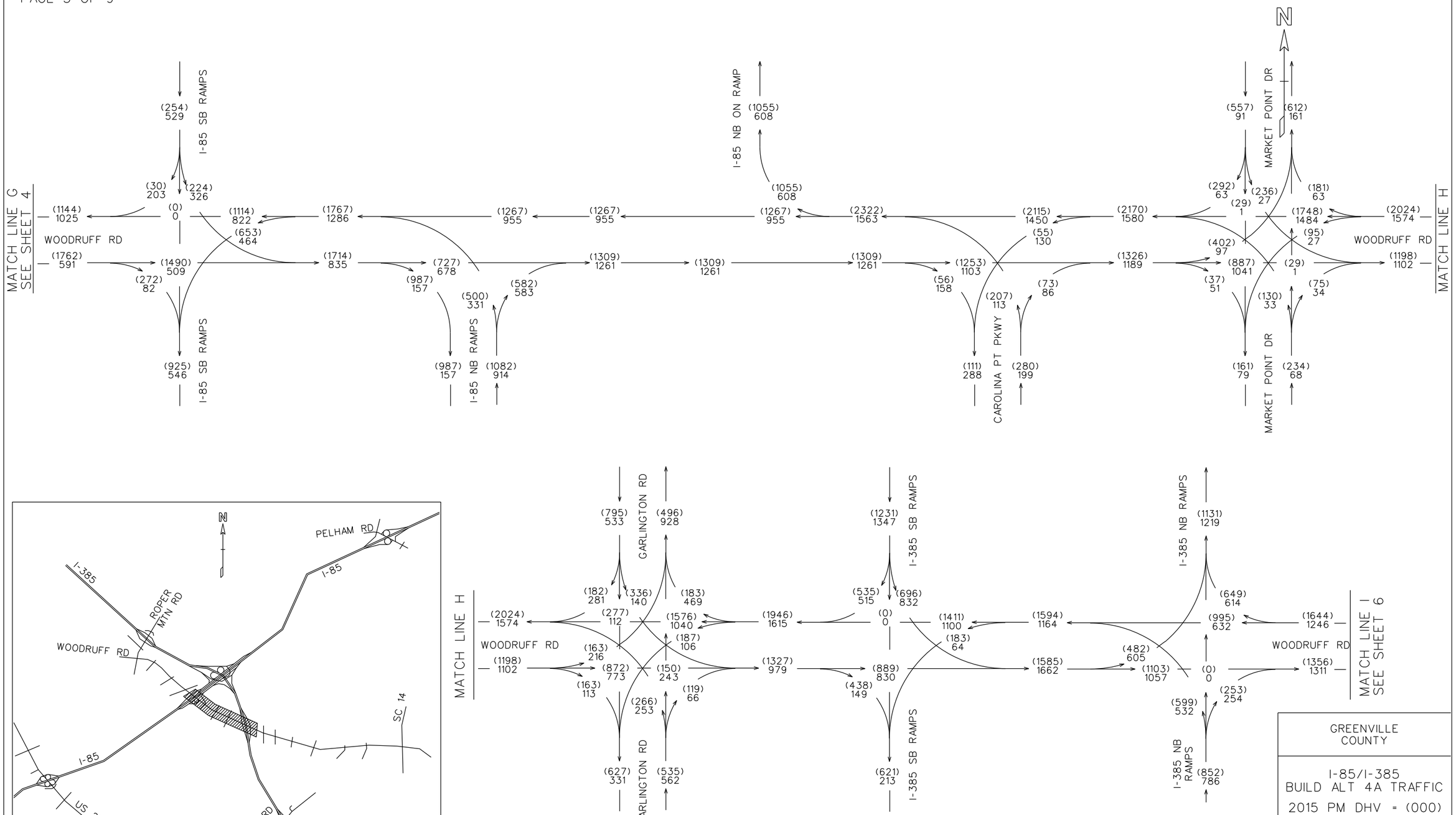

GREENVILLE COUNTY

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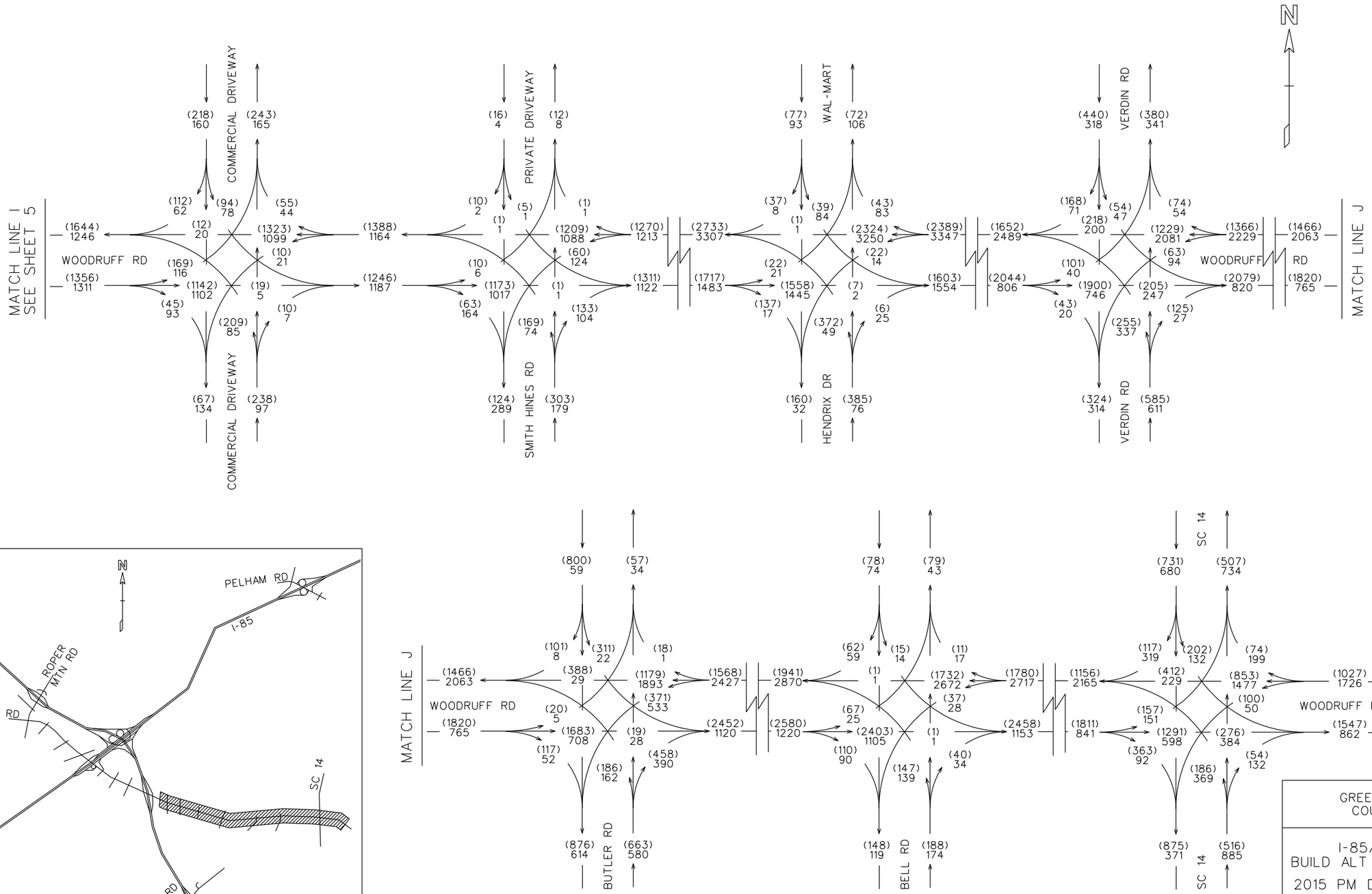
CONSULTING ENGINEERS



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GREENVILLE COUNTY

I-85/I-385
BUILD ALT 4A TRAFFIC

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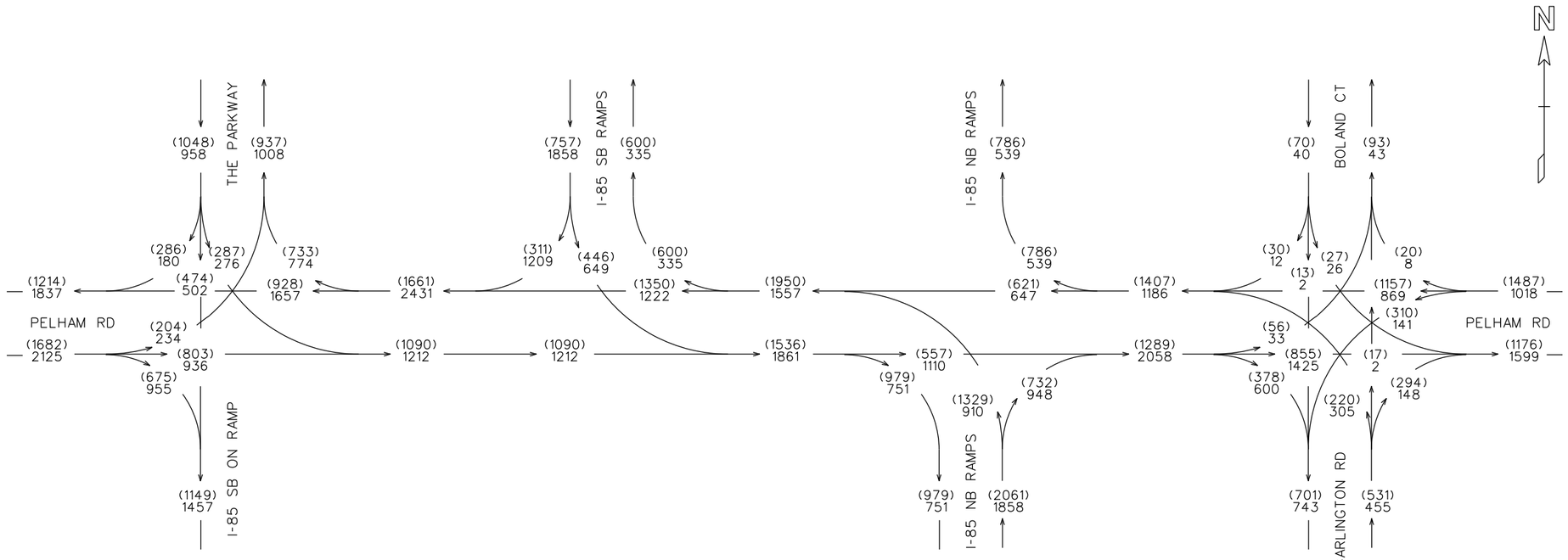

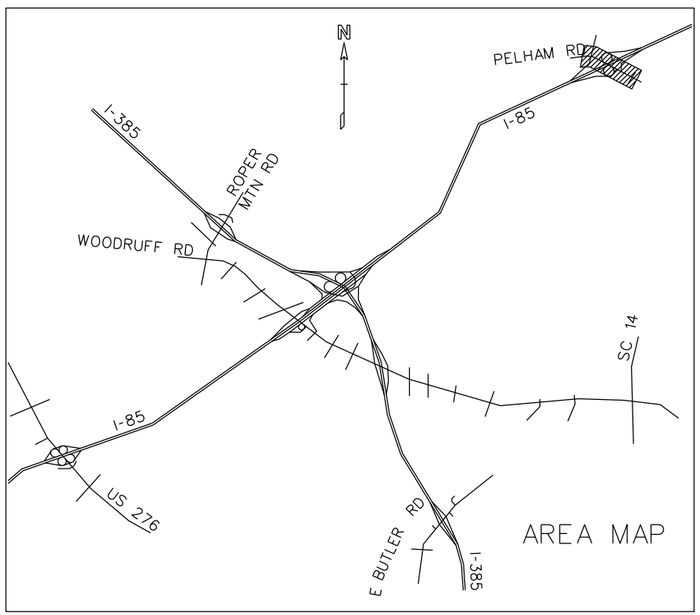

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GREENVILLE COUNTY

I-85/I-385
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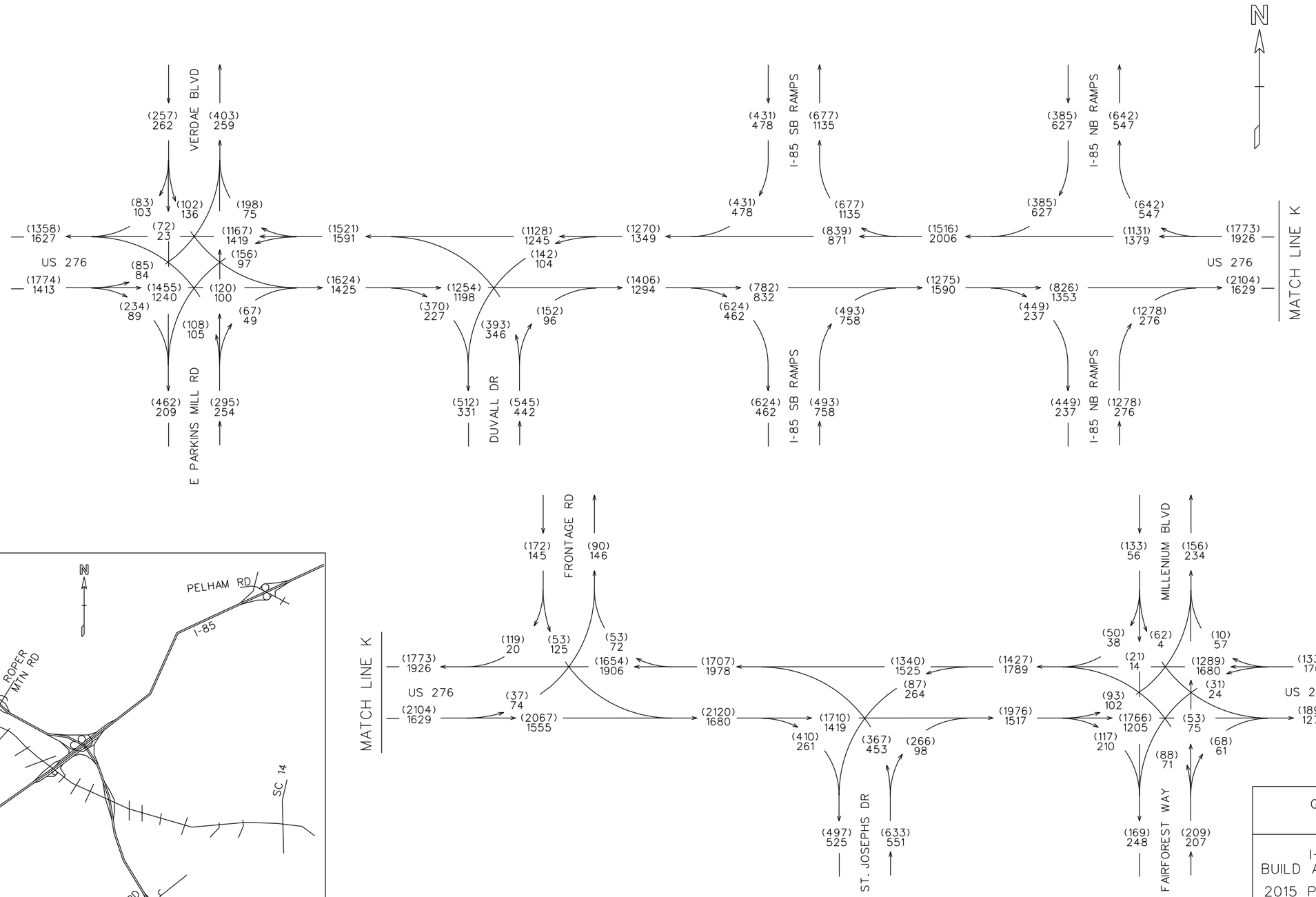

GREENVILLE COUNTY

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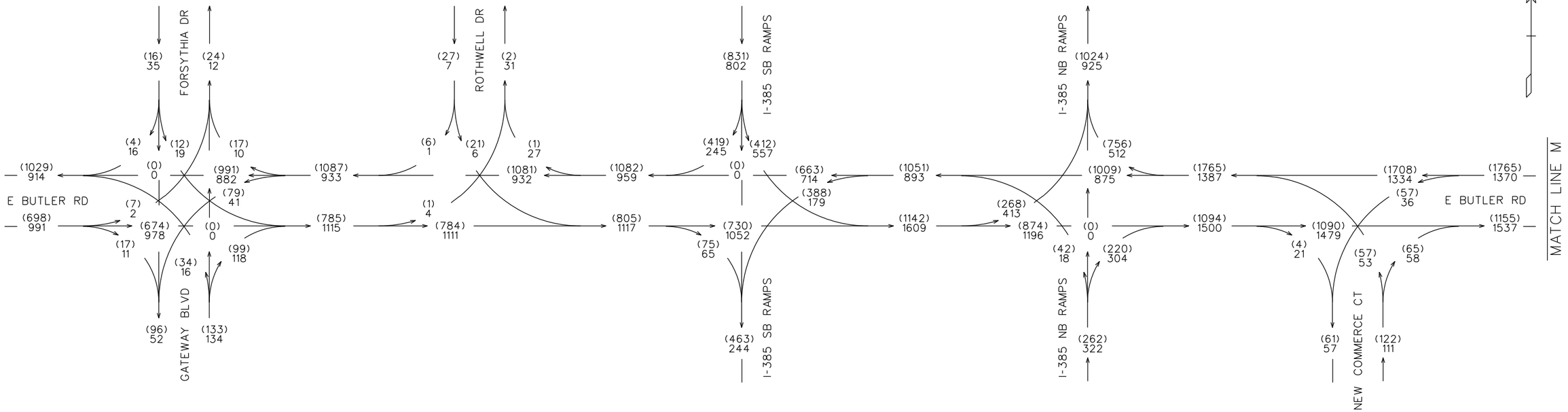

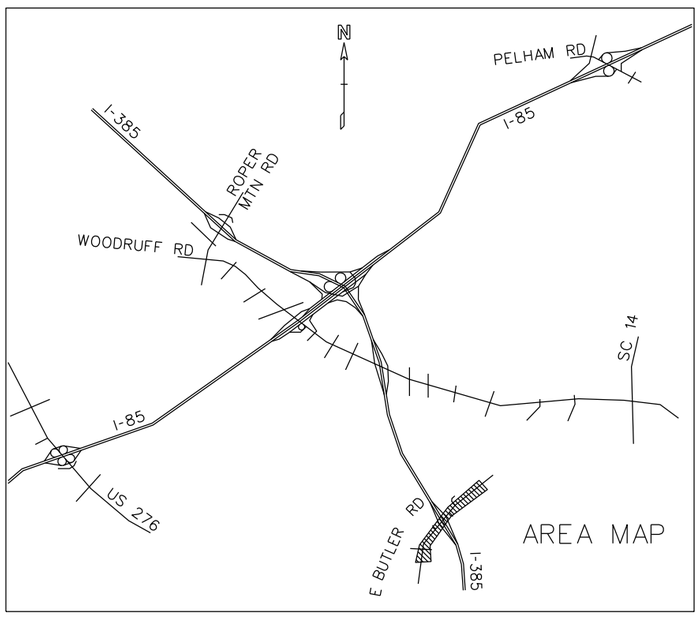

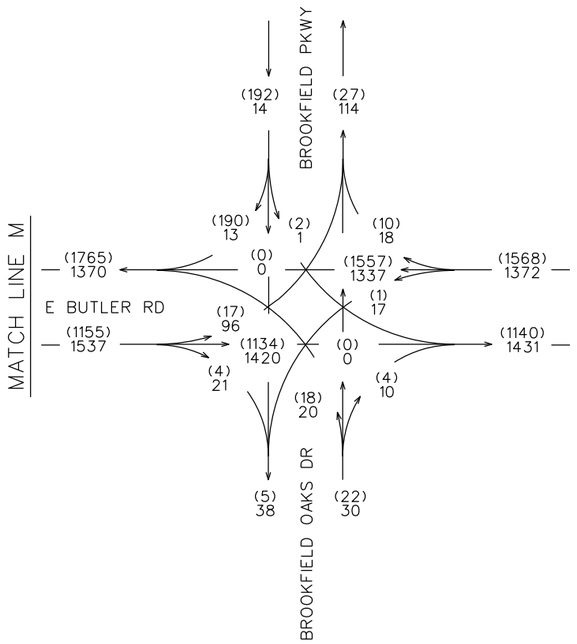

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GREENVILLE COUNTY

I-85/I-385
BUILD ALT 4A TRAFFIC

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JANUARY/2012

TRAFFIC FLOW DIAGRAMS
2035 ALTERNATE 4A CONDITIONS

MATCH LINE C
SEE SHEET 2

TO GREENVILLE
I-385

WOODRUFF RD

(8318)
7566

(9977)
5597

(3625)
2537

(6352)
3060

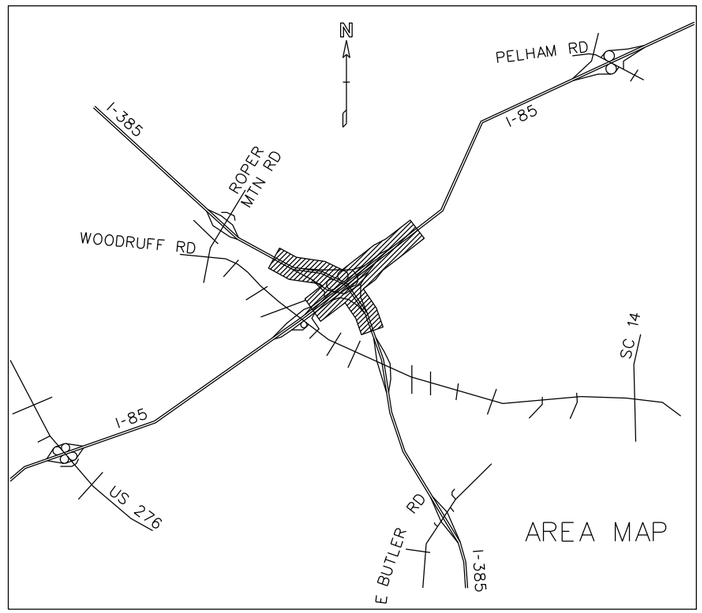
(7669)
6496

(1312)
818

(1112)
890

(2513)
1647

N



AREA MAP

TO ATLANTA
I-85

(7192)
6004

(416)
839

(1992)
2055

(880)
1165

(416)
839

(2311)
2006

(1172)
2065

(2727)
2845

(5200)
3949

(3899)
4910

(9099)
8859

MATCH LINE A
SEE SHEETS 2 & 3

MATCH LINE B
SEE SHEET 2

(4308)
2528

(2736)
1711

(2087)
641

(649)
1070

(4388)
3480

(3259)
3743

(1572)
817

(1172)
2065

(1880)
1165

(2484)
2883

(1875)
1833

(5346)
4384

(9734)
7864

I-85
TO SPARTANBURG

(5040)
2242

(5358)
4490

(4056)
3700

(2755)
2998

TO COLUMBIA

WOODRUFF RD

MATCH LINE E
SEE SHEET 3

Florence & Hutcheson
CONSULTING ENGINEERS

GREENVILLE
COUNTY

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BUILD ALT 4A TRAFFIC

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2035 AM DHV = 000
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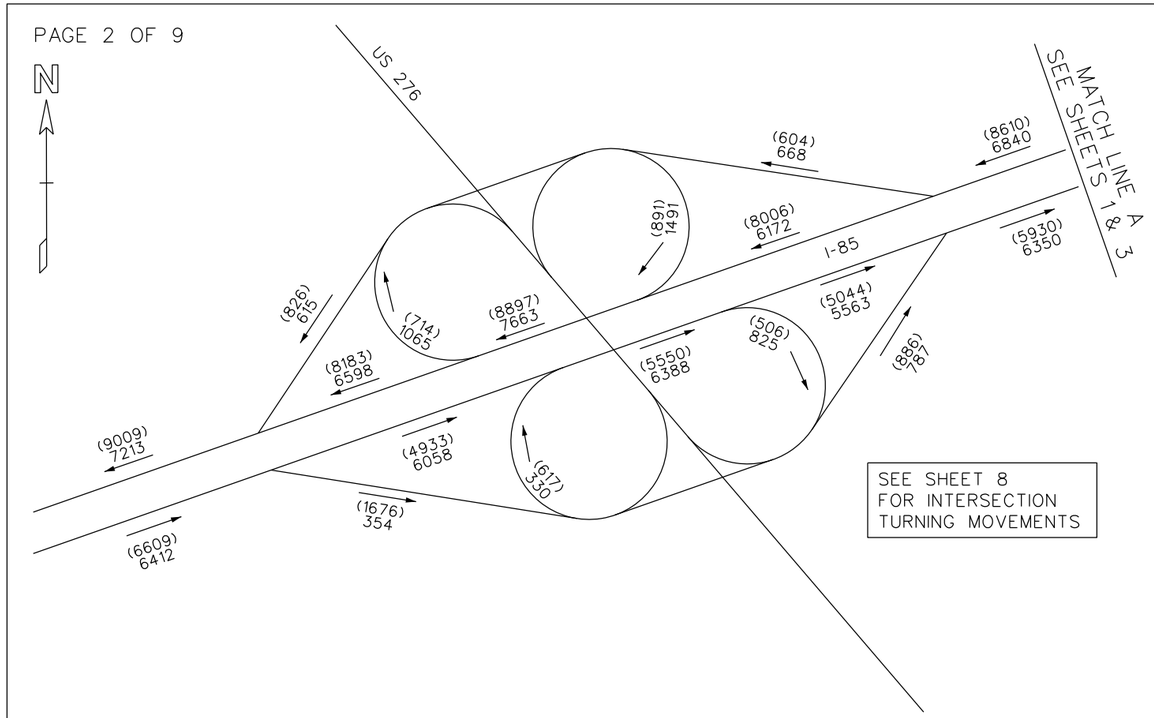
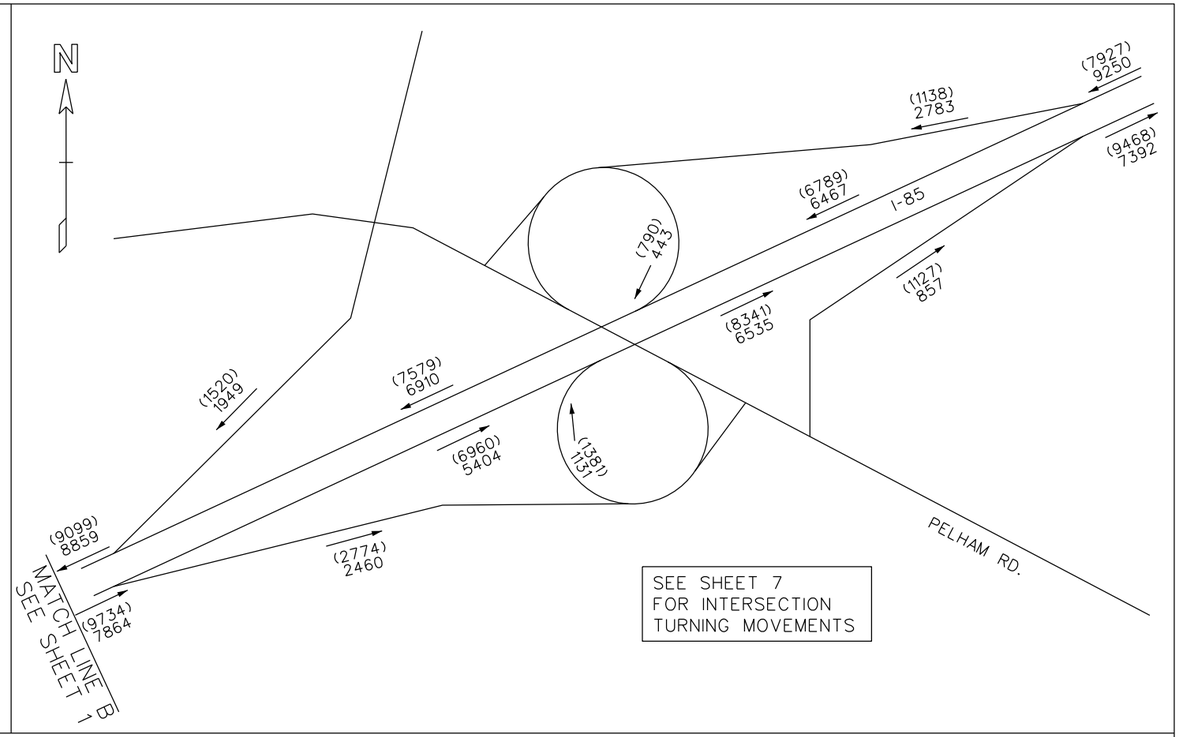
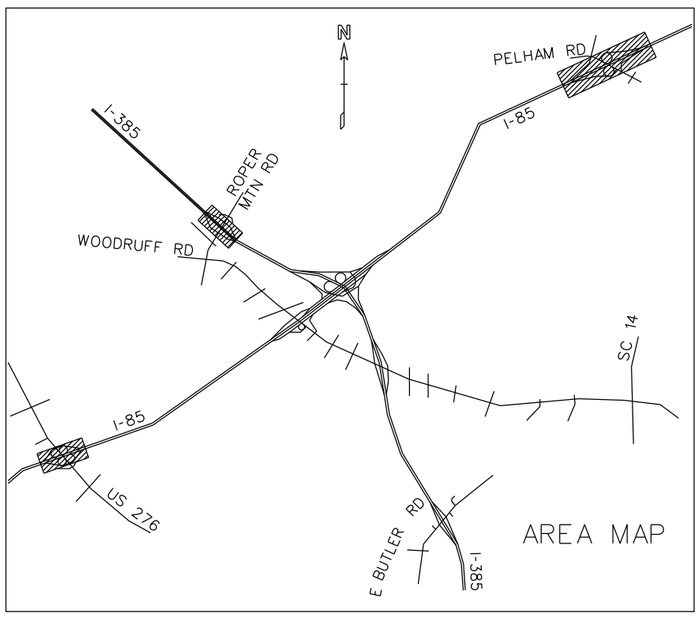
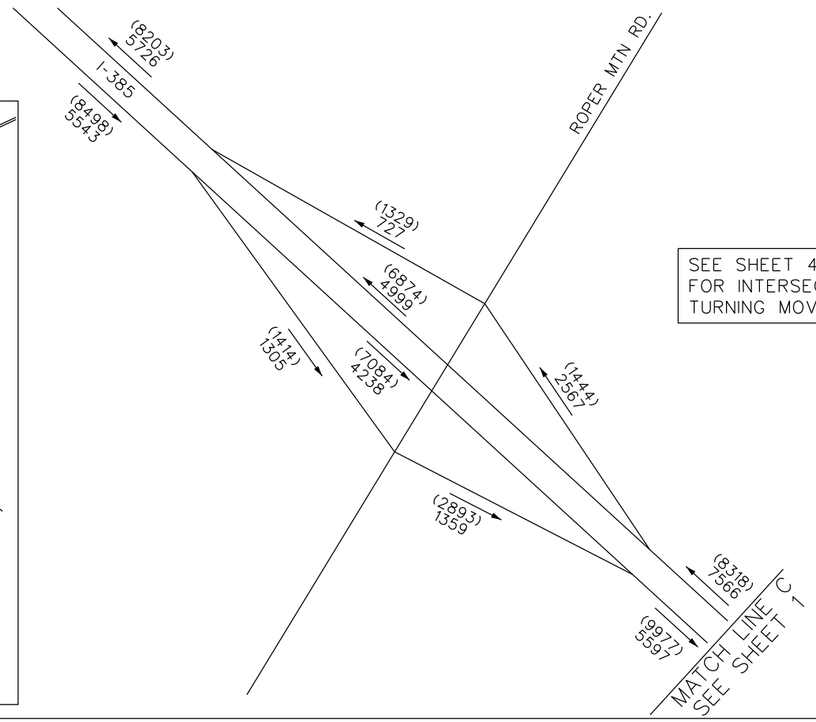
(SU = 16%)
(COMB. = 2%)

JANUARY/2012









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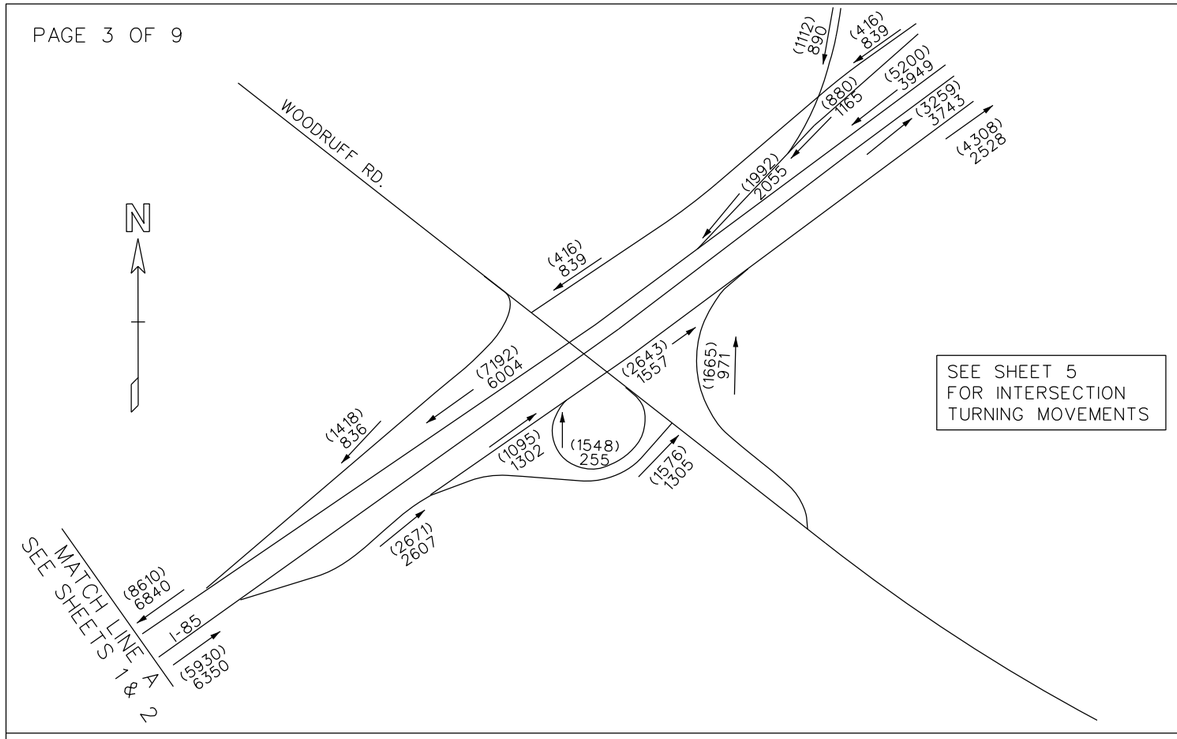
Consulting Engineers

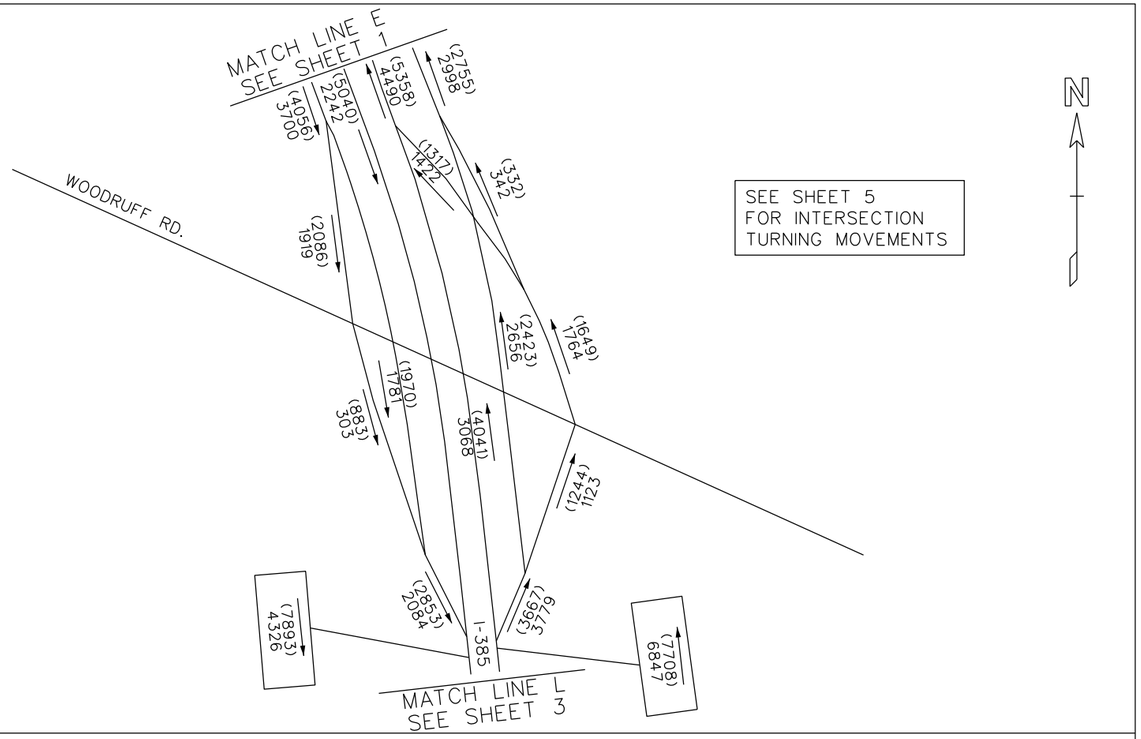
GREENVILLE
COUNTY

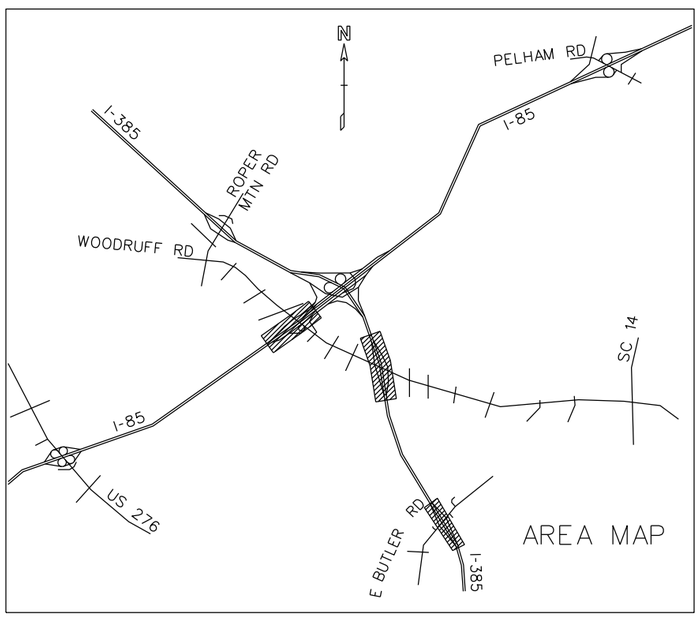
I-85/I-385
BUILD ALT 4A TRAFFIC

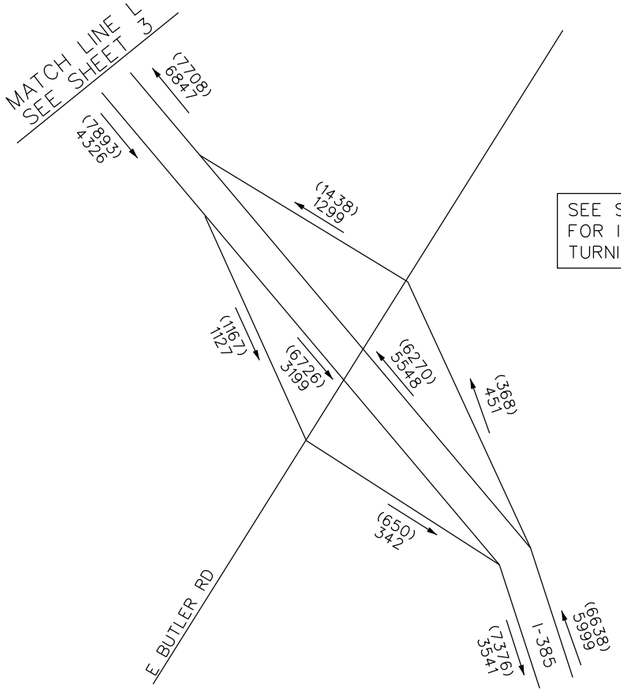
2035 PM DHV = (000)
2035 AM DHV = 000
T = 18%
SU = 16%
(COMB. = 2%)

JANUARY/2012









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GREENVILLE
COUNTY

I-85/I-385
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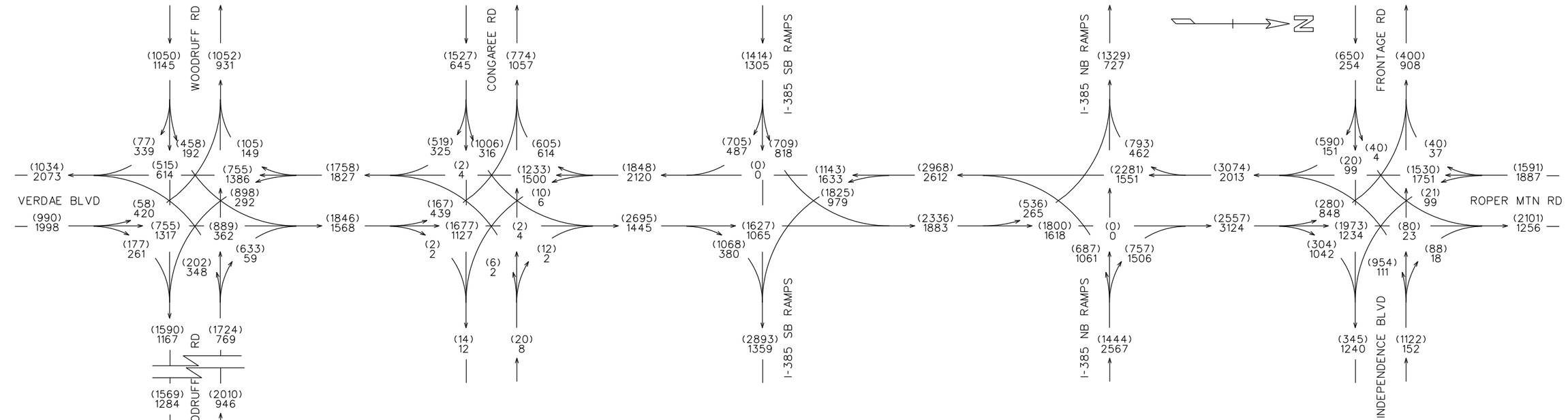

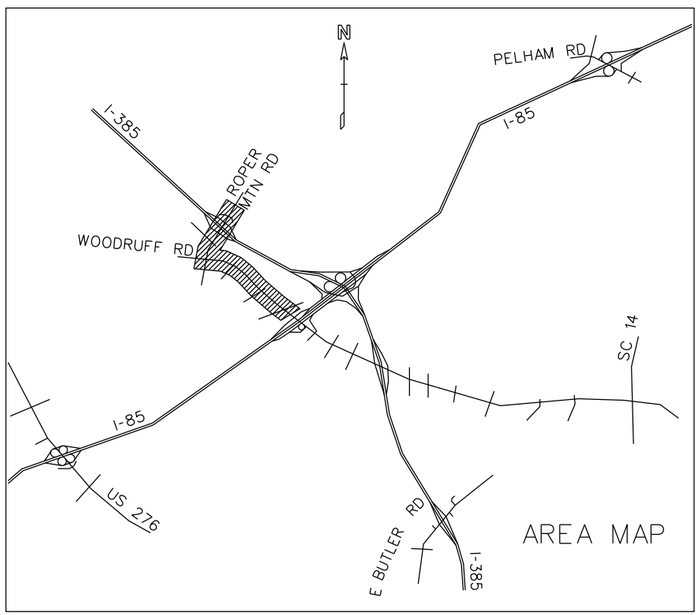

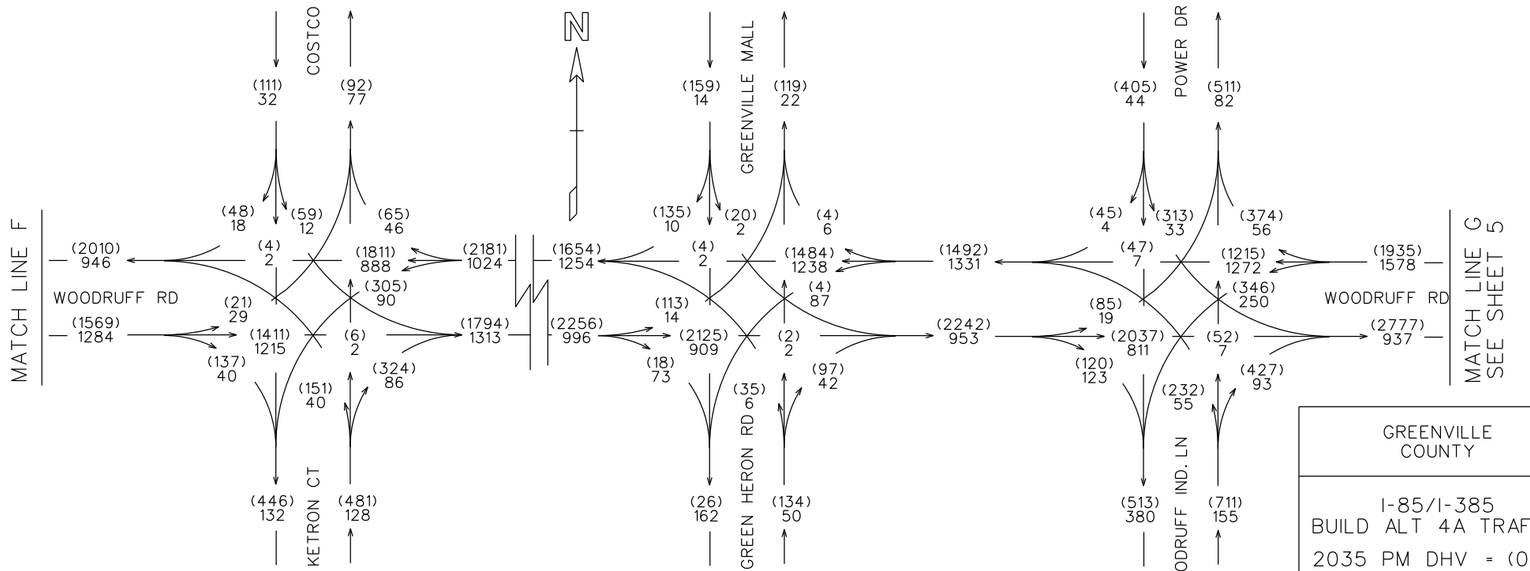

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Consulting Engineers

GREENVILLE COUNTY

I-85/I-385
BUILD ALT 4A TRAFFIC

2035 PM DHV = (000)
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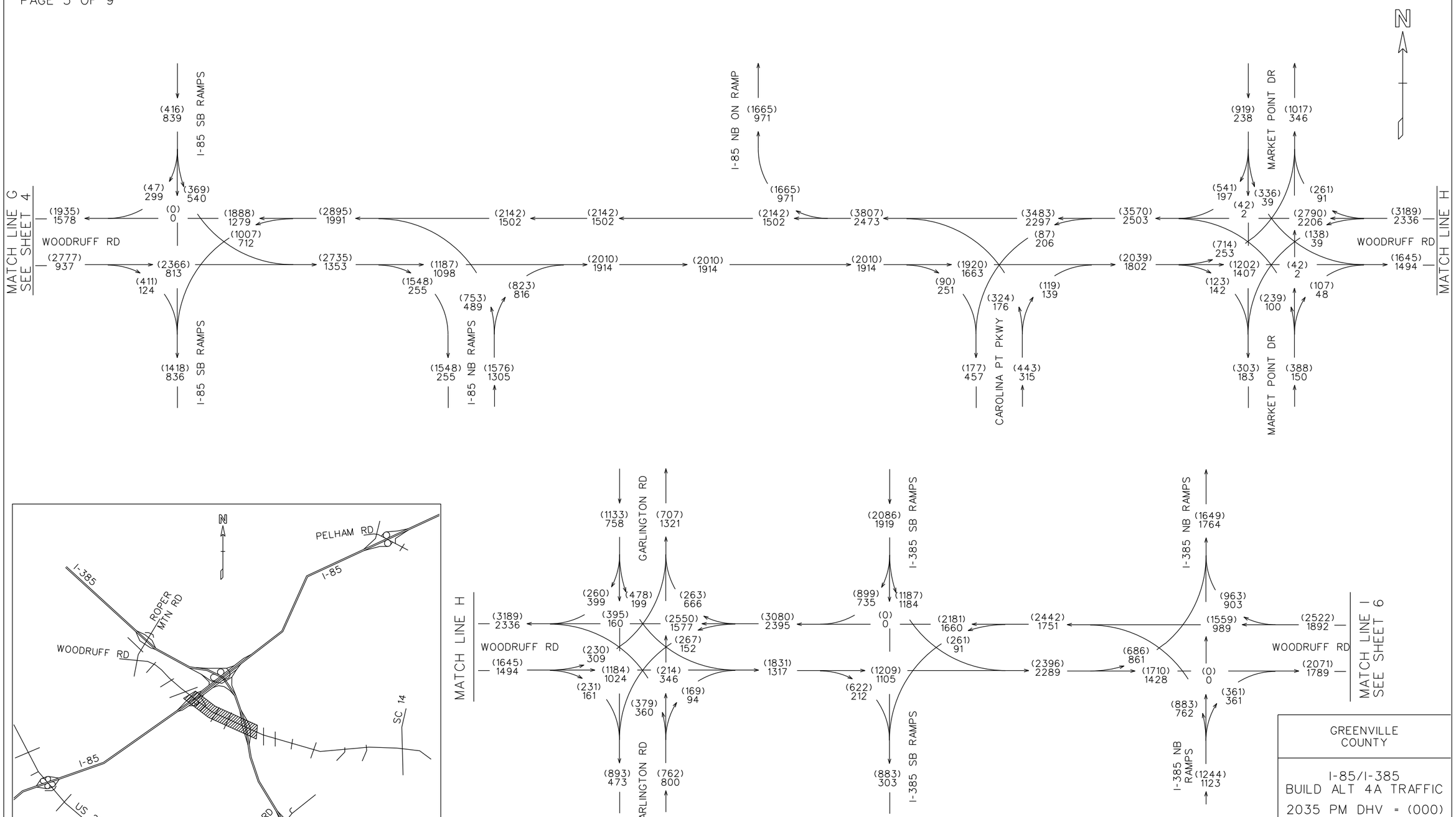
(SU = 14%
COMB. = 1%)

JANUARY/2012



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GREENVILLE COUNTY

I-85/I-385
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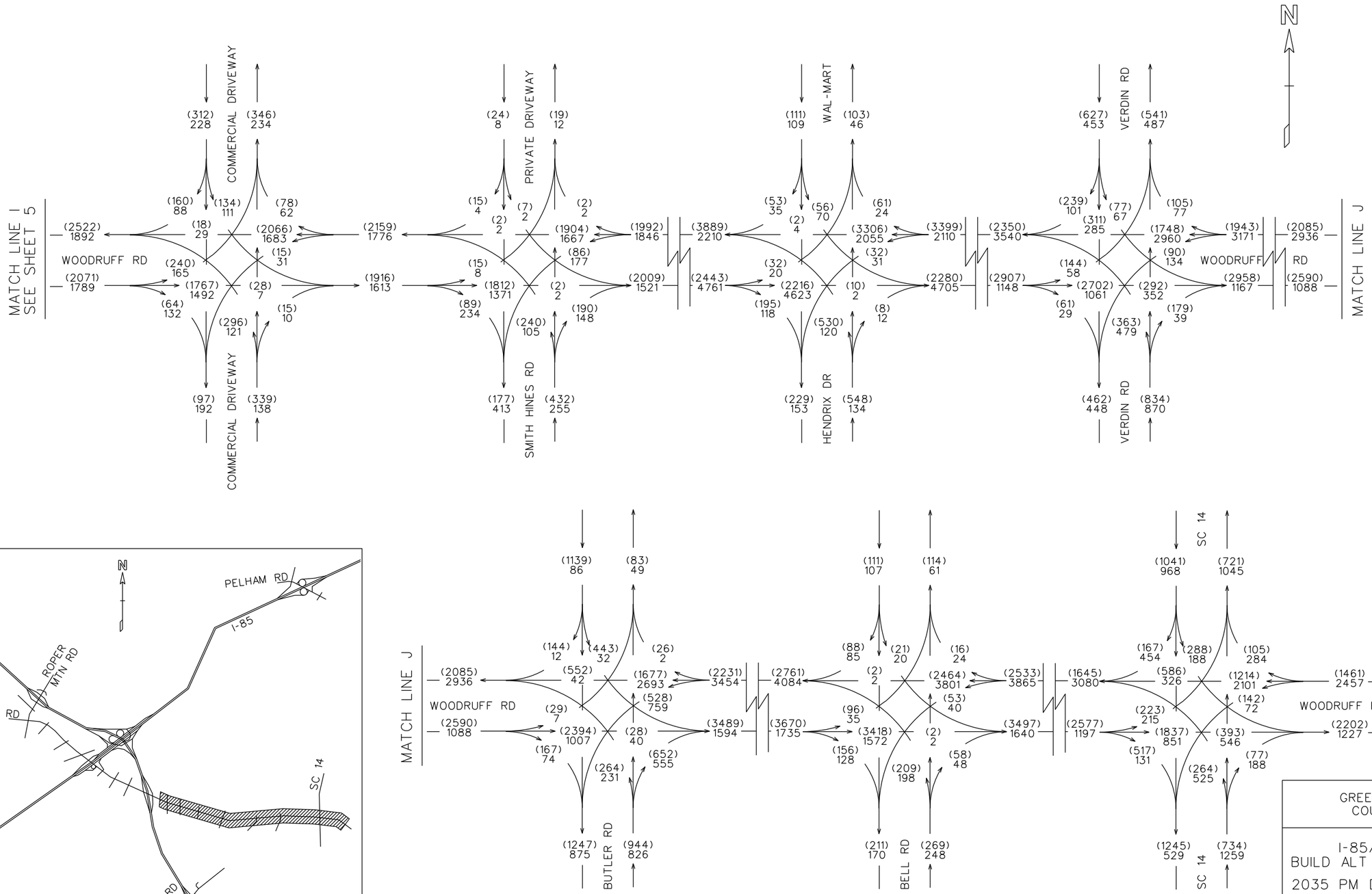

GREENVILLE COUNTY

I-85/I-385
BUILD ALT 4A TRAFFIC

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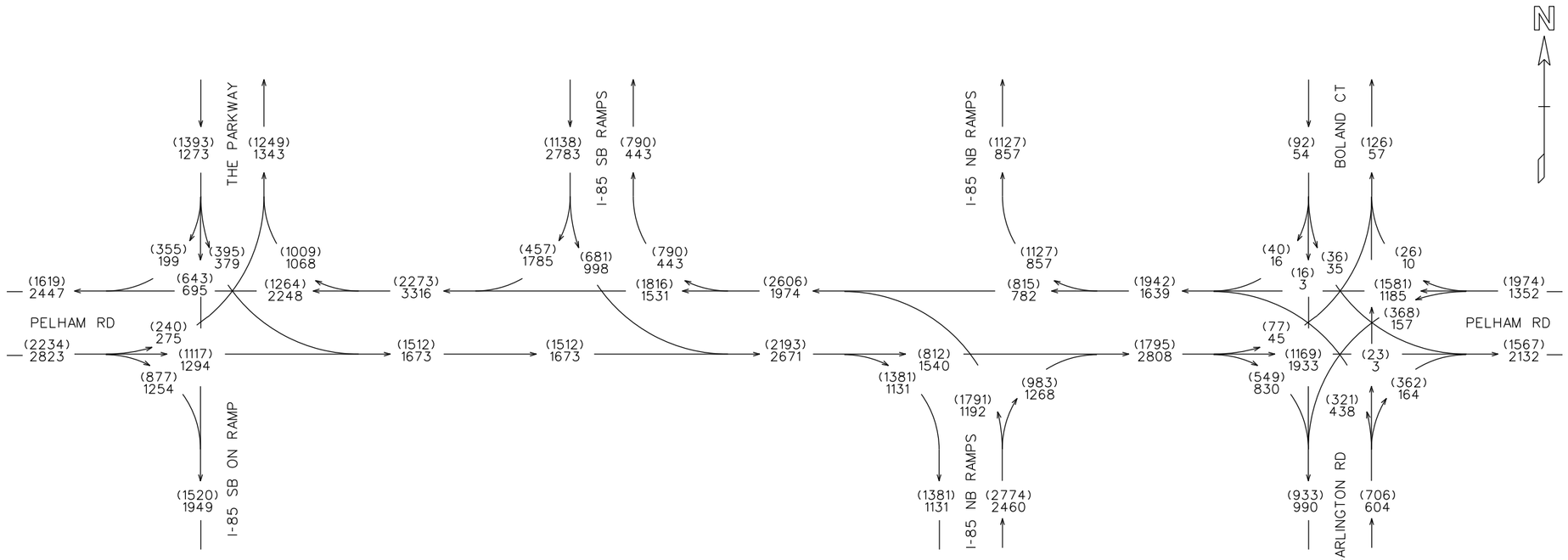

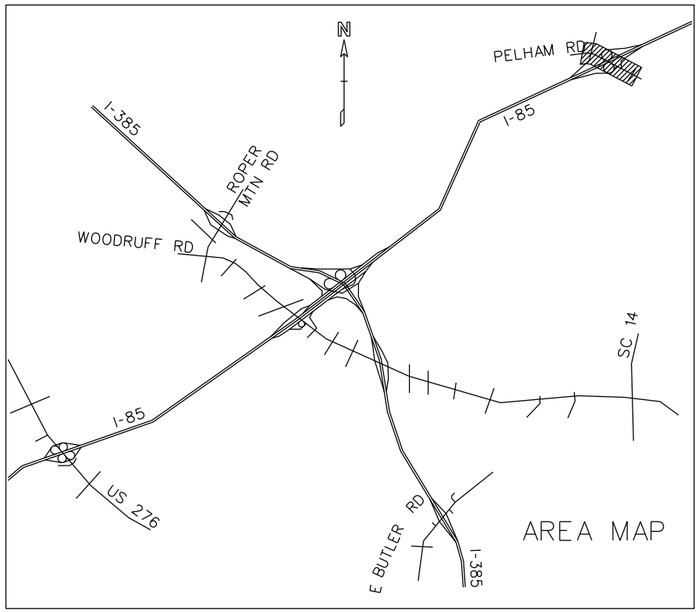

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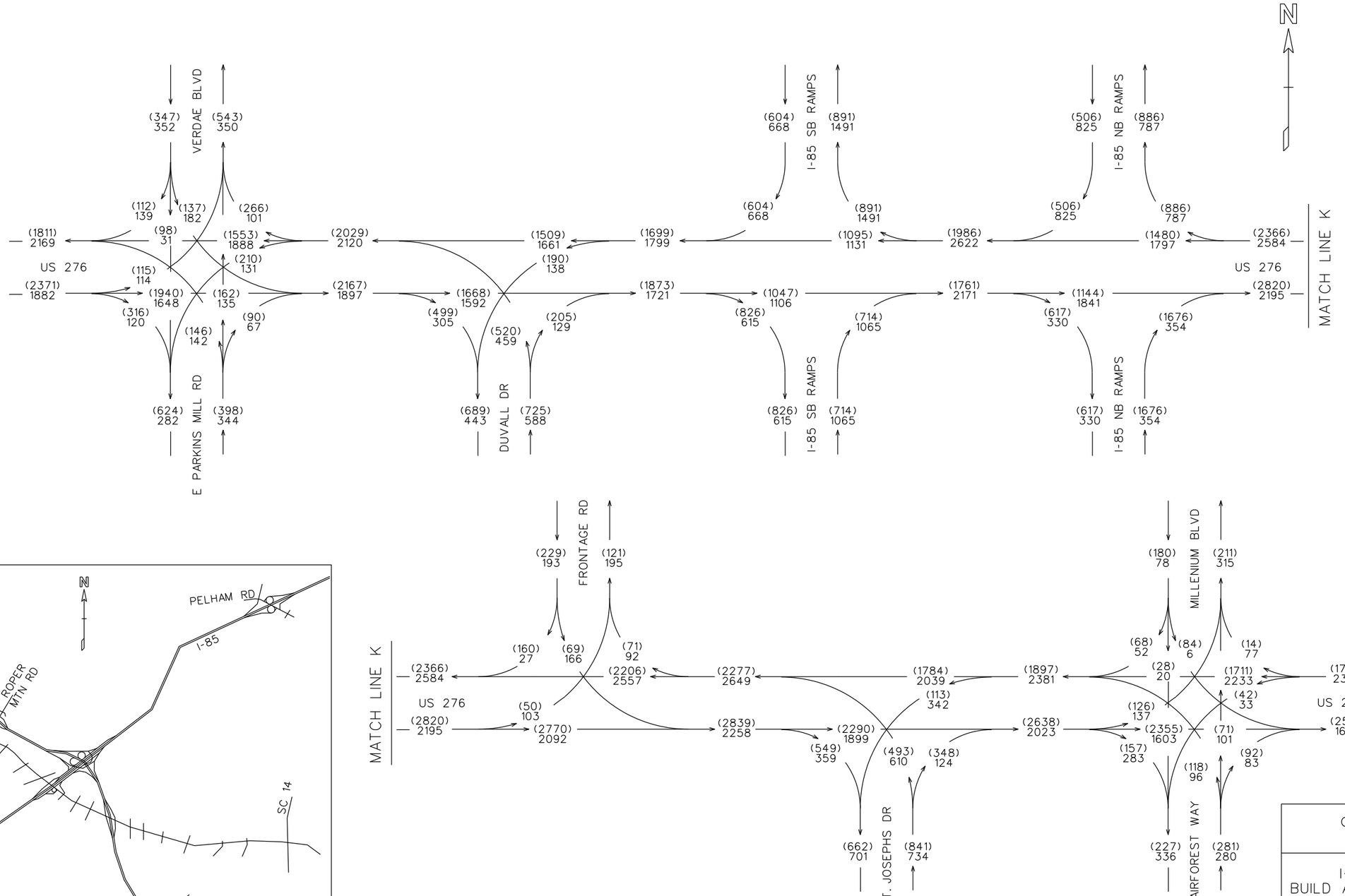

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GREENVILLE COUNTY

I-85/I-385
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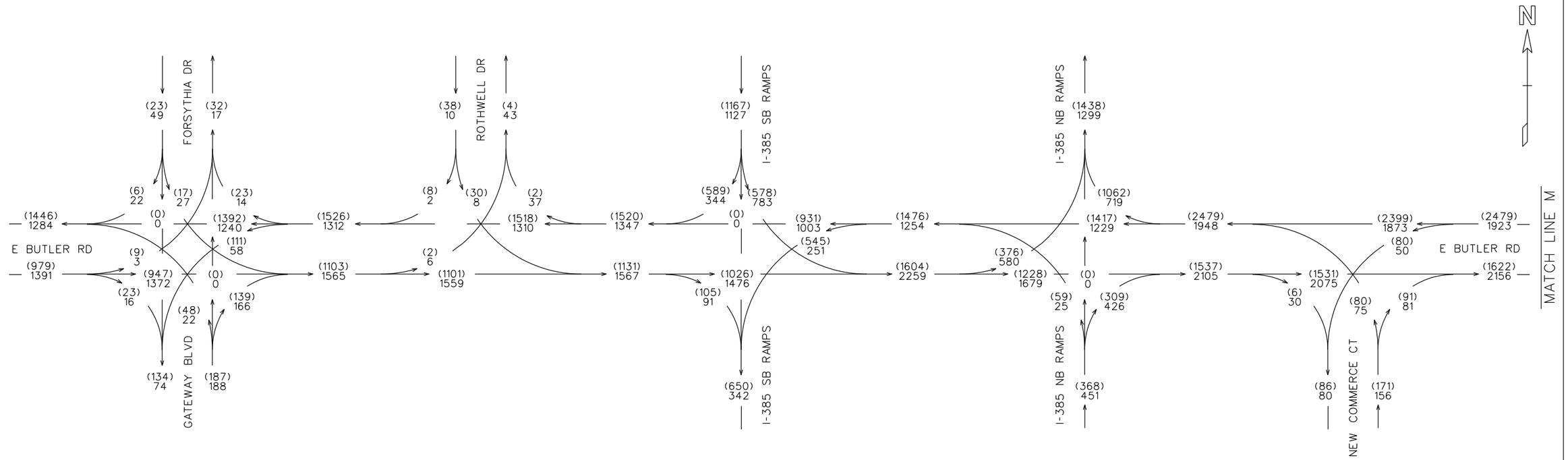

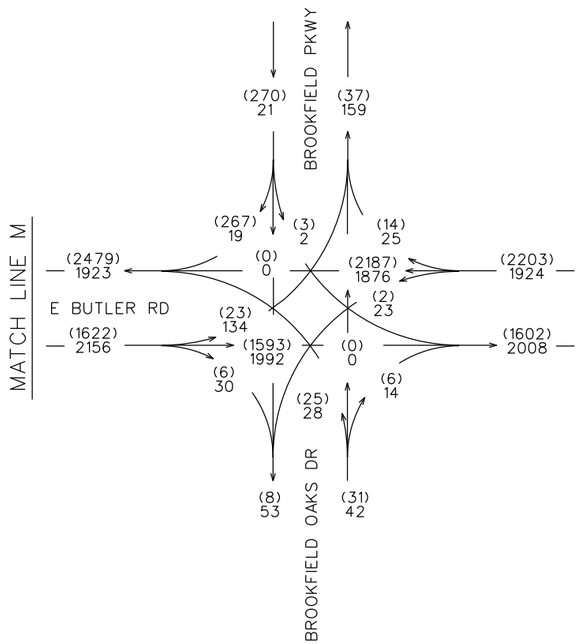

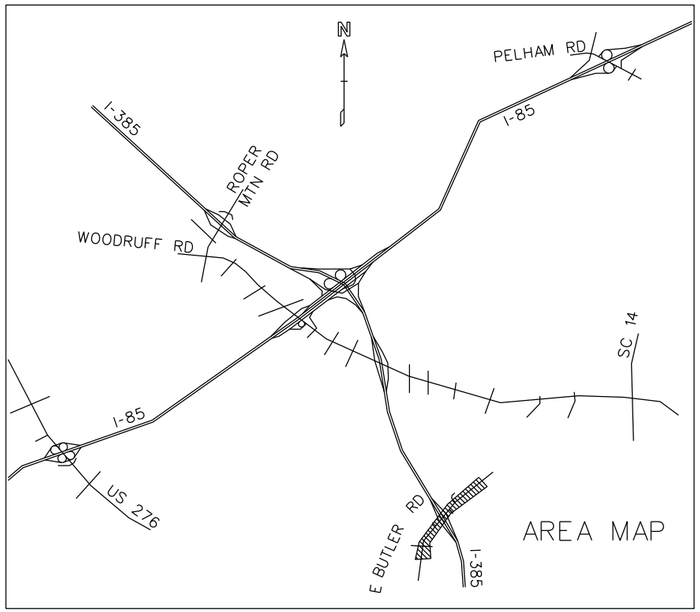

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I-85/I-385
BUILD ALT 4A TRAFFIC

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JANUARY/2012

INTERCHANGE MODIFICATION REPORT
FOR
I-85/I-385 INTERCHANGE IMPROVEMENTS

GREENVILLE COUNTY, SOUTH CAROLINA

APPENDIX C

Prepared for:

SCDOT
South Carolina Department of Transportation

Prepared by:

Florence & Hutcheson
CONSULTING ENGINEERS

501 Huger Street
Columbia, SC 29201
Tel. (803) 254-5800
Fax. (803) 929-0334




August 2012

CONTENTS

Cost Summary

Statewide Transportation Improvement Plan (STIP)

COST SUMMARY

I-85 &I-385 Interchange	
Cost Estimate Summary	
	Alternate 4A
Construction Design Fee	$5,000,000
R/W Acquisition	$14,500,000
Construction Cost	$151,700,000
Contingencies (20% of Construction Cost, includes Utility Rec.)	$30,300,000
CEI & SCDOT Management (20% of Construction Cost plus Contingencies)	$364,000,000
PROJECT TOTAL	**$237,900,000**

STATEWIDE TRANSPORTATION IMPROVEMENT PLAN (STIP)

Project Description / Length / Rank	MPO / COG	STIP Category	Federal Program	Previous STIP(s)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	2010-2015 Project Cost	Remaining Cost
I-385 at Fairview Street (Road S-543) (Roadway and Bridge Improvements) (Matching Agency - SCDOT) FY 2008 IMD Earmark (Appropriation amount ($375,000) - The funds will be used to complete maintenance improvements to I-385 in the vicinity of the Fairview Street Interchange	GPATS	Earmark (Appropriation)	Earmark			373					$373	
Salters Road Expansion along I-85 (Matching Agency - Local)	GPATS	Earmark (Appropriation)	Earmark	116 PRC							$368	
(Matching Agency - SCDOT) FY 2010 Appropriation Earmark - Actual amount ($300,000) was reduced by a 2% recession		Earmark (Appropriation)	Earmark					368 C				
SC 153 (Near Cooper Road to I-85) (Matching Agency - SCDOT) (Available balance of previously approved ISTEA earmark identified for the Southern Connector Corridor)	GPATS	Earmark (SAFETEA-LU)	Earmark	200 P	250 R	188 C					$438	
Widen West Georgia Road from Neely Ferry Road to Fork Shoals Road (Matching Agency - Local)	GPATS	Earmark (SAFETEA-LU)	Earmark		200 P		200 R 1,000 C				$1,400	
Greenville SC Transit Authority Multimodal Center IMP (Matching Agency - City of Greenville)	GPATS	Earmark (SAFETEA-LU)	Earmark		1,000 C						$1,000	
ICAR Roads (Matching Agency - City of Greenville)	GPATS	Earmark (SAFETEA-LU)	Earmark		1,822 C						$1,822	
International Center for Automotive Research (ICAR) and reconstruction of Fairforest Way (Matching Agency - City of Greenville)	GPATS	Earmark (SAFETEA-LU)	Earmark		4,373 C						$4,373	
US 25 (White Horse Rd) (Broadway Blvd (S-1047) to North of S-506)	GPATS	Federal Lands	Appalachian Development	10,000 C	20,000 C						$20,000	
Swamp Rabbit Trail - Phase I This project was awarded with the 2008 Recreational Trails program Agency - Greenville County Recreation District	GPATS	Federal Lands	Recreational Trails		125						$125	
Reedy River Trail - Greenville Tec South Section This project was awarded with the 2008 Recreational Trails program Agency - City of Greenville Parks & Recreation Department	GPATS	Federal Lands	Recreational Trails		125						$125	
Lake Conestee Nature Park - Phase III Trail This project was awarded with the 2009 Recreational Trails program Agency - Conestee Foundation	GPATS	Federal Lands	Recreational Trails		125						$125	
Fountain Inn Recreational Greenway This project was awarded with the 2009 Recreational Trails program Agency - City of Fountain Inn	GPATS	Federal Lands	Recreational Trails		125						$125	
Lake Conestee Nature Park - Swamp Rabbit Trail Extension This project was awarded with the 2010 Recreational Trail program Agency - Conestee Foundation	GPATS	Federal Lands	Recreational Trails		125						$125	
Poinsett Reservior Passage Phase II This project was awarded with the 2010 Recreational Trail program Agency - Palmetto Conservation Foundation	GPATS	Federal Lands	Recreational Trails		120						$120	
Wildcat Wayside Roadside Park This project was awarded with the 2010 Recreational Trail program Agency - South Carolina State Park Service (SCPRT)	GPATS	Federal Lands	Recreational Trails		125						$125	
The Blue Wall Connection - Protecting Scenic Highway 11 at Caesar's Head (Awarded FY 2008 funding) (The amount shown includes $330,000 of local match)	Appalachian	Federal Lands	Scenic Byways	1,160								
Cherokee Foothills Scenic Highway SC - The Blue Wall Connection (Awarded FY 2009 funding) (The amount shown includes $49,380 of local match)	Appalachian	Federal Lands	Scenic Byways		247						$247	

District 3
Greenville

Project			MPO / COG	STIP Category	Federal Program	Previous STIP(s)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	2010-2015 Project Cost	Remaining Cost
Description	Length	Rank												
Cherokee Foothills Scenic Highway SC - Protection of Critical Byway Viewshed (Awarded FY 2010 funding) (The amount shown includes $87,785 of local match)			Appalachian	Federal Lands	Scenic Byways			439					$439	
I-85 @ I-385 Exit 51		II-2	GPATS	Interstate (Interchanges)	IM NHS	4,000 P 1,000 P				31,465 C 7,866 C	100,535 C 25,134 C	56,000 C 14,000 C	$235,000	
I-85 (Near MM 40 to Near MM 44) (Northbound & Southbound)	4.00	IM-3 IM-16	GPATS	Interstate (Rehab)	IM	8,712 C								
I-85 (Near MM 43 to Near MM 48) (Northbound) (Near MM 47 to Near MM 57) (Southbound) (This project includes activities in Spartanburg County)	5.00 10.00	IM-30	GPATS	Interstate (Rehab)	IM		38 P	13,333 C					$13,370	
I-85 (Near MM 43 to Near MM 48) (Southbound)	5.00	IM-48	GPATS	Interstate (Rehab)	ARRA IM	5,220 C 580 C								
I-185 (Near MM 14 to Near MM 17) (Northbound)	3.00	IM-57	GPATS	Interstate (Rehab)	ARRA IM	2,016 C 224 C								
I-185 (Near MM 14 to Near MM 17) (Southbound)	3.00	IM-37	GPATS	Interstate (Rehab)	IM		150 P	2,417 C					$2,567	
I-385 (Near MM 22 to Near MM 26) (Northbound/Southbound)	4.00	IM-69	GPATS	Interstate (Rehab)	IM	14,991 C								
I-85 (US 25 to SC 129) (Widen to 8 lanes) (This project includes activities in Spartanburg County) (Identified in the Interstate Long Range Plan for Design Plans only)		IU-4	GPATS	Interstate (Widening)	IM NHS	4,000 P 1,000 P								
I-385 (Southern Conn to Woodruff Rd) (MM 30.3 to MM 36.5) (Widen to 6 lanes)	6.20	IU-5	GPATS	Interstate (Widening)	ARRA IM NHS	 440 P 110 P	28,330 C 39,606 C 12,114 C						$80,050	
Greenville County Resurfacing S-136 (Near S-439 to S-575) S-48 (S-566 to SC 14) S-21 (SC 291 to US 276) S-547 (S-492 to S-183) S-79 (SC 124 to Near S-1077) S-79 (Near S-47 to SC 183) S-448 (S-107 to Near Maple Dr) S-448 (S of S-107 to N of S-84) S-448 (Perimeter Rd to Ranch Rd) S-75 (McBee Ave to US 276) S-94 (SC 183 to SC 291) S-558 (US 276 to Ramseur Court) S-260 (Marue Driver to SC 20) S-476 (Goodrich St to US 123) S-116 (Near Knob Hill Lane to Near Red Hill Rd) S-116 (Near Red Hill Rd to Near Belue Cementary Rd) S-116 (Near Belue Cementary Rd to Pierce Rd)			Appalachian / GPATS	Resurfacing	ARRA Pave/Reconst	7,628 C 296 C								
Intersection Improvements SC 146 (Woodruff Rd) @ SC 296 (Bennetts Bridge)		SI-46	GPATS	Safety	Safety	625 C								
S-434 (Fairforest Way) (US 276 to Mauldin Road) (Widening)		AU-16	GPATS	System Upgrade	ARRA		3,118 C						$3,118	

Project Description	Length	Rank	MPO / COG	STIP Category	Federal Program	Previous STIP(s)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	2010-2015 Project Cost	Remaining Cost
US 29 (Church St) (S-436 (University Ridge) to Augusta St) (Corridor Improvements) Due to timeline restrictions, $5,100,000 of ARRA funds have been made available for the I-385 widening. Federal Aid funds will be made available to complete the US 29 project.		NA	GPATS	System Upgrade	NHS		5,100 C						$5,100	
US 25/SC 11 interchange/intersection improvements (Add loop to interchange & turn lanes on SC 11)		APP-01	Appalachian	System Upgrade	STP	200 P	487 R	514 R	3,000 C				$4,001	
S-164 (Batesville Road) (From SC 14 to Roper Mountain Road) (Three lanes with median, bike lanes, sidewalk North of Pelham Falls Drive)		GPATS-02	GPATS	System Upgrade	STP		250 P		500 P 1,500 R	3,000 C	5,250 C		$10,500	
SC 101/SC 290 (North Buncombe Rd) (From US 29 (Wade Hampton) to SC 290 (Locust Hill)) (Five lanes with bike lanes)		GPATS-01	GPATS	System Upgrade	STP			300 P	600 R	3,000 C			$3,900	
S-548 (Roper Mountain Rd) (From Garlington Road to Feaster Road) (Four lanes with median, bike lanes and sidewalks)		GPATS-05	GPATS	System Upgrade	STP		250 P	150 P	1,700 R		1,500 C	2,000 C	$5,600	
S-107 (Butler Road) (From Mauldin High School to Bridges Rd) (Four lanes with median, wide outside lanes and sidewalks)		GPATS-04	GPATS	System Upgrade	STP		160 P	560 R	2,500 C				$3,220	
Salter Road Ph1 Widening (Old Sulfur to Verdae Blvd) (Four lanes with median, bike lanes and sidewalks) (Environmental to be completed for Phase I & II)		GPATS-08	GPATS	System Upgrade	STP		250 P		100 R	1,500 C	2,000 C		$3,850	
Salter Road Ph2 Widening (Old Sulfur to Millenium Blvd) Widen to 4 lanes		GPATS-10	GPATS	System Upgrade	STP		500 P		100 R	3,000 C	2,000 C	2,000 C	$7,600	
Woodruff Road Widening (Scuffletown Rd to Bennetts Bridge Rd) - Widen to 5 lanes w/ S/W & wide outside lane		GPATS-11	GPATS	System Upgrade	STP			200 P	200 P	1,500 R	2,000 C		$3,900	
SC 14 (Five Forks Road to Bethel Road) (Five lanes, bike lanes, sidewalk, and future greenway access)		GPATS-13	GPATS	System Upgrade	STP				250 P	250 P		500 R	$1,000	2,000
Roper Mountain Extension (S-547) (Pelham Road to Roper Mountain Road) (This project may be combined with the Roper Mountain Road project for cost savings, if possible) (Three lanes, bike lanes, and sidewalk on one side)		GPATS-14	GPATS	System Upgrade	STP				400 P	350 P		600 R	$1,350	5,600
Roper Mountain Road (S-548) (Rope Mountain Road Extension (S-547) to Garlington Road) (This project may be combined with the Roper Mountain Road project for cost savings, if possible) (Three lanes, bike lanes, and sidewalk on one side)		GPATS-15	GPATS	System Upgrade	STP				400 P	350 P		750 R	$1,500	6,750

District 3
Greenville

Project			MPO /	STIP	Federal	Previous	FY	FY	FY	FY	FY	FY	2010-2015	Remaining
Description	Length	Rank	COG	Category	Program	STIP(s)	2010	2011	2012	2013	2014	2015	Project Cost	Cost
Butler Road (S-107) (Bridges Road to US 276) (Four lanes, divided, bike lanes, and sidewalks)		GPATS-16	GPATS	System Upgrade	STP					500 P	500 P		$1,000	15,000
Batesville Road (S-164) (Pelham Road to Roper Mountain Road) (Three lanes, wide outside lane and sidewalks)		GPATS-16	GPATS	System Upgrade	STP									12,500
Intersection Improvements SC 101 and Fews Chapel		GPATS-02	GPATS	System Upgrade	STP		200 P	350 R	1,500 C				$11,400	
Woodruff Rd and I-85 interchange (Ramp modifications) (Project to merge with I-85 @ I-385 Design Build)		GPATS-03			STP		200 P		350 C	1,500 C				
Woodruff Rd and Garlington/Miller (Project to merge with I-85 @ I-385 Design Build)		GPATS-04			STP		200 P		1,000 C	1,500 C				
Locust Hill (SC 290) and Mountain View (SC 253)		GPATS-05			STP		200 P		500 R	2,000 C				
Brushy Creek and Strange		GPATS-08			STP		250 P		450 R	1,200 C				

Project Description	MPO / COG	STIP Category	Federal Program	Previous STIP(s)	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	2010-2015 Project Cost	Remaining Cost
GTA (Greenlink) Capital - Vehicle Acquisition	GPATS/ Appalachian	Mass Transit	5307	2,240 VA	1,844 CA	1,598 CA 566 VA	1,956 CA				$5,964	
Cities of Mauldin/Simpsonville	GPATS/ Appalachian	Mass Transit	5307									
GTA (Greenlink) Capital - Vehicle Acquisition, Operations	GPATS/ Appalachian	Mass Transit	ARRA - Urban		2,690 VA 299 OP						$2,989	
Cities of Mauldin/Simpsonville (Greenlink) Capital - Vehicle Acquisition, Bus Shelters	GPATS/ Appalachian	Mass Transit	ARRA - Urban	132 CA 1,077 VA								
GTA (Greenlink) Capital - Multimodal Transportation Center	GPATS/ Appalachian	Mass Transit	5309	274 FC								
GTA (Greenlink) Job Access & Reverse Commute	GPATS/ Appalachian	Mass Transit	5316	384								
GTA (Greenlink/CU-CAR/St Francis) Vehicle Acquisition, Operations Includes carryover funds from the GPATS MPO from FY 2008 and FY 2009	GPATS	Mass Transit	5316		52 VA 57 OP						$109	
GTA (Miracle Hill Ministries) Vehicle Acquisition Includes carryover funds from the GPATS MPO from FY 2008 and FY 2009	GPATS	Mass Transit	5316		48 VA						$48	
GTA (Upstate Shuttle Service) Operations Includes carryover funds from the GPATS MPO from FY 2008 and FY 2009	GPATS	Mass Transit	5316		85 OP						$85	
GTA Administration Costs Includes carryover funds from the GPATS MPO from FY 2008 and FY 2009	GPATS	Mass Transit	5316		24 AD						$24	
GTA (Greenlink) New Freedom	GPATS/ Appalachian	Mass Transit	5317	228		48 AD 6 VA					$54	
City of Greenville Recreation Department Vehicle Acquisition, Operations, Administration	GPATS	Mass Transit	5317		48 VA 9 OP 6 AD						$63	

INTERCHANGE MODIFICATION REPORT
FOR
I-85/I-385 INTERCHANGE IMPROVEMENTS

GREENVILLE COUNTY, SOUTH CAROLINA

APPENDIX D

Prepared for:

SCDOT
South Carolina Department of Transportation

Prepared by:

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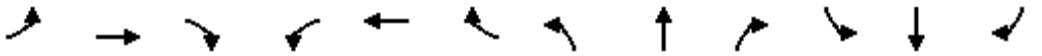
February 2012

CONTENTS

Capacity Analysis (Synchro)

- Existing Conditions
- 2015 No-Build Conditions
- 2035 No-Build Conditions

CAPACITY ANALYSIS (SYNCHRO)
EXISTING CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	323	178	183	232	31	221	693	137	139	729	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3255		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.57	1.00		0.25	1.00	1.00	0.35	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1033	3255		455	3438	1538	626	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	359	198	203	258	34	246	770	152	154	810	87
RTOR Reduction (vph)	0	73	0	0	0	29	0	0	86	0	0	37
Lane Group Flow (vph)	112	484	0	203	258	5	246	770	66	154	810	50
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	26.1	15.6		26.7	15.9	15.9	43.2	43.2	43.2	9.4	57.6	57.6
Effective Green, g (s)	26.1	15.6		26.7	15.9	15.9	43.2	43.2	43.2	9.4	57.6	57.6
Actuated g/C Ratio	0.26	0.16		0.27	0.16	0.16	0.43	0.43	0.43	0.09	0.58	0.58
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	342	508		258	547	245	270	1485	664	313	1980	886
v/s Ratio Prot	0.03	c0.15		c0.08	0.08			0.22		0.05	c0.24	
v/s Ratio Perm	0.05			0.13		0.00	c0.39		0.04			0.03
v/c Ratio	0.33	0.95		0.79	0.47	0.02	0.91	0.52	0.10	0.49	0.41	0.06
Uniform Delay, d1	29.2	41.8		31.1	38.2	35.5	26.6	20.8	16.9	43.0	11.8	9.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.98	1.32
Incremental Delay, d2	0.9	28.9		15.8	1.6	0.1	36.0	1.3	0.3	1.7	0.6	0.1
Delay (s)	30.1	70.7		47.0	39.8	35.6	62.6	22.1	17.1	35.0	12.0	12.3
Level of Service	C	E		D	D	D	E	C	B	C	B	B
Approach Delay (s)		63.9			42.5			30.0			15.4	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	624	21	47	467	24	21	1	45	6	1	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3422		1719	3438	1538	1719	1543		1719	1810	1538
Flt Permitted	0.43	1.00		0.38	1.00	1.00	0.76	1.00		0.72	1.00	1.00
Satd. Flow (perm)	774	3422		687	3438	1538	1370	1543		1310	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	693	23	52	519	27	23	1	50	7	1	10
RTOR Reduction (vph)	0	1	0	0	0	8	0	46	0	0	0	9
Lane Group Flow (vph)	17	715	0	52	519	19	23	5	0	7	1	1
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	96.9	96.9		85.6	85.6	85.6	10.1	10.1		10.1	10.1	14.9
Effective Green, g (s)	96.9	96.9		85.6	85.6	85.6	10.1	10.1		10.1	10.1	14.9
Actuated g/C Ratio	0.81	0.81		0.71	0.71	0.71	0.08	0.08		0.08	0.08	0.12
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	663	2763		490	2452	1097	115	130		110	152	274
v/s Ratio Prot	0.00	c0.21			0.15			0.00			0.00	0.00
v/s Ratio Perm	0.02			0.08		0.01	c0.02			0.01		0.00
v/c Ratio	0.03	0.26		0.11	0.21	0.02	0.20	0.04		0.06	0.01	0.00
Uniform Delay, d1	2.4	2.8		5.3	5.8	5.0	51.2	50.5		50.6	50.4	46.1
Progression Factor	1.00	1.00		0.11	0.12	0.01	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.0	0.2		0.4	0.2	0.0	2.1	0.3		0.6	0.0	0.0
Delay (s)	2.5	3.0		1.0	0.9	0.1	53.3	50.8		51.2	50.4	46.1
Level of Service	A	A		A	A	A	D	D		D	D	D
Approach Delay (s)		3.0			0.9			51.6			48.3	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	5.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	3	1	22	1	1	5	7	492	38	46	726	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.88			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1592			1765	1538	1719	3401		1719	3438	1538
Flt Permitted		0.97			0.87	1.00	0.35	1.00		0.43	1.00	1.00
Satd. Flow (perm)		1548			1577	1538	628	3401		778	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	1	24	1	1	6	8	547	42	51	807	3
RTOR Reduction (vph)	0	22	0	0	0	6	0	3	0	0	0	0
Lane Group Flow (vph)	0	6	0	0	2	0	8	586	0	51	807	3
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		7.7			7.7	7.7	101.0	101.0		101.0	101.0	101.0
Effective Green, g (s)		7.7			7.7	7.7	101.0	101.0		101.0	101.0	101.0
Actuated g/C Ratio		0.06			0.06	0.06	0.84	0.84		0.84	0.84	0.84
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		99			101	99	529	2863		655	2894	1294
v/s Ratio Prot								0.17			c0.23	
v/s Ratio Perm		c0.00			0.00	0.00	0.01			0.07		0.00
v/c Ratio		0.06			0.02	0.00	0.02	0.20		0.08	0.28	0.00
Uniform Delay, d1		52.7			52.6	52.6	1.5	1.8		1.6	2.0	1.5
Progression Factor		1.00			1.00	1.00	0.98	0.98		0.34	0.43	0.27
Incremental Delay, d2		0.4			0.1	0.0	0.1	0.2		0.2	0.2	0.0
Delay (s)		53.1			52.7	52.6	1.5	1.9		0.8	1.1	0.4
Level of Service		D			D	D	A	A		A	A	A
Approach Delay (s)		53.1			52.6			1.9			1.1	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	2.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	31	4	49	18	4	2	10	437	68	133	742	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.86		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1557		1719	1719		1719	3368		1719	3418	
Flt Permitted	0.61	1.00		0.72	1.00		0.33	1.00		0.39	1.00	
Satd. Flow (perm)	1110	1557		1301	1719		597	3368		700	3418	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	4	54	20	4	2	11	486	76	148	824	33
RTOR Reduction (vph)	0	49	0	0	2	0	0	7	0	0	1	0
Lane Group Flow (vph)	34	9	0	20	4	0	11	555	0	148	856	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	17.7	11.8		13.3	9.6		72.9	71.6		86.5	79.2	
Effective Green, g (s)	17.7	11.8		13.3	9.6		72.9	71.6		86.5	79.2	
Actuated g/C Ratio	0.15	0.10		0.11	0.08		0.61	0.60		0.72	0.66	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	194	153		157	138		375	2010		580	2256	
v/s Ratio Prot	c0.01	0.01		0.00	0.00		0.00	0.16		c0.02	c0.25	
v/s Ratio Perm	c0.02			0.01			0.02			0.16		
v/c Ratio	0.18	0.06		0.13	0.03		0.03	0.28		0.26	0.38	
Uniform Delay, d1	44.5	49.1		48.0	50.9		9.3	11.7		5.6	9.3	
Progression Factor	1.00	1.00		1.00	1.00		0.58	0.79		0.30	0.34	
Incremental Delay, d2	0.7	0.3		0.6	0.1		0.0	0.3		0.4	0.5	
Delay (s)	45.2	49.3		48.6	51.0		5.5	9.6		2.0	3.6	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		47.8			49.1			9.5			3.4	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	8.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations											
Volume (vph)	291	0	203	0	432	72	402	702	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95			
Frt	1.00		0.85		1.00	0.85	1.00	1.00			
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00			
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438			
Flt Permitted	0.95		1.00		1.00	1.00	0.42	1.00			
Satd. Flow (perm)	3335		2707		3438	1538	759	3438			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	323	0	226	0	480	80	447	780	0	0	0
RTOR Reduction (vph)	0	0	192	0	0	36	0	0	0	0	0
Lane Group Flow (vph)	323	0	34	0	480	44	447	780	0	0	0
Turn Type	custom		custom			Perm	pm+pt				
Protected Phases					2		1	6			
Permitted Phases	4		4			2	6				
Actuated Green, G (s)	18.3		18.3		66.6	66.6	90.6	90.6			
Effective Green, g (s)	18.3		18.3		66.6	66.6	90.6	90.6			
Actuated g/C Ratio	0.15		0.15		0.55	0.55	0.76	0.76			
Clearance Time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Vehicle Extension (s)	4.3		4.3		4.3	4.3	4.3	4.3			
Lane Grp Cap (vph)	509		413		1908	854	711	2596			
v/s Ratio Prot					0.14		c0.09	0.23			
v/s Ratio Perm	c0.10		0.01			0.03	c0.38				
v/c Ratio	0.63		0.08		0.25	0.05	0.63	0.30			
Uniform Delay, d1	47.7		43.7		13.8	12.2	5.6	4.7			
Progression Factor	1.00		1.00		0.46	0.09	0.78	0.22			
Incremental Delay, d2	3.1		0.1		0.3	0.1	1.9	0.3			
Delay (s)	50.8		43.8		6.7	1.2	6.3	1.3			
Level of Service	D		D		A	A	A	A			
Approach Delay (s)		47.9			5.9			3.1		0.0	
Approach LOS		D			A			A		A	

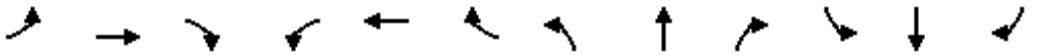
Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	292	524	590	133	0	812
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	1.00	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	1538	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	1538	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	324	582	656	148	0	902
RTOR Reduction (vph)	0	152	0	98	0	0
Lane Group Flow (vph)	324	430	656	50	0	902
Turn Type		Perm		Perm		
Protected Phases	3		2			2 4
Permitted Phases		3		2		
Actuated Green, G (s)	51.4	51.4	40.5	40.5		56.5
Effective Green, g (s)	51.4	51.4	40.5	40.5		49.5
Actuated g/C Ratio	0.43	0.43	0.34	0.34		0.41
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	1428	659	1160	519		1418
v/s Ratio Prot	0.10		0.19			c0.26
v/s Ratio Perm		c0.28		0.03		
v/c Ratio	0.23	0.65	0.57	0.10		0.64
Uniform Delay, d1	21.7	27.2	32.5	27.2		28.1
Progression Factor	1.00	1.00	0.80	1.66		0.36
Incremental Delay, d2	0.1	2.7	1.9	0.4		1.1
Delay (s)	21.8	29.9	28.0	45.4		11.2
Level of Service	C	C	C	D		B
Approach Delay (s)	27.0		31.2			11.2
Approach LOS	C		C			B

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

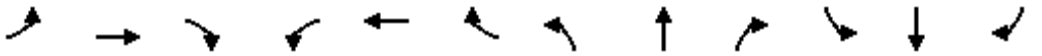
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	61	36	73	0	0	0	0	973	141	105	751	481
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0					6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00					0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00					1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1810	1538					3438	1538	1719	3438	1538
Flt Permitted	0.95	1.00	1.00					1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	1719	1810	1538					3438	1538	461	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	68	40	81	0	0	0	0	1081	157	117	834	534
RTOR Reduction (vph)	0	0	75	0	0	0	0	0	28	0	0	96
Lane Group Flow (vph)	68	40	6	0	0	0	0	1081	129	117	834	438
Turn Type	custom		Perm						Perm	Perm		Perm
Protected Phases	4	4						2 3 6			2 3 6	
Permitted Phases	4		4						2 3 6	2 3 6		2 3 6
Actuated Green, G (s)	9.0	9.0	9.0					98.4	98.4	98.4	98.4	98.4
Effective Green, g (s)	9.0	9.0	9.0					98.4	98.4	98.4	98.4	98.4
Actuated g/C Ratio	0.08	0.08	0.08					0.82	0.82	0.82	0.82	0.82
Clearance Time (s)	7.0	7.0	7.0									
Vehicle Extension (s)	4.3	4.3	4.3									
Lane Grp Cap (vph)	129	136	115					2819	1261	378	2819	1261
v/s Ratio Prot	c0.04	0.02						c0.31			0.24	
v/s Ratio Perm			0.00						0.08	0.25		0.28
v/c Ratio	0.53	0.29	0.05					0.38	0.10	0.31	0.30	0.35
Uniform Delay, d1	53.5	52.5	51.5					2.8	2.1	2.6	2.6	2.7
Progression Factor	1.00	1.00	1.00					0.28	0.00	2.02	1.98	9.63
Incremental Delay, d2	5.7	1.9	0.3					0.1	0.0	0.5	0.1	0.2
Delay (s)	59.1	54.4	51.8					0.9	0.0	5.8	5.2	26.4
Level of Service	E	D	D					A	A	A	A	C
Approach Delay (s)		55.0			0.0			0.8			12.8	
Approach LOS		E			A			A			B	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



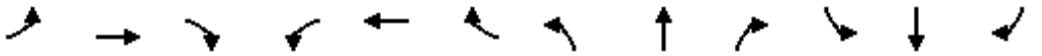
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	954	31	21	1292	54	16	1	30	24	1	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	5.8	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	68	1060	34	23	1436	60	18	1	33	27	1	32
RTOR Reduction (vph)	0	0	17	0	0	18	0	0	23	0	0	30
Lane Group Flow (vph)	68	1060	17	23	1436	42	18	1	10	27	1	2
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		Perm
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	8.0	51.4	59.1	30.3	73.7	81.1	7.7	7.1	37.4	7.4	6.8	6.8
Effective Green, g (s)	8.0	51.4	59.1	30.3	73.7	81.1	7.7	7.1	37.4	7.4	6.8	6.8
Actuated g/C Ratio	0.07	0.43	0.49	0.25	0.61	0.68	0.06	0.06	0.31	0.06	0.06	0.06
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	5.8	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	222	1473	757	434	2112	1039	110	107	479	206	195	87
v/s Ratio Prot	0.02	c0.31	0.00	0.01	c0.42	0.00	c0.01	0.00	c0.01	0.01	0.00	
v/s Ratio Perm			0.01			0.03			0.00			0.00
v/c Ratio	0.31	0.72	0.02	0.05	0.68	0.04	0.16	0.01	0.02	0.13	0.01	0.02
Uniform Delay, d1	53.4	28.3	15.6	34.0	15.3	6.5	53.1	53.1	28.6	53.3	53.4	53.5
Progression Factor	0.82	0.79	1.16	0.74	0.58	0.77	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	2.9	0.0	0.0	0.9	0.0	1.1	0.1	0.0	0.5	0.0	0.2
Delay (s)	45.0	25.3	18.1	25.1	9.8	5.0	54.2	53.2	28.6	53.7	53.4	53.6
Level of Service	D	C	B	C	A	A	D	D	C	D	D	D
Approach Delay (s)		26.3			9.9			38.0			53.7	
Approach LOS		C			A			D			D	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



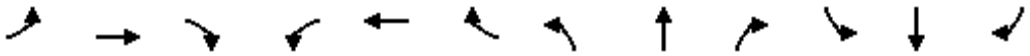
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	197	707	104	92	890	416	226	217	59	125	100	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1		5.2	6.1		5.2	5.2		5.2	5.2	5.2
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.95		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3372		1719	3274		1719	1751		1719	1810	1538
Flt Permitted	0.07	1.00		0.24	1.00		0.61	1.00		0.19	1.00	1.00
Satd. Flow (perm)	126	3372		434	3274		1111	1751		353	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	219	786	116	102	989	462	251	241	66	139	111	279
RTOR Reduction (vph)	0	9	0	0	46	0	0	8	0	0	0	180
Lane Group Flow (vph)	219	893	0	102	1405	0	251	299	0	139	111	99
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	69.5	57.6		63.3	54.5		32.9	22.1		30.9	21.1	21.1
Effective Green, g (s)	69.5	57.6		63.3	54.5		32.9	22.1		30.9	21.1	21.1
Actuated g/C Ratio	0.58	0.48		0.53	0.45		0.27	0.18		0.26	0.18	0.18
Clearance Time (s)	5.2	6.1		5.2	6.1		5.2	5.2		5.2	5.2	5.2
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	4.3
Lane Grp Cap (vph)	231	1619		323	1487		359	322		202	318	270
v/s Ratio Prot	c0.09	0.26		0.02	0.43		c0.06	c0.17		0.06	0.06	
v/s Ratio Perm	c0.46			0.14			0.13			0.12		0.06
v/c Ratio	0.95	0.55		0.32	0.94		0.70	0.93		0.69	0.35	0.37
Uniform Delay, d1	36.5	22.1		15.1	31.3		37.8	48.2		36.9	43.4	43.6
Progression Factor	2.23	0.08		0.60	0.70		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	41.7	1.2		0.7	11.1		6.6	32.4		10.6	1.1	1.3
Delay (s)	123.2	3.1		9.8	33.1		44.4	80.5		47.5	44.5	44.9
Level of Service	F	A		A	C		D	F		D	D	D
Approach Delay (s)		26.5			31.5			64.3			45.5	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



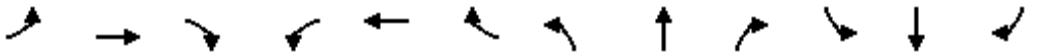
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	758	133	57	955	0	0	0	0	744	0	443
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		5.7
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.98		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3361		1719	3438					3335		1538
Flt Permitted		1.00		0.15	1.00					0.95		1.00
Satd. Flow (perm)		3361		275	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	842	148	63	1061	0	0	0	0	827	0	492
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	0	40
Lane Group Flow (vph)	0	979	0	63	1061	0	0	0	0	827	0	452
Turn Type				pm+pt						Prot		custom
Protected Phases		2		1	6					4		
Permitted Phases				6								4
Actuated Green, G (s)		51.8		64.9	64.9					42.8		42.8
Effective Green, g (s)		51.8		64.9	64.9					42.8		42.8
Actuated g/C Ratio		0.43		0.54	0.54					0.36		0.36
Clearance Time (s)		6.6		6.6	6.6					5.7		5.7
Vehicle Extension (s)		4.3		4.3	4.3					4.3		4.3
Lane Grp Cap (vph)		1451		227	1859					1189		549
v/s Ratio Prot		c0.29		0.02	c0.31					0.25		
v/s Ratio Perm				0.14								c0.29
v/c Ratio		0.67		0.28	0.57					0.70		0.82
Uniform Delay, d1		27.3		16.8	18.3					33.0		35.2
Progression Factor		0.47		0.25	0.36					1.01		1.01
Incremental Delay, d2		2.0		0.6	0.7					2.0		10.4
Delay (s)		14.9		4.8	7.3					35.5		46.1
Level of Service		B		A	A					D		D
Approach Delay (s)		14.9			7.2			0.0			39.4	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.9
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



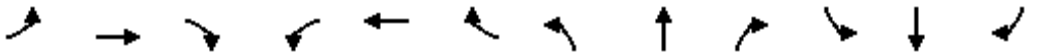
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	541	961	0	0	544	542	468	0	227	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.20	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	370	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	601	1068	0	0	604	602	520	0	252	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	447	0	0	68	0	0	0
Lane Group Flow (vph)	601	1068	0	0	604	155	520	0	184	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	71.2	71.2			30.9	30.9	37.7		37.7			
Effective Green, g (s)	71.2	71.2			30.9	30.9	37.7		37.7			
Actuated g/C Ratio	0.59	0.59			0.26	0.26	0.31		0.31			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	604	2040			885	396	540		483			
v/s Ratio Prot	c0.28	0.31			0.18		c0.30					
v/s Ratio Perm	c0.31					0.10			0.12			
v/c Ratio	1.00	0.52			0.68	0.39	0.96		0.38			
Uniform Delay, d1	28.6	14.4			40.1	36.8	40.5		32.1			
Progression Factor	0.97	0.59			0.82	1.58	1.00		1.00			
Incremental Delay, d2	30.7	0.7			3.7	2.5	29.6		0.8			
Delay (s)	58.5	9.2			36.5	60.6	70.1		32.9			
Level of Service	E	A			D	E	E		C			
Approach Delay (s)		27.0			48.6			57.9			0.0	
Approach LOS		C			D			E			A	

Intersection Summary			
HCM Average Control Delay	40.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



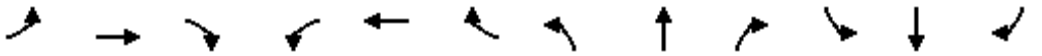
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	1001	83	19	955	39	76	4	6	70	18	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.90		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3399		1719	3418		1719	1637		1719	1605	
Flt Permitted	0.17	1.00		0.23	1.00		0.50	1.00		0.75	1.00	
Satd. Flow (perm)	313	3399		420	3418		909	1637		1358	1605	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	1112	92	21	1061	43	84	4	7	78	20	61
RTOR Reduction (vph)	0	4	0	0	2	0	0	5	0	0	54	0
Lane Group Flow (vph)	116	1200	0	21	1102	0	84	6	0	78	27	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	82.8	82.8		68.5	68.5		26.3	26.3		13.2	13.2	
Effective Green, g (s)	82.8	82.8		68.5	68.5		26.3	26.3		13.2	13.2	
Actuated g/C Ratio	0.69	0.69		0.57	0.57		0.22	0.22		0.11	0.11	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	321	2345		240	1951		252	359		149	177	
v/s Ratio Prot	0.03	c0.35			c0.32		c0.02	0.00			0.02	
v/s Ratio Perm	0.22			0.05			0.05			c0.06		
v/c Ratio	0.36	0.51		0.09	0.56		0.33	0.02		0.52	0.15	
Uniform Delay, d1	9.5	8.9		11.6	16.3		38.6	36.7		50.4	48.3	
Progression Factor	0.57	0.37		0.35	0.36		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.7		0.7	1.1		1.2	0.0		4.8	0.6	
Delay (s)	6.3	4.0		4.8	7.0		39.8	36.7		55.3	49.0	
Level of Service	A	A		A	A		D	D		E	D	
Approach Delay (s)		4.2			7.0			39.5			52.1	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



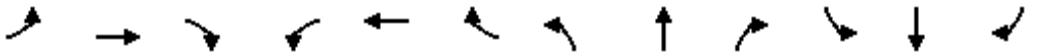
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	925	147	111	945	1	66	1	93	1	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.92			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1719	3368		1719	3438			1634			1667	
Flt Permitted	0.25	1.00		0.21	1.00			0.86			0.96	
Satd. Flow (perm)	458	3368		387	3438			1441			1618	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	1028	163	123	1050	1	73	1	103	1	1	2
RTOR Reduction (vph)	0	8	0	0	0	0	0	45	0	0	2	0
Lane Group Flow (vph)	6	1183	0	123	1051	0	0	132	0	0	2	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	91.6	91.6		91.9	91.9			17.1			17.1	
Effective Green, g (s)	91.6	91.6		91.9	91.9			17.1			17.1	
Actuated g/C Ratio	0.76	0.76		0.77	0.77			0.14			0.14	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	350	2571		296	2633			205			231	
v/s Ratio Prot		c0.35			0.31							
v/s Ratio Perm	0.01			0.32				c0.09			0.00	
v/c Ratio	0.02	0.46		0.42	0.40			0.64			0.01	
Uniform Delay, d1	3.4	5.2		4.8	4.7			48.6			44.2	
Progression Factor	0.12	0.11		0.29	0.31			1.00			1.00	
Incremental Delay, d2	0.1	0.5		0.4	0.0			7.9			0.0	
Delay (s)	0.5	1.1		1.8	1.5			56.5			44.2	
Level of Service	A	A		A	A			E			D	
Approach Delay (s)		1.1			1.5			56.5			44.2	
Approach LOS		A			A			E			D	

Intersection Summary			
HCM Average Control Delay	5.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



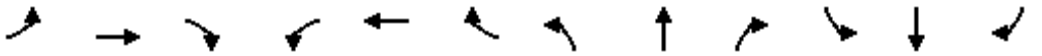
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	1393	122	12	2907	74	44	2	22	75	1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.86			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	
Satd. Flow (prot)	1719	3396		1719	3425		1719	1559			1711	
Flt Permitted	0.04	1.00		0.13	1.00		0.77	1.00			0.73	
Satd. Flow (perm)	80	3396		234	3425		1393	1559			1302	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	1548	136	13	3230	82	49	2	24	83	1	8
RTOR Reduction (vph)	0	4	0	0	1	0	0	21	0	0	4	0
Lane Group Flow (vph)	22	1680	0	13	3311	0	49	5	0	0	88	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	94.1	94.1		83.8	83.8		14.6	14.6			14.6	
Effective Green, g (s)	94.1	94.1		83.8	83.8		14.6	14.6			14.6	
Actuated g/C Ratio	0.78	0.78		0.70	0.70		0.12	0.12			0.12	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	117	2663		163	2392		169	190			158	
v/s Ratio Prot	0.01	c0.49			c0.97			0.00				
v/s Ratio Perm	0.14			0.06			0.04				c0.07	
v/c Ratio	0.19	0.63		0.08	1.38		0.29	0.03			0.56	
Uniform Delay, d1	34.1	5.5		5.8	18.1		48.0	46.4			49.7	
Progression Factor	1.45	1.16		0.55	0.57		1.00	1.00			1.00	
Incremental Delay, d2	1.2	1.1		0.5	174.4		1.5	0.1			6.0	
Delay (s)	50.7	7.5		3.7	184.8		49.5	46.5			55.7	
Level of Service	D	A		A	F		D	D			E	
Approach Delay (s)		8.1			184.1			48.5			55.7	
Approach LOS		A			F			D			E	

Intersection Summary			
HCM Average Control Delay	122.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	103.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



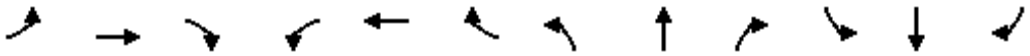
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	667	18	84	1861	48	301	221	24	42	179	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3425		1719	3425		1719	1810	1538	1719	1739	
Flt Permitted	0.06	1.00		0.32	1.00		0.18	1.00	1.00	0.61	1.00	
Satd. Flow (perm)	106	3425		576	3425		325	1810	1538	1097	1739	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	741	20	93	2068	53	334	246	27	47	199	70
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	18	0	10	0
Lane Group Flow (vph)	40	759	0	93	2120	0	334	246	9	47	259	0
Turn Type	Perm			Perm			pm+pt		Perm	Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	68.6	68.6		68.6	68.6		40.1	40.1	40.1	16.9	16.9	
Effective Green, g (s)	68.6	68.6		68.6	68.6		40.1	40.1	40.1	16.9	16.9	
Actuated g/C Ratio	0.57	0.57		0.57	0.57		0.33	0.33	0.33	0.14	0.14	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	61	1958		329	1958		315	605	514	154	245	
v/s Ratio Prot		0.22			c0.62		c0.16	0.14			0.15	
v/s Ratio Perm	0.38			0.16			c0.20		0.01	0.04		
v/c Ratio	0.66	0.39		0.28	1.08		1.06	0.41	0.02	0.31	1.06	
Uniform Delay, d1	17.6	14.1		13.1	25.7		34.3	30.8	26.8	46.3	51.6	
Progression Factor	0.84	0.94		0.91	0.85		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	36.3	0.5		1.5	44.3		67.5	0.7	0.0	1.8	73.0	
Delay (s)	51.1	13.7		13.5	66.2		101.9	31.5	26.8	48.1	124.5	
Level of Service	D	B		B	E		F	C	C	D	F	
Approach Delay (s)		15.6			64.0			70.0			113.2	
Approach LOS		B			E			E			F	

Intersection Summary			
HCM Average Control Delay	59.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	113.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



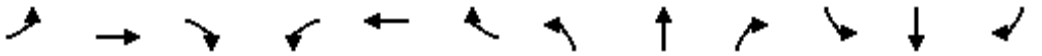
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	633	46	477	1693	1	145	25	349	20	26	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3402		1719	3438			1736	1538	1719	1751	
Flt Permitted		0.94		0.25	1.00			0.73	1.00	0.45	1.00	
Satd. Flow (perm)		3203		445	3438			1324	1538	814	1751	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	703	51	530	1881	1	161	28	388	22	29	8
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	52	0	7	0
Lane Group Flow (vph)	0	754	0	530	1882	0	0	189	336	22	30	0
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		52.7		86.7	86.7			22.0	49.7	22.0	22.0	
Effective Green, g (s)		52.7		86.7	86.7			22.0	49.7	22.0	22.0	
Actuated g/C Ratio		0.44		0.72	0.72			0.18	0.41	0.18	0.18	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1407		616	2484			243	637	149	321	
v/s Ratio Prot				c0.20	0.55				0.12		0.02	
v/s Ratio Perm		0.24		c0.42				c0.14	0.10	0.03		
v/c Ratio		0.54		0.86	0.76			0.78	0.53	0.15	0.09	
Uniform Delay, d1		24.7		16.9	10.2			46.7	26.3	41.1	40.7	
Progression Factor		0.75		1.50	0.81			1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.4		3.3	0.5			15.7	1.2	0.7	0.2	
Delay (s)		19.8		28.6	8.8			62.4	27.5	41.9	40.9	
Level of Service		B		C	A			E	C	D	D	
Approach Delay (s)		19.8			13.1			38.9			41.3	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



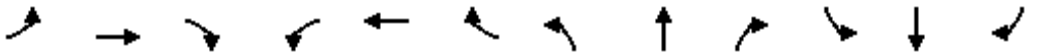
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	988	80	25	2390	15	124	1	30	12	1	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3399		1719	3435			1695			1598	
Flt Permitted	0.04	1.00		0.22	1.00			0.72			0.95	
Satd. Flow (perm)	78	3399		391	3435			1278			1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	1098	89	28	2656	17	138	1	33	13	1	59
RTOR Reduction (vph)	0	5	0	0	0	0	0	7	0	0	8	0
Lane Group Flow (vph)	24	1182	0	28	2673	0	0	165	0	0	65	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	92.4	92.4		92.4	92.4			16.0			16.0	
Effective Green, g (s)	92.4	92.4		92.4	92.4			16.0			16.0	
Actuated g/C Ratio	0.77	0.77		0.77	0.77			0.13			0.13	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	60	2617		301	2645			170			204	
v/s Ratio Prot		0.35			c0.78							
v/s Ratio Perm	0.31			0.07				c0.13			0.04	
v/c Ratio	0.40	0.45		0.09	1.01			0.97			0.32	
Uniform Delay, d1	4.6	4.9		3.4	13.8			51.8			47.1	
Progression Factor	1.72	0.92		0.75	0.55			1.00			1.00	
Incremental Delay, d2	16.9	0.5		0.3	15.4			60.5			1.4	
Delay (s)	24.8	5.0		2.9	23.0			112.3			48.5	
Level of Service	C	A		A	C			F			D	
Approach Delay (s)		5.4			22.8			112.3			48.5	
Approach LOS		A			C			F			D	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	535	82	45	1321	178	330	343	118	118	205	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3377		1719	1810	1538	1719	1810	1538
Flt Permitted	0.07	1.00	1.00	0.38	1.00		0.20	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	127	3438	1538	694	3377		362	1810	1538	483	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	150	594	91	50	1468	198	367	381	131	131	228	317
RTOR Reduction (vph)	0	0	34	0	9	0	0	0	89	0	0	21
Lane Group Flow (vph)	150	594	57	50	1657	0	367	381	42	131	228	296
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	65.6	56.9	74.9	63.2	55.7		38.0	23.1	30.6	24.9	15.0	23.7
Effective Green, g (s)	65.6	56.9	74.9	63.2	55.7		38.0	23.1	30.6	24.9	15.0	23.7
Actuated g/C Ratio	0.55	0.47	0.62	0.53	0.46		0.32	0.19	0.26	0.21	0.12	0.20
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	185	1630	960	430	1567		318	348	392	202	226	304
v/s Ratio Prot	0.06	0.17	0.01	0.01	c0.49		c0.17	0.21	0.01	0.05	0.13	c0.07
v/s Ratio Perm	0.38		0.03	0.05			c0.19		0.02	0.08		0.12
v/c Ratio	0.81	0.36	0.06	0.12	1.06		1.15	1.09	0.11	0.65	1.01	0.97
Uniform Delay, d1	30.5	20.1	8.8	14.0	32.2		36.0	48.4	34.2	41.3	52.5	47.8
Progression Factor	1.45	0.65	0.56	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.5	0.6	0.0	0.2	39.7		99.0	76.1	0.2	8.2	62.2	44.5
Delay (s)	66.7	13.6	5.0	14.2	71.9		135.1	124.6	34.4	49.6	114.7	92.3
Level of Service	E	B	A	B	E		F	F	C	D	F	F
Approach Delay (s)		22.2			70.2			115.5			91.6	
Approach LOS		C			E			F			F	

Intersection Summary			
HCM Average Control Delay	73.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	97.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



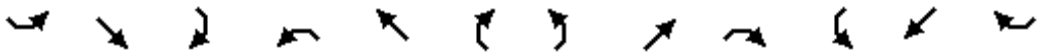
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	91	45	124	21	94	89	1302	68	77	1138	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3267		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.74	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1343	3267		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	101	50	138	23	104	99	1447	76	86	1264	90
RTOR Reduction (vph)	0	44	0	0	0	90	0	0	39	0	0	43
Lane Group Flow (vph)	107	107	0	138	23	14	99	1447	37	86	1264	47
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	20.4	11.4		10.7	13.1	13.1	11.3	47.8	47.8	8.5	45.0	45.0
Effective Green, g (s)	20.4	11.4		10.7	13.1	13.1	11.3	47.8	47.8	8.5	45.0	45.0
Actuated g/C Ratio	0.21	0.11		0.11	0.13	0.13	0.11	0.48	0.48	0.09	0.45	0.45
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	310	375		359	239	203	195	2376	740	285	2236	696
v/s Ratio Prot	0.03	0.03		c0.04	0.01		c0.06	c0.29		0.03	0.26	
v/s Ratio Perm	c0.04					0.01			0.02			0.03
v/c Ratio	0.35	0.28		0.38	0.10	0.07	0.51	0.61	0.05	0.30	0.57	0.07
Uniform Delay, d1	33.5	40.3		41.3	37.9	37.8	41.4	18.9	13.7	42.7	20.0	15.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.8		1.1	0.4	0.3	3.3	0.6	0.1	0.9	0.5	0.1
Delay (s)	34.5	41.1		42.4	38.3	38.1	44.7	19.6	13.8	43.6	20.5	15.4
Level of Service	C	D		D	D	D	D	B	B	D	C	B
Approach Delay (s)		38.4			40.3			20.8			21.6	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	99.4	Sum of lost time (s)	19.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



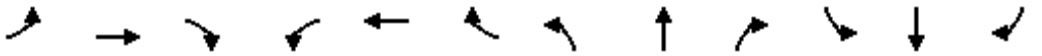
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	318	88	1099	208	95	1141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4822		1719	4940
Flt Permitted	0.95	1.00	1.00		0.15	1.00
Satd. Flow (perm)	1719	1538	4822		265	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	353	98	1221	231	106	1268
RTOR Reduction (vph)	0	50	43	0	0	0
Lane Group Flow (vph)	353	48	1409	0	106	1268
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	15.0	15.0	36.4		36.4	36.4
Effective Green, g (s)	15.0	15.0	36.4		36.4	36.4
Actuated g/C Ratio	0.24	0.24	0.57		0.57	0.57
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	405	362	2755		151	2823
v/s Ratio Prot	c0.21		0.29			0.26
v/s Ratio Perm		0.03			c0.40	
v/c Ratio	0.87	0.13	0.51		0.70	0.45
Uniform Delay, d1	23.4	19.2	8.3		9.8	7.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	19.4	0.3	0.3		16.7	0.2
Delay (s)	42.8	19.5	8.6		26.5	8.1
Level of Service	D	B	A		C	A
Approach Delay (s)	37.8		8.6			9.5
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	63.7	Sum of lost time (s)	12.3
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



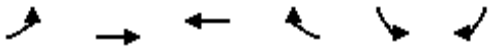
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	93	1104	192	22	1542	52	65	68	56	4	13	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3206		1719	1810	2707
Flt Permitted	0.06	1.00	1.00	0.19	1.00	1.00	0.95	1.00		0.66	1.00	1.00
Satd. Flow (perm)	112	3438	1538	347	3438	1538	3335	3206		1202	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	1227	213	24	1713	58	72	76	62	4	14	39
RTOR Reduction (vph)	0	0	72	0	0	22	0	54	0	0	0	33
Lane Group Flow (vph)	103	1227	141	24	1713	36	72	84	0	4	14	6
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	95.7	87.5	87.5	85.8	82.1	82.1	8.5	16.7		10.8	9.5	19.1
Effective Green, g (s)	95.7	87.5	87.5	85.8	82.1	82.1	8.5	16.7		10.8	9.5	19.1
Actuated g/C Ratio	0.72	0.66	0.66	0.65	0.62	0.62	0.06	0.13		0.08	0.07	0.14
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	198	2276	1018	264	2135	955	214	405		103	130	391
v/s Ratio Prot	c0.04	0.36		0.00	c0.50		c0.02	c0.03		0.00	0.01	0.00
v/s Ratio Perm	0.34		0.09	0.06		0.02				0.00		0.00
v/c Ratio	0.52	0.54	0.14	0.09	0.80	0.04	0.34	0.21		0.04	0.11	0.01
Uniform Delay, d1	19.9	11.7	8.3	8.9	18.9	9.7	59.2	51.8		55.9	57.4	48.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.6	0.4	0.1	0.2	2.6	0.0	1.5	0.8		0.2	1.1	0.0
Delay (s)	23.6	12.2	8.4	9.2	21.5	9.8	60.6	52.6		56.1	58.5	48.5
Level of Service	C	B	A	A	C	A	E	D		E	E	D
Approach Delay (s)		12.4			21.0			55.4			51.5	
Approach LOS		B			C			E			D	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	132.2	Sum of lost time (s)	16.5
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	846	880	0	1509	700	0	0	0	250	454	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	940	978	0	1677	778	0	0	0	278	504	194
RTOR Reduction (vph)	0	0	40	0	0	4	0	0	0	0	0	116
Lane Group Flow (vph)	249	940	938	0	1677	774	0	0	0	278	504	78
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	10.2	78.1	78.1		62.1	97.9				35.8	35.8	35.8
Effective Green, g (s)	10.2	78.1	78.1		62.1	97.9				35.8	35.8	35.8
Actuated g/C Ratio	0.08	0.62	0.62		0.50	0.78				0.29	0.29	0.29
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	272	2148	961		1708	1205				492	518	440
v/s Ratio Prot	0.07	0.27			0.49	0.18					c0.28	
v/s Ratio Perm			c0.61			0.32				0.16		0.05
v/c Ratio	0.92	0.44	0.98		0.98	0.64				0.57	0.97	0.18
Uniform Delay, d1	57.0	12.1	22.6		30.9	5.9				38.0	44.1	33.5
Progression Factor	1.00	1.00	1.00		0.80	0.86				1.00	1.00	1.00
Incremental Delay, d2	33.6	0.7	23.8		11.2	0.7				2.0	32.6	0.3
Delay (s)	90.6	12.8	46.4		35.8	5.7				40.0	76.8	33.8
Level of Service	F	B	D		D	A				D	E	C
Approach Delay (s)		36.9			26.3			0.0			57.8	
Approach LOS		D			C			A			E	

Intersection Summary			
HCM Average Control Delay	35.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	134.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

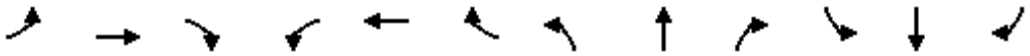


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1096	1144	0	562	1065
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1218	1271	0	624	1183
RTOR Reduction (vph)	0	0	0	0	0	19
Lane Group Flow (vph)	0	1218	1271	0	624	1164
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		54.9	54.9		59.2	59.2
Effective Green, g (s)		54.9	54.9		59.2	59.2
Actuated g/C Ratio		0.44	0.44		0.47	0.47
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1510	1510		814	1282
v/s Ratio Prot		0.35	c0.37		0.36	
v/s Ratio Perm						c0.43
v/c Ratio		0.81	0.84		0.77	0.91
Uniform Delay, d1		30.4	31.2		27.2	30.4
Progression Factor		0.98	0.84		1.00	1.00
Incremental Delay, d2		4.3	5.1		4.8	9.8
Delay (s)		34.2	31.3		32.0	40.2
Level of Service		C	C		C	D
Approach Delay (s)		34.2	31.3		37.3	
Approach LOS		C	C		D	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

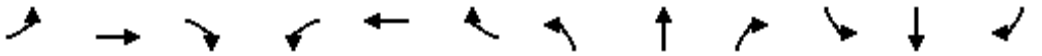
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1002	0	0	613	839	869
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1113	0	0	681	932	966
RTOR Reduction (vph)	0	0	0	0	0	5
Lane Group Flow (vph)	1113	0	0	681	932	961
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	42.2			42.2	72.0	72.0
Effective Green, g (s)	42.2			42.2	72.0	72.0
Actuated g/C Ratio	0.34			0.34	0.58	0.58
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	1161			1161	1921	886
v/s Ratio Prot	c0.32			0.20	0.28	
v/s Ratio Perm						c0.62
v/c Ratio	0.96			0.59	0.49	1.08
Uniform Delay, d1	40.5			34.2	15.6	26.5
Progression Factor	0.70			0.94	1.00	1.00
Incremental Delay, d2	12.6			1.8	0.3	55.8
Delay (s)	40.9			33.9	15.9	82.3
Level of Service	D			C	B	F
Approach Delay (s)	40.9			33.9	49.7	
Approach LOS	D			C	D	

Intersection Summary			
HCM Average Control Delay	44.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	123.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



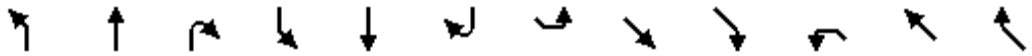
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	1299	542	137	790	7	272	2	144	24	2	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.96		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	
Satd. Flow (prot)	1719	3286		1719	3433			1724	1538		1683	
Flt Permitted	0.32	1.00		0.05	1.00			0.70	1.00		0.53	
Satd. Flow (perm)	581	3286		95	3433			1262	1538		929	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	33	1443	602	152	878	8	302	2	160	27	2	12
RTOR Reduction (vph)	0	37	0	0	1	0	0	0	114	0	9	0
Lane Group Flow (vph)	33	2008	0	152	885	0	0	304	46	0	32	0
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	69.3	69.3		84.3	84.3			27.7	27.7		27.7	
Effective Green, g (s)	69.3	69.3		84.3	84.3			27.7	27.7		27.7	
Actuated g/C Ratio	0.55	0.55		0.67	0.67			0.22	0.22		0.22	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	322	1822		172	2315			280	341		206	
v/s Ratio Prot		c0.61		c0.06	0.26							
v/s Ratio Perm	0.06			0.54				c0.24	0.03		0.03	
v/c Ratio	0.10	1.10		0.88	0.38			1.09	0.14		0.15	
Uniform Delay, d1	13.2	27.8		40.1	8.9			48.7	39.0		39.2	
Progression Factor	0.67	0.55		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.1	47.0		38.7	0.5			78.6	0.3		0.6	
Delay (s)	8.8	62.3		78.8	9.4			127.2	39.3		39.8	
Level of Service	A	E		E	A			F	D		D	
Approach Delay (s)		61.5			19.6			96.9			39.8	
Approach LOS		E			B			F			D	

Intersection Summary			
HCM Average Control Delay	53.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



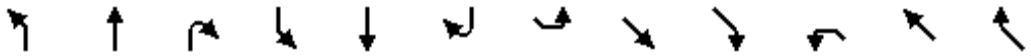
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	0	14	14	0	106	2	879	10	37	793	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.88		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1585		1719	3432		1719	3432	
Flt Permitted		0.89	1.00		0.95		0.29	1.00		0.21	1.00	
Satd. Flow (perm)		1611	1538		1521		521	3432		379	3432	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	19	0	16	16	0	118	2	977	11	41	881	10
RTOR Reduction (vph)	0	0	14	0	100	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	19	2	0	34	0	2	987	0	41	890	0
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		7.3	7.3		7.3		21.6	20.9		23.8	22.0	
Effective Green, g (s)		7.3	7.3		7.3		21.6	20.9		23.8	22.0	
Actuated g/C Ratio		0.15	0.15		0.15		0.45	0.44		0.50	0.46	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		245	234		231		252	1494		238	1573	
v/s Ratio Prot							0.00	c0.29		c0.01	0.26	
v/s Ratio Perm		0.01	0.00		c0.02		0.00			0.08		
v/c Ratio		0.08	0.01		0.15		0.01	0.66		0.17	0.57	
Uniform Delay, d1		17.5	17.3		17.6		7.3	10.7		6.7	9.5	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1	0.0		0.3		0.0	1.1		0.3	0.5	
Delay (s)		17.6	17.3		17.9		7.3	11.9		7.0	10.0	
Level of Service		B	B		B		A	B		A	A	
Approach Delay (s)		17.5			17.9			11.8			9.8	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



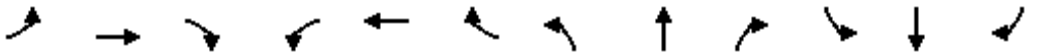
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	945	58	161	642	0	501	0	220	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6		5.6	5.6			5.7	5.7			
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00			
Frt		0.99		1.00	1.00			1.00	0.85			
Flt Protected		1.00		0.95	1.00			0.95	1.00			
Satd. Flow (prot)		3408		1719	3438			1719	1538			
Flt Permitted		1.00		0.09	1.00			0.95	1.00			
Satd. Flow (perm)		3408		155	3438			1719	1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1050	64	179	713	0	557	0	244	0	0	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	116	0	0	0
Lane Group Flow (vph)	0	1111	0	179	713	0	0	557	128	0	0	0
Turn Type				pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases				6			4		4			
Actuated Green, G (s)		41.1		58.2	58.2			41.0	41.0			
Effective Green, g (s)		41.1		58.2	58.2			41.0	41.0			
Actuated g/C Ratio		0.37		0.53	0.53			0.37	0.37			
Clearance Time (s)		5.6		5.6	5.6			5.7	5.7			
Vehicle Extension (s)		2.5		2.5	2.0			2.8	2.8			
Lane Grp Cap (vph)		1268		244	1811			638	571			
v/s Ratio Prot		c0.33		c0.08	0.21							
v/s Ratio Perm				0.31				0.32	0.08			
v/c Ratio		0.88		0.73	0.39			0.87	0.22			
Uniform Delay, d1		32.3		24.6	15.6			32.3	23.8			
Progression Factor		1.00		1.00	1.00			1.00	1.00			
Incremental Delay, d2		7.0		10.3	0.1			12.6	0.2			
Delay (s)		39.3		34.9	15.7			44.9	24.0			
Level of Service		D		C	B			D	C			
Approach Delay (s)		39.3			19.5			38.5			0.0	
Approach LOS		D			B			D			A	

Intersection Summary			
HCM Average Control Delay	32.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.5	Sum of lost time (s)	16.9
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



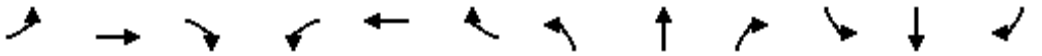
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	371	1075	0	0	787	460	0	0	0	16	0	273
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.3			5.3	5.3				5.3		5.3
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1719	3438			3438	1538				1719		1538
Flt Permitted	0.15	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	264	3438			3438	1538				1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	412	1194	0	0	874	511	0	0	0	18	0	303
RTOR Reduction (vph)	0	0	0	0	0	333	0	0	0	0	0	84
Lane Group Flow (vph)	412	1194	0	0	874	178	0	0	0	18	0	219
Turn Type	pm+pt					Perm				custom		custom
Protected Phases	5	2			6					3		3
Permitted Phases	2					6				8		
Actuated Green, G (s)	64.6	64.6			32.7	32.7				18.5		18.5
Effective Green, g (s)	64.6	64.6			32.7	32.7				18.5		18.5
Actuated g/C Ratio	0.69	0.69			0.35	0.35				0.20		0.20
Clearance Time (s)	5.3	5.3			5.3	5.3				5.3		5.3
Vehicle Extension (s)	2.0	3.0			3.0	3.0				3.0		3.0
Lane Grp Cap (vph)	595	2370			1200	537				339		304
v/s Ratio Prot	c0.20	0.35			0.25					0.01		c0.14
v/s Ratio Perm	c0.28					0.12						
v/c Ratio	0.69	0.50			0.73	0.33				0.05		0.72
Uniform Delay, d1	17.3	6.9			26.6	22.5				30.5		35.2
Progression Factor	1.00	1.00			1.00	1.00				1.00		1.00
Incremental Delay, d2	2.8	0.2			2.2	0.4				0.1		7.9
Delay (s)	20.1	7.1			28.9	22.8				30.6		43.1
Level of Service	C	A			C	C				C		D
Approach Delay (s)		10.4			26.6			0.0			42.4	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	93.7	Sum of lost time (s)	10.6
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



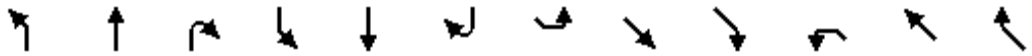
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	52	80	58	12	9	446	649	548	52	921	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1645		1633	1664	1538	1719	3438	1538	1719	3428	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.10	1.00	1.00	0.38	1.00	
Satd. Flow (perm)	1719	1645		1633	1664	1538	174	3438	1538	683	3428	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	58	89	64	13	10	496	721	609	58	1023	21
RTOR Reduction (vph)	0	56	0	0	0	10	0	0	192	0	1	0
Lane Group Flow (vph)	2	91	0	38	39	0	496	721	417	58	1043	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	8.8	8.8		4.7	4.7	4.7	68.5	68.5	68.5	35.5	35.5	
Effective Green, g (s)	8.8	8.8		4.7	4.7	4.7	68.5	68.5	68.5	35.5	35.5	
Actuated g/C Ratio	0.09	0.09		0.05	0.05	0.05	0.68	0.68	0.68	0.36	0.36	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	151	145		77	78	72	536	2355	1054	242	1217	
v/s Ratio Prot	0.00	c0.06		0.02	c0.02		c0.25	0.21			0.30	
v/s Ratio Perm						0.00	c0.38		0.27	0.08		
v/c Ratio	0.01	0.63		0.49	0.50	0.01	0.93	0.31	0.40	0.24	0.86	
Uniform Delay, d1	41.6	44.0		46.5	46.5	45.4	28.0	6.3	6.8	22.7	29.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.94	1.09	3.51	1.00	1.00	
Incremental Delay, d2	0.1	11.5		9.7	9.8	0.1	18.2	0.3	0.8	2.3	7.9	
Delay (s)	41.7	55.6		56.2	56.3	45.5	44.4	7.1	24.8	25.1	37.8	
Level of Service	D	E		E	E	D	D	A	C	C	D	
Approach Delay (s)		55.4			55.0			23.1			37.1	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



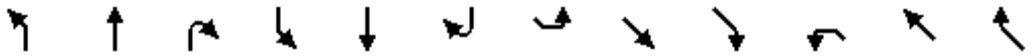
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	558	0	792	139	851	0	0	816	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	620	0	880	154	946	0	0	907	270
RTOR Reduction (vph)	0	0	0	0	0	99	0	0	0	0	0	170
Lane Group Flow (vph)	0	0	0	310	310	781	154	946	0	0	907	100
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				36.3	36.3	36.3	8.8	51.7			36.9	36.9
Effective Green, g (s)				36.3	36.3	36.3	8.8	51.7			36.9	36.9
Actuated g/C Ratio				0.36	0.36	0.36	0.09	0.52			0.37	0.37
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				593	593	983	293	1777			1269	568
v/s Ratio Prot							0.05	c0.28			c0.26	
v/s Ratio Perm				0.19	0.19	c0.29						0.06
v/c Ratio				0.52	0.52	0.79	0.53	0.53			0.71	0.18
Uniform Delay, d1				25.0	25.0	28.5	43.6	16.1			27.0	21.3
Progression Factor				1.00	1.00	1.00	1.36	0.51			0.64	0.99
Incremental Delay, d2				1.5	1.5	5.1	2.3	1.0			1.9	0.4
Delay (s)				26.6	26.6	33.7	61.5	9.3			19.1	21.5
Level of Service				C	C	C	E	A			B	C
Approach Delay (s)		0.0			30.7			16.6			19.6	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	560	200	515	859	0	430	0	241	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.39	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	705	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	622	222	572	954	0	478	0	268	0	0	0
RTOR Reduction (vph)	0	0	127	0	0	0	0	0	214	0	0	0
Lane Group Flow (vph)	0	622	95	572	954	0	239	239	54	0	0	0
Turn Type			Perm	pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		43.0	43.0	68.1	67.5		20.0	20.0	20.0			
Effective Green, g (s)		43.0	43.0	68.1	67.5		20.0	20.0	20.0			
Actuated g/C Ratio		0.43	0.43	0.68	0.68		0.20	0.20	0.20			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		2124	661	670	2321		327	327	541			
v/s Ratio Prot		0.13		c0.16	0.28							
v/s Ratio Perm			0.06	c0.42			c0.15	0.15	0.02			
v/c Ratio		0.29	0.14	0.85	0.41		0.73	0.73	0.10			
Uniform Delay, d1		18.6	17.3	15.0	7.3		37.5	37.5	32.6			
Progression Factor		0.26	0.24	0.54	0.24		1.00	1.00	1.00			
Incremental Delay, d2		0.3	0.4	8.7	0.4		9.7	9.7	0.2			
Delay (s)		5.2	4.7	16.8	2.2		47.2	47.2	32.8			
Level of Service		A	A	B	A		D	D	C			
Approach Delay (s)		5.1			7.7			42.0			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	231	593	1	3	774	323	166	2	171	1	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.98	1.00
Satd. Flow (prot)	1719	4939			3437	1538	1719	1541			1780	1538
Flt Permitted	0.24	1.00			0.95	1.00	0.76	1.00			0.93	1.00
Satd. Flow (perm)	425	4939			3277	1538	1368	1541			1676	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	257	659	1	3	860	359	184	2	190	1	2	1
RTOR Reduction (vph)	0	0	0	0	0	177	0	153	0	0	0	1
Lane Group Flow (vph)	257	660	0	0	863	182	184	39	0	0	3	0
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	67.9	67.9			50.7	50.7	19.6	19.6			19.6	19.6
Effective Green, g (s)	67.9	67.9			50.7	50.7	19.6	19.6			19.6	19.6
Actuated g/C Ratio	0.68	0.68			0.51	0.51	0.20	0.20			0.20	0.20
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	436	3354			1661	780	268	302			328	301
v/s Ratio Prot	c0.07	0.13						0.03				
v/s Ratio Perm	c0.33				0.26	0.12	c0.13				0.00	0.00
v/c Ratio	0.59	0.20			0.52	0.23	0.69	0.13			0.01	0.00
Uniform Delay, d1	8.3	5.9			16.5	13.8	37.3	33.2			32.4	32.3
Progression Factor	2.21	1.96			0.54	0.54	1.00	1.00			1.00	1.00
Incremental Delay, d2	2.4	0.1			1.1	0.7	8.9	0.4			0.0	0.0
Delay (s)	20.8	11.8			10.0	8.0	46.3	33.6			32.4	32.3
Level of Service	C	B			B	A	D	C			C	C
Approach Delay (s)		14.3			9.4			39.8			32.4	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	115	18	67	1419	1744	67
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	128	20	74	1577	1938	74
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1009	
pX, platoon unblocked	0.63	0.63	0.63			
vC, conflicting volume	2912	1006	2012			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2861	0	1435			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.2			
p0 queue free %	0	97	74			
cM capacity (veh/h)	6	678	287			

Direction, Lane #	WB 1	SE 1	SE 2	SE 3	NW 1	NW 2
Volume Total	148	74	788	788	1292	720
Volume Left	128	74	0	0	0	0
Volume Right	20	0	0	0	0	74
cSH	7	287	1700	1700	1700	1700
Volume to Capacity	21.67	0.26	0.46	0.46	0.76	0.42
Queue Length 95th (ft)	Err	25	0	0	0	0
Control Delay (s)	Err	21.9	0.0	0.0	0.0	0.0
Lane LOS	F	C				
Approach Delay (s)	Err	1.0			0.0	
Approach LOS	F					

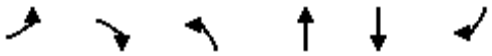
Intersection Summary			
Average Delay	388.1		
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	1297	237	245	1397	414	92
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1441	263	272	1552	460	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				854		
pX, platoon unblocked					0.59	
vC, conflicting volume			1704		2893	852
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1704		2818	852
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			24		0	66
cM capacity (veh/h)			356		2	297

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	961	744	790	1035	562
Volume Left	0	0	272	0	460
Volume Right	0	263	0	0	102
cSH	1700	1700	356	1700	2
Volume to Capacity	0.57	0.44	0.76	0.61	246.23
Queue Length 95th (ft)	0	0	154	0	Err
Control Delay (s)	0.0	0.0	41.4	0.0	Err
Lane LOS			E		F
Approach Delay (s)	0.0		17.9		Err
Approach LOS					F

Intersection Summary			
Average Delay	1382.1		
Intersection Capacity Utilization	127.7%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	5	1	4	998	838	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	1	4	1109	931	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1176	378	
pX, platoon unblocked	0.86	0.88	0.88			
vC, conflicting volume	1508	479	958			
vC1, stage 1 conf vol	944					
vC2, stage 2 conf vol	563					
vCu, unblocked vol	619	130	675			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.6	3.4	2.2			
p0 queue free %	99	100	99			
cM capacity (veh/h)	400	779	784			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	7	4	554	554	621	337
Volume Left	6	4	0	0	0	0
Volume Right	1	0	0	0	0	27
cSH	480	784	1700	1700	1700	1700
Volume to Capacity	0.01	0.01	0.33	0.33	0.37	0.20
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	13.4	9.6	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	13.4	0.0			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	48	52	1329	19	32	1199
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	53	58	1477	21	36	1332
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			371			
pX, platoon unblocked	0.83	0.83			0.83	
vC, conflicting volume	2224	749			1498	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2067	291			1192	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.2	
p0 queue free %	0	90			92	
cM capacity (veh/h)	35	579			469	

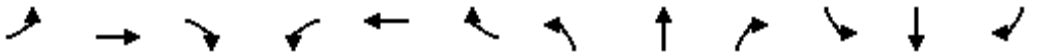
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	111	984	513	36	666	666
Volume Left	53	0	0	36	0	0
Volume Right	58	0	21	0	0	0
cSH	68	1700	1700	469	1700	1700
Volume to Capacity	1.63	0.58	0.30	0.08	0.39	0.39
Queue Length 95th (ft)	242	0	0	6	0	0
Control Delay (s)	444.4	0.0	0.0	13.3	0.0	0.0
Lane LOS	F			B		
Approach Delay (s)	444.4	0.0		0.3		
Approach LOS	F					

Intersection Summary			
Average Delay	16.7		
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	86	1276	19	15	1201	16	1	0	12	18	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	96	1418	21	17	1334	18	1	0	13	20	0	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		939										
pX, platoon unblocked				0.85			0.85	0.85		0.85	0.85	0.85
vC, conflicting volume	1352			1439			2287	3007	676	2333	3005	719
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1352			1159			2159	3008	676	2214	3006	310
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.6	4.0	3.4	3.6	4.0	3.4
p0 queue free %	80			97			94	100	97	0	100	98
cM capacity (veh/h)	489			493			18	8	389	16	8	574

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SE 1	SE 2	NW 1	NW 2
Volume Total	96	945	494	684	685	1	13	20	10
Volume Left	96	0	0	17	0	1	0	20	0
Volume Right	0	0	21	0	18	0	13	0	10
cSH	489	1700	1700	493	1700	18	389	16	574
Volume to Capacity	0.20	0.56	0.29	0.03	0.40	0.06	0.03	1.26	0.02
Queue Length 95th (ft)	18	0	0	3	0	5	3	75	1
Control Delay (s)	14.1	0.0	0.0	1.0	0.0	221.0	14.6	657.2	11.4
Lane LOS	B			A		F	B	F	B
Approach Delay (s)	0.9			0.5		30.5		441.9	
Approach LOS						D		F	

Intersection Summary				
Average Delay	5.3			
Intersection Capacity Utilization	85.8%	ICU Level of Service		E
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	241	271	40	106	569	333	30	397	93	382	397	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3372		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.18	1.00		0.54	1.00	1.00	0.50	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	334	3372		985	3438	1538	898	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	268	301	44	118	632	370	33	441	103	424	441	61
RTOR Reduction (vph)	0	12	0	0	0	282	0	0	80	0	0	34
Lane Group Flow (vph)	268	333	0	118	632	88	33	441	23	424	441	27
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	44.1	30.1		33.7	23.7	23.7	22.7	22.7	22.7	16.2	43.9	43.9
Effective Green, g (s)	44.1	30.1		33.7	23.7	23.7	22.7	22.7	22.7	16.2	43.9	43.9
Actuated g/C Ratio	0.44	0.30		0.34	0.24	0.24	0.23	0.23	0.23	0.16	0.44	0.44
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	374	1015		405	815	365	204	780	349	540	1509	675
v/s Ratio Prot	c0.12	0.10		0.03	0.18			c0.13		c0.13	0.13	
v/s Ratio Perm	c0.20			0.07		0.06	0.04		0.02			0.02
v/c Ratio	0.72	0.33		0.29	0.78	0.24	0.16	0.57	0.07	0.79	0.29	0.04
Uniform Delay, d1	20.3	27.1		23.6	35.7	30.9	31.0	34.3	30.3	40.2	18.1	16.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.55	0.43	0.22
Incremental Delay, d2	7.1	0.5		0.6	5.6	0.8	1.7	3.0	0.4	7.2	0.4	0.1
Delay (s)	27.5	27.6		24.2	41.3	31.7	32.7	37.2	30.7	29.1	8.2	3.6
Level of Service	C	C		C	D	C	C	D	C	C	A	A
Approach Delay (s)		27.5			36.3			35.8			17.5	
Approach LOS		C			D			D			B	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	11	652	72	160	953	34	79	3	170	31	2	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3387		1719	3438	1538	1719	1542		1719	1810	1538
Flt Permitted	0.22	1.00		0.35	1.00	1.00	0.76	1.00		0.39	1.00	1.00
Satd. Flow (perm)	389	3387		630	3438	1538	1369	1542		700	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	724	80	178	1059	38	88	3	189	34	2	28
RTOR Reduction (vph)	0	6	0	0	0	12	0	165	0	0	0	23
Lane Group Flow (vph)	12	798	0	178	1059	26	88	27	0	34	2	5
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	91.7	91.7		80.4	80.4	80.4	15.3	15.3		15.3	15.3	20.1
Effective Green, g (s)	91.7	91.7		80.4	80.4	80.4	15.3	15.3		15.3	15.3	20.1
Actuated g/C Ratio	0.76	0.76		0.67	0.67	0.67	0.13	0.13		0.13	0.13	0.17
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	350	2588		422	2303	1030	175	197		89	231	341
v/s Ratio Prot	0.00	c0.24			c0.31			0.02			0.00	0.00
v/s Ratio Perm	0.02			0.28		0.02	c0.06			0.05		0.00
v/c Ratio	0.03	0.31		0.42	0.46	0.03	0.50	0.14		0.38	0.01	0.01
Uniform Delay, d1	4.7	4.4		9.1	9.4	6.6	48.8	46.5		48.0	45.7	41.7
Progression Factor	1.00	1.00		0.60	0.54	0.18	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3		3.0	0.7	0.0	5.5	0.8		6.6	0.0	0.0
Delay (s)	4.8	4.7		8.5	5.8	1.2	54.3	47.3		54.6	45.8	41.7
Level of Service	A	A		A	A	A	D	D		D	D	D
Approach Delay (s)		4.7			6.0			49.5			48.7	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	18	1	51	10	2	71	59	1152	9	2	798	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.90			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1610			1736	1538	1719	3434		1719	3438	1538
Flt Permitted		0.91			0.71	1.00	0.32	1.00		0.20	1.00	1.00
Satd. Flow (perm)		1481			1292	1538	575	3434		364	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	1	57	11	2	79	66	1280	10	2	887	2
RTOR Reduction (vph)	0	53	0	0	0	73	0	0	0	0	0	0
Lane Group Flow (vph)	0	25	0	0	13	6	66	1290	0	2	887	2
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		9.2			9.2	9.2	99.5	99.5		99.5	99.5	99.5
Effective Green, g (s)		9.2			9.2	9.2	99.5	99.5		99.5	99.5	99.5
Actuated g/C Ratio		0.08			0.08	0.08	0.83	0.83		0.83	0.83	0.83
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		114			99	118	477	2847		302	2851	1275
v/s Ratio Prot								c0.38			0.26	
v/s Ratio Perm		c0.02			0.01	0.00	0.11			0.01		0.00
v/c Ratio		0.22			0.13	0.05	0.14	0.45		0.01	0.31	0.00
Uniform Delay, d1		52.0			51.7	51.4	2.0	2.8		1.8	2.4	1.8
Progression Factor		1.00			1.00	1.00	0.93	0.93		0.26	0.34	0.15
Incremental Delay, d2		1.6			1.0	0.3	0.6	0.5		0.0	0.2	0.0
Delay (s)		53.6			52.6	51.6	2.4	3.1		0.5	1.1	0.3
Level of Service		D			D	D	A	A		A	A	A
Approach Delay (s)		53.6			51.8			3.1			1.1	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	5.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	124	28	233	170	25	24	45	1104	64	187	654	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.87		1.00	0.93		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1567		1719	1676		1719	3410		1719	3317	
Flt Permitted	0.72	1.00		0.22	1.00		0.27	1.00		0.08	1.00	
Satd. Flow (perm)	1305	1567		400	1676		482	3410		136	3317	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	138	31	259	189	28	27	50	1227	71	208	727	224
RTOR Reduction (vph)	0	163	0	0	23	0	0	3	0	0	23	0
Lane Group Flow (vph)	138	127	0	189	32	0	50	1295	0	208	928	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	23.1	14.1		31.1	18.1		59.8	55.3		74.9	64.4	
Effective Green, g (s)	23.1	14.1		31.1	18.1		59.8	55.3		74.9	64.4	
Actuated g/C Ratio	0.19	0.12		0.26	0.15		0.50	0.46		0.62	0.54	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	282	184		247	253		287	1571		264	1780	
v/s Ratio Prot	0.04	0.08		c0.08	0.02		0.01	c0.38		c0.09	0.28	
v/s Ratio Perm	0.06			c0.12			0.08			0.40		
v/c Ratio	0.49	0.69		0.77	0.13		0.17	0.82		0.79	0.52	
Uniform Delay, d1	42.5	50.8		37.9	44.1		15.7	28.1		30.9	17.9	
Progression Factor	1.00	1.00		1.00	1.00		0.85	0.89		0.86	0.74	
Incremental Delay, d2	2.1	11.6		14.4	0.4		0.4	4.6		15.0	1.0	
Delay (s)	44.6	62.4		52.3	44.5		13.8	29.6		41.6	14.3	
Level of Service	D	E		D	D		B	C		D	B	
Approach Delay (s)		56.7			50.5			29.0			19.2	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

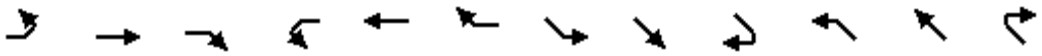


Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations											
Volume (vph)	285	0	171	0	1270	237	565	872	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95			
Frt	1.00		0.85		1.00	0.85	1.00	1.00			
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00			
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438			
Flt Permitted	0.95		1.00		1.00	1.00	0.07	1.00			
Satd. Flow (perm)	3335		2707		3438	1538	124	3438			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	317	0	190	0	1411	263	628	969	0	0	0
RTOR Reduction (vph)	0	0	173	0	0	117	0	0	0	0	0
Lane Group Flow (vph)	317	0	17	0	1411	146	628	969	0	0	0
Turn Type	custom		custom			Perm	pm+pt				
Protected Phases					2		1	6			
Permitted Phases	4		4			2	6				
Actuated Green, G (s)	11.0		11.0		51.7	51.7	97.9	97.9			
Effective Green, g (s)	11.0		11.0		51.7	51.7	97.9	97.9			
Actuated g/C Ratio	0.09		0.09		0.43	0.43	0.82	0.82			
Clearance Time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Vehicle Extension (s)	4.3		4.3		4.3	4.3	4.3	4.3			
Lane Grp Cap (vph)	306		248		1481	663	626	2805			
v/s Ratio Prot					0.41		c0.33	0.28			
v/s Ratio Perm	c0.10		0.01			0.10	c0.49				
v/c Ratio	1.04		0.07		0.95	0.22	1.00	0.35			
Uniform Delay, d1	54.5		49.8		33.0	21.5	35.7	2.8			
Progression Factor	1.00		1.00		0.55	0.17	1.03	2.51			
Incremental Delay, d2	61.1		0.2		9.5	0.4	34.1	0.3			
Delay (s)	115.6		50.0		27.5	4.0	71.1	7.4			
Level of Service	F		D		C	A	E	A			
Approach Delay (s)		91.0			23.8			32.5		0.0	
Approach LOS		F			C			C		A	

Intersection Summary			
HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

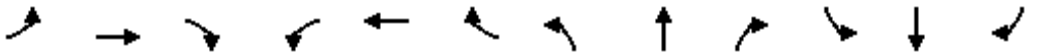
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	437	522	709	846	0	1000
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	1.00	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	1538	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	1538	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	486	580	788	940	0	1111
RTOR Reduction (vph)	0	184	0	537	0	0
Lane Group Flow (vph)	486	396	788	403	0	1111
Turn Type		Perm		Perm		
Protected Phases	3		2			2 4
Permitted Phases		3		2		
Actuated Green, G (s)	38.4	38.4	51.5	51.5		69.5
Effective Green, g (s)	38.4	38.4	51.5	51.5		62.5
Actuated g/C Ratio	0.32	0.32	0.43	0.43		0.52
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	1067	492	1475	660		1791
v/s Ratio Prot	0.15		0.23			c0.32
v/s Ratio Perm		c0.26		0.26		
v/c Ratio	0.46	0.80	0.53	0.61		0.62
Uniform Delay, d1	32.5	37.4	25.4	26.5		20.4
Progression Factor	1.00	1.00	1.33	11.99		1.38
Incremental Delay, d2	0.5	10.0	0.4	1.2		0.8
Delay (s)	33.0	47.4	34.1	318.9		28.9
Level of Service	C	D	C	F		C
Approach Delay (s)	40.8		189.1			28.9
Approach LOS	D		F			C

Intersection Summary			
HCM Average Control Delay	103.0	HCM Level of Service	F
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



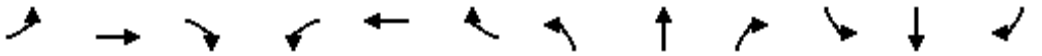
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	75	103	62	0	0	0	0	1151	80	15	925	800
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	7.0					6.5	6.5	6.5	6.5	6.5
Lane Util. Factor	1.00	1.00	1.00					0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00					1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1810	1538					3438	1538	1719	3438	1538
Flt Permitted	0.95	1.00	1.00					1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	1719	1810	1538					3438	1538	361	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	114	69	0	0	0	0	1279	89	17	1028	889
RTOR Reduction (vph)	0	0	63	0	0	0	0	0	18	0	0	42
Lane Group Flow (vph)	83	114	6	0	0	0	0	1279	71	17	1028	847
Turn Type	custom		Perm						Perm	Perm		Perm
Protected Phases	4	4						2 3 6			2 3 6	
Permitted Phases	4		4						2 3 6	2 3 6		2 3 6
Actuated Green, G (s)	11.0	11.0	11.0					96.4	96.4	96.4	96.4	96.4
Effective Green, g (s)	11.0	11.0	11.0					96.4	96.4	96.4	96.4	96.4
Actuated g/C Ratio	0.09	0.09	0.09					0.80	0.80	0.80	0.80	0.80
Clearance Time (s)	7.0	7.0	7.0									
Vehicle Extension (s)	4.3	4.3	4.3									
Lane Grp Cap (vph)	158	166	141					2762	1236	290	2762	1236
v/s Ratio Prot	0.05	c0.06						0.37			0.30	
v/s Ratio Perm			0.00						0.05	0.05		c0.55
v/c Ratio	0.53	0.69	0.04					0.46	0.06	0.06	0.37	0.69
Uniform Delay, d1	52.0	52.8	49.7					3.7	2.4	2.4	3.3	5.2
Progression Factor	1.00	1.00	1.00					0.35	0.18	0.34	0.21	0.58
Incremental Delay, d2	4.6	12.6	0.2					0.1	0.0	0.1	0.1	0.9
Delay (s)	56.6	65.4	49.9					1.5	0.5	0.9	0.8	3.9
Level of Service	E	E	D					A	A	A	A	A
Approach Delay (s)		58.7			0.0			1.4			2.2	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM Average Control Delay	6.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



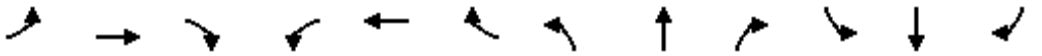
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	339	842	32	68	1407	146	103	26	67	211	26	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	5.8	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	377	936	36	76	1563	162	114	29	74	234	29	256
RTOR Reduction (vph)	0	0	13	0	0	42	0	0	62	0	0	219
Lane Group Flow (vph)	377	936	23	76	1563	120	114	29	12	234	29	37
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		Perm
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	15.1	65.1	75.3	12.0	62.0	73.5	10.2	7.6	19.6	11.5	8.9	8.9
Effective Green, g (s)	15.1	65.1	75.3	12.0	62.0	73.5	10.2	7.6	19.6	11.5	8.9	8.9
Actuated g/C Ratio	0.13	0.54	0.63	0.10	0.52	0.61	0.08	0.06	0.16	0.10	0.07	0.07
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	5.8	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	420	1865	965	172	1776	942	146	115	251	320	255	114
v/s Ratio Prot	c0.11	0.27	0.00	0.04	c0.45	0.01	0.07	0.02	0.00	c0.07	0.01	
v/s Ratio Perm			0.01			0.07			0.00			c0.02
v/c Ratio	0.90	0.50	0.02	0.44	0.88	0.13	0.78	0.25	0.05	0.73	0.11	0.32
Uniform Delay, d1	51.7	17.3	8.4	50.8	25.7	9.8	53.8	53.5	42.3	52.7	51.9	52.7
Progression Factor	1.24	0.45	0.55	0.64	0.35	0.04	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.2	0.9	0.0	0.9	2.3	0.0	25.1	1.8	0.1	9.2	0.3	2.6
Delay (s)	84.1	8.7	4.6	33.5	11.3	0.4	78.9	55.3	42.5	61.9	52.2	55.3
Level of Service	F	A	A	C	B	A	E	E	D	E	D	E
Approach Delay (s)		29.7			11.2			63.3			58.1	
Approach LOS		C			B			E			E	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



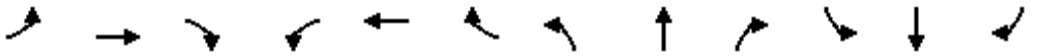
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	794	163	150	1220	147	238	134	106	301	248	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1		5.2	6.1		5.2	5.2		5.2	5.2	5.2
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3350		1719	3383		1719	1690		1719	1810	1538
Flt Permitted	0.08	1.00		0.14	1.00		0.38	1.00		0.17	1.00	1.00
Satd. Flow (perm)	142	3350		246	3383		687	1690		312	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	181	882	181	167	1356	163	264	149	118	334	276	181
RTOR Reduction (vph)	0	14	0	0	8	0	0	24	0	0	0	143
Lane Group Flow (vph)	181	1049	0	167	1511	0	264	243	0	334	276	38
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)	60.8	51.1		62.2	51.8		31.0	18.0		42.0	23.8	23.8
Effective Green, g (s)	60.8	51.1		62.2	51.8		31.0	18.0		42.0	23.8	23.8
Actuated g/C Ratio	0.51	0.43		0.52	0.43		0.26	0.15		0.35	0.20	0.20
Clearance Time (s)	5.2	6.1		5.2	6.1		5.2	5.2		5.2	5.2	5.2
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	4.3
Lane Grp Cap (vph)	199	1427		255	1460		289	254		330	359	305
v/s Ratio Prot	c0.07	0.31		0.06	c0.45		0.10	0.14		c0.16	0.15	
v/s Ratio Perm	0.39			0.28			0.14			c0.20		0.02
v/c Ratio	0.91	0.73		0.65	1.03		0.91	0.96		1.01	0.77	0.12
Uniform Delay, d1	32.7	28.8		19.6	34.1		40.6	50.6		34.1	45.5	39.5
Progression Factor	1.38	0.75		1.36	0.74		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	36.1	2.9		5.3	30.2		32.0	44.7		52.6	10.4	0.3
Delay (s)	81.3	24.6		32.0	55.5		72.6	95.4		86.8	55.9	39.8
Level of Service	F	C		C	E		E	F		F	E	D
Approach Delay (s)		32.8			53.2			84.0			65.3	
Approach LOS		C			D			F			E	

Intersection Summary			
HCM Average Control Delay	53.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.4
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



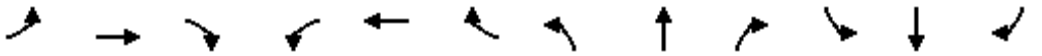
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	810	391	164	1170	0	0	0	0	573	0	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		5.7
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.95		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3270		1719	3438					3335		1538
Flt Permitted		1.00		0.08	1.00					0.95		1.00
Satd. Flow (perm)		3270		141	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	900	434	182	1300	0	0	0	0	637	0	386
RTOR Reduction (vph)	0	46	0	0	0	0	0	0	0	0	0	48
Lane Group Flow (vph)	0	1288	0	182	1300	0	0	0	0	637	0	338
Turn Type				pm+pt						Prot		custom
Protected Phases		2		1	6					4		
Permitted Phases				6								4
Actuated Green, G (s)		57.7		76.5	76.5					31.2		31.2
Effective Green, g (s)		57.7		76.5	76.5					31.2		31.2
Actuated g/C Ratio		0.48		0.64	0.64					0.26		0.26
Clearance Time (s)		6.6		6.6	6.6					5.7		5.7
Vehicle Extension (s)		4.3		4.3	4.3					4.3		4.3
Lane Grp Cap (vph)		1572		250	2192					867		400
v/s Ratio Prot		c0.39		0.07	c0.38					0.19		
v/s Ratio Perm				0.39								c0.22
v/c Ratio		0.82		0.73	0.59					0.73		0.84
Uniform Delay, d1		26.7		26.9	12.7					40.6		42.1
Progression Factor		0.77		1.01	0.27					1.03		1.03
Incremental Delay, d2		2.7		3.8	0.4					3.6		15.8
Delay (s)		23.3		31.0	3.8					45.3		59.2
Level of Service		C		C	A					D		E
Approach Delay (s)		23.3			7.1			0.0			50.5	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.9
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



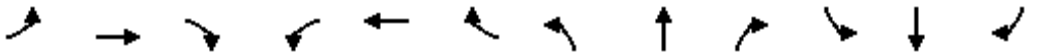
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	431	952	0	0	855	571	479	0	227	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.10	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	174	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	479	1058	0	0	950	634	532	0	252	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	418	0	0	70	0	0	0
Lane Group Flow (vph)	479	1058	0	0	950	216	532	0	182	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	70.9	70.9			35.5	35.5	38.0		38.0			
Effective Green, g (s)	70.9	70.9			35.5	35.5	38.0		38.0			
Actuated g/C Ratio	0.59	0.59			0.30	0.30	0.32		0.32			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	480	2031			1017	455	544		487			
v/s Ratio Prot	c0.24	0.31			0.28		c0.31					
v/s Ratio Perm	c0.35					0.14			0.12			
v/c Ratio	1.00	0.52			0.93	0.47	0.98		0.37			
Uniform Delay, d1	36.7	14.5			41.1	34.6	40.6		31.8			
Progression Factor	1.06	0.93			0.76	0.71	1.00		1.00			
Incremental Delay, d2	31.7	0.6			12.0	2.4	32.8		0.8			
Delay (s)	70.5	14.1			43.2	26.8	73.4		32.6			
Level of Service	E	B			D	C	E		C			
Approach Delay (s)		31.6			36.6			60.2			0.0	
Approach LOS		C			D			E			A	

Intersection Summary			
HCM Average Control Delay	39.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



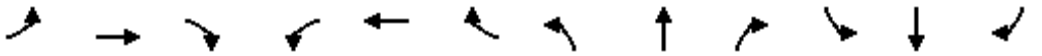
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	151	988	40	9	1139	49	187	17	9	84	11	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3418		1719	3417		1719	1716		1719	1565	
Flt Permitted	0.09	1.00		0.25	1.00		0.38	1.00		0.74	1.00	
Satd. Flow (perm)	168	3418		450	3417		690	1716		1336	1565	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	168	1098	44	10	1266	54	208	19	10	93	12	111
RTOR Reduction (vph)	0	2	0	0	2	0	0	7	0	0	99	0
Lane Group Flow (vph)	168	1140	0	10	1318	0	208	22	0	93	24	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	77.8	77.8		61.2	61.2		31.3	31.3		12.5	12.5	
Effective Green, g (s)	77.8	77.8		61.2	61.2		31.3	31.3		12.5	12.5	
Actuated g/C Ratio	0.65	0.65		0.51	0.51		0.26	0.26		0.10	0.10	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	255	2216		230	1743		296	448		139	163	
v/s Ratio Prot	c0.06	0.33			c0.39		c0.08	0.01			0.02	
v/s Ratio Perm	0.36			0.02			c0.10			0.07		
v/c Ratio	0.66	0.51		0.04	0.76		0.70	0.05		0.67	0.14	
Uniform Delay, d1	18.4	11.1		14.7	23.4		37.6	33.2		51.8	48.9	
Progression Factor	2.45	0.28		0.66	0.72		1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.2	0.7		0.3	2.7		8.2	0.1		13.3	0.6	
Delay (s)	51.3	3.8		10.1	19.6		45.8	33.3		65.0	49.5	
Level of Service	D	A		B	B		D	C		E	D	
Approach Delay (s)		9.9			19.5			44.2			56.2	
Approach LOS		A			B			D			E	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



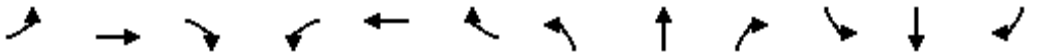
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	1016	56	54	1037	1	151	1	119	4	1	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.94			0.91	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.99	
Satd. Flow (prot)	1719	3411		1719	3438			1656			1625	
Flt Permitted	0.20	1.00		0.19	1.00			0.82			0.93	
Satd. Flow (perm)	362	3411		343	3438			1393			1527	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	10	1129	62	60	1152	1	168	1	132	4	1	10
RTOR Reduction (vph)	0	2	0	0	0	0	0	28	0	0	8	0
Lane Group Flow (vph)	10	1189	0	60	1153	0	0	273	0	0	7	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	78.8	78.8		79.1	79.1			29.9			29.9	
Effective Green, g (s)	78.8	78.8		79.1	79.1			29.9			29.9	
Actuated g/C Ratio	0.66	0.66		0.66	0.66			0.25			0.25	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	238	2240		226	2266			347			380	
v/s Ratio Prot		c0.35			0.34							
v/s Ratio Perm	0.03			0.17				c0.20			0.00	
v/c Ratio	0.04	0.53		0.27	0.51			0.79			0.02	
Uniform Delay, d1	7.3	10.9		8.4	10.5			42.1			34.0	
Progression Factor	0.26	0.17		0.80	0.76			1.00			1.00	
Incremental Delay, d2	0.3	0.8		0.3	0.1			12.2			0.0	
Delay (s)	2.2	2.7		7.0	8.1			54.3			34.0	
Level of Service	A	A		A	A			D			C	
Approach Delay (s)		2.7			8.0			54.3			34.0	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM Average Control Delay	10.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



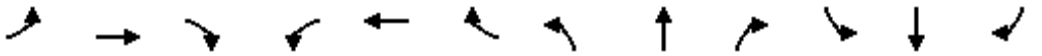
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	1393	122	20	2079	38	333	6	5	35	1	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.93			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1719	3396		1719	3429		1719	1684			1650	
Flt Permitted	0.05	1.00		0.10	1.00		0.72	1.00			0.87	
Satd. Flow (perm)	94	3396		173	3429		1302	1684			1464	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	1548	136	22	2310	42	370	7	6	39	1	37
RTOR Reduction (vph)	0	5	0	0	1	0	0	5	0	0	28	0
Lane Group Flow (vph)	22	1679	0	22	2351	0	370	8	0	0	49	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	79.7	79.7		70.4	70.4		29.0	29.0			29.0	
Effective Green, g (s)	79.7	79.7		70.4	70.4		29.0	29.0			29.0	
Actuated g/C Ratio	0.66	0.66		0.59	0.59		0.24	0.24			0.24	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	103	2256		101	2012		315	407			354	
v/s Ratio Prot	0.01	c0.49			c0.69			0.01				
v/s Ratio Perm	0.14			0.13			c0.28				0.03	
v/c Ratio	0.21	0.74		0.22	1.17		1.17	0.02			0.14	
Uniform Delay, d1	29.1	13.4		11.8	24.8		45.5	34.7			35.7	
Progression Factor	1.02	0.78		0.77	0.62		1.00	1.00			1.00	
Incremental Delay, d2	1.5	2.1		4.2	80.8		106.8	0.0			0.3	
Delay (s)	31.2	12.5		13.3	96.3		152.3	34.7			36.0	
Level of Service	C	B		B	F		F	C			D	
Approach Delay (s)		12.8			95.5			148.3			36.0	
Approach LOS		B			F			F			D	

Intersection Summary			
HCM Average Control Delay	67.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



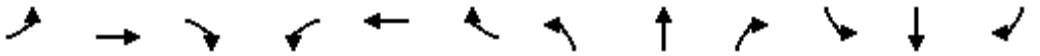
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	90	1699	38	56	1099	66	228	183	112	48	195	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3427		1719	3409		1719	1810	1538	1719	1691	
Flt Permitted	0.13	1.00		0.06	1.00		0.14	1.00	1.00	0.63	1.00	
Satd. Flow (perm)	233	3427		109	3409		248	1810	1538	1141	1691	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	1888	42	62	1221	73	253	203	124	53	217	167
RTOR Reduction (vph)	0	1	0	0	4	0	0	0	6	0	23	0
Lane Group Flow (vph)	100	1929	0	62	1290	0	253	203	118	53	361	0
Turn Type	Perm			Perm			pm+pt		Perm	Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	66.3	66.3		66.3	66.3		42.4	42.4	42.4	23.8	23.8	
Effective Green, g (s)	66.3	66.3		66.3	66.3		42.4	42.4	42.4	23.8	23.8	
Actuated g/C Ratio	0.55	0.55		0.55	0.55		0.35	0.35	0.35	0.20	0.20	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	129	1893		60	1883		249	640	543	226	335	
v/s Ratio Prot		0.56			0.38		c0.11	0.11			0.21	
v/s Ratio Perm	0.43			c0.57			c0.25		0.08	0.05		
v/c Ratio	0.78	1.02		1.03	0.69		1.02	0.32	0.22	0.23	1.08	
Uniform Delay, d1	21.0	26.9		26.9	19.3		32.5	28.3	27.2	40.4	48.1	
Progression Factor	0.79	0.79		1.51	1.56		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	30.5	23.7		99.2	1.2		61.2	0.5	0.3	0.8	71.2	
Delay (s)	47.1	44.8		139.9	31.3		93.7	28.7	27.5	41.3	119.3	
Level of Service	D	D		F	C		F	C	C	D	F	
Approach Delay (s)		44.9			36.3			56.8			109.8	
Approach LOS		D			D			E			F	

Intersection Summary			
HCM Average Control Delay	50.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	120.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



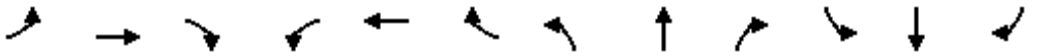
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	1505	105	332	1054	16	166	17	410	278	347	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3403		1719	3430			1731	1538	1719	1754	
Flt Permitted		0.92		0.07	1.00			0.18	1.00	0.55	1.00	
Satd. Flow (perm)		3149		127	3430			324	1538	993	1754	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	1672	117	369	1171	18	184	19	456	309	386	100
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	2	0	8	0
Lane Group Flow (vph)	0	1805	0	369	1188	0	0	203	454	309	478	0
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		50.7		68.7	68.7			40.0	51.7	40.0	40.0	
Effective Green, g (s)		50.7		68.7	68.7			40.0	51.7	40.0	40.0	
Actuated g/C Ratio		0.42		0.57	0.57			0.33	0.43	0.33	0.33	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1330		228	1964			108	663	331	585	
v/s Ratio Prot				c0.16	0.35				0.07		0.27	
v/s Ratio Perm		0.57		c0.77				c0.63	0.23	0.31		
v/c Ratio		1.36		1.62	0.60			1.88	0.68	0.93	0.82	
Uniform Delay, d1		34.6		38.5	16.8			40.0	27.6	38.7	36.6	
Progression Factor		0.42		1.25	1.08			1.00	1.00	1.00	1.00	
Incremental Delay, d2		162.3		292.6	1.0			428.7	3.3	33.0	9.3	
Delay (s)		176.8		340.5	19.2			468.7	30.9	71.8	46.0	
Level of Service		F		F	B			F	C	E	D	
Approach Delay (s)		176.8			95.3			165.8			56.0	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM Average Control Delay	129.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	127.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



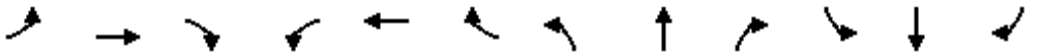
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	2149	98	33	1549	10	131	1	36	13	1	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3416		1719	3435			1691			1599	
Flt Permitted	0.10	1.00		0.04	1.00			0.73			0.94	
Satd. Flow (perm)	180	3416		80	3435			1277			1520	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	67	2388	109	37	1721	11	146	1	40	14	1	61
RTOR Reduction (vph)	0	3	0	0	0	0	0	8	0	0	42	0
Lane Group Flow (vph)	67	2494	0	37	1732	0	0	179	0	0	34	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	90.0	90.0		90.0	90.0			18.4			18.4	
Effective Green, g (s)	90.0	90.0		90.0	90.0			18.4			18.4	
Actuated g/C Ratio	0.75	0.75		0.75	0.75			0.15			0.15	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	135	2562		60	2576			196			233	
v/s Ratio Prot		c0.73			0.50							
v/s Ratio Perm	0.37			0.46				c0.14			0.02	
v/c Ratio	0.50	0.97		0.62	0.67			0.91			0.14	
Uniform Delay, d1	6.0	13.9		7.0	7.6			50.0			44.0	
Progression Factor	0.67	0.61		1.13	1.05			1.00			1.00	
Incremental Delay, d2	1.2	2.0		36.8	1.3			41.0			0.5	
Delay (s)	5.2	10.5		44.6	9.2			91.0			44.4	
Level of Service	A	B		D	A			F			D	
Approach Delay (s)		10.3			10.0			91.0			44.4	
Approach LOS		B			A			F			D	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	1155	325	89	763	66	166	247	48	181	368	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3397		1719	1810	1538	1719	1810	1538
Flt Permitted	0.18	1.00	1.00	0.08	1.00		0.14	1.00	1.00	0.36	1.00	1.00
Satd. Flow (perm)	319	3438	1538	146	3397		252	1810	1538	645	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	156	1283	361	99	848	73	184	274	53	201	409	117
RTOR Reduction (vph)	0	0	66	0	5	0	0	0	38	0	0	55
Lane Group Flow (vph)	156	1283	295	99	916	0	184	274	15	201	409	62
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	61.6	52.4	62.4	55.8	49.5		38.7	28.7	35.0	38.7	28.7	37.9
Effective Green, g (s)	61.6	52.4	62.4	55.8	49.5		38.7	28.7	35.0	38.7	28.7	37.9
Actuated g/C Ratio	0.51	0.44	0.52	0.46	0.41		0.32	0.24	0.29	0.32	0.24	0.32
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	271	1501	800	150	1401		204	433	449	298	433	486
v/s Ratio Prot	c0.04	c0.37	0.03	0.03	0.27		c0.08	0.15	0.00	0.06	c0.23	0.01
v/s Ratio Perm	0.25		0.16	0.27			0.22		0.01	0.16		0.03
v/c Ratio	0.58	0.85	0.37	0.66	0.65		0.90	0.63	0.03	0.67	0.94	0.13
Uniform Delay, d1	18.6	30.4	17.1	23.7	28.4		33.2	40.9	30.4	32.5	44.9	29.3
Progression Factor	0.43	0.56	0.89	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	2.0	0.1	11.9	2.4		38.0	3.6	0.0	6.8	29.8	0.2
Delay (s)	9.2	18.9	15.4	35.6	30.7		71.3	44.5	30.5	39.3	74.7	29.4
Level of Service	A	B	B	D	C		E	D	C	D	E	C
Approach Delay (s)		17.4			31.2			52.7			57.6	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	110	61	93	66	76	142	1071	181	78	1334	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.60	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1079	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	110	122	68	103	73	84	158	1190	201	87	1482	238
RTOR Reduction (vph)	0	60	0	0	0	76	0	0	92	0	0	101
Lane Group Flow (vph)	110	130	0	103	73	8	158	1190	109	87	1482	137
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	20.1	11.3		7.0	9.5	9.5	14.4	53.9	53.9	6.0	45.5	45.5
Effective Green, g (s)	20.1	11.3		7.0	9.5	9.5	14.4	53.9	53.9	6.0	45.5	45.5
Actuated g/C Ratio	0.20	0.11		0.07	0.10	0.10	0.15	0.54	0.54	0.06	0.46	0.46
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	275	371		235	173	147	250	2684	836	202	2266	705
v/s Ratio Prot	c0.04	0.04		0.03	0.04		c0.09	0.24		0.03	c0.30	
v/s Ratio Perm	c0.05					0.01			0.07			0.09
v/c Ratio	0.40	0.35		0.44	0.42	0.05	0.63	0.44	0.13	0.43	0.65	0.19
Uniform Delay, d1	33.7	40.6		44.2	42.3	40.8	39.9	13.6	11.1	45.0	20.8	16.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.5	1.2		2.1	3.3	0.3	6.1	0.2	0.1	2.3	0.9	0.3
Delay (s)	35.2	41.7		46.3	45.6	41.1	46.0	13.9	11.3	47.3	21.7	16.2
Level of Service	D	D		D	D	D	D	B	B	D	C	B
Approach Delay (s)		39.3			44.4			16.8			22.2	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	99.2	Sum of lost time (s)	19.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

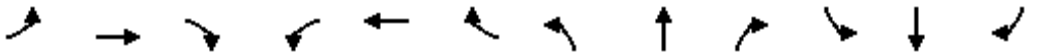


Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	361	139	1150	338	130	1033
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4772		1719	4940
Flt Permitted	0.95	1.00	1.00		0.12	1.00
Satd. Flow (perm)	1719	1538	4772		212	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	401	154	1278	376	144	1148
RTOR Reduction (vph)	0	59	81	0	0	0
Lane Group Flow (vph)	401	95	1573	0	144	1148
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	12.0	12.0	40.7		40.7	40.7
Effective Green, g (s)	12.0	12.0	40.7		40.7	40.7
Actuated g/C Ratio	0.18	0.18	0.63		0.63	0.63
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	317	284	2988		133	3093
v/s Ratio Prot	c0.23		0.33			0.23
v/s Ratio Perm		0.06			c0.68	
v/c Ratio	1.26	0.34	0.53		1.08	0.37
Uniform Delay, d1	26.5	23.0	6.8		12.1	5.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	142.0	1.4	0.3		101.9	0.2
Delay (s)	168.5	24.4	7.1		114.1	6.1
Level of Service	F	C	A		F	A
Approach Delay (s)	128.5		7.1			18.1
Approach LOS	F		A			B

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

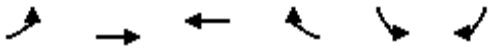
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	85	1618	107	28	1184	9	80	48	62	57	19	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3146		1719	1810	2707
Flt Permitted	0.15	1.00	1.00	0.07	1.00	1.00	0.95	1.00		0.67	1.00	1.00
Satd. Flow (perm)	266	3438	1538	134	3438	1538	3335	3146		1221	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	1798	119	31	1316	10	89	53	69	63	21	51
RTOR Reduction (vph)	0	0	38	0	0	4	0	64	0	0	0	45
Lane Group Flow (vph)	94	1798	81	31	1316	6	89	58	0	63	21	6
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	94.6	86.5	86.5	86.1	82.5	82.5	8.1	9.7		10.8	6.2	14.3
Effective Green, g (s)	94.6	86.5	86.5	86.1	82.5	82.5	8.1	9.7		10.8	6.2	14.3
Actuated g/C Ratio	0.74	0.68	0.68	0.68	0.65	0.65	0.06	0.08		0.08	0.05	0.11
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	290	2334	1044	135	2226	996	212	240		121	88	304
v/s Ratio Prot	c0.02	c0.52		0.01	0.38		c0.03	c0.02		0.02	0.01	0.00
v/s Ratio Perm	0.22		0.05	0.15		0.00				c0.03		0.00
v/c Ratio	0.32	0.77	0.08	0.23	0.59	0.01	0.42	0.24		0.52	0.24	0.02
Uniform Delay, d1	7.9	13.8	6.9	12.3	12.8	7.9	57.4	55.4		55.4	58.3	50.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	1.9	0.1	1.4	0.6	0.0	2.1	1.6		5.9	4.3	0.0
Delay (s)	8.9	15.7	7.0	13.7	13.4	8.0	59.5	57.0		61.3	62.7	50.3
Level of Service	A	B	A	B	B	A	E	E		E	E	D
Approach Delay (s)		14.8			13.4			58.1			57.4	
Approach LOS		B			B			E			E	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	127.4	Sum of lost time (s)	28.5
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	195	724	624	0	844	664	0	0	0	260	433	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	217	804	693	0	938	738	0	0	0	289	481	299
RTOR Reduction (vph)	0	0	84	0	0	20	0	0	0	0	0	183
Lane Group Flow (vph)	217	804	609	0	938	718	0	0	0	289	481	116
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	12.9	71.3	71.3		52.6	95.2				42.6	42.6	42.6
Effective Green, g (s)	12.9	71.3	71.3		52.6	95.2				42.6	42.6	42.6
Actuated g/C Ratio	0.10	0.57	0.57		0.42	0.76				0.34	0.34	0.34
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	344	1961	877		1447	1171				586	617	524
v/s Ratio Prot	0.07	0.23			0.27	0.21					c0.27	
v/s Ratio Perm			c0.40			0.26				0.17		0.08
v/c Ratio	0.63	0.41	0.69		0.65	0.61				0.49	0.78	0.22
Uniform Delay, d1	53.8	15.1	19.1		28.8	6.7				32.6	37.0	29.4
Progression Factor	1.00	1.00	1.00		0.63	1.47				1.00	1.00	1.00
Incremental Delay, d2	4.5	0.6	4.5		1.8	1.0				1.0	6.8	0.3
Delay (s)	58.2	15.7	23.6		20.0	10.7				33.7	43.8	29.7
Level of Service	E	B	C		C	B				C	D	C
Approach Delay (s)		24.3			15.9			0.0			37.1	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

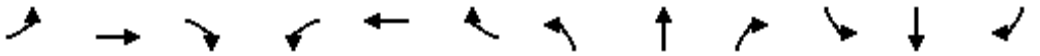


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	984	1233	0	387	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1093	1370	0	430	306
RTOR Reduction (vph)	0	0	0	0	0	41
Lane Group Flow (vph)	0	1093	1370	0	430	265
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		75.4	75.4		38.7	38.7
Effective Green, g (s)		75.4	75.4		38.7	38.7
Actuated g/C Ratio		0.60	0.60		0.31	0.31
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		2074	2074		532	838
v/s Ratio Prot		0.32	c0.40		c0.25	
v/s Ratio Perm						0.10
v/c Ratio		0.53	0.66		0.81	0.32
Uniform Delay, d1		14.4	16.4		39.7	33.0
Progression Factor		0.90	1.04		1.00	1.00
Incremental Delay, d2		0.9	1.3		9.6	0.3
Delay (s)		13.8	18.4		49.3	33.4
Level of Service		B	B		D	C
Approach Delay (s)		13.8	18.4		42.7	
Approach LOS		B	B		D	

Intersection Summary			
HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

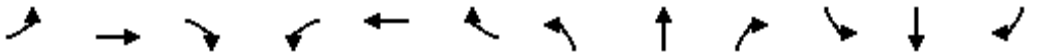
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	493	0	0	572	1213	669
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	548	0	0	636	1348	743
RTOR Reduction (vph)	0	0	0	0	0	34
Lane Group Flow (vph)	548	0	0	636	1348	709
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	40.6			40.6	73.6	73.6
Effective Green, g (s)	40.6			40.6	73.6	73.6
Actuated g/C Ratio	0.32			0.32	0.59	0.59
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	1117			1117	1964	906
v/s Ratio Prot	0.16			c0.18	0.40	
v/s Ratio Perm						c0.46
v/c Ratio	0.49			0.57	0.69	0.78
Uniform Delay, d1	33.9			35.0	17.7	19.6
Progression Factor	0.81			0.91	1.00	1.00
Incremental Delay, d2	1.3			1.8	1.2	4.9
Delay (s)	28.6			33.5	18.9	24.5
Level of Service	C			C	B	C
Approach Delay (s)	28.6			33.5	20.9	
Approach LOS	C			C	C	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	123.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	776	335	295	1051	19	195	16	277	25	12	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.95		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1719	3283		1719	3429			1730	1538		1673	
Flt Permitted	0.24	1.00		0.09	1.00			0.72	1.00		0.70	
Satd. Flow (perm)	429	3283		169	3429			1311	1538		1196	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	57	862	372	328	1168	21	217	18	308	28	13	30
RTOR Reduction (vph)	0	37	0	0	1	0	0	0	244	0	21	0
Lane Group Flow (vph)	57	1197	0	328	1188	0	0	235	64	0	50	0
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	57.8	57.8		86.1	86.1			25.9	25.9		25.9	
Effective Green, g (s)	57.8	57.8		86.1	86.1			25.9	25.9		25.9	
Actuated g/C Ratio	0.46	0.46		0.69	0.69			0.21	0.21		0.21	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	198	1518		384	2362			272	319		248	
v/s Ratio Prot		0.36		c0.15	0.35							
v/s Ratio Perm	0.13			c0.44				c0.18	0.04		0.04	
v/c Ratio	0.29	0.79		0.85	0.50			0.86	0.20		0.20	
Uniform Delay, d1	20.8	28.4		33.5	9.3			47.8	41.0		41.0	
Progression Factor	0.70	0.67		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	2.8	3.3		17.5	0.8			24.6	0.5		0.6	
Delay (s)	17.3	22.4		51.0	10.0			72.5	41.5		41.6	
Level of Service	B	C		D	B			E	D		D	
Approach Delay (s)		22.1			18.9			54.9			41.6	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	125.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	0	4	31	0	89	6	606	15	71	891	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.90		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1607		1719	3425		1719	3429	
Flt Permitted		0.88	1.00		0.91		0.25	1.00		0.32	1.00	
Satd. Flow (perm)		1598	1538		1479		449	3425		574	3429	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	0	4	34	0	99	7	673	17	79	990	17
RTOR Reduction (vph)	0	0	3	0	83	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	12	1	0	50	0	7	688	0	79	1006	0
Turn Type	Perm		Perm	Perm			pm+pt			pm+pt		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		7.5	7.5		7.5		19.0	18.3		24.2	20.9	
Effective Green, g (s)		7.5	7.5		7.5		19.0	18.3		24.2	20.9	
Actuated g/C Ratio		0.16	0.16		0.16		0.40	0.39		0.51	0.44	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		254	245		236		200	1331		375	1522	
v/s Ratio Prot							0.00	0.20		c0.01	c0.29	
v/s Ratio Perm		0.01	0.00		c0.03		0.01			0.09		
v/c Ratio		0.05	0.00		0.21		0.04	0.52		0.21	0.66	
Uniform Delay, d1		16.8	16.7		17.2		8.5	11.0		6.0	10.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1	0.0		0.4		0.1	0.3		0.3	1.1	
Delay (s)		16.9	16.7		17.7		8.5	11.4		6.3	11.4	
Level of Service		B	B		B		A	B		A	B	
Approach Delay (s)		16.8			17.7			11.3			11.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	47.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	657	67	349	596	0	370	0	377	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			2%			-2%	
Total Lost time (s)		5.6		5.6	5.6			5.7	5.7			
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00			
Frt		0.99		1.00	1.00			1.00	0.85			
Flt Protected		1.00		0.95	1.00			0.95	1.00			
Satd. Flow (prot)		3391		1719	3438			1702	1523			
Flt Permitted		1.00		0.13	1.00			0.95	1.00			
Satd. Flow (perm)		3391		233	3438			1702	1523			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	730	74	388	662	0	411	0	419	0	0	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	175	0	0	0
Lane Group Flow (vph)	0	797	0	388	662	0	0	411	244	0	0	0
Turn Type				pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases				6			4		4			
Actuated Green, G (s)		25.8		51.8	51.8			27.0	27.0			
Effective Green, g (s)		25.8		51.8	51.8			27.0	27.0			
Actuated g/C Ratio		0.29		0.57	0.57			0.30	0.30			
Clearance Time (s)		5.6		5.6	5.6			5.7	5.7			
Vehicle Extension (s)		2.5		2.5	2.0			2.8	2.8			
Lane Grp Cap (vph)		971		470	1977			510	456			
v/s Ratio Prot		0.24		c0.19	0.19							
v/s Ratio Perm				c0.29				0.24	0.16			
v/c Ratio		0.82		0.83	0.33			0.81	0.53			
Uniform Delay, d1		30.0		21.9	10.1			29.1	26.3			
Progression Factor		1.00		1.00	1.00			1.00	1.00			
Incremental Delay, d2		5.5		11.1	0.0			8.9	1.1			
Delay (s)		35.5		32.9	10.1			38.1	27.4			
Level of Service		D		C	B			D	C			
Approach Delay (s)		35.5			18.6			32.7			0.0	
Approach LOS		D			B			C			A	

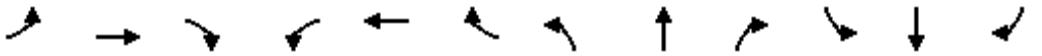
Intersection Summary			
HCM Average Control Delay	28.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.1	Sum of lost time (s)	11.3
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	241	786	0	0	907	680	0	0	0	38	0	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		0%			0%			-2%			2%	
Total Lost time (s)	5.3	5.3			5.3	5.3				6.0		6.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1719	3438			3438	1538				1702		1523
Flt Permitted	0.17	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	305	3438			3438	1538				1702		1523
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	268	873	0	0	1008	756	0	0	0	42	0	220
RTOR Reduction (vph)	0	0	0	0	0	358	0	0	0	0	0	194
Lane Group Flow (vph)	268	873	0	0	1008	398	0	0	0	42	0	26
Turn Type	pm+pt					Perm				custom		custom
Protected Phases	5	2			6							
Permitted Phases	2					6				8		8
Actuated Green, G (s)	55.5	55.5			35.8	35.8				9.1		9.1
Effective Green, g (s)	55.5	55.5			35.8	35.8				9.1		9.1
Actuated g/C Ratio	0.73	0.73			0.47	0.47				0.12		0.12
Clearance Time (s)	5.3	5.3			5.3	5.3				6.0		6.0
Vehicle Extension (s)	2.0	3.0			3.0	3.0				4.3		4.3
Lane Grp Cap (vph)	491	2514			1622	725				204		183
v/s Ratio Prot	c0.10	0.25			c0.29							
v/s Ratio Perm	0.30					0.26				c0.02		0.02
v/c Ratio	0.55	0.35			0.62	0.55				0.21		0.14
Uniform Delay, d1	7.1	3.7			15.0	14.3				30.1		29.9
Progression Factor	1.00	1.00			1.00	1.00				1.00		1.00
Incremental Delay, d2	0.7	0.1			0.7	0.9				0.8		0.6
Delay (s)	7.8	3.8			15.7	15.1				30.9		30.5
Level of Service	A	A			B	B				C		C
Approach Delay (s)		4.7			15.5			0.0			30.6	
Approach LOS		A			B			A			C	

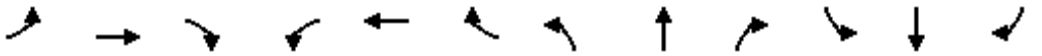
Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	75.9	Sum of lost time (s)	16.6
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



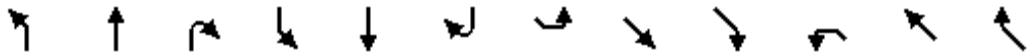
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	10	310	502	42	46	147	1038	160	11	805	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1547		1633	1649	1538	1719	3438	1538	1719	3425	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.11	1.00	1.00	0.18	1.00	
Satd. Flow (perm)	1719	1547		1633	1649	1538	193	3438	1538	327	3425	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	11	344	558	47	51	163	1153	178	12	894	23
RTOR Reduction (vph)	0	127	0	0	0	22	0	0	98	0	2	0
Lane Group Flow (vph)	23	228	0	301	304	29	163	1153	80	12	915	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	16.2	16.2		20.7	20.7	20.7	45.1	45.1	45.1	31.6	31.6	
Effective Green, g (s)	16.2	16.2		20.7	20.7	20.7	45.1	45.1	45.1	31.6	31.6	
Actuated g/C Ratio	0.16	0.16		0.21	0.21	0.21	0.45	0.45	0.45	0.32	0.32	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	278	251		338	341	318	201	1551	694	103	1082	
v/s Ratio Prot	0.01	c0.15		0.18	c0.18		0.06	c0.34			0.27	
v/s Ratio Perm						0.02	c0.30		0.05	0.04		
v/c Ratio	0.08	0.91		0.89	0.89	0.09	0.81	0.74	0.12	0.12	0.85	
Uniform Delay, d1	35.6	41.2		38.5	38.6	32.0	21.0	22.7	15.9	24.3	31.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.78	0.90	1.01	1.00	1.00	
Incremental Delay, d2	0.3	35.2		25.3	25.3	0.3	20.7	2.9	0.3	2.3	8.2	
Delay (s)	35.8	76.4		63.9	63.8	32.3	37.1	23.4	16.3	26.6	40.1	
Level of Service	D	E		E	E	C	D	C	B	C	D	
Approach Delay (s)		73.9			61.4			24.0			39.9	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM Average Control Delay	40.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	104.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



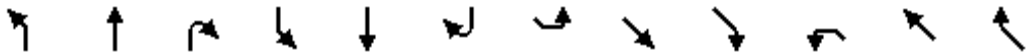
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	361	0	398	282	947	0	0	1200	417
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	401	0	442	313	1052	0	0	1333	463
RTOR Reduction (vph)	0	0	0	0	0	213	0	0	0	0	0	224
Lane Group Flow (vph)	0	0	0	200	201	229	313	1052	0	0	1333	239
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				17.6	17.6	17.6	12.7	70.4			51.7	51.7
Effective Green, g (s)				17.6	17.6	17.6	12.7	70.4			51.7	51.7
Actuated g/C Ratio				0.18	0.18	0.18	0.13	0.70			0.52	0.52
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				287	287	476	424	2420			1777	795
v/s Ratio Prot							c0.09	0.31			c0.39	
v/s Ratio Perm				0.12	0.12	0.08						0.16
v/c Ratio				0.70	0.70	0.48	0.74	0.43			0.75	0.30
Uniform Delay, d1				38.7	38.7	37.1	42.0	6.3			19.1	13.8
Progression Factor				1.00	1.00	1.00	0.81	1.28			0.64	1.32
Incremental Delay, d2				8.9	9.2	1.6	4.1	0.3			1.4	0.5
Delay (s)				47.6	47.9	38.6	38.1	8.4			13.5	18.7
Level of Service				D	D	D	D	A			B	B
Approach Delay (s)		0.0			43.0			15.2			14.9	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	856	562	960	601	0	373	0	280	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.21	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	385	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	951	624	1067	668	0	414	0	311	0	0	0
RTOR Reduction (vph)	0	0	181	0	0	0	0	0	280	0	0	0
Lane Group Flow (vph)	0	951	443	1067	668	0	207	207	31	0	0	0
Turn Type			Perm	pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		31.6	31.6	78.2	77.6		9.9	9.9	9.9			
Effective Green, g (s)		31.6	31.6	78.2	77.6		9.9	9.9	9.9			
Actuated g/C Ratio		0.32	0.32	0.78	0.78		0.10	0.10	0.10			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1561	486	837	2668		162	162	268			
v/s Ratio Prot		0.19		c0.51	0.19							
v/s Ratio Perm			0.29	c0.48			c0.13	0.13	0.01			
v/c Ratio		0.61	0.91	1.27	0.25		1.28	1.28	0.11			
Uniform Delay, d1		29.0	32.8	18.2	3.1		45.0	45.0	41.1			
Progression Factor		0.50	0.39	0.67	0.92		1.00	1.00	1.00			
Incremental Delay, d2		1.4	19.4	130.0	0.2		164.0	164.0	0.4			
Delay (s)		15.7	32.2	142.2	3.0		209.0	209.0	41.4			
Level of Service		B	C	F	A		F	F	D			
Approach Delay (s)		22.3			88.6			137.1			0.0	
Approach LOS		C			F			F			A	

Intersection Summary			
HCM Average Control Delay	71.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	88	882	1	5	558	318	530	1	273	3	1	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1719	4939			3436	1538	1719	1539			1744	1538
Flt Permitted	0.26	1.00			0.94	1.00	0.76	1.00			0.88	1.00
Satd. Flow (perm)	479	4939			3241	1538	1366	1539			1591	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	98	980	1	6	620	353	589	1	303	3	1	7
RTOR Reduction (vph)	0	0	0	0	0	234	0	112	0	0	0	4
Lane Group Flow (vph)	98	981	0	0	626	119	589	192	0	0	4	3
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	42.9	42.9			33.7	33.7	44.6	44.6			44.6	44.6
Effective Green, g (s)	42.9	42.9			33.7	33.7	44.6	44.6			44.6	44.6
Actuated g/C Ratio	0.43	0.43			0.34	0.34	0.45	0.45			0.45	0.45
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	248	2119			1092	518	609	686			710	686
v/s Ratio Prot	0.01	c0.20						0.12				
v/s Ratio Perm	0.16				c0.19	0.08	c0.43				0.00	0.00
v/c Ratio	0.40	0.46			0.57	0.23	0.97	0.28			0.01	0.00
Uniform Delay, d1	18.6	20.3			27.2	23.8	27.0	17.5			15.4	15.4
Progression Factor	1.08	1.18			1.26	3.10	1.00	1.00			1.00	1.00
Incremental Delay, d2	1.3	0.6			2.1	1.0	28.5	0.5			0.0	0.0
Delay (s)	21.4	24.6			36.3	74.9	55.5	18.0			15.4	15.4
Level of Service	C	C			D	E	E	B			B	B
Approach Delay (s)		24.3			50.2			42.7			15.4	
Approach LOS		C			D			D			B	

Intersection Summary			
HCM Average Control Delay	38.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.9
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	49	109	34	1891	1516	49
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	54	121	38	2101	1684	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1011	
pX, platoon unblocked	0.78	0.78	0.78			
vC, conflicting volume	2838	869	1739			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2793	279	1389			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	78	90			
cM capacity (veh/h)	10	556	371			

Direction, Lane #	WB 1	SE 1	SE 2	SE 3	NW 1	NW 2
Volume Total	176	38	1051	1051	1123	616
Volume Left	54	38	0	0	0	0
Volume Right	121	0	0	0	0	54
cSH	31	371	1700	1700	1700	1700
Volume to Capacity	5.70	0.10	0.62	0.62	0.66	0.36
Queue Length 95th (ft)	Err	8	0	0	0	0
Control Delay (s)	Err	15.8	0.0	0.0	0.0	0.0
Lane LOS	F	C				
Approach Delay (s)	Err	0.3			0.0	
Approach LOS	F					

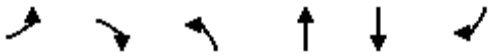
Intersection Summary			
Average Delay	433.2		
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	1565	375	80	1230	335	245
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1739	417	89	1367	372	272
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				863		
pX, platoon unblocked					0.77	
vC, conflicting volume			2156		2808	1078
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2156		2751	1078
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			62		0	0
cM capacity (veh/h)			236		7	209

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	1159	996	544	911	644
Volume Left	0	0	89	0	372
Volume Right	0	417	0	0	272
cSH	1700	1700	236	1700	12
Volume to Capacity	0.68	0.59	0.38	0.54	52.64
Queue Length 95th (ft)	0	0	42	0	Err
Control Delay (s)	0.0	0.0	17.4	0.0	Err
Lane LOS			C		F
Approach Delay (s)	0.0		6.5		Err
Approach LOS					F

Intersection Summary			
Average Delay	1516.4		
Intersection Capacity Utilization	134.4%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	19	5	1	705	972	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	21	6	1	783	1080	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1175	377	
pX, platoon unblocked	0.93	0.90	0.90			
vC, conflicting volume	1474	541	1081			
vC1, stage 1 conf vol	1081					
vC2, stage 2 conf vol	394					
vCu, unblocked vol	1063	273	872			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	99	100			
cM capacity (veh/h)	313	645	677			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	27	1	392	392	720	361
Volume Left	21	1	0	0	0	0
Volume Right	6	0	0	0	0	1
cSH	396	677	1700	1700	1700	1700
Volume to Capacity	0.07	0.00	0.23	0.23	0.42	0.21
Queue Length 95th (ft)	5	0	0	0	0	0
Control Delay (s)	15.9	10.3	0.0	0.0	0.0	0.0
Lane LOS	C	B				
Approach Delay (s)	15.9	0.0			0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	51	58	980	4	51	1536
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	57	64	1089	4	57	1707
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			369			
pX, platoon unblocked	0.92	0.92			0.92	
vC, conflicting volume	2058	547			1093	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1974	328			924	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	89			91	
cM capacity (veh/h)	44	605			658	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	121	726	367	57	853	853
Volume Left	57	0	0	57	0	0
Volume Right	64	0	4	0	0	0
cSH	87	1700	1700	658	1700	1700
Volume to Capacity	1.40	0.43	0.22	0.09	0.50	0.50
Queue Length 95th (ft)	230	0	0	7	0	0
Control Delay (s)	319.8	0.0	0.0	11.0	0.0	0.0
Lane LOS	F			B		
Approach Delay (s)	319.8	0.0		0.4		
Approach LOS	F					

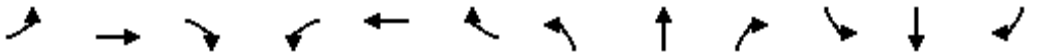
Intersection Summary			
Average Delay	13.2		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	15	1019	4	1	1400	9	2	0	171	16	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	1132	4	1	1556	10	2	0	190	18	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		939										
pX, platoon unblocked				1.00			1.00	1.00		1.00	1.00	1.00
vC, conflicting volume	1566			1137			2167	2733	783	2138	2736	568
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1566			1131			2164	2732	783	2135	2735	561
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			91	100	42	0	100	99
cM capacity (veh/h)	404			595			24	18	330	11	18	462

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SE 1	SE 2	NW 1	NW 2
Volume Total	17	755	382	779	788	2	190	18	4
Volume Left	17	0	0	1	0	2	0	18	0
Volume Right	0	0	4	0	10	0	190	0	4
cSH	404	1700	1700	595	1700	24	330	11	462
Volume to Capacity	0.04	0.44	0.22	0.00	0.46	0.09	0.58	1.62	0.01
Queue Length 95th (ft)	3	0	0	0	0	7	85	76	1
Control Delay (s)	14.3	0.0	0.0	0.1	0.0	167.5	29.7	981.0	12.9
Lane LOS	B			A		F	D	F	B
Approach Delay (s)	0.2			0.0		31.3		787.4	
Approach LOS						D		F	

Intersection Summary				
Average Delay	8.1			
Intersection Capacity Utilization	62.9%	ICU Level of Service		B
Analysis Period (min)	15			

CAPACITY ANALYSIS (SYNCHRO)
2015 NO-BUILD CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	381	210	216	258	37	261	818	162	164	860	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3255		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.50	1.00		0.16	1.00	1.00	0.29	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	898	3255		297	3438	1538	526	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	132	423	233	240	287	41	290	909	180	182	956	102
RTOR Reduction (vph)	0	53	0	0	0	34	0	0	80	0	0	38
Lane Group Flow (vph)	132	603	0	240	287	7	290	909	100	182	956	64
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	34.6	23.0		37.4	24.4	24.4	76.0	76.0	76.0	7.0	88.0	88.0
Effective Green, g (s)	34.6	23.0		37.4	24.4	24.4	76.0	76.0	76.0	7.0	88.0	88.0
Actuated g/C Ratio	0.25	0.16		0.27	0.17	0.17	0.54	0.54	0.54	0.05	0.63	0.63
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	290	535		211	599	268	286	1866	835	167	2161	967
v/s Ratio Prot	0.04	0.19		c0.11	0.08			0.26		c0.05	0.28	
v/s Ratio Perm	0.07			c0.20		0.00	c0.55		0.07			0.04
v/c Ratio	0.46	1.13		1.14	0.48	0.03	1.01	0.49	0.12	1.09	0.44	0.07
Uniform Delay, d1	43.0	58.5		46.1	52.1	47.9	32.0	19.9	15.7	66.5	13.4	10.1
Progression Factor	1.00	1.00		0.97	0.79	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	78.5		103.1	1.4	0.1	56.8	0.9	0.3	95.7	0.7	0.1
Delay (s)	44.8	137.0		147.8	42.3	46.8	88.8	20.8	15.9	162.2	14.0	10.2
Level of Service	D	F		F	D	D	F	C	B	F	B	B
Approach Delay (s)		121.6			87.2			34.5			35.5	
Approach LOS		F			F			C			D	

Intersection Summary			
HCM Average Control Delay	59.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	18	736	25	56	551	28	25	1	53	7	1	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3421		1719	3438	1538	1719	1543		1719	1810	1538
Flt Permitted	0.36	1.00		0.33	1.00	1.00	0.76	1.00		0.72	1.00	1.00
Satd. Flow (perm)	647	3421		604	3438	1538	1370	1543		1299	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	818	28	62	612	31	28	1	59	8	1	12
RTOR Reduction (vph)	0	3	0	0	0	14	0	52	0	0	0	10
Lane Group Flow (vph)	20	843	0	62	612	17	28	8	0	8	1	2
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	48.6	48.6		38.9	38.9	38.9	8.4	8.4		8.4	8.4	11.6
Effective Green, g (s)	48.6	48.6		38.9	38.9	38.9	8.4	8.4		8.4	8.4	11.6
Actuated g/C Ratio	0.69	0.69		0.56	0.56	0.56	0.12	0.12		0.12	0.12	0.17
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	498	2375		336	1911	855	164	185		156	217	398
v/s Ratio Prot	0.00	c0.25			0.18			0.01			0.00	0.00
v/s Ratio Perm	0.03			0.10		0.01	c0.02			0.01		0.00
v/c Ratio	0.04	0.35		0.18	0.32	0.02	0.17	0.04		0.05	0.00	0.00
Uniform Delay, d1	3.6	4.3		7.7	8.4	7.0	27.7	27.2		27.3	27.1	24.4
Progression Factor	0.33	0.32		0.29	0.30	0.44	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.0	0.2		1.1	0.4	0.0	1.2	0.2		0.3	0.0	0.0
Delay (s)	1.2	1.6		3.4	3.0	3.1	28.9	27.5		27.6	27.1	24.4
Level of Service	A	A		A	A	A	C	C		C	C	C
Approach Delay (s)		1.6			3.0			27.9			25.7	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	3.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	4	1	26	1	1	6	8	576	45	54	834	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.88			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1592			1765	1538	1719	3401		1719	3438	1538
Flt Permitted		0.97			0.87	1.00	0.30	1.00		0.39	1.00	1.00
Satd. Flow (perm)		1546			1578	1538	550	3401		704	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	1	29	1	1	7	9	640	50	60	927	4
RTOR Reduction (vph)	0	26	0	0	0	6	0	7	0	0	0	1
Lane Group Flow (vph)	0	8	0	0	2	1	9	683	0	60	927	3
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		7.6			7.6	7.6	51.1	51.1		51.1	51.1	51.1
Effective Green, g (s)		7.6			7.6	7.6	51.1	51.1		51.1	51.1	51.1
Actuated g/C Ratio		0.11			0.11	0.11	0.73	0.73		0.73	0.73	0.73
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		168			171	167	402	2483		514	2510	1123
v/s Ratio Prot								0.20			c0.27	
v/s Ratio Perm		c0.01			0.00	0.00	0.02			0.09		0.00
v/c Ratio		0.05			0.01	0.00	0.02	0.27		0.12	0.37	0.00
Uniform Delay, d1		28.0			27.8	27.8	2.6	3.2		2.8	3.5	2.6
Progression Factor		1.00			1.00	1.00	0.23	0.19		0.28	0.33	0.23
Incremental Delay, d2		0.2			0.0	0.0	0.1	0.3		0.4	0.4	0.0
Delay (s)		28.1			27.9	27.8	0.7	0.9		1.2	1.6	0.6
Level of Service		C			C	C	A	A		A	A	A
Approach Delay (s)		28.1			27.9			0.9			1.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	1.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	36	5	58	21	5	2	12	512	79	156	854	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.86		1.00	0.96		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1561		1719	1742		1719	3369		1719	3418	
Flt Permitted	0.61	1.00		0.71	1.00		0.28	1.00		0.35	1.00	
Satd. Flow (perm)	1105	1561		1287	1742		498	3369		636	3418	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	6	64	23	6	2	13	569	88	173	949	39
RTOR Reduction (vph)	0	58	0	0	2	0	0	6	0	0	2	0
Lane Group Flow (vph)	40	12	0	23	6	0	13	651	0	173	986	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	19.3	12.2		14.7	9.9		91.9	89.3		105.0	96.4	
Effective Green, g (s)	19.3	12.2		14.7	9.9		91.9	89.3		105.0	96.4	
Actuated g/C Ratio	0.14	0.09		0.10	0.07		0.66	0.64		0.75	0.69	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	183	136		150	123		350	2149		552	2354	
v/s Ratio Prot	c0.01	0.01		0.01	0.00		0.00	0.19		c0.02	c0.29	
v/s Ratio Perm	c0.02			0.01			0.02			0.21		
v/c Ratio	0.22	0.09		0.15	0.05		0.04	0.30		0.31	0.42	
Uniform Delay, d1	53.3	58.8		56.8	60.7		8.4	11.4		5.5	9.5	
Progression Factor	1.00	1.00		1.00	1.00		0.47	0.40		0.21	0.39	
Incremental Delay, d2	1.0	0.4		0.8	0.3		0.1	0.4		0.5	0.5	
Delay (s)	54.2	59.2		57.6	60.9		4.0	5.0		1.7	4.2	
Level of Service	D	E		E	E		A	A		A	A	
Approach Delay (s)		57.4			58.5			4.9			3.8	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations											
Volume (vph)	346	0	232	0	509	82	464	813	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95			
Frt	1.00		0.85		1.00	0.85	1.00	1.00			
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00			
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438			
Flt Permitted	0.95		1.00		1.00	1.00	0.36	1.00			
Satd. Flow (perm)	3335		2707		3438	1538	655	3438			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	384	0	258	0	566	91	516	903	0	0	0
RTOR Reduction (vph)	0	0	216	0	0	44	0	0	0	0	0
Lane Group Flow (vph)	384	0	42	0	566	47	516	903	0	0	0
Turn Type	custom		custom			Perm	pm+pt				
Protected Phases					2		1	6			
Permitted Phases	4		4			2	6				
Actuated Green, G (s)	23.0		23.0		71.6	71.6	105.9	105.9			
Effective Green, g (s)	23.0		23.0		71.6	71.6	105.9	105.9			
Actuated g/C Ratio	0.16		0.16		0.51	0.51	0.76	0.76			
Clearance Time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Vehicle Extension (s)	4.3		4.3		4.3	4.3	4.3	4.3			
Lane Grp Cap (vph)	548		445		1758	787	705	2601			
v/s Ratio Prot					0.16		c0.14	0.26			
v/s Ratio Perm	c0.12		0.02			0.03	c0.41				
v/c Ratio	0.70		0.10		0.32	0.06	0.73	0.35			
Uniform Delay, d1	55.2		49.7		20.0	17.2	7.9	5.6			
Progression Factor	1.00		1.00		0.37	0.22	1.37	0.33			
Incremental Delay, d2	4.5		0.1		0.5	0.1	3.9	0.3			
Delay (s)	59.7		49.8		7.8	4.0	14.7	2.2			
Level of Service	E		D		A	A	B	A			
Approach Delay (s)		55.8			7.3			6.7		0.0	
Approach LOS		E			A			A		A	

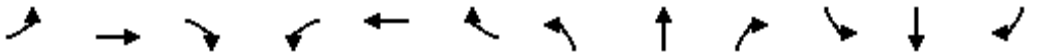
Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	331	583	698	157	0	946
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	368	648	776	174	0	1051
RTOR Reduction (vph)	0	398	0	79	0	0
Lane Group Flow (vph)	368	250	776	95	0	1051
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	32.4	32.4	76.5	76.5		95.5
Effective Green, g (s)	32.4	32.4	76.5	76.5		88.5
Actuated g/C Ratio	0.23	0.23	0.55	0.55		0.63
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	772	626	1879	840		2173
v/s Ratio Prot	c0.11	0.09	0.23			c0.31
v/s Ratio Perm				0.06		
v/c Ratio	0.48	0.40	0.41	0.11		0.48
Uniform Delay, d1	46.5	45.6	18.6	15.4		13.6
Progression Factor	1.00	1.00	0.81	2.48		1.00
Incremental Delay, d2	0.7	0.7	0.6	0.3		0.2
Delay (s)	47.2	46.2	15.6	38.4		13.9
Level of Service	D	D	B	D		B
Approach Delay (s)	46.6		19.8			13.9
Approach LOS	D		B			B

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

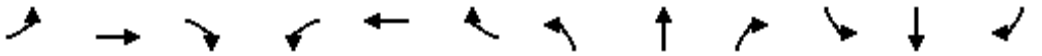
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	113	86	1116	165	123	1441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3335	1538	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.21	1.00
Satd. Flow (perm)	3335	1538	3438	1538	382	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	126	96	1240	183	137	1601
RTOR Reduction (vph)	0	88	0	32	0	0
Lane Group Flow (vph)	126	8	1240	151	137	1601
Turn Type		Prot		Perm	Perm	
Protected Phases	4	4	2 3 6			2 3 6
Permitted Phases	4			2 3 6	2 3 6	
Actuated Green, G (s)	12.0	12.0	115.4	115.4	115.4	115.4
Effective Green, g (s)	12.0	12.0	115.4	115.4	115.4	115.4
Actuated g/C Ratio	0.09	0.09	0.82	0.82	0.82	0.82
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	286	132	2834	1268	315	2834
v/s Ratio Prot	c0.04	0.01	0.36			c0.47
v/s Ratio Perm				0.10	0.36	
v/c Ratio	0.44	0.06	0.44	0.12	0.43	0.56
Uniform Delay, d1	60.8	58.8	3.4	2.4	3.4	4.0
Progression Factor	1.00	1.00	0.31	0.00	0.12	0.11
Incremental Delay, d2	1.7	0.3	0.1	0.1	1.1	0.2
Delay (s)	62.5	59.1	1.2	0.1	1.5	0.7
Level of Service	E	E	A	A	A	A
Approach Delay (s)	61.1		1.1			0.7
Approach LOS	E		A			A

Intersection Summary			
HCM Average Control Delay	4.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



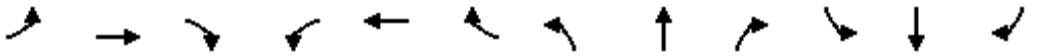
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	1048	54	24	1468	60	33	1	34	27	1	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	111	1164	60	27	1631	67	37	1	38	30	1	70
RTOR Reduction (vph)	0	0	17	0	0	21	0	0	33	0	0	66
Lane Group Flow (vph)	111	1164	43	27	1631	46	37	1	5	30	1	4
Turn Type	Prot		pm+ov	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	9.8	93.6	101.4	6.9	90.7	90.7	7.8	11.5	18.4	4.2	7.9	7.9
Effective Green, g (s)	9.8	93.6	101.4	6.9	90.7	90.7	7.8	11.5	18.4	4.2	7.9	7.9
Actuated g/C Ratio	0.07	0.67	0.72	0.05	0.65	0.65	0.06	0.08	0.13	0.03	0.06	0.06
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	233	2299	1114	85	2227	996	96	149	202	100	194	87
v/s Ratio Prot	0.03	c0.34	0.00	0.02	c0.47		c0.02	0.00	c0.00	0.01	0.00	
v/s Ratio Perm			0.03			0.03			0.00			c0.00
v/c Ratio	0.48	0.51	0.04	0.32	0.73	0.05	0.39	0.01	0.02	0.30	0.01	0.05
Uniform Delay, d1	62.6	11.6	5.5	64.3	16.5	8.9	63.8	59.0	53.0	66.5	62.3	62.5
Progression Factor	1.25	0.52	0.29	0.72	0.15	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.7	0.0	2.7	1.7	0.1	4.0	0.0	0.1	2.7	0.0	0.3
Delay (s)	80.5	6.7	1.6	48.7	4.2	0.1	67.8	59.0	53.1	69.1	62.4	62.8
Level of Service	F	A	A	D	A	A	E	E	D	E	E	E
Approach Delay (s)		12.6			4.7			60.3			64.7	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	29.9
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



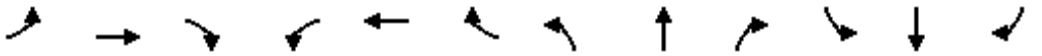
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	220	773	116	103	1018	465	253	243	66	140	112	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	3335	1752		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.26	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	475	3438	1538	3335	1752		3335	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	244	859	129	114	1131	517	281	270	73	156	124	312
RTOR Reduction (vph)	0	0	66	0	0	217	0	7	0	0	0	0
Lane Group Flow (vph)	244	859	63	114	1131	300	281	336	0	156	124	312
Turn Type	Prot		Perm	pm+pt		Perm	Prot			Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6						Free
Actuated Green, G (s)	14.4	67.9	67.9	71.5	62.5	62.5	17.1	31.6		9.8	24.3	140.0
Effective Green, g (s)	14.4	67.9	67.9	71.5	62.5	62.5	17.1	31.6		9.8	24.3	140.0
Actuated g/C Ratio	0.10	0.49	0.49	0.51	0.45	0.45	0.12	0.23		0.07	0.17	1.00
Clearance Time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	343	1667	746	323	1535	687	407	395		233	314	1538
v/s Ratio Prot	c0.07	0.25		0.02	c0.33		c0.08	c0.19		0.05	0.07	
v/s Ratio Perm			0.04	0.16		0.20						0.20
v/c Ratio	0.71	0.52	0.08	0.35	0.74	0.44	0.69	0.85		0.67	0.39	0.20
Uniform Delay, d1	60.8	24.8	19.4	18.7	32.0	26.6	58.9	51.9		63.5	51.3	0.0
Progression Factor	1.22	0.77	0.93	0.49	0.48	0.06	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.7	1.0	0.2	0.9	2.8	1.7	5.6	16.8		8.2	1.3	0.3
Delay (s)	81.1	20.1	18.2	10.0	18.1	3.4	64.5	68.7		71.7	52.6	0.3
Level of Service	F	C	B	A	B	A	E	E		E	D	A
Approach Delay (s)		32.0			13.3			66.8			30.1	
Approach LOS		C			B			E			C	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



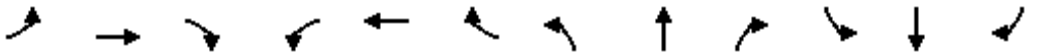
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	830	149	64	1091	0	0	0	0	832	0	495
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		4.0
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.98		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3359		1719	3438					3335		1538
Flt Permitted		1.00		0.14	1.00					0.95		1.00
Satd. Flow (perm)		3359		261	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	922	166	71	1212	0	0	0	0	924	0	550
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1078	0	71	1212	0	0	0	0	924	0	550
Turn Type				pm+pt						Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		68.0		81.2	81.2					46.5		140.0
Effective Green, g (s)		68.0		81.2	81.2					46.5		140.0
Actuated g/C Ratio		0.49		0.58	0.58					0.33		1.00
Clearance Time (s)		6.6		6.6	6.6					5.7		
Vehicle Extension (s)		4.3		4.3	4.3					4.3		
Lane Grp Cap (vph)		1632		220	1994					1108		1538
v/s Ratio Prot		c0.32		0.02	c0.35					c0.28		
v/s Ratio Perm				0.17								0.36
v/c Ratio		0.66		0.32	0.61					0.83		0.36
Uniform Delay, d1		27.3		17.6	19.1					43.2		0.0
Progression Factor		0.72		0.12	0.29					1.02		1.00
Incremental Delay, d2		1.8		0.4	0.4					5.9		0.7
Delay (s)		21.5		2.6	5.9					49.8		0.7
Level of Service		C		A	A					D		A
Approach Delay (s)		21.5			5.8			0.0			31.5	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.9
Intersection Capacity Utilization	114.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



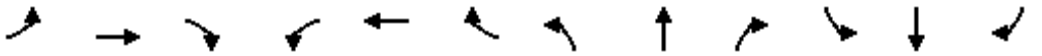
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	605	1057	0	0	632	614	523	0	254	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.11	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	190	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	672	1174	0	0	702	682	581	0	282	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	452	0	0	54	0	0	0
Lane Group Flow (vph)	672	1174	0	0	702	230	581	0	228	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	83.9	83.9			31.9	31.9	45.0		45.0			
Effective Green, g (s)	83.9	83.9			31.9	31.9	45.0		45.0			
Actuated g/C Ratio	0.60	0.60			0.23	0.23	0.32		0.32			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	615	2060			783	350	553		494			
v/s Ratio Prot	c0.36	0.34			0.20		c0.34					
v/s Ratio Perm	c0.30					0.15			0.15			
v/c Ratio	1.09	0.57			0.90	0.66	1.05		0.46			
Uniform Delay, d1	40.0	17.1			52.4	49.1	47.5		37.8			
Progression Factor	0.99	0.71			0.75	1.77	1.00		1.00			
Incremental Delay, d2	58.9	0.8			11.0	6.4	52.2		1.1			
Delay (s)	98.4	12.9			50.3	93.3	99.7		38.9			
Level of Service	F	B			D	F	F		D			
Approach Delay (s)		44.1			71.5			79.9			0.0	
Approach LOS		D			E			E			A	

Intersection Summary			
HCM Average Control Delay	60.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	114.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



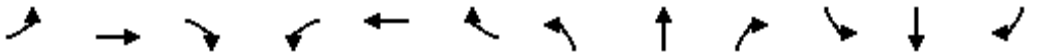
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	1102	93	21	1099	44	85	5	7	78	20	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3398		1719	3418		1719	1654		1719	1604	
Flt Permitted	0.11	1.00		0.19	1.00		0.39	1.00		0.75	1.00	
Satd. Flow (perm)	195	3398		350	3418		710	1654		1354	1604	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	1224	103	23	1221	49	94	6	8	87	22	69
RTOR Reduction (vph)	0	9	0	0	4	0	0	6	0	0	62	0
Lane Group Flow (vph)	129	1318	0	23	1266	0	94	8	0	87	29	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	42.1	42.1		31.9	31.9		17.0	17.0		6.8	6.8	
Effective Green, g (s)	42.1	42.1		31.9	31.9		17.0	17.0		6.8	6.8	
Actuated g/C Ratio	0.60	0.60		0.46	0.46		0.24	0.24		0.10	0.10	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	224	2044		160	1558		243	402		132	156	
v/s Ratio Prot	0.04	c0.39			c0.37		c0.03	0.00			0.02	
v/s Ratio Perm	0.31			0.07			0.07			c0.06		
v/c Ratio	0.58	0.64		0.14	0.81		0.39	0.02		0.66	0.18	
Uniform Delay, d1	10.8	9.1		11.1	16.5		21.4	20.2		30.5	29.0	
Progression Factor	1.20	1.08		0.61	0.75		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.9	1.3		1.6	4.2		1.6	0.0		13.1	0.9	
Delay (s)	17.0	11.1		8.4	16.5		23.1	20.2		43.6	30.0	
Level of Service	B	B		A	B		C	C		D	C	
Approach Delay (s)		11.7			16.3			22.7			36.6	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



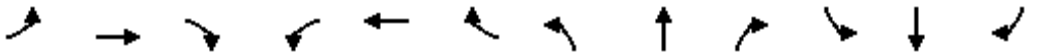
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	1017	164	124	1088	1	74	1	104	1	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.92			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1719	3367		1719	3438			1633			1667	
Flt Permitted	0.21	1.00		0.18	1.00			0.86			0.92	
Satd. Flow (perm)	380	3367		333	3438			1441			1548	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	1130	182	138	1209	1	82	1	116	1	1	2
RTOR Reduction (vph)	0	18	0	0	0	0	0	72	0	0	2	0
Lane Group Flow (vph)	7	1294	0	138	1210	0	0	127	0	0	2	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	49.9	49.9		50.2	50.2			8.8			8.8	
Effective Green, g (s)	49.9	49.9		50.2	50.2			8.8			8.8	
Actuated g/C Ratio	0.71	0.71		0.72	0.72			0.13			0.13	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	271	2400		239	2466			181			195	
v/s Ratio Prot		0.38			0.35							
v/s Ratio Perm	0.02			c0.41				c0.09			0.00	
v/c Ratio	0.03	0.54		0.58	0.49			0.70			0.01	
Uniform Delay, d1	2.9	4.7		4.8	4.3			29.3			26.8	
Progression Factor	0.15	0.10		1.94	1.43			1.00			1.00	
Incremental Delay, d2	0.1	0.7		0.9	0.1			13.0			0.0	
Delay (s)	0.6	1.1		10.2	6.3			42.3			26.8	
Level of Service	A	A		B	A			D			C	
Approach Delay (s)		1.1			6.7			42.3			26.8	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM Average Control Delay	6.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	1445	17	14	3250	83	49	2	25	84	1	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.86			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	
Satd. Flow (prot)	1719	3432		1719	3425		1719	1556			1711	
Flt Permitted	0.04	1.00		0.14	1.00		0.78	1.00			0.73	
Satd. Flow (perm)	67	3432		251	3425		1413	1556			1296	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	1606	19	16	3611	92	54	2	28	93	1	9
RTOR Reduction (vph)	0	0	0	0	1	0	0	25	0	0	3	0
Lane Group Flow (vph)	23	1625	0	16	3702	0	54	5	0	0	100	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	111.4	111.4		101.0	101.0		17.3	17.3			17.3	
Effective Green, g (s)	111.4	111.4		101.0	101.0		17.3	17.3			17.3	
Actuated g/C Ratio	0.80	0.80		0.72	0.72		0.12	0.12			0.12	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	102	2731		181	2471		175	192			160	
v/s Ratio Prot	0.01	c0.47			c1.08			0.00				
v/s Ratio Perm	0.17			0.06			0.04				c0.08	
v/c Ratio	0.23	0.59		0.09	1.50		0.31	0.03			0.63	
Uniform Delay, d1	41.6	5.5		5.8	19.5		55.9	54.0			58.3	
Progression Factor	0.75	0.50		0.60	0.54		1.00	1.00			1.00	
Incremental Delay, d2	1.6	0.9		0.4	225.2		1.6	0.1			9.0	
Delay (s)	32.8	3.7		3.9	235.7		57.5	54.1			67.3	
Level of Service	C	A		A	F		E	D			E	
Approach Delay (s)		4.1			234.7			56.3			67.3	
Approach LOS		A			F			E			E	

Intersection Summary			
HCM Average Control Delay	160.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

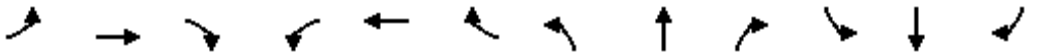


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	746	20	94	2081	54	337	247	27	47	200	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3425		1719	3425		1719	1810	1538	1719	1738	
Flt Permitted	0.05	1.00		0.28	1.00		0.17	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	86	3425		512	3425		299	1810	1538	1069	1738	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	829	22	104	2312	60	374	274	30	52	222	79
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	20	0	10	0
Lane Group Flow (vph)	44	850	0	104	2371	0	374	274	10	52	291	0
Turn Type	Perm			Perm			pm+pt		Perm	Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	83.7	83.7		83.7	83.7		45.0	45.0	45.0	18.8	18.8	
Effective Green, g (s)	83.7	83.7		83.7	83.7		45.0	45.0	45.0	18.8	18.8	
Actuated g/C Ratio	0.60	0.60		0.60	0.60		0.32	0.32	0.32	0.13	0.13	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	51	2048		306	2048		307	582	494	144	233	
v/s Ratio Prot		0.25			c0.69		c0.18	0.15			0.17	
v/s Ratio Perm	0.51			0.20			c0.21		0.01	0.05		
v/c Ratio	0.86	0.41		0.34	1.16		1.22	0.47	0.02	0.36	1.25	
Uniform Delay, d1	23.4	15.1		14.2	28.1		41.5	38.0	32.4	55.1	60.6	
Progression Factor	0.83	0.90		0.80	0.77		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	79.7	0.5		1.9	74.7		124.1	1.0	0.0	2.4	143.3	
Delay (s)	99.1	14.0		13.3	96.5		165.6	38.9	32.5	57.6	203.9	
Level of Service	F	B		B	F		F	D	C	E	F	
Approach Delay (s)		18.2			93.0			108.5			182.3	
Approach LOS		B			F			F			F	

Intersection Summary			
HCM Average Control Delay	87.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	125.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

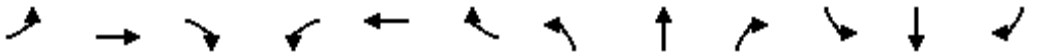
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	708	52	533	1893	1	162	28	390	22	29	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3402		1719	3438			1735	1538	1719	1750	
Flt Permitted		0.93		0.19	1.00			0.73	1.00	0.39	1.00	
Satd. Flow (perm)		3151		336	3438			1318	1538	700	1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	787	58	592	2103	1	180	31	433	24	32	9
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	35	0	7	0
Lane Group Flow (vph)	0	847	0	592	2104	0	0	211	398	24	34	0
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		56.4		102.3	102.3			26.4	66.0	26.4	26.4	
Effective Green, g (s)		56.4		102.3	102.3			26.4	66.0	26.4	26.4	
Actuated g/C Ratio		0.40		0.73	0.73			0.19	0.47	0.19	0.19	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1269		637	2512			249	725	132	330	
v/s Ratio Prot				c0.26	0.61				0.16		0.02	
v/s Ratio Perm		0.27		c0.42				c0.16	0.10	0.03		
v/c Ratio		0.67		0.93	0.84			0.85	0.55	0.18	0.10	
Uniform Delay, d1		34.1		29.9	13.1			54.9	26.4	47.7	47.0	
Progression Factor		0.55		1.19	0.59			1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.6		2.8	0.3			23.7	1.2	1.1	0.2	
Delay (s)		21.4		38.3	8.0			78.6	27.6	48.8	47.2	
Level of Service		C		D	A			E	C	D	D	
Approach Delay (s)		21.4			14.7			44.3			47.8	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	109.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



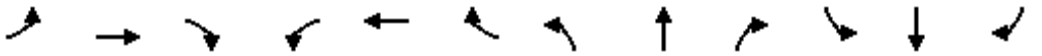
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1105	90	28	2672	17	139	1	34	14	1	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3399		1719	3435			1694			1600	
Flt Permitted	0.04	1.00		0.18	1.00			0.67			0.95	
Satd. Flow (perm)	67	3399		327	3435			1176			1528	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	1228	100	31	2969	19	154	1	38	16	1	66
RTOR Reduction (vph)	0	4	0	0	0	0	0	6	0	0	4	0
Lane Group Flow (vph)	28	1324	0	31	2988	0	0	187	0	0	79	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	108.8	108.8		108.8	108.8			19.6			19.6	
Effective Green, g (s)	108.8	108.8		108.8	108.8			19.6			19.6	
Actuated g/C Ratio	0.78	0.78		0.78	0.78			0.14			0.14	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	52	2642		254	2669			165			214	
v/s Ratio Prot		0.39			c0.87							
v/s Ratio Perm	0.42			0.09				c0.16			0.05	
v/c Ratio	0.54	0.50		0.12	1.12			1.13			0.37	
Uniform Delay, d1	6.0	5.7		3.8	15.6			60.2			54.6	
Progression Factor	1.93	1.36		0.70	0.48			1.00			1.00	
Incremental Delay, d2	29.6	0.6		0.4	56.3			110.4			1.7	
Delay (s)	41.1	8.3		3.1	63.7			170.6			56.3	
Level of Service	D	A		A	E			F			E	
Approach Delay (s)		9.0			63.1			170.6			56.3	
Approach LOS		A			E			F			E	

Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	151	598	92	50	1477	199	369	384	132	132	229	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3377		1719	1810	1538	1719	1810	1538
Flt Permitted	0.06	1.00	1.00	0.36	1.00		0.19	1.00	1.00	0.25	1.00	1.00
Satd. Flow (perm)	102	3438	1538	652	3377		345	1810	1538	452	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	168	664	102	56	1641	221	410	427	147	147	254	354
RTOR Reduction (vph)	0	0	33	0	7	0	0	0	75	0	0	18
Lane Group Flow (vph)	168	664	69	56	1855	0	410	427	72	147	254	336
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	82.0	71.3	94.3	74.8	67.7		44.0	32.0	39.1	23.0	16.0	26.7
Effective Green, g (s)	82.0	71.3	94.3	74.8	67.7		44.0	32.0	39.1	23.0	16.0	26.7
Actuated g/C Ratio	0.59	0.51	0.67	0.53	0.48		0.31	0.23	0.28	0.16	0.11	0.19
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	183	1751	1036	402	1633		334	414	430	138	207	293
v/s Ratio Prot	0.07	0.19	0.01	0.01	c0.55		c0.20	0.24	0.01	0.05	0.14	c0.09
v/s Ratio Perm	c0.47		0.03	0.07			c0.18		0.04	0.12		0.13
v/c Ratio	0.92	0.38	0.07	0.14	1.14		1.23	1.03	0.17	1.07	1.23	1.15
Uniform Delay, d1	44.1	20.9	7.8	15.9	36.1		42.2	54.0	38.1	57.1	62.0	56.6
Progression Factor	1.12	0.57	0.88	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	40.3	0.5	0.0	0.3	69.2		126.0	52.5	0.3	95.1	137.2	98.5
Delay (s)	89.9	12.5	6.9	16.1	105.4		168.2	106.5	38.4	152.2	199.2	155.2
Level of Service	F	B	A	B	F		F	F	D	F	F	F
Approach Delay (s)		25.8			102.8			122.1			169.4	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM Average Control Delay	102.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.9
Intersection Capacity Utilization	106.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

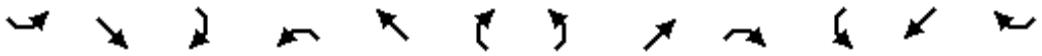


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	100	49	136	23	103	97	1419	75	84	1240	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3269		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.74	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1340	3269		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	111	54	151	26	114	108	1577	83	93	1378	99
RTOR Reduction (vph)	0	49	0	0	0	100	0	0	48	0	0	62
Lane Group Flow (vph)	117	116	0	151	26	14	108	1577	35	93	1378	37
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	9.8	5.8		6.0	7.8	7.8	7.6	27.2	27.2	5.0	24.6	24.6
Effective Green, g (s)	9.8	5.8		6.0	7.8	7.8	7.6	27.2	27.2	5.0	24.6	24.6
Actuated g/C Ratio	0.15	0.09		0.09	0.12	0.12	0.12	0.42	0.42	0.08	0.38	0.38
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	225	292		308	217	185	201	2067	644	257	1870	582
v/s Ratio Prot	0.03	0.04		c0.05	0.01		c0.06	c0.32		0.03	0.28	
v/s Ratio Perm	c0.05					0.01			0.02			0.02
v/c Ratio	0.52	0.40		0.49	0.12	0.07	0.54	0.76	0.05	0.36	0.74	0.06
Uniform Delay, d1	25.2	27.9		28.0	25.5	25.4	27.0	16.1	11.2	28.5	17.4	12.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.87	0.89	0.82	1.00	1.00	1.00
Incremental Delay, d2	3.2	1.8		1.9	0.5	0.3	3.2	2.2	0.1	1.4	2.6	0.2
Delay (s)	28.3	29.7		30.0	26.0	25.7	26.8	16.6	9.3	29.9	20.0	13.1
Level of Service	C	C		C	C	C	C	B	A	C	C	B
Approach Delay (s)		29.2			28.0			16.9			20.2	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

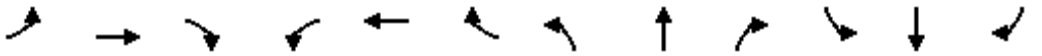
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	346	96	1198	227	104	1245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4822		1719	4940
Flt Permitted	0.95	1.00	1.00		0.12	1.00
Satd. Flow (perm)	1719	1538	4822		221	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	384	107	1331	252	116	1383
RTOR Reduction (vph)	0	38	42	0	0	0
Lane Group Flow (vph)	384	69	1541	0	116	1383
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	15.0	15.0	37.7		37.7	37.7
Effective Green, g (s)	15.0	15.0	37.7		37.7	37.7
Actuated g/C Ratio	0.23	0.23	0.58		0.58	0.58
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	397	355	2797		128	2865
v/s Ratio Prot	c0.22		0.32			0.28
v/s Ratio Perm		0.04			c0.52	
v/c Ratio	0.97	0.19	0.55		0.91	0.48
Uniform Delay, d1	24.8	20.1	8.4		12.1	8.0
Progression Factor	1.00	1.00	0.18		1.00	1.00
Incremental Delay, d2	36.7	0.5	0.6		57.5	0.6
Delay (s)	61.5	20.7	2.1		69.6	8.5
Level of Service	E	C	A		E	A
Approach Delay (s)	52.6		2.1			13.3
Approach LOS	D		A			B

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



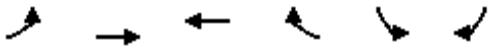
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	102	1205	210	24	1680	57	71	75	61	4	14	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3206		1719	1810	2707
Flt Permitted	0.06	1.00	1.00	0.14	1.00	1.00	0.95	1.00		0.66	1.00	1.00
Satd. Flow (perm)	115	3438	1538	260	3438	1538	3335	3206		1188	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	113	1339	233	27	1867	63	79	83	68	4	16	42
RTOR Reduction (vph)	0	0	95	0	0	28	0	58	0	0	0	35
Lane Group Flow (vph)	113	1339	138	27	1867	35	79	93	0	4	16	7
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	71.2	63.2	63.2	62.9	59.3	59.3	8.0	16.2		9.4	8.8	16.8
Effective Green, g (s)	71.2	63.2	63.2	62.9	59.3	59.3	8.0	16.2		9.4	8.8	16.8
Actuated g/C Ratio	0.67	0.59	0.59	0.59	0.56	0.56	0.08	0.15		0.09	0.08	0.16
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	197	2038	912	203	1913	856	250	487		108	149	427
v/s Ratio Prot	c0.04	0.39		0.00	c0.54		c0.02	c0.03		0.00	0.01	0.00
v/s Ratio Perm	0.34		0.09	0.07		0.02				0.00		0.00
v/c Ratio	0.57	0.66	0.15	0.13	0.98	0.04	0.32	0.19		0.04	0.11	0.02
Uniform Delay, d1	22.3	14.5	9.7	10.7	23.0	10.7	46.7	39.5		44.4	45.3	37.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.2	1.0	0.2	0.5	15.3	0.0	1.2	0.6		0.2	1.0	0.0
Delay (s)	27.6	15.5	9.9	11.1	38.3	10.8	47.9	40.1		44.6	46.3	37.9
Level of Service	C	B	A	B	D	B	D	D		D	D	D
Approach Delay (s)		15.5			37.0			42.8			40.5	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	106.6	Sum of lost time (s)	20.5
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	234	936	955	0	1657	774	0	0	0	276	502	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	260	1040	1061	0	1841	860	0	0	0	307	558	200
RTOR Reduction (vph)	0	0	29	0	0	2	0	0	0	0	0	107
Lane Group Flow (vph)	260	1040	1032	0	1841	858	0	0	0	307	558	93
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	8.2	68.2	68.2		54.2	84.9				30.7	30.7	30.7
Effective Green, g (s)	8.2	68.2	68.2		54.2	84.9				30.7	30.7	30.7
Actuated g/C Ratio	0.07	0.62	0.62		0.49	0.77				0.28	0.28	0.28
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	249	2132	954		1694	1187				480	505	429
v/s Ratio Prot	0.08	0.30			0.54	0.20					c0.31	
v/s Ratio Perm			c0.67			0.36				0.18		0.06
v/c Ratio	1.04	0.49	1.08		1.09	0.72				0.64	1.10	0.22
Uniform Delay, d1	50.9	11.4	20.9		27.9	6.5				34.8	39.6	30.4
Progression Factor	1.00	1.00	1.00		0.82	0.89				1.00	1.00	1.00
Incremental Delay, d2	69.1	0.8	53.9		42.2	0.6				3.4	71.9	0.4
Delay (s)	120.0	12.2	74.8		65.2	6.4				38.1	111.5	30.8
Level of Service	F	B	E		E	A				D	F	C
Approach Delay (s)		52.2			46.5			0.0			75.2	
Approach LOS		D			D			A			E	

Intersection Summary			
HCM Average Control Delay	53.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	145.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

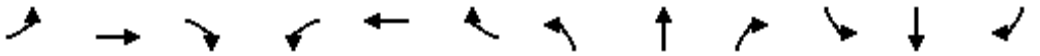


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1212	1222	0	649	1209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1347	1358	0	721	1343
RTOR Reduction (vph)	0	0	0	0	0	11
Lane Group Flow (vph)	0	1347	1358	0	721	1332
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		45.4	45.4		53.7	53.7
Effective Green, g (s)		45.4	45.4		53.7	53.7
Actuated g/C Ratio		0.41	0.41		0.49	0.49
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1419	1419		839	1322
v/s Ratio Prot		0.39	c0.39		0.42	
v/s Ratio Perm						c0.49
v/c Ratio		0.95	0.96		0.86	1.01
Uniform Delay, d1		31.2	31.4		24.8	28.1
Progression Factor		0.93	0.84		1.00	1.00
Incremental Delay, d2		13.0	13.7		9.2	26.7
Delay (s)		42.0	40.1		34.1	54.8
Level of Service		D	D		C	D
Approach Delay (s)		42.0	40.1		47.6	
Approach LOS		D	D		D	

Intersection Summary			
HCM Average Control Delay	43.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

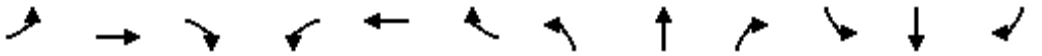
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1110	0	0	647	910	948
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1233	0	0	719	1011	1053
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	1233	0	0	719	1011	1050
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	36.2			36.2	63.0	63.0
Effective Green, g (s)	36.2			36.2	63.0	63.0
Actuated g/C Ratio	0.33			0.33	0.57	0.57
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	1131			1131	1910	881
v/s Ratio Prot	c0.36			0.21	0.30	
v/s Ratio Perm						c0.68
v/c Ratio	1.09			0.64	0.53	1.19
Uniform Delay, d1	36.9			31.3	14.4	23.5
Progression Factor	0.74			0.84	1.00	1.00
Incremental Delay, d2	46.9			2.2	0.4	97.8
Delay (s)	74.3			28.6	14.8	121.3
Level of Service	E			C	B	F
Approach Delay (s)	74.3			28.6	69.1	
Approach LOS	E			C	E	

Intersection Summary			
HCM Average Control Delay	63.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	135.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	1425	600	141	869	8	305	2	148	26	2	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.96		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	
Satd. Flow (prot)	1719	3285		1719	3433			1724	1538		1682	
Flt Permitted	0.29	1.00		0.06	1.00			0.69	1.00		0.51	
Satd. Flow (perm)	532	3285		110	3433			1258	1538		880	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	37	1583	667	157	966	9	339	2	164	29	2	13
RTOR Reduction (vph)	0	42	0	0	1	0	0	0	82	0	10	0
Lane Group Flow (vph)	37	2208	0	157	974	0	0	341	82	0	34	0
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	59.0	59.0		71.0	71.0			26.0	26.0		26.0	
Effective Green, g (s)	59.0	59.0		71.0	71.0			26.0	26.0		26.0	
Actuated g/C Ratio	0.54	0.54		0.65	0.65			0.24	0.24		0.24	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	285	1762		149	2216			297	364		208	
v/s Ratio Prot		c0.67		c0.05	0.28							
v/s Ratio Perm	0.07			0.63				c0.27	0.05		0.04	
v/c Ratio	0.13	1.25		1.05	0.44			1.15	0.22		0.16	
Uniform Delay, d1	12.7	25.5		33.1	9.7			42.0	33.9		33.4	
Progression Factor	0.62	0.54		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.1	114.3		88.7	0.6			98.5	0.5		0.6	
Delay (s)	7.9	128.1		121.8	10.3			140.5	34.4		34.0	
Level of Service	A	F		F	B			F	C		C	
Approach Delay (s)		126.1			25.8			106.0			34.0	
Approach LOS		F			C			F			C	

Intersection Summary			
HCM Average Control Delay	93.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

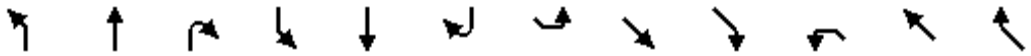


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	0	16	16	0	118	2	978	11	41	882	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.88		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1585		1719	3432		1719	3432	
Flt Permitted		0.76	1.00		0.96		0.26	1.00		0.22	1.00	
Satd. Flow (perm)		1377	1538		1527		474	3432		405	3432	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	0	18	18	0	131	2	1087	12	46	980	11
RTOR Reduction (vph)	0	0	15	0	46	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	21	3	0	103	0	2	1098	0	46	990	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		10.2	10.2		10.2		32.8	32.8		32.8	32.8	
Effective Green, g (s)		10.2	10.2		10.2		32.8	32.8		32.8	32.8	
Actuated g/C Ratio		0.19	0.19		0.19		0.60	0.60		0.60	0.60	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		4.3	4.3		4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)		255	285		283		283	2047		242	2047	
v/s Ratio Prot								c0.32			0.29	
v/s Ratio Perm		0.02	0.00		c0.07		0.00			0.11		
v/c Ratio		0.08	0.01		0.37		0.01	0.54		0.19	0.48	
Uniform Delay, d1		18.5	18.3		19.6		4.5	6.6		5.1	6.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.65	0.72	
Incremental Delay, d2		0.2	0.0		1.3		0.0	1.0		1.6	0.8	
Delay (s)		18.7	18.3		20.8		4.5	7.6		4.9	5.3	
Level of Service		B	B		C		A	A		A	A	
Approach Delay (s)		18.5			20.8			7.6			5.3	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

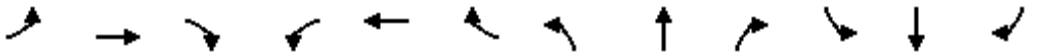
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1052	65	179	714	0	557	0	245	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0	6.0			
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00			
Frt		0.99		1.00	1.00			1.00	0.85			
Flt Protected		1.00		0.95	1.00			0.95	1.00			
Satd. Flow (prot)		3408		1719	3438			1719	1538			
Flt Permitted		1.00		0.09	1.00			0.95	1.00			
Satd. Flow (perm)		3408		155	3438			1719	1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1169	72	199	793	0	619	0	272	0	0	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	105	0	0	0
Lane Group Flow (vph)	0	1237	0	199	793	0	0	619	167	0	0	0
Turn Type				pm+pt			Perm		Perm			
Protected Phases				1	6			4				
Permitted Phases		2		6			4		4			
Actuated Green, G (s)		40.7		60.0	60.0			38.0	38.0			
Effective Green, g (s)		40.7		60.0	60.0			38.0	38.0			
Actuated g/C Ratio		0.37		0.55	0.55			0.35	0.35			
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0			
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3			
Lane Grp Cap (vph)		1261		274	1875			594	531			
v/s Ratio Prot				c0.09	0.23							
v/s Ratio Perm		c0.36		0.31				0.36	0.11			
v/c Ratio		0.98		0.73	0.42			1.04	0.31			
Uniform Delay, d1		34.3		26.9	14.8			36.0	26.4			
Progression Factor		1.02		0.64	1.39			1.00	1.00			
Incremental Delay, d2		19.7		7.0	0.5			48.3	0.5			
Delay (s)		54.5		24.4	21.0			84.3	27.0			
Level of Service		D		C	C			F	C			
Approach Delay (s)		54.5			21.7			66.8			0.0	
Approach LOS		D			C			E			A	

Intersection Summary			
HCM Average Control Delay	47.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



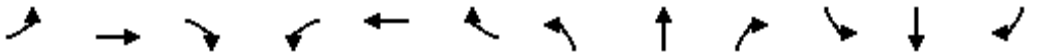
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	413	1196	0	0	875	512	0	0	0	18	0	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1719	3438			3438	1538				1719		1538
Flt Permitted	0.13	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	234	3438			3438	1538				1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	459	1329	0	0	972	569	0	0	0	20	0	338
RTOR Reduction (vph)	0	0	0	0	0	351	0	0	0	0	0	60
Lane Group Flow (vph)	459	1329	0	0	972	218	0	0	0	20	0	278
Turn Type	pm+pt					custom				custom		custom
Protected Phases	5	2										8
Permitted Phases	2				6	6				8		
Actuated Green, G (s)	74.9	74.9			42.1	42.1				23.1		23.1
Effective Green, g (s)	74.9	74.9			42.1	42.1				23.1		23.1
Actuated g/C Ratio	0.68	0.68			0.38	0.38				0.21		0.21
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Vehicle Extension (s)	4.3	4.3			4.3	4.3				4.3		4.3
Lane Grp Cap (vph)	521	2341			1316	589				361		323
v/s Ratio Prot	c0.21	0.39										c0.18
v/s Ratio Perm	c0.38				0.28	0.14				0.01		
v/c Ratio	0.88	0.57			0.74	0.37				0.06		0.86
Uniform Delay, d1	27.0	9.1			29.2	24.4				34.7		41.9
Progression Factor	0.63	0.34			1.00	1.00				1.00		1.00
Incremental Delay, d2	1.9	0.1			3.7	1.8				0.1		21.1
Delay (s)	19.0	3.2			33.0	26.2				34.8		63.0
Level of Service	B	A			C	C				C		E
Approach Delay (s)		7.2			30.5			0.0			61.4	
Approach LOS		A			C			A			E	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



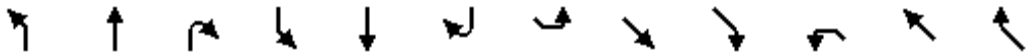
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	61	94	69	14	11	526	766	647	61	1087	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1645		1633	1664	1538	1719	3438	1538	1719	3427	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.11	1.00	1.00	0.33	1.00	
Satd. Flow (perm)	1719	1645		1633	1664	1538	196	3438	1538	601	3427	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	68	104	77	16	12	584	851	719	68	1208	26
RTOR Reduction (vph)	0	61	0	0	0	11	0	0	200	0	2	0
Lane Group Flow (vph)	2	111	0	46	47	1	584	851	519	68	1232	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	7.0	7.0		4.0	4.0	4.0	61.0	61.0	61.0	31.0	31.0	
Effective Green, g (s)	7.0	7.0		4.0	4.0	4.0	61.0	61.0	61.0	31.0	31.0	
Actuated g/C Ratio	0.08	0.08		0.04	0.04	0.04	0.68	0.68	0.68	0.34	0.34	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	134	128		73	74	68	539	2330	1042	207	1180	
v/s Ratio Prot	0.00	c0.07		0.03	c0.03		c0.29	0.25			0.36	
v/s Ratio Perm						0.00	c0.45		0.34	0.11		
v/c Ratio	0.01	0.87		0.63	0.64	0.01	1.08	0.37	0.50	0.33	1.04	
Uniform Delay, d1	38.3	41.0		42.3	42.3	41.1	26.6	6.2	7.1	21.8	29.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.03	0.85	1.75	1.00	1.00	
Incremental Delay, d2	0.1	44.8		21.7	21.8	0.1	54.4	0.3	1.0	4.2	38.5	
Delay (s)	38.4	85.8		64.0	64.1	41.2	81.9	5.5	13.3	26.0	68.0	
Level of Service	D	F		E	E	D	F	A	B	C	E	
Approach Delay (s)		85.3			61.4			28.8			65.8	
Approach LOS		F			E			C			E	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



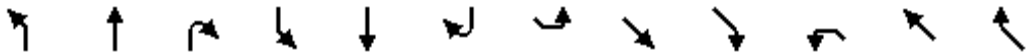
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	659	0	934	164	1005	0	0	963	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	732	0	1038	182	1117	0	0	1070	319
RTOR Reduction (vph)	0	0	0	0	0	56	0	0	0	0	0	206
Lane Group Flow (vph)	0	0	0	366	366	982	182	1117	0	0	1070	113
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				34.2	34.2	34.2	6.0	43.8			31.8	31.8
Effective Green, g (s)				34.2	34.2	34.2	6.0	43.8			31.8	31.8
Actuated g/C Ratio				0.38	0.38	0.38	0.07	0.49			0.35	0.35
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				621	621	1029	222	1673			1215	543
v/s Ratio Prot							0.05	c0.32			c0.31	
v/s Ratio Perm				0.22	0.22	c0.36						0.07
v/c Ratio				0.59	0.59	0.95	0.82	0.67			0.88	0.21
Uniform Delay, d1				22.3	22.3	27.1	41.5	17.6			27.3	20.3
Progression Factor				1.00	1.00	1.00	1.36	0.16			0.67	1.14
Incremental Delay, d2				2.2	2.2	18.4	17.6	1.6			1.0	0.1
Delay (s)				24.5	24.5	45.5	74.2	4.5			19.4	23.3
Level of Service				C	C	D	E	A			B	C
Approach Delay (s)		0.0			36.8			14.3			20.3	
Approach LOS		A			D			B			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	661	236	608	1014	0	508	0	284	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.32	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	587	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	734	262	676	1127	0	564	0	316	0	0	0
RTOR Reduction (vph)	0	0	170	0	0	0	0	0	178	0	0	0
Lane Group Flow (vph)	0	734	92	676	1127	0	282	282	138	0	0	0
Turn Type			Perm	pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		31.6	31.6	61.6	61.0		16.5	16.5	16.5			
Effective Green, g (s)		31.6	31.6	61.6	61.0		16.5	16.5	16.5			
Actuated g/C Ratio		0.35	0.35	0.68	0.68		0.18	0.18	0.18			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1734	540	699	2330		299	299	496			
v/s Ratio Prot		0.15		c0.25	0.33							
v/s Ratio Perm			0.06	c0.41			c0.17	0.17	0.05			
v/c Ratio		0.42	0.17	0.97	0.48		0.94	0.94	0.28			
Uniform Delay, d1		22.3	20.2	16.1	7.0		36.3	36.3	31.6			
Progression Factor		0.74	0.26	0.52	0.45		1.00	1.00	1.00			
Incremental Delay, d2		0.7	0.7	19.5	0.5		37.8	37.8	0.6			
Delay (s)		17.1	5.8	27.8	3.6		74.1	74.1	32.2			
Level of Service		B	A	C	A		E	E	C			
Approach Delay (s)		14.2			12.7			59.1			0.0	
Approach LOS		B			B			E			A	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	273	700	1	4	913	381	196	2	202	1	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.98	1.00
Satd. Flow (prot)	1719	4939			3437	1538	1719	1540			1780	1538
Flt Permitted	0.16	1.00			0.95	1.00	0.76	1.00			0.92	1.00
Satd. Flow (perm)	295	4939			3274	1538	1368	1540			1662	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	303	778	1	4	1014	423	218	2	224	1	2	1
RTOR Reduction (vph)	0	0	0	0	0	227	0	178	0	0	0	1
Lane Group Flow (vph)	303	779	0	0	1018	196	218	48	0	0	3	0
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	59.0	59.0			41.6	41.6	18.5	18.5			18.5	18.5
Effective Green, g (s)	59.0	59.0			41.6	41.6	18.5	18.5			18.5	18.5
Actuated g/C Ratio	0.66	0.66			0.46	0.46	0.21	0.21			0.21	0.21
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	377	3238			1513	711	281	317			342	316
v/s Ratio Prot	c0.10	0.16						0.03				
v/s Ratio Perm	c0.42				0.31	0.13	c0.16				0.00	0.00
v/c Ratio	0.80	0.24			0.67	0.27	0.78	0.15			0.01	0.00
Uniform Delay, d1	12.4	6.3			18.9	14.9	33.8	29.3			28.5	28.4
Progression Factor	1.00	1.00			0.75	0.74	1.00	1.00			1.00	1.00
Incremental Delay, d2	12.7	0.2			2.2	0.9	14.4	0.4			0.0	0.0
Delay (s)	25.1	6.5			16.3	11.8	48.2	29.8			28.5	28.4
Level of Service	C	A			B	B	D	C			C	C
Approach Delay (s)		11.7			15.0			38.8			28.5	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	125	20	74	1555	1906	72
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	139	22	82	1728	2118	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1013	
pX, platoon unblocked	0.50	0.50	0.50			
vC, conflicting volume	3186	1099	2198			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3372	0	1396			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	96	65			
cM capacity (veh/h)	2	537	235			

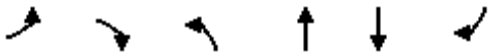
Direction, Lane #	WB 1	SE 1	SE 2	SE 3	NW 1	NW 2
Volume Total	161	82	864	864	1412	786
Volume Left	139	82	0	0	0	0
Volume Right	22	0	0	0	0	80
cSH	2	235	1700	1700	1700	1700
Volume to Capacity	78.27	0.35	0.51	0.51	0.83	0.46
Queue Length 95th (ft)	Err	37	0	0	0	0
Control Delay (s)	Err	28.3	0.0	0.0	0.0	0.0
Lane LOS	F	D				
Approach Delay (s)	Err	1.3			0.0	
Approach LOS	F					

Intersection Summary			
Average Delay	387.0		
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	1419	261	264	1525	453	98
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1577	290	293	1694	503	109
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				860		
pX, platoon unblocked					0.47	
vC, conflicting volume			1867		3156	933
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1867		3330	933
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			4		0	58
cM capacity (veh/h)			307		0	262

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	1051	816	858	1130	612
Volume Left	0	0	293	0	503
Volume Right	0	290	0	0	109
cSH	1700	1700	307	1700	0
Volume to Capacity	0.62	0.48	0.96	0.66	4063.17
Queue Length 95th (ft)	0	0	242	0	Err
Control Delay (s)	0.0	0.0	78.3	0.0	Err
Lane LOS			F		F
Approach Delay (s)	0.0		33.8		Err
Approach LOS					F

Intersection Summary			
Average Delay	1385.6		
Intersection Capacity Utilization	138.4%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	6	1	4	1111	932	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	1	4	1234	1036	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1176	378	
pX, platoon unblocked	0.91	0.87	0.87			
vC, conflicting volume	1677	533	1066			
vC1, stage 1 conf vol	1051					
vC2, stage 2 conf vol	626					
vCu, unblocked vol	878	149	764			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	99			
cM capacity (veh/h)	351	746	714			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	8	4	617	617	690	375
Volume Left	7	4	0	0	0	0
Volume Right	1	0	0	0	0	30
cSH	409	714	1700	1700	1700	1700
Volume to Capacity	0.02	0.01	0.36	0.36	0.41	0.22
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	14.7	10.1	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	14.7	0.0			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	53	58	1479	21	36	1334
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	59	64	1643	23	40	1482
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			371			
pX, platoon unblocked	0.79	0.79			0.79	
vC, conflicting volume	2476	833			1667	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2338	261			1314	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	89			90	
cM capacity (veh/h)	21	577			400	

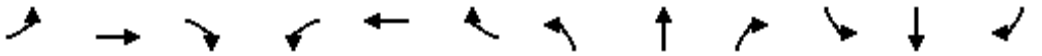
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	123	1096	571	40	741	741
Volume Left	59	0	0	40	0	0
Volume Right	64	0	23	0	0	0
cSH	42	1700	1700	400	1700	1700
Volume to Capacity	2.92	0.64	0.34	0.10	0.44	0.44
Queue Length 95th (ft)	339	0	0	8	0	0
Control Delay (s)	1070.6	0.0	0.0	15.0	0.0	0.0
Lane LOS	F			B		
Approach Delay (s)	1070.6	0.0		0.4		
Approach LOS	F					

Intersection Summary			
Average Delay	40.0		
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	96	1420	21	17	1337	18	1	0	13	20	0	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	107	1578	23	19	1486	20	1	0	14	22	0	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		939										
pX, platoon unblocked				0.81			0.81	0.81		0.81	0.81	0.81
vC, conflicting volume	1506			1601			2547	3348	753	2598	3346	801
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1506			1273			2440	3429	753	2503	3427	285
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	75			96			88	100	96	0	100	98
cM capacity (veh/h)	426			426			10	4	346	8	4	570

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SE 1	SE 2	NW 1	NW 2
Volume Total	107	1052	549	762	763	1	14	22	11
Volume Left	107	0	0	19	0	1	0	22	0
Volume Right	0	0	23	0	20	0	14	0	11
cSH	426	1700	1700	426	1700	10	346	8	570
Volume to Capacity	0.25	0.62	0.32	0.04	0.45	0.12	0.04	2.65	0.02
Queue Length 95th (ft)	24	0	0	3	0	8	3	97	1
Control Delay (s)	16.2	0.0	0.0	1.4	0.0	422.8	15.9	1608.6	11.4
Lane LOS	C			A		F	C	F	B
Approach Delay (s)	1.0			0.7		44.9		1076.2	
Approach LOS						E		F	

Intersection Summary				
Average Delay	12.0			
Intersection Capacity Utilization	94.2%	ICU Level of Service		F
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	284	320	47	125	633	393	36	469	110	451	469	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3372		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.22	1.00		0.51	1.00	1.00	0.46	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	396	3372		927	3438	1538	831	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	316	356	52	139	703	437	40	521	122	501	521	72
RTOR Reduction (vph)	0	16	0	0	0	311	0	0	102	0	0	44
Lane Group Flow (vph)	316	392	0	139	703	126	40	521	20	501	521	28
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	28.8	18.3		23.8	15.8	15.8	11.7	11.7	11.7	11.0	27.7	27.7
Effective Green, g (s)	28.8	18.3		23.8	15.8	15.8	11.7	11.7	11.7	11.0	27.7	27.7
Actuated g/C Ratio	0.41	0.26		0.34	0.23	0.23	0.17	0.17	0.17	0.16	0.40	0.40
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	361	882		406	776	347	139	575	257	524	1360	609
v/s Ratio Prot	c0.13	0.12		0.04	0.20			c0.15		c0.15	0.15	
v/s Ratio Perm	c0.23			0.08		0.08	0.05		0.01			0.02
v/c Ratio	0.88	0.45		0.34	0.91	0.36	0.29	0.91	0.08	0.96	0.38	0.05
Uniform Delay, d1	16.1	21.6		16.6	26.4	22.9	25.5	28.6	24.6	29.3	15.1	13.0
Progression Factor	1.00	1.00		0.40	0.73	1.87	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	21.2	0.9		0.6	12.5	1.2	5.1	20.4	0.6	28.6	0.8	0.1
Delay (s)	37.2	22.5		7.2	31.8	43.9	30.7	49.0	25.2	57.9	15.9	13.2
Level of Service	D	C		A	C	D	C	D	C	E	B	B
Approach Delay (s)		28.9			33.2			43.7			34.9	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	13	769	85	189	1125	40	93	4	201	37	2	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3387		1719	3438	1538	1719	1543		1719	1810	1538
Flt Permitted	0.13	1.00		0.30	1.00	1.00	0.76	1.00		0.50	1.00	1.00
Satd. Flow (perm)	234	3387		546	3438	1538	1369	1543		905	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	854	94	210	1250	44	103	4	223	41	2	33
RTOR Reduction (vph)	0	12	0	0	0	20	0	197	0	0	0	27
Lane Group Flow (vph)	14	936	0	210	1250	24	103	30	0	41	2	6
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	49.0	49.0		37.7	37.7	37.7	8.0	8.0		8.0	8.0	12.8
Effective Green, g (s)	49.0	49.0		37.7	37.7	37.7	8.0	8.0		8.0	8.0	12.8
Actuated g/C Ratio	0.70	0.70		0.54	0.54	0.54	0.11	0.11		0.11	0.11	0.18
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	266	2371		294	1852	828	156	176		103	207	424
v/s Ratio Prot	0.00	c0.28			0.36			0.02			0.00	0.00
v/s Ratio Perm	0.03			c0.38		0.02	c0.08			0.05		0.00
v/c Ratio	0.05	0.39		0.71	0.67	0.03	0.66	0.17		0.40	0.01	0.01
Uniform Delay, d1	5.7	4.4		12.1	11.7	7.6	29.7	28.0		28.8	27.5	23.4
Progression Factor	0.13	0.20		0.77	0.60	0.51	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4		13.3	1.9	0.1	14.2	1.1		6.1	0.0	0.0
Delay (s)	0.8	1.2		22.6	9.0	3.9	43.9	29.2		34.9	27.5	23.5
Level of Service	A	A		C	A	A	D	C		C	C	C
Approach Delay (s)		1.2			10.7			33.8			29.7	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	91.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	21	1	60	12	2	84	70	1347	11	2	971	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.90			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1609			1734	1538	1719	3434		1719	3438	1538
Flt Permitted		0.91			0.83	1.00	0.25	1.00		0.14	1.00	1.00
Satd. Flow (perm)		1481			1497	1538	455	3434		257	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	1	67	13	2	93	78	1497	12	2	1079	2
RTOR Reduction (vph)	0	58	0	0	0	83	0	1	0	0	0	1
Lane Group Flow (vph)	0	33	0	0	15	10	78	1508	0	2	1079	1
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		7.9			7.9	7.9	50.8	50.8		50.8	50.8	50.8
Effective Green, g (s)		7.9			7.9	7.9	50.8	50.8		50.8	50.8	50.8
Actuated g/C Ratio		0.11			0.11	0.11	0.73	0.73		0.73	0.73	0.73
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		167			169	174	330	2492		187	2495	1116
v/s Ratio Prot								c0.44			0.31	
v/s Ratio Perm		c0.02			0.01	0.01	0.17			0.01		0.00
v/c Ratio		0.20			0.09	0.06	0.24	0.61		0.01	0.43	0.00
Uniform Delay, d1		28.2			27.8	27.7	3.2	4.7		2.7	3.8	2.6
Progression Factor		1.00			1.00	1.00	0.64	0.73		0.44	0.61	0.33
Incremental Delay, d2		0.9			0.4	0.2	1.6	1.1		0.1	0.5	0.0
Delay (s)		29.1			28.2	28.0	3.7	4.5		1.2	2.8	0.9
Level of Service		C			C	C	A	A		A	A	A
Approach Delay (s)		29.1			28.0			4.5			2.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	5.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	146	33	272	199	29	28	53	1291	75	219	800	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.87		1.00	0.93		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1568		1719	1676		1719	3410		1719	3321	
Flt Permitted	0.72	1.00		0.22	1.00		0.20	1.00		0.05	1.00	
Satd. Flow (perm)	1296	1568		391	1676		371	3410		98	3321	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	162	37	302	221	32	31	59	1434	83	243	889	262
RTOR Reduction (vph)	0	139	0	0	26	0	0	3	0	0	18	0
Lane Group Flow (vph)	162	200	0	221	37	0	59	1514	0	243	1133	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	27.5	15.5		33.5	18.5		72.7	67.6		91.5	80.4	
Effective Green, g (s)	27.5	15.5		33.5	18.5		72.7	67.6		91.5	80.4	
Actuated g/C Ratio	0.20	0.11		0.24	0.13		0.52	0.48		0.65	0.57	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	291	174		236	221		242	1647		271	1907	
v/s Ratio Prot	0.05	c0.13		c0.10	0.02		0.01	0.44		c0.11	0.34	
v/s Ratio Perm	0.06			c0.12			0.12			c0.47		
v/c Ratio	0.56	1.15		0.94	0.17		0.24	0.92		0.90	0.59	
Uniform Delay, d1	49.9	62.2		47.9	53.9		17.3	33.7		46.2	19.3	
Progression Factor	1.00	1.00		1.00	1.00		0.69	0.72		1.01	1.00	
Incremental Delay, d2	3.2	114.7		41.7	0.6		0.7	8.2		28.5	1.3	
Delay (s)	53.1	176.9		89.6	54.5		12.6	32.4		75.2	20.5	
Level of Service	D	F		F	D		B	C		E	C	
Approach Delay (s)		136.9			81.8			31.7			30.0	
Approach LOS		F			F			C			C	

Intersection Summary			
HCM Average Control Delay	48.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations											
Volume (vph)	336	0	205	0	1490	272	653	1051	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95			
Frt	1.00		0.85		1.00	0.85	1.00	1.00			
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00			
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438			
Flt Permitted	0.95		1.00		1.00	1.00	0.06	1.00			
Satd. Flow (perm)	3335		2707		3438	1538	104	3438			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	373	0	228	0	1656	302	726	1168	0	0	0
RTOR Reduction (vph)	0	0	207	0	0	98	0	0	0	0	0
Lane Group Flow (vph)	373	0	21	0	1656	204	726	1168	0	0	0
Turn Type	custom		custom			Perm	pm+pt				
Protected Phases					2		1	6			
Permitted Phases	4		4			2	6				
Actuated Green, G (s)	13.0		13.0		62.7	62.7	115.9	115.9			
Effective Green, g (s)	13.0		13.0		62.7	62.7	115.9	115.9			
Actuated g/C Ratio	0.09		0.09		0.45	0.45	0.83	0.83			
Clearance Time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Vehicle Extension (s)	4.3		4.3		4.3	4.3	4.3	4.3			
Lane Grp Cap (vph)	310		251		1540	689	623	2846			
v/s Ratio Prot					0.48		c0.39	0.34			
v/s Ratio Perm	c0.11		0.01			0.13	c0.58				
v/c Ratio	1.20		0.08		1.08	0.30	1.17	0.41			
Uniform Delay, d1	63.5		58.1		38.6	24.6	42.7	3.1			
Progression Factor	1.00		1.00		0.62	0.35	0.84	0.93			
Incremental Delay, d2	118.1		0.2		39.1	0.4	87.9	0.3			
Delay (s)	181.6		58.3		63.0	9.1	123.7	3.3			
Level of Service	F		E		E	A	F	A			
Approach Delay (s)		134.8			54.7			49.4		0.0	
Approach LOS		F			D			D		A	

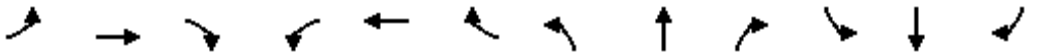
Intersection Summary			
HCM Average Control Delay	63.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	500	582	839	987	0	1204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	556	647	932	1097	0	1338
RTOR Reduction (vph)	0	350	0	471	0	0
Lane Group Flow (vph)	556	297	932	626	0	1338
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	29.4	29.4	79.5	79.5		98.5
Effective Green, g (s)	29.4	29.4	79.5	79.5		91.5
Actuated g/C Ratio	0.21	0.21	0.57	0.57		0.65
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	700	568	1952	873		2247
v/s Ratio Prot	c0.17	0.11	0.27			c0.39
v/s Ratio Perm				c0.41		
v/c Ratio	0.79	0.52	0.48	0.72		0.60
Uniform Delay, d1	52.4	49.1	17.9	22.0		13.8
Progression Factor	1.00	1.00	0.71	11.75		1.34
Incremental Delay, d2	6.8	1.3	0.1	0.5		0.3
Delay (s)	59.2	50.4	12.8	259.4		18.7
Level of Service	E	D	B	F		B
Approach Delay (s)	54.4		146.1			18.7
Approach LOS	D		F			B

Intersection Summary			
HCM Average Control Delay	84.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

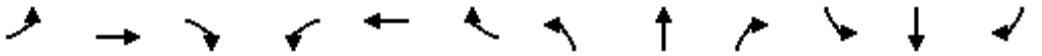
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	207	73	1328	93	18	2052
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3335	1538	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.16	1.00
Satd. Flow (perm)	3335	1538	3438	1538	288	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	230	81	1476	103	20	2280
RTOR Reduction (vph)	0	74	0	18	0	0
Lane Group Flow (vph)	230	7	1476	85	20	2280
Turn Type		Prot		Perm	Perm	
Protected Phases	4	4	2 3 6			2 3 6
Permitted Phases	4			2 3 6	2 3 6	
Actuated Green, G (s)	12.0	12.0	115.4	115.4	115.4	115.4
Effective Green, g (s)	12.0	12.0	115.4	115.4	115.4	115.4
Actuated g/C Ratio	0.09	0.09	0.82	0.82	0.82	0.82
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	286	132	2834	1268	237	2834
v/s Ratio Prot	c0.07	0.00	0.43			c0.66
v/s Ratio Perm				0.06	0.07	
v/c Ratio	0.80	0.05	0.52	0.07	0.08	0.80
Uniform Delay, d1	62.8	58.8	3.8	2.3	2.3	6.4
Progression Factor	1.00	1.00	0.25	0.01	0.61	0.97
Incremental Delay, d2	16.2	0.3	0.2	0.0	0.0	0.2
Delay (s)	79.1	59.0	1.2	0.0	1.4	6.4
Level of Service	E	E	A	A	A	A
Approach Delay (s)	73.9		1.1			6.4
Approach LOS	E		A			A

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



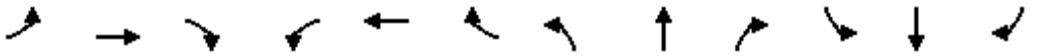
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	420	925	56	76	1648	163	130	29	75	236	29	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	467	1028	62	84	1831	181	144	32	83	262	32	324
RTOR Reduction (vph)	0	0	22	0	0	53	0	0	70	0	0	217
Lane Group Flow (vph)	467	1028	40	84	1831	128	144	32	13	262	32	107
Turn Type	Prot		pm+ov	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	19.5	78.7	90.7	13.5	72.7	72.7	12.0	8.9	22.4	15.1	12.0	12.0
Effective Green, g (s)	19.5	78.7	90.7	13.5	72.7	72.7	12.0	8.9	22.4	15.1	12.0	12.0
Actuated g/C Ratio	0.14	0.56	0.65	0.10	0.52	0.52	0.09	0.06	0.16	0.11	0.09	0.09
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	465	1933	996	166	1785	799	147	115	246	360	295	132
v/s Ratio Prot	c0.14	0.30	0.00	0.05	c0.53		c0.08	0.02	0.01	0.08	0.01	
v/s Ratio Perm			0.02			0.08			0.00			c0.07
v/c Ratio	1.00	0.53	0.04	0.51	1.03	0.16	0.98	0.28	0.05	0.73	0.11	0.81
Uniform Delay, d1	60.2	19.1	8.9	60.1	33.6	17.6	63.9	62.5	49.8	60.5	59.1	62.9
Progression Factor	1.20	1.02	1.74	0.69	0.44	0.32	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	39.9	0.9	0.0	1.8	21.5	0.2	67.6	2.1	0.1	7.9	0.3	32.4
Delay (s)	112.3	20.5	15.5	43.3	36.4	5.8	131.5	64.6	50.0	68.4	59.3	95.3
Level of Service	F	C	B	D	D	A	F	E	D	E	E	F
Approach Delay (s)		47.8			34.1			97.1			82.0	
Approach LOS		D			C			F			F	

Intersection Summary			
HCM Average Control Delay	48.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	23.8
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



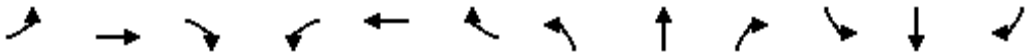
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	872	182	168	1439	164	266	150	119	336	277	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	3335	1690		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.18	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	321	3438	1538	3335	1690		3335	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	202	969	202	187	1599	182	296	167	132	373	308	202
RTOR Reduction (vph)	0	0	109	0	0	61	0	21	0	0	0	0
Lane Group Flow (vph)	202	969	93	187	1599	121	296	278	0	373	308	202
Turn Type	Prot		Perm	pm+pt		Perm	Prot			Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6						Free
Actuated Green, G (s)	9.6	64.5	64.5	80.9	67.9	67.9	13.4	24.0		16.8	27.4	140.0
Effective Green, g (s)	9.6	64.5	64.5	80.9	67.9	67.9	13.4	24.0		16.8	27.4	140.0
Actuated g/C Ratio	0.07	0.46	0.46	0.58	0.49	0.49	0.10	0.17		0.12	0.20	1.00
Clearance Time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	229	1584	709	315	1667	746	319	290		400	354	1538
v/s Ratio Prot	c0.06	0.28		0.06	c0.47		0.09	c0.16		c0.11	c0.17	
v/s Ratio Perm			0.06	0.29		0.08						0.13
v/c Ratio	0.88	0.61	0.13	0.59	0.96	0.16	0.93	0.96		0.93	0.87	0.13
Uniform Delay, d1	64.6	28.3	21.7	18.0	34.7	20.1	62.8	57.5		61.0	54.6	0.0
Progression Factor	1.27	0.72	0.74	0.89	0.40	0.19	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	27.6	1.5	0.3	3.1	12.4	0.4	32.5	41.8		29.0	20.9	0.2
Delay (s)	109.8	21.9	16.5	19.1	26.3	4.1	95.4	99.3		90.0	75.5	0.2
Level of Service	F	C	B	B	C	A	F	F		F	E	A
Approach Delay (s)		34.0			23.6			97.4			64.4	
Approach LOS		C			C			F			E	

Intersection Summary			
HCM Average Control Delay	43.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	26.9
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



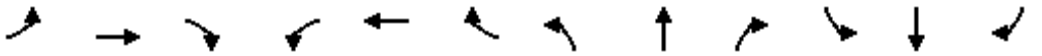
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	889	438	183	1348	0	0	0	0	696	0	423
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		4.0
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.95		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3268		1719	3438					3335		1538
Flt Permitted		1.00		0.06	1.00					0.95		1.00
Satd. Flow (perm)		3268		101	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	988	487	203	1498	0	0	0	0	773	0	470
RTOR Reduction (vph)	0	42	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1433	0	203	1498	0	0	0	0	773	0	470
Turn Type				pm+pt						Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		70.4		92.1	92.1					35.6		140.0
Effective Green, g (s)		70.4		92.1	92.1					35.6		140.0
Actuated g/C Ratio		0.50		0.66	0.66					0.25		1.00
Clearance Time (s)		6.6		6.6	6.6					5.7		
Vehicle Extension (s)		4.3		4.3	4.3					4.3		
Lane Grp Cap (vph)		1643		241	2262					848		1538
v/s Ratio Prot		0.44		c0.09	0.44					c0.23		
v/s Ratio Perm				c0.46								0.31
v/c Ratio		0.87		0.84	0.66					0.91		0.31
Uniform Delay, d1		30.8		42.8	14.5					50.7		0.0
Progression Factor		0.65		1.56	0.85					1.04		1.00
Incremental Delay, d2		4.7		2.7	0.1					14.2		0.5
Delay (s)		24.7		69.4	12.4					66.8		0.5
Level of Service		C		E	B					E		A
Approach Delay (s)		24.7			19.2			0.0			41.7	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



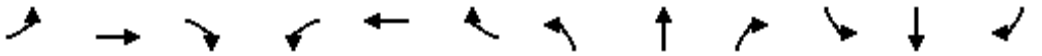
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	482	1103	0	0	995	649	536	0	253	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.08	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	145	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	536	1226	0	0	1106	721	596	0	281	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	350	0	0	51	0	0	0
Lane Group Flow (vph)	536	1226	0	0	1106	371	596	0	230	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	84.9	84.9			43.9	43.9	44.0		44.0			
Effective Green, g (s)	84.9	84.9			43.9	43.9	44.0		44.0			
Actuated g/C Ratio	0.61	0.61			0.31	0.31	0.31		0.31			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	480	2085			1078	482	540		483			
v/s Ratio Prot	c0.28	0.36			0.32		c0.35					
v/s Ratio Perm	c0.40					0.24			0.15			
v/c Ratio	1.12	0.59			1.03	0.77	1.10		0.48			
Uniform Delay, d1	44.5	16.9			48.1	43.5	48.0		38.7			
Progression Factor	1.10	1.20			0.67	0.84	1.00		1.00			
Incremental Delay, d2	65.3	0.5			26.9	6.2	70.2		1.2			
Delay (s)	114.2	20.8			59.0	42.7	118.2		39.9			
Level of Service	F	C			E	D	F		D			
Approach Delay (s)		49.2			52.5			93.1			0.0	
Approach LOS		D			D			F			A	

Intersection Summary			
HCM Average Control Delay	59.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	110.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



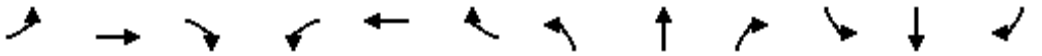
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	1142	45	10	1323	55	209	19	10	94	12	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3419		1719	3418		1719	1716		1719	1564	
Flt Permitted	0.05	1.00		0.19	1.00		0.33	1.00		0.74	1.00	
Satd. Flow (perm)	93	3419		352	3418		589	1716		1332	1564	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	1269	50	11	1470	61	232	21	11	104	13	124
RTOR Reduction (vph)	0	2	0	0	2	0	0	8	0	0	111	0
Lane Group Flow (vph)	188	1317	0	11	1529	0	232	24	0	104	26	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	92.1	92.1		72.3	72.3		37.0	37.0		14.6	14.6	
Effective Green, g (s)	92.1	92.1		72.3	72.3		37.0	37.0		14.6	14.6	
Actuated g/C Ratio	0.66	0.66		0.52	0.52		0.26	0.26		0.10	0.10	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	230	2249		182	1765		294	454		139	163	
v/s Ratio Prot	c0.08	0.39			c0.45		c0.10	0.01			0.02	
v/s Ratio Perm	0.45			0.03			c0.11			0.08		
v/c Ratio	0.82	0.59		0.06	0.87		0.79	0.05		0.75	0.16	
Uniform Delay, d1	43.2	13.3		16.9	29.6		44.3	38.4		60.9	57.1	
Progression Factor	1.47	0.73		1.00	0.99		1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.9	0.9		0.5	4.4		14.3	0.1		21.4	0.7	
Delay (s)	81.6	10.7		17.4	33.8		58.5	38.5		82.3	57.8	
Level of Service	F	B		B	C		E	D		F	E	
Approach Delay (s)		19.6			33.7			56.1			68.4	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



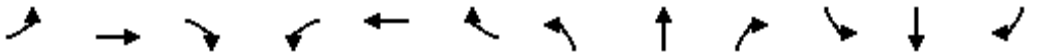
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	1173	63	60	1209	1	169	1	133	5	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1719	3412		1719	3438			1656			1633	
Flt Permitted	0.13	1.00		0.13	1.00			0.82			0.89	
Satd. Flow (perm)	242	3412		231	3438			1390			1475	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	1303	70	67	1343	1	188	1	148	6	1	11
RTOR Reduction (vph)	0	5	0	0	0	0	0	31	0	0	8	0
Lane Group Flow (vph)	11	1368	0	67	1344	0	0	306	0	0	10	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	39.6	39.6		39.9	39.9			19.1			19.1	
Effective Green, g (s)	39.6	39.6		39.9	39.9			19.1			19.1	
Actuated g/C Ratio	0.57	0.57		0.57	0.57			0.27			0.27	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	137	1930		132	1960			379			402	
v/s Ratio Prot		c0.40			0.39							
v/s Ratio Perm	0.05			0.29				c0.22			0.01	
v/c Ratio	0.08	0.71		0.51	0.69			0.81			0.02	
Uniform Delay, d1	6.9	11.0		9.1	10.6			23.7			18.6	
Progression Factor	0.56	0.86		0.95	0.97			1.00			1.00	
Incremental Delay, d2	0.9	1.8		1.3	0.2			13.0			0.0	
Delay (s)	4.8	11.3		9.9	10.5			36.7			18.7	
Level of Service	A	B		A	B			D			B	
Approach Delay (s)		11.3			10.5			36.7			18.7	
Approach LOS		B			B			D			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



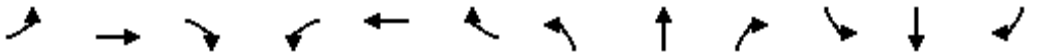
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	1558	137	22	2324	43	372	7	6	39	1	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.93			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1719	3396		1719	3429		1719	1683			1650	
Flt Permitted	0.04	1.00		0.06	1.00		0.70	1.00			0.86	
Satd. Flow (perm)	81	3396		104	3429		1264	1683			1455	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	1731	152	24	2582	48	413	8	7	43	1	41
RTOR Reduction (vph)	0	5	0	0	1	0	0	5	0	0	24	0
Lane Group Flow (vph)	24	1878	0	24	2629	0	413	10	0	0	61	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	92.7	92.7		83.4	83.4		36.0	36.0			36.0	
Effective Green, g (s)	92.7	92.7		83.4	83.4		36.0	36.0			36.0	
Actuated g/C Ratio	0.66	0.66		0.60	0.60		0.26	0.26			0.26	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	89	2249		62	2043		325	433			374	
v/s Ratio Prot	0.01	c0.55			c0.77			0.01				
v/s Ratio Perm	0.17			0.23			c0.33				0.04	
v/c Ratio	0.27	0.84		0.39	1.29		1.27	0.02			0.16	
Uniform Delay, d1	34.7	17.9		14.9	28.3		52.0	38.9			40.3	
Progression Factor	0.63	0.58		0.78	0.67		1.00	1.00			1.00	
Incremental Delay, d2	2.2	3.3		14.1	132.2		143.9	0.0			0.3	
Delay (s)	24.1	13.6		25.8	151.1		195.9	38.9			40.7	
Level of Service	C	B		C	F		F	D			D	
Approach Delay (s)		13.8			150.0			190.4			40.7	
Approach LOS		B			F			F			D	

Intersection Summary			
HCM Average Control Delay	100.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



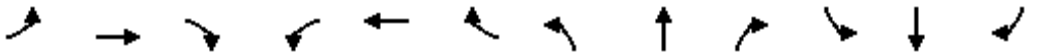
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	1900	43	63	1229	74	255	205	125	54	218	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3427		1719	3409		1719	1810	1538	1719	1691	
Flt Permitted	0.11	1.00		0.05	1.00		0.14	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	201	3427		84	3409		248	1810	1538	1115	1691	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	2111	48	70	1366	82	283	228	139	60	242	187
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	6	0	20	0
Lane Group Flow (vph)	112	2158	0	70	1445	0	283	228	133	60	409	0
Turn Type	Perm			Perm			pm+pt		Perm	Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	85.7	85.7		85.7	85.7		43.0	43.0	43.0	23.8	23.8	
Effective Green, g (s)	85.7	85.7		85.7	85.7		43.0	43.0	43.0	23.8	23.8	
Actuated g/C Ratio	0.61	0.61		0.61	0.61		0.31	0.31	0.31	0.17	0.17	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	123	2098		51	2087		221	556	472	190	287	
v/s Ratio Prot		0.63			0.42		c0.13	0.13			0.24	
v/s Ratio Perm	0.56			c0.83			c0.27		0.09	0.05		
v/c Ratio	0.91	1.03		1.37	0.69		1.28	0.41	0.28	0.32	1.43	
Uniform Delay, d1	23.8	27.1		27.1	18.3		41.9	38.4	36.8	51.0	58.1	
Progression Factor	0.37	0.37		1.47	1.47		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	50.5	25.0		211.5	0.8		156.3	0.8	0.5	1.5	210.5	
Delay (s)	59.3	34.9		251.4	27.6		198.1	39.2	37.3	52.5	268.6	
Level of Service	E	C		F	C		F	D	D	D	F	
Approach Delay (s)		36.1			37.9			108.0			242.1	
Approach LOS		D			D			F			F	

Intersection Summary			
HCM Average Control Delay	66.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	133.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



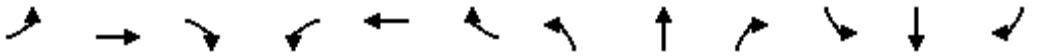
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	1683	117	371	1179	18	186	19	458	311	388	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3403		1719	3430			1731	1538	1719	1754	
Flt Permitted		0.92		0.06	1.00			0.16	1.00	0.52	1.00	
Satd. Flow (perm)		3116		115	3430			291	1538	949	1754	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	1870	130	412	1310	20	207	21	509	346	431	112
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	1	0	7	0
Lane Group Flow (vph)	0	2018	0	412	1329	0	0	228	508	346	536	0
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		56.7		76.7	76.7			52.0	65.7	52.0	52.0	
Effective Green, g (s)		56.7		76.7	76.7			52.0	65.7	52.0	52.0	
Actuated g/C Ratio		0.41		0.55	0.55			0.37	0.47	0.37	0.37	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1262		220	1879			108	722	352	651	
v/s Ratio Prot				c0.18	0.39				0.07		0.31	
v/s Ratio Perm		0.65		c0.84				c0.78	0.26	0.36		
v/c Ratio		1.60		1.87	0.71			2.11	0.70	0.98	0.82	
Uniform Delay, d1		41.6		46.2	23.4			44.0	29.4	43.6	39.8	
Progression Factor		0.54		1.17	1.17			1.00	1.00	1.00	1.00	
Incremental Delay, d2		270.8		403.6	1.5			529.9	3.5	43.3	8.9	
Delay (s)		293.3		457.6	28.7			573.9	32.9	86.8	48.8	
Level of Service		F		F	C			F	C	F	D	
Approach Delay (s)		293.3			130.1			200.3			63.6	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM Average Control Delay	190.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	140.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



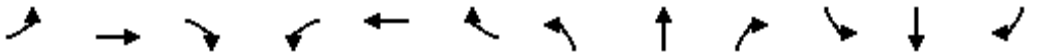
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	2403	110	37	1732	11	147	1	40	15	1	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3416		1719	3435			1692			1600	
Flt Permitted	0.07	1.00		0.04	1.00			0.67			0.94	
Satd. Flow (perm)	128	3416		68	3435			1184			1516	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	2670	122	41	1924	12	163	1	44	17	1	69
RTOR Reduction (vph)	0	2	0	0	0	0	0	7	0	0	29	0
Lane Group Flow (vph)	74	2790	0	41	1936	0	0	201	0	0	58	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	105.8	105.8		105.8	105.8			22.6			22.6	
Effective Green, g (s)	105.8	105.8		105.8	105.8			22.6			22.6	
Actuated g/C Ratio	0.76	0.76		0.76	0.76			0.16			0.16	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	97	2582		51	2596			191			245	
v/s Ratio Prot		c0.82			0.56							
v/s Ratio Perm	0.58			0.60				c0.17			0.04	
v/c Ratio	0.76	1.08		0.80	0.75			1.05			0.24	
Uniform Delay, d1	9.9	17.1		10.6	9.6			58.7			51.2	
Progression Factor	0.61	0.65		1.50	1.59			1.00			1.00	
Incremental Delay, d2	5.1	37.0		71.6	1.8			80.1			0.8	
Delay (s)	11.1	48.1		87.6	17.0			138.8			52.0	
Level of Service	B	D		F	B			F			D	
Approach Delay (s)		47.1			18.5			138.8			52.0	
Approach LOS		D			B			F			D	

Intersection Summary			
HCM Average Control Delay	39.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	157	1291	363	100	853	74	186	276	54	202	412	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3397		1719	1810	1538	1719	1810	1538
Flt Permitted	0.12	1.00	1.00	0.07	1.00		0.11	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	214	3438	1538	129	3397		201	1810	1538	581	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	174	1434	403	111	948	82	207	307	60	224	458	130
RTOR Reduction (vph)	0	0	48	0	5	0	0	0	35	0	0	40
Lane Group Flow (vph)	174	1434	355	111	1025	0	207	307	25	224	458	90
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	74.3	62.1	76.1	62.5	56.2		50.0	36.0	42.3	48.0	35.0	47.2
Effective Green, g (s)	74.3	62.1	76.1	62.5	56.2		50.0	36.0	42.3	48.0	35.0	47.2
Actuated g/C Ratio	0.53	0.44	0.54	0.45	0.40		0.36	0.26	0.30	0.34	0.25	0.34
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	245	1525	836	129	1364		224	465	465	305	453	519
v/s Ratio Prot	c0.06	c0.42	0.04	0.04	0.30		c0.09	0.17	0.00	0.07	c0.25	0.02
v/s Ratio Perm	0.32		0.19	0.35			0.24		0.01	0.18		0.04
v/c Ratio	0.71	0.94	0.42	0.86	0.75		0.92	0.66	0.05	0.73	1.01	0.17
Uniform Delay, d1	24.1	37.2	19.0	31.4	35.9		37.8	46.5	34.7	36.6	52.5	32.7
Progression Factor	0.83	0.58	0.92	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	1.6	0.0	42.2	3.9		40.3	4.1	0.1	9.7	45.1	0.3
Delay (s)	21.0	23.0	17.5	73.7	39.8		78.0	50.6	34.7	46.3	97.6	32.9
Level of Service	C	C	B	E	D		E	D	C	D	F	C
Approach Delay (s)		21.8			43.1			58.8			73.1	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	41.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



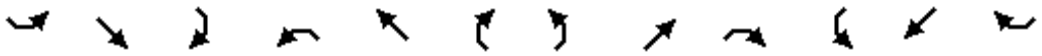
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	120	67	102	72	83	156	1167	198	85	1455	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.70	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1276	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	133	74	113	80	92	173	1297	220	94	1617	260
RTOR Reduction (vph)	0	67	0	0	0	82	0	0	104	0	0	137
Lane Group Flow (vph)	120	140	0	113	80	10	173	1297	116	94	1617	123
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	11.0	7.8		4.0	8.6	8.6	11.8	42.2	42.2	5.0	35.4	35.4
Effective Green, g (s)	11.0	7.8		4.0	8.6	8.6	11.8	42.2	42.2	5.0	35.4	35.4
Actuated g/C Ratio	0.14	0.10		0.05	0.11	0.11	0.15	0.53	0.53	0.06	0.44	0.44
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	193	317		167	195	165	254	2606	811	208	2186	681
v/s Ratio Prot	0.02	0.04		c0.03	0.04		c0.10	0.26		0.03	c0.33	
v/s Ratio Perm	c0.06					0.01			0.08			0.08
v/c Ratio	0.62	0.44		0.68	0.41	0.06	0.68	0.50	0.14	0.45	0.74	0.18
Uniform Delay, d1	32.1	34.0		37.4	33.3	32.1	32.3	12.1	9.7	36.2	18.5	13.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.07	1.10	2.12	1.00	1.00	1.00
Incremental Delay, d2	7.4	2.0		11.8	2.8	0.3	5.9	0.5	0.3	2.5	2.3	0.6
Delay (s)	39.5	36.0		49.2	36.2	32.4	40.6	13.8	20.7	38.6	20.8	14.1
Level of Service	D	D		D	D	C	D	B	C	D	C	B
Approach Delay (s)		37.3			40.1			17.5			20.7	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



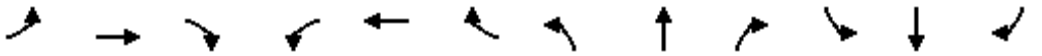
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	393	152	1254	370	142	1128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4771		1719	4940
Flt Permitted	0.95	1.00	1.00		0.21	1.00
Satd. Flow (perm)	1719	1538	4771		387	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	437	169	1393	411	158	1253
RTOR Reduction (vph)	0	15	133	0	0	0
Lane Group Flow (vph)	437	154	1671	0	158	1253
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	9.0	9.0	18.7		18.7	18.7
Effective Green, g (s)	9.0	9.0	18.7		18.7	18.7
Actuated g/C Ratio	0.22	0.22	0.47		0.47	0.47
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	387	346	2230		181	2309
v/s Ratio Prot	c0.25		0.35			0.25
v/s Ratio Perm		0.10			c0.41	
v/c Ratio	1.13	0.45	0.75		0.87	0.54
Uniform Delay, d1	15.5	13.4	8.7		9.6	7.6
Progression Factor	1.00	1.00	0.85		1.00	1.00
Incremental Delay, d2	85.7	1.8	1.6		40.1	0.9
Delay (s)	101.2	15.2	9.0		49.7	8.5
Level of Service	F	B	A		D	A
Approach Delay (s)	77.2		9.0			13.1
Approach LOS	E		A			B

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



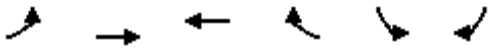
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	93	1766	117	31	1289	10	88	53	68	62	21	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3148		1719	1810	2707
Flt Permitted	0.11	1.00	1.00	0.07	1.00	1.00	0.95	1.00		0.75	1.00	1.00
Satd. Flow (perm)	191	3438	1538	125	3438	1538	3335	3148		1366	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	1962	130	34	1432	11	98	59	76	69	23	56
RTOR Reduction (vph)	0	0	48	0	0	5	0	69	0	0	0	50
Lane Group Flow (vph)	103	1962	82	34	1432	6	98	66	0	69	23	6
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	66.7	60.4	60.4	61.6	58.1	58.1	8.0	8.6		10.0	5.3	11.6
Effective Green, g (s)	66.7	60.4	60.4	61.6	58.1	58.1	8.0	8.6		10.0	5.3	11.6
Actuated g/C Ratio	0.67	0.60	0.60	0.61	0.58	0.58	0.08	0.09		0.10	0.05	0.12
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	223	2072	927	133	1993	892	266	270		153	96	313
v/s Ratio Prot	c0.03	c0.57		0.01	0.42		c0.03	c0.02		0.02	0.01	0.00
v/s Ratio Perm	0.28		0.05	0.15		0.00				c0.02		0.00
v/c Ratio	0.46	0.95	0.09	0.26	0.72	0.01	0.37	0.24		0.45	0.24	0.02
Uniform Delay, d1	10.9	18.4	8.3	18.2	15.2	8.9	43.7	42.8		42.3	45.5	39.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.4	10.2	0.1	1.6	1.5	0.0	1.4	1.5		3.3	4.0	0.0
Delay (s)	13.3	28.6	8.4	19.9	16.7	8.9	45.1	44.2		45.6	49.5	39.3
Level of Service	B	C	A	B	B	A	D	D		D	D	D
Approach Delay (s)		26.7			16.7			44.6			43.8	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	24.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.2	Sum of lost time (s)	26.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	803	675	0	928	733	0	0	0	287	474	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	227	892	750	0	1031	814	0	0	0	319	527	318
RTOR Reduction (vph)	0	0	68	0	0	10	0	0	0	0	0	152
Lane Group Flow (vph)	227	892	682	0	1031	804	0	0	0	319	527	166
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	10.2	61.1	61.1		45.1	82.9				37.8	37.8	37.8
Effective Green, g (s)	10.2	61.1	61.1		45.1	82.9				37.8	37.8	37.8
Actuated g/C Ratio	0.09	0.56	0.56		0.41	0.75				0.34	0.34	0.34
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	309	1910	854		1410	1159				591	622	529
v/s Ratio Prot	0.07	0.26			0.30	0.24					c0.29	
v/s Ratio Perm			c0.44			0.28				0.19		0.11
v/c Ratio	0.73	0.47	0.80		0.73	0.69				0.54	0.85	0.31
Uniform Delay, d1	48.6	14.7	19.5		27.3	7.0				29.1	33.4	26.6
Progression Factor	1.00	1.00	1.00		0.63	0.80				1.00	1.00	1.00
Incremental Delay, d2	9.6	0.8	7.7		2.4	1.5				1.4	11.0	0.5
Delay (s)	58.2	15.5	27.3		19.6	7.1				30.5	44.4	27.1
Level of Service	E	B	C		B	A				C	D	C
Approach Delay (s)		25.4			14.1			0.0			35.9	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	23.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

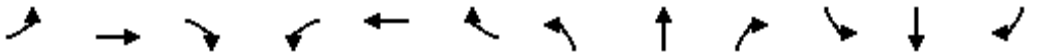


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1090	1350	0	446	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1211	1500	0	496	346
RTOR Reduction (vph)	0	0	0	0	0	26
Lane Group Flow (vph)	0	1211	1500	0	496	320
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		61.6	61.6		37.5	37.5
Effective Green, g (s)		61.6	61.6		37.5	37.5
Actuated g/C Ratio		0.56	0.56		0.34	0.34
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1925	1925		586	923
v/s Ratio Prot		0.35	c0.44		c0.29	
v/s Ratio Perm						0.12
v/c Ratio		0.63	0.78		0.85	0.35
Uniform Delay, d1		16.4	18.9		33.6	27.1
Progression Factor		0.86	1.01		1.00	1.00
Incremental Delay, d2		1.4	2.3		11.5	0.4
Delay (s)		15.6	21.3		45.1	27.5
Level of Service		B	C		D	C
Approach Delay (s)		15.6	21.3		37.9	
Approach LOS		B	C		D	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	104.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

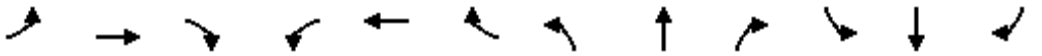
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	557	0	0	621	1329	732
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	619	0	0	690	1477	813
RTOR Reduction (vph)	0	0	0	0	0	21
Lane Group Flow (vph)	619	0	0	690	1477	792
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	31.8			31.8	67.4	67.4
Effective Green, g (s)	31.8			31.8	67.4	67.4
Actuated g/C Ratio	0.29			0.29	0.61	0.61
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	994			994	2043	942
v/s Ratio Prot	0.18			c0.20	0.44	
v/s Ratio Perm						c0.52
v/c Ratio	0.62			0.69	0.72	0.84
Uniform Delay, d1	33.9			34.8	14.8	17.0
Progression Factor	0.70			0.84	1.00	1.00
Incremental Delay, d2	2.2			3.2	1.4	7.3
Delay (s)	26.1			32.5	16.2	24.3
Level of Service	C			C	B	C
Approach Delay (s)	26.1			32.5	19.1	
Approach LOS	C			C	B	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	135.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	855	378	310	1157	20	220	17	294	27	13	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.95		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1719	3280		1719	3429			1729	1538		1672	
Flt Permitted	0.21	1.00		0.08	1.00			0.73	1.00		0.70	
Satd. Flow (perm)	381	3280		136	3429			1316	1538		1189	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	950	420	344	1286	22	244	19	327	30	14	33
RTOR Reduction (vph)	0	45	0	0	1	0	0	0	253	0	25	0
Lane Group Flow (vph)	62	1325	0	344	1307	0	0	263	74	0	52	0
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	46.6	46.6		72.1	72.1			24.9	24.9		24.9	
Effective Green, g (s)	46.6	46.6		72.1	72.1			24.9	24.9		24.9	
Actuated g/C Ratio	0.42	0.42		0.66	0.66			0.23	0.23		0.23	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	161	1390		360	2248			298	348		269	
v/s Ratio Prot		0.40		c0.16	0.38							
v/s Ratio Perm	0.16			c0.46				c0.20	0.05		0.04	
v/c Ratio	0.39	0.95		0.96	0.58			0.88	0.21		0.19	
Uniform Delay, d1	21.8	30.6		35.1	10.5			41.1	34.6		34.4	
Progression Factor	0.73	0.67		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	4.5	11.3		36.0	1.1			25.8	0.5		0.6	
Delay (s)	20.5	31.9		71.1	11.7			66.9	35.1		35.0	
Level of Service	C	C		E	B			E	D		C	
Approach Delay (s)		31.4			24.0			49.3			35.0	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	0	4	34	0	99	7	674	17	79	991	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.90		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1607		1719	3425		1719	3429	
Flt Permitted		0.53	1.00		0.91		0.24	1.00		0.36	1.00	
Satd. Flow (perm)		965	1538		1478		429	3425		649	3429	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	0	4	38	0	110	8	749	19	88	1101	19
RTOR Reduction (vph)	0	0	4	0	98	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	13	0	0	50	0	8	767	0	88	1119	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		9.9	9.9		9.9		68.1	68.1		68.1	68.1	
Effective Green, g (s)		9.9	9.9		9.9		68.1	68.1		68.1	68.1	
Actuated g/C Ratio		0.11	0.11		0.11		0.76	0.76		0.76	0.76	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		4.3	4.3		4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)		106	169		163		325	2592		491	2595	
v/s Ratio Prot								0.22			c0.33	
v/s Ratio Perm		0.01	0.00		c0.03		0.02			0.14		
v/c Ratio		0.12	0.00		0.31		0.02	0.30		0.18	0.43	
Uniform Delay, d1		36.1	35.7		36.9		2.7	3.4		3.1	4.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.38	0.41	
Incremental Delay, d2		0.8	0.0		1.7		0.1	0.3		0.7	0.5	
Delay (s)		37.0	35.7		38.6		2.9	3.7		1.9	2.1	
Level of Service		D	D		D		A	A		A	A	
Approach Delay (s)		36.7			38.6			3.7			2.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

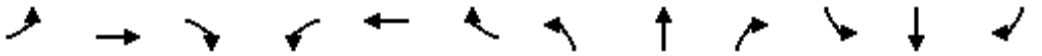
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	730	75	388	663	0	412	0	419	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0	6.0			
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00			
Frt		0.99		1.00	1.00			1.00	0.85			
Flt Protected		1.00		0.95	1.00			0.95	1.00			
Satd. Flow (prot)		3390		1719	3438			1719	1538			
Flt Permitted		1.00		0.12	1.00			0.95	1.00			
Satd. Flow (perm)		3390		226	3438			1719	1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	811	83	431	737	0	458	0	466	0	0	0
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	141	0	0	0
Lane Group Flow (vph)	0	885	0	431	737	0	0	458	325	0	0	0
Turn Type				pm+pt			Perm		Perm			
Protected Phases				1	6			4				
Permitted Phases		2		6			4		4			
Actuated Green, G (s)		26.0		51.6	51.6			26.4	26.4			
Effective Green, g (s)		26.0		51.6	51.6			26.4	26.4			
Actuated g/C Ratio		0.29		0.57	0.57			0.29	0.29			
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0			
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3			
Lane Grp Cap (vph)		979		455	1971			504	451			
v/s Ratio Prot				c0.21	0.21							
v/s Ratio Perm		0.26		c0.34				0.27	0.21			
v/c Ratio		0.90		0.95	0.37			0.91	0.72			
Uniform Delay, d1		30.8		24.8	10.4			30.6	28.5			
Progression Factor		0.89		0.50	0.78			1.00	1.00			
Incremental Delay, d2		13.0		25.4	0.4			20.6	6.2			
Delay (s)		40.5		37.9	8.5			51.3	34.7			
Level of Service		D		D	A			D	C			
Approach Delay (s)		40.5			19.3			42.9			0.0	
Approach LOS		D			B			D			A	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



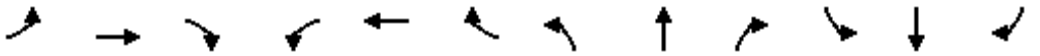
Movement	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations											
Volume (vph)	0	0	268	874	0	0	1009	756	42	0	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			6.0	6.0			6.0	6.0	6.0		6.0
Lane Util. Factor			1.00	0.95			0.95	1.00	1.00		1.00
Frt			1.00	1.00			1.00	0.85	1.00		0.85
Flt Protected			0.95	1.00			1.00	1.00	0.95		1.00
Satd. Flow (prot)			1719	3438			3438	1538	1719		1538
Flt Permitted			0.16	1.00			1.00	1.00	0.95		1.00
Satd. Flow (perm)			281	3438			3438	1538	1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	298	971	0	0	1121	840	47	0	244
RTOR Reduction (vph)	0	0	0	0	0	0	0	317	0	0	149
Lane Group Flow (vph)	0	0	298	971	0	0	1121	523	47	0	95
Turn Type			pm+pt					custom	custom		custom
Protected Phases			5	2							8
Permitted Phases			2				6	6	8		
Actuated Green, G (s)			66.6	66.6			47.4	47.4	11.4		11.4
Effective Green, g (s)			66.6	66.6			47.4	47.4	11.4		11.4
Actuated g/C Ratio			0.74	0.74			0.53	0.53	0.13		0.13
Clearance Time (s)			6.0	6.0			6.0	6.0	6.0		6.0
Vehicle Extension (s)			4.3	4.3			4.3	4.3	4.3		4.3
Lane Grp Cap (vph)			419	2544			1811	810	218		195
v/s Ratio Prot			c0.10	0.28							c0.06
v/s Ratio Perm			c0.42				0.33	0.34	0.03		
v/c Ratio			0.71	0.38			0.62	0.65	0.22		0.49
Uniform Delay, d1			11.4	4.2			15.0	15.3	35.3		36.6
Progression Factor			0.57	0.39			1.00	1.00	1.00		1.00
Incremental Delay, d2			2.7	0.2			1.6	4.0	0.8		3.0
Delay (s)			9.1	1.8			16.6	19.2	36.1		39.6
Level of Service			A	A			B	B	D		D
Approach Delay (s)	0.0			3.6			17.7			39.0	
Approach LOS	A			A			B			D	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



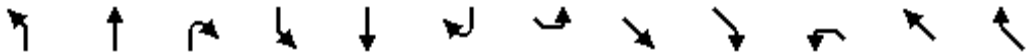
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	12	366	592	50	54	174	1224	189	13	950	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1546		1633	1649	1538	1719	3438	1538	1719	3425	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.10	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	1719	1546		1633	1649	1538	172	3438	1538	201	3425	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	13	407	658	56	60	193	1360	210	14	1056	28
RTOR Reduction (vph)	0	130	0	0	0	20	0	0	106	0	2	0
Lane Group Flow (vph)	28	290	0	355	359	40	193	1360	104	14	1082	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	18.0	18.0		23.0	23.0	23.0	51.0	51.0	51.0	36.0	36.0	
Effective Green, g (s)	18.0	18.0		23.0	23.0	23.0	51.0	51.0	51.0	36.0	36.0	
Actuated g/C Ratio	0.16	0.16		0.21	0.21	0.21	0.46	0.46	0.46	0.33	0.33	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	281	253		341	345	322	206	1594	713	66	1121	
v/s Ratio Prot	0.02	c0.19		0.22	c0.22		0.08	c0.40			0.32	
v/s Ratio Perm						0.03	c0.36		0.07	0.07		
v/c Ratio	0.10	1.14		1.04	1.04	0.12	0.94	0.85	0.15	0.21	0.97	
Uniform Delay, d1	39.1	46.0		43.5	43.5	35.3	27.3	26.2	17.0	26.7	36.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.78	0.93	1.01	1.00	1.00	
Incremental Delay, d2	0.3	101.2		59.8	59.4	0.4	39.7	4.9	0.3	7.2	19.7	
Delay (s)	39.4	147.2		103.3	102.9	35.7	61.0	29.3	17.5	33.9	56.1	
Level of Service	D	F		F	F	D	E	C	B	C	E	
Approach Delay (s)		140.4			97.9			31.3			55.8	
Approach LOS		F			F			C			E	

Intersection Summary			
HCM Average Control Delay	62.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	115.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	426	0	470	333	1117	0	0	1416	492
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	473	0	522	370	1241	0	0	1573	547
RTOR Reduction (vph)	0	0	0	0	0	156	0	0	0	0	0	234
Lane Group Flow (vph)	0	0	0	236	237	366	370	1241	0	0	1573	313
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				19.4	19.4	19.4	14.7	78.6			57.9	57.9
Effective Green, g (s)				19.4	19.4	19.4	14.7	78.6			57.9	57.9
Actuated g/C Ratio				0.18	0.18	0.18	0.13	0.71			0.53	0.53
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				288	288	477	446	2457			1810	810
v/s Ratio Prot							c0.11	0.36			c0.46	
v/s Ratio Perm				0.14	0.15	0.14						0.20
v/c Ratio				0.82	0.82	0.77	0.83	0.51			0.87	0.39
Uniform Delay, d1				43.6	43.6	43.2	46.4	7.0			22.7	15.5
Progression Factor				1.00	1.00	1.00	1.18	0.52			0.69	1.10
Incremental Delay, d2				18.3	18.8	8.5	5.6	0.3			0.6	0.1
Delay (s)				61.9	62.4	51.6	60.3	3.9			16.2	17.2
Level of Service				E	E	D	E	A			B	B
Approach Delay (s)		0.0			56.6			16.9			16.5	
Approach LOS		A			E			B			B	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	112.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1010	663	1133	709	0	440	0	331	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.15	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	275	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1122	737	1259	788	0	489	0	368	0	0	0
RTOR Reduction (vph)	0	0	172	0	0	0	0	0	328	0	0	0
Lane Group Flow (vph)	0	1122	565	1259	788	0	244	245	40	0	0	0
Turn Type			Perm	pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		35.6	35.6	86.2	85.6		11.9	11.9	11.9			
Effective Green, g (s)		35.6	35.6	86.2	85.6		11.9	11.9	11.9			
Actuated g/C Ratio		0.32	0.32	0.78	0.78		0.11	0.11	0.11			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1599	498	796	2675		177	177	293			
v/s Ratio Prot		0.23		c0.64	0.23							
v/s Ratio Perm			0.37	c0.60			0.15	0.15	0.01			
v/c Ratio		0.70	1.13	1.58	0.29		1.38	1.38	0.14			
Uniform Delay, d1		32.6	37.2	22.2	3.5		49.0	49.0	44.4			
Progression Factor		0.58	0.37	0.67	0.83		1.00	1.00	1.00			
Incremental Delay, d2		1.7	75.6	264.7	0.1		201.6	203.9	0.4			
Delay (s)		20.6	89.3	279.5	3.1		250.7	253.0	44.8			
Level of Service		C	F	F	A		F	F	D			
Approach Delay (s)		47.8			173.1			162.9			0.0	
Approach LOS		D			F			F			A	

Intersection Summary			
HCM Average Control Delay	122.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	112.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	104	1041	1	6	659	375	625	1	322	4	1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1719	4939			3436	1538	1719	1539			1740	1538
Flt Permitted	0.18	1.00			0.94	1.00	0.75	1.00			0.86	1.00
Satd. Flow (perm)	323	4939			3225	1538	1365	1539			1554	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	1157	1	7	732	417	694	1	358	4	1	8
RTOR Reduction (vph)	0	0	0	0	0	290	0	82	0	0	0	4
Lane Group Flow (vph)	116	1158	0	0	739	127	694	277	0	0	5	4
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	43.6	43.6			33.6	33.6	53.9	53.9			53.9	53.9
Effective Green, g (s)	43.6	43.6			33.6	33.6	53.9	53.9			53.9	53.9
Actuated g/C Ratio	0.40	0.40			0.31	0.31	0.49	0.49			0.49	0.49
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	181	1958			985	470	669	754			761	754
v/s Ratio Prot	0.02	c0.23						0.18				
v/s Ratio Perm	0.23				c0.23	0.08	c0.51				0.00	0.00
v/c Ratio	0.64	0.59			0.75	0.27	1.04	0.37			0.01	0.01
Uniform Delay, d1	25.7	26.2			34.4	28.9	28.1	17.5			14.4	14.3
Progression Factor	1.00	1.00			1.18	2.71	1.00	1.00			1.00	1.00
Incremental Delay, d2	8.9	1.3			4.9	1.3	44.8	0.6			0.0	0.0
Delay (s)	34.6	27.5			45.5	79.6	72.9	18.1			14.4	14.3
Level of Service	C	C			D	E	E	B			B	B
Approach Delay (s)		28.1			57.8			54.2			14.4	
Approach LOS		C			E			D			B	

Intersection Summary			
HCM Average Control Delay	45.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.9
Intersection Capacity Utilization	107.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	53	119	37	2967	1654	53
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	59	132	41	3297	1838	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1010	
pX, platoon unblocked	0.70	0.70	0.70			
vC, conflicting volume	3598	948	1897			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3860	50	1413			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	81	87			
cM capacity (veh/h)	1	694	322			

Direction, Lane #	WB 1	SE 1	SE 2	SE 3	NW 1	NW 2
Volume Total	191	41	1648	1648	1225	671
Volume Left	59	41	0	0	0	0
Volume Right	132	0	0	0	0	59
cSH	5	322	1700	1700	1700	1700
Volume to Capacity	40.32	0.13	0.97	0.97	0.72	0.39
Queue Length 95th (ft)	Err	11	0	0	0	0
Control Delay (s)	Err	17.8	0.0	0.0	0.0	0.0
Lane LOS	F	C				
Approach Delay (s)	Err	0.2			0.0	
Approach LOS	F					

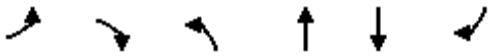
Intersection Summary			
Average Delay	352.3		
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	1710	410	87	1340	367	266
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1900	456	97	1489	408	296
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				862		
pX, platoon unblocked					0.68	
vC, conflicting volume			2356		3066	1178
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2356		3096	1178
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			51		0	0
cM capacity (veh/h)			196		3	179

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	1267	1089	593	993	703
Volume Left	0	0	97	0	408
Volume Right	0	456	0	0	296
cSH	1700	1700	196	1700	5
Volume to Capacity	0.75	0.64	0.49	0.58	139.54
Queue Length 95th (ft)	0	0	61	0	Err
Control Delay (s)	0.0	0.0	29.9	0.0	Err
Lane LOS			D		F
Approach Delay (s)	0.0		11.2		Err
Approach LOS					F

Intersection Summary			
Average Delay	1518.0		
Intersection Capacity Utilization	145.8%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	6	1	784	1081	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	23	7	1	871	1201	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1175	377	
pX, platoon unblocked	0.89	0.89	0.89			
vC, conflicting volume	1639	601	1202			
vC1, stage 1 conf vol	1202					
vC2, stage 2 conf vol	438					
vCu, unblocked vol	1400	293	971			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	99	100			
cM capacity (veh/h)	265	616	609			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	30	1	436	436	801	401
Volume Left	23	1	0	0	0	0
Volume Right	7	0	0	0	0	1
cSH	341	609	1700	1700	1700	1700
Volume to Capacity	0.09	0.00	0.26	0.26	0.47	0.24
Queue Length 95th (ft)	7	0	0	0	0	0
Control Delay (s)	17.9	10.9	0.0	0.0	0.0	0.0
Lane LOS	C	B				
Approach Delay (s)	17.9	0.0			0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	57	65	1090	4	57	1708
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	63	72	1211	4	63	1898
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			369			
pX, platoon unblocked	0.90	0.90			0.90	
vC, conflicting volume	2289	608			1216	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2211	344			1019	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	88			89	
cM capacity (veh/h)	29	579			594	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	136	807	408	63	949	949
Volume Left	63	0	0	63	0	0
Volume Right	72	0	4	0	0	0
cSH	59	1700	1700	594	1700	1700
Volume to Capacity	2.31	0.47	0.24	0.11	0.56	0.56
Queue Length 95th (ft)	335	0	0	9	0	0
Control Delay (s)	749.1	0.0	0.0	11.8	0.0	0.0
Lane LOS	F			B		
Approach Delay (s)	749.1	0.0		0.4		
Approach LOS	F					

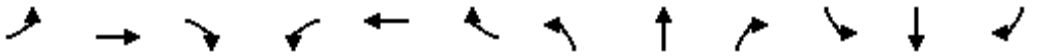
Intersection Summary			
Average Delay	30.9		
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	17	1134	4	1	1557	10	2	0	190	18	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	19	1260	4	1	1730	11	2	0	211	20	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		939										
pX, platoon unblocked				0.95			0.95	0.95		0.95	0.95	0.95
vC, conflicting volume	1741			1264			2410	3040	871	2378	3043	632
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1741			1170			2378	3042	871	2344	3046	503
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			86	100	27	0	100	99
cM capacity (veh/h)	344			546			16	11	289	4	11	480

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SE 1	SE 2	NW 1	NW 2
Volume Total	19	840	424	866	876	2	211	20	4
Volume Left	19	0	0	1	0	2	0	20	0
Volume Right	0	0	4	0	11	0	211	0	4
cSH	344	1700	1700	546	1700	16	289	4	480
Volume to Capacity	0.05	0.49	0.25	0.00	0.52	0.14	0.73	4.45	0.01
Queue Length 95th (ft)	4	0	0	0	0	10	132	Err	1
Control Delay (s)	16.1	0.0	0.0	0.1	0.0	270.6	45.2	Err	12.6
Lane LOS	C			A		F	E	F	B
Approach Delay (s)	0.2			0.0		47.5		8183.3	
Approach LOS						E		F	

Intersection Summary				
Average Delay	64.5			
Intersection Capacity Utilization	68.5%	ICU Level of Service		C
Analysis Period (min)	15			

CAPACITY ANALYSIS (SYNCHRO)
2035 NO-BUILD CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	614	339	348	362	59	420	1317	261	263	1386	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3255		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.31	1.00		0.16	1.00	1.00	0.11	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	552	3255		285	3438	1538	197	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	213	682	377	387	402	66	467	1463	290	292	1540	166
RTOR Reduction (vph)	0	30	0	0	0	54	0	0	74	0	0	53
Lane Group Flow (vph)	213	1029	0	387	402	12	467	1463	216	292	1540	113
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	40.6	25.0		41.4	25.4	25.4	80.0	80.0	80.0	8.0	93.0	93.0
Effective Green, g (s)	40.6	25.0		41.4	25.4	25.4	80.0	80.0	80.0	8.0	93.0	93.0
Actuated g/C Ratio	0.27	0.17		0.28	0.17	0.17	0.53	0.53	0.53	0.05	0.62	0.62
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	271	543		232	582	260	105	1834	820	178	2132	954
v/s Ratio Prot	0.08	c0.32		c0.18	0.12			0.43		c0.09	0.45	
v/s Ratio Perm	0.13			0.28		0.01	c2.37		0.14			0.07
v/c Ratio	0.79	1.90		1.67	0.69	0.05	4.45	0.80	0.26	1.64	0.72	0.12
Uniform Delay, d1	46.0	62.5		48.2	58.6	52.2	35.0	28.4	19.0	71.0	19.6	11.7
Progression Factor	1.00	1.00		1.02	0.74	0.98	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.1	409.7		317.2	4.4	0.2	1573.2	3.7	0.8	312.1	2.2	0.3
Delay (s)	61.1	472.2		366.5	47.9	51.3	1608.2	32.1	19.8	383.1	21.8	11.9
Level of Service	E	F		F	D	D	F	C	B	F	C	B
Approach Delay (s)		403.3			192.4			362.1			73.8	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM Average Control Delay	256.7	HCM Level of Service	F
HCM Volume to Capacity ratio	3.43		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	127.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	29	1186	40	90	888	46	40	2	86	12	2	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3421		1719	3438	1538	1719	1544		1719	1810	1538
Flt Permitted	0.21	1.00		0.20	1.00	1.00	0.76	1.00		0.69	1.00	1.00
Satd. Flow (perm)	385	3421		361	3438	1538	1369	1544		1255	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	1318	44	100	987	51	44	2	96	13	2	20
RTOR Reduction (vph)	0	3	0	0	0	22	0	86	0	0	0	17
Lane Group Flow (vph)	32	1359	0	100	987	29	44	12	0	13	2	3
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	54.0	54.0		42.7	42.7	42.7	8.0	8.0		8.0	8.0	12.8
Effective Green, g (s)	54.0	54.0		42.7	42.7	42.7	8.0	8.0		8.0	8.0	12.8
Actuated g/C Ratio	0.72	0.72		0.57	0.57	0.57	0.11	0.11		0.11	0.11	0.17
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	363	2463		206	1957	876	146	165		134	193	396
v/s Ratio Prot	0.01	c0.40			0.29			0.01			0.00	0.00
v/s Ratio Perm	0.06			0.28		0.02	c0.03			0.01		0.00
v/c Ratio	0.09	0.55		0.49	0.50	0.03	0.30	0.07		0.10	0.01	0.01
Uniform Delay, d1	4.2	4.9		9.6	9.8	7.1	30.9	30.2		30.2	30.0	25.8
Progression Factor	0.37	0.75		0.50	0.45	0.70	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1		6.8	0.8	0.1	2.8	0.5		0.8	0.1	0.0
Delay (s)	1.6	3.7		11.6	5.2	5.0	33.8	30.6		31.0	30.0	25.8
Level of Service	A	A		B	A	A	C	C		C	C	C
Approach Delay (s)		3.7			5.8			31.6			28.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	6.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	6	2	42	2	2	10	14	909	73	87	1267	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.89			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1595			1765	1538	1719	3400		1719	3438	1538
Flt Permitted		0.96			0.85	1.00	0.17	1.00		0.25	1.00	1.00
Satd. Flow (perm)		1539			1544	1538	303	3400		453	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	2	47	2	2	11	16	1010	81	97	1408	7
RTOR Reduction (vph)	0	42	0	0	0	10	0	8	0	0	0	2
Lane Group Flow (vph)	0	14	0	0	4	1	16	1083	0	97	1408	5
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		7.4			7.4	7.4	56.3	56.3		56.3	56.3	56.3
Effective Green, g (s)		7.4			7.4	7.4	56.3	56.3		56.3	56.3	56.3
Actuated g/C Ratio		0.10			0.10	0.10	0.75	0.75		0.75	0.75	0.75
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		152			152	152	227	2552		340	2581	1155
v/s Ratio Prot								0.32			c0.41	
v/s Ratio Perm		c0.01			0.00	0.00	0.05			0.21		0.00
v/c Ratio		0.09			0.03	0.01	0.07	0.42		0.29	0.55	0.00
Uniform Delay, d1		30.7			30.5	30.5	2.5	3.4		3.0	3.9	2.3
Progression Factor		1.00			1.00	1.00	0.38	0.59		0.79	0.85	0.97
Incremental Delay, d2		0.4			0.1	0.0	0.5	0.4		1.7	0.7	0.0
Delay (s)		31.1			30.7	30.5	1.4	2.5		4.1	4.0	2.3
Level of Service		C			C	C	A	A		A	A	A
Approach Delay (s)		31.1			30.6			2.5			4.0	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	4.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	55	7	93	33	7	4	19	811	123	250	1301	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.86		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1558		1719	1719		1719	3370		1719	3417	
Flt Permitted	0.69	1.00		0.51	1.00		0.14	1.00		0.21	1.00	
Satd. Flow (perm)	1249	1558		921	1719		261	3370		381	3417	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	8	103	37	8	4	21	901	137	278	1446	62
RTOR Reduction (vph)	0	96	0	0	4	0	0	6	0	0	2	0
Lane Group Flow (vph)	61	15	0	37	8	0	21	1032	0	278	1506	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	15.7	10.1		14.1	9.3		98.8	94.9		117.1	107.2	
Effective Green, g (s)	15.7	10.1		14.1	9.3		98.8	94.9		117.1	107.2	
Actuated g/C Ratio	0.10	0.07		0.09	0.06		0.66	0.63		0.78	0.71	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	148	105		112	107		210	2132		442	2442	
v/s Ratio Prot	c0.02	0.01		0.01	0.00		0.00	0.31		c0.07	c0.44	
v/s Ratio Perm	c0.03			0.02			0.06			c0.42		
v/c Ratio	0.41	0.14		0.33	0.08		0.10	0.48		0.63	0.62	
Uniform Delay, d1	62.3	65.9		62.9	66.3		9.7	14.6		8.6	10.9	
Progression Factor	1.00	1.00		1.00	1.00		0.54	0.46		0.98	0.90	
Incremental Delay, d2	2.9	1.0		2.7	0.5		0.3	0.7		2.8	1.0	
Delay (s)	65.3	66.9		65.7	66.8		5.5	7.4		11.3	10.8	
Level of Service	E	E		E	E		A	A		B	B	
Approach Delay (s)		66.3			65.9			7.4			10.9	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	0	0	570	0	346	0	813	124	712	1261	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0		5.0		6.3	6.3	6.5	6.1	
Lane Util. Factor				0.97		0.88		0.95	1.00	1.00	0.95	
Frt				1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected				0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)				3335		2707		3438	1538	1719	3438	
Flt Permitted				0.95		1.00		1.00	1.00	0.08	1.00	
Satd. Flow (perm)				3335		2707		3438	1538	150	3438	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	633	0	384	0	903	138	791	1401	0
RTOR Reduction (vph)	0	0	0	0	0	126	0	0	77	0	0	0
Lane Group Flow (vph)	0	0	0	633	0	258	0	903	61	791	1401	0
Turn Type				custom		custom			Perm	pm+pt		
Protected Phases								2		1	6	
Permitted Phases				4		4			2	6		
Actuated Green, G (s)				28.0		28.0		41.7	41.7	110.9	110.9	
Effective Green, g (s)				28.0		28.0		41.7	41.7	110.9	110.9	
Actuated g/C Ratio				0.19		0.19		0.28	0.28	0.74	0.74	
Clearance Time (s)				5.0		5.0		6.3	6.3	6.5	6.1	
Vehicle Extension (s)				4.3		4.3		4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)				623		505		956	428	765	2542	
v/s Ratio Prot								0.26		c0.43	0.41	
v/s Ratio Perm				c0.19		0.10			0.04	c0.33		
v/c Ratio				1.02		0.51		0.94	0.14	1.03	0.55	
Uniform Delay, d1				61.0		54.8		53.0	40.7	39.0	8.6	
Progression Factor				1.00		1.00		0.47	0.26	0.87	0.82	
Incremental Delay, d2				40.1		1.3		17.1	0.6	36.1	0.6	
Delay (s)				101.1		56.2		42.0	11.4	70.2	7.7	
Level of Service				F		E		D	B	E	A	
Approach Delay (s)		0.0			84.2			37.9			30.2	
Approach LOS		A			F			D			C	

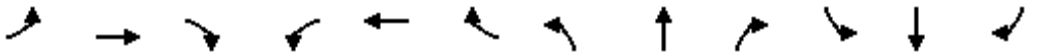
Intersection Summary			
HCM Average Control Delay	45.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	489	816	1128	255	0	1484
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	543	907	1253	283	0	1649
RTOR Reduction (vph)	0	264	0	107	0	0
Lane Group Flow (vph)	543	643	1253	176	0	1649
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	26.4	26.4	93.5	93.5		111.5
Effective Green, g (s)	26.4	26.4	93.5	93.5		104.5
Actuated g/C Ratio	0.18	0.18	0.62	0.62		0.70
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	587	476	2143	959		2395
v/s Ratio Prot	0.16	c0.24	0.36			c0.48
v/s Ratio Perm				0.11		
v/c Ratio	0.93	1.35	0.58	0.18		0.69
Uniform Delay, d1	60.8	61.8	16.7	12.0		13.3
Progression Factor	1.00	1.00	0.28	0.38		1.07
Incremental Delay, d2	21.0	171.6	0.3	0.1		0.4
Delay (s)	81.8	233.4	5.0	4.7		14.7
Level of Service	F	F	A	A		B
Approach Delay (s)	176.6		5.0			14.7
Approach LOS	F		A			B

Intersection Summary			
HCM Average Control Delay	62.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

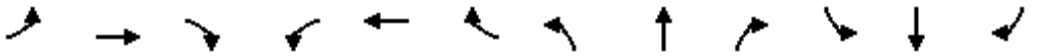
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	176	139	1683	261	196	2279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3335	1538	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.10	1.00
Satd. Flow (perm)	3335	1538	3438	1538	177	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	196	154	1870	290	218	2532
RTOR Reduction (vph)	0	51	0	46	0	0
Lane Group Flow (vph)	196	103	1870	244	218	2532
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2 3 6			2 3 6
Permitted Phases	4	4		2 3 6	2 3 6	
Actuated Green, G (s)	11.0	11.0	126.4	126.4	126.4	126.4
Effective Green, g (s)	11.0	11.0	126.4	126.4	126.4	126.4
Actuated g/C Ratio	0.07	0.07	0.84	0.84	0.84	0.84
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	245	113	2897	1296	149	2897
v/s Ratio Prot	0.06		0.54			0.74
v/s Ratio Perm		c0.07		0.16	c1.23	
v/c Ratio	0.80	0.91	0.65	0.19	1.46	0.87
Uniform Delay, d1	68.4	69.0	4.1	2.2	11.8	7.0
Progression Factor	1.00	1.00	0.57	1.26	0.91	0.54
Incremental Delay, d2	18.2	58.7	0.3	0.1	211.8	0.3
Delay (s)	86.6	127.8	2.6	2.8	222.5	4.1
Level of Service	F	F	A	A	F	A
Approach Delay (s)	104.7		2.6			21.4
Approach LOS	F		A			C

Intersection Summary			
HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



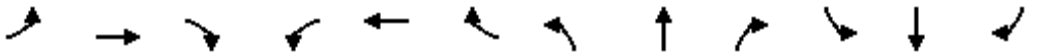
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	258	1417	147	34	2178	86	100	2	48	39	2	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	287	1574	163	38	2420	96	111	2	53	43	2	219
RTOR Reduction (vph)	0	0	43	0	0	20	0	0	46	0	0	123
Lane Group Flow (vph)	287	1574	120	38	2420	76	111	2	7	43	2	96
Turn Type	Prot		pm+ov	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	11.9	99.8	109.0	9.0	96.9	96.9	9.2	12.0	21.0	5.4	8.2	8.2
Effective Green, g (s)	11.9	99.8	109.0	9.0	96.9	96.9	9.2	12.0	21.0	5.4	8.2	8.2
Actuated g/C Ratio	0.08	0.67	0.73	0.06	0.65	0.65	0.06	0.08	0.14	0.04	0.05	0.05
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	265	2287	1118	103	2221	994	105	145	215	120	188	84
v/s Ratio Prot	c0.09	0.46	0.01	0.02	c0.70		c0.06	0.00	c0.00	0.01	0.00	
v/s Ratio Perm			0.07			0.05			0.00			c0.06
v/c Ratio	1.08	0.69	0.11	0.37	1.09	0.08	1.06	0.01	0.03	0.36	0.01	1.14
Uniform Delay, d1	69.0	15.5	6.1	67.8	26.5	9.9	70.4	63.6	55.7	70.6	67.1	70.9
Progression Factor	0.96	1.00	2.18	0.75	0.55	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	71.3	1.3	0.0	1.4	44.0	0.1	104.1	0.1	0.1	2.9	0.0	142.4
Delay (s)	137.8	16.8	13.3	52.0	58.5	7.0	174.5	63.6	55.8	73.5	67.1	213.3
Level of Service	F	B	B	D	E	A	F	E	E	E	E	F
Approach Delay (s)		33.7			56.5			135.3			189.4	
Approach LOS		C			E			F			F	

Intersection Summary			
HCM Average Control Delay	56.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	29.9
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



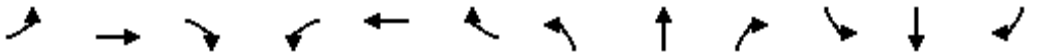
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	314	1024	166	147	1539	661	360	346	94	199	160	399
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	3335	1752		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.14	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	249	3438	1538	3335	1752		3335	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	349	1138	184	163	1710	734	400	384	104	221	178	443
RTOR Reduction (vph)	0	0	79	0	0	137	0	7	0	0	0	0
Lane Group Flow (vph)	349	1138	105	163	1710	597	400	481	0	221	178	443
Turn Type	Prot		Perm	pm+pt		Perm	Prot			Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6						Free
Actuated Green, G (s)	14.8	71.2	71.2	81.4	68.9	68.9	21.0	35.8		8.8	23.6	150.0
Effective Green, g (s)	14.8	71.2	71.2	81.4	68.9	68.9	21.0	35.8		8.8	23.6	150.0
Actuated g/C Ratio	0.10	0.47	0.47	0.54	0.46	0.46	0.14	0.24		0.06	0.16	1.00
Clearance Time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	329	1632	730	258	1579	706	467	418		196	285	1538
v/s Ratio Prot	c0.10	0.33		0.05	c0.50		0.12	c0.27		c0.07	0.10	
v/s Ratio Perm			0.07	0.29		0.39						c0.29
v/c Ratio	1.06	0.70	0.14	0.63	1.08	0.85	0.86	1.15		1.13	0.62	0.29
Uniform Delay, d1	67.6	30.9	22.2	22.3	40.5	35.9	63.0	57.1		70.6	59.1	0.0
Progression Factor	1.24	0.57	0.33	1.64	0.41	0.11	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	59.7	1.9	0.3	3.0	43.6	6.3	15.1	92.2		102.7	5.1	0.5
Delay (s)	143.8	19.5	7.7	39.6	60.3	10.3	78.1	149.3		173.3	64.2	0.5
Level of Service	F	B	A	D	E	B	E	F		F	E	A
Approach Delay (s)		44.1			45.0			117.2			59.3	
Approach LOS		D			D			F			E	

Intersection Summary			
HCM Average Control Delay	57.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



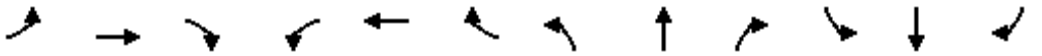
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1105	212	91	1642	0	0	0	0	1184	0	705
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		4.0
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.98		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3355		1719	3438					3335		1538
Flt Permitted		1.00		0.05	1.00					0.95		1.00
Satd. Flow (perm)		3355		99	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1228	236	101	1824	0	0	0	0	1316	0	783
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1453	0	101	1824	0	0	0	0	1316	0	783
Turn Type				pm+pt						Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		66.2		79.4	79.4					58.3		150.0
Effective Green, g (s)		66.2		79.4	79.4					58.3		150.0
Actuated g/C Ratio		0.44		0.53	0.53					0.39		1.00
Clearance Time (s)		6.6		6.6	6.6					5.7		
Vehicle Extension (s)		4.3		4.3	4.3					4.3		
Lane Grp Cap (vph)		1481		124	1820					1296		1538
v/s Ratio Prot		0.43		0.04	c0.53					c0.39		
v/s Ratio Perm				0.39								0.51
v/c Ratio		0.98		0.81	1.00					1.02		0.51
Uniform Delay, d1		41.3		33.5	35.3					45.9		0.0
Progression Factor		0.63		2.02	0.91					1.00		1.00
Incremental Delay, d2		14.0		4.1	6.8					28.9		1.2
Delay (s)		39.8		71.7	39.1					74.8		1.2
Level of Service		D		E	D					E		A
Approach Delay (s)		39.8			40.8			0.0			47.4	
Approach LOS		D			D			A			D	

Intersection Summary			
HCM Average Control Delay	43.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	171.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



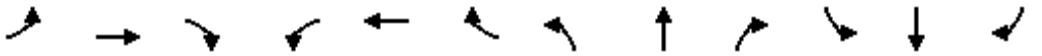
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	861	1428	0	0	989	903	744	0	361	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.08	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	151	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	957	1587	0	0	1099	1003	827	0	401	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	389	0	0	26	0	0	0
Lane Group Flow (vph)	957	1587	0	0	1099	614	827	0	375	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	94.9	94.9			41.9	41.9	44.0		44.0			
Effective Green, g (s)	94.9	94.9			41.9	41.9	44.0		44.0			
Actuated g/C Ratio	0.63	0.63			0.28	0.28	0.29		0.29			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	586	2175			960	430	504		451			
v/s Ratio Prot	c0.51	0.46			0.32		c0.48					
v/s Ratio Perm	c0.52					0.40			0.24			
v/c Ratio	1.63	0.73			1.14	1.43	1.64		0.83			
Uniform Delay, d1	44.9	18.8			54.0	54.0	53.0		49.5			
Progression Factor	1.17	1.07			0.82	0.76	0.98		0.97			
Incremental Delay, d2	286.7	0.5			70.7	197.9	297.2		13.0			
Delay (s)	339.2	20.6			115.0	239.2	348.9		61.1			
Level of Service	F	C			F	F	F		E			
Approach Delay (s)		140.5			174.3			254.9			0.0	
Approach LOS		F			F			F			A	

Intersection Summary			
HCM Average Control Delay	176.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.60		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	171.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	1492	132	31	1683	62	121	7	10	111	29	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3396		1719	3420		1719	1652		1719	1605	
Flt Permitted	0.04	1.00		0.10	1.00		0.34	1.00		0.75	1.00	
Satd. Flow (perm)	75	3396		181	3420		611	1652		1348	1605	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	1658	147	34	1870	69	134	8	11	123	32	98
RTOR Reduction (vph)	0	4	0	0	2	0	0	9	0	0	74	0
Lane Group Flow (vph)	183	1801	0	34	1937	0	134	10	0	123	56	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	110.5	110.5		91.2	91.2		28.6	28.6		15.5	15.5	
Effective Green, g (s)	110.5	110.5		91.2	91.2		28.6	28.6		15.5	15.5	
Actuated g/C Ratio	0.74	0.74		0.61	0.61		0.19	0.19		0.10	0.10	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	209	2502		110	2079		174	315		139	166	
v/s Ratio Prot	c0.08	0.53			c0.57		c0.04	0.01			0.04	
v/s Ratio Perm	0.56			0.19			c0.11			0.09		
v/c Ratio	0.88	0.72		0.31	0.93		0.77	0.03		0.88	0.34	
Uniform Delay, d1	52.3	11.1		14.2	26.6		56.1	49.4		66.4	62.5	
Progression Factor	1.46	0.38		0.16	0.25		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.9	1.2		5.0	6.7		20.3	0.1		45.1	1.9	
Delay (s)	99.2	5.3		7.2	13.5		76.4	49.5		111.4	64.4	
Level of Service	F	A		A	B		E	D		F	E	
Approach Delay (s)		14.0			13.4			73.0			87.3	
Approach LOS		B			B			E			F	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

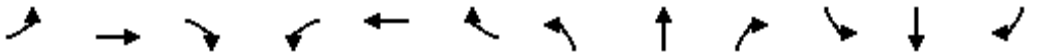


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	1371	234	177	1667	2	105	2	148	2	2	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.92			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1719	3363		1719	3438			1634			1667	
Flt Permitted	0.09	1.00		0.10	1.00			0.86			0.90	
Satd. Flow (perm)	167	3363		185	3438			1438			1523	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	1523	260	197	1852	2	117	2	164	2	2	4
RTOR Reduction (vph)	0	9	0	0	0	0	0	33	0	0	4	0
Lane Group Flow (vph)	9	1774	0	197	1854	0	0	250	0	0	4	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	120.7	120.7		121.0	121.0			18.0			18.0	
Effective Green, g (s)	120.7	120.7		121.0	121.0			18.0			18.0	
Actuated g/C Ratio	0.80	0.80		0.81	0.81			0.12			0.12	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	134	2706		149	2773			173			183	
v/s Ratio Prot		0.53			0.54							
v/s Ratio Perm	0.05			c1.06				c0.17			0.00	
v/c Ratio	0.07	0.66		1.32	0.67			1.44			0.02	
Uniform Delay, d1	3.0	6.1		14.5	6.1			66.0			58.3	
Progression Factor	0.16	0.12		1.24	0.49			1.00			1.00	
Incremental Delay, d2	0.6	0.8		149.3	0.1			228.7			0.1	
Delay (s)	1.1	1.6		167.3	3.1			294.7			58.3	
Level of Service	A	A		F	A			F			E	
Approach Delay (s)		1.6			18.9			294.7			58.3	
Approach LOS		A			B			F			E	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	107.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

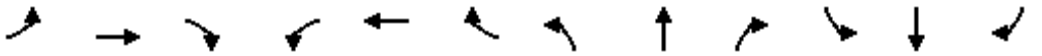
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	2055	24	20	4623	118	70	4	35	120	2	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.86			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	
Satd. Flow (prot)	1719	3432		1719	3425		1719	1563			1711	
Flt Permitted	0.04	1.00		0.04	1.00		0.79	1.00			0.72	
Satd. Flow (perm)	65	3432		69	3425		1423	1563			1281	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	34	2283	27	22	5137	131	78	4	39	133	2	13
RTOR Reduction (vph)	0	0	0	0	1	0	0	14	0	0	3	0
Lane Group Flow (vph)	34	2310	0	22	5267	0	78	29	0	0	145	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	116.4	116.4		105.4	105.4		22.3	22.3			22.3	
Effective Green, g (s)	116.4	116.4		105.4	105.4		22.3	22.3			22.3	
Actuated g/C Ratio	0.78	0.78		0.70	0.70		0.15	0.15			0.15	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	102	2663		48	2407		212	232			190	
v/s Ratio Prot	0.01	c0.67			c1.54			0.02				
v/s Ratio Perm	0.25			0.32			0.05				c0.11	
v/c Ratio	0.33	0.87		0.46	2.19		0.37	0.12			0.77	
Uniform Delay, d1	43.2	11.5		9.8	22.3		57.5	55.4			61.3	
Progression Factor	1.31	0.70		0.51	0.50		1.00	1.00			1.00	
Incremental Delay, d2	2.6	3.6		2.8	534.8		1.7	0.4			18.2	
Delay (s)	59.5	11.7		7.8	545.9		59.2	55.7			79.5	
Level of Service	E	B		A	F		E	E			E	
Approach Delay (s)		12.4			543.7			58.0			79.5	
Approach LOS		B			F			E			E	

Intersection Summary			
HCM Average Control Delay	370.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.93		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	155.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



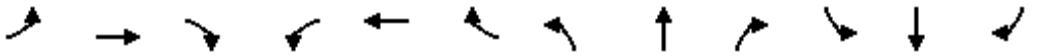
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	1061	29	134	2960	77	479	352	39	67	285	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3424		1719	3425		1719	1810	1538	1719	1739	
Flt Permitted	0.04	1.00		0.16	1.00		0.15	1.00	1.00	0.53	1.00	
Satd. Flow (perm)	81	3424		295	3425		276	1810	1538	961	1739	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	1179	32	149	3289	86	532	391	43	74	317	112
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	29	0	3	0
Lane Group Flow (vph)	64	1210	0	149	3374	0	532	391	14	74	426	0
Turn Type	Perm			Perm			pm+pt		Perm	Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	89.7	89.7		89.7	89.7		49.0	49.0	49.0	20.8	20.8	
Effective Green, g (s)	89.7	89.7		89.7	89.7		49.0	49.0	49.0	20.8	20.8	
Actuated g/C Ratio	0.60	0.60		0.60	0.60		0.33	0.33	0.33	0.14	0.14	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	48	2048		176	2048		309	591	502	133	241	
v/s Ratio Prot		0.35			c0.99		c0.26	0.22			0.24	
v/s Ratio Perm	0.79			0.51			c0.30		0.01	0.08		
v/c Ratio	1.33	0.59		0.85	1.65		1.72	0.66	0.03	0.56	1.77	
Uniform Delay, d1	30.1	18.7		24.5	30.1		45.7	43.4	34.3	60.3	64.6	
Progression Factor	1.00	1.08		0.65	0.67		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	205.6	0.6		4.8	291.5		338.1	3.2	0.0	6.8	361.0	
Delay (s)	235.8	20.9		20.6	311.7		383.8	46.6	34.4	67.1	425.6	
Level of Service	F	C		C	F		F	D	C	E	F	
Approach Delay (s)		31.7			299.4			231.8			372.9	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM Average Control Delay	240.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	172.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



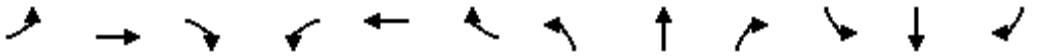
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	1007	74	759	2693	2	231	40	555	32	42	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3402		1719	3438			1735	1538	1719	1751	
Flt Permitted		0.74		0.07	1.00			0.72	1.00	0.15	1.00	
Satd. Flow (perm)		2517		130	3438			1294	1538	278	1751	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	1119	82	843	2992	2	257	44	617	36	47	13
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	16	0	3	0
Lane Group Flow (vph)	0	1206	0	843	2994	0	0	301	601	36	57	0
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		62.7		112.7	112.7			26.0	69.7	26.0	26.0	
Effective Green, g (s)		62.7		112.7	112.7			26.0	69.7	26.0	26.0	
Actuated g/C Ratio		0.42		0.75	0.75			0.17	0.46	0.17	0.17	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1052		561	2583			224	715	48	304	
v/s Ratio Prot				c0.44	0.87				0.25		0.03	
v/s Ratio Perm		0.48		c0.69				c0.23	0.15	0.13		
v/c Ratio		1.15		1.50	1.16			1.34	0.84	0.75	0.19	
Uniform Delay, d1		43.6		45.7	18.6			62.0	35.3	58.9	53.0	
Progression Factor		0.76		1.27	0.74			1.00	1.00	1.00	1.00	
Incremental Delay, d2		75.3		227.1	72.1			181.5	9.4	51.9	0.5	
Delay (s)		108.6		285.1	85.8			243.5	44.7	110.8	53.4	
Level of Service		F		F	F			F	D	F	D	
Approach Delay (s)		108.6			129.6			109.8			74.9	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM Average Control Delay	121.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	141.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



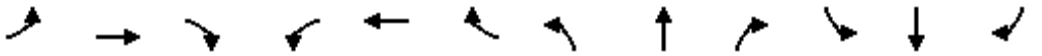
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	1572	128	40	3801	24	198	2	48	20	2	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3399		1719	3435			1695			1600	
Flt Permitted	0.04	1.00		0.08	1.00			0.59			0.95	
Satd. Flow (perm)	64	3399		137	3435			1039			1531	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	1747	142	44	4223	27	220	2	53	22	2	94
RTOR Reduction (vph)	0	4	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	39	1885	0	44	4250	0	0	269	0	0	118	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	112.8	112.8		112.8	112.8			25.6			25.6	
Effective Green, g (s)	112.8	112.8		112.8	112.8			25.6			25.6	
Actuated g/C Ratio	0.75	0.75		0.75	0.75			0.17			0.17	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	48	2556		103	2583			177			261	
v/s Ratio Prot		0.55			c1.24							
v/s Ratio Perm	0.61			0.32				c0.26			0.08	
v/c Ratio	0.81	0.74		0.43	1.65			1.52			0.45	
Uniform Delay, d1	11.9	10.4		6.8	18.6			62.2			55.9	
Progression Factor	0.89	0.86		0.60	0.48			1.00			1.00	
Incremental Delay, d2	39.6	0.7		1.2	290.5			261.1			2.0	
Delay (s)	50.1	9.6		5.2	299.4			323.3			57.9	
Level of Service	D	A		A	F			F			E	
Approach Delay (s)		10.4			296.4			323.3			57.9	
Approach LOS		B			F			F			E	

Intersection Summary			
HCM Average Control Delay	209.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	136.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	215	851	131	72	2101	284	525	546	188	188	326	454
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3377		1719	1810	1538	1719	1810	1538
Flt Permitted	0.06	1.00	1.00	0.22	1.00		0.15	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	100	3438	1538	389	3377		278	1810	1538	345	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	239	946	146	80	2334	316	583	607	209	209	362	504
RTOR Reduction (vph)	0	0	51	0	7	0	0	0	46	0	0	4
Lane Group Flow (vph)	239	946	95	80	2643	0	583	607	163	209	362	500
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	85.0	72.3	97.3	77.8	68.7		51.0	36.0	45.1	31.0	21.0	33.7
Effective Green, g (s)	85.0	72.3	97.3	77.8	68.7		51.0	36.0	45.1	31.0	21.0	33.7
Actuated g/C Ratio	0.57	0.48	0.65	0.52	0.46		0.34	0.24	0.30	0.21	0.14	0.22
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	194	1657	998	282	1547		335	434	462	163	253	346
v/s Ratio Prot	0.10	0.28	0.02	0.02	c0.78		c0.29	0.34	0.02	0.09	0.20	c0.12
v/s Ratio Perm	c0.59		0.05	0.13			c0.30		0.08	0.18		0.20
v/c Ratio	1.23	0.57	0.09	0.28	1.71		1.74	1.40	0.35	1.28	1.43	1.45
Uniform Delay, d1	50.4	27.8	9.9	19.8	40.6		46.2	57.0	41.0	56.1	64.5	58.1
Progression Factor	0.90	0.92	3.32	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	129.5	0.9	0.0	0.9	321.6		345.3	192.9	0.7	165.5	215.2	216.1
Delay (s)	174.8	26.4	32.8	20.6	362.2		391.5	249.9	41.8	221.6	279.7	274.3
Level of Service	F	C	C	C	F		F	F	D	F	F	F
Approach Delay (s)		53.7			352.2			277.8			265.8	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM Average Control Delay	261.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.9
Intersection Capacity Utilization	144.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	142	135	67	182	31	139	131	1888	101	114	1648	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3268		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.73	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1330	3268		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	158	150	74	202	34	154	146	2098	112	127	1831	133
RTOR Reduction (vph)	0	67	0	0	0	140	0	0	52	0	0	54
Lane Group Flow (vph)	158	157	0	202	34	14	146	2098	60	127	1831	79
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	14.0	7.0		8.0	8.0	8.0	11.7	48.0	48.0	6.0	42.3	42.3
Effective Green, g (s)	14.0	7.0		8.0	8.0	8.0	11.7	48.0	48.0	6.0	42.3	42.3
Actuated g/C Ratio	0.16	0.08		0.09	0.09	0.09	0.13	0.53	0.53	0.07	0.47	0.47
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	237	254		296	161	137	223	2635	820	222	2322	723
v/s Ratio Prot	0.05	0.05		c0.06	0.02		c0.08	c0.42		0.04	0.37	
v/s Ratio Perm	c0.05					0.01			0.04			0.05
v/c Ratio	0.67	0.62		0.68	0.21	0.10	0.65	0.80	0.07	0.57	0.79	0.11
Uniform Delay, d1	35.3	40.2		39.8	38.1	37.7	37.2	17.0	10.2	40.8	20.1	13.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.03	1.04	1.86	1.00	1.00	1.00
Incremental Delay, d2	8.0	6.2		7.2	1.3	0.6	3.7	1.2	0.1	4.6	2.8	0.3
Delay (s)	43.3	46.4		47.0	39.4	38.3	41.9	18.8	19.0	45.4	22.9	13.6
Level of Service	D	D		D	D	D	D	B	B	D	C	B
Approach Delay (s)		45.1			42.9			20.3			23.7	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

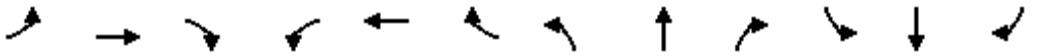


Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	459	129	1592	305	138	1661
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4821		1719	4940
Flt Permitted	0.95	1.00	1.00		0.19	1.00
Satd. Flow (perm)	1719	1538	4821		350	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	510	143	1769	339	153	1846
RTOR Reduction (vph)	0	4	63	0	0	0
Lane Group Flow (vph)	510	139	2045	0	153	1846
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	12.0	12.0	20.7		20.7	20.7
Effective Green, g (s)	12.0	12.0	20.7		20.7	20.7
Actuated g/C Ratio	0.27	0.27	0.46		0.46	0.46
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	458	410	2218		161	2272
v/s Ratio Prot	c0.30		0.42			0.37
v/s Ratio Perm		0.09			c0.44	
v/c Ratio	1.11	0.34	0.92		0.95	0.81
Uniform Delay, d1	16.5	13.3	11.4		11.7	10.5
Progression Factor	1.00	1.00	0.95		1.00	1.00
Incremental Delay, d2	76.8	1.0	5.1		58.9	3.3
Delay (s)	93.3	14.3	16.0		70.5	13.8
Level of Service	F	B	B		E	B
Approach Delay (s)	76.0		16.0			18.1
Approach LOS	E		B			B

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

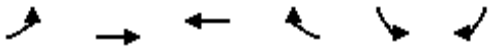
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	137	1603	283	33	2233	77	96	101	83	6	20	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3206		1719	1810	2707
Flt Permitted	0.04	1.00	1.00	0.08	1.00	1.00	0.95	1.00		0.62	1.00	1.00
Satd. Flow (perm)	72	3438	1538	141	3438	1538	3335	3206		1129	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	152	1781	314	37	2481	86	107	112	92	7	22	58
RTOR Reduction (vph)	0	0	96	0	0	22	0	82	0	0	0	16
Lane Group Flow (vph)	152	1781	218	37	2481	64	107	122	0	7	22	42
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	109.1	101.1	101.1	103.2	98.4	98.4	8.0	16.2		9.4	8.8	16.8
Effective Green, g (s)	109.1	101.1	101.1	103.2	98.4	98.4	8.0	16.2		9.4	8.8	16.8
Actuated g/C Ratio	0.75	0.69	0.69	0.71	0.68	0.68	0.05	0.11		0.06	0.06	0.12
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	144	2386	1067	152	2322	1039	183	356		75	109	312
v/s Ratio Prot	c0.06	0.52		0.01	0.72		c0.03	c0.04		0.00	0.01	0.01
v/s Ratio Perm	c0.73		0.14	0.16		0.04				0.01		0.01
v/c Ratio	1.06	0.75	0.20	0.24	1.07	0.06	0.58	0.34		0.09	0.20	0.13
Uniform Delay, d1	54.2	14.2	8.0	12.6	23.6	8.0	67.2	59.8		64.0	65.1	57.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	90.6	1.6	0.2	1.3	40.1	0.1	6.0	1.8		0.9	2.8	0.3
Delay (s)	144.7	15.7	8.1	13.9	63.8	8.1	73.3	61.6		64.9	67.9	58.2
Level of Service	F	B	A	B	E	A	E	E		E	E	E
Approach Delay (s)		23.4			61.2			65.6			61.2	
Approach LOS		C			E			E			E	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	145.7	Sum of lost time (s)	14.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	275	1294	1254	0	2248	1068	0	0	0	379	695	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	306	1438	1393	0	2498	1187	0	0	0	421	772	221
RTOR Reduction (vph)	0	0	10	0	0	1	0	0	0	0	0	95
Lane Group Flow (vph)	306	1438	1383	0	2498	1186	0	0	0	421	772	126
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	9.2	82.2	82.2		67.2	103.9				36.7	36.7	36.7
Effective Green, g (s)	9.2	82.2	82.2		67.2	103.9				36.7	36.7	36.7
Actuated g/C Ratio	0.07	0.63	0.63		0.52	0.80				0.28	0.28	0.28
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	236	2174	972		1777	1229				485	511	434
v/s Ratio Prot	0.09	0.42			0.73	0.27					c0.43	
v/s Ratio Perm			c0.90			0.50				0.24		0.08
v/c Ratio	1.30	0.66	1.42		1.41	0.97				0.87	1.51	0.29
Uniform Delay, d1	60.4	15.1	23.9		31.4	11.5				44.3	46.6	36.5
Progression Factor	1.00	1.00	1.00		0.93	1.05				1.00	1.00	1.00
Incremental Delay, d2	161.1	1.6	196.4		182.9	2.9				15.8	239.8	0.6
Delay (s)	221.5	16.7	220.3		212.2	15.0				60.2	286.5	37.1
Level of Service	F	B	F		F	B				E	F	D
Approach Delay (s)		127.1			148.7			0.0			180.1	
Approach LOS		F			F			A			F	

Intersection Summary			
HCM Average Control Delay	145.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	190.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

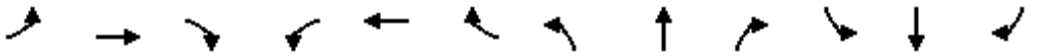


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1673	1531	0	998	1785
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1859	1701	0	1109	1983
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	0	1859	1701	0	1109	1980
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		53.4	53.4		65.7	65.7
Effective Green, g (s)		53.4	53.4		65.7	65.7
Actuated g/C Ratio		0.41	0.41		0.51	0.51
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1412	1412		869	1368
v/s Ratio Prot		c0.54	0.49		0.65	
v/s Ratio Perm						c0.73
v/c Ratio		1.32	1.20		1.28	1.45
Uniform Delay, d1		38.3	38.3		32.1	32.1
Progression Factor		0.95	1.05		1.00	1.00
Incremental Delay, d2		146.0	97.0		133.2	205.5
Delay (s)		182.3	137.1		165.4	237.6
Level of Service		F	F		F	F
Approach Delay (s)		182.3	137.1		211.7	
Approach LOS		F	F		F	

Intersection Summary			
HCM Average Control Delay	184.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	163.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

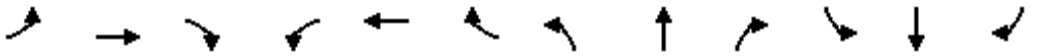
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1540	0	0	782	1192	1268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1711	0	0	869	1324	1409
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1711	0	0	869	1324	1409
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	46.2			46.2	73.0	73.0
Effective Green, g (s)	46.2			46.2	73.0	73.0
Actuated g/C Ratio	0.36			0.36	0.56	0.56
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	1222			1222	1873	864
v/s Ratio Prot	c0.50			0.25	0.40	
v/s Ratio Perm						c0.92
v/c Ratio	1.40			0.71	0.71	1.63
Uniform Delay, d1	41.9			36.1	20.7	28.5
Progression Factor	0.99			0.87	1.00	1.00
Incremental Delay, d2	180.5			1.8	1.4	288.9
Delay (s)	221.9			33.4	22.1	317.4
Level of Service	F			C	C	F
Approach Delay (s)	221.9			33.4	174.4	
Approach LOS	F			C	F	

Intersection Summary			
HCM Average Control Delay	166.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	182.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	1933	830	157	1185	10	438	2	164	35	3	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.95		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	
Satd. Flow (prot)	1719	3283		1719	3434			1724	1538		1682	
Flt Permitted	0.19	1.00		0.05	1.00			0.72	1.00		0.14	
Satd. Flow (perm)	352	3283		95	3434			1300	1538		241	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	2148	922	174	1317	11	487	2	182	39	3	18
RTOR Reduction (vph)	0	37	0	0	0	0	0	0	85	0	12	0
Lane Group Flow (vph)	50	3033	0	174	1328	0	0	489	97	0	48	0
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	69.3	69.3		86.3	86.3			30.7	30.7		30.7	
Effective Green, g (s)	69.3	69.3		86.3	86.3			30.7	30.7		30.7	
Actuated g/C Ratio	0.53	0.53		0.66	0.66			0.24	0.24		0.24	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	188	1750		192	2280			307	363		57	
v/s Ratio Prot		c0.92		c0.07	0.39							
v/s Ratio Perm	0.14			0.53				c0.38	0.06		0.20	
v/c Ratio	0.27	1.73		0.91	0.58			1.59	0.27		0.84	
Uniform Delay, d1	16.5	30.4		43.1	12.0			49.6	40.5		47.3	
Progression Factor	0.62	0.57		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.3	330.2		40.4	1.1			281.7	0.6		66.8	
Delay (s)	10.6	347.5		83.5	13.1			331.3	41.1		114.1	
Level of Service	B	F		F	B			F	D		F	
Approach Delay (s)		342.1			21.2			252.6			114.1	
Approach LOS		F			C			F			F	

Intersection Summary			
HCM Average Control Delay	238.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	136.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

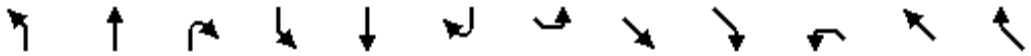


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	0	22	22	0	166	3	1372	16	58	1240	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.88		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1584		1719	3432		1719	3432	
Flt Permitted		0.51	1.00		0.96		0.15	1.00		0.12	1.00	
Satd. Flow (perm)		914	1538		1529		268	3432		210	3432	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	30	0	24	24	0	184	3	1524	18	64	1378	16
RTOR Reduction (vph)	0	0	20	0	34	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	30	4	0	174	0	3	1541	0	64	1393	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		13.5	13.5		13.5		49.5	49.5		49.5	49.5	
Effective Green, g (s)		13.5	13.5		13.5		49.5	49.5		49.5	49.5	
Actuated g/C Ratio		0.18	0.18		0.18		0.66	0.66		0.66	0.66	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		4.3	4.3		4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)		165	277		275		177	2265		139	2265	
v/s Ratio Prot								c0.45			0.41	
v/s Ratio Perm		0.03	0.00		c0.11		0.01			0.30		
v/c Ratio		0.18	0.02		0.63		0.02	0.68		0.46	0.62	
Uniform Delay, d1		26.1	25.3		28.5		4.4	7.9		6.2	7.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.55	0.53	
Incremental Delay, d2		0.8	0.0		5.6		0.2	1.7		8.6	1.0	
Delay (s)		26.9	25.3		34.1		4.6	9.5		12.0	4.9	
Level of Service		C	C		C		A	A		B	A	
Approach Delay (s)		26.2			34.1			9.5			5.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

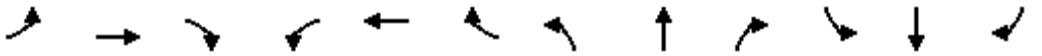
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1476	91	251	1003	0	783	0	344	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0	6.0			
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00			
Frt		0.99		1.00	1.00			1.00	0.85			
Flt Protected		1.00		0.95	1.00			0.95	1.00			
Satd. Flow (prot)		3408		1719	3438			1719	1538			
Flt Permitted		1.00		0.06	1.00			0.95	1.00			
Satd. Flow (perm)		3408		111	3438			1719	1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1640	101	279	1114	0	870	0	382	0	0	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	43	0	0	0
Lane Group Flow (vph)	0	1738	0	279	1114	0	0	870	339	0	0	0
Turn Type				pm+pt			Perm		Perm			
Protected Phases				1	6			4				
Permitted Phases		2		6			4		4			
Actuated Green, G (s)		59.0		81.0	81.0			57.0	57.0			
Effective Green, g (s)		59.0		81.0	81.0			57.0	57.0			
Actuated g/C Ratio		0.39		0.54	0.54			0.38	0.38			
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0			
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3			
Lane Grp Cap (vph)		1340		231	1857			653	584			
v/s Ratio Prot				c0.13	0.32							
v/s Ratio Perm		c0.51		0.52				0.51	0.22			
v/c Ratio		1.30		1.21	0.60			1.33	0.58			
Uniform Delay, d1		45.5		50.5	23.5			46.5	37.0			
Progression Factor		0.94		1.73	1.20			0.99	0.99			
Incremental Delay, d2		137.9		97.4	0.1			159.9	1.8			
Delay (s)		180.7		184.8	28.2			205.9	38.4			
Level of Service		F		F	C			F	D			
Approach Delay (s)		180.7			59.6			154.8			0.0	
Approach LOS		F			E			F			A	

Intersection Summary			
HCM Average Control Delay	134.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



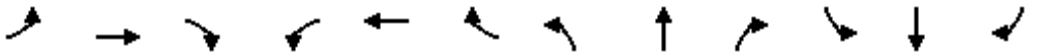
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	580	1679	0	0	1229	719	0	0	0	25	0	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1719	3438			3438	1538				1719		1538
Flt Permitted	0.07	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	123	3438			3438	1538				1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	644	1866	0	0	1366	799	0	0	0	28	0	473
RTOR Reduction (vph)	0	0	0	0	0	294	0	0	0	0	0	19
Lane Group Flow (vph)	644	1866	0	0	1366	505	0	0	0	28	0	454
Turn Type	pm+pt					custom				custom		custom
Protected Phases	5	2										8
Permitted Phases	2				6	6				8		
Actuated Green, G (s)	101.0	101.0			53.0	53.0				37.0		37.0
Effective Green, g (s)	101.0	101.0			53.0	53.0				37.0		37.0
Actuated g/C Ratio	0.67	0.67			0.35	0.35				0.25		0.25
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Vehicle Extension (s)	4.3	4.3			4.3	4.3				4.3		4.3
Lane Grp Cap (vph)	530	2315			1215	543				424		379
v/s Ratio Prot	c0.34	0.54										c0.30
v/s Ratio Perm	c0.48				0.40	0.33				0.02		
v/c Ratio	1.22	0.81			1.12	0.93				0.07		1.20
Uniform Delay, d1	47.5	17.5			48.5	46.7				43.3		56.5
Progression Factor	1.49	0.64			1.00	1.00				1.00		1.00
Incremental Delay, d2	98.5	0.3			67.1	24.8				0.1		112.1
Delay (s)	169.2	11.4			115.6	71.5				43.4		168.6
Level of Service	F	B			F	E				D		F
Approach Delay (s)		51.9			99.3			0.0			161.6	
Approach LOS		D			F			A			F	

Intersection Summary			
HCM Average Control Delay	82.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



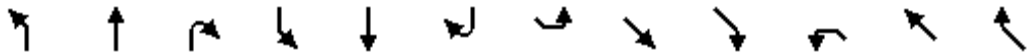
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	99	151	111	23	18	848	1234	1042	99	1751	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1645		1633	1665	1538	1719	3438	1538	1719	3427	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.07	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	1719	1645		1633	1665	1538	119	3438	1538	358	3427	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	110	168	123	26	20	942	1371	1158	110	1946	41
RTOR Reduction (vph)	0	42	0	0	0	19	0	0	106	0	1	0
Lane Group Flow (vph)	4	236	0	74	75	1	942	1371	1052	110	1986	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	10.0	10.0		4.0	4.0	4.0	98.0	98.0	98.0	55.0	55.0	
Effective Green, g (s)	10.0	10.0		4.0	4.0	4.0	98.0	98.0	98.0	55.0	55.0	
Actuated g/C Ratio	0.08	0.08		0.03	0.03	0.03	0.75	0.75	0.75	0.42	0.42	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	132	127		50	51	47	545	2592	1159	151	1450	
v/s Ratio Prot	0.00	c0.14		c0.05	0.05		c0.49	0.40			0.58	
v/s Ratio Perm						0.00	c0.81		0.68	0.31		
v/c Ratio	0.03	1.85		1.48	1.47	0.01	1.73	0.53	0.91	0.73	1.37	
Uniform Delay, d1	55.5	60.0		63.0	63.0	61.1	41.1	6.6	12.5	31.3	37.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.92	0.94	1.00	1.00	
Incremental Delay, d2	0.2	413.2		296.8	291.8	0.2	328.5	0.1	1.3	26.3	170.8	
Delay (s)	55.7	473.2		359.8	354.8	61.3	369.5	6.1	13.0	57.6	208.3	
Level of Service	E	F		F	F	E	F	A	B	E	F	
Approach Delay (s)		467.3			322.3			107.0			200.4	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	162.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	134.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



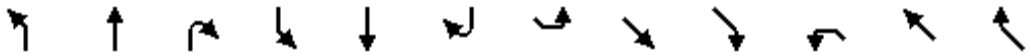
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	1061	0	1506	265	1618	0	0	1551	462
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	1179	0	1673	294	1798	0	0	1723	513
RTOR Reduction (vph)	0	0	0	0	0	9	0	0	0	0	0	173
Lane Group Flow (vph)	0	0	0	589	590	1664	294	1798	0	0	1723	340
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				52.0	52.0	52.0	9.0	66.0			51.0	51.0
Effective Green, g (s)				52.0	52.0	52.0	9.0	66.0			51.0	51.0
Actuated g/C Ratio				0.40	0.40	0.40	0.07	0.51			0.39	0.39
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				653	653	1083	231	1745			1349	603
v/s Ratio Prot							0.09	c0.52			c0.50	
v/s Ratio Perm				0.36	0.36	c0.61						0.22
v/c Ratio				0.90	0.90	1.54	1.27	1.03			1.28	0.56
Uniform Delay, d1				36.6	36.6	39.0	60.5	32.0			39.5	30.8
Progression Factor				1.00	1.00	1.00	1.38	0.23			0.42	0.11
Incremental Delay, d2				16.5	16.7	246.1	125.9	16.3			125.3	0.3
Delay (s)				53.1	53.3	285.1	209.2	23.8			142.0	3.7
Level of Service				D	D	F	F	C			F	A
Approach Delay (s)		0.0			189.2			49.8			110.3	
Approach LOS		A			F			D			F	

Intersection Summary			
HCM Average Control Delay	124.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	146.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1065	380	979	1633	0	818	0	458	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.11	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	190	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1183	422	1088	1814	0	909	0	509	0	0	0
RTOR Reduction (vph)	0	0	221	0	0	0	0	0	45	0	0	0
Lane Group Flow (vph)	0	1183	201	1088	1814	0	454	455	464	0	0	0
Turn Type			Perm	pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		31.6	31.6	91.2	90.6		26.9	26.9	26.9			
Effective Green, g (s)		31.6	31.6	91.2	90.6		26.9	26.9	26.9			
Actuated g/C Ratio		0.24	0.24	0.70	0.70		0.21	0.21	0.21			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1201	374	759	2396		338	338	560			
v/s Ratio Prot		0.24		c0.59	0.53							
v/s Ratio Perm			0.13	c0.42			0.28	0.28	0.17			
v/c Ratio		0.99	0.54	1.43	0.76		1.34	1.35	0.83			
Uniform Delay, d1		49.0	42.8	32.6	12.6		51.5	51.5	49.3			
Progression Factor		0.87	0.67	0.77	0.52		1.00	1.00	1.00			
Incremental Delay, d2		20.5	4.6	195.8	0.2		173.0	174.3	10.9			
Delay (s)		63.3	33.1	220.8	6.8		224.6	225.8	60.2			
Level of Service		E	C	F	A		F	F	E			
Approach Delay (s)		55.3			87.0			166.0			0.0	
Approach LOS		E			F			F			A	

Intersection Summary			
HCM Average Control Delay	97.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	146.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	439	1127	2	6	1471	614	316	4	325	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.98	1.00
Satd. Flow (prot)	1719	4939			3437	1538	1719	1541			1780	1538
Flt Permitted	0.06	1.00			0.95	1.00	0.75	1.00			0.81	1.00
Satd. Flow (perm)	107	4939			3256	1538	1364	1541			1466	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	488	1252	2	7	1634	682	351	4	361	2	4	2
RTOR Reduction (vph)	0	0	0	0	0	240	0	242	0	0	0	2
Lane Group Flow (vph)	488	1254	0	0	1641	442	351	123	0	0	6	0
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	90.6	90.6			61.6	61.6	26.9	26.9			26.9	26.9
Effective Green, g (s)	90.6	90.6			61.6	61.6	26.9	26.9			26.9	26.9
Actuated g/C Ratio	0.70	0.70			0.47	0.47	0.21	0.21			0.21	0.21
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	362	3442			1543	729	282	319			303	318
v/s Ratio Prot	c0.24	0.25						0.08				
v/s Ratio Perm	c0.70				0.50	0.29	c0.26				0.00	0.00
v/c Ratio	1.35	0.36			1.06	0.61	1.24	0.39			0.02	0.00
Uniform Delay, d1	45.2	8.0			34.2	25.2	51.5	44.4			41.1	40.9
Progression Factor	1.00	1.00			0.88	0.47	1.00	1.00			1.00	1.00
Incremental Delay, d2	174.0	0.3			37.6	2.3	136.3	1.6			0.1	0.0
Delay (s)	219.1	8.3			67.6	14.1	187.9	46.0			41.1	40.9
Level of Service	F	A			E	B	F	D			D	D
Approach Delay (s)		67.4			51.9			115.6			41.1	
Approach LOS		E			D			F			D	

Intersection Summary			
HCM Average Control Delay	67.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	105.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	166	27	103	2092	2557	92
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	184	30	114	2324	2841	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1010	
pX, platoon unblocked	0.43	0.43	0.43			
vC, conflicting volume	4283	1472	2943			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	5957	0	2869			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	94	0			
cM capacity (veh/h)	0	466	53			

Direction, Lane #	WB 1	SE 1	SE 2	SE 3	NW 1	NW 2
Volume Total	214	114	1162	1162	1894	1049
Volume Left	184	114	0	0	0	0
Volume Right	30	0	0	0	0	102
cSH	0	53	1700	1700	1700	1700
Volume to Capacity	Err	2.18	0.68	0.68	1.11	0.62
Queue Length 95th (ft)	Err	287	0	0	0	0
Control Delay (s)	Err	709.5	0.0	0.0	0.0	0.0
Lane LOS	F	F				
Approach Delay (s)	Err	33.3			0.0	
Approach LOS	F					

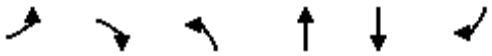
Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	1899	359	342	1397	610	124
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	2110	399	380	1552	678	138
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				862		
pX, platoon unblocked					0.36	
vC, conflicting volume			2509		3846	1254
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2509		5320	1254
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			0		0	13
cM capacity (veh/h)			170		0	159

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	1407	1102	897	1035	816
Volume Left	0	0	380	0	678
Volume Right	0	399	0	0	138
cSH	1700	1700	170	1700	0
Volume to Capacity	0.83	0.65	2.24	0.61	Err
Queue Length 95th (ft)	0	0	772	0	Err
Control Delay (s)	0.0	0.0	619.6	0.0	Err
Lane LOS			F		F
Approach Delay (s)	0.0		287.8		Err
Approach LOS					F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	163.8%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	8	2	6	1559	1310	37
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	9	2	7	1732	1456	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1175	379	
pX, platoon unblocked	0.80	0.78	0.78			
vC, conflicting volume	2356	748	1497			
vC1, stage 1 conf vol	1476					
vC2, stage 2 conf vol	879					
vCu, unblocked vol	951	107	1068			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	100	99			
cM capacity (veh/h)	223	714	491			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	11	7	866	866	970	526
Volume Left	9	7	0	0	0	0
Volume Right	2	0	0	0	0	41
cSH	279	491	1700	1700	1700	1700
Volume to Capacity	0.04	0.01	0.51	0.51	0.57	0.31
Queue Length 95th (ft)	3	1	0	0	0	0
Control Delay (s)	19.4	12.4	0.0	0.0	0.0	0.0
Lane LOS	C	B				
Approach Delay (s)	19.4	0.0			0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	75	81	2075	30	50	1873
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	83	90	2306	33	56	2081
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			371			
pX, platoon unblocked	0.58	0.58			0.58	
vC, conflicting volume	3474	1169			2339	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3821	0			1855	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	85			69	
cM capacity (veh/h)	1	621			179	

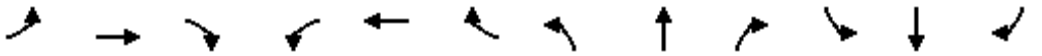
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	173	1537	802	56	1041	1041
Volume Left	83	0	0	56	0	0
Volume Right	90	0	33	0	0	0
cSH	2	1700	1700	179	1700	1700
Volume to Capacity	81.12	0.90	0.47	0.31	0.61	0.61
Queue Length 95th (ft)	Err	0	0	31	0	0
Control Delay (s)	Err	0.0	0.0	33.9	0.0	0.0
Lane LOS	F			D		
Approach Delay (s)	Err	0.0		0.9		
Approach LOS	F					

Intersection Summary			
Average Delay	373.2		
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	134	1992	30	23	1876	25	2	0	19	28	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	149	2213	33	26	2084	28	2	0	21	31	0	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		939										
pX, platoon unblocked				0.58			0.58	0.58		0.58	0.58	0.58
vC, conflicting volume	2112			2247			3569	4694	1056	3642	4691	1123
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2112			1698			3985	5929	1056	4110	5924	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	39			88			0	100	90	0	100	97
cM capacity (veh/h)	245			207			0	0	217	0	0	622

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SE 1	SE 2	NW 1	NW 2
Volume Total	149	1476	771	1068	1070	2	21	31	16
Volume Left	149	0	0	26	0	2	0	31	0
Volume Right	0	0	33	0	28	0	21	0	16
cSH	245	1700	1700	207	1700	0	217	0	622
Volume to Capacity	0.61	0.87	0.45	0.12	0.63	9.22	0.10	176.81	0.03
Queue Length 95th (ft)	89	0	0	10	0	Err	8	Err	2
Control Delay (s)	40.0	0.0	0.0	8.3	0.0	Err	23.4	Err	10.9
Lane LOS	E			A		F	C	F	B
Approach Delay (s)	2.5			4.2		973.5		6669.6	
Approach LOS						F		F	

Intersection Summary				
Average Delay	75.8			
Intersection Capacity Utilization	126.2%	ICU Level of Service		H
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	458	515	77	202	889	633	58	755	177	726	755	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3371		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.12	1.00		0.30	1.00	1.00	0.34	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	226	3371		542	3438	1538	608	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	509	572	86	224	988	703	64	839	197	807	839	117
RTOR Reduction (vph)	0	10	0	0	0	292	0	0	110	0	0	64
Lane Group Flow (vph)	509	648	0	224	988	411	64	839	87	807	839	53
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	54.0	35.1		42.9	28.0	28.0	26.0	26.0	26.0	23.0	54.0	54.0
Effective Green, g (s)	54.0	35.1		42.9	28.0	28.0	26.0	26.0	26.0	23.0	54.0	54.0
Actuated g/C Ratio	0.45	0.29		0.36	0.23	0.23	0.22	0.22	0.22	0.19	0.45	0.45
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	375	986		340	802	359	132	745	333	639	1547	692
v/s Ratio Prot	c0.25	0.19		0.08	0.29			c0.24		c0.24	0.24	
v/s Ratio Perm	c0.36			0.15		0.27	0.11		0.06			0.03
v/c Ratio	1.36	0.66		0.66	1.23	1.14	0.48	1.13	0.26	1.26	0.54	0.08
Uniform Delay, d1	36.3	37.2		28.8	46.0	46.0	41.1	47.0	39.0	48.5	24.0	18.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	177.3	2.3		5.3	115.2	92.9	5.6	73.4	0.9	130.6	0.7	0.1
Delay (s)	213.6	39.5		34.1	161.2	138.9	46.7	120.4	39.9	179.1	24.7	18.9
Level of Service	F	D		C	F	F	D	F	D	F	C	B
Approach Delay (s)		115.5			138.1			101.7			95.0	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	114.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	109.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	21	1239	137	305	1811	65	151	6	324	59	4	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3387		1719	3438	1538	1719	1543		1719	1810	1538
Flt Permitted	0.05	1.00		0.16	1.00	1.00	0.76	1.00		0.28	1.00	1.00
Satd. Flow (perm)	94	3387		297	3438	1538	1366	1543		499	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	1377	152	339	2012	72	168	7	360	66	4	53
RTOR Reduction (vph)	0	5	0	0	0	11	0	106	0	0	0	22
Lane Group Flow (vph)	23	1524	0	339	2012	61	168	261	0	66	4	31
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	123.8	123.8		110.9	110.9	110.9	14.5	14.5		14.5	14.5	20.9
Effective Green, g (s)	123.8	123.8		110.9	110.9	110.9	14.5	14.5		14.5	14.5	20.9
Actuated g/C Ratio	0.82	0.82		0.73	0.73	0.73	0.10	0.10		0.10	0.10	0.14
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	146	2771		218	2520	1127	131	148		48	173	279
v/s Ratio Prot	0.01	c0.45			0.59			c0.17			0.00	0.00
v/s Ratio Perm	0.12			c1.14		0.04	0.12			0.13		0.02
v/c Ratio	0.16	0.55		1.56	0.80	0.05	1.28	1.76		1.38	0.02	0.11
Uniform Delay, d1	15.1	4.5		20.2	13.0	5.6	68.4	68.4		68.4	62.0	57.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	0.8		271.1	2.7	0.1	172.9	370.3		258.5	0.1	0.3
Delay (s)	15.9	5.3		291.3	15.7	5.7	241.3	438.7		326.9	62.1	57.4
Level of Service	B	A		F	B	A	F	F		F	E	E
Approach Delay (s)		5.5			54.0			376.7			202.2	
Approach LOS		A			D			F			F	

Intersection Summary			
HCM Average Control Delay	79.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.55		
Actuated Cycle Length (s)	151.3	Sum of lost time (s)	19.5
Intersection Capacity Utilization	112.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	35	2	97	20	4	135	113	2125	18	4	1656	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.90			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1611			1736	1538	1719	3434		1719	3438	1538
Flt Permitted		0.90			0.46	1.00	0.09	1.00		0.06	1.00	1.00
Satd. Flow (perm)		1473			835	1538	171	3434		102	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	2	108	22	4	150	126	2361	20	4	1840	4
RTOR Reduction (vph)	0	16	0	0	0	43	0	1	0	0	0	1
Lane Group Flow (vph)	0	133	0	0	26	107	126	2380	0	4	1840	3
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		8.0			8.0	8.0	70.7	70.7		70.7	70.7	70.7
Effective Green, g (s)		8.0			8.0	8.0	70.7	70.7		70.7	70.7	70.7
Actuated g/C Ratio		0.09			0.09	0.09	0.79	0.79		0.79	0.79	0.79
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		131			74	137	134	2698		80	2701	1208
v/s Ratio Prot								0.69			0.54	
v/s Ratio Perm		c0.09			0.03	0.07	c0.74			0.04		0.00
v/c Ratio		1.01			0.35	0.78	0.94	0.88		0.05	0.68	0.00
Uniform Delay, d1		41.0			38.6	40.1	7.9	6.7		2.2	4.5	2.1
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		81.9			4.5	26.6	63.1	4.6		1.2	1.4	0.0
Delay (s)		122.9			43.1	66.7	71.1	11.3		3.3	5.9	2.1
Level of Service		F			D	E	E	B		A	A	A
Approach Delay (s)		122.9			63.2			14.3			5.8	
Approach LOS		F			E			B			A	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	232	52	427	313	47	45	85	2037	120	346	1387	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.87		1.00	0.93		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1568		1719	1676		1719	3409		1719	3328	
Flt Permitted	0.46	1.00		0.23	1.00		0.06	1.00		0.05	1.00	
Satd. Flow (perm)	837	1568		421	1676		106	3409		98	3328	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	258	58	474	348	52	50	94	2263	133	384	1541	416
RTOR Reduction (vph)	0	94	0	0	24	0	0	3	0	0	17	0
Lane Group Flow (vph)	258	438	0	348	78	0	94	2393	0	384	1940	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	44.0	25.0		30.2	17.2		73.0	68.0		89.0	78.0	
Effective Green, g (s)	44.0	25.0		30.2	17.2		73.0	68.0		89.0	78.0	
Actuated g/C Ratio	0.30	0.17		0.21	0.12		0.50	0.47		0.61	0.54	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	381	270		204	199		109	1599		228	1790	
v/s Ratio Prot	0.10	c0.28		c0.15	0.05		0.03	0.70		c0.17	0.58	
v/s Ratio Perm	0.11			0.20			0.40			c0.86		
v/c Ratio	0.68	1.62		1.71	0.39		0.86	1.50		1.68	1.08	
Uniform Delay, d1	41.6	60.0		54.1	59.1		33.8	38.5		50.7	33.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.4	297.2		337.7	2.0		47.9	226.7		326.2	48.0	
Delay (s)	47.0	357.2		391.8	61.1		81.7	265.2		376.9	81.5	
Level of Service	D	F		F	E		F	F		F	F	
Approach Delay (s)		255.9			316.8			258.3			130.0	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	212.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.63		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	145.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations											
Volume (vph)	541	0	340	0	2366	411	1007	1767	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95			
Frt	1.00		0.85		1.00	0.85	1.00	1.00			
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00			
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438			
Flt Permitted	0.95		1.00		1.00	1.00	0.05	1.00			
Satd. Flow (perm)	3335		2707		3438	1538	96	3438			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	601	0	378	0	2629	457	1119	1963	0	0	0
RTOR Reduction (vph)	0	0	71	0	0	87	0	0	0	0	0
Lane Group Flow (vph)	601	0	307	0	2629	370	1119	1963	0	0	0
Turn Type	custom		custom			Perm	pm+pt				
Protected Phases					2		1	6			
Permitted Phases	4		4			2	6				
Actuated Green, G (s)	15.0		15.0		68.7	68.7	123.9	123.9			
Effective Green, g (s)	15.0		15.0		68.7	68.7	123.9	123.9			
Actuated g/C Ratio	0.10		0.10		0.46	0.46	0.83	0.83			
Clearance Time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Vehicle Extension (s)	4.3		4.3		4.3	4.3	4.3	4.3			
Lane Grp Cap (vph)	334		271		1575	704	604	2840			
v/s Ratio Prot					0.76		c0.60	0.57			
v/s Ratio Perm	c0.18		0.11			0.24	c0.93				
v/c Ratio	1.80		1.13		1.67	0.53	1.85	0.69			
Uniform Delay, d1	67.5		67.5		40.6	29.0	46.6	5.3			
Progression Factor	1.00		1.00		1.00	1.00	1.00	1.00			
Incremental Delay, d2	371.5		95.2		304.0	2.8	390.1	1.4			
Delay (s)	439.0		162.7		344.6	31.8	436.6	6.7			
Level of Service	F		F		F	C	F	A			
Approach Delay (s)		332.3			298.3			162.8		0.0	
Approach LOS		F			F			F		A	

Intersection Summary			
HCM Average Control Delay	244.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.80		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	150.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

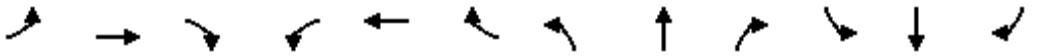
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	753	823	1359	1548	0	2021
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	837	914	1510	1720	0	2246
RTOR Reduction (vph)	0	251	0	462	0	0
Lane Group Flow (vph)	837	663	1510	1258	0	2246
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	30.4	30.4	86.5	86.5		107.5
Effective Green, g (s)	30.4	30.4	86.5	86.5		100.5
Actuated g/C Ratio	0.20	0.20	0.58	0.58		0.67
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	676	549	1983	887		2303
v/s Ratio Prot	c0.25	0.24	0.44			c0.65
v/s Ratio Perm				c0.82		
v/c Ratio	1.24	1.21	0.76	1.42		0.98
Uniform Delay, d1	59.8	59.8	24.0	31.8		23.6
Progression Factor	1.00	1.00	1.00	1.00		0.91
Incremental Delay, d2	119.6	109.6	2.8	194.9		2.2
Delay (s)	179.4	169.4	26.8	226.7		23.8
Level of Service	F	F	C	F		C
Approach Delay (s)	174.2		133.2			23.8
Approach LOS	F		F			C

Intersection Summary			
HCM Average Control Delay	109.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



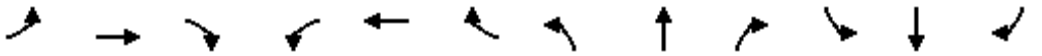
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	324	119	2035	147	30	3362
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3335	1538	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.05	1.00
Satd. Flow (perm)	3335	1538	3438	1538	90	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	360	132	2261	163	33	3736
RTOR Reduction (vph)	0	24	0	29	0	0
Lane Group Flow (vph)	360	108	2261	134	33	3736
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2 3 6			2 3 6
Permitted Phases	4	4		2 3 6	2 3 6	
Actuated Green, G (s)	14.0	14.0	123.4	123.4	123.4	123.4
Effective Green, g (s)	14.0	14.0	123.4	123.4	123.4	123.4
Actuated g/C Ratio	0.09	0.09	0.82	0.82	0.82	0.82
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	311	144	2828	1265	74	2828
v/s Ratio Prot	c0.11		0.66			c1.09
v/s Ratio Perm		0.07		0.09	0.36	
v/c Ratio	1.16	0.75	0.80	0.11	0.45	1.32
Uniform Delay, d1	68.0	66.3	6.9	2.6	3.7	13.3
Progression Factor	1.00	1.00	0.50	0.44	1.00	1.00
Incremental Delay, d2	100.8	21.5	0.7	0.0	6.6	147.1
Delay (s)	168.8	87.8	4.2	1.2	10.4	160.4
Level of Service	F	F	A	A	B	F
Approach Delay (s)	147.1		4.0			159.0
Approach LOS	F		A			F

Intersection Summary			
HCM Average Control Delay	101.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	113.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	742	1260	152	109	2612	233	239	42	107	336	42	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	824	1400	169	121	2902	259	266	47	119	373	47	601
RTOR Reduction (vph)	0	0	50	0	0	45	0	0	22	0	0	199
Lane Group Flow (vph)	824	1400	119	121	2902	214	266	47	97	373	47	402
Turn Type	Prot		pm+ov	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	20.9	77.2	91.4	18.6	74.9	74.9	14.2	10.4	29.0	20.0	16.2	16.2
Effective Green, g (s)	20.9	77.2	91.4	18.6	74.9	74.9	14.2	10.4	29.0	20.0	16.2	16.2
Actuated g/C Ratio	0.14	0.51	0.61	0.12	0.50	0.50	0.09	0.07	0.19	0.13	0.11	0.11
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	465	1769	937	213	1717	768	163	125	297	445	371	166
v/s Ratio Prot	c0.25	0.41	0.01	0.07	c0.84		c0.15	0.03	0.04	0.11	0.01	
v/s Ratio Perm			0.07			0.14			0.02			c0.26
v/c Ratio	1.77	0.79	0.13	0.57	1.69	0.28	1.63	0.38	0.33	0.84	0.13	2.42
Uniform Delay, d1	64.5	29.8	12.4	61.9	37.5	21.8	67.9	66.7	52.1	63.4	60.5	66.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	356.1	3.7	0.1	4.6	313.1	0.9	310.5	3.0	1.0	13.8	0.2	658.0
Delay (s)	420.6	33.5	12.5	66.5	350.7	22.8	378.4	69.7	53.1	77.2	60.7	724.9
Level of Service	F	C	B	E	F	C	F	E	D	E	E	F
Approach Delay (s)		165.3			314.3			255.2			457.7	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	281.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.8
Intersection Capacity Utilization	133.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

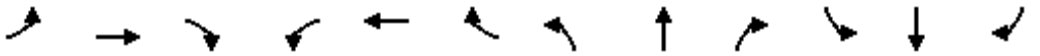


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	259	1184	260	238	2315	234	379	214	169	478	395	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	3335	1690		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.07	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	130	3438	1538	3335	1690		3335	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	288	1316	289	264	2572	260	421	238	188	531	439	289
RTOR Reduction (vph)	0	0	112	0	0	51	0	19	0	0	0	0
Lane Group Flow (vph)	288	1316	177	264	2572	209	421	407	0	531	439	289
Turn Type	Prot		Perm	pm+pt		Perm	Prot			Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6						Free
Actuated Green, G (s)	9.8	69.9	69.9	93.9	78.9	78.9	12.8	23.8		15.8	26.8	150.0
Effective Green, g (s)	9.8	69.9	69.9	93.9	78.9	78.9	12.8	23.8		15.8	26.8	150.0
Actuated g/C Ratio	0.07	0.47	0.47	0.63	0.53	0.53	0.09	0.16		0.11	0.18	1.00
Clearance Time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	218	1602	717	281	1808	809	285	268		351	323	1538
v/s Ratio Prot	c0.09	0.38		0.12	c0.75		0.13	c0.24		c0.16	c0.24	
v/s Ratio Perm			0.12	0.47		0.14						0.19
v/c Ratio	1.32	0.82	0.25	0.94	1.42	0.26	1.48	1.52		1.51	1.36	0.19
Uniform Delay, d1	70.1	34.7	24.2	45.7	35.5	19.5	68.6	63.1		67.1	61.6	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	172.9	4.9	0.8	37.9	193.4	0.8	232.8	251.1		245.0	180.5	0.3
Delay (s)	243.0	39.5	25.0	83.5	229.0	20.3	301.4	314.2		312.1	242.1	0.3
Level of Service	F	D	C	F	F	C	F	F		F	F	A
Approach Delay (s)		68.3			199.1			307.8			216.1	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM Average Control Delay	180.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	26.9
Intersection Capacity Utilization	124.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1209	622	261	2060	0	0	0	0	1187	0	727
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		4.0
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.95		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3263		1719	3438					3335		1538
Flt Permitted		1.00		0.05	1.00					0.95		1.00
Satd. Flow (perm)		3263		92	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1343	691	290	2289	0	0	0	0	1319	0	808
RTOR Reduction (vph)	0	43	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1991	0	290	2289	0	0	0	0	1319	0	808
Turn Type				pm+pt						Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		72.4		94.4	94.4					43.3		150.0
Effective Green, g (s)		72.4		94.4	94.4					43.3		150.0
Actuated g/C Ratio		0.48		0.63	0.63					0.29		1.00
Clearance Time (s)		6.6		6.6	6.6					5.7		
Vehicle Extension (s)		4.3		4.3	4.3					4.3		
Lane Grp Cap (vph)		1575		225	2164					963		1538
v/s Ratio Prot		0.61		0.13	c0.67					c0.40		
v/s Ratio Perm				c0.68								0.53
v/c Ratio		1.26		1.29	1.06					1.37		0.53
Uniform Delay, d1		38.8		53.3	27.8					53.4		0.0
Progression Factor		1.00		1.00	1.00					1.00		1.00
Incremental Delay, d2		124.0		159.2	36.8					173.0		1.3
Delay (s)		162.8		212.5	64.6					226.4		1.3
Level of Service		F		F	E					F		A
Approach Delay (s)		162.8			81.2			0.0			140.9	
Approach LOS		F			F			A			F	

Intersection Summary			
HCM Average Control Delay	124.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	192.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

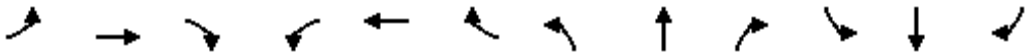


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	686	1710	0	0	1559	963	762	0	361	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.08	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	139	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	762	1900	0	0	1732	1070	847	0	401	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	383	0	0	14	0	0	0
Lane Group Flow (vph)	762	1900	0	0	1732	687	847	0	387	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	76.9	76.9			45.9	45.9	32.0		32.0			
Effective Green, g (s)	76.9	76.9			45.9	45.9	32.0		32.0			
Actuated g/C Ratio	0.64	0.64			0.38	0.38	0.27		0.27			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	417	2203			1315	588	458		410			
v/s Ratio Prot	c0.38	0.55			0.50		c0.49					
v/s Ratio Perm	c0.79					0.45			0.25			
v/c Ratio	1.83	0.86			1.32	1.17	1.85		0.94			
Uniform Delay, d1	39.2	17.3			37.1	37.1	44.0		43.1			
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			
Incremental Delay, d2	381.6	4.8			148.2	93.2	390.6		30.8			
Delay (s)	420.8	22.1			185.2	130.2	434.6		73.9			
Level of Service	F	C			F	F	F		E			
Approach Delay (s)		136.2			164.2			318.7			0.0	
Approach LOS		F			F			F			A	

Intersection Summary			
HCM Average Control Delay	181.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	192.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

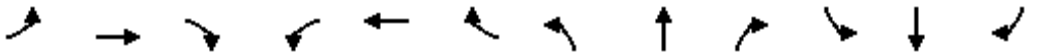
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	1767	64	15	2066	78	296	28	15	134	18	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3420		1719	3419		1719	1713		1719	1566	
Flt Permitted	0.05	1.00		0.05	1.00		0.21	1.00		0.73	1.00	
Satd. Flow (perm)	83	3420		89	3419		383	1713		1313	1566	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	267	1963	71	17	2296	87	329	31	17	149	20	178
RTOR Reduction (vph)	0	2	0	0	2	0	0	13	0	0	138	0
Lane Group Flow (vph)	267	2032	0	17	2381	0	329	35	0	149	60	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	101.5	101.5		81.5	81.5		37.6	37.6		13.6	13.6	
Effective Green, g (s)	101.5	101.5		81.5	81.5		37.6	37.6		13.6	13.6	
Actuated g/C Ratio	0.68	0.68		0.54	0.54		0.25	0.25		0.09	0.09	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	216	2314		48	1858		263	429		119	142	
v/s Ratio Prot	c0.12	0.59			c0.70		c0.16	0.02			0.04	
v/s Ratio Perm	0.71			0.19			c0.16			0.11		
v/c Ratio	1.24	0.88		0.35	1.28		1.25	0.08		1.25	0.42	
Uniform Delay, d1	54.7	19.3		19.4	34.2		51.6	43.0		68.2	64.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	139.5	5.1		19.3	131.0		140.4	0.1		165.1	3.2	
Delay (s)	194.2	24.5		38.7	165.2		192.0	43.1		233.3	67.6	
Level of Service	F	C		D	F		F	D		F	E	
Approach Delay (s)		44.2			164.3			173.0			138.8	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM Average Control Delay	112.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	118.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



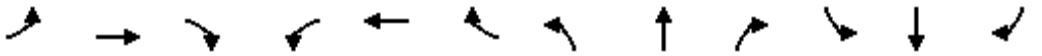
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	1812	89	86	1904	2	240	2	190	7	2	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.99	
Satd. Flow (prot)	1719	3414		1719	3438			1656			1632	
Flt Permitted	0.06	1.00		0.06	1.00			0.81			0.90	
Satd. Flow (perm)	107	3414		106	3438			1383			1494	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	2013	99	96	2116	2	267	2	211	8	2	17
RTOR Reduction (vph)	0	4	0	0	0	0	0	15	0	0	13	0
Lane Group Flow (vph)	17	2108	0	96	2118	0	0	465	0	0	14	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	67.7	67.7		68.0	68.0			21.0			21.0	
Effective Green, g (s)	67.7	67.7		68.0	68.0			21.0			21.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.21			0.21	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	72	2311		72	2338			290			314	
v/s Ratio Prot		0.62			0.62							
v/s Ratio Perm	0.16			c0.90				c0.34			0.01	
v/c Ratio	0.24	0.91		1.33	0.91			1.60			0.05	
Uniform Delay, d1	6.2	13.6		16.0	13.3			39.5			31.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	7.6	6.9		218.6	6.4			287.1			0.1	
Delay (s)	13.8	20.5		234.6	19.8			326.6			31.6	
Level of Service	B	C		F	B			F			C	
Approach Delay (s)		20.5			29.1			326.6			31.6	
Approach LOS		C			C			F			C	

Intersection Summary			
HCM Average Control Delay	54.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	112.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



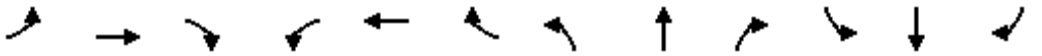
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	2216	195	32	3306	61	530	10	8	56	2	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.93			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1719	3396		1719	3429		1719	1687			1651	
Flt Permitted	0.04	1.00		0.05	1.00		0.66	1.00			0.85	
Satd. Flow (perm)	79	3396		84	3429		1188	1687			1432	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	2462	217	36	3673	68	589	11	9	62	2	59
RTOR Reduction (vph)	0	4	0	0	1	0	0	4	0	0	22	0
Lane Group Flow (vph)	36	2675	0	36	3740	0	589	16	0	0	101	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	97.0	97.0		85.9	85.9		43.0	43.0			43.0	
Effective Green, g (s)	97.0	97.0		85.9	85.9		43.0	43.0			43.0	
Actuated g/C Ratio	0.64	0.64		0.57	0.57		0.28	0.28			0.28	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	103	2177		48	1947		338	479			407	
v/s Ratio Prot	0.01	c0.79			c1.09			0.01				
v/s Ratio Perm	0.22			0.43			c0.50				0.07	
v/c Ratio	0.35	1.23		0.75	1.92		1.74	0.03			0.25	
Uniform Delay, d1	36.2	27.2		24.6	32.7		54.2	39.1			41.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	3.2	107.1		69.5	416.4		346.2	0.0			0.5	
Delay (s)	39.4	134.3		94.1	449.1		400.4	39.2			42.2	
Level of Service	D	F		F	F		F	D			D	
Approach Delay (s)		133.0			445.7			388.5			42.2	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM Average Control Delay	316.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.87		
Actuated Cycle Length (s)	151.3	Sum of lost time (s)	17.6
Intersection Capacity Utilization	138.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	2702	61	90	1748	105	363	292	179	77	311	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3427		1719	3409		1719	1810	1538	1719	1692	
Flt Permitted	0.05	1.00		0.05	1.00		0.13	1.00	1.00	0.56	1.00	
Satd. Flow (perm)	85	3427		85	3409		240	1810	1538	1021	1692	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	160	3002	68	100	1942	117	403	324	199	86	346	266
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	1	0	12	0
Lane Group Flow (vph)	160	3069	0	100	2056	0	403	324	198	86	600	0
Turn Type	Perm			Perm			pm+pt		Perm	Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	84.7	84.7		84.7	84.7		44.0	44.0	44.0	24.8	24.8	
Effective Green, g (s)	84.7	84.7		84.7	84.7		44.0	44.0	44.0	24.8	24.8	
Actuated g/C Ratio	0.61	0.61		0.61	0.61		0.31	0.31	0.31	0.18	0.18	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	51	2073		51	2062		221	569	483	181	300	
v/s Ratio Prot		0.90			0.60		c0.18	0.18			0.35	
v/s Ratio Perm	c1.87			1.17			c0.39		0.13	0.08		
v/c Ratio	3.14	1.48		1.96	1.00		1.82	0.57	0.41	0.48	2.00	
Uniform Delay, d1	27.6	27.6		27.6	27.5		41.1	40.1	37.8	51.8	57.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1011.0	218.8		495.2	19.1		387.8	1.8	0.9	3.1	462.4	
Delay (s)	1038.7	246.5		522.9	46.7		428.9	41.8	38.7	54.8	520.0	
Level of Service	F	F		F	D		F	D	D	D	F	
Approach Delay (s)		285.7			68.7			209.6			462.7	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM Average Control Delay	226.5	HCM Level of Service	F
HCM Volume to Capacity ratio	2.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	171.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

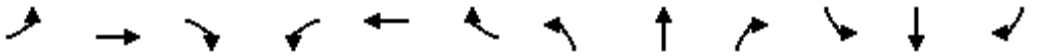


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	2394	167	528	1677	26	264	28	652	443	552	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3403		1719	3430			1731	1538	1719	1753	
Flt Permitted		0.83		0.08	1.00			0.18	1.00	0.29	1.00	
Satd. Flow (perm)		2830		145	3430			328	1538	528	1753	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	2660	186	587	1863	29	293	31	724	492	613	160
RTOR Reduction (vph)	0	6	0	0	1	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	2872	0	587	1891	0	0	324	724	492	762	0
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		43.7		57.7	57.7			21.0	28.7	21.0	21.0	
Effective Green, g (s)		43.7		57.7	57.7			21.0	28.7	21.0	21.0	
Actuated g/C Ratio		0.49		0.64	0.64			0.23	0.32	0.23	0.23	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1374		228	2199			77	490	123	409	
v/s Ratio Prot				c0.22	0.55				0.13		0.43	
v/s Ratio Perm		1.01		c1.44				c0.99	0.34	0.93		
v/c Ratio		2.09		2.57	0.86			4.21	1.48	4.00	1.86	
Uniform Delay, d1		23.1		27.7	12.9			34.5	30.6	34.5	34.5	
Progression Factor		1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		493.2		721.2	4.7			1473.5	225.7	1369.2	398.0	
Delay (s)		516.4		748.9	17.6			1508.0	256.4	1403.7	432.5	
Level of Service		F		F	B			F	F	F	F	
Approach Delay (s)		516.4			190.8			643.3			810.2	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	476.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.91		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	192.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

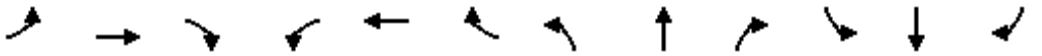
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	3418	156	53	2464	16	209	2	58	21	2	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3416		1719	3435			1691			1600	
Flt Permitted	0.04	1.00		0.04	1.00			0.61			0.95	
Satd. Flow (perm)	76	3416		76	3435			1064			1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	3798	173	59	2738	18	232	2	64	23	2	98
RTOR Reduction (vph)	0	2	0	0	0	0	0	1	0	0	5	0
Lane Group Flow (vph)	107	3969	0	59	2756	0	0	297	0	0	118	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	95.8	95.8		95.8	95.8			22.6			22.6	
Effective Green, g (s)	95.8	95.8		95.8	95.8			22.6			22.6	
Actuated g/C Ratio	0.74	0.74		0.74	0.74			0.17			0.17	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	56	2517		56	2531			185			266	
v/s Ratio Prot		1.16			0.80							
v/s Ratio Perm	c1.42			0.78				c0.28			0.08	
v/c Ratio	1.91	1.58		1.05	1.09			1.61			0.44	
Uniform Delay, d1	17.1	17.1		17.1	17.1			53.7			48.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	468.8	261.5		136.1	47.3			296.6			1.9	
Delay (s)	485.9	278.6		153.2	64.4			350.3			49.9	
Level of Service	F	F		F	E			F			D	
Approach Delay (s)		284.0			66.3			350.3			49.9	
Approach LOS		F			E			F			D	

Intersection Summary			
HCM Average Control Delay	199.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.85		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	131.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	223	1837	517	142	1214	105	264	393	77	288	586	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3397		1719	1810	1538	1719	1810	1538
Flt Permitted	0.06	1.00	1.00	0.07	1.00		0.11	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	112	3438	1538	123	3397		196	1810	1538	196	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	248	2041	574	158	1349	117	293	437	86	320	651	186
RTOR Reduction (vph)	0	0	20	0	4	0	0	0	9	0	0	15
Lane Group Flow (vph)	248	2041	554	158	1462	0	293	437	77	320	651	171
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	79.4	64.7	81.7	67.4	58.7		54.0	37.0	45.7	54.0	37.0	51.7
Effective Green, g (s)	79.4	64.7	81.7	67.4	58.7		54.0	37.0	45.7	54.0	37.0	51.7
Actuated g/C Ratio	0.53	0.43	0.54	0.45	0.39		0.36	0.25	0.30	0.36	0.25	0.34
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	217	1483	838	148	1329		243	446	469	243	446	530
v/s Ratio Prot	c0.11	c0.59	0.08	0.06	0.43		0.14	0.24	0.01	c0.15	c0.36	0.03
v/s Ratio Perm	0.49		0.29	0.42			0.30		0.04	0.33		0.08
v/c Ratio	1.14	1.38	0.66	1.07	1.10		1.21	0.98	0.16	1.32	1.46	0.32
Uniform Delay, d1	49.9	42.6	24.3	41.6	45.6		45.3	56.1	38.2	45.2	56.5	36.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	104.9	173.6	2.3	93.1	56.8		124.8	37.1	0.3	168.6	218.9	0.6
Delay (s)	154.8	216.3	26.6	134.8	102.4		170.1	93.2	38.4	213.8	275.4	36.8
Level of Service	F	F	C	F	F		F	F	D	F	F	D
Approach Delay (s)		172.9			105.6			115.1			220.0	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	157.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	122.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	162	90	137	98	112	210	1553	266	115	1940	316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.69	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1243	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	162	180	100	152	109	124	233	1726	296	128	2156	351
RTOR Reduction (vph)	0	76	0	0	0	114	0	0	127	0	0	111
Lane Group Flow (vph)	162	204	0	152	109	10	233	1726	169	128	2156	240
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	14.0	8.0		6.0	8.0	8.0	15.6	57.2	57.2	7.8	49.4	49.4
Effective Green, g (s)	14.0	8.0		6.0	8.0	8.0	15.6	57.2	57.2	7.8	49.4	49.4
Actuated g/C Ratio	0.14	0.08		0.06	0.08	0.08	0.16	0.57	0.57	0.08	0.49	0.49
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	203	260		200	145	123	268	2826	880	260	2440	760
v/s Ratio Prot	c0.05	0.06		0.05	0.06		c0.14	0.35		0.04	c0.44	
v/s Ratio Perm	c0.06					0.01			0.11			0.16
v/c Ratio	0.80	0.78		0.76	0.75	0.08	0.87	0.61	0.19	0.49	0.88	0.32
Uniform Delay, d1	41.0	45.1		46.3	45.0	42.6	41.2	14.1	10.3	44.2	22.7	15.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.06	1.28	3.13	1.00	1.00	1.00
Incremental Delay, d2	20.8	16.2		16.9	22.6	0.6	13.1	0.4	0.2	2.3	5.1	1.1
Delay (s)	61.8	61.3		63.2	67.6	43.2	56.7	18.4	32.4	46.5	27.8	16.3
Level of Service	E	E		E	E	D	E	B	C	D	C	B
Approach Delay (s)		61.5			58.0			24.2			27.2	
Approach LOS		E			E			C			C	

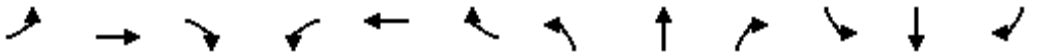
Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	520	205	1668	499	190	1509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4769		1719	4940
Flt Permitted	0.95	1.00	1.00		0.14	1.00
Satd. Flow (perm)	1719	1538	4769		261	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	578	228	1853	554	211	1677
RTOR Reduction (vph)	0	9	108	0	0	0
Lane Group Flow (vph)	578	219	2299	0	211	1677
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	10.0	10.0	27.7		27.7	27.7
Effective Green, g (s)	10.0	10.0	27.7		27.7	27.7
Actuated g/C Ratio	0.20	0.20	0.55		0.55	0.55
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	344	308	2642		145	2737
v/s Ratio Prot	c0.34		0.48			0.34
v/s Ratio Perm		0.14			c0.81	
v/c Ratio	1.68	0.71	0.87		1.46	0.61
Uniform Delay, d1	20.0	18.7	9.6		11.2	7.5
Progression Factor	1.00	1.00	1.02		1.00	1.00
Incremental Delay, d2	318.5	9.1	2.0		238.9	1.0
Delay (s)	338.5	27.8	11.8		250.0	8.6
Level of Service	F	C	B		F	A
Approach Delay (s)	250.6		11.8			35.5
Approach LOS	F		B			D

Intersection Summary			
HCM Average Control Delay	58.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

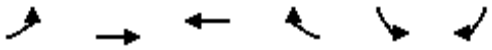
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	126	2355	157	33	1711	14	118	71	92	84	28	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3147		1719	1810	2707
Flt Permitted	0.06	1.00	1.00	0.04	1.00	1.00	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	100	3438	1538	70	3438	1538	3335	3147		1810	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	140	2617	174	37	1901	16	131	79	102	93	31	76
RTOR Reduction (vph)	0	0	33	0	0	4	0	67	0	0	0	38
Lane Group Flow (vph)	140	2617	141	37	1901	12	131	114	0	93	31	38
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	118.3	109.1	109.1	107.4	102.7	102.7	8.0	7.0		9.0	4.0	15.6
Effective Green, g (s)	118.3	109.1	109.1	107.4	102.7	102.7	8.0	7.0		9.0	4.0	15.6
Actuated g/C Ratio	0.80	0.73	0.73	0.72	0.69	0.69	0.05	0.05		0.06	0.03	0.10
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	206	2521	1128	103	2373	1062	179	148		106	49	284
v/s Ratio Prot	c0.05	c0.76		0.01	0.55		c0.04	c0.04		0.03	0.02	0.01
v/s Ratio Perm	0.49		0.09	0.25		0.01				0.02		0.00
v/c Ratio	0.68	1.04	0.13	0.36	0.80	0.01	0.73	0.77		0.88	0.63	0.14
Uniform Delay, d1	35.4	19.9	5.8	39.3	16.0	7.2	69.3	70.1		69.4	71.7	60.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.8	28.7	0.1	3.4	2.3	0.0	15.7	27.3		52.1	39.1	0.3
Delay (s)	45.2	48.6	5.9	42.7	18.3	7.2	85.0	97.4		121.5	110.8	60.8
Level of Service	D	D	A	D	B	A	F	F		F	F	E
Approach Delay (s)		45.9			18.7			92.2			96.8	
Approach LOS		D			B			F			F	

Intersection Summary			
HCM Average Control Delay	40.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	148.8	Sum of lost time (s)	22.5
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	1117	877	0	1264	1009	0	0	0	395	643	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	267	1241	974	0	1404	1121	0	0	0	439	714	394
RTOR Reduction (vph)	0	0	12	0	0	11	0	0	0	0	0	179
Lane Group Flow (vph)	267	1241	962	0	1404	1110	0	0	0	439	714	215
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	6.0	33.2	33.2		21.4	37.1				15.7	15.7	15.7
Effective Green, g (s)	6.0	33.2	33.2		21.4	37.1				15.7	15.7	15.7
Actuated g/C Ratio	0.10	0.55	0.55		0.36	0.62				0.26	0.26	0.26
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	334	1902	851		1226	951				450	474	402
v/s Ratio Prot	0.08	0.36			0.41	0.31					c0.39	
v/s Ratio Perm			c0.63			0.42				0.26		0.14
v/c Ratio	0.80	0.65	1.13		1.15	1.17				0.98	1.51	0.54
Uniform Delay, d1	26.4	9.4	13.4		19.3	11.4				22.0	22.1	19.0
Progression Factor	1.00	1.00	1.00		1.27	0.73				1.00	1.00	1.00
Incremental Delay, d2	13.6	1.8	73.3		66.4	76.2				36.0	238.6	2.0
Delay (s)	40.0	11.1	86.7		90.9	84.5				57.9	260.8	21.0
Level of Service	D	B	F		F	F				E	F	C
Approach Delay (s)		43.9			88.1			0.0			142.1	
Approach LOS		D			F			A			F	

Intersection Summary			
HCM Average Control Delay	84.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	137.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

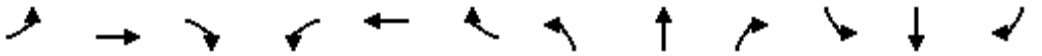


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1512	1816	0	681	457
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1680	2018	0	757	508
RTOR Reduction (vph)	0	0	0	0	0	4
Lane Group Flow (vph)	0	1680	2018	0	757	504
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		29.4	29.4		19.7	19.7
Effective Green, g (s)		29.4	29.4		19.7	19.7
Actuated g/C Ratio		0.49	0.49		0.33	0.33
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1685	1685		564	889
v/s Ratio Prot		0.49	c0.59		c0.44	
v/s Ratio Perm						0.19
v/c Ratio		1.00	1.20		1.34	0.57
Uniform Delay, d1		15.3	15.3		20.1	16.6
Progression Factor		1.16	0.77		1.00	1.00
Incremental Delay, d2		17.1	89.5		165.6	1.1
Delay (s)		34.8	101.3		185.8	17.7
Level of Service		C	F		F	B
Approach Delay (s)		34.8	101.3		118.3	
Approach LOS		C	F		F	

Intersection Summary			
HCM Average Control Delay	83.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	142.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

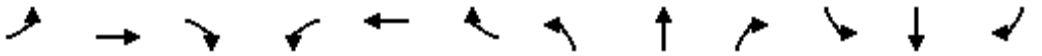
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	812	0	0	815	1791	983
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	902	0	0	906	1990	1092
RTOR Reduction (vph)	0	0	0	0	0	5
Lane Group Flow (vph)	902	0	0	906	1990	1087
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	16.2			16.2	33.0	33.0
Effective Green, g (s)	16.2			16.2	33.0	33.0
Actuated g/C Ratio	0.27			0.27	0.55	0.55
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	928			928	1834	846
v/s Ratio Prot	0.26			c0.26	0.60	
v/s Ratio Perm						c0.71
v/c Ratio	0.97			0.98	1.09	1.28
Uniform Delay, d1	21.7			21.7	13.5	13.5
Progression Factor	0.75			1.00	1.00	1.00
Incremental Delay, d2	4.5			24.3	48.2	137.2
Delay (s)	20.7			46.1	61.7	150.7
Level of Service	C			D	E	F
Approach Delay (s)	20.7			46.1	93.2	
Approach LOS	C			D	F	

Intersection Summary			
HCM Average Control Delay	71.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	181.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1169	549	368	1580	26	321	23	362	36	16	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.95		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1719	3273		1719	3430			1729	1538		1671	
Flt Permitted	0.10	1.00		0.06	1.00			0.66	1.00		0.40	
Satd. Flow (perm)	174	3273		103	3430			1200	1538		675	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	86	1299	610	409	1756	29	357	26	402	40	18	44
RTOR Reduction (vph)	0	39	0	0	1	0	0	0	221	0	20	0
Lane Group Flow (vph)	86	1870	0	409	1784	0	0	383	181	0	82	0
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	63.3	63.3		92.3	92.3			34.7	34.7		34.7	
Effective Green, g (s)	63.3	63.3		92.3	92.3			34.7	34.7		34.7	
Actuated g/C Ratio	0.45	0.45		0.66	0.66			0.25	0.25		0.25	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	79	1480		325	2261			297	381		167	
v/s Ratio Prot		0.57		c0.20	0.52							
v/s Ratio Perm	0.49			c0.63				c0.32	0.12		0.12	
v/c Ratio	1.09	1.26		1.26	0.79			1.29	0.47		0.49	
Uniform Delay, d1	38.4	38.4		49.2	16.9			52.6	44.9		45.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	127.5	124.0		138.9	2.9			153.3	1.5		3.6	
Delay (s)	165.8	162.4		188.0	19.8			205.9	46.4		48.7	
Level of Service	F	F		F	B			F	D		D	
Approach Delay (s)		162.5			51.2			124.2			48.7	
Approach LOS		F			D			F			D	

Intersection Summary			
HCM Average Control Delay	106.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	112.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

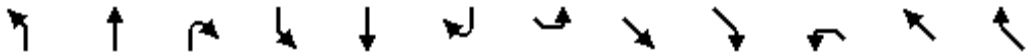


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	0	6	48	0	139	9	947	23	111	1392	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.90		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1607		1719	3426		1719	3430	
Flt Permitted		0.50	1.00		0.91		0.12	1.00		0.24	1.00	
Satd. Flow (perm)		906	1538		1475		213	3426		435	3430	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	19	0	7	53	0	154	10	1052	26	123	1547	26
RTOR Reduction (vph)	0	0	6	0	101	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	19	1	0	106	0	10	1076	0	123	1572	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		11.4	11.4		11.4		51.6	51.6		51.6	51.6	
Effective Green, g (s)		11.4	11.4		11.4		51.6	51.6		51.6	51.6	
Actuated g/C Ratio		0.15	0.15		0.15		0.69	0.69		0.69	0.69	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		4.3	4.3		4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)		138	234		224		147	2357		299	2360	
v/s Ratio Prot								0.31			c0.46	
v/s Ratio Perm		0.02	0.00		c0.07		0.05			0.28		
v/c Ratio		0.14	0.00		0.47		0.07	0.46		0.41	0.67	
Uniform Delay, d1		27.5	27.0		29.1		3.8	5.3		5.1	6.7	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.99	0.98	
Incremental Delay, d2		0.7	0.0		2.5		0.9	0.6		2.7	1.0	
Delay (s)		28.3	27.0		31.5		4.7	6.0		7.7	7.6	
Level of Service		C	C		C		A	A		A	A	
Approach Delay (s)		27.9			31.5			6.0			7.6	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

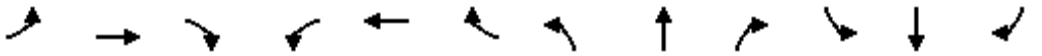
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1026	105	545	931	0	578	0	589	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0	6.0			
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00			
Frt		0.99		1.00	1.00			1.00	0.85			
Flt Protected		1.00		0.95	1.00			0.95	1.00			
Satd. Flow (prot)		3390		1719	3438			1719	1538			
Flt Permitted		1.00		0.08	1.00			0.95	1.00			
Satd. Flow (perm)		3390		137	3438			1719	1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1140	117	606	1034	0	642	0	654	0	0	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	79	0	0	0
Lane Group Flow (vph)	0	1252	0	606	1034	0	0	642	575	0	0	0
Turn Type				pm+pt			Perm		Perm			
Protected Phases				1	6			4				
Permitted Phases		2		6			4		4			
Actuated Green, G (s)		47.0		91.0	91.0			47.0	47.0			
Effective Green, g (s)		47.0		91.0	91.0			47.0	47.0			
Actuated g/C Ratio		0.31		0.61	0.61			0.31	0.31			
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0			
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3			
Lane Grp Cap (vph)		1062		484	2086			539	482			
v/s Ratio Prot				c0.32	0.30							
v/s Ratio Perm		0.37		c0.44				0.37	c0.37			
v/c Ratio		1.18		1.25	0.50			1.19	1.19			
Uniform Delay, d1		51.5		48.0	16.6			51.5	51.5			
Progression Factor		0.91		1.24	0.21			1.00	1.00			
Incremental Delay, d2		89.5		122.6	0.5			103.3	105.8			
Delay (s)		136.3		182.1	4.0			154.8	157.3			
Level of Service		F		F	A			F	F			
Approach Delay (s)		136.3			69.8			156.1			0.0	
Approach LOS		F			E			F			A	

Intersection Summary			
HCM Average Control Delay	116.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



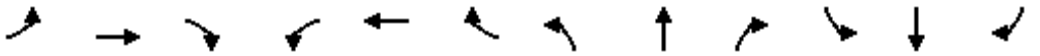
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	376	1228	0	0	1417	1062	0	0	0	59	0	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1719	3438			3438	1538				1719		1538
Flt Permitted	0.05	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	94	3438			3438	1538				1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	418	1364	0	0	1574	1180	0	0	0	66	0	343
RTOR Reduction (vph)	0	0	0	0	0	248	0	0	0	0	0	87
Lane Group Flow (vph)	418	1364	0	0	1574	932	0	0	0	66	0	256
Turn Type	pm+pt					custom				custom		custom
Protected Phases	5	2										8
Permitted Phases	2				6	6				8		
Actuated Green, G (s)	115.0	115.0			81.0	81.0				23.0		23.0
Effective Green, g (s)	115.0	115.0			81.0	81.0				23.0		23.0
Actuated g/C Ratio	0.77	0.77			0.54	0.54				0.15		0.15
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Vehicle Extension (s)	4.3	4.3			4.3	4.3				4.3		4.3
Lane Grp Cap (vph)	375	2636			1857	831				264		236
v/s Ratio Prot	c0.21	0.40										c0.17
v/s Ratio Perm	c0.64				0.46	0.61				0.04		
v/c Ratio	1.11	0.52			0.85	1.12				0.25		1.08
Uniform Delay, d1	51.8	6.8			29.3	34.5				55.9		63.5
Progression Factor	0.74	1.94			1.00	1.00				1.00		1.00
Incremental Delay, d2	55.5	0.1			5.0	70.3				0.8		82.7
Delay (s)	93.8	13.2			34.3	104.8				56.7		146.2
Level of Service	F	B			C	F				E		F
Approach Delay (s)		32.1			64.5			0.0			131.8	
Approach LOS		C			E			A			F	

Intersection Summary			
HCM Average Control Delay	58.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



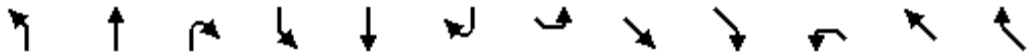
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	20	590	954	80	88	280	1973	304	21	1530	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1547		1633	1649	1538	1719	3438	1538	1719	3425	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.06	1.00	1.00	0.07	1.00	
Satd. Flow (perm)	1719	1547		1633	1649	1538	117	3438	1538	129	3425	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	22	656	1060	89	98	311	2192	338	23	1700	44
RTOR Reduction (vph)	0	118	0	0	0	15	0	0	78	0	1	0
Lane Group Flow (vph)	44	560	0	572	577	83	311	2192	261	23	1743	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	25.0	25.0		32.0	32.0	32.0	75.0	75.0	75.0	56.0	56.0	
Effective Green, g (s)	25.0	25.0		32.0	32.0	32.0	75.0	75.0	75.0	56.0	56.0	
Actuated g/C Ratio	0.17	0.17		0.21	0.21	0.21	0.50	0.50	0.50	0.37	0.37	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	287	258		348	352	328	197	1719	769	48	1279	
v/s Ratio Prot	0.03	c0.36		c0.35	0.35		0.14	c0.64			0.51	
v/s Ratio Perm						0.05	c0.65		0.17	0.18		
v/c Ratio	0.15	2.17		1.64	1.64	0.25	1.58	1.28	0.34	0.48	1.36	
Uniform Delay, d1	53.4	62.5		59.0	59.0	49.1	48.0	37.5	22.6	35.9	47.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	538.8		302.3	300.2	0.8	283.3	128.5	0.5	14.4	168.3	
Delay (s)	54.0	601.3		361.3	359.2	49.9	331.4	166.0	23.1	50.3	215.3	
Level of Service	D	F		F	F	D	F	F	C	D	F	
Approach Delay (s)		567.9			335.9			167.1			213.1	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	255.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.67		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	161.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



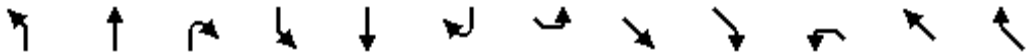
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	687	0	757	536	1800	0	0	2281	793
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	763	0	841	596	2000	0	0	2534	881
RTOR Reduction (vph)	0	0	0	0	0	34	0	0	0	0	0	175
Lane Group Flow (vph)	0	0	0	381	382	807	596	2000	0	0	2534	706
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				31.0	31.0	31.0	19.0	107.0			82.0	82.0
Effective Green, g (s)				31.0	31.0	31.0	19.0	107.0			82.0	82.0
Actuated g/C Ratio				0.21	0.21	0.21	0.13	0.71			0.55	0.55
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				337	337	559	422	2452			1879	841
v/s Ratio Prot							c0.18	0.58			c0.74	
v/s Ratio Perm				0.23	0.23	c0.30						0.46
v/c Ratio				1.13	1.13	1.44	1.41	0.82			1.35	0.84
Uniform Delay, d1				59.5	59.5	59.5	65.5	14.7			34.0	28.5
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				89.2	90.3	209.5	199.2	2.5			160.5	8.3
Delay (s)				148.7	149.8	269.0	264.7	17.2			194.5	36.8
Level of Service				F	F	F	F	B			F	D
Approach Delay (s)		0.0			212.1			74.0			153.8	
Approach LOS		A			F			E			F	

Intersection Summary			
HCM Average Control Delay	138.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	178.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1627	1068	1825	1143	0	709	0	533	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.07	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	123	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1808	1187	2028	1270	0	788	0	592	0	0	0
RTOR Reduction (vph)	0	0	153	0	0	0	0	0	212	0	0	0
Lane Group Flow (vph)	0	1808	1034	2028	1270	0	394	394	380	0	0	0
Turn Type			Perm	pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		52.6	52.6	121.2	120.6		16.9	16.9	16.9			
Effective Green, g (s)		52.6	52.6	121.2	120.6		16.9	16.9	16.9			
Actuated g/C Ratio		0.35	0.35	0.81	0.80		0.11	0.11	0.11			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1732	539	761	2764		184	184	305			
v/s Ratio Prot		0.37		c1.10	0.37							
v/s Ratio Perm			0.67	c1.05			c0.24	0.24	0.14			
v/c Ratio		1.04	1.92	2.66	0.46		2.14	2.14	1.25			
Uniform Delay, d1		48.7	48.7	39.4	4.6		66.5	66.5	66.5			
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Incremental Delay, d2		34.1	419.9	753.0	0.2		531.3	531.3	135.0			
Delay (s)		82.8	468.6	792.4	4.8		597.9	597.9	201.6			
Level of Service		F	F	F	A		F	F	F			
Approach Delay (s)		235.7			489.1			427.9			0.0	
Approach LOS		F			F			F			A	

Intersection Summary			
HCM Average Control Delay	379.2	HCM Level of Service	F
HCM Volume to Capacity ratio	2.56		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	178.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	167	1677	2	10	1061	605	1006	2	519	6	2	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1719	4939			3437	1538	1719	1539			1742	1538
Flt Permitted	0.08	1.00			0.86	1.00	0.75	1.00			0.79	1.00
Satd. Flow (perm)	153	4939			2968	1538	1360	1539			1421	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	186	1863	2	11	1179	672	1118	2	577	7	2	13
RTOR Reduction (vph)	0	0	0	0	0	354	0	58	0	0	0	2
Lane Group Flow (vph)	186	1865	0	0	1190	318	1118	521	0	0	9	11
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	51.6	51.6			41.6	41.6	55.9	55.9			55.9	55.9
Effective Green, g (s)	51.6	51.6			41.6	41.6	55.9	55.9			55.9	55.9
Actuated g/C Ratio	0.43	0.43			0.35	0.35	0.47	0.47			0.47	0.47
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	121	2124			1029	533	634	717			662	716
v/s Ratio Prot	c0.05	0.38						0.34				
v/s Ratio Perm	c0.61				0.40	0.21	c0.82				0.01	0.01
v/c Ratio	1.54	0.88			1.16	0.60	1.76	0.73			0.01	0.02
Uniform Delay, d1	33.9	31.3			39.2	32.3	32.0	25.9			17.2	17.2
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	278.7	4.8			81.6	2.6	350.0	4.4			0.0	0.0
Delay (s)	312.5	36.1			120.8	34.9	382.0	30.3			17.2	17.3
Level of Service	F	D			F	C	F	C			B	B
Approach Delay (s)		61.2			89.8			262.0			17.3	
Approach LOS		E			F			F			B	

Intersection Summary			
HCM Average Control Delay	131.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	140.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	69	160	50	2770	2206	71
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	77	178	56	3078	2451	79
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1009	
pX, platoon unblocked	0.58	0.58	0.58			
vC, conflicting volume	4141	1265	2530			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4977	0	2185			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	71	58			
cM capacity (veh/h)	0	620	132			

Direction, Lane #	WB 1	SE 1	SE 2	SE 3	NW 1	NW 2
Volume Total	254	56	1539	1539	1634	896
Volume Left	77	56	0	0	0	0
Volume Right	178	0	0	0	0	79
cSH	0	132	1700	1700	1700	1700
Volume to Capacity	634.92	0.42	0.91	0.91	0.96	0.53
Queue Length 95th (ft)	Err	46	0	0	0	0
Control Delay (s)	Err	50.6	0.0	0.0	0.0	0.0
Lane LOS	F	F				
Approach Delay (s)	Err	0.9			0.0	
Approach LOS	F					

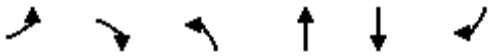
Intersection Summary			
Average Delay	430.4		
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	2290	549	113	1784	493	348
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	2544	610	126	1982	548	387
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				861		
pX, platoon unblocked					0.55	
vC, conflicting volume			3154		4092	1577
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			3154		4988	1577
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			0		0	0
cM capacity (veh/h)			92		0	95

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	1696	1458	786	1321	934
Volume Left	0	0	126	0	548
Volume Right	0	610	0	0	387
cSH	1700	1700	92	1700	0
Volume to Capacity	1.00	0.86	1.36	0.78	Err
Queue Length 95th (ft)	0	0	231	0	Err
Control Delay (s)	0.0	0.0	298.8	0.0	Err
Lane LOS			F		F
Approach Delay (s)	0.0		111.5		Err
Approach LOS					F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	189.5%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	30	8	2	1101	1518	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	33	9	2	1223	1687	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1175	377	
pX, platoon unblocked	0.89	0.83	0.83			
vC, conflicting volume	2304	844	1689			
vC1, stage 1 conf vol	1688					
vC2, stage 2 conf vol	616					
vCu, unblocked vol	1627	404	1421			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	77	98	99			
cM capacity (veh/h)	148	488	382			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	42	2	612	612	1124	564
Volume Left	33	2	0	0	0	0
Volume Right	9	0	0	0	0	2
cSH	187	382	1700	1700	1700	1700
Volume to Capacity	0.23	0.01	0.36	0.36	0.66	0.33
Queue Length 95th (ft)	21	0	0	0	0	0
Control Delay (s)	31.3	14.5	0.0	0.0	0.0	0.0
Lane LOS	D	B				
Approach Delay (s)	31.3	0.0			0.0	
Approach LOS	D					

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	80	91	1531	6	80	2399
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	89	101	1701	7	89	2666
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			369			
pX, platoon unblocked	0.84	0.84			0.84	
vC, conflicting volume	3215	854			1708	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3255	450			1465	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	78			76	
cM capacity (veh/h)	4	461			372	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	190	1134	574	89	1333	1333
Volume Left	89	0	0	89	0	0
Volume Right	101	0	7	0	0	0
cSH	9	1700	1700	372	1700	1700
Volume to Capacity	21.18	0.67	0.34	0.24	0.78	0.78
Queue Length 95th (ft)	Err	0	0	23	0	0
Control Delay (s)	Err	0.0	0.0	17.7	0.0	0.0
Lane LOS	F			C		
Approach Delay (s)	Err	0.0		0.6		
Approach LOS	F					

Intersection Summary			
Average Delay	408.7		
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	23	1593	6	2	2187	14	3	0	267	25	0	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	26	1770	7	2	2430	16	3	0	297	28	0	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		939										
pX, platoon unblocked				0.84			0.84	0.84		0.84	0.84	0.84
vC, conflicting volume	2446			1777			3385	4270	1223	3341	4274	888
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2446			1542			3459	4514	1223	3406	4519	483
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	86			99			0	100	0	0	100	98
cM capacity (veh/h)	180			346			2	1	167	0	1	438

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SE 1	SE 2	NW 1	NW 2
Volume Total	26	1180	597	1217	1231	3	297	28	7
Volume Left	26	0	0	2	0	3	0	28	0
Volume Right	0	0	7	0	16	0	297	0	7
cSH	180	1700	1700	346	1700	2	167	0	438
Volume to Capacity	0.14	0.69	0.35	0.01	0.72	1.89	1.78	Err	0.02
Queue Length 95th (ft)	12	0	0	0	0	31	535	Err	1
Control Delay (s)	28.3	0.0	0.0	0.4	0.0	3573.0	420.1	Err	13.4
Lane LOS	D			A		F	F	F	B
Approach Delay (s)	0.4			0.2		455.1		Err	
Approach LOS						F		F	

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	90.8%	ICU Level of Service		E
Analysis Period (min)	15			

TRAFFIC STUDY
FOR
I-85/I-385 INTERCHANGE IMPROVEMENTS

GREENVILLE COUNTY, SOUTH CAROLINA

APPENDIX E

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August 2012

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- 2015 Build Alternate 4A Conditions
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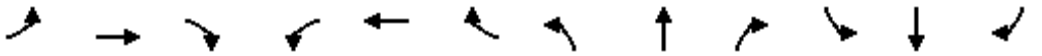
CAPACITY ANALYSIS (SYNCHRO)
2015 BUILD ALTERNATE 4A CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	381	210	216	258	37	261	818	162	184	860	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3255		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.58	1.00		0.31	1.00	1.00	0.30	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1042	3255		565	3438	1538	542	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	132	423	233	240	287	41	290	909	180	204	956	102
RTOR Reduction (vph)	0	93	0	0	0	34	0	0	108	0	0	47
Lane Group Flow (vph)	132	563	0	240	287	7	290	909	72	204	956	55
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	18.8	10.8		22.8	12.8	12.8	32.2	32.2	32.2	6.0	43.2	43.2
Effective Green, g (s)	18.8	10.8		22.8	12.8	12.8	32.2	32.2	32.2	6.0	43.2	43.2
Actuated g/C Ratio	0.24	0.14		0.29	0.16	0.16	0.40	0.40	0.40	0.08	0.54	0.54
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	313	439		305	550	246	218	1384	619	250	1857	831
v/s Ratio Prot	0.04	c0.17		c0.10	0.08			0.26		c0.06	0.28	
v/s Ratio Perm	0.06			0.13		0.00	c0.54		0.05			0.04
v/c Ratio	0.42	1.28		0.79	0.52	0.03	1.33	0.66	0.12	0.82	0.51	0.07
Uniform Delay, d1	25.4	34.6		24.3	30.8	28.3	23.9	19.4	15.0	36.5	11.7	8.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.71	0.69
Incremental Delay, d2	1.5	144.0		13.7	2.0	0.1	176.6	2.5	0.4	15.0	0.8	0.1
Delay (s)	26.8	178.6		38.0	32.8	28.5	200.5	21.9	15.4	46.7	9.1	6.1
Level of Service	C	F		D	C	C	F	C	B	D	A	A
Approach Delay (s)		153.2			34.7			58.6			14.9	
Approach LOS		F			C			E			B	

Intersection Summary			
HCM Average Control Delay	60.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	18	756	25	56	551	28	25	1	53	7	1	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3421		1719	3438	1538	1719	1543		1719	1810	1538
Flt Permitted	0.36	1.00		0.33	1.00	1.00	0.76	1.00		0.72	1.00	1.00
Satd. Flow (perm)	655	3421		591	3438	1538	1370	1543		1299	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	20	840	28	62	612	31	28	1	59	8	1	12
RTOR Reduction (vph)	0	3	0	0	0	13	0	52	0	0	0	10
Lane Group Flow (vph)	20	865	0	62	612	18	28	8	0	8	1	2
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	53.0	53.0		43.3	43.3	43.3	9.0	9.0		9.0	9.0	12.2
Effective Green, g (s)	53.0	53.0		43.3	43.3	43.3	9.0	9.0		9.0	9.0	12.2
Actuated g/C Ratio	0.71	0.71		0.58	0.58	0.58	0.12	0.12		0.12	0.12	0.16
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	508	2418		341	1985	888	164	185		156	217	383
v/s Ratio Prot	0.00	c0.25			0.18			0.01			0.00	0.00
v/s Ratio Perm	0.03			0.10		0.01	c0.02			0.01		0.00
v/c Ratio	0.04	0.36		0.18	0.31	0.02	0.17	0.04		0.05	0.00	0.01
Uniform Delay, d1	3.6	4.3		7.5	8.1	6.8	29.6	29.2		29.2	29.1	26.3
Progression Factor	1.00	1.00		0.31	0.35	0.52	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4		1.1	0.4	0.0	1.2	0.2		0.3	0.0	0.0
Delay (s)	3.6	4.7		3.4	3.2	3.6	30.9	29.4		29.6	29.1	26.3
Level of Service	A	A		A	A	A	C	C		C	C	C
Approach Delay (s)		4.7			3.2			29.9			27.7	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	5.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	4	1	26	1	1	6	8	576	45	54	814	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.88			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1592			1765	1538	1719	3401		1719	3438	1538
Flt Permitted		0.96			0.87	1.00	0.31	1.00		0.39	1.00	1.00
Satd. Flow (perm)		1545			1577	1538	565	3401		704	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	1	29	1	1	7	9	640	50	60	904	4
RTOR Reduction (vph)	0	26	0	0	0	6	0	7	0	0	0	1
Lane Group Flow (vph)	0	8	0	0	2	1	9	683	0	60	904	3
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		7.6			7.6	7.6	56.1	56.1		56.1	56.1	56.1
Effective Green, g (s)		7.6			7.6	7.6	56.1	56.1		56.1	56.1	56.1
Actuated g/C Ratio		0.10			0.10	0.10	0.75	0.75		0.75	0.75	0.75
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		157			160	156	423	2544		527	2572	1150
v/s Ratio Prot								0.20			c0.26	
v/s Ratio Perm		c0.01			0.00	0.00	0.02			0.09		0.00
v/c Ratio		0.05			0.01	0.00	0.02	0.27		0.11	0.35	0.00
Uniform Delay, d1		30.4			30.3	30.3	2.4	3.0		2.6	3.2	2.4
Progression Factor		1.00			1.00	1.00	0.37	0.60		0.61	0.68	0.61
Incremental Delay, d2		0.2			0.0	0.0	0.1	0.2		0.4	0.4	0.0
Delay (s)		30.7			30.4	30.3	1.0	2.0		2.0	2.6	1.5
Level of Service		C			C	C	A	A		A	A	A
Approach Delay (s)		30.7			30.3			2.0			2.5	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	3.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	36	5	58	21	5	2	12	512	79	156	834	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.86		1.00	0.96		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1561		1719	1742		1719	3369		1719	3417	
Flt Permitted	0.61	1.00		0.71	1.00		0.28	1.00		0.35	1.00	
Satd. Flow (perm)	1098	1561		1287	1742		513	3369		642	3417	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	6	64	23	6	2	13	569	88	173	927	39
RTOR Reduction (vph)	0	59	0	0	2	0	0	5	0	0	1	0
Lane Group Flow (vph)	40	11	0	23	6	0	13	652	0	173	965	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	20.1	12.4		15.3	10.0		101.1	98.5		114.3	105.7	
Effective Green, g (s)	20.1	12.4		15.3	10.0		101.1	98.5		114.3	105.7	
Actuated g/C Ratio	0.13	0.08		0.10	0.07		0.67	0.66		0.76	0.70	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	179	129		147	116		367	2212		560	2408	
v/s Ratio Prot	c0.01	0.01		0.01	0.00		0.00	0.19		c0.02	c0.28	
v/s Ratio Perm	c0.02			0.01			0.02			0.22		
v/c Ratio	0.22	0.09		0.16	0.05		0.04	0.29		0.31	0.40	
Uniform Delay, d1	57.6	63.6		61.3	65.6		8.1	11.0		5.4	9.1	
Progression Factor	1.00	1.00		1.00	1.00		1.23	1.31		0.21	0.50	
Incremental Delay, d2	1.0	0.5		0.8	0.3		0.1	0.3		0.5	0.5	
Delay (s)	58.6	64.0		62.1	65.9		10.0	14.7		1.6	5.0	
Level of Service	E	E		E	E		B	B		A	A	
Approach Delay (s)		62.1			63.1			14.6			4.5	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations											
Volume (vph)	326	0	203	0	509	82	464	822	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95			
Frt	1.00		0.85		1.00	0.85	1.00	1.00			
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00			
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438			
Flt Permitted	0.95		1.00		1.00	1.00	0.37	1.00			
Satd. Flow (perm)	3335		2707		3438	1538	672	3438			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	362	0	226	0	566	91	516	913	0	0	0
RTOR Reduction (vph)	0	0	191	0	0	41	0	0	0	0	0
Lane Group Flow (vph)	362	0	35	0	566	50	516	913	0	0	0
Turn Type	custom		custom			Perm	pm+pt				
Protected Phases					2		1	6			
Permitted Phases	4		4			2	6				
Actuated Green, G (s)	23.0		23.0		81.9	81.9	115.9	115.9			
Effective Green, g (s)	23.0		23.0		81.9	81.9	115.9	115.9			
Actuated g/C Ratio	0.15		0.15		0.55	0.55	0.77	0.77			
Clearance Time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Vehicle Extension (s)	4.3		4.3		4.3	4.3	4.3	4.3			
Lane Grp Cap (vph)	511		415		1877	840	710	2656			
v/s Ratio Prot					0.16		c0.13	0.27			
v/s Ratio Perm	c0.11		0.01			0.03	c0.43				
v/c Ratio	0.71		0.08		0.30	0.06	0.73	0.34			
Uniform Delay, d1	60.3		54.5		18.5	16.0	7.3	5.3			
Progression Factor	1.00		1.00		0.40	0.38	1.49	1.09			
Incremental Delay, d2	5.0		0.1		0.4	0.1	3.7	0.3			
Delay (s)	65.3		54.6		7.9	6.2	14.7	6.0			
Level of Service	E		D		A	A	B	A			
Approach Delay (s)		61.2			7.6			9.2		0.0	
Approach LOS		E			A			A		A	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

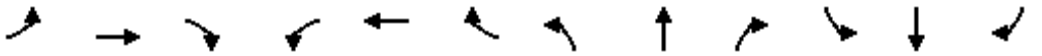
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	331	583	678	157	0	955
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	368	648	753	174	0	1061
RTOR Reduction (vph)	0	402	0	77	0	0
Lane Group Flow (vph)	368	246	753	97	0	1061
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	35.4	35.4	83.5	83.5		102.5
Effective Green, g (s)	35.4	35.4	83.5	83.5		95.5
Actuated g/C Ratio	0.24	0.24	0.56	0.56		0.64
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	787	639	1914	856		2189
v/s Ratio Prot	c0.11	0.09	0.22			c0.31
v/s Ratio Perm				0.06		
v/c Ratio	0.47	0.39	0.39	0.11		0.48
Uniform Delay, d1	49.2	48.2	18.9	15.7		14.3
Progression Factor	1.00	1.00	1.13	3.69		0.81
Incremental Delay, d2	0.7	0.6	0.6	0.2		0.2
Delay (s)	49.9	48.8	21.9	58.3		11.8
Level of Service	D	D	C	E		B
Approach Delay (s)	49.2		28.7			11.8
Approach LOS	D		C			B

Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



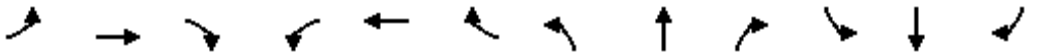
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	113	86	1103	158	130	1450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3335	1538	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.22	1.00
Satd. Flow (perm)	3335	1538	3438	1538	390	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	126	96	1226	176	144	1611
RTOR Reduction (vph)	0	88	0	29	0	0
Lane Group Flow (vph)	126	8	1226	147	144	1611
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2 3 6			2 3 6
Permitted Phases	4	4		2 3 6	2 3 6	
Actuated Green, G (s)	12.0	12.0	125.4	125.4	125.4	125.4
Effective Green, g (s)	12.0	12.0	125.4	125.4	125.4	125.4
Actuated g/C Ratio	0.08	0.08	0.84	0.84	0.84	0.84
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	267	123	2874	1286	326	2874
v/s Ratio Prot	c0.04		0.36			c0.47
v/s Ratio Perm		0.00		0.10	0.37	
v/c Ratio	0.47	0.06	0.43	0.11	0.44	0.56
Uniform Delay, d1	66.0	63.8	3.1	2.2	3.2	3.8
Progression Factor	1.00	1.00	0.34	0.00	0.06	0.05
Incremental Delay, d2	2.1	0.3	0.1	0.1	1.1	0.2
Delay (s)	68.0	64.1	1.2	0.1	1.3	0.4
Level of Service	E	E	A	A	A	A
Approach Delay (s)	66.4		1.1			0.5
Approach LOS	E		A			A

Intersection Summary			
HCM Average Control Delay	5.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



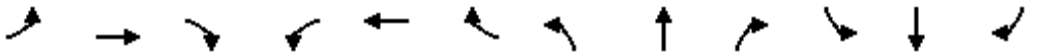
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	1041	51	27	1484	63	33	1	34	27	1	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	108	1157	57	30	1649	70	37	1	38	30	1	70
RTOR Reduction (vph)	0	0	15	0	0	20	0	0	33	0	0	66
Lane Group Flow (vph)	108	1157	42	30	1649	50	37	1	5	30	1	4
Turn Type	Prot		pm+ov	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	9.9	102.9	111.3	6.9	99.9	99.9	8.4	12.2	19.1	4.2	8.0	8.0
Effective Green, g (s)	9.9	102.9	111.3	6.9	99.9	99.9	8.4	12.2	19.1	4.2	8.0	8.0
Actuated g/C Ratio	0.07	0.69	0.74	0.05	0.67	0.67	0.06	0.08	0.13	0.03	0.05	0.05
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	220	2358	1141	79	2290	1024	96	147	196	93	183	82
v/s Ratio Prot	0.03	c0.34	0.00	0.02	c0.48		c0.02	0.00	c0.00	0.01	0.00	
v/s Ratio Perm			0.03			0.03			0.00			c0.00
v/c Ratio	0.49	0.49	0.04	0.38	0.72	0.05	0.39	0.01	0.02	0.32	0.01	0.05
Uniform Delay, d1	67.6	11.1	5.1	69.5	16.1	8.6	68.3	63.3	57.3	71.5	67.2	67.4
Progression Factor	1.15	0.64	0.76	0.73	0.14	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	0.7	0.0	3.8	1.6	0.1	4.0	0.0	0.1	3.2	0.0	0.4
Delay (s)	80.0	7.8	3.9	54.5	3.8	0.1	72.3	63.4	57.4	74.7	67.3	67.7
Level of Service	F	A	A	D	A	A	E	E	E	E	E	E
Approach Delay (s)		13.6			4.5			64.7			69.8	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	29.9
Intersection Capacity Utilization	63.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



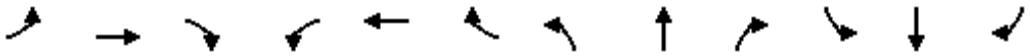
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	216	773	113	106	1040	469	253	243	66	140	112	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	3335	1752		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.27	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	482	3438	1538	3335	1752		3335	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	240	859	126	118	1156	521	281	270	73	156	124	312
RTOR Reduction (vph)	0	0	63	0	0	212	0	7	0	0	0	0
Lane Group Flow (vph)	240	859	63	118	1156	309	281	336	0	156	124	312
Turn Type	Prot		Perm	pm+pt		Perm	Prot			Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6						Free
Actuated Green, G (s)	15.1	74.9	74.9	78.2	69.0	69.0	18.1	33.5		10.7	26.1	150.0
Effective Green, g (s)	15.1	74.9	74.9	78.2	69.0	69.0	18.1	33.5		10.7	26.1	150.0
Actuated g/C Ratio	0.10	0.50	0.50	0.52	0.46	0.46	0.12	0.22		0.07	0.17	1.00
Clearance Time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	336	1717	768	327	1581	707	402	391		238	315	1538
v/s Ratio Prot	c0.07	0.25		0.02	c0.34		c0.08	c0.19		0.05	0.07	
v/s Ratio Perm			0.04	0.17		0.20						0.20
v/c Ratio	0.71	0.50	0.08	0.36	0.73	0.44	0.70	0.86		0.66	0.39	0.20
Uniform Delay, d1	65.4	25.1	19.6	19.2	33.0	27.4	63.3	56.0		67.9	54.9	0.0
Progression Factor	1.25	0.67	0.97	0.53	0.52	0.09	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.0	0.9	0.2	0.9	2.6	1.7	5.9	17.8		7.4	1.3	0.3
Delay (s)	88.8	17.7	19.2	11.1	19.7	4.2	69.2	73.7		75.3	56.2	0.3
Level of Service	F	B	B	B	B	A	E	E		E	E	A
Approach Delay (s)		31.8			14.6			71.7			31.8	
Approach LOS		C			B			E			C	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



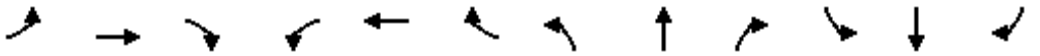
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	830	149	64	1100	0	0	0	0	832	0	515
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		4.0
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.98		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3359		1719	3438					3335		1538
Flt Permitted		1.00		0.14	1.00					0.95		1.00
Satd. Flow (perm)		3359		261	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	922	166	71	1222	0	0	0	0	924	0	572
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1079	0	71	1222	0	0	0	0	924	0	572
Turn Type				pm+pt						Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		73.1		87.8	87.8					49.9		150.0
Effective Green, g (s)		73.1		87.8	87.8					49.9		150.0
Actuated g/C Ratio		0.49		0.59	0.59					0.33		1.00
Clearance Time (s)		6.6		6.6	6.6					5.7		
Vehicle Extension (s)		4.3		4.3	4.3					4.3		
Lane Grp Cap (vph)		1637		232	2012					1109		1538
v/s Ratio Prot		c0.32		0.02	c0.36					c0.28		
v/s Ratio Perm				0.16								0.37
v/c Ratio		0.66		0.31	0.61					0.83		0.37
Uniform Delay, d1		29.0		18.5	20.0					46.2		0.0
Progression Factor		0.77		0.07	0.18					1.01		1.00
Incremental Delay, d2		1.8		0.3	0.3					5.9		0.7
Delay (s)		24.2		1.5	4.0					52.5		0.7
Level of Service		C		A	A					D		A
Approach Delay (s)		24.2			3.9			0.0			32.7	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.9
Intersection Capacity Utilization	115.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



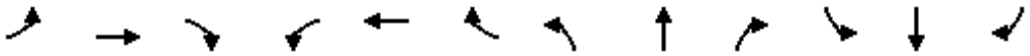
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	605	1057	0	0	632	614	532	0	254	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.10	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	188	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	672	1174	0	0	702	682	591	0	282	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	463	0	0	52	0	0	0
Lane Group Flow (vph)	672	1174	0	0	702	219	591	0	230	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	88.9	88.9			32.3	32.3	50.0		50.0			
Effective Green, g (s)	88.9	88.9			32.3	32.3	50.0		50.0			
Actuated g/C Ratio	0.59	0.59			0.22	0.22	0.33		0.33			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	627	2038			740	331	573		513			
v/s Ratio Prot	c0.36	0.34			0.20		c0.34					
v/s Ratio Perm	c0.27					0.14			0.15			
v/c Ratio	1.07	0.58			0.95	0.66	1.03		0.45			
Uniform Delay, d1	42.8	18.9			58.0	53.9	50.0		39.2			
Progression Factor	0.86	0.91			0.82	2.05	1.00		1.00			
Incremental Delay, d2	51.4	0.8			17.9	7.2	45.9		1.0			
Delay (s)	88.4	18.1			65.5	117.7	95.9		40.2			
Level of Service	F	B			E	F	F		D			
Approach Delay (s)		43.7			91.2			77.9			0.0	
Approach LOS		D			F			E			A	

Intersection Summary			
HCM Average Control Delay	67.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	115.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



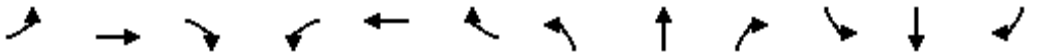
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	1102	93	21	1099	44	85	5	7	78	20	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3398		1719	3418		1719	1654		1719	1604	
Flt Permitted	0.10	1.00		0.19	1.00		0.42	1.00		0.75	1.00	
Satd. Flow (perm)	177	3398		347	3418		760	1654		1354	1604	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	1224	103	23	1221	49	94	6	8	87	22	69
RTOR Reduction (vph)	0	8	0	0	4	0	0	6	0	0	62	0
Lane Group Flow (vph)	129	1319	0	23	1266	0	94	8	0	87	29	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	45.9	45.9		35.5	35.5		18.2	18.2		8.0	8.0	
Effective Green, g (s)	45.9	45.9		35.5	35.5		18.2	18.2		8.0	8.0	
Actuated g/C Ratio	0.61	0.61		0.47	0.47		0.24	0.24		0.11	0.11	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	213	2080		164	1618		247	401		144	171	
v/s Ratio Prot	0.04	c0.39			c0.37		c0.02	0.00			0.02	
v/s Ratio Perm	0.33			0.07			0.07			c0.06		
v/c Ratio	0.61	0.63		0.14	0.78		0.38	0.02		0.60	0.17	
Uniform Delay, d1	11.3	9.2		11.1	16.5		23.0	21.6		32.0	30.5	
Progression Factor	1.78	0.79		0.56	0.70		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.0	1.2		1.6	3.4		1.5	0.0		8.7	0.8	
Delay (s)	25.1	8.6		7.8	14.9		24.5	21.6		40.6	31.2	
Level of Service	C	A		A	B		C	C		D	C	
Approach Delay (s)		10.0			14.8			24.1			35.8	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



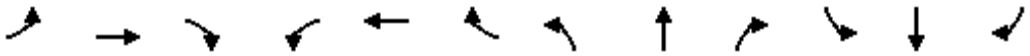
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	1017	164	124	1088	1	74	1	104	1	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.92			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1719	3367		1719	3438			1633			1667	
Flt Permitted	0.21	1.00		0.18	1.00			0.86			0.94	
Satd. Flow (perm)	376	3367		329	3438			1441			1584	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	1130	182	138	1209	1	82	1	116	1	1	2
RTOR Reduction (vph)	0	17	0	0	0	0	0	68	0	0	2	0
Lane Group Flow (vph)	7	1295	0	138	1210	0	0	131	0	0	2	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	53.4	53.4		53.7	53.7			10.3			10.3	
Effective Green, g (s)	53.4	53.4		53.7	53.7			10.3			10.3	
Actuated g/C Ratio	0.71	0.71		0.72	0.72			0.14			0.14	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	268	2397		236	2462			198			218	
v/s Ratio Prot		0.38			0.35							
v/s Ratio Perm	0.02			c0.42				c0.09			0.00	
v/c Ratio	0.03	0.54		0.58	0.49			0.66			0.01	
Uniform Delay, d1	3.2	5.1		5.2	4.7			30.7			27.9	
Progression Factor	0.41	0.29		2.19	1.54			1.00			1.00	
Incremental Delay, d2	0.1	0.7		1.0	0.1			9.2			0.0	
Delay (s)	1.5	2.2		12.3	7.3			39.9			28.0	
Level of Service	A	A		B	A			D			C	
Approach Delay (s)		2.2			7.8			39.9			28.0	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



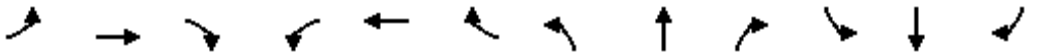
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	1445	17	14	3250	83	49	2	25	84	1	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.86			0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	
Satd. Flow (prot)	1719	3432		1719	3425		1719	1556			1711	
Flt Permitted	0.03	1.00		0.14	1.00		0.79	1.00			0.73	
Satd. Flow (perm)	62	3432		251	3425		1421	1556			1296	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	1606	19	16	3611	92	54	2	28	93	1	9
RTOR Reduction (vph)	0	0	0	0	1	0	0	25	0	0	3	0
Lane Group Flow (vph)	23	1625	0	16	3702	0	54	5	0	0	100	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	120.6	120.6		110.3	110.3		18.1	18.1			18.1	
Effective Green, g (s)	120.6	120.6		110.3	110.3		18.1	18.1			18.1	
Actuated g/C Ratio	0.80	0.80		0.74	0.74		0.12	0.12			0.12	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	94	2759		185	2519		171	188			156	
v/s Ratio Prot	0.01	c0.47			c1.08			0.00				
v/s Ratio Perm	0.19			0.06			0.04				c0.08	
v/c Ratio	0.24	0.59		0.09	1.47		0.32	0.03			0.64	
Uniform Delay, d1	45.7	5.5		5.6	19.9		60.3	58.2			62.9	
Progression Factor	1.42	0.71		0.58	0.53		1.00	1.00			1.00	
Incremental Delay, d2	2.0	0.9		0.4	212.4		1.7	0.1			10.3	
Delay (s)	67.1	4.7		3.7	222.8		62.0	58.3			73.2	
Level of Service	E	A		A	F		E	E			E	
Approach Delay (s)		5.6			221.9			60.7			73.2	
Approach LOS		A			F			E			E	

Intersection Summary			
HCM Average Control Delay	152.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



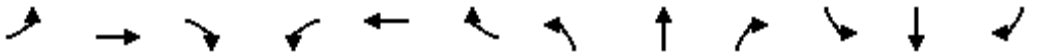
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	746	20	94	2081	54	337	247	27	47	200	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3425		1719	3425		1719	1810	1538	1719	1738	
Flt Permitted	0.04	1.00		0.28	1.00		0.16	1.00	1.00	0.59	1.00	
Satd. Flow (perm)	81	3425		510	3425		287	1810	1538	1069	1738	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	829	22	104	2312	60	374	274	30	52	222	79
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	20	0	9	0
Lane Group Flow (vph)	44	850	0	104	2371	0	374	274	10	52	292	0
Turn Type	Perm			Perm			pm+pt		Perm	Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	89.7	89.7		89.7	89.7		49.0	49.0	49.0	19.8	19.8	
Effective Green, g (s)	89.7	89.7		89.7	89.7		49.0	49.0	49.0	19.8	19.8	
Actuated g/C Ratio	0.60	0.60		0.60	0.60		0.33	0.33	0.33	0.13	0.13	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	48	2048		305	2048		321	591	502	141	229	
v/s Ratio Prot		0.25			c0.69		c0.18	0.15			0.17	
v/s Ratio Perm	0.55			0.20			c0.20		0.01	0.05		
v/c Ratio	0.92	0.41		0.34	1.16		1.17	0.46	0.02	0.37	1.28	
Uniform Delay, d1	26.8	16.1		15.2	30.1		45.8	40.1	34.2	59.4	65.1	
Progression Factor	1.19	1.18		0.67	0.74		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	95.8	0.5		1.9	74.8		102.9	0.9	0.0	2.6	153.8	
Delay (s)	127.8	19.5		12.2	97.0		148.7	41.0	34.2	62.0	218.9	
Level of Service	F	B		B	F		F	D	C	E	F	
Approach Delay (s)		24.9			93.4			100.1			195.8	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM Average Control Delay	88.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	125.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



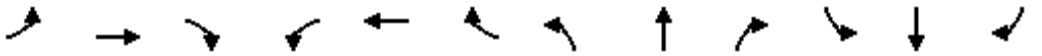
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	708	52	533	1893	1	162	28	390	22	29	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3402		1719	3438			1735	1538	1719	1750	
Flt Permitted		0.93		0.19	1.00			0.73	1.00	0.38	1.00	
Satd. Flow (perm)		3150		341	3438			1318	1538	688	1750	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	787	58	592	2103	1	180	31	433	24	32	9
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	36	0	7	0
Lane Group Flow (vph)	0	847	0	592	2104	0	0	211	397	24	34	0
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		61.5		110.3	110.3			28.4	70.9	28.4	28.4	
Effective Green, g (s)		61.5		110.3	110.3			28.4	70.9	28.4	28.4	
Actuated g/C Ratio		0.41		0.74	0.74			0.19	0.47	0.19	0.19	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1292		641	2528			250	727	130	331	
v/s Ratio Prot				c0.26	0.61				0.15		0.02	
v/s Ratio Perm		0.27		c0.42				c0.16	0.10	0.03		
v/c Ratio		0.66		0.92	0.83			0.84	0.55	0.18	0.10	
Uniform Delay, d1		35.7		31.4	13.5			58.7	28.1	51.1	50.3	
Progression Factor		0.56		1.16	0.52			1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.4		2.6	0.3			23.3	1.2	1.1	0.2	
Delay (s)		22.5		38.9	7.4			81.9	29.3	52.2	50.5	
Level of Service		C		D	A			F	C	D	D	
Approach Delay (s)		22.5			14.3			46.5			51.1	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	109.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



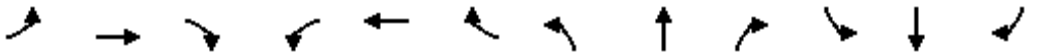
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	1105	90	28	2672	17	139	1	34	14	1	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3399		1719	3435			1694			1600	
Flt Permitted	0.03	1.00		0.18	1.00			0.66			0.94	
Satd. Flow (perm)	62	3399		326	3435			1161			1526	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	1228	100	31	2969	19	154	1	38	16	1	66
RTOR Reduction (vph)	0	4	0	0	0	0	0	6	0	0	5	0
Lane Group Flow (vph)	28	1324	0	31	2988	0	0	187	0	0	78	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	116.8	116.8		116.8	116.8			21.6			21.6	
Effective Green, g (s)	116.8	116.8		116.8	116.8			21.6			21.6	
Actuated g/C Ratio	0.78	0.78		0.78	0.78			0.14			0.14	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	48	2647		254	2675			167			220	
v/s Ratio Prot		0.39			c0.87							
v/s Ratio Perm	0.45			0.10				c0.16			0.05	
v/c Ratio	0.58	0.50		0.12	1.12			1.12			0.35	
Uniform Delay, d1	6.7	6.0		4.1	16.6			64.2			57.9	
Progression Factor	2.06	1.59		0.71	0.49			1.00			1.00	
Incremental Delay, d2	37.0	0.6		0.4	55.2			105.4			1.6	
Delay (s)	50.9	10.2		3.3	63.3			169.6			59.5	
Level of Service	D	B		A	E			F			E	
Approach Delay (s)		11.0			62.7			169.6			59.5	
Approach LOS		B			E			F			E	

Intersection Summary			
HCM Average Control Delay	52.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	151	598	92	50	1477	199	369	384	132	132	229	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3377		1719	1810	1538	1719	1810	1538
Flt Permitted	0.05	1.00	1.00	0.36	1.00		0.17	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	94	3438	1538	656	3377		315	1810	1538	402	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	168	664	102	56	1641	221	410	427	147	147	254	354
RTOR Reduction (vph)	0	0	33	0	7	0	0	0	70	0	0	18
Lane Group Flow (vph)	168	664	69	56	1855	0	410	427	77	147	254	336
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	88.9	77.2	102.2	79.9	72.7		48.0	35.0	42.2	26.0	18.0	29.7
Effective Green, g (s)	88.9	77.2	102.2	79.9	72.7		48.0	35.0	42.2	26.0	18.0	29.7
Actuated g/C Ratio	0.59	0.51	0.68	0.53	0.48		0.32	0.23	0.28	0.17	0.12	0.20
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	182	1769	1048	400	1637		335	422	433	140	217	305
v/s Ratio Prot	0.07	c0.19	0.01	0.01	c0.55		c0.20	0.24	0.01	0.06	0.14	c0.09
v/s Ratio Perm	0.48		0.03	0.07			c0.19		0.04	0.13		0.13
v/c Ratio	0.92	0.38	0.07	0.14	1.13		1.22	1.01	0.18	1.05	1.17	1.10
Uniform Delay, d1	48.9	21.9	8.0	17.1	38.6		45.7	57.5	40.8	59.9	66.0	60.1
Progression Factor	1.05	0.56	1.35	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	41.8	0.5	0.0	0.3	68.1		124.5	46.8	0.3	90.0	114.8	82.0
Delay (s)	93.0	12.8	10.8	17.4	106.8		170.2	104.3	41.1	149.9	180.8	142.1
Level of Service	F	B	B	B	F		F	F	D	F	F	F
Approach Delay (s)		27.0			104.1			122.3			156.6	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM Average Control Delay	101.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.9
Intersection Capacity Utilization	106.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



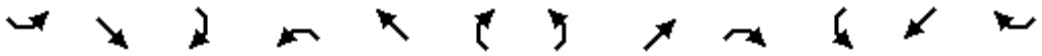
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	100	49	136	23	103	97	1419	75	84	1240	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3269		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.74	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1340	3269		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	117	111	54	151	26	114	108	1577	83	93	1378	99
RTOR Reduction (vph)	0	49	0	0	0	100	0	0	48	0	0	62
Lane Group Flow (vph)	117	116	0	151	26	14	108	1577	35	93	1378	37
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	9.8	5.8		6.0	7.8	7.8	7.6	27.2	27.2	5.0	24.6	24.6
Effective Green, g (s)	9.8	5.8		6.0	7.8	7.8	7.6	27.2	27.2	5.0	24.6	24.6
Actuated g/C Ratio	0.15	0.09		0.09	0.12	0.12	0.12	0.42	0.42	0.08	0.38	0.38
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	225	292		308	217	185	201	2067	644	257	1870	582
v/s Ratio Prot	0.03	0.04		c0.05	0.01		c0.06	c0.32		0.03	0.28	
v/s Ratio Perm	c0.05					0.01			0.02			0.02
v/c Ratio	0.52	0.40		0.49	0.12	0.07	0.54	0.76	0.05	0.36	0.74	0.06
Uniform Delay, d1	25.2	27.9		28.0	25.5	25.4	27.0	16.1	11.2	28.5	17.4	12.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.87	0.89	0.82	1.00	1.00	1.00
Incremental Delay, d2	3.2	1.8		1.9	0.5	0.3	3.2	2.2	0.1	1.4	2.6	0.2
Delay (s)	28.3	29.7		30.0	26.0	25.7	26.8	16.6	9.3	29.9	20.0	13.1
Level of Service	C	C		C	C	C	C	B	A	C	C	B
Approach Delay (s)		29.2			28.0			16.9			20.2	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



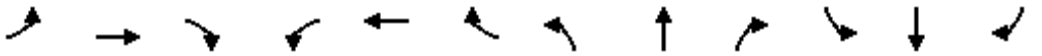
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	346	96	1198	227	104	1245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4822		1719	4940
Flt Permitted	0.95	1.00	1.00		0.12	1.00
Satd. Flow (perm)	1719	1538	4822		221	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	384	107	1331	252	116	1383
RTOR Reduction (vph)	0	38	42	0	0	0
Lane Group Flow (vph)	384	69	1541	0	116	1383
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	15.0	15.0	37.7		37.7	37.7
Effective Green, g (s)	15.0	15.0	37.7		37.7	37.7
Actuated g/C Ratio	0.23	0.23	0.58		0.58	0.58
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	397	355	2797		128	2865
v/s Ratio Prot	c0.22		0.32			0.28
v/s Ratio Perm		0.04			c0.52	
v/c Ratio	0.97	0.19	0.55		0.91	0.48
Uniform Delay, d1	24.8	20.1	8.4		12.1	8.0
Progression Factor	1.00	1.00	0.18		1.00	1.00
Incremental Delay, d2	36.7	0.5	0.6		57.5	0.6
Delay (s)	61.5	20.7	2.1		69.6	8.5
Level of Service	E	C	A		E	A
Approach Delay (s)	52.6		2.1			13.3
Approach LOS	D		A			B

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



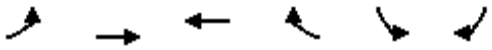
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	102	1205	210	24	1680	57	71	75	61	4	14	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3206		1719	1810	2707
Flt Permitted	0.06	1.00	1.00	0.15	1.00	1.00	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	115	3438	1538	279	3438	1538	3335	3206		1810	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	113	1339	233	27	1867	63	79	83	68	4	16	42
RTOR Reduction (vph)	0	0	88	0	0	26	0	62	0	0	0	37
Lane Group Flow (vph)	113	1339	145	27	1867	37	79	89	0	4	16	5
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	71.2	63.2	63.2	62.9	59.3	59.3	8.0	9.0		7.0	4.0	12.0
Effective Green, g (s)	71.2	63.2	63.2	62.9	59.3	59.3	8.0	9.0		7.0	4.0	12.0
Actuated g/C Ratio	0.70	0.62	0.62	0.62	0.58	0.58	0.08	0.09		0.07	0.04	0.12
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	206	2134	955	223	2003	896	262	283		122	71	319
v/s Ratio Prot	c0.04	0.39		0.00	c0.54		c0.02	c0.03		0.00	0.01	0.00
v/s Ratio Perm	0.34		0.09	0.07		0.02				0.00		0.00
v/c Ratio	0.55	0.63	0.15	0.12	0.93	0.04	0.30	0.31		0.03	0.23	0.02
Uniform Delay, d1	19.9	12.0	8.1	8.7	19.4	9.1	44.3	43.5		44.2	47.4	39.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	0.8	0.1	0.4	8.9	0.0	1.0	2.0		0.2	5.0	0.0
Delay (s)	24.1	12.8	8.2	9.0	28.3	9.1	45.3	45.5		44.4	52.4	39.7
Level of Service	C	B	A	A	C	A	D	D		D	D	D
Approach Delay (s)		12.9			27.4			45.4			43.3	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	101.8	Sum of lost time (s)	26.5
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	234	936	955	0	1657	774	0	0	0	276	502	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	260	1040	1061	0	1841	860	0	0	0	307	558	200
RTOR Reduction (vph)	0	0	29	0	0	2	0	0	0	0	0	107
Lane Group Flow (vph)	260	1040	1032	0	1841	858	0	0	0	307	558	93
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	8.2	68.2	68.2		54.2	84.9				30.7	30.7	30.7
Effective Green, g (s)	8.2	68.2	68.2		54.2	84.9				30.7	30.7	30.7
Actuated g/C Ratio	0.07	0.62	0.62		0.49	0.77				0.28	0.28	0.28
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	249	2132	954		1694	1187				480	505	429
v/s Ratio Prot	0.08	0.30			0.54	0.20					c0.31	
v/s Ratio Perm			c0.67			0.36				0.18		0.06
v/c Ratio	1.04	0.49	1.08		1.09	0.72				0.64	1.10	0.22
Uniform Delay, d1	50.9	11.4	20.9		27.9	6.5				34.8	39.6	30.4
Progression Factor	1.00	1.00	1.00		0.82	0.89				1.00	1.00	1.00
Incremental Delay, d2	69.1	0.8	53.9		42.2	0.6				3.4	71.9	0.4
Delay (s)	120.0	12.2	74.8		65.2	6.4				38.1	111.5	30.8
Level of Service	F	B	E		E	A				D	F	C
Approach Delay (s)		52.2			46.5			0.0			75.2	
Approach LOS		D			D			A			E	

Intersection Summary			
HCM Average Control Delay	53.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	145.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

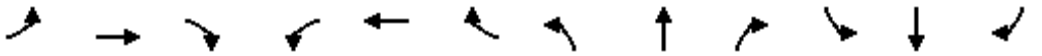


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1212	1222	0	649	1209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1347	1358	0	721	1343
RTOR Reduction (vph)	0	0	0	0	0	11
Lane Group Flow (vph)	0	1347	1358	0	721	1332
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		45.4	45.4		53.7	53.7
Effective Green, g (s)		45.4	45.4		53.7	53.7
Actuated g/C Ratio		0.41	0.41		0.49	0.49
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1419	1419		839	1322
v/s Ratio Prot		0.39	c0.39		0.42	
v/s Ratio Perm						c0.49
v/c Ratio		0.95	0.96		0.86	1.01
Uniform Delay, d1		31.2	31.4		24.8	28.1
Progression Factor		0.93	0.84		1.00	1.00
Incremental Delay, d2		13.0	13.7		9.2	26.7
Delay (s)		42.0	40.1		34.1	54.8
Level of Service		D	D		C	D
Approach Delay (s)		42.0	40.1		47.6	
Approach LOS		D	D		D	

Intersection Summary			
HCM Average Control Delay	43.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	122.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

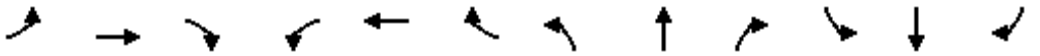
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1110	0	0	647	910	948
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1233	0	0	719	1011	1053
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	1233	0	0	719	1011	1050
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	36.2			36.2	63.0	63.0
Effective Green, g (s)	36.2			36.2	63.0	63.0
Actuated g/C Ratio	0.33			0.33	0.57	0.57
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	1131			1131	1910	881
v/s Ratio Prot	c0.36			0.21	0.30	
v/s Ratio Perm						c0.68
v/c Ratio	1.09			0.64	0.53	1.19
Uniform Delay, d1	36.9			31.3	14.4	23.5
Progression Factor	0.74			0.84	1.00	1.00
Incremental Delay, d2	46.9			2.2	0.4	97.8
Delay (s)	74.3			28.6	14.8	121.3
Level of Service	E			C	B	F
Approach Delay (s)	74.3			28.6	69.1	
Approach LOS	E			C	E	

Intersection Summary			
HCM Average Control Delay	63.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	135.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	1425	600	141	869	8	305	2	148	26	2	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.96		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	
Satd. Flow (prot)	1719	3285		1719	3433			1724	1538		1682	
Flt Permitted	0.29	1.00		0.06	1.00			0.69	1.00		0.51	
Satd. Flow (perm)	532	3285		110	3433			1258	1538		880	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	37	1583	667	157	966	9	339	2	164	29	2	13
RTOR Reduction (vph)	0	42	0	0	1	0	0	0	82	0	10	0
Lane Group Flow (vph)	37	2208	0	157	974	0	0	341	82	0	34	0
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	59.0	59.0		71.0	71.0			26.0	26.0		26.0	
Effective Green, g (s)	59.0	59.0		71.0	71.0			26.0	26.0		26.0	
Actuated g/C Ratio	0.54	0.54		0.65	0.65			0.24	0.24		0.24	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	285	1762		149	2216			297	364		208	
v/s Ratio Prot		c0.67		c0.05	0.28							
v/s Ratio Perm	0.07			0.63				c0.27	0.05		0.04	
v/c Ratio	0.13	1.25		1.05	0.44			1.15	0.22		0.16	
Uniform Delay, d1	12.7	25.5		33.1	9.7			42.0	33.9		33.4	
Progression Factor	0.62	0.54		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.1	114.3		88.7	0.6			98.5	0.5		0.6	
Delay (s)	7.9	128.1		121.8	10.3			140.5	34.4		34.0	
Level of Service	A	F		F	B			F	C		C	
Approach Delay (s)		126.1			25.8			106.0			34.0	
Approach LOS		F			C			F			C	

Intersection Summary			
HCM Average Control Delay	93.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	19	0	16	16	0	118	2	978	11	41	882	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.88		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1585		1719	3432		1719	3432	
Flt Permitted		0.68	1.00		0.96		0.27	1.00		0.23	1.00	
Satd. Flow (perm)		1234	1538		1524		487	3432		422	3432	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	21	0	18	18	0	131	2	1087	12	46	980	11
RTOR Reduction (vph)	0	0	15	0	68	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	21	3	0	81	0	2	1098	0	46	990	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		10.0	10.0		10.0		43.0	43.0		43.0	43.0	
Effective Green, g (s)		10.0	10.0		10.0		43.0	43.0		43.0	43.0	
Actuated g/C Ratio		0.15	0.15		0.15		0.66	0.66		0.66	0.66	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		4.3	4.3		4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)		190	237		234		322	2270		279	2270	
v/s Ratio Prot								c0.32			0.29	
v/s Ratio Perm		0.02	0.00		c0.05		0.00			0.11		
v/c Ratio		0.11	0.01		0.35		0.01	0.48		0.16	0.44	
Uniform Delay, d1		23.7	23.3		24.6		3.7	5.5		4.2	5.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.52	0.55	
Incremental Delay, d2		0.4	0.0		1.4		0.0	0.7		1.2	0.6	
Delay (s)		24.1	23.3		26.0		3.8	6.2		3.3	3.4	
Level of Service		C	C		C		A	A		A	A	
Approach Delay (s)		23.7			26.0			6.2			3.4	
Approach LOS		C			C			A			A	

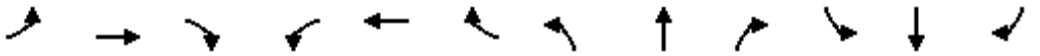
Intersection Summary			
HCM Average Control Delay	6.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1052	65	179	714	0	557	0	245	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0		6.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Frt		0.99		1.00	1.00		1.00		0.85			
Flt Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3408		1719	3438		1719		1538			
Flt Permitted		1.00		0.07	1.00		0.95		1.00			
Satd. Flow (perm)		3408		130	3438		1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1169	72	199	793	0	619	0	272	0	0	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	99	0	0	0
Lane Group Flow (vph)	0	1238	0	199	793	0	619	0	173	0	0	0
Turn Type				pm+pt			Prot		custom			
Protected Phases		2		1	6		4					
Permitted Phases				6					4			
Actuated Green, G (s)		49.5		70.0	70.0		48.0		48.0			
Effective Green, g (s)		49.5		70.0	70.0		48.0		48.0			
Actuated g/C Ratio		0.38		0.54	0.54		0.37		0.37			
Clearance Time (s)		6.0		6.0	6.0		6.0		6.0			
Vehicle Extension (s)		4.3		4.3	4.3		4.3		4.3			
Lane Grp Cap (vph)		1298		247	1851		635		568			
v/s Ratio Prot		c0.36		c0.09	0.23		c0.36					
v/s Ratio Perm				0.34					0.11			
v/c Ratio		0.95		0.81	0.43		0.97		0.30			
Uniform Delay, d1		39.1		36.3	18.0		40.4		29.1			
Progression Factor		0.91		0.90	1.63		1.00		1.00			
Incremental Delay, d2		15.0		14.1	0.5		29.4		0.5			
Delay (s)		50.6		46.8	29.9		69.8		29.6			
Level of Service		D		D	C		E		C			
Approach Delay (s)		50.6			33.3			57.5			0.0	
Approach LOS		D			C			E			A	

Intersection Summary			
HCM Average Control Delay	47.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

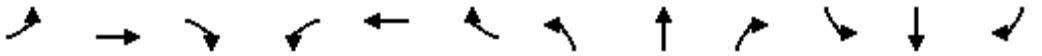
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	413	1196	0	0	875	512	0	0	0	18	0	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1719	3438			3438	1538				1719		1538
Flt Permitted	0.14	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	260	3438			3438	1538				1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	459	1329	0	0	972	569	0	0	0	20	0	338
RTOR Reduction (vph)	0	0	0	0	0	309	0	0	0	0	0	63
Lane Group Flow (vph)	459	1329	0	0	972	260	0	0	0	20	0	275
Turn Type	pm+pt					custom				custom		custom
Protected Phases	5	2										8
Permitted Phases	2				6	6				8		
Actuated Green, G (s)	91.0	91.0			53.4	53.4				27.0		27.0
Effective Green, g (s)	91.0	91.0			53.4	53.4				27.0		27.0
Actuated g/C Ratio	0.70	0.70			0.41	0.41				0.21		0.21
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Vehicle Extension (s)	4.3	4.3			4.3	4.3				4.3		4.3
Lane Grp Cap (vph)	537	2407			1412	632				357		319
v/s Ratio Prot	c0.21	0.39										c0.18
v/s Ratio Perm	c0.39				0.28	0.17				0.01		
v/c Ratio	0.85	0.55			0.69	0.41				0.06		0.86
Uniform Delay, d1	29.3	9.5			31.5	27.2				41.3		49.7
Progression Factor	0.67	0.41			1.00	1.00				1.00		1.00
Incremental Delay, d2	4.5	0.3			2.8	2.0				0.1		21.4
Delay (s)	24.1	4.2			34.2	29.1				41.4		71.1
Level of Service	C	A			C	C				D		E
Approach Delay (s)		9.3			32.3			0.0			69.4	
Approach LOS		A			C			A			E	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



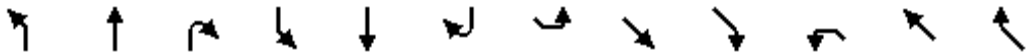
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	61	94	69	14	11	526	766	647	61	1087	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1645		1633	1664	1538	1719	3438	1538	1719	3427	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.12	1.00	1.00	0.33	1.00	
Satd. Flow (perm)	1719	1645		1633	1664	1538	219	3438	1538	601	3427	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	68	104	77	16	12	584	851	719	68	1208	26
RTOR Reduction (vph)	0	68	0	0	0	11	0	0	213	0	2	0
Lane Group Flow (vph)	2	104	0	46	47	1	584	851	506	68	1232	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	5.0	5.0		4.0	4.0	4.0	53.0	53.0	53.0	27.0	27.0	
Effective Green, g (s)	5.0	5.0		4.0	4.0	4.0	53.0	53.0	53.0	27.0	27.0	
Actuated g/C Ratio	0.06	0.06		0.05	0.05	0.05	0.66	0.66	0.66	0.34	0.34	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	107	103		82	83	77	520	2278	1019	203	1157	
v/s Ratio Prot	0.00	c0.06		0.03	c0.03		c0.28	0.25			0.36	
v/s Ratio Perm						0.00	c0.46		0.33	0.11		
v/c Ratio	0.02	1.01		0.56	0.57	0.01	1.12	0.37	0.50	0.33	1.06	
Uniform Delay, d1	35.2	37.5		37.1	37.2	36.1	23.2	6.1	6.8	19.8	26.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.11	0.70	1.37	1.00	1.00	
Incremental Delay, d2	0.1	90.2		13.3	13.4	0.1	68.8	0.2	0.9	4.4	45.5	
Delay (s)	35.3	127.7		50.4	50.6	36.2	94.5	4.5	10.2	24.2	72.0	
Level of Service	D	F		D	D	D	F	A	B	C	E	
Approach Delay (s)		126.6			48.9			30.8			69.5	
Approach LOS		F			D			C			E	

Intersection Summary			
HCM Average Control Delay	49.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



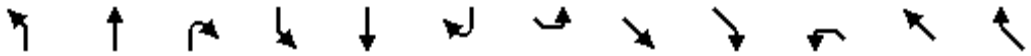
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	659	0	934	164	1005	0	0	963	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	732	0	1038	182	1117	0	0	1070	319
RTOR Reduction (vph)	0	0	0	0	0	62	0	0	0	0	0	207
Lane Group Flow (vph)	0	0	0	366	366	976	182	1117	0	0	1070	112
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				28.0	28.0	28.0	6.0	40.0			28.0	28.0
Effective Green, g (s)				28.0	28.0	28.0	6.0	40.0			28.0	28.0
Actuated g/C Ratio				0.35	0.35	0.35	0.08	0.50			0.35	0.35
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				572	572	947	250	1719			1203	538
v/s Ratio Prot							0.05	c0.32			c0.31	
v/s Ratio Perm				0.22	0.22	c0.36						0.07
v/c Ratio				0.64	0.64	1.03	0.73	0.65			0.89	0.21
Uniform Delay, d1				21.8	21.8	26.0	36.2	14.8			24.5	18.2
Progression Factor				1.00	1.00	1.00	1.32	0.12			0.49	0.46
Incremental Delay, d2				3.2	3.2	37.2	8.7	1.5			1.1	0.1
Delay (s)				25.0	25.0	63.2	56.4	3.2			13.1	8.5
Level of Service				C	C	E	E	A			B	A
Approach Delay (s)		0.0			47.4			10.6			12.0	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	661	236	608	1014	0	508	0	304	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.34	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	615	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	734	262	676	1127	0	564	0	338	0	0	0
RTOR Reduction (vph)	0	0	160	0	0	0	0	0	172	0	0	0
Lane Group Flow (vph)	0	734	102	676	1127	0	282	282	166	0	0	0
Turn Type			Perm	pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		31.0	31.0	54.2	53.6		13.9	13.9	13.9			
Effective Green, g (s)		31.0	31.0	54.2	53.6		13.9	13.9	13.9			
Actuated g/C Ratio		0.39	0.39	0.68	0.67		0.17	0.17	0.17			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1914	596	649	2303		284	284	470			
v/s Ratio Prot		0.15		c0.22	0.33							
v/s Ratio Perm			0.07	c0.49			c0.17	0.17	0.06			
v/c Ratio		0.38	0.17	1.04	0.49		0.99	0.99	0.35			
Uniform Delay, d1		17.6	16.1	14.2	6.5		33.0	33.0	29.1			
Progression Factor		0.30	0.26	0.67	0.75		1.00	1.00	1.00			
Incremental Delay, d2		0.6	0.6	38.6	0.4		51.4	51.4	0.9			
Delay (s)		5.8	4.7	48.1	5.3		84.4	84.4	30.0			
Level of Service		A	A	D	A		F	F	C			
Approach Delay (s)		5.5			21.3			64.0			0.0	
Approach LOS		A			C			E			A	

Intersection Summary			
HCM Average Control Delay	27.5	HCM Level of Service	C
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	273	700	1	4	933	381	196	2	202	1	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.98	1.00
Satd. Flow (prot)	1719	4939			3437	1538	1719	1540			1780	1538
Flt Permitted	0.15	1.00			0.95	1.00	0.76	1.00			0.91	1.00
Satd. Flow (perm)	268	4939			3273	1538	1368	1540			1647	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	303	778	1	4	1037	423	218	2	224	1	2	1
RTOR Reduction (vph)	0	0	0	0	0	236	0	179	0	0	0	1
Lane Group Flow (vph)	303	779	0	0	1041	187	218	47	0	0	3	0
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	51.3	51.3			35.3	35.3	16.2	16.2			16.2	16.2
Effective Green, g (s)	51.3	51.3			35.3	35.3	16.2	16.2			16.2	16.2
Actuated g/C Ratio	0.64	0.64			0.44	0.44	0.20	0.20			0.20	0.20
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	357	3167			1444	679	277	312			334	311
v/s Ratio Prot	c0.11	0.16						0.03				
v/s Ratio Perm	c0.44				0.32	0.12	c0.16				0.00	0.00
v/c Ratio	0.85	0.25			0.72	0.27	0.79	0.15			0.01	0.00
Uniform Delay, d1	13.9	6.1			18.3	14.2	30.3	26.2			25.5	25.4
Progression Factor	1.07	1.35			0.68	0.56	1.00	1.00			1.00	1.00
Incremental Delay, d2	15.0	0.2			2.8	0.9	15.6	0.5			0.0	0.0
Delay (s)	29.8	8.4			15.2	8.9	45.8	26.7			25.5	25.4
Level of Service	C	A			B	A	D	C			C	C
Approach Delay (s)		14.4			13.4			36.1			25.5	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	125	20	74	1555	1906	72
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	139	22	82	1728	2118	80
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1013	
pX, platoon unblocked	0.50	0.50	0.50			
vC, conflicting volume	3186	1099	2198			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3371	0	1401			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	96	65			
cM capacity (veh/h)	2	539	235			

Direction, Lane #	WB 1	SE 1	SE 2	SE 3	NW 1	NW 2
Volume Total	161	82	864	864	1412	786
Volume Left	139	82	0	0	0	0
Volume Right	22	0	0	0	0	80
cSH	2	235	1700	1700	1700	1700
Volume to Capacity	77.97	0.35	0.51	0.51	0.83	0.46
Queue Length 95th (ft)	Err	37	0	0	0	0
Control Delay (s)	Err	28.3	0.0	0.0	0.0	0.0
Lane LOS	F	D				
Approach Delay (s)	Err	1.3			0.0	
Approach LOS	F					

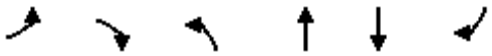
Intersection Summary			
Average Delay	387.0		
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	1419	261	264	1525	453	98
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1577	290	293	1694	503	109
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				860		
pX, platoon unblocked					0.46	
vC, conflicting volume			1867		3156	933
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1867		3339	933
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			4		0	58
cM capacity (veh/h)			307		0	262

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	1051	816	858	1130	612
Volume Left	0	0	293	0	503
Volume Right	0	290	0	0	109
cSH	1700	1700	307	1700	0
Volume to Capacity	0.62	0.48	0.96	0.66	4235.26
Queue Length 95th (ft)	0	0	242	0	Err
Control Delay (s)	0.0	0.0	78.3	0.0	Err
Lane LOS			F		F
Approach Delay (s)	0.0		33.8		Err
Approach LOS					F

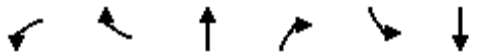
Intersection Summary			
Average Delay	1385.6		
Intersection Capacity Utilization	138.4%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	6	1	4	1111	932	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	1	4	1234	1036	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1176	378	
pX, platoon unblocked	0.93	0.86	0.86			
vC, conflicting volume	1677	533	1066			
vC1, stage 1 conf vol	1051					
vC2, stage 2 conf vol	626					
vCu, unblocked vol	937	141	758			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	100	99			
cM capacity (veh/h)	349	752	716			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	8	4	617	617	690	375
Volume Left	7	4	0	0	0	0
Volume Right	1	0	0	0	0	30
cSH	407	716	1700	1700	1700	1700
Volume to Capacity	0.02	0.01	0.36	0.36	0.41	0.22
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	14.7	10.1	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	14.7	0.0			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	53	58	1479	21	36	1334
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	59	64	1643	23	40	1482
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			371			
pX, platoon unblocked	0.81	0.81			0.81	
vC, conflicting volume	2476	833			1667	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2350	312			1346	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	88			90	
cM capacity (veh/h)	21	544			397	

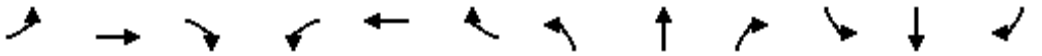
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	123	1096	571	40	741	741
Volume Left	59	0	0	40	0	0
Volume Right	64	0	23	0	0	0
cSH	42	1700	1700	397	1700	1700
Volume to Capacity	2.94	0.64	0.34	0.10	0.44	0.44
Queue Length 95th (ft)	339	0	0	8	0	0
Control Delay (s)	1076.8	0.0	0.0	15.1	0.0	0.0
Lane LOS	F			C		
Approach Delay (s)	1076.8	0.0		0.4		
Approach LOS	F					

Intersection Summary			
Average Delay	40.3		
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	96	1420	21	17	1337	18	1	0	13	20	0	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	107	1578	23	19	1486	20	1	0	14	22	0	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		939										
pX, platoon unblocked				0.81			0.81	0.81		0.81	0.81	0.81
vC, conflicting volume	1506			1601			2547	3348	753	2598	3346	801
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1506			1282			2443	3427	753	2506	3425	299
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	75			96			88	100	96	0	100	98
cM capacity (veh/h)	426			424			10	4	346	8	4	561

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SE 1	SE 2	NW 1	NW 2
Volume Total	107	1052	549	762	763	1	14	22	11
Volume Left	107	0	0	19	0	1	0	22	0
Volume Right	0	0	23	0	20	0	14	0	11
cSH	426	1700	1700	424	1700	10	346	8	561
Volume to Capacity	0.25	0.62	0.32	0.04	0.45	0.12	0.04	2.64	0.02
Queue Length 95th (ft)	24	0	0	3	0	8	3	97	2
Control Delay (s)	16.2	0.0	0.0	1.4	0.0	423.0	15.9	1607.7	11.6
Lane LOS	C			A		F	C	F	B
Approach Delay (s)	1.0			0.7		44.9		1075.7	
Approach LOS						E		F	

Intersection Summary				
Average Delay	12.0			
Intersection Capacity Utilization	94.2%	ICU Level of Service		F
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	284	320	47	125	633	393	36	469	110	563	469	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3372		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.13	1.00		0.51	1.00	1.00	0.46	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	240	3372		927	3438	1538	831	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	316	356	52	139	703	437	40	521	122	626	521	72
RTOR Reduction (vph)	0	10	0	0	0	278	0	0	99	0	0	40
Lane Group Flow (vph)	316	398	0	139	703	159	40	521	23	626	521	32
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	48.9	34.9		36.1	26.1	26.1	20.7	20.7	20.7	23.4	49.1	49.1
Effective Green, g (s)	48.9	34.9		36.1	26.1	26.1	20.7	20.7	20.7	23.4	49.1	49.1
Actuated g/C Ratio	0.44	0.32		0.33	0.24	0.24	0.19	0.19	0.19	0.21	0.45	0.45
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	359	1070		376	816	365	156	647	289	709	1535	687
v/s Ratio Prot	c0.15	0.12		0.03	0.20			c0.15		c0.19	0.15	
v/s Ratio Perm	c0.24			0.09		0.10	0.05		0.01			0.02
v/c Ratio	0.88	0.37		0.37	0.86	0.44	0.26	0.81	0.08	0.88	0.34	0.05
Uniform Delay, d1	28.8	29.1		27.0	40.2	35.7	38.1	42.7	36.8	42.0	19.9	17.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.54	0.36	0.20
Incremental Delay, d2	22.1	0.5		1.0	10.3	2.0	3.9	10.3	0.5	9.0	0.4	0.1
Delay (s)	50.9	29.6		28.0	50.5	37.7	42.0	53.0	37.3	31.5	7.6	3.5
Level of Service	D	C		C	D	D	D	D	D	C	A	A
Approach Delay (s)		38.9			43.7			49.6			19.6	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	13	881	85	189	1125	40	93	4	201	37	2	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3393		1719	3438	1538	1719	1543		1719	1810	1538
Flt Permitted	0.17	1.00		0.27	1.00	1.00	0.76	1.00		0.21	1.00	1.00
Satd. Flow (perm)	311	3393		482	3438	1538	1369	1543		387	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	14	979	94	210	1250	44	103	4	223	41	2	33
RTOR Reduction (vph)	0	4	0	0	0	10	0	176	0	0	0	27
Lane Group Flow (vph)	14	1069	0	210	1250	34	103	51	0	41	2	6
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	118.3	118.3		105.4	105.4	105.4	18.7	18.7		18.7	18.7	25.1
Effective Green, g (s)	118.3	118.3		105.4	105.4	105.4	18.7	18.7		18.7	18.7	25.1
Actuated g/C Ratio	0.79	0.79		0.70	0.70	0.70	0.12	0.12		0.12	0.12	0.17
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	305	2676		339	2416	1081	171	192		48	226	324
v/s Ratio Prot	0.00	c0.32			0.36			0.03			0.00	0.00
v/s Ratio Perm	0.03			c0.44		0.02	0.08			c0.11		0.00
v/c Ratio	0.05	0.40		0.62	0.52	0.03	0.60	0.27		0.85	0.01	0.02
Uniform Delay, d1	5.7	4.9		11.7	10.4	6.8	62.1	59.4		64.3	57.5	52.1
Progression Factor	1.00	1.00		0.60	0.65	0.55	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4		8.1	0.8	0.1	9.4	1.8		83.3	0.0	0.0
Delay (s)	5.8	5.3		15.1	7.5	3.8	71.5	61.3		147.6	57.6	52.2
Level of Service	A	A		B	A	A	E	E		F	E	D
Approach Delay (s)		5.3			8.5			64.5			103.8	
Approach LOS		A			A			E			F	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	21	1	60	12	2	84	70	1347	11	2	859	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.90			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1609			1734	1538	1719	3434		1719	3438	1538
Flt Permitted		0.91			0.80	1.00	0.29	1.00		0.14	1.00	1.00
Satd. Flow (perm)		1481			1447	1538	532	3434		262	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	1	67	13	2	93	78	1497	12	2	954	2
RTOR Reduction (vph)	0	60	0	0	0	83	0	1	0	0	0	1
Lane Group Flow (vph)	0	31	0	0	15	10	78	1508	0	2	954	1
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		7.9			7.9	7.9	55.8	55.8		55.8	55.8	55.8
Effective Green, g (s)		7.9			7.9	7.9	55.8	55.8		55.8	55.8	55.8
Actuated g/C Ratio		0.11			0.11	0.11	0.74	0.74		0.74	0.74	0.74
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		156			152	162	396	2555		195	2558	1144
v/s Ratio Prot								c0.44			0.28	
v/s Ratio Perm		c0.02			0.01	0.01	0.15			0.01		0.00
v/c Ratio		0.20			0.10	0.06	0.20	0.59		0.01	0.37	0.00
Uniform Delay, d1		30.7			30.3	30.2	2.9	4.4		2.5	3.4	2.5
Progression Factor		1.00			1.00	1.00	0.80	0.82		0.36	0.53	0.28
Incremental Delay, d2		1.0			0.5	0.2	1.1	1.0		0.1	0.4	0.0
Delay (s)		31.7			30.8	30.5	3.4	4.6		1.0	2.2	0.7
Level of Service		C			C	C	A	A		A	A	A
Approach Delay (s)		31.7			30.5			4.5			2.2	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	5.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	146	33	272	199	29	28	53	1291	75	219	689	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.87		1.00	0.93		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1568		1719	1676		1719	3410		1719	3307	
Flt Permitted	0.72	1.00		0.16	1.00		0.25	1.00		0.05	1.00	
Satd. Flow (perm)	1296	1568		298	1676		451	3410		93	3307	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	162	37	302	221	32	31	59	1434	83	243	766	262
RTOR Reduction (vph)	0	144	0	0	23	0	0	3	0	0	22	0
Lane Group Flow (vph)	162	195	0	221	40	0	59	1514	0	243	1006	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	32.3	20.3		40.3	24.3		75.7	71.7		95.7	85.7	
Effective Green, g (s)	32.3	20.3		40.3	24.3		75.7	71.7		95.7	85.7	
Actuated g/C Ratio	0.22	0.14		0.27	0.16		0.50	0.48		0.64	0.57	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	313	212		232	272		261	1630		254	1889	
v/s Ratio Prot	0.04	0.12		c0.10	0.02		0.01	0.44		c0.11	0.30	
v/s Ratio Perm	0.07			c0.15			0.11			c0.49		
v/c Ratio	0.52	0.92		0.95	0.15		0.23	0.93		0.96	0.53	
Uniform Delay, d1	51.0	64.0		47.8	53.9		19.3	36.8		51.5	19.8	
Progression Factor	1.00	1.00		1.00	1.00		0.77	0.80		0.84	1.05	
Incremental Delay, d2	2.2	40.2		46.1	0.4		0.6	9.2		42.6	1.0	
Delay (s)	53.2	104.2		93.9	54.3		15.4	38.7		86.1	21.8	
Level of Service	D	F		F	D		B	D		F	C	
Approach Delay (s)		87.7			85.1			37.8			34.1	
Approach LOS		F			F			D			C	

Intersection Summary			
HCM Average Control Delay	47.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations											
Volume (vph)	224	0	30	0	1490	272	653	1114	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95			
Frt	1.00		0.85		1.00	0.85	1.00	1.00			
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00			
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438			
Flt Permitted	0.95		1.00		1.00	1.00	0.05	1.00			
Satd. Flow (perm)	3335		2707		3438	1538	96	3438			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	249	0	33	0	1656	302	726	1238	0	0	0
RTOR Reduction (vph)	0	0	31	0	0	91	0	0	0	0	0
Lane Group Flow (vph)	249	0	2	0	1656	211	726	1238	0	0	0
Turn Type	custom		custom			Perm	pm+pt				
Protected Phases					2		1	6			
Permitted Phases	4		4			2	6				
Actuated Green, G (s)	11.0		11.0		68.6	68.6	127.9	127.9			
Effective Green, g (s)	11.0		11.0		68.6	68.6	127.9	127.9			
Actuated g/C Ratio	0.07		0.07		0.46	0.46	0.85	0.85			
Clearance Time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Vehicle Extension (s)	4.3		4.3		4.3	4.3	4.3	4.3			
Lane Grp Cap (vph)	245		199		1572	703	651	2931			
v/s Ratio Prot					0.48		c0.39	0.36			
v/s Ratio Perm	c0.07		0.00			0.14	c0.56				
v/c Ratio	1.02		0.01		1.05	0.30	1.12	0.42			
Uniform Delay, d1	69.5		64.5		40.7	25.6	45.0	2.5			
Progression Factor	1.00		1.00		0.61	0.47	0.77	1.03			
Incremental Delay, d2	61.8		0.0		30.4	0.4	67.6	0.3			
Delay (s)	131.3		64.5		55.2	12.4	102.1	3.0			
Level of Service	F		E		E	B	F	A			
Approach Delay (s)		123.4			48.6			39.6		0.0	
Approach LOS		F			D			D		A	

Intersection Summary			
HCM Average Control Delay	49.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	97.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

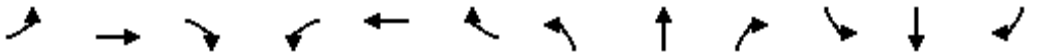
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	500	582	727	987	0	1267
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	556	647	808	1097	0	1408
RTOR Reduction (vph)	0	425	0	476	0	0
Lane Group Flow (vph)	556	222	808	621	0	1408
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	31.4	31.4	84.5	84.5		106.5
Effective Green, g (s)	31.4	31.4	84.5	84.5		99.5
Actuated g/C Ratio	0.21	0.21	0.56	0.56		0.66
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	698	567	1937	866		2281
v/s Ratio Prot	c0.17	0.08	0.24			c0.41
v/s Ratio Perm				c0.40		
v/c Ratio	0.80	0.39	0.42	0.72		0.62
Uniform Delay, d1	56.3	51.1	18.7	24.0		14.4
Progression Factor	1.00	1.00	0.86	14.42		1.34
Incremental Delay, d2	6.9	0.7	0.1	0.5		0.3
Delay (s)	63.1	51.8	16.2	346.3		19.6
Level of Service	E	D	B	F		B
Approach Delay (s)	57.0		206.2			19.6
Approach LOS	E		F			B

Intersection Summary			
HCM Average Control Delay	108.3	HCM Level of Service	F
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



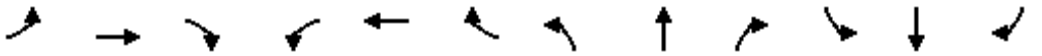
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	207	73	1253	56	55	2115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3335	1538	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.17	1.00
Satd. Flow (perm)	3335	1538	3438	1538	314	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	230	81	1392	62	61	2350
RTOR Reduction (vph)	0	73	0	11	0	0
Lane Group Flow (vph)	230	8	1392	51	61	2350
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2 3 6			2 3 6
Permitted Phases	4	4		2 3 6	2 3 6	
Actuated Green, G (s)	15.0	15.0	122.4	122.4	122.4	122.4
Effective Green, g (s)	15.0	15.0	122.4	122.4	122.4	122.4
Actuated g/C Ratio	0.10	0.10	0.82	0.82	0.82	0.82
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	334	154	2805	1255	256	2805
v/s Ratio Prot	c0.07		0.40			c0.68
v/s Ratio Perm		0.01		0.03	0.19	
v/c Ratio	0.69	0.05	0.50	0.04	0.24	0.84
Uniform Delay, d1	65.2	61.1	4.3	2.6	3.2	8.0
Progression Factor	1.00	1.00	0.30	0.00	1.22	1.43
Incremental Delay, d2	6.6	0.2	0.2	0.0	0.1	0.2
Delay (s)	71.8	61.3	1.5	0.0	3.9	11.7
Level of Service	E	E	A	A	A	B
Approach Delay (s)	69.1		1.4			11.5
Approach LOS	E		A			B

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



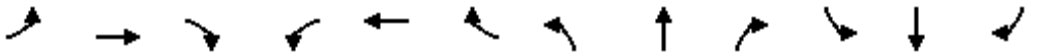
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	402	887	37	95	1748	181	130	29	75	236	29	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	447	986	41	106	1942	201	144	32	83	262	32	324
RTOR Reduction (vph)	0	0	15	0	0	52	0	0	69	0	0	194
Lane Group Flow (vph)	447	986	26	106	1942	149	144	32	14	262	32	130
Turn Type	Prot		pm+ov	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	19.1	83.7	96.0	17.0	81.6	81.6	12.3	8.4	25.4	17.1	13.2	13.2
Effective Green, g (s)	19.1	83.7	96.0	17.0	81.6	81.6	12.3	8.4	25.4	17.1	13.2	13.2
Actuated g/C Ratio	0.13	0.56	0.64	0.11	0.54	0.54	0.08	0.06	0.17	0.11	0.09	0.09
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	425	1918	984	195	1870	837	141	101	260	380	303	135
v/s Ratio Prot	c0.13	0.29	0.00	0.06	c0.56		c0.08	0.02	0.01	0.08	0.01	
v/s Ratio Perm			0.01			0.10			0.00			c0.08
v/c Ratio	1.05	0.51	0.03	0.54	1.04	0.18	1.02	0.32	0.05	0.69	0.11	0.96
Uniform Delay, d1	65.5	20.5	9.9	62.8	34.2	17.3	68.8	68.0	52.2	63.9	63.0	68.1
Progression Factor	1.02	0.64	0.76	0.70	0.43	0.30	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	55.3	0.9	0.0	1.8	24.9	0.2	81.5	2.8	0.1	5.8	0.2	65.7
Delay (s)	121.9	14.1	7.5	45.9	39.8	5.4	150.4	70.9	52.4	69.7	63.2	133.9
Level of Service	F	B	A	D	D	A	F	E	D	E	E	F
Approach Delay (s)		46.6			37.0			109.2			103.0	
Approach LOS		D			D			F			F	

Intersection Summary			
HCM Average Control Delay	53.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.8
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



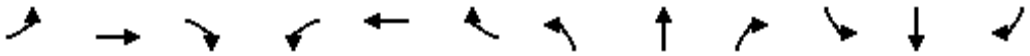
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	872	163	187	1576	183	266	150	119	336	277	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	3335	1690		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.18	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	332	3438	1538	3335	1690		3335	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	181	969	181	208	1751	203	296	167	132	373	308	202
RTOR Reduction (vph)	0	0	90	0	0	58	0	19	0	0	0	0
Lane Group Flow (vph)	181	969	91	208	1751	145	296	280	0	373	308	202
Turn Type	Prot		Perm	pm+pt		Perm	Prot			Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6						Free
Actuated Green, G (s)	8.8	72.8	72.8	92.0	78.0	78.0	14.3	24.3		17.2	27.2	150.0
Effective Green, g (s)	8.8	72.8	72.8	92.0	78.0	78.0	14.3	24.3		17.2	27.2	150.0
Actuated g/C Ratio	0.06	0.49	0.49	0.61	0.52	0.52	0.10	0.16		0.11	0.18	1.00
Clearance Time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	196	1669	746	333	1788	800	318	274		382	328	1538
v/s Ratio Prot	c0.05	0.28		0.06	c0.51		0.09	0.17		c0.11	c0.17	
v/s Ratio Perm			0.06	0.32		0.09						c0.13
v/c Ratio	0.92	0.58	0.12	0.62	0.98	0.18	0.93	1.02		0.98	0.94	0.13
Uniform Delay, d1	70.3	27.7	21.1	17.5	35.2	19.1	67.4	62.9		66.2	60.6	0.0
Progression Factor	1.25	0.67	0.84	0.84	0.43	0.23	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	39.8	1.3	0.3	3.5	14.7	0.4	33.4	59.8		39.6	34.2	0.2
Delay (s)	127.5	19.8	18.0	18.3	29.9	4.8	100.8	122.7		105.8	94.8	0.2
Level of Service	F	B	B	B	C	A	F	F		F	F	A
Approach Delay (s)		34.2			26.4			111.8			77.8	
Approach LOS		C			C			F			E	

Intersection Summary			
HCM Average Control Delay	47.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



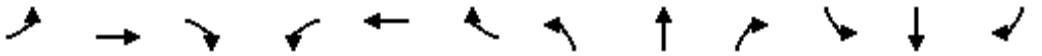
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	889	438	183	1411	0	0	0	0	696	0	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		4.0
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.95		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3268		1719	3438					3335		1538
Flt Permitted		1.00		0.06	1.00					0.95		1.00
Satd. Flow (perm)		3268		101	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	988	487	203	1568	0	0	0	0	773	0	594
RTOR Reduction (vph)	0	39	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1436	0	203	1568	0	0	0	0	773	0	594
Turn Type				pm+pt						Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		75.7		98.9	98.9					38.8		150.0
Effective Green, g (s)		75.7		98.9	98.9					38.8		150.0
Actuated g/C Ratio		0.50		0.66	0.66					0.26		1.00
Clearance Time (s)		6.6		6.6	6.6					5.7		
Vehicle Extension (s)		4.3		4.3	4.3					4.3		
Lane Grp Cap (vph)		1649		246	2267					863		1538
v/s Ratio Prot		c0.44		0.09	c0.46					c0.23		
v/s Ratio Perm				0.45								0.39
v/c Ratio		0.87		0.83	0.69					0.90		0.39
Uniform Delay, d1		32.8		45.5	16.0					53.6		0.0
Progression Factor		0.65		1.42	0.87					1.03		1.00
Incremental Delay, d2		4.6		2.3	0.2					12.1		0.7
Delay (s)		25.9		66.9	14.1					67.6		0.7
Level of Service		C		E	B					E		A
Approach Delay (s)		25.9			20.1			0.0			38.5	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.9
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



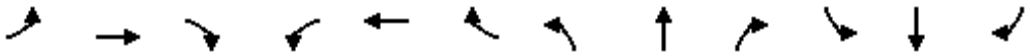
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	482	1103	0	0	995	649	599	0	253	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.08	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	139	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	536	1226	0	0	1106	721	666	0	281	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	327	0	0	44	0	0	0
Lane Group Flow (vph)	536	1226	0	0	1106	394	666	0	237	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	87.9	87.9			45.9	45.9	51.0		51.0			
Effective Green, g (s)	87.9	87.9			45.9	45.9	51.0		51.0			
Actuated g/C Ratio	0.59	0.59			0.31	0.31	0.34		0.34			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	460	2015			1052	471	584		523			
v/s Ratio Prot	c0.28	0.36			0.32		c0.39					
v/s Ratio Perm	c0.40					0.26			0.15			
v/c Ratio	1.17	0.61			1.05	0.84	1.14		0.45			
Uniform Delay, d1	48.5	20.0			52.0	48.6	49.5		38.6			
Progression Factor	1.19	1.15			0.65	0.88	1.00		1.00			
Incremental Delay, d2	85.5	0.6			35.6	9.5	82.4		1.0			
Delay (s)	143.2	23.5			69.3	52.4	131.9		39.6			
Level of Service	F	C			E	D	F		D			
Approach Delay (s)		59.9			62.6			104.5			0.0	
Approach LOS		E			E			F			A	

Intersection Summary			
HCM Average Control Delay	70.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	114.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



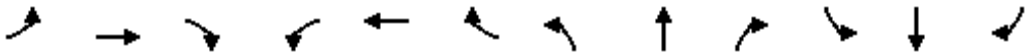
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	1142	45	10	1323	55	209	19	10	94	12	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.86	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3419		1719	3418		1719	1716		1719	1564	
Flt Permitted	0.05	1.00		0.19	1.00		0.32	1.00		0.74	1.00	
Satd. Flow (perm)	97	3419		353	3418		572	1716		1332	1564	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	188	1269	50	11	1470	61	232	21	11	104	13	124
RTOR Reduction (vph)	0	2	0	0	2	0	0	8	0	0	111	0
Lane Group Flow (vph)	188	1317	0	11	1529	0	232	24	0	104	26	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	99.9	99.9		79.0	79.0		39.2	39.2		15.5	15.5	
Effective Green, g (s)	99.9	99.9		79.0	79.0		39.2	39.2		15.5	15.5	
Actuated g/C Ratio	0.67	0.67		0.53	0.53		0.26	0.26		0.10	0.10	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	233	2277		186	1800		290	448		138	162	
v/s Ratio Prot	c0.08	0.39			c0.45		c0.10	0.01			0.02	
v/s Ratio Perm	0.45			0.03			c0.11			0.08		
v/c Ratio	0.81	0.58		0.06	0.85		0.80	0.05		0.75	0.16	
Uniform Delay, d1	45.1	13.6		17.3	30.4		47.8	41.5		65.4	61.3	
Progression Factor	1.41	0.77		0.96	0.90		1.00	1.00		1.00	1.00	
Incremental Delay, d2	16.4	0.9		0.4	3.9		15.7	0.1		22.4	0.7	
Delay (s)	80.1	11.4		17.1	31.3		63.5	41.6		87.8	62.0	
Level of Service	F	B		B	C		E	D		F	E	
Approach Delay (s)		20.0			31.1			60.9			73.1	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



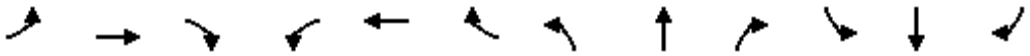
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	1173	63	60	1209	1	169	1	133	5	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.98	
Satd. Flow (prot)	1719	3412		1719	3438			1656			1633	
Flt Permitted	0.14	1.00		0.13	1.00			0.82			0.89	
Satd. Flow (perm)	245	3412		234	3438			1390			1479	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	1303	70	67	1343	1	188	1	148	6	1	11
RTOR Reduction (vph)	0	5	0	0	0	0	0	31	0	0	8	0
Lane Group Flow (vph)	11	1368	0	67	1344	0	0	306	0	0	10	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	43.2	43.2		43.5	43.5			20.5			20.5	
Effective Green, g (s)	43.2	43.2		43.5	43.5			20.5			20.5	
Actuated g/C Ratio	0.58	0.58		0.58	0.58			0.27			0.27	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	141	1965		136	1994			380			404	
v/s Ratio Prot		c0.40			0.39							
v/s Ratio Perm	0.04			0.29				c0.22			0.01	
v/c Ratio	0.08	0.70		0.49	0.67			0.80			0.02	
Uniform Delay, d1	7.1	11.3		9.3	10.9			25.4			19.9	
Progression Factor	0.62	0.79		0.96	0.98			1.00			1.00	
Incremental Delay, d2	0.9	1.7		1.2	0.2			12.7			0.0	
Delay (s)	5.3	10.6		10.1	10.8			38.1			20.0	
Level of Service	A	B		B	B			D			B	
Approach Delay (s)		10.5			10.8			38.1			20.0	
Approach LOS		B			B			D			B	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



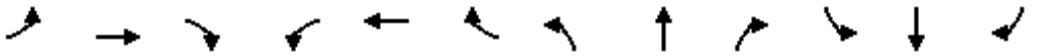
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	1558	137	22	2324	43	372	7	6	39	1	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.93			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1719	3396		1719	3429		1719	1683			1650	
Flt Permitted	0.04	1.00		0.06	1.00		0.69	1.00			0.86	
Satd. Flow (perm)	75	3396		104	3429		1258	1683			1454	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	24	1731	152	24	2582	48	413	8	7	43	1	41
RTOR Reduction (vph)	0	4	0	0	1	0	0	5	0	0	22	0
Lane Group Flow (vph)	24	1879	0	24	2629	0	413	10	0	0	63	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	99.7	99.7		90.4	90.4		39.0	39.0			39.0	
Effective Green, g (s)	99.7	99.7		90.4	90.4		39.0	39.0			39.0	
Actuated g/C Ratio	0.66	0.66		0.60	0.60		0.26	0.26			0.26	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	83	2257		63	2067		327	438			378	
v/s Ratio Prot	0.01	c0.55			c0.77			0.01				
v/s Ratio Perm	0.19			0.23			c0.33				0.04	
v/c Ratio	0.29	0.83		0.38	1.27		1.26	0.02			0.17	
Uniform Delay, d1	37.6	18.9		15.4	29.8		55.5	41.3			42.9	
Progression Factor	0.78	0.55		0.72	0.72		1.00	1.00			1.00	
Incremental Delay, d2	2.6	3.2		13.5	125.6		140.6	0.0			0.3	
Delay (s)	32.0	13.7		24.6	147.0		196.1	41.3			43.3	
Level of Service	C	B		C	F		F	D			D	
Approach Delay (s)		13.9			145.9			190.7			43.3	
Approach LOS		B			F			F			D	

Intersection Summary			
HCM Average Control Delay	98.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.6
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



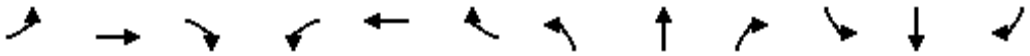
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	1900	43	63	1229	74	255	205	125	54	218	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3427		1719	3409		1719	1810	1538	1719	1691	
Flt Permitted	0.12	1.00		0.04	1.00		0.14	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	215	3427		76	3409		248	1810	1538	1115	1691	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	112	2111	48	70	1366	82	283	228	139	60	242	187
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	9	0	19	0
Lane Group Flow (vph)	112	2158	0	70	1445	0	283	228	130	60	410	0
Turn Type	Perm			Perm			pm+pt		Perm	Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	95.7	95.7		95.7	95.7		43.0	43.0	43.0	23.8	23.8	
Effective Green, g (s)	95.7	95.7		95.7	95.7		43.0	43.0	43.0	23.8	23.8	
Actuated g/C Ratio	0.64	0.64		0.64	0.64		0.29	0.29	0.29	0.16	0.16	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	137	2186		48	2175		206	519	441	177	268	
v/s Ratio Prot		0.63			0.42		c0.13	0.13			c0.24	
v/s Ratio Perm	0.52			c0.93			0.27		0.08	0.05		
v/c Ratio	0.82	0.99		1.46	0.66		1.37	0.44	0.30	0.34	1.53	
Uniform Delay, d1	20.5	26.5		27.1	17.1		46.8	43.7	41.7	56.1	63.1	
Progression Factor	0.32	0.34		1.49	1.45		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	32.4	14.1		250.7	0.7		195.8	0.9	0.6	1.8	257.3	
Delay (s)	39.0	23.1		291.3	25.6		242.6	44.6	42.3	57.9	320.4	
Level of Service	D	C		F	C		F	D	D	E	F	
Approach Delay (s)		23.9			37.8			130.3			288.2	
Approach LOS		C			D			F			F	

Intersection Summary			
HCM Average Control Delay	68.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.7
Intersection Capacity Utilization	133.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



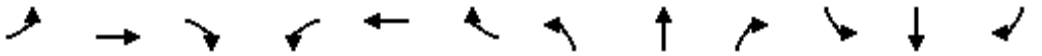
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	1683	117	371	1179	18	186	19	458	311	388	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3403		1719	3430			1731	1538	1719	1754	
Flt Permitted		0.91		0.06	1.00			0.17	1.00	0.52	1.00	
Satd. Flow (perm)		3112		108	3430			305	1538	949	1754	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	1870	130	412	1310	20	207	21	509	346	431	112
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	1	0	6	0
Lane Group Flow (vph)	0	2018	0	412	1329	0	0	228	508	346	537	0
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		60.7		81.7	81.7			57.0	71.7	57.0	57.0	
Effective Green, g (s)		60.7		81.7	81.7			57.0	71.7	57.0	57.0	
Actuated g/C Ratio		0.40		0.54	0.54			0.38	0.48	0.38	0.38	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1259		217	1868			116	735	361	667	
v/s Ratio Prot				c0.19	0.39				0.07		0.31	
v/s Ratio Perm		0.65		c0.85				c0.75	0.26	0.36		
v/c Ratio		1.60		1.90	0.71			1.97	0.69	0.96	0.80	
Uniform Delay, d1		44.6		50.4	25.4			46.5	30.5	45.3	41.5	
Progression Factor		0.59		0.81	0.88			1.00	1.00	1.00	1.00	
Incremental Delay, d2		272.8		415.3	1.5			464.1	3.2	36.5	7.6	
Delay (s)		299.0		456.3	23.9			510.6	33.7	81.8	49.1	
Level of Service		F		F	C			F	C	F	D	
Approach Delay (s)		299.0			126.1			181.2			61.9	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM Average Control Delay	187.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	140.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



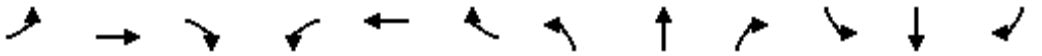
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	2403	110	37	1732	11	147	1	40	15	1	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3416		1719	3435			1692			1600	
Flt Permitted	0.07	1.00		0.04	1.00			0.67			0.94	
Satd. Flow (perm)	128	3416		64	3435			1170			1515	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	74	2670	122	41	1924	12	163	1	44	17	1	69
RTOR Reduction (vph)	0	2	0	0	0	0	0	7	0	0	30	0
Lane Group Flow (vph)	74	2790	0	41	1936	0	0	201	0	0	57	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	113.8	113.8		113.8	113.8			24.6			24.6	
Effective Green, g (s)	113.8	113.8		113.8	113.8			24.6			24.6	
Actuated g/C Ratio	0.76	0.76		0.76	0.76			0.16			0.16	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	97	2592		49	2606			192			248	
v/s Ratio Prot		c0.82			0.56							
v/s Ratio Perm	0.58			0.64				c0.17			0.04	
v/c Ratio	0.76	1.08		0.84	0.74			1.05			0.23	
Uniform Delay, d1	10.4	18.1		12.0	10.0			62.7			54.5	
Progression Factor	0.58	0.59		1.33	0.99			1.00			1.00	
Incremental Delay, d2	5.1	35.2		80.8	1.8			78.3			0.8	
Delay (s)	11.1	45.8		96.7	11.7			141.0			55.2	
Level of Service	B	D		F	B			F			E	
Approach Delay (s)		44.9			13.5			141.0			55.2	
Approach LOS		D			B			F			E	

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	157	1291	363	100	853	74	186	276	54	202	412	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3397		1719	1810	1538	1719	1810	1538
Flt Permitted	0.12	1.00	1.00	0.06	1.00		0.10	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	223	3438	1538	117	3397		186	1810	1538	578	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	174	1434	403	111	948	82	207	307	60	224	458	130
RTOR Reduction (vph)	0	0	48	0	4	0	0	0	35	0	0	41
Lane Group Flow (vph)	174	1434	355	111	1026	0	207	307	25	224	458	89
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	80.2	67.5	82.5	68.6	61.7		54.0	39.0	45.9	52.0	38.0	50.7
Effective Green, g (s)	80.2	67.5	82.5	68.6	61.7		54.0	39.0	45.9	52.0	38.0	50.7
Actuated g/C Ratio	0.53	0.45	0.55	0.46	0.41		0.36	0.26	0.31	0.35	0.25	0.34
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	246	1547	846	127	1397		220	471	471	307	459	520
v/s Ratio Prot	c0.06	c0.42	0.04	0.04	0.30		c0.09	0.17	0.00	0.07	c0.25	0.01
v/s Ratio Perm	0.32		0.19	0.36			0.24		0.01	0.18		0.04
v/c Ratio	0.71	0.93	0.42	0.87	0.73		0.94	0.65	0.05	0.73	1.00	0.17
Uniform Delay, d1	25.3	38.9	19.7	33.2	37.2		42.4	49.5	36.7	38.7	56.0	34.9
Progression Factor	1.49	1.02	0.99	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	1.3	0.0	45.5	3.5		44.8	3.8	0.1	9.3	41.2	0.2
Delay (s)	38.6	41.2	19.5	78.7	40.7		87.2	53.2	36.8	48.0	97.2	35.1
Level of Service	D	D	B	E	D		F	D	D	D	F	D
Approach Delay (s)		36.6			44.4			63.8			73.7	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	48.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



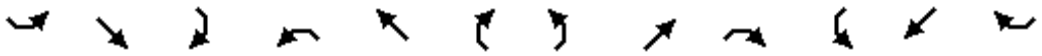
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	120	67	102	72	83	156	1167	198	85	1455	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.70	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1276	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	133	74	113	80	92	173	1297	220	94	1617	260
RTOR Reduction (vph)	0	67	0	0	0	82	0	0	104	0	0	137
Lane Group Flow (vph)	120	140	0	113	80	10	173	1297	116	94	1617	123
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	11.0	7.8		4.0	8.6	8.6	11.8	42.2	42.2	5.0	35.4	35.4
Effective Green, g (s)	11.0	7.8		4.0	8.6	8.6	11.8	42.2	42.2	5.0	35.4	35.4
Actuated g/C Ratio	0.14	0.10		0.05	0.11	0.11	0.15	0.53	0.53	0.06	0.44	0.44
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	193	317		167	195	165	254	2606	811	208	2186	681
v/s Ratio Prot	0.02	0.04		c0.03	0.04		c0.10	0.26		0.03	c0.33	
v/s Ratio Perm	c0.06					0.01			0.08			0.08
v/c Ratio	0.62	0.44		0.68	0.41	0.06	0.68	0.50	0.14	0.45	0.74	0.18
Uniform Delay, d1	32.1	34.0		37.4	33.3	32.1	32.3	12.1	9.7	36.2	18.5	13.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.07	1.10	2.12	1.00	1.00	1.00
Incremental Delay, d2	7.4	2.0		11.8	2.8	0.3	5.9	0.5	0.3	2.5	2.3	0.6
Delay (s)	39.5	36.0		49.2	36.2	32.4	40.6	13.8	20.7	38.6	20.8	14.1
Level of Service	D	D		D	D	C	D	B	C	D	C	B
Approach Delay (s)		37.3			40.1			17.5			20.7	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



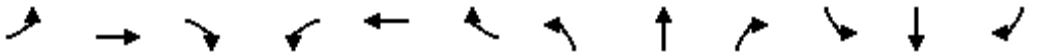
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	393	152	1254	370	142	1128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4771		1719	4940
Flt Permitted	0.95	1.00	1.00		0.21	1.00
Satd. Flow (perm)	1719	1538	4771		387	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	437	169	1393	411	158	1253
RTOR Reduction (vph)	0	15	133	0	0	0
Lane Group Flow (vph)	437	154	1671	0	158	1253
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	9.0	9.0	18.7		18.7	18.7
Effective Green, g (s)	9.0	9.0	18.7		18.7	18.7
Actuated g/C Ratio	0.22	0.22	0.47		0.47	0.47
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	387	346	2230		181	2309
v/s Ratio Prot	c0.25		0.35			0.25
v/s Ratio Perm		0.10			c0.41	
v/c Ratio	1.13	0.45	0.75		0.87	0.54
Uniform Delay, d1	15.5	13.4	8.7		9.6	7.6
Progression Factor	1.00	1.00	0.85		1.00	1.00
Incremental Delay, d2	85.7	1.8	1.6		40.1	0.9
Delay (s)	101.2	15.2	9.0		49.7	8.5
Level of Service	F	B	A		D	A
Approach Delay (s)	77.2		9.0			13.1
Approach LOS	E		A			B

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



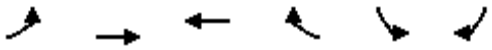
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	93	1766	117	31	1289	10	88	53	68	62	21	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3148		1719	1810	2707
Flt Permitted	0.10	1.00	1.00	0.07	1.00	1.00	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	183	3438	1538	125	3438	1538	3335	3148		1810	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	103	1962	130	34	1432	11	98	59	76	69	23	56
RTOR Reduction (vph)	0	0	47	0	0	5	0	71	0	0	0	49
Lane Group Flow (vph)	103	1962	83	34	1432	6	98	64	0	69	23	7
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	69.7	61.7	61.7	61.2	57.7	57.7	8.0	6.0		10.0	4.0	12.0
Effective Green, g (s)	69.7	61.7	61.7	61.2	57.7	57.7	8.0	6.0		10.0	4.0	12.0
Actuated g/C Ratio	0.70	0.62	0.62	0.61	0.58	0.58	0.08	0.06		0.10	0.04	0.12
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	250	2117	947	132	1980	886	266	189		175	72	324
v/s Ratio Prot	c0.03	c0.57		0.01	0.42		c0.03	c0.02		0.02	0.01	0.00
v/s Ratio Perm	0.25		0.05	0.15		0.00				0.02		0.00
v/c Ratio	0.41	0.93	0.09	0.26	0.72	0.01	0.37	0.34		0.39	0.32	0.02
Uniform Delay, d1	10.6	17.2	7.8	17.0	15.4	9.1	43.7	45.2		42.3	46.8	38.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.7	7.9	0.1	1.6	1.6	0.0	1.4	3.3		2.3	7.8	0.0
Delay (s)	12.4	25.2	7.9	18.6	17.1	9.1	45.1	48.5		44.6	54.6	39.0
Level of Service	B	C	A	B	B	A	D	D		D	D	D
Approach Delay (s)		23.6			17.0			47.0			44.0	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.2	Sum of lost time (s)	16.5
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	803	675	0	928	733	0	0	0	287	474	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	227	892	750	0	1031	814	0	0	0	319	527	318
RTOR Reduction (vph)	0	0	68	0	0	10	0	0	0	0	0	152
Lane Group Flow (vph)	227	892	682	0	1031	804	0	0	0	319	527	166
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	10.2	61.1	61.1		45.1	82.9				37.8	37.8	37.8
Effective Green, g (s)	10.2	61.1	61.1		45.1	82.9				37.8	37.8	37.8
Actuated g/C Ratio	0.09	0.56	0.56		0.41	0.75				0.34	0.34	0.34
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	309	1910	854		1410	1159				591	622	529
v/s Ratio Prot	0.07	0.26			0.30	0.24					c0.29	
v/s Ratio Perm			c0.44			0.28				0.19		0.11
v/c Ratio	0.73	0.47	0.80		0.73	0.69				0.54	0.85	0.31
Uniform Delay, d1	48.6	14.7	19.5		27.3	7.0				29.1	33.4	26.6
Progression Factor	1.00	1.00	1.00		0.63	0.80				1.00	1.00	1.00
Incremental Delay, d2	9.6	0.8	7.7		2.4	1.5				1.4	11.0	0.5
Delay (s)	58.2	15.5	27.3		19.6	7.1				30.5	44.4	27.1
Level of Service	E	B	C		B	A				C	D	C
Approach Delay (s)		25.4			14.1			0.0			35.9	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	23.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

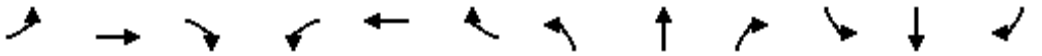


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1090	1350	0	446	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1211	1500	0	496	346
RTOR Reduction (vph)	0	0	0	0	0	26
Lane Group Flow (vph)	0	1211	1500	0	496	320
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		61.6	61.6		37.5	37.5
Effective Green, g (s)		61.6	61.6		37.5	37.5
Actuated g/C Ratio		0.56	0.56		0.34	0.34
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1925	1925		586	923
v/s Ratio Prot		0.35	c0.44		c0.29	
v/s Ratio Perm						0.12
v/c Ratio		0.63	0.78		0.85	0.35
Uniform Delay, d1		16.4	18.9		33.6	27.1
Progression Factor		0.86	1.01		1.00	1.00
Incremental Delay, d2		1.4	2.3		11.5	0.4
Delay (s)		15.6	21.3		45.1	27.5
Level of Service		B	C		D	C
Approach Delay (s)		15.6	21.3		37.9	
Approach LOS		B	C		D	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	104.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

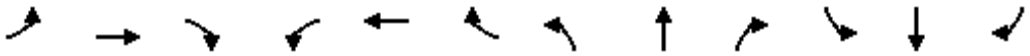
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	557	0	0	621	1329	732
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	619	0	0	690	1477	813
RTOR Reduction (vph)	0	0	0	0	0	21
Lane Group Flow (vph)	619	0	0	690	1477	792
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	31.8			31.8	67.4	67.4
Effective Green, g (s)	31.8			31.8	67.4	67.4
Actuated g/C Ratio	0.29			0.29	0.61	0.61
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	994			994	2043	942
v/s Ratio Prot	0.18			c0.20	0.44	
v/s Ratio Perm						c0.52
v/c Ratio	0.62			0.69	0.72	0.84
Uniform Delay, d1	33.9			34.8	14.8	17.0
Progression Factor	0.70			0.84	1.00	1.00
Incremental Delay, d2	2.2			3.2	1.4	7.3
Delay (s)	26.1			32.5	16.2	24.3
Level of Service	C			C	B	C
Approach Delay (s)	26.1			32.5	19.1	
Approach LOS	C			C	B	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	135.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	855	378	310	1157	20	220	17	294	27	13	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.95		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1719	3280		1719	3429			1729	1538		1672	
Flt Permitted	0.21	1.00		0.08	1.00			0.73	1.00		0.70	
Satd. Flow (perm)	381	3280		136	3429			1316	1538		1189	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	950	420	344	1286	22	244	19	327	30	14	33
RTOR Reduction (vph)	0	45	0	0	1	0	0	0	253	0	25	0
Lane Group Flow (vph)	62	1325	0	344	1307	0	0	263	74	0	52	0
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	46.6	46.6		72.1	72.1			24.9	24.9		24.9	
Effective Green, g (s)	46.6	46.6		72.1	72.1			24.9	24.9		24.9	
Actuated g/C Ratio	0.42	0.42		0.66	0.66			0.23	0.23		0.23	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	161	1390		360	2248			298	348		269	
v/s Ratio Prot		0.40		c0.16	0.38							
v/s Ratio Perm	0.16			c0.46				c0.20	0.05		0.04	
v/c Ratio	0.39	0.95		0.96	0.58			0.88	0.21		0.19	
Uniform Delay, d1	21.8	30.6		35.1	10.5			41.1	34.6		34.4	
Progression Factor	0.73	0.67		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	4.5	11.3		36.0	1.1			25.8	0.5		0.6	
Delay (s)	20.5	31.9		71.1	11.7			66.9	35.1		35.0	
Level of Service	C	C		E	B			E	D		C	
Approach Delay (s)		31.4			24.0			49.3			35.0	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

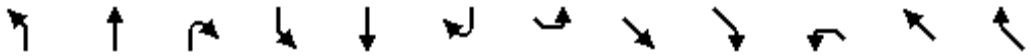


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	0	4	34	0	99	7	674	17	79	991	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.90		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1607		1719	3425		1719	3429	
Flt Permitted		0.53	1.00		0.91		0.24	1.00		0.36	1.00	
Satd. Flow (perm)		965	1538		1478		429	3425		649	3429	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	13	0	4	38	0	110	8	749	19	88	1101	19
RTOR Reduction (vph)	0	0	4	0	98	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	13	0	0	50	0	8	767	0	88	1119	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		9.9	9.9		9.9		68.1	68.1		68.1	68.1	
Effective Green, g (s)		9.9	9.9		9.9		68.1	68.1		68.1	68.1	
Actuated g/C Ratio		0.11	0.11		0.11		0.76	0.76		0.76	0.76	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		4.3	4.3		4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)		106	169		163		325	2592		491	2595	
v/s Ratio Prot								0.22			c0.33	
v/s Ratio Perm		0.01	0.00		c0.03		0.02			0.14		
v/c Ratio		0.12	0.00		0.31		0.02	0.30		0.18	0.43	
Uniform Delay, d1		36.1	35.7		36.9		2.7	3.4		3.1	4.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.37	0.38	
Incremental Delay, d2		0.8	0.0		1.7		0.1	0.3		0.7	0.5	
Delay (s)		37.0	35.7		38.6		2.9	3.7		1.8	2.0	
Level of Service		D	D		D		A	A		A	A	
Approach Delay (s)		36.7			38.6			3.7			1.9	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

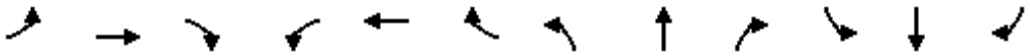
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	730	75	388	663	0	412	0	419	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0		6.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Frt		0.99		1.00	1.00		1.00		0.85			
Flt Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3390		1719	3438		1719		1538			
Flt Permitted		1.00		0.12	1.00		0.95		1.00			
Satd. Flow (perm)		3390		225	3438		1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	811	83	431	737	0	458	0	466	0	0	0
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	141	0	0	0
Lane Group Flow (vph)	0	885	0	431	737	0	458	0	325	0	0	0
Turn Type				pm+pt			Prot		custom			
Protected Phases		2		1	6		4					
Permitted Phases				6					4			
Actuated Green, G (s)		26.1		51.7	51.7		26.3		26.3			
Effective Green, g (s)		26.1		51.7	51.7		26.3		26.3			
Actuated g/C Ratio		0.29		0.57	0.57		0.29		0.29			
Clearance Time (s)		6.0		6.0	6.0		6.0		6.0			
Vehicle Extension (s)		4.3		4.3	4.3		4.3		4.3			
Lane Grp Cap (vph)		983		455	1975		502		449			
v/s Ratio Prot		0.26		c0.21	0.21		c0.27					
v/s Ratio Perm				c0.34					0.21			
v/c Ratio		0.90		0.95	0.37		0.91		0.72			
Uniform Delay, d1		30.7		24.8	10.4		30.7		28.6			
Progression Factor		0.89		0.51	0.88		1.00		1.00			
Incremental Delay, d2		12.6		25.5	0.4		21.4		6.3			
Delay (s)		39.9		38.0	9.5		52.1		34.9			
Level of Service		D		D	A		D		C			
Approach Delay (s)		39.9			20.1			43.5			0.0	
Approach LOS		D			C			D			A	

Intersection Summary			
HCM Average Control Delay	33.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



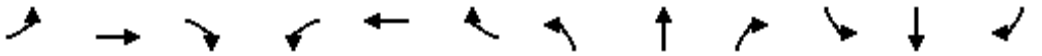
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	268	874	0	0	1009	756	0	0	0	42	0	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1719	3438			3438	1538				1719		1538
Flt Permitted	0.16	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	282	3438			3438	1538				1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	298	971	0	0	1121	840	0	0	0	47	0	244
RTOR Reduction (vph)	0	0	0	0	0	318	0	0	0	0	0	149
Lane Group Flow (vph)	298	971	0	0	1121	522	0	0	0	47	0	95
Turn Type	pm+pt					custom				custom		custom
Protected Phases	5	2										8
Permitted Phases	2				6	6				8		
Actuated Green, G (s)	66.6	66.6			47.6	47.6				11.4		11.4
Effective Green, g (s)	66.6	66.6			47.6	47.6				11.4		11.4
Actuated g/C Ratio	0.74	0.74			0.53	0.53				0.13		0.13
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Vehicle Extension (s)	4.3	4.3			4.3	4.3				4.3		4.3
Lane Grp Cap (vph)	416	2544			1818	813				218		195
v/s Ratio Prot	c0.10	0.28										c0.06
v/s Ratio Perm	c0.43				0.33	0.34				0.03		
v/c Ratio	0.72	0.38			0.62	0.64				0.22		0.49
Uniform Delay, d1	11.2	4.2			14.8	15.1				35.3		36.6
Progression Factor	0.61	0.78			1.00	1.00				1.00		1.00
Incremental Delay, d2	2.8	0.2			1.6	3.9				0.8		3.0
Delay (s)	9.6	3.5			16.4	19.0				36.1		39.6
Level of Service	A	A			B	B				D		D
Approach Delay (s)		4.9			17.5			0.0			39.0	
Approach LOS		A			B			A			D	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



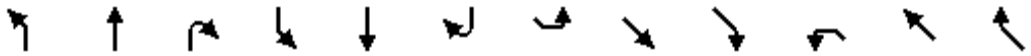
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	12	366	592	50	54	174	1224	189	13	950	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1546		1633	1649	1538	1719	3438	1538	1719	3425	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.10	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	1719	1546		1633	1649	1538	172	3438	1538	201	3425	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	13	407	658	56	60	193	1360	210	14	1056	28
RTOR Reduction (vph)	0	130	0	0	0	20	0	0	106	0	2	0
Lane Group Flow (vph)	28	290	0	355	359	40	193	1360	104	14	1082	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	18.0	18.0		23.0	23.0	23.0	51.0	51.0	51.0	36.0	36.0	
Effective Green, g (s)	18.0	18.0		23.0	23.0	23.0	51.0	51.0	51.0	36.0	36.0	
Actuated g/C Ratio	0.16	0.16		0.21	0.21	0.21	0.46	0.46	0.46	0.33	0.33	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	281	253		341	345	322	206	1594	713	66	1121	
v/s Ratio Prot	0.02	c0.19		0.22	c0.22		0.08	c0.40			0.32	
v/s Ratio Perm						0.03	c0.36		0.07	0.07		
v/c Ratio	0.10	1.14		1.04	1.04	0.12	0.94	0.85	0.15	0.21	0.97	
Uniform Delay, d1	39.1	46.0		43.5	43.5	35.3	27.3	26.2	17.0	26.7	36.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.78	0.94	1.01	1.00	1.00	
Incremental Delay, d2	0.3	101.2		59.8	59.4	0.4	39.7	4.9	0.3	7.2	19.7	
Delay (s)	39.4	147.2		103.3	102.9	35.7	61.1	29.5	17.6	33.9	56.1	
Level of Service	D	F		F	F	D	E	C	B	C	E	
Approach Delay (s)		140.4			97.9			31.5			55.8	
Approach LOS		F			F			C			E	

Intersection Summary			
HCM Average Control Delay	62.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	115.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



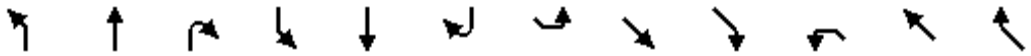
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	426	0	470	333	1117	0	0	1416	492
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	473	0	522	370	1241	0	0	1573	547
RTOR Reduction (vph)	0	0	0	0	0	156	0	0	0	0	0	234
Lane Group Flow (vph)	0	0	0	236	237	366	370	1241	0	0	1573	313
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				19.4	19.4	19.4	14.7	78.6			57.9	57.9
Effective Green, g (s)				19.4	19.4	19.4	14.7	78.6			57.9	57.9
Actuated g/C Ratio				0.18	0.18	0.18	0.13	0.71			0.53	0.53
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				288	288	477	446	2457			1810	810
v/s Ratio Prot							c0.11	0.36			c0.46	
v/s Ratio Perm				0.14	0.15	0.14						0.20
v/c Ratio				0.82	0.82	0.77	0.83	0.51			0.87	0.39
Uniform Delay, d1				43.6	43.6	43.2	46.4	7.0			22.7	15.5
Progression Factor				1.00	1.00	1.00	1.11	0.75			0.69	1.10
Incremental Delay, d2				18.3	18.8	8.5	5.6	0.3			0.6	0.1
Delay (s)				61.9	62.4	51.6	57.3	5.5			16.2	17.2
Level of Service				E	E	D	E	A			B	B
Approach Delay (s)		0.0			56.6			17.4			16.5	
Approach LOS		A			E			B			B	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	115.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1010	663	1133	709	0	440	0	443	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.15	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	275	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1122	737	1259	788	0	489	0	492	0	0	0
RTOR Reduction (vph)	0	0	172	0	0	0	0	0	439	0	0	0
Lane Group Flow (vph)	0	1122	565	1259	788	0	244	245	53	0	0	0
Turn Type			Perm	pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		35.6	35.6	86.2	85.6		11.9	11.9	11.9			
Effective Green, g (s)		35.6	35.6	86.2	85.6		11.9	11.9	11.9			
Actuated g/C Ratio		0.32	0.32	0.78	0.78		0.11	0.11	0.11			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1599	498	796	2675		177	177	293			
v/s Ratio Prot		0.23		c0.64	0.23							
v/s Ratio Perm			0.37	c0.60			0.15	0.15	0.02			
v/c Ratio		0.70	1.13	1.58	0.29		1.38	1.38	0.18			
Uniform Delay, d1		32.6	37.2	22.2	3.5		49.0	49.0	44.6			
Progression Factor		0.49	0.37	0.65	0.84		1.00	1.00	1.00			
Incremental Delay, d2		1.7	75.6	264.7	0.1		201.6	203.9	0.6			
Delay (s)		17.6	89.4	279.2	3.1		250.7	253.0	45.2			
Level of Service		B	F	F	A		F	F	D			
Approach Delay (s)		46.1			172.9			148.2			0.0	
Approach LOS		D			F			F			A	

Intersection Summary			
HCM Average Control Delay	119.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	115.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	104	1041	1	6	771	375	625	1	322	4	1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1719	4939			3437	1538	1719	1539			1740	1538
Flt Permitted	0.12	1.00			0.94	1.00	0.75	1.00			0.86	1.00
Satd. Flow (perm)	214	4939			3233	1538	1365	1539			1554	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	1157	1	7	857	417	694	1	358	4	1	8
RTOR Reduction (vph)	0	0	0	0	0	290	0	73	0	0	0	4
Lane Group Flow (vph)	116	1158	0	0	864	127	694	286	0	0	5	4
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	43.6	43.6			33.6	33.6	53.9	53.9			53.9	53.9
Effective Green, g (s)	43.6	43.6			33.6	33.6	53.9	53.9			53.9	53.9
Actuated g/C Ratio	0.40	0.40			0.31	0.31	0.49	0.49			0.49	0.49
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	142	1958			988	470	669	754			761	754
v/s Ratio Prot	0.03	c0.23						0.19				
v/s Ratio Perm	c0.29				0.27	0.08	c0.51				0.00	0.00
v/c Ratio	0.82	0.59			0.87	0.27	1.04	0.38			0.01	0.01
Uniform Delay, d1	27.5	26.2			36.2	28.9	28.1	17.6			14.4	14.3
Progression Factor	0.98	1.00			1.20	2.66	1.00	1.00			1.00	1.00
Incremental Delay, d2	20.8	0.8			9.9	1.3	44.8	0.6			0.0	0.0
Delay (s)	47.6	27.0			53.2	78.2	72.9	18.2			14.4	14.3
Level of Service	D	C			D	E	E	B			B	B
Approach Delay (s)		28.9			61.3			54.2			14.4	
Approach LOS		C			E			D			B	

Intersection Summary			
HCM Average Control Delay	47.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	107.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	53	119	37	2067	1654	53
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	59	132	41	2297	1838	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1013	
pX, platoon unblocked	0.69	0.69	0.69			
vC, conflicting volume	3098	948	1897			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3141	37	1407			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	81	87			
cM capacity (veh/h)	5	704	323			

Direction, Lane #	WB 1	SE 1	SE 2	SE 3	NW 1	NW 2
Volume Total	191	41	1148	1148	1225	671
Volume Left	59	41	0	0	0	0
Volume Right	132	0	0	0	0	59
cSH	15	323	1700	1700	1700	1700
Volume to Capacity	12.39	0.13	0.68	0.68	0.72	0.39
Queue Length 95th (ft)	Err	11	0	0	0	0
Control Delay (s)	Err	17.8	0.0	0.0	0.0	0.0
Lane LOS	F	C				
Approach Delay (s)	Err	0.3			0.0	
Approach LOS	F					

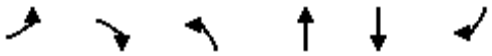
Intersection Summary			
Average Delay	432.0		
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	1710	410	87	1340	367	266
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1900	456	97	1489	408	296
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				860		
pX, platoon unblocked					0.68	
vC, conflicting volume			2356		3066	1178
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2356		3097	1178
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			51		0	0
cM capacity (veh/h)			196		3	179

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	1267	1089	593	993	703
Volume Left	0	0	97	0	408
Volume Right	0	456	0	0	296
cSH	1700	1700	196	1700	5
Volume to Capacity	0.75	0.64	0.49	0.58	140.22
Queue Length 95th (ft)	0	0	61	0	Err
Control Delay (s)	0.0	0.0	29.9	0.0	Err
Lane LOS			D		F
Approach Delay (s)	0.0		11.2		Err
Approach LOS					F

Intersection Summary			
Average Delay	1518.0		
Intersection Capacity Utilization	145.8%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	6	1	784	1081	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	23	7	1	871	1201	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1176	378	
pX, platoon unblocked	0.89	0.89	0.89			
vC, conflicting volume	1639	601	1202			
vC1, stage 1 conf vol	1202					
vC2, stage 2 conf vol	438					
vCu, unblocked vol	1401	294	972			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	99	100			
cM capacity (veh/h)	265	615	609			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	30	1	436	436	801	401
Volume Left	23	1	0	0	0	0
Volume Right	7	0	0	0	0	1
cSH	341	609	1700	1700	1700	1700
Volume to Capacity	0.09	0.00	0.26	0.26	0.47	0.24
Queue Length 95th (ft)	7	0	0	0	0	0
Control Delay (s)	17.9	10.9	0.0	0.0	0.0	0.0
Lane LOS	C	B				
Approach Delay (s)	17.9	0.0			0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	57	65	1090	4	57	1708
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	63	72	1211	4	63	1898
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			371			
pX, platoon unblocked	0.90	0.90			0.90	
vC, conflicting volume	2289	608			1216	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2208	337			1014	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	88			89	
cM capacity (veh/h)	29	584			595	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	136	807	408	63	949	949
Volume Left	63	0	0	63	0	0
Volume Right	72	0	4	0	0	0
cSH	59	1700	1700	595	1700	1700
Volume to Capacity	2.31	0.47	0.24	0.11	0.56	0.56
Queue Length 95th (ft)	335	0	0	9	0	0
Control Delay (s)	747.6	0.0	0.0	11.8	0.0	0.0
Lane LOS	F			B		
Approach Delay (s)	747.6	0.0		0.4		
Approach LOS	F					

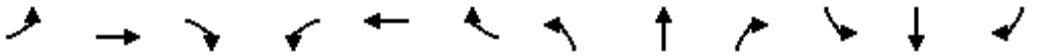
Intersection Summary			
Average Delay	30.8		
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	17	1134	4	1	1557	10	2	0	190	18	0	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	19	1260	4	1	1730	11	2	0	211	20	0	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		939										
pX, platoon unblocked				0.92			0.92	0.92		0.92	0.92	0.92
vC, conflicting volume	1741			1264			2410	3040	871	2378	3043	632
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1741			1107			2356	3044	871	2322	3047	417
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			86	100	27	0	100	99
cM capacity (veh/h)	344			559			16	10	289	5	10	528

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SE 1	SE 2	NW 1	NW 2
Volume Total	19	840	424	866	876	2	211	20	4
Volume Left	19	0	0	1	0	2	0	20	0
Volume Right	0	0	4	0	11	0	211	0	4
cSH	344	1700	1700	559	1700	16	289	5	528
Volume to Capacity	0.05	0.49	0.25	0.00	0.52	0.14	0.73	4.42	0.01
Queue Length 95th (ft)	4	0	0	0	0	10	132	Err	1
Control Delay (s)	16.1	0.0	0.0	0.1	0.0	269.0	45.2	Err	11.9
Lane LOS	C			A		F	E	F	B
Approach Delay (s)	0.2			0.0		47.5		8183.2	
Approach LOS						E		F	

Intersection Summary				
Average Delay	64.5			
Intersection Capacity Utilization	68.5%	ICU Level of Service		C
Analysis Period (min)	15			

CAPACITY ANALYSIS (SYNCHRO)
2035 BUILD ALTERNATE 4A CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	614	339	348	362	59	420	1317	261	292	1386	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3255		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.35	1.00		0.16	1.00	1.00	0.11	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	636	3255		290	3438	1538	200	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	213	682	377	387	402	66	467	1463	290	324	1540	166
RTOR Reduction (vph)	0	30	0	0	0	54	0	0	79	0	0	57
Lane Group Flow (vph)	213	1029	0	387	402	12	467	1463	211	324	1540	109
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	36.0	23.0		40.0	25.0	25.0	72.0	72.0	72.0	9.0	86.0	86.0
Effective Green, g (s)	36.0	23.0		40.0	25.0	25.0	72.0	72.0	72.0	9.0	86.0	86.0
Actuated g/C Ratio	0.26	0.16		0.29	0.18	0.18	0.51	0.51	0.51	0.06	0.61	0.61
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	264	535		236	614	275	103	1768	791	214	2112	945
v/s Ratio Prot	0.07	c0.32		c0.18	0.12			0.43		c0.10	0.45	
v/s Ratio Perm	0.13			0.29		0.01	c2.34		0.14			0.07
v/c Ratio	0.81	1.92		1.64	0.65	0.04	4.53	0.83	0.27	1.51	0.73	0.12
Uniform Delay, d1	45.2	58.5		44.2	53.5	47.6	34.0	28.7	19.1	65.5	18.9	11.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.40	0.12	0.00
Incremental Delay, d2	17.6	422.3		306.3	3.7	0.2	1612.4	4.6	0.8	233.5	0.2	0.0
Delay (s)	62.9	480.8		350.5	57.2	47.8	1646.4	33.4	20.0	325.0	2.6	0.0
Level of Service	E	F		F	E	D	F	C	B	F	A	A
Approach Delay (s)		410.8			189.2			370.9			53.8	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM Average Control Delay	253.6	HCM Level of Service	F
HCM Volume to Capacity ratio	3.56		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	127.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	29	1215	40	90	888	46	40	2	86	12	2	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3422		1719	3438	1538	1719	1544		1719	1810	1538
Flt Permitted	0.21	1.00		0.19	1.00	1.00	0.76	1.00		0.69	1.00	1.00
Satd. Flow (perm)	385	3422		349	3438	1538	1369	1544		1255	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	1350	44	100	987	51	44	2	96	13	2	20
RTOR Reduction (vph)	0	3	0	0	0	22	0	80	0	0	0	17
Lane Group Flow (vph)	32	1391	0	100	987	29	44	18	0	13	2	3
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	54.0	54.0		42.7	42.7	42.7	8.0	8.0		8.0	8.0	12.8
Effective Green, g (s)	54.0	54.0		42.7	42.7	42.7	8.0	8.0		8.0	8.0	12.8
Actuated g/C Ratio	0.72	0.72		0.57	0.57	0.57	0.11	0.11		0.11	0.11	0.17
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	363	2464		199	1957	876	146	165		134	193	396
v/s Ratio Prot	0.01	c0.41			0.29			0.01			0.00	0.00
v/s Ratio Perm	0.06			0.29		0.02	c0.03			0.01		0.00
v/c Ratio	0.09	0.56		0.50	0.50	0.03	0.30	0.11		0.10	0.01	0.01
Uniform Delay, d1	4.2	5.0		9.7	9.8	7.1	30.9	30.3		30.2	30.0	25.8
Progression Factor	1.00	1.00		0.50	0.45	0.60	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.2	0.9		7.6	0.8	0.1	2.8	0.7		0.8	0.1	0.0
Delay (s)	4.4	5.9		12.5	5.2	4.3	33.8	31.0		31.0	30.0	25.8
Level of Service	A	A		B	A	A	C	C		C	C	C
Approach Delay (s)		5.9			5.8			31.8			28.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	6	2	42	2	2	10	14	909	73	87	1238	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.89			1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.98	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1595			1765	1538	1719	3400		1719	3438	1538
Flt Permitted		0.96			0.85	1.00	0.17	1.00		0.25	1.00	1.00
Satd. Flow (perm)		1539			1544	1538	316	3400		453	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	2	47	2	2	11	16	1010	81	97	1376	7
RTOR Reduction (vph)	0	42	0	0	0	10	0	8	0	0	0	2
Lane Group Flow (vph)	0	14	0	0	4	1	16	1083	0	97	1376	5
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		7.4			7.4	7.4	56.3	56.3		56.3	56.3	56.3
Effective Green, g (s)		7.4			7.4	7.4	56.3	56.3		56.3	56.3	56.3
Actuated g/C Ratio		0.10			0.10	0.10	0.75	0.75		0.75	0.75	0.75
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		152			152	152	237	2552		340	2581	1155
v/s Ratio Prot								0.32			c0.40	
v/s Ratio Perm		c0.01			0.00	0.00	0.05			0.21		0.00
v/c Ratio		0.09			0.03	0.01	0.07	0.42		0.29	0.53	0.00
Uniform Delay, d1		30.7			30.5	30.5	2.5	3.4		3.0	3.9	2.3
Progression Factor		1.00			1.00	1.00	0.49	0.86		0.55	0.63	0.65
Incremental Delay, d2		0.4			0.1	0.0	0.5	0.4		1.7	0.7	0.0
Delay (s)		31.1			30.7	30.5	1.7	3.4		3.4	3.1	1.5
Level of Service		C			C	C	A	A		A	A	A
Approach Delay (s)		31.1			30.6			3.4			3.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	4.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	55	7	93	33	7	4	19	811	123	250	1272	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.86		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1558		1719	1719		1719	3370		1719	3416	
Flt Permitted	0.69	1.00		0.51	1.00		0.15	1.00		0.21	1.00	
Satd. Flow (perm)	1249	1558		921	1719		274	3370		381	3416	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	8	103	37	8	4	21	901	137	278	1413	62
RTOR Reduction (vph)	0	96	0	0	4	0	0	6	0	0	2	0
Lane Group Flow (vph)	61	15	0	37	8	0	21	1032	0	278	1473	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	15.7	10.1		14.1	9.3		98.8	94.9		117.1	107.2	
Effective Green, g (s)	15.7	10.1		14.1	9.3		98.8	94.9		117.1	107.2	
Actuated g/C Ratio	0.10	0.07		0.09	0.06		0.66	0.63		0.78	0.71	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	148	105		112	107		218	2132		442	2441	
v/s Ratio Prot	c0.02	0.01		0.01	0.00		0.00	0.31		c0.07	0.43	
v/s Ratio Perm	c0.03			0.02			0.06			c0.42		
v/c Ratio	0.41	0.14		0.33	0.08		0.10	0.48		0.63	0.60	
Uniform Delay, d1	62.3	65.9		62.9	66.3		9.6	14.6		8.6	10.7	
Progression Factor	1.00	1.00		1.00	1.00		0.94	1.15		0.88	0.71	
Incremental Delay, d2	2.9	1.0		2.7	0.5		0.3	0.7		2.9	0.9	
Delay (s)	65.3	66.9		65.7	66.8		9.2	17.4		10.4	8.5	
Level of Service	E	E		E	E		A	B		B	A	
Approach Delay (s)		66.3			65.9			17.3			8.8	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations											
Volume (vph)	540	0	299	0	813	124	712	1279	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95			
Frt	1.00		0.85		1.00	0.85	1.00	1.00			
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00			
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438			
Flt Permitted	0.95		1.00		1.00	1.00	0.08	1.00			
Satd. Flow (perm)	3335		2707		3438	1538	144	3438			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	600	0	332	0	903	138	791	1421	0	0	0
RTOR Reduction (vph)	0	0	129	0	0	77	0	0	0	0	0
Lane Group Flow (vph)	600	0	203	0	903	61	791	1421	0	0	0
Turn Type	custom		custom			Perm	pm+pt				
Protected Phases					2		1	6			
Permitted Phases	4		4			2	6				
Actuated Green, G (s)	26.0		26.0		43.7	43.7	112.9	112.9			
Effective Green, g (s)	26.0		26.0		43.7	43.7	112.9	112.9			
Actuated g/C Ratio	0.17		0.17		0.29	0.29	0.75	0.75			
Clearance Time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Vehicle Extension (s)	4.3		4.3		4.3	4.3	4.3	4.3			
Lane Grp Cap (vph)	578		469		1002	448	765	2588			
v/s Ratio Prot					0.26		c0.43	0.41			
v/s Ratio Perm	c0.18		0.08			0.04	c0.35				
v/c Ratio	1.04		0.43		0.90	0.14	1.03	0.55			
Uniform Delay, d1	62.0		55.4		51.1	39.2	39.1	7.8			
Progression Factor	1.00		1.00		0.64	0.65	0.99	0.50			
Incremental Delay, d2	47.0		1.0		11.7	0.6	35.8	0.6			
Delay (s)	109.0		56.3		44.2	26.0	74.7	4.5			
Level of Service	F		E		D	C	E	A			
Approach Delay (s)		90.2			41.8			29.6		0.0	
Approach LOS		F			D			C		A	

Intersection Summary			
HCM Average Control Delay	46.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



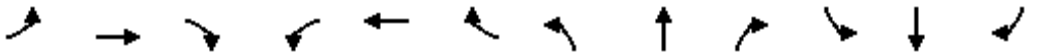
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	489	816	1098	255	0	1502
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	543	907	1220	283	0	1669
RTOR Reduction (vph)	0	275	0	105	0	0
Lane Group Flow (vph)	543	632	1220	178	0	1669
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	25.4	25.4	94.5	94.5		112.5
Effective Green, g (s)	25.4	25.4	94.5	94.5		105.5
Actuated g/C Ratio	0.17	0.17	0.63	0.63		0.70
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	565	458	2166	969		2418
v/s Ratio Prot	0.16	c0.23	0.35			c0.49
v/s Ratio Perm				0.12		
v/c Ratio	0.96	1.38	0.56	0.18		0.69
Uniform Delay, d1	61.8	62.3	15.9	11.6		12.8
Progression Factor	1.00	1.00	0.01	0.01		1.15
Incremental Delay, d2	28.4	184.3	0.3	0.1		0.4
Delay (s)	90.3	246.6	0.4	0.3		15.2
Level of Service	F	F	A	A		B
Approach Delay (s)	188.0		0.4			15.2
Approach LOS	F		A			B

Intersection Summary			
HCM Average Control Delay	64.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



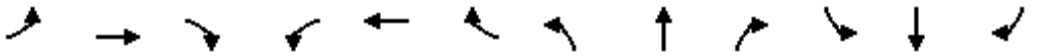
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	176	139	1663	251	206	2297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3335	1538	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.10	1.00
Satd. Flow (perm)	3335	1538	3438	1538	183	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	196	154	1848	279	229	2552
RTOR Reduction (vph)	0	53	0	44	0	0
Lane Group Flow (vph)	196	101	1848	235	229	2552
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2 3 6			2 3 6
Permitted Phases	4	4		2 3 6	2 3 6	
Actuated Green, G (s)	11.0	11.0	126.4	126.4	126.4	126.4
Effective Green, g (s)	11.0	11.0	126.4	126.4	126.4	126.4
Actuated g/C Ratio	0.07	0.07	0.84	0.84	0.84	0.84
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	245	113	2897	1296	154	2897
v/s Ratio Prot	0.06		0.54			0.74
v/s Ratio Perm		c0.07		0.15	c1.25	
v/c Ratio	0.80	0.90	0.64	0.18	1.49	0.88
Uniform Delay, d1	68.4	68.9	4.0	2.2	11.8	7.2
Progression Factor	1.00	1.00	0.63	1.34	1.12	0.76
Incremental Delay, d2	18.2	54.4	0.3	0.1	222.3	0.3
Delay (s)	86.6	123.3	2.8	3.0	235.5	5.8
Level of Service	F	F	A	A	F	A
Approach Delay (s)	102.7		2.8			24.7
Approach LOS	F		A			C

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	79.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



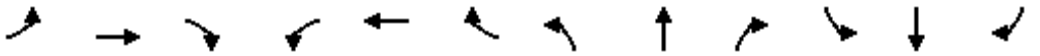
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	253	1407	142	39	2206	91	100	2	48	39	2	197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	281	1563	158	43	2451	101	111	2	53	43	2	219
RTOR Reduction (vph)	0	0	42	0	0	21	0	0	45	0	0	123
Lane Group Flow (vph)	281	1563	116	43	2451	80	111	2	8	43	2	96
Turn Type	Prot		pm+ov	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	11.9	99.3	108.5	9.5	96.9	96.9	9.2	12.0	21.5	5.4	8.2	8.2
Effective Green, g (s)	11.9	99.3	108.5	9.5	96.9	96.9	9.2	12.0	21.5	5.4	8.2	8.2
Actuated g/C Ratio	0.08	0.66	0.72	0.06	0.65	0.65	0.06	0.08	0.14	0.04	0.05	0.05
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	265	2276	1112	109	2221	994	105	145	220	120	188	84
v/s Ratio Prot	c0.08	0.45	0.01	0.03	c0.71		c0.06	0.00	c0.00	0.01	0.00	
v/s Ratio Perm			0.07			0.05			0.00			c0.06
v/c Ratio	1.06	0.69	0.10	0.39	1.10	0.08	1.06	0.01	0.03	0.36	0.01	1.14
Uniform Delay, d1	69.0	15.7	6.2	67.5	26.5	9.9	70.4	63.6	55.3	70.6	67.1	70.9
Progression Factor	1.22	0.44	0.62	0.74	0.48	0.69	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	64.4	1.3	0.0	1.5	49.9	0.1	104.1	0.1	0.1	2.9	0.0	142.4
Delay (s)	148.9	8.2	3.9	51.5	62.6	6.9	174.5	63.6	55.4	73.5	67.1	213.3
Level of Service	F	A	A	D	E	A	F	E	E	E	E	F
Approach Delay (s)		27.7			60.2			135.1			189.4	
Approach LOS		C			E			F			F	

Intersection Summary			
HCM Average Control Delay	56.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	29.9
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



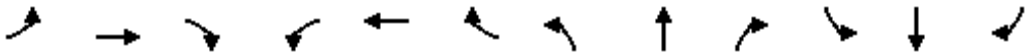
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	1024	161	152	1577	666	360	346	94	199	160	399
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	3335	1752		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.14	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	250	3438	1538	3335	1752		3335	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	343	1138	179	169	1752	740	400	384	104	221	178	443
RTOR Reduction (vph)	0	0	76	0	0	134	0	6	0	0	0	0
Lane Group Flow (vph)	343	1138	103	169	1752	606	400	482	0	221	178	443
Turn Type	Prot		Perm	pm+pt		Perm	Prot			Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6						Free
Actuated Green, G (s)	13.8	72.0	72.0	83.6	70.9	70.9	21.0	34.8		8.8	22.6	150.0
Effective Green, g (s)	13.8	72.0	72.0	83.6	70.9	70.9	21.0	34.8		8.8	22.6	150.0
Actuated g/C Ratio	0.09	0.48	0.48	0.56	0.47	0.47	0.14	0.23		0.06	0.15	1.00
Clearance Time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	307	1650	738	264	1625	727	467	406		196	273	1538
v/s Ratio Prot	c0.10	0.33		0.05	c0.51		0.12	c0.28		c0.07	0.10	
v/s Ratio Perm			0.07	0.30		0.39						c0.29
v/c Ratio	1.12	0.69	0.14	0.64	1.08	0.83	0.86	1.19		1.13	0.65	0.29
Uniform Delay, d1	68.1	30.3	21.7	21.6	39.5	34.4	63.0	57.6		70.6	60.0	0.0
Progression Factor	1.29	0.55	0.29	1.61	0.39	0.09	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	80.1	1.8	0.3	3.0	41.3	5.4	15.1	106.3		102.7	6.4	0.5
Delay (s)	168.1	18.4	6.6	37.9	56.6	8.4	78.1	163.9		173.3	66.4	0.5
Level of Service	F	B	A	D	E	A	E	F		F	E	A
Approach Delay (s)		48.0			42.0			125.3			59.8	
Approach LOS		D			D			F			E	

Intersection Summary			
HCM Average Control Delay	58.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



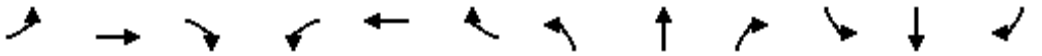
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1105	212	91	1660	0	0	0	0	1184	0	735
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		4.0
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.98		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3355		1719	3438					3335		1538
Flt Permitted		1.00		0.05	1.00					0.95		1.00
Satd. Flow (perm)		3355		99	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1228	236	101	1844	0	0	0	0	1316	0	817
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1453	0	101	1844	0	0	0	0	1316	0	817
Turn Type				pm+pt						Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		66.2		79.4	79.4					58.3		150.0
Effective Green, g (s)		66.2		79.4	79.4					58.3		150.0
Actuated g/C Ratio		0.44		0.53	0.53					0.39		1.00
Clearance Time (s)		6.6		6.6	6.6					5.7		
Vehicle Extension (s)		4.3		4.3	4.3					4.3		
Lane Grp Cap (vph)		1481		124	1820					1296		1538
v/s Ratio Prot		0.43		0.04	c0.54					c0.39		
v/s Ratio Perm				0.39								0.53
v/c Ratio		0.98		0.81	1.01					1.02		0.53
Uniform Delay, d1		41.3		33.5	35.3					45.9		0.0
Progression Factor		0.63		2.01	0.81					0.99		1.00
Incremental Delay, d2		14.0		4.1	10.0					28.9		1.3
Delay (s)		39.9		71.4	38.6					74.4		1.3
Level of Service		D		E	D					E		A
Approach Delay (s)		39.9			40.3			0.0			46.4	
Approach LOS		D			D			A			D	

Intersection Summary			
HCM Average Control Delay	42.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	172.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



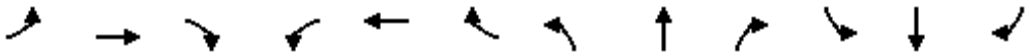
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	861	1428	0	0	989	903	762	0	361	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.08	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	148	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	957	1587	0	0	1099	1003	847	0	401	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	389	0	0	26	0	0	0
Lane Group Flow (vph)	957	1587	0	0	1099	614	847	0	375	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	94.9	94.9			42.9	42.9	44.0		44.0			
Effective Green, g (s)	94.9	94.9			42.9	42.9	44.0		44.0			
Actuated g/C Ratio	0.63	0.63			0.29	0.29	0.29		0.29			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	574	2175			983	440	504		451			
v/s Ratio Prot	c0.51	0.46			0.32		c0.49					
v/s Ratio Perm	c0.55					0.40			0.24			
v/c Ratio	1.67	0.73			1.12	1.40	1.68		0.83			
Uniform Delay, d1	45.3	18.8			53.5	53.5	53.0		49.5			
Progression Factor	1.13	1.09			0.71	1.06	0.97		0.96			
Incremental Delay, d2	302.0	0.5			59.4	183.5	314.7		13.0			
Delay (s)	353.0	21.0			97.4	240.2	366.0		60.6			
Level of Service	F	C			F	F	F		E			
Approach Delay (s)		145.9			165.5			267.9			0.0	
Approach LOS		F			F			F			A	

Intersection Summary			
HCM Average Control Delay	178.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.63		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	172.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



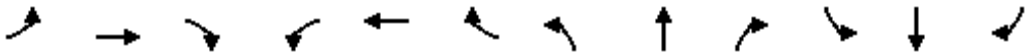
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	1492	132	31	1683	62	121	7	10	111	29	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.91		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3396		1719	3420		1719	1652		1719	1605	
Flt Permitted	0.04	1.00		0.10	1.00		0.34	1.00		0.75	1.00	
Satd. Flow (perm)	75	3396		181	3420		611	1652		1348	1605	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	183	1658	147	34	1870	69	134	8	11	123	32	98
RTOR Reduction (vph)	0	4	0	0	2	0	0	9	0	0	74	0
Lane Group Flow (vph)	183	1801	0	34	1937	0	134	10	0	123	56	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	110.5	110.5		91.2	91.2		28.6	28.6		15.5	15.5	
Effective Green, g (s)	110.5	110.5		91.2	91.2		28.6	28.6		15.5	15.5	
Actuated g/C Ratio	0.74	0.74		0.61	0.61		0.19	0.19		0.10	0.10	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	209	2502		110	2079		174	315		139	166	
v/s Ratio Prot	c0.08	0.53			c0.57		c0.04	0.01			0.04	
v/s Ratio Perm	0.56			0.19			c0.11			0.09		
v/c Ratio	0.88	0.72		0.31	0.93		0.77	0.03		0.88	0.34	
Uniform Delay, d1	52.3	11.1		14.2	26.6		56.1	49.4		66.4	62.5	
Progression Factor	1.23	0.56		0.92	0.79		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.9	1.2		5.0	6.7		20.3	0.1		45.1	1.9	
Delay (s)	87.5	7.4		18.0	27.8		76.4	49.5		111.4	64.4	
Level of Service	F	A		B	C		E	D		F	E	
Approach Delay (s)		14.7			27.6			73.0			87.3	
Approach LOS		B			C			E			F	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



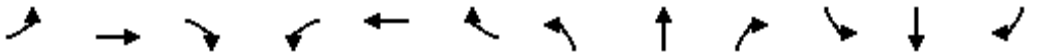
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	1371	234	177	1667	2	105	2	148	2	2	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.98		1.00	1.00			0.92			0.93	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.99	
Satd. Flow (prot)	1719	3363		1719	3438			1634			1667	
Flt Permitted	0.09	1.00		0.10	1.00			0.86			0.90	
Satd. Flow (perm)	167	3363		185	3438			1438			1523	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	1523	260	197	1852	2	117	2	164	2	2	4
RTOR Reduction (vph)	0	9	0	0	0	0	0	33	0	0	4	0
Lane Group Flow (vph)	9	1774	0	197	1854	0	0	250	0	0	4	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	120.7	120.7		121.0	121.0			18.0			18.0	
Effective Green, g (s)	120.7	120.7		121.0	121.0			18.0			18.0	
Actuated g/C Ratio	0.80	0.80		0.81	0.81			0.12			0.12	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	134	2706		149	2773			173			183	
v/s Ratio Prot		0.53			0.54							
v/s Ratio Perm	0.05			c1.06				c0.17			0.00	
v/c Ratio	0.07	0.66		1.32	0.67			1.44			0.02	
Uniform Delay, d1	3.0	6.1		14.5	6.1			66.0			58.3	
Progression Factor	0.67	0.96		0.54	0.25			1.00			1.00	
Incremental Delay, d2	0.6	0.8		163.1	0.5			228.7			0.1	
Delay (s)	2.7	6.7		171.0	2.1			294.7			58.3	
Level of Service	A	A		F	A			F			E	
Approach Delay (s)		6.6			18.3			294.7			58.3	
Approach LOS		A			B			F			E	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	107.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



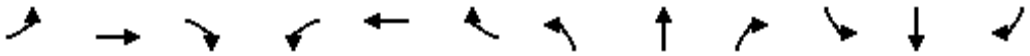
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	4623	118	31	2055	24	120	2	12	70	4	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	1.00		1.00	1.00		1.00	0.87			0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1719	3425		1719	3432		1719	1574			1677	
Flt Permitted	0.04	1.00		0.04	1.00		0.67	1.00			0.80	
Satd. Flow (perm)	64	3425		68	3432		1207	1574			1378	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	5137	131	34	2283	27	133	2	13	78	4	39
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	0	0	12	0
Lane Group Flow (vph)	22	5267	0	34	2309	0	133	15	0	0	109	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	116.6	116.6		106.3	106.3		22.1	22.1			22.1	
Effective Green, g (s)	116.6	116.6		106.3	106.3		22.1	22.1			22.1	
Actuated g/C Ratio	0.78	0.78		0.71	0.71		0.15	0.15			0.15	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	94	2662		48	2432		178	232			203	
v/s Ratio Prot	0.01	c1.54			0.67			0.01				
v/s Ratio Perm	0.18			0.50			c0.11				0.08	
v/c Ratio	0.23	1.98		0.71	0.95		0.75	0.06			0.54	
Uniform Delay, d1	33.3	16.7		12.8	19.5		61.3	55.1			59.2	
Progression Factor	0.94	0.72		0.35	0.31		1.00	1.00			1.00	
Incremental Delay, d2	2.0	441.7		7.7	1.2		17.1	0.2			3.9	
Delay (s)	33.1	453.7		12.2	7.2		78.4	55.2			63.1	
Level of Service	C	F		B	A		E	E			E	
Approach Delay (s)		451.9			7.3			76.1			63.1	
Approach LOS		F			A			E			E	

Intersection Summary			
HCM Average Control Delay	307.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	153.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



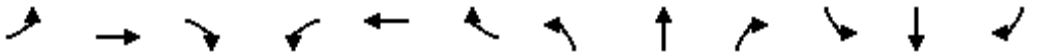
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	1061	29	134	2960	77	479	352	39	67	285	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3424		1719	3425		1719	1810	1538	1719	1739	
Flt Permitted	0.04	1.00		0.16	1.00		0.15	1.00	1.00	0.53	1.00	
Satd. Flow (perm)	81	3424		295	3425		276	1810	1538	961	1739	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	64	1179	32	149	3289	86	532	391	43	74	317	112
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	29	0	3	0
Lane Group Flow (vph)	64	1210	0	149	3374	0	532	391	14	74	426	0
Turn Type	Perm			Perm			pm+pt		Perm	Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	89.7	89.7		89.7	89.7		49.0	49.0	49.0	20.8	20.8	
Effective Green, g (s)	89.7	89.7		89.7	89.7		49.0	49.0	49.0	20.8	20.8	
Actuated g/C Ratio	0.60	0.60		0.60	0.60		0.33	0.33	0.33	0.14	0.14	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	48	2048		176	2048		309	591	502	133	241	
v/s Ratio Prot		0.35			c0.99		c0.26	0.22			0.24	
v/s Ratio Perm	0.79			0.51			c0.30		0.01	0.08		
v/c Ratio	1.33	0.59		0.85	1.65		1.72	0.66	0.03	0.56	1.77	
Uniform Delay, d1	30.1	18.7		24.5	30.1		45.7	43.4	34.3	60.3	64.6	
Progression Factor	0.92	1.04		0.61	0.64		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	162.5	0.1		4.8	291.5		338.1	3.2	0.0	6.8	361.0	
Delay (s)	190.3	19.5		19.6	310.7		383.8	46.6	34.4	67.1	425.6	
Level of Service	F	B		B	F		F	D	C	E	F	
Approach Delay (s)		28.1			298.4			231.8			372.9	
Approach LOS		C			F			F			F	

Intersection Summary			
HCM Average Control Delay	239.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.65		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	172.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



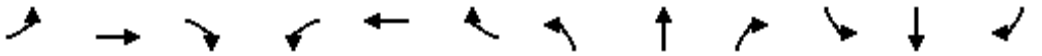
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	1007	74	759	2693	2	231	40	555	32	42	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3402		1719	3438			1735	1538	1719	1751	
Flt Permitted		0.74		0.07	1.00			0.72	1.00	0.15	1.00	
Satd. Flow (perm)		2517		130	3438			1294	1538	278	1751	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	8	1119	82	843	2992	2	257	44	617	36	47	13
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	16	0	3	0
Lane Group Flow (vph)	0	1206	0	843	2994	0	0	301	601	36	57	0
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		62.7		112.7	112.7			26.0	69.7	26.0	26.0	
Effective Green, g (s)		62.7		112.7	112.7			26.0	69.7	26.0	26.0	
Actuated g/C Ratio		0.42		0.75	0.75			0.17	0.46	0.17	0.17	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1052		561	2583			224	715	48	304	
v/s Ratio Prot				c0.44	0.87				0.25		0.03	
v/s Ratio Perm		0.48		c0.69				c0.23	0.15	0.13		
v/c Ratio		1.15		1.50	1.16			1.34	0.84	0.75	0.19	
Uniform Delay, d1		43.6		45.7	18.6			62.0	35.3	58.9	53.0	
Progression Factor		0.87		1.20	0.57			1.00	1.00	1.00	1.00	
Incremental Delay, d2		75.3		227.1	72.1			181.5	9.4	51.9	0.5	
Delay (s)		113.1		281.8	82.7			243.5	44.7	110.8	53.4	
Level of Service		F		F	F			F	D	F	D	
Approach Delay (s)		113.1			126.4			109.8			74.9	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM Average Control Delay	120.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	141.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



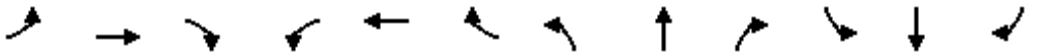
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	1572	128	40	3801	24	198	2	48	20	2	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3399		1719	3435			1695			1600	
Flt Permitted	0.04	1.00		0.08	1.00			0.59			0.95	
Satd. Flow (perm)	64	3399		137	3435			1039			1531	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	1747	142	44	4223	27	220	2	53	22	2	94
RTOR Reduction (vph)	0	4	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	39	1885	0	44	4250	0	0	269	0	0	118	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	112.8	112.8		112.8	112.8			25.6			25.6	
Effective Green, g (s)	112.8	112.8		112.8	112.8			25.6			25.6	
Actuated g/C Ratio	0.75	0.75		0.75	0.75			0.17			0.17	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	48	2556		103	2583			177			261	
v/s Ratio Prot		0.55			c1.24							
v/s Ratio Perm	0.61			0.32				c0.26			0.08	
v/c Ratio	0.81	0.74		0.43	1.65			1.52			0.45	
Uniform Delay, d1	11.9	10.4		6.8	18.6			62.2			55.9	
Progression Factor	1.15	1.22		0.60	0.48			1.00			1.00	
Incremental Delay, d2	39.6	0.7		1.2	290.5			261.1			2.0	
Delay (s)	53.2	13.3		5.2	299.4			323.3			57.9	
Level of Service	D	B		A	F			F			E	
Approach Delay (s)		14.2			296.4			323.3			57.9	
Approach LOS		B			F			F			E	

Intersection Summary			
HCM Average Control Delay	211.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	136.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	215	851	131	72	2101	284	525	546	188	188	326	454
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3377		1719	1810	1538	1719	1810	1538
Flt Permitted	0.06	1.00	1.00	0.22	1.00		0.15	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	100	3438	1538	389	3377		278	1810	1538	345	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	239	946	146	80	2334	316	583	607	209	209	362	504
RTOR Reduction (vph)	0	0	51	0	7	0	0	0	46	0	0	4
Lane Group Flow (vph)	239	946	95	80	2643	0	583	607	163	209	362	500
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	85.0	72.3	97.3	77.8	68.7		51.0	36.0	45.1	31.0	21.0	33.7
Effective Green, g (s)	85.0	72.3	97.3	77.8	68.7		51.0	36.0	45.1	31.0	21.0	33.7
Actuated g/C Ratio	0.57	0.48	0.65	0.52	0.46		0.34	0.24	0.30	0.21	0.14	0.22
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	194	1657	998	282	1547		335	434	462	163	253	346
v/s Ratio Prot	0.10	0.28	0.02	0.02	c0.78		c0.29	0.34	0.02	0.09	0.20	c0.12
v/s Ratio Perm	c0.59		0.05	0.13			c0.30		0.08	0.18		0.20
v/c Ratio	1.23	0.57	0.09	0.28	1.71		1.74	1.40	0.35	1.28	1.43	1.45
Uniform Delay, d1	50.4	27.8	9.9	19.8	40.6		46.2	57.0	41.0	56.1	64.5	58.1
Progression Factor	0.97	0.95	2.40	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	129.5	0.9	0.0	0.9	321.6		345.3	192.9	0.7	165.5	215.2	216.1
Delay (s)	178.2	27.4	23.7	20.6	362.2		391.5	249.9	41.8	221.6	279.7	274.3
Level of Service	F	C	C	C	F		F	F	D	F	F	F
Approach Delay (s)		54.1			352.2			277.8			265.8	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM Average Control Delay	261.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.9
Intersection Capacity Utilization	144.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	142	135	67	182	31	139	131	1888	101	114	1648	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3268		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.73	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1330	3268		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	158	150	74	202	34	154	146	2098	112	127	1831	133
RTOR Reduction (vph)	0	67	0	0	0	140	0	0	52	0	0	54
Lane Group Flow (vph)	158	157	0	202	34	14	146	2098	60	127	1831	79
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	14.0	7.0		8.0	8.0	8.0	11.7	48.0	48.0	6.0	42.3	42.3
Effective Green, g (s)	14.0	7.0		8.0	8.0	8.0	11.7	48.0	48.0	6.0	42.3	42.3
Actuated g/C Ratio	0.16	0.08		0.09	0.09	0.09	0.13	0.53	0.53	0.07	0.47	0.47
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	237	254		296	161	137	223	2635	820	222	2322	723
v/s Ratio Prot	0.05	0.05		c0.06	0.02		c0.08	c0.42		0.04	0.37	
v/s Ratio Perm	c0.05					0.01			0.04			0.05
v/c Ratio	0.67	0.62		0.68	0.21	0.10	0.65	0.80	0.07	0.57	0.79	0.11
Uniform Delay, d1	35.3	40.2		39.8	38.1	37.7	37.2	17.0	10.2	40.8	20.1	13.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.03	1.04	1.86	1.00	1.00	1.00
Incremental Delay, d2	8.0	6.2		7.2	1.3	0.6	3.7	1.2	0.1	4.6	2.8	0.3
Delay (s)	43.3	46.4		47.0	39.4	38.3	41.9	18.8	19.0	45.4	22.9	13.6
Level of Service	D	D		D	D	D	D	B	B	D	C	B
Approach Delay (s)		45.1			42.9			20.3			23.7	
Approach LOS		D			D			C			C	

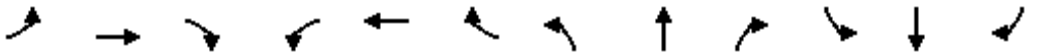
Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	459	129	1592	305	138	1661
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4821		1719	4940
Flt Permitted	0.95	1.00	1.00		0.19	1.00
Satd. Flow (perm)	1719	1538	4821		350	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	510	143	1769	339	153	1846
RTOR Reduction (vph)	0	4	63	0	0	0
Lane Group Flow (vph)	510	139	2045	0	153	1846
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	12.0	12.0	20.7		20.7	20.7
Effective Green, g (s)	12.0	12.0	20.7		20.7	20.7
Actuated g/C Ratio	0.27	0.27	0.46		0.46	0.46
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	458	410	2218		161	2272
v/s Ratio Prot	c0.30		0.42			0.37
v/s Ratio Perm		0.09			c0.44	
v/c Ratio	1.11	0.34	0.92		0.95	0.81
Uniform Delay, d1	16.5	13.3	11.4		11.7	10.5
Progression Factor	1.00	1.00	0.95		1.00	1.00
Incremental Delay, d2	76.8	1.0	5.1		58.9	3.3
Delay (s)	93.3	14.3	16.0		70.5	13.8
Level of Service	F	B	B		E	B
Approach Delay (s)	76.0		16.0			18.1
Approach LOS	E		B			B

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

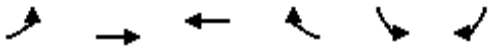
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	137	1603	283	33	2233	77	96	101	83	6	20	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3206		1719	1810	2707
Flt Permitted	0.04	1.00	1.00	0.09	1.00	1.00	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	72	3438	1538	154	3438	1538	3335	3206		1810	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	152	1781	314	37	2481	86	107	112	92	7	22	58
RTOR Reduction (vph)	0	0	89	0	0	21	0	86	0	0	0	16
Lane Group Flow (vph)	152	1781	225	37	2481	65	107	118	0	7	22	42
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	109.1	101.1	101.1	103.2	98.4	98.4	8.0	9.0		7.0	4.0	12.0
Effective Green, g (s)	109.1	101.1	101.1	103.2	98.4	98.4	8.0	9.0		7.0	4.0	12.0
Actuated g/C Ratio	0.77	0.72	0.72	0.73	0.70	0.70	0.06	0.06		0.05	0.03	0.09
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	149	2467	1104	166	2401	1074	189	205		88	51	231
v/s Ratio Prot	c0.06	0.52		0.01	0.72		c0.03	c0.04		0.00	0.01	0.01
v/s Ratio Perm	c0.73		0.15	0.16		0.04				0.00		0.01
v/c Ratio	1.02	0.72	0.20	0.22	1.03	0.06	0.57	0.58		0.08	0.43	0.18
Uniform Delay, d1	53.4	11.7	6.6	10.0	21.2	6.7	64.8	64.1		63.9	67.3	59.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	79.1	1.3	0.2	1.1	27.6	0.0	5.1	8.1		0.6	17.2	0.6
Delay (s)	132.6	13.0	6.8	11.1	48.9	6.7	69.9	72.2		64.5	84.5	60.5
Level of Service	F	B	A	B	D	A	E	E		E	F	E
Approach Delay (s)		20.2			46.9			71.4			66.9	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	37.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	140.9	Sum of lost time (s)	20.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	275	1294	1254	0	2248	1068	0	0	0	379	695	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	306	1438	1393	0	2498	1187	0	0	0	421	772	221
RTOR Reduction (vph)	0	0	11	0	0	1	0	0	0	0	0	89
Lane Group Flow (vph)	306	1438	1382	0	2498	1186	0	0	0	421	772	132
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	12.2	95.2	95.2		77.2	120.9				43.7	43.7	43.7
Effective Green, g (s)	12.2	95.2	95.2		77.2	120.9				43.7	43.7	43.7
Actuated g/C Ratio	0.08	0.63	0.63		0.51	0.81				0.29	0.29	0.29
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	271	2182	976		1769	1240				501	527	448
v/s Ratio Prot	0.09	0.42			0.73	0.28					c0.43	
v/s Ratio Perm			c0.90			0.49				0.24		0.09
v/c Ratio	1.13	0.66	1.42		1.41	0.96				0.84	1.46	0.29
Uniform Delay, d1	68.9	17.2	27.4		36.4	12.3				49.9	53.1	41.2
Progression Factor	1.00	1.00	1.00		0.93	1.03				1.00	1.00	1.00
Incremental Delay, d2	94.0	1.6	193.3		185.8	2.4				12.8	219.5	0.6
Delay (s)	162.9	18.8	220.7		219.7	15.0				62.6	272.6	41.8
Level of Service	F	B	F		F	B				E	F	D
Approach Delay (s)		122.5			153.7			0.0			174.0	
Approach LOS		F			F			A			F	

Intersection Summary			
HCM Average Control Delay	145.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	190.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



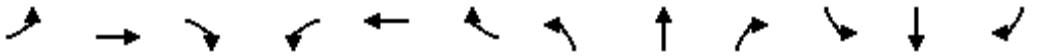
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1673	1531	0	998	1785
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1859	1701	0	1109	1983
RTOR Reduction (vph)	0	0	0	0	0	3
Lane Group Flow (vph)	0	1859	1701	0	1109	1980
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		62.4	62.4		76.7	76.7
Effective Green, g (s)		62.4	62.4		76.7	76.7
Actuated g/C Ratio		0.42	0.42		0.51	0.51
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1430	1430		879	1384
v/s Ratio Prot		c0.54	0.49		0.65	
v/s Ratio Perm						c0.73
v/c Ratio		1.30	1.19		1.26	1.43
Uniform Delay, d1		43.8	43.8		36.6	36.6
Progression Factor		0.95	1.09		1.00	1.00
Incremental Delay, d2		138.7	90.5		126.9	198.0
Delay (s)		180.2	138.4		163.6	234.7
Level of Service		F	F		F	F
Approach Delay (s)		180.2	138.4		209.2	
Approach LOS		F	F		F	

Intersection Summary			
HCM Average Control Delay	183.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.37		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	163.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



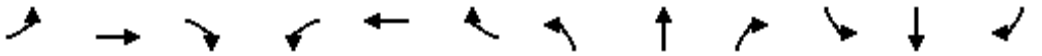
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1540	0	0	782	1192	1268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1711	0	0	869	1324	1409
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1711	0	0	869	1324	1409
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	53.2			53.2	86.0	86.0
Effective Green, g (s)	53.2			53.2	86.0	86.0
Actuated g/C Ratio	0.35			0.35	0.57	0.57
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	1219			1219	1912	882
v/s Ratio Prot	c0.50			0.25	0.40	
v/s Ratio Perm						c0.92
v/c Ratio	1.40			0.71	0.69	1.60
Uniform Delay, d1	48.4			41.8	22.6	32.0
Progression Factor	1.09			0.91	1.00	1.00
Incremental Delay, d2	182.1			1.9	1.2	274.0
Delay (s)	234.9			39.9	23.9	306.0
Level of Service	F			D	C	F
Approach Delay (s)	234.9			39.9	169.3	
Approach LOS	F			D	F	

Intersection Summary			
HCM Average Control Delay	169.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	182.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	1933	830	157	1185	10	438	3	164	35	3	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.95		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.97	
Satd. Flow (prot)	1719	3283		1719	3434			1724	1538		1682	
Flt Permitted	0.19	1.00		0.04	1.00			0.71	1.00		0.15	
Satd. Flow (perm)	342	3283		81	3434			1280	1538		258	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	50	2148	922	174	1317	11	487	3	182	39	3	18
RTOR Reduction (vph)	0	32	0	0	0	0	0	0	73	0	11	0
Lane Group Flow (vph)	50	3038	0	174	1328	0	0	490	109	0	49	0
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	82.3	82.3		100.3	100.3			36.7	36.7		36.7	
Effective Green, g (s)	82.3	82.3		100.3	100.3			36.7	36.7		36.7	
Actuated g/C Ratio	0.55	0.55		0.67	0.67			0.24	0.24		0.24	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	188	1801		178	2296			313	376		63	
v/s Ratio Prot		c0.93		c0.07	0.39							
v/s Ratio Perm	0.15			0.58				c0.38	0.07		0.19	
v/c Ratio	0.27	1.69		0.98	0.58			1.57	0.29		0.78	
Uniform Delay, d1	17.9	33.9		53.3	13.4			56.6	46.0		53.0	
Progression Factor	0.63	0.55		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.3	309.3		60.5	1.1			269.5	0.7		49.4	
Delay (s)	11.5	328.0		113.9	14.5			326.2	46.7		102.3	
Level of Service	B	F		F	B			F	D		F	
Approach Delay (s)		322.9			26.0			250.5			102.3	
Approach LOS		F			C			F			F	

Intersection Summary			
HCM Average Control Delay	228.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.7
Intersection Capacity Utilization	136.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	0	22	22	0	166	3	1372	16	58	1240	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.88		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1584		1719	3432		1719	3432	
Flt Permitted		0.51	1.00		0.96		0.15	1.00		0.12	1.00	
Satd. Flow (perm)		914	1538		1529		268	3432		210	3432	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	30	0	24	24	0	184	3	1524	18	64	1378	16
RTOR Reduction (vph)	0	0	20	0	34	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	30	4	0	174	0	3	1541	0	64	1393	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		13.5	13.5		13.5		49.5	49.5		49.5	49.5	
Effective Green, g (s)		13.5	13.5		13.5		49.5	49.5		49.5	49.5	
Actuated g/C Ratio		0.18	0.18		0.18		0.66	0.66		0.66	0.66	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		4.3	4.3		4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)		165	277		275		177	2265		139	2265	
v/s Ratio Prot								c0.45			0.41	
v/s Ratio Perm		0.03	0.00		c0.11		0.01			0.30		
v/c Ratio		0.18	0.02		0.63		0.02	0.68		0.46	0.62	
Uniform Delay, d1		26.1	25.3		28.5		4.4	7.9		6.2	7.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.58	0.61	
Incremental Delay, d2		0.8	0.0		5.6		0.2	1.7		8.6	1.0	
Delay (s)		26.9	25.3		34.1		4.6	9.5		12.2	5.5	
Level of Service		C	C		C		A	A		B	A	
Approach Delay (s)		26.2			34.1			9.5			5.8	
Approach LOS		C			C			A			A	

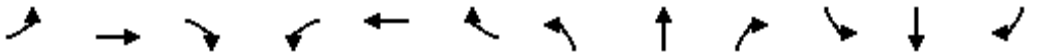
Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1476	91	251	1003	0	783	0	344	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0		6.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Frt		0.99		1.00	1.00		1.00		0.85			
Flt Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3408		1719	3438		1719		1538			
Flt Permitted		1.00		0.06	1.00		0.95		1.00			
Satd. Flow (perm)		3408		111	3438		1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1640	101	279	1114	0	870	0	382	0	0	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	43	0	0	0
Lane Group Flow (vph)	0	1738	0	279	1114	0	870	0	339	0	0	0
Turn Type				pm+pt			Prot		custom			
Protected Phases		2		1	6		4					
Permitted Phases				6					4			
Actuated Green, G (s)		59.0		81.0	81.0		57.0		57.0			
Effective Green, g (s)		59.0		81.0	81.0		57.0		57.0			
Actuated g/C Ratio		0.39		0.54	0.54		0.38		0.38			
Clearance Time (s)		6.0		6.0	6.0		6.0		6.0			
Vehicle Extension (s)		4.3		4.3	4.3		4.3		4.3			
Lane Grp Cap (vph)		1340		231	1857		653		584			
v/s Ratio Prot		c0.51		c0.13	0.32		c0.51					
v/s Ratio Perm				0.52					0.22			
v/c Ratio		1.30		1.21	0.60		1.33		0.58			
Uniform Delay, d1		45.5		50.5	23.5		46.5		37.0			
Progression Factor		0.98		1.77	1.00		0.99		0.99			
Incremental Delay, d2		137.9		97.4	0.1		159.9		1.8			
Delay (s)		182.6		186.7	23.6		206.0		38.5			
Level of Service		F		F	C		F		D			
Approach Delay (s)		182.6			56.3			154.9			0.0	
Approach LOS		F			E			F			A	

Intersection Summary			
HCM Average Control Delay	134.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

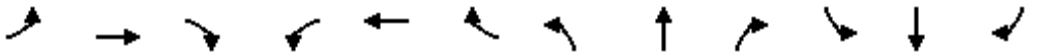
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	580	1679	0	0	1229	719	0	0	0	25	0	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1719	3438			3438	1538				1719		1538
Flt Permitted	0.07	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	121	3438			3438	1538				1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	644	1866	0	0	1366	799	0	0	0	28	0	473
RTOR Reduction (vph)	0	0	0	0	0	293	0	0	0	0	0	19
Lane Group Flow (vph)	644	1866	0	0	1366	506	0	0	0	28	0	454
Turn Type	pm+pt					custom				custom		custom
Protected Phases	5	2										8
Permitted Phases	2				6	6				8		
Actuated Green, G (s)	101.0	101.0			54.0	54.0				37.0		37.0
Effective Green, g (s)	101.0	101.0			54.0	54.0				37.0		37.0
Actuated g/C Ratio	0.67	0.67			0.36	0.36				0.25		0.25
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Vehicle Extension (s)	4.3	4.3			4.3	4.3				4.3		4.3
Lane Grp Cap (vph)	518	2315			1238	554				424		379
v/s Ratio Prot	c0.34	0.54										c0.30
v/s Ratio Perm	c0.50				0.40	0.33				0.02		
v/c Ratio	1.24	0.81			1.10	0.91				0.07		1.20
Uniform Delay, d1	47.8	17.5			48.0	45.8				43.3		56.5
Progression Factor	1.50	0.59			1.00	1.00				1.00		1.00
Incremental Delay, d2	111.0	0.3			58.8	21.9				0.1		112.1
Delay (s)	182.6	10.6			106.8	67.7				43.4		168.6
Level of Service	F	B			F	E				D		F
Approach Delay (s)		54.8			92.4			0.0			161.6	
Approach LOS		D			F			A			F	

Intersection Summary			
HCM Average Control Delay	80.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	99	151	111	23	18	848	1234	1042	99	1751	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1645		1633	1665	1538	1719	3438	1538	1719	3427	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.06	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	1719	1645		1633	1665	1538	111	3438	1538	358	3427	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	110	168	123	26	20	942	1371	1158	110	1946	41
RTOR Reduction (vph)	0	40	0	0	0	19	0	0	99	0	1	0
Lane Group Flow (vph)	4	238	0	74	75	1	942	1371	1059	110	1986	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	11.0	11.0		4.0	4.0	4.0	107.0	107.0	107.0	59.0	59.0	
Effective Green, g (s)	11.0	11.0		4.0	4.0	4.0	107.0	107.0	107.0	59.0	59.0	
Actuated g/C Ratio	0.08	0.08		0.03	0.03	0.03	0.76	0.76	0.76	0.42	0.42	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	135	129		47	48	44	567	2628	1175	151	1444	
v/s Ratio Prot	0.00	c0.14		c0.05	0.05		c0.50	0.40			0.58	
v/s Ratio Perm						0.00	c0.77		0.69	0.31		
v/c Ratio	0.03	1.85		1.57	1.56	0.01	1.66	0.52	0.90	0.73	1.38	
Uniform Delay, d1	59.6	64.5		68.0	68.0	66.1	43.9	6.5	12.5	33.8	40.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.03	0.88	0.88	1.00	1.00	
Incremental Delay, d2	0.2	409.9		338.6	332.4	0.2	298.3	0.1	1.2	26.3	173.3	
Delay (s)	59.8	474.4		406.6	400.4	66.3	343.6	5.8	12.2	60.1	213.8	
Level of Service	E	F		F	F	E	F	A	B	E	F	
Approach Delay (s)		468.5			363.6			99.6			205.7	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	161.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.63		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	134.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

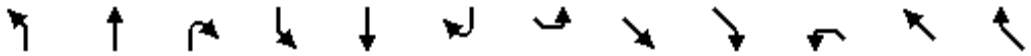


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	1061	0	1506	265	1618	0	0	1551	462
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	1179	0	1673	294	1798	0	0	1723	513
RTOR Reduction (vph)	0	0	0	0	0	8	0	0	0	0	0	160
Lane Group Flow (vph)	0	0	0	589	590	1665	294	1798	0	0	1723	353
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				58.0	58.0	58.0	10.0	70.0			54.0	54.0
Effective Green, g (s)				58.0	58.0	58.0	10.0	70.0			54.0	54.0
Actuated g/C Ratio				0.41	0.41	0.41	0.07	0.50			0.39	0.39
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				677	677	1121	238	1719			1326	593
v/s Ratio Prot							0.09	c0.52			c0.50	
v/s Ratio Perm				0.36	0.36	c0.62						0.23
v/c Ratio				0.87	0.87	1.49	1.24	1.05			1.30	0.60
Uniform Delay, d1				37.5	37.6	41.0	65.0	35.0			43.0	34.3
Progression Factor				1.00	1.00	1.00	1.38	0.28			0.50	0.23
Incremental Delay, d2				12.6	12.7	223.3	109.3	22.6			135.3	0.4
Delay (s)				50.1	50.3	264.3	198.9	32.4			156.7	8.3
Level of Service				D	D	F	F	C			F	A
Approach Delay (s)		0.0			175.8			55.8			122.7	
Approach LOS		A			F			E			F	

Intersection Summary			
HCM Average Control Delay	124.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	146.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1065	380	979	1633	0	818	0	487	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.10	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	186	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1183	422	1088	1814	0	909	0	541	0	0	0
RTOR Reduction (vph)	0	0	206	0	0	0	0	0	45	0	0	0
Lane Group Flow (vph)	0	1183	216	1088	1814	0	454	455	496	0	0	0
Turn Type			Perm	pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		32.6	32.6	98.2	97.6		29.9	29.9	29.9			
Effective Green, g (s)		32.6	32.6	98.2	97.6		29.9	29.9	29.9			
Actuated g/C Ratio		0.23	0.23	0.70	0.70		0.21	0.21	0.21			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1150	358	779	2397		349	349	578			
v/s Ratio Prot		0.24		c0.59	0.53							
v/s Ratio Perm			0.14	c0.39			0.28	0.28	0.18			
v/c Ratio		1.03	0.60	1.40	0.76		1.30	1.30	0.86			
Uniform Delay, d1		53.7	47.9	35.2	13.6		55.0	55.0	53.0			
Progression Factor		0.90	1.27	0.76	0.48		1.00	1.00	1.00			
Incremental Delay, d2		32.0	6.2	179.2	0.2		154.9	156.1	13.1			
Delay (s)		80.3	67.0	206.0	6.7		209.9	211.1	66.1			
Level of Service		F	E	F	A		F	F	E			
Approach Delay (s)		76.8			81.4			156.6			0.0	
Approach LOS		E			F			F			A	

Intersection Summary			
HCM Average Control Delay	98.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	146.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	439	1127	2	6	1500	614	316	4	325	2	4	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.98	1.00
Satd. Flow (prot)	1719	4939			3437	1538	1719	1541			1780	1538
Flt Permitted	0.06	1.00			0.95	1.00	0.75	1.00			0.80	1.00
Satd. Flow (perm)	100	4939			3256	1538	1364	1541			1457	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	488	1252	2	7	1667	682	351	4	361	2	4	2
RTOR Reduction (vph)	0	0	0	0	0	219	0	249	0	0	0	2
Lane Group Flow (vph)	488	1254	0	0	1674	463	351	116	0	0	6	0
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	98.6	98.6			66.6	66.6	28.9	28.9			28.9	28.9
Effective Green, g (s)	98.6	98.6			66.6	66.6	28.9	28.9			28.9	28.9
Actuated g/C Ratio	0.70	0.70			0.48	0.48	0.21	0.21			0.21	0.21
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	373	3478			1549	732	282	318			301	317
v/s Ratio Prot	c0.24	0.25						0.08				
v/s Ratio Perm	c0.68				0.51	0.30	c0.26				0.00	0.00
v/c Ratio	1.31	0.36			1.08	0.63	1.24	0.36			0.02	0.00
Uniform Delay, d1	49.1	8.2			36.7	27.5	55.5	47.7			44.3	44.1
Progression Factor	1.00	1.63			0.88	0.55	1.00	1.00			1.00	1.00
Incremental Delay, d2	149.7	0.2			44.0	2.5	136.3	1.4			0.1	0.0
Delay (s)	198.5	13.6			76.4	17.6	191.9	49.1			44.3	44.1
Level of Service	F	B			E	B	F	D			D	D
Approach Delay (s)		65.4			59.4			119.1			44.3	
Approach LOS		E			E			F			D	

Intersection Summary			
HCM Average Control Delay	70.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	106.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	166	27	103	2092	2557	92
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	184	30	114	2324	2841	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1013	
pX, platoon unblocked	0.33	0.33	0.33			
vC, conflicting volume	4283	1472	2943			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	6882	0	2829			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	92	0			
cM capacity (veh/h)	0	355	42			

Direction, Lane #	WB 1	SE 1	SE 2	SE 3	NW 1	NW 2
Volume Total	214	114	1162	1162	1894	1049
Volume Left	184	114	0	0	0	0
Volume Right	30	0	0	0	0	102
cSH	0	42	1700	1700	1700	1700
Volume to Capacity	Err	2.75	0.68	0.68	1.11	0.62
Queue Length 95th (ft)	Err	313	0	0	0	0
Control Delay (s)	Err	998.1	0.0	0.0	0.0	0.0
Lane LOS	F	F				
Approach Delay (s)	Err	46.8			0.0	
Approach LOS	F					

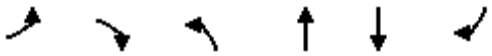
Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	1899	359	342	2039	610	124
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	2110	399	380	2266	678	138
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				860		
pX, platoon unblocked					0.31	
vC, conflicting volume			2509		4202	1254
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2509		6826	1254
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			0		0	13
cM capacity (veh/h)			170		0	159

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	1407	1102	1135	1510	816
Volume Left	0	0	380	0	678
Volume Right	0	399	0	0	138
cSH	1700	1700	170	1700	0
Volume to Capacity	0.83	0.65	2.24	0.89	Err
Queue Length 95th (ft)	0	0	772	0	Err
Control Delay (s)	0.0	0.0	619.6	0.0	Err
Lane LOS			F		F
Approach Delay (s)	0.0		265.9		Err
Approach LOS					F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	181.6%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	8	2	6	1559	1310	37
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	9	2	7	1732	1456	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1176	378	
pX, platoon unblocked	0.80	0.78	0.78			
vC, conflicting volume	2356	748	1497			
vC1, stage 1 conf vol	1476					
vC2, stage 2 conf vol	879					
vCu, unblocked vol	951	107	1068			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	100	99			
cM capacity (veh/h)	223	714	491			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	11	7	866	866	970	526
Volume Left	9	7	0	0	0	0
Volume Right	2	0	0	0	0	41
cSH	279	491	1700	1700	1700	1700
Volume to Capacity	0.04	0.01	0.51	0.51	0.57	0.31
Queue Length 95th (ft)	3	1	0	0	0	0
Control Delay (s)	19.4	12.4	0.0	0.0	0.0	0.0
Lane LOS	C	B				
Approach Delay (s)	19.4	0.0			0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	75	81	2075	30	50	1873
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	83	90	2306	33	56	2081
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			371			
pX, platoon unblocked	0.59	0.59			0.59	
vC, conflicting volume	3474	1169			2339	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3807	0			1875	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	86			69	
cM capacity (veh/h)	1	631			179	

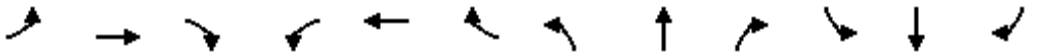
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	173	1537	802	56	1041	1041
Volume Left	83	0	0	56	0	0
Volume Right	90	0	33	0	0	0
cSH	2	1700	1700	179	1700	1700
Volume to Capacity	77.91	0.90	0.47	0.31	0.61	0.61
Queue Length 95th (ft)	Err	0	0	31	0	0
Control Delay (s)	Err	0.0	0.0	33.9	0.0	0.0
Lane LOS	F			D		
Approach Delay (s)	Err	0.0		0.9		
Approach LOS	F					

Intersection Summary			
Average Delay	373.2		
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	134	1992	30	23	1876	25	2	0	19	28	0	14
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	149	2213	33	26	2084	28	2	0	21	31	0	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		939										
pX, platoon unblocked				0.59			0.59	0.59		0.59	0.59	0.59
vC, conflicting volume	2112			2247			3569	4694	1056	3642	4691	1123
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2112			1721			3967	5876	1056	4090	5871	0
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	39			88			0	100	90	0	100	98
cM capacity (veh/h)	245			207			0	0	217	0	0	633

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SE 1	SE 2	NW 1	NW 2
Volume Total	149	1476	771	1068	1070	2	21	31	16
Volume Left	149	0	0	26	0	2	0	31	0
Volume Right	0	0	33	0	28	0	21	0	16
cSH	245	1700	1700	207	1700	0	217	0	633
Volume to Capacity	0.61	0.87	0.45	0.12	0.63	8.76	0.10	167.31	0.02
Queue Length 95th (ft)	89	0	0	10	0	Err	8	Err	2
Control Delay (s)	40.0	0.0	0.0	8.4	0.0	Err	23.4	Err	10.8
Lane LOS	E			A		F	C	F	B
Approach Delay (s)	2.5			4.2		973.5		6669.6	
Approach LOS						F		F	

Intersection Summary				
Average Delay	75.8			
Intersection Capacity Utilization	126.2%	ICU Level of Service		H
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	458	515	77	202	889	633	58	755	177	898	755	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3371		1719	3438	1538	1719	3438	1538	3335	3438	1538
Flt Permitted	0.12	1.00		0.30	1.00	1.00	0.34	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	226	3371		535	3438	1538	608	3438	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	509	572	86	224	988	703	64	839	197	998	839	117
RTOR Reduction (vph)	0	9	0	0	0	270	0	0	101	0	0	61
Lane Group Flow (vph)	509	649	0	224	988	433	64	839	96	998	839	56
Turn Type	pm+pt			pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2			6
Actuated Green, G (s)	56.0	36.8		43.2	28.0	28.0	27.0	27.0	27.0	30.0	62.0	62.0
Effective Green, g (s)	56.0	36.8		43.2	28.0	28.0	27.0	27.0	27.0	30.0	62.0	62.0
Actuated g/C Ratio	0.43	0.28		0.33	0.22	0.22	0.21	0.21	0.21	0.23	0.48	0.48
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	4.3	5.5		4.3	5.5	5.5	4.9	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	373	954		316	740	331	126	714	319	770	1640	734
v/s Ratio Prot	c0.25	0.19		0.08	0.29			c0.24		c0.30	0.24	
v/s Ratio Perm	c0.34			0.15		0.28	0.11		0.06			0.04
v/c Ratio	1.36	0.68		0.71	1.34	1.31	0.51	1.18	0.30	1.30	0.51	0.08
Uniform Delay, d1	39.9	41.4		33.6	51.0	51.0	45.6	51.5	43.5	50.0	23.5	18.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	180.5	2.8		7.9	159.9	158.9	6.4	93.1	1.1	142.8	0.5	0.1
Delay (s)	220.4	44.1		41.5	210.9	209.9	52.0	144.6	44.6	192.8	24.0	18.5
Level of Service	F	D		D	F	F	D	F	D	F	C	B
Approach Delay (s)		121.0			190.8			121.3			109.9	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	139.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	113.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	21	1411	137	305	1811	65	151	6	324	59	4	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3393		1719	3438	1538	1719	1543		1719	1810	1538
Flt Permitted	0.05	1.00		0.12	1.00	1.00	0.76	1.00		0.23	1.00	1.00
Satd. Flow (perm)	85	3393		224	3438	1538	1366	1543		414	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	23	1568	152	339	2012	72	168	7	360	66	4	53
RTOR Reduction (vph)	0	5	0	0	0	11	0	70	0	0	0	19
Lane Group Flow (vph)	23	1715	0	339	2012	61	168	297	0	66	4	34
Turn Type	pm+pt			Perm		Perm	Perm			Perm		pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases	2			6		6	8			4		4
Actuated Green, G (s)	120.8	120.8		107.9	107.9	107.9	17.5	17.5		17.5	17.5	23.9
Effective Green, g (s)	120.8	120.8		107.9	107.9	107.9	17.5	17.5		17.5	17.5	23.9
Actuated g/C Ratio	0.80	0.80		0.71	0.71	0.71	0.12	0.12		0.12	0.12	0.16
Clearance Time (s)	6.5	6.5		6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5
Vehicle Extension (s)	4.3	5.5		5.5	5.5	5.5	5.5	5.5		5.5	5.5	4.3
Lane Grp Cap (vph)	137	2709		160	2452	1097	158	178		48	209	309
v/s Ratio Prot	0.01	c0.51			0.59			c0.19			0.00	0.00
v/s Ratio Perm	0.13			c1.51		0.04	0.12			0.16		0.02
v/c Ratio	0.17	0.63		2.12	0.82	0.06	1.06	1.67		1.38	0.02	0.11
Uniform Delay, d1	17.6	6.2		21.7	15.0	6.5	66.9	66.9		66.9	59.3	54.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	1.1		523.9	3.2	0.1	89.4	324.6		258.5	0.1	0.3
Delay (s)	18.5	7.4		545.6	18.2	6.6	156.3	391.5		325.4	59.4	54.9
Level of Service	B	A		F	B	A	F	F		F	E	D
Approach Delay (s)		7.5			91.7			317.6			200.2	
Approach LOS		A			F			F			F	

Intersection Summary			
HCM Average Control Delay	89.1	HCM Level of Service	F
HCM Volume to Capacity ratio	2.01		
Actuated Cycle Length (s)	151.3	Sum of lost time (s)	19.5
Intersection Capacity Utilization	117.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	35	2	97	20	4	135	113	2125	18	4	1484	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frt		0.90			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1611			1736	1538	1719	3434		1719	3438	1538
Flt Permitted		0.90			0.49	1.00	0.12	1.00		0.06	1.00	1.00
Satd. Flow (perm)		1473			882	1538	221	3434		104	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	2	108	22	4	150	126	2361	20	4	1649	4
RTOR Reduction (vph)	0	15	0	0	0	57	0	1	0	0	0	1
Lane Group Flow (vph)	0	134	0	0	26	93	126	2380	0	4	1649	3
Turn Type	Perm			Perm		Perm	Perm			Perm		Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Actuated Green, G (s)		9.0			9.0	9.0	69.7	69.7		69.7	69.7	69.7
Effective Green, g (s)		9.0			9.0	9.0	69.7	69.7		69.7	69.7	69.7
Actuated g/C Ratio		0.10			0.10	0.10	0.77	0.77		0.77	0.77	0.77
Clearance Time (s)		5.0			5.0	5.0	6.3	6.3		6.3	6.3	6.3
Vehicle Extension (s)		4.3			4.3	4.3	5.5	5.5		5.5	5.5	5.5
Lane Grp Cap (vph)		147			88	154	171	2659		81	2663	1191
v/s Ratio Prot								c0.69			0.48	
v/s Ratio Perm		c0.09			0.03	0.06	0.57			0.04		0.00
v/c Ratio		0.91			0.30	0.61	0.74	0.90		0.05	0.62	0.00
Uniform Delay, d1		40.1			37.6	38.8	5.3	7.5		2.4	4.4	2.3
Progression Factor		1.00			1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		48.8			3.0	8.2	24.4	5.2		1.2	1.1	0.0
Delay (s)		88.9			40.5	47.0	29.8	12.7		3.5	5.5	2.3
Level of Service		F			D	D	C	B		A	A	A
Approach Delay (s)		88.9			46.0			13.5			5.5	
Approach LOS		F			D			B			A	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	232	52	427	313	47	45	85	2037	120	346	1215	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.87		1.00	0.93		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1568		1719	1676		1719	3409		1719	3317	
Flt Permitted	0.46	1.00		0.23	1.00		0.06	1.00		0.05	1.00	
Satd. Flow (perm)	837	1568		421	1676		106	3409		98	3317	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	258	58	474	348	52	50	94	2263	133	384	1350	416
RTOR Reduction (vph)	0	94	0	0	24	0	0	3	0	0	20	0
Lane Group Flow (vph)	258	438	0	348	78	0	94	2393	0	384	1746	0
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	44.0	25.0		30.2	17.2		73.0	68.0		89.0	78.0	
Effective Green, g (s)	44.0	25.0		30.2	17.2		73.0	68.0		89.0	78.0	
Actuated g/C Ratio	0.30	0.17		0.21	0.12		0.50	0.47		0.61	0.54	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	5.5		4.3	5.5	
Lane Grp Cap (vph)	381	270		204	199		109	1599		228	1784	
v/s Ratio Prot	0.10	c0.28		c0.15	0.05		0.03	0.70		c0.17	0.53	
v/s Ratio Perm	0.11			0.20			0.40			c0.86		
v/c Ratio	0.68	1.62		1.71	0.39		0.86	1.50		1.68	0.98	
Uniform Delay, d1	41.6	60.0		54.1	59.1		31.6	38.5		50.7	32.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.4	297.2		337.7	2.0		47.9	226.7		326.2	16.8	
Delay (s)	47.0	357.2		391.8	61.1		79.5	265.2		376.9	49.5	
Level of Service	D	F		F	E		E	F		F	D	
Approach Delay (s)		255.9			316.8			258.2			108.0	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	207.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.63		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	145.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL2	WBL	WBR	SEL	SET	SER	NWL	NWT	NWR	NEL	NER
Lane Configurations											
Volume (vph)	369	0	47	0	2366	411	1007	1888	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Lane Util. Factor	0.97		0.88		0.95	1.00	1.00	0.95			
Frt	1.00		0.85		1.00	0.85	1.00	1.00			
Flt Protected	0.95		1.00		1.00	1.00	0.95	1.00			
Satd. Flow (prot)	3335		2707		3438	1538	1719	3438			
Flt Permitted	0.95		1.00		1.00	1.00	0.05	1.00			
Satd. Flow (perm)	3335		2707		3438	1538	94	3438			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	410	0	52	0	2629	457	1119	2098	0	0	0
RTOR Reduction (vph)	0	0	48	0	0	87	0	0	0	0	0
Lane Group Flow (vph)	410	0	4	0	2629	370	1119	2098	0	0	0
Turn Type	custom		custom			Perm	pm+pt				
Protected Phases					2		1	6			
Permitted Phases	4		4			2	6				
Actuated Green, G (s)	11.0		11.0		70.7	70.7	127.9	127.9			
Effective Green, g (s)	11.0		11.0		70.7	70.7	127.9	127.9			
Actuated g/C Ratio	0.07		0.07		0.47	0.47	0.85	0.85			
Clearance Time (s)	5.0		5.0		6.3	6.3	6.5	6.1			
Vehicle Extension (s)	4.3		4.3		4.3	4.3	4.3	4.3			
Lane Grp Cap (vph)	245		199		1620	725	627	2931			
v/s Ratio Prot					0.76		c0.60	0.61			
v/s Ratio Perm	c0.12		0.00			0.24	c0.93				
v/c Ratio	1.67		0.02		1.62	0.51	1.78	0.72			
Uniform Delay, d1	69.5		64.5		39.6	27.6	46.0	4.2			
Progression Factor	1.00		1.00		1.00	1.00	1.00	1.00			
Incremental Delay, d2	320.3		0.1		283.1	2.6	359.5	1.5			
Delay (s)	389.8		64.6		322.8	30.2	405.5	5.7			
Level of Service	F		E		F	C	F	A			
Approach Delay (s)		353.2			279.5			144.8		0.0	
Approach LOS		F			F			F		A	

Intersection Summary			
HCM Average Control Delay	220.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.73		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	145.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

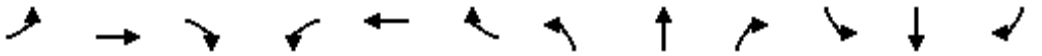
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	753	823	1187	1548	0	2142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	837	914	1319	1720	0	2380
RTOR Reduction (vph)	0	274	0	462	0	0
Lane Group Flow (vph)	837	640	1319	1258	0	2380
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	30.4	30.4	86.5	86.5		107.5
Effective Green, g (s)	30.4	30.4	86.5	86.5		100.5
Actuated g/C Ratio	0.20	0.20	0.58	0.58		0.67
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	676	549	1983	887		2303
v/s Ratio Prot	c0.25	0.24	0.38			c0.69
v/s Ratio Perm				c0.82		
v/c Ratio	1.24	1.17	0.67	1.42		1.03
Uniform Delay, d1	59.8	59.8	21.8	31.8		24.8
Progression Factor	1.00	1.00	1.00	1.00		0.91
Incremental Delay, d2	119.6	92.9	1.8	194.9		17.0
Delay (s)	179.4	152.7	23.6	226.7		39.4
Level of Service	F	F	C	F		D
Approach Delay (s)	165.4		138.5			39.4
Approach LOS	F		F			D

Intersection Summary			
HCM Average Control Delay	112.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.6
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



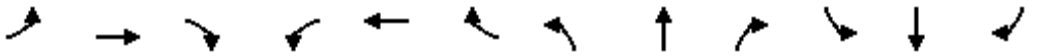
Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	324	119	1920	90	87	3483
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	6.5	6.5	6.5
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3335	1538	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.06	1.00
Satd. Flow (perm)	3335	1538	3438	1538	114	3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	360	132	2133	100	97	3870
RTOR Reduction (vph)	0	29	0	18	0	0
Lane Group Flow (vph)	360	103	2133	82	97	3870
Turn Type		Perm		Perm	Perm	
Protected Phases	4		2 3 6			2 3 6
Permitted Phases	4	4		2 3 6	2 3 6	
Actuated Green, G (s)	14.0	14.0	123.4	123.4	123.4	123.4
Effective Green, g (s)	14.0	14.0	123.4	123.4	123.4	123.4
Actuated g/C Ratio	0.09	0.09	0.82	0.82	0.82	0.82
Clearance Time (s)	7.0	7.0				
Vehicle Extension (s)	4.3	4.3				
Lane Grp Cap (vph)	311	144	2828	1265	94	2828
v/s Ratio Prot	c0.11		0.62			c1.13
v/s Ratio Perm		0.07		0.05	0.85	
v/c Ratio	1.16	0.72	0.75	0.07	1.03	1.37
Uniform Delay, d1	68.0	66.1	6.2	2.5	13.3	13.3
Progression Factor	1.00	1.00	0.59	0.53	1.00	1.00
Incremental Delay, d2	100.8	17.1	0.7	0.0	101.8	168.1
Delay (s)	168.8	83.2	4.3	1.3	115.1	181.4
Level of Service	F	F	A	A	F	F
Approach Delay (s)	145.8		4.2			179.8
Approach LOS	F		A			F

Intersection Summary			
HCM Average Control Delay	118.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	116.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



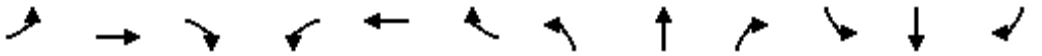
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	714	1202	123	138	2790	261	239	42	107	336	42	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	1719	3438	1538	1719	1810	1538	3335	3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	793	1336	137	153	3100	290	266	47	119	373	47	601
RTOR Reduction (vph)	0	0	42	0	0	47	0	0	29	0	0	188
Lane Group Flow (vph)	793	1336	95	153	3100	243	266	47	90	373	47	413
Turn Type	Prot		pm+ov	Prot		Perm	Prot		pm+ov	Prot		Perm
Protected Phases	5	2	3	1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Actuated Green, G (s)	19.9	79.7	92.9	18.1	77.9	77.9	13.2	8.4	26.5	20.0	15.2	15.2
Effective Green, g (s)	19.9	79.7	92.9	18.1	77.9	77.9	13.2	8.4	26.5	20.0	15.2	15.2
Actuated g/C Ratio	0.13	0.53	0.62	0.12	0.52	0.52	0.09	0.06	0.18	0.13	0.10	0.10
Clearance Time (s)	6.1	6.1	5.8	6.1	6.1	6.1	5.8	5.8	6.1	5.8	5.8	5.8
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	442	1827	953	207	1785	799	151	101	272	445	348	156
v/s Ratio Prot	c0.24	0.39	0.01	0.09	c0.90		c0.15	0.03	0.04	0.11	0.01	
v/s Ratio Perm			0.05			0.16			0.02			c0.27
v/c Ratio	1.79	0.73	0.10	0.74	1.74	0.30	1.76	0.47	0.33	0.84	0.14	2.65
Uniform Delay, d1	65.0	26.9	11.6	63.7	36.0	20.6	68.4	68.6	54.0	63.4	61.4	67.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	366.3	2.6	0.1	14.2	333.9	1.0	368.4	5.3	1.1	13.8	0.3	760.0
Delay (s)	431.4	29.6	11.7	77.9	369.9	21.6	436.8	73.9	55.1	77.2	61.7	827.4
Level of Service	F	C	B	E	F	C	F	E	E	E	E	F
Approach Delay (s)		169.1			328.8			292.2			518.1	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	303.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.86		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	23.8
Intersection Capacity Utilization	138.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



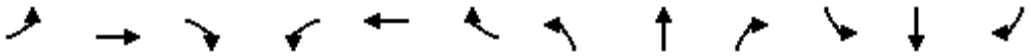
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	230	1184	231	267	2550	263	379	214	169	478	395	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538	1719	3438	1538	3335	1690		3335	1810	1538
Flt Permitted	0.95	1.00	1.00	0.07	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538	120	3438	1538	3335	1690		3335	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	256	1316	257	297	2833	292	421	238	188	531	439	289
RTOR Reduction (vph)	0	0	100	0	0	52	0	19	0	0	0	0
Lane Group Flow (vph)	256	1316	157	297	2833	240	421	407	0	531	439	289
Turn Type	Prot		Perm	pm+pt		Perm	Prot			Prot		Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2	6		6						Free
Actuated Green, G (s)	8.8	68.4	68.4	94.9	80.9	80.9	12.8	22.8		15.8	25.8	150.0
Effective Green, g (s)	8.8	68.4	68.4	94.9	80.9	80.9	12.8	22.8		15.8	25.8	150.0
Actuated g/C Ratio	0.06	0.46	0.46	0.63	0.54	0.54	0.09	0.15		0.11	0.17	1.00
Clearance Time (s)	5.2	6.1	6.1	5.2	6.1	6.1	5.2	5.2		5.2	5.2	
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	196	1568	701	303	1854	829	285	257		351	311	1538
v/s Ratio Prot	c0.08	0.38		0.14	c0.82		0.13	c0.24		c0.16	c0.24	
v/s Ratio Perm			0.10	0.48		0.16						0.19
v/c Ratio	1.31	0.84	0.22	0.98	1.53	0.29	1.48	1.58		1.51	1.41	0.19
Uniform Delay, d1	70.6	36.0	24.7	48.7	34.5	18.9	68.6	63.6		67.1	62.1	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	169.6	5.6	0.7	46.3	240.4	0.9	232.8	281.0		245.0	203.3	0.3
Delay (s)	240.2	41.5	25.5	95.0	274.9	19.8	301.4	344.6		312.1	265.4	0.3
Level of Service	F	D	C	F	F	B	F	F		F	F	A
Approach Delay (s)		67.1			237.6			323.1			224.2	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM Average Control Delay	202.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	26.9
Intersection Capacity Utilization	130.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



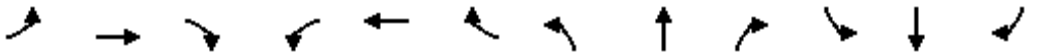
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1209	622	261	2181	0	0	0	0	1187	0	899
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.6		6.6	6.6					5.7		4.0
Lane Util. Factor		0.95		1.00	0.95					0.97		1.00
Frt		0.95		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		3263		1719	3438					3335		1538
Flt Permitted		1.00		0.05	1.00					0.95		1.00
Satd. Flow (perm)		3263		92	3438					3335		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1343	691	290	2423	0	0	0	0	1319	0	999
RTOR Reduction (vph)	0	43	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1991	0	290	2423	0	0	0	0	1319	0	999
Turn Type				pm+pt						Prot		Free
Protected Phases		2		1	6					4		
Permitted Phases				6								Free
Actuated Green, G (s)		72.4		94.4	94.4					43.3		150.0
Effective Green, g (s)		72.4		94.4	94.4					43.3		150.0
Actuated g/C Ratio		0.48		0.63	0.63					0.29		1.00
Clearance Time (s)		6.6		6.6	6.6					5.7		
Vehicle Extension (s)		4.3		4.3	4.3					4.3		
Lane Grp Cap (vph)		1575		225	2164					963		1538
v/s Ratio Prot		0.61		0.13	c0.70					c0.40		
v/s Ratio Perm				c0.68								0.65
v/c Ratio		1.26		1.29	1.12					1.37		0.65
Uniform Delay, d1		38.8		53.3	27.8					53.4		0.0
Progression Factor		1.00		1.00	1.00					1.00		1.00
Incremental Delay, d2		124.0		159.2	60.8					173.0		2.1
Delay (s)		162.8		212.5	88.6					226.4		2.1
Level of Service		F		F	F					F		A
Approach Delay (s)		162.8			101.8			0.0			129.7	
Approach LOS		F			F			A			F	

Intersection Summary			
HCM Average Control Delay	128.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	198.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	686	1710	0	0	1559	963	883	0	361	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.08	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	142	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	762	1900	0	0	1732	1070	981	0	401	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	387	0	0	12	0	0	0
Lane Group Flow (vph)	762	1900	0	0	1732	683	981	0	389	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	74.9	74.9			44.9	44.9	34.0		34.0			
Effective Green, g (s)	74.9	74.9			44.9	44.9	34.0		34.0			
Actuated g/C Ratio	0.62	0.62			0.37	0.37	0.28		0.28			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	403	2146			1286	575	487		436			
v/s Ratio Prot	c0.38	0.55			0.50		c0.57					
v/s Ratio Perm	c0.80					0.44			0.25			
v/c Ratio	1.89	0.89			1.35	1.19	2.01		0.89			
Uniform Delay, d1	39.2	18.9			37.5	37.5	43.0		41.2			
Progression Factor	1.00	1.00			1.00	1.00	1.00		1.00			
Incremental Delay, d2	410.1	5.8			161.3	100.8	463.7		20.6			
Delay (s)	449.4	24.8			198.9	138.4	506.7		61.8			
Level of Service	F	C			F	F	F		E			
Approach Delay (s)		146.3			175.8			377.6			0.0	
Approach LOS		F			F			F			A	

Intersection Summary			
HCM Average Control Delay	205.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	198.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

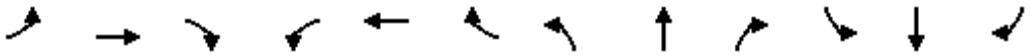


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	1767	64	15	2066	78	296	28	15	134	18	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.95		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	3420		1719	3419		1719	1713		1719	1566	
Flt Permitted	0.05	1.00		0.05	1.00		0.21	1.00		0.73	1.00	
Satd. Flow (perm)	83	3420		89	3419		383	1713		1313	1566	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	267	1963	71	17	2296	87	329	31	17	149	20	178
RTOR Reduction (vph)	0	2	0	0	2	0	0	13	0	0	138	0
Lane Group Flow (vph)	267	2032	0	17	2381	0	329	35	0	149	60	0
Turn Type	pm+pt			Perm			pm+pt			Perm		
Protected Phases	5	2			6		3	8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	101.5	101.5		81.5	81.5		37.6	37.6		13.6	13.6	
Effective Green, g (s)	101.5	101.5		81.5	81.5		37.6	37.6		13.6	13.6	
Actuated g/C Ratio	0.68	0.68		0.54	0.54		0.25	0.25		0.09	0.09	
Clearance Time (s)	5.3	5.5		5.5	5.5		5.3	5.4		5.4	5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)	216	2314		48	1858		263	429		119	142	
v/s Ratio Prot	c0.12	0.59			c0.70		c0.16	0.02			0.04	
v/s Ratio Perm	0.71			0.19			c0.16			0.11		
v/c Ratio	1.24	0.88		0.35	1.28		1.25	0.08		1.25	0.42	
Uniform Delay, d1	54.7	19.3		19.4	34.2		51.6	43.0		68.2	64.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	139.5	5.1		19.3	131.0		140.4	0.1		165.1	3.2	
Delay (s)	194.2	24.5		38.7	165.2		192.0	43.1		233.3	67.6	
Level of Service	F	C		D	F		F	D		F	E	
Approach Delay (s)		44.2			164.3			173.0			138.8	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM Average Control Delay	112.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.1
Intersection Capacity Utilization	118.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

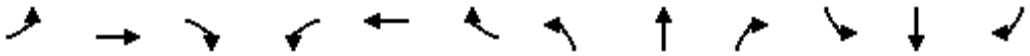
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	1812	89	86	1904	2	240	2	190	7	2	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.94			0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.99	
Satd. Flow (prot)	1719	3414		1719	3438			1656			1632	
Flt Permitted	0.06	1.00		0.06	1.00			0.81			0.90	
Satd. Flow (perm)	107	3414		106	3438			1383			1494	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	2013	99	96	2116	2	267	2	211	8	2	17
RTOR Reduction (vph)	0	4	0	0	0	0	0	15	0	0	13	0
Lane Group Flow (vph)	17	2108	0	96	2118	0	0	465	0	0	14	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	67.7	67.7		68.0	68.0			21.0			21.0	
Effective Green, g (s)	67.7	67.7		68.0	68.0			21.0			21.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.68			0.21			0.21	
Clearance Time (s)	6.3	6.3		6.0	6.0			5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	72	2311		72	2338			290			314	
v/s Ratio Prot		0.62			0.62							
v/s Ratio Perm	0.16			c0.90				c0.34			0.01	
v/c Ratio	0.24	0.91		1.33	0.91			1.60			0.05	
Uniform Delay, d1	6.2	13.6		16.0	13.3			39.5			31.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	7.6	6.9		218.6	6.4			287.1			0.1	
Delay (s)	13.8	20.5		234.6	19.8			326.6			31.6	
Level of Service	B	C		F	B			F			C	
Approach Delay (s)		20.5			29.1			326.6			31.6	
Approach LOS		C			C			F			C	

Intersection Summary			
HCM Average Control Delay	54.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	112.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



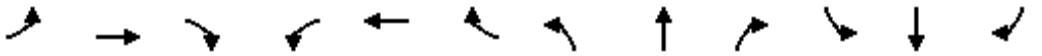
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	2216	195	32	3306	61	530	10	8	56	2	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.99		1.00	1.00		1.00	0.93			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1719	3396		1719	3429		1719	1687			1651	
Flt Permitted	0.04	1.00		0.05	1.00		0.66	1.00			0.85	
Satd. Flow (perm)	79	3396		84	3429		1188	1687			1432	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	36	2462	217	36	3673	68	589	11	9	62	2	59
RTOR Reduction (vph)	0	4	0	0	1	0	0	4	0	0	22	0
Lane Group Flow (vph)	36	2675	0	36	3740	0	589	16	0	0	101	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	5	2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	97.0	97.0		85.9	85.9		43.0	43.0			43.0	
Effective Green, g (s)	97.0	97.0		85.9	85.9		43.0	43.0			43.0	
Actuated g/C Ratio	0.64	0.64		0.57	0.57		0.28	0.28			0.28	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.0	5.0			5.0	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3			4.3	
Lane Grp Cap (vph)	103	2177		48	1947		338	479			407	
v/s Ratio Prot	0.01	c0.79			c1.09			0.01				
v/s Ratio Perm	0.22			0.43			c0.50				0.07	
v/c Ratio	0.35	1.23		0.75	1.92		1.74	0.03			0.25	
Uniform Delay, d1	36.2	27.2		24.6	32.7		54.2	39.1			41.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	3.2	107.1		69.5	416.4		346.2	0.0			0.5	
Delay (s)	39.4	134.3		94.1	449.1		400.4	39.2			42.2	
Level of Service	D	F		F	F		F	D			D	
Approach Delay (s)		133.0			445.7			388.5			42.2	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM Average Control Delay	316.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.87		
Actuated Cycle Length (s)	151.3	Sum of lost time (s)	17.6
Intersection Capacity Utilization	138.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



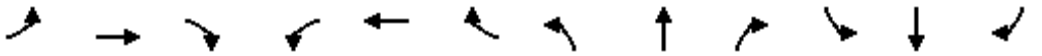
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	2702	61	90	1748	105	363	292	179	77	311	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	3427		1719	3409		1719	1810	1538	1719	1692	
Flt Permitted	0.05	1.00		0.05	1.00		0.13	1.00	1.00	0.56	1.00	
Satd. Flow (perm)	85	3427		85	3409		240	1810	1538	1021	1692	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	160	3002	68	100	1942	117	403	324	199	86	346	266
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	1	0	12	0
Lane Group Flow (vph)	160	3069	0	100	2056	0	403	324	198	86	600	0
Turn Type	Perm			Perm			pm+pt		Perm	Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	84.7	84.7		84.7	84.7		44.0	44.0	44.0	24.8	24.8	
Effective Green, g (s)	84.7	84.7		84.7	84.7		44.0	44.0	44.0	24.8	24.8	
Actuated g/C Ratio	0.61	0.61		0.61	0.61		0.31	0.31	0.31	0.18	0.18	
Clearance Time (s)	6.3	6.3		6.3	6.3		5.2	5.0	5.0	5.2	5.2	
Vehicle Extension (s)	4.3	4.3		4.3	4.3		4.3	4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)	51	2073		51	2062		221	569	483	181	300	
v/s Ratio Prot		0.90			0.60		c0.18	0.18			0.35	
v/s Ratio Perm	c1.87			1.17			c0.39		0.13	0.08		
v/c Ratio	3.14	1.48		1.96	1.00		1.82	0.57	0.41	0.48	2.00	
Uniform Delay, d1	27.6	27.6		27.6	27.5		41.1	40.1	37.8	51.8	57.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1011.0	218.8		495.2	19.1		387.8	1.8	0.9	3.1	462.4	
Delay (s)	1038.7	246.5		522.9	46.7		428.9	41.8	38.7	54.8	520.0	
Level of Service	F	F		F	D		F	D	D	D	F	
Approach Delay (s)		285.7			68.7			209.6			462.7	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM Average Control Delay	226.5	HCM Level of Service	F
HCM Volume to Capacity ratio	2.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	171.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



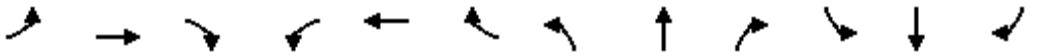
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	2394	167	528	1677	26	264	28	652	443	552	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Lane Util. Factor		0.95		1.00	0.95			1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00			1.00	0.85	1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.96	1.00	0.95	1.00	
Satd. Flow (prot)		3403		1719	3430			1731	1538	1719	1753	
Flt Permitted		0.83		0.08	1.00			0.18	1.00	0.29	1.00	
Satd. Flow (perm)		2830		145	3430			328	1538	528	1753	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	2660	186	587	1863	29	293	31	724	492	613	160
RTOR Reduction (vph)	0	6	0	0	1	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	2872	0	587	1891	0	0	324	724	492	762	0
Turn Type	Perm			pm+pt			Perm		pm+ov	Perm		
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)		43.7		57.7	57.7			21.0	28.7	21.0	21.0	
Effective Green, g (s)		43.7		57.7	57.7			21.0	28.7	21.0	21.0	
Actuated g/C Ratio		0.49		0.64	0.64			0.23	0.32	0.23	0.23	
Clearance Time (s)		6.3		6.3	6.3			5.0	6.3	5.0	5.0	
Vehicle Extension (s)		4.3		4.3	4.3			4.3	4.3	4.3	4.3	
Lane Grp Cap (vph)		1374		228	2199			77	490	123	409	
v/s Ratio Prot				c0.22	0.55				0.13		0.43	
v/s Ratio Perm		1.01		c1.44				c0.99	0.34	0.93		
v/c Ratio		2.09		2.57	0.86			4.21	1.48	4.00	1.86	
Uniform Delay, d1		23.1		27.7	12.9			34.5	30.6	34.5	34.5	
Progression Factor		1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		493.2		721.2	4.7			1473.5	225.7	1369.2	398.0	
Delay (s)		516.4		748.9	17.6			1508.0	256.4	1403.7	432.5	
Level of Service		F		F	B			F	F	F	F	
Approach Delay (s)		516.4			190.8			643.3			810.2	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	476.9	HCM Level of Service	F
HCM Volume to Capacity ratio	2.91		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.3
Intersection Capacity Utilization	192.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



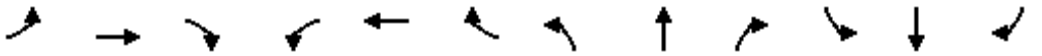
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	3418	156	53	2464	16	209	2	58	21	2	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	1.00			0.97			0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.99	
Satd. Flow (prot)	1719	3416		1719	3435			1691			1600	
Flt Permitted	0.04	1.00		0.04	1.00			0.61			0.95	
Satd. Flow (perm)	76	3416		76	3435			1064			1530	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	3798	173	59	2738	18	232	2	64	23	2	98
RTOR Reduction (vph)	0	2	0	0	0	0	0	1	0	0	5	0
Lane Group Flow (vph)	107	3969	0	59	2756	0	0	297	0	0	118	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	95.8	95.8		95.8	95.8			22.6			22.6	
Effective Green, g (s)	95.8	95.8		95.8	95.8			22.6			22.6	
Actuated g/C Ratio	0.74	0.74		0.74	0.74			0.17			0.17	
Clearance Time (s)	6.2	6.2		6.2	6.2			5.4			5.4	
Vehicle Extension (s)	4.3	4.3		4.3	4.3			4.3			4.3	
Lane Grp Cap (vph)	56	2517		56	2531			185			266	
v/s Ratio Prot		1.16			0.80							
v/s Ratio Perm	c1.42			0.78				c0.28			0.08	
v/c Ratio	1.91	1.58		1.05	1.09			1.61			0.44	
Uniform Delay, d1	17.1	17.1		17.1	17.1			53.7			48.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	468.8	261.5		136.1	47.3			296.6			1.9	
Delay (s)	485.9	278.6		153.2	64.4			350.3			49.9	
Level of Service	F	F		F	E			F			D	
Approach Delay (s)		284.0			66.3			350.3			49.9	
Approach LOS		F			E			F			D	

Intersection Summary			
HCM Average Control Delay	199.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.85		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	131.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	223	1837	517	142	1214	105	264	393	77	288	586	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3397		1719	1810	1538	1719	1810	1538
Flt Permitted	0.06	1.00	1.00	0.07	1.00		0.11	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	112	3438	1538	123	3397		196	1810	1538	196	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	248	2041	574	158	1349	117	293	437	86	320	651	186
RTOR Reduction (vph)	0	0	20	0	4	0	0	0	9	0	0	15
Lane Group Flow (vph)	248	2041	554	158	1462	0	293	437	77	320	651	171
Turn Type	pm+pt		pm+ov	pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	79.4	64.7	81.7	67.4	58.7		54.0	37.0	45.7	54.0	37.0	51.7
Effective Green, g (s)	79.4	64.7	81.7	67.4	58.7		54.0	37.0	45.7	54.0	37.0	51.7
Actuated g/C Ratio	0.53	0.43	0.54	0.45	0.39		0.36	0.25	0.30	0.36	0.25	0.34
Clearance Time (s)	6.3	6.3	5.0	6.3	6.3		5.0	5.0	6.3	5.0	5.0	6.3
Vehicle Extension (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3	4.3	4.3	4.3	4.3
Lane Grp Cap (vph)	217	1483	838	148	1329		243	446	469	243	446	530
v/s Ratio Prot	c0.11	c0.59	0.08	0.06	0.43		0.14	0.24	0.01	c0.15	c0.36	0.03
v/s Ratio Perm	0.49		0.29	0.42			0.30		0.04	0.33		0.08
v/c Ratio	1.14	1.38	0.66	1.07	1.10		1.21	0.98	0.16	1.32	1.46	0.32
Uniform Delay, d1	49.9	42.6	24.3	41.6	45.6		45.3	56.1	38.2	45.2	56.5	36.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	104.9	173.6	2.3	93.1	56.8		124.8	37.1	0.3	168.6	218.9	0.6
Delay (s)	154.8	216.3	26.6	134.8	102.4		170.1	93.2	38.4	213.8	275.4	36.8
Level of Service	F	F	C	F	F		F	F	D	F	F	D
Approach Delay (s)		172.9			105.6			115.1			220.0	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	157.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.6
Intersection Capacity Utilization	122.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	162	90	137	98	112	210	1553	266	115	1940	316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00	1.00	0.91	1.00	0.97	0.91	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Flt Permitted	0.69	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1243	3254		3335	1810	1538	1719	4940	1538	3335	4940	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	162	180	100	152	109	124	233	1726	296	128	2156	351
RTOR Reduction (vph)	0	76	0	0	0	114	0	0	127	0	0	111
Lane Group Flow (vph)	162	204	0	152	109	10	233	1726	169	128	2156	240
Turn Type	pm+pt			Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8					4			6			2
Actuated Green, G (s)	14.0	8.0		6.0	8.0	8.0	15.6	57.2	57.2	7.8	49.4	49.4
Effective Green, g (s)	14.0	8.0		6.0	8.0	8.0	15.6	57.2	57.2	7.8	49.4	49.4
Actuated g/C Ratio	0.14	0.08		0.06	0.08	0.08	0.16	0.57	0.57	0.08	0.49	0.49
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	7.0	7.0	4.0	7.0	7.0
Vehicle Extension (s)	4.3	4.9		4.3	4.9	4.9	4.3	4.9	4.9	4.3	4.9	4.9
Lane Grp Cap (vph)	203	260		200	145	123	268	2826	880	260	2440	760
v/s Ratio Prot	c0.05	0.06		0.05	0.06		c0.14	0.35		0.04	c0.44	
v/s Ratio Perm	c0.06					0.01			0.11			0.16
v/c Ratio	0.80	0.78		0.76	0.75	0.08	0.87	0.61	0.19	0.49	0.88	0.32
Uniform Delay, d1	41.0	45.1		46.3	45.0	42.6	41.2	14.1	10.3	44.2	22.7	15.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.06	1.28	3.13	1.00	1.00	1.00
Incremental Delay, d2	20.8	16.2		16.9	22.6	0.6	13.1	0.4	0.2	2.3	5.1	1.1
Delay (s)	61.8	61.3		63.2	67.6	43.2	56.7	18.4	32.4	46.5	27.8	16.3
Level of Service	E	E		E	E	D	E	B	C	D	C	B
Approach Delay (s)		61.5			58.0			24.2			27.2	
Approach LOS		E			E			C			C	

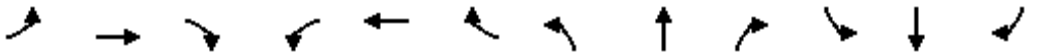
Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	520	205	1668	499	190	1509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.3		6.3	6.3
Lane Util. Factor	1.00	1.00	0.91		1.00	0.91
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1719	1538	4769		1719	4940
Flt Permitted	0.95	1.00	1.00		0.14	1.00
Satd. Flow (perm)	1719	1538	4769		261	4940
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	578	228	1853	554	211	1677
RTOR Reduction (vph)	0	9	108	0	0	0
Lane Group Flow (vph)	578	219	2299	0	211	1677
Turn Type		Perm			Perm	
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	10.0	10.0	27.7		27.7	27.7
Effective Green, g (s)	10.0	10.0	27.7		27.7	27.7
Actuated g/C Ratio	0.20	0.20	0.55		0.55	0.55
Clearance Time (s)	6.0	6.0	6.3		6.3	6.3
Vehicle Extension (s)	4.9	4.9	4.9		4.9	4.9
Lane Grp Cap (vph)	344	308	2642		145	2737
v/s Ratio Prot	c0.34		0.48			0.34
v/s Ratio Perm		0.14			c0.81	
v/c Ratio	1.68	0.71	0.87		1.46	0.61
Uniform Delay, d1	20.0	18.7	9.6		11.2	7.5
Progression Factor	1.00	1.00	1.02		1.00	1.00
Incremental Delay, d2	318.5	9.1	2.0		238.9	1.0
Delay (s)	338.5	27.8	11.8		250.0	8.6
Level of Service	F	C	B		F	A
Approach Delay (s)	250.6		11.8			35.5
Approach LOS	F		B			D

Intersection Summary			
HCM Average Control Delay	58.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

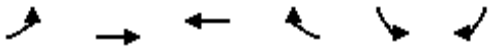
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	126	2355	157	42	1711	14	118	71	92	84	28	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1719	3438	1538	1719	3438	1538	3335	3147		1719	1810	2707
Flt Permitted	0.06	1.00	1.00	0.04	1.00	1.00	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	100	3438	1538	70	3438	1538	3335	3147		1810	1810	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	140	2617	174	47	1901	16	131	79	102	93	31	76
RTOR Reduction (vph)	0	0	33	0	0	4	0	67	0	0	0	38
Lane Group Flow (vph)	140	2617	141	47	1901	12	131	114	0	93	31	38
Turn Type	pm+pt		Perm	pm+pt		Perm	Prot			pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8		7	4	5
Permitted Phases	2		2	6		6				4		4
Actuated Green, G (s)	118.3	109.1	109.1	107.4	102.7	102.7	8.0	7.0		9.0	4.0	15.6
Effective Green, g (s)	118.3	109.1	109.1	107.4	102.7	102.7	8.0	7.0		9.0	4.0	15.6
Actuated g/C Ratio	0.80	0.73	0.73	0.72	0.69	0.69	0.05	0.05		0.06	0.03	0.10
Clearance Time (s)	4.0	6.5	6.5	4.5	6.5	6.5	6.0	6.0		6.0	6.0	4.0
Vehicle Extension (s)	4.3	4.9	4.9	4.3	4.9	4.9	4.3	6.4		4.3	6.4	4.3
Lane Grp Cap (vph)	206	2521	1128	103	2373	1062	179	148		106	49	284
v/s Ratio Prot	c0.05	c0.76		0.01	0.55		c0.04	c0.04		0.03	0.02	0.01
v/s Ratio Perm	0.49		0.09	0.31		0.01				0.02		0.00
v/c Ratio	0.68	1.04	0.13	0.46	0.80	0.01	0.73	0.77		0.88	0.63	0.14
Uniform Delay, d1	35.4	19.9	5.8	39.5	16.0	7.2	69.3	70.1		69.4	71.7	60.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.8	28.7	0.1	5.0	2.3	0.0	15.7	27.3		52.1	39.1	0.3
Delay (s)	45.2	48.6	5.9	44.5	18.3	7.2	85.0	97.4		121.5	110.8	60.8
Level of Service	D	D	A	D	B	A	F	F		F	F	E
Approach Delay (s)		45.9			18.8			92.2			96.8	
Approach LOS		D			B			F			F	

Intersection Summary			
HCM Average Control Delay	40.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	148.8	Sum of lost time (s)	22.5
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	1117	877	0	1264	1009	0	0	0	395	643	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Lane Util. Factor	0.97	0.95	1.00		0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	3335	3438	1538		3438	1538				1719	1810	1538
Flt Permitted	0.95	1.00	1.00		1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	3335	3438	1538		3438	1538				1719	1810	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	267	1241	974	0	1404	1121	0	0	0	439	714	394
RTOR Reduction (vph)	0	0	12	0	0	11	0	0	0	0	0	179
Lane Group Flow (vph)	267	1241	962	0	1404	1110	0	0	0	439	714	215
Turn Type	Prot		Perm	Perm		custom				Perm		Perm
Protected Phases	5	2			6	4					4	
Permitted Phases			2	6		6				4		4
Actuated Green, G (s)	6.0	33.2	33.2		21.4	37.1				15.7	15.7	15.7
Effective Green, g (s)	6.0	33.2	33.2		21.4	37.1				15.7	15.7	15.7
Actuated g/C Ratio	0.10	0.55	0.55		0.36	0.62				0.26	0.26	0.26
Clearance Time (s)	5.8	5.8	5.8		5.8	5.3				5.3	5.3	5.3
Vehicle Extension (s)	4.3	4.3	4.3		4.3	4.3				4.3	4.3	4.3
Lane Grp Cap (vph)	334	1902	851		1226	951				450	474	402
v/s Ratio Prot	0.08	0.36			0.41	0.31					c0.39	
v/s Ratio Perm			c0.63			0.42				0.26		0.14
v/c Ratio	0.80	0.65	1.13		1.15	1.17				0.98	1.51	0.54
Uniform Delay, d1	26.4	9.4	13.4		19.3	11.4				22.0	22.1	19.0
Progression Factor	1.00	1.00	1.00		1.27	0.73				1.00	1.00	1.00
Incremental Delay, d2	13.6	1.8	73.3		66.4	76.2				36.0	238.6	2.0
Delay (s)	40.0	11.1	86.7		90.9	84.5				57.9	260.8	21.0
Level of Service	D	B	F		F	F				E	F	C
Approach Delay (s)		43.9			88.1			0.0			142.1	
Approach LOS		D			F			A			F	

Intersection Summary			
HCM Average Control Delay	84.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	137.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

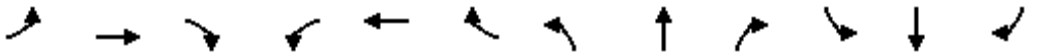


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1512	1816	0	681	457
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.6	5.6		5.3	5.3
Lane Util. Factor		0.95	0.95		1.00	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3438	3438		1719	2707
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3438	3438		1719	2707
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1680	2018	0	757	508
RTOR Reduction (vph)	0	0	0	0	0	4
Lane Group Flow (vph)	0	1680	2018	0	757	504
Turn Type						Perm
Protected Phases		2	6		4	
Permitted Phases						4
Actuated Green, G (s)		29.4	29.4		19.7	19.7
Effective Green, g (s)		29.4	29.4		19.7	19.7
Actuated g/C Ratio		0.49	0.49		0.33	0.33
Clearance Time (s)		5.6	5.6		5.3	5.3
Vehicle Extension (s)		4.3	4.3		4.3	4.3
Lane Grp Cap (vph)		1685	1685		564	889
v/s Ratio Prot		0.49	c0.59		c0.44	
v/s Ratio Perm						0.19
v/c Ratio		1.00	1.20		1.34	0.57
Uniform Delay, d1		15.3	15.3		20.1	16.6
Progression Factor		1.16	0.77		1.00	1.00
Incremental Delay, d2		17.1	89.5		165.6	1.1
Delay (s)		34.8	101.3		185.8	17.7
Level of Service		C	F		F	B
Approach Delay (s)		34.8	101.3		118.3	
Approach LOS		C	F		F	

Intersection Summary			
HCM Average Control Delay	83.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	142.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

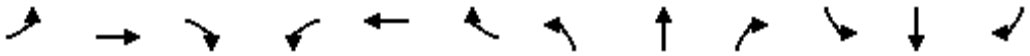
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	812	0	0	815	1791	983
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8			5.8	5.0	5.0
Lane Util. Factor	0.95			0.95	0.97	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3438			3438	3335	1538
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3438			3438	3335	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	902	0	0	906	1990	1092
RTOR Reduction (vph)	0	0	0	0	0	5
Lane Group Flow (vph)	902	0	0	906	1990	1087
Turn Type						Perm
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	16.2			16.2	33.0	33.0
Effective Green, g (s)	16.2			16.2	33.0	33.0
Actuated g/C Ratio	0.27			0.27	0.55	0.55
Clearance Time (s)	5.8			5.8	5.0	5.0
Vehicle Extension (s)	4.3			4.3	4.3	4.3
Lane Grp Cap (vph)	928			928	1834	846
v/s Ratio Prot	0.26			c0.26	0.60	
v/s Ratio Perm						c0.71
v/c Ratio	0.97			0.98	1.09	1.28
Uniform Delay, d1	21.7			21.7	13.5	13.5
Progression Factor	0.75			1.00	1.00	1.00
Incremental Delay, d2	4.5			24.3	48.2	137.2
Delay (s)	20.7			46.1	61.7	150.7
Level of Service	C			D	E	F
Approach Delay (s)	20.7			46.1	93.2	
Approach LOS	C			D	F	

Intersection Summary			
HCM Average Control Delay	71.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	181.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



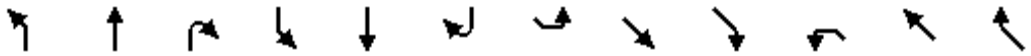
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1169	549	368	1581	26	321	23	362	36	16	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.95		1.00	1.00			1.00	0.85		0.94	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.98	
Satd. Flow (prot)	1719	3273		1719	3430			1729	1538		1671	
Flt Permitted	0.10	1.00		0.06	1.00			0.66	1.00		0.40	
Satd. Flow (perm)	173	3273		103	3430			1200	1538		675	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	86	1299	610	409	1757	29	357	26	402	40	18	44
RTOR Reduction (vph)	0	39	0	0	1	0	0	0	221	0	20	0
Lane Group Flow (vph)	86	1870	0	409	1785	0	0	383	181	0	82	0
Turn Type	Perm			pm+pt			Perm		Perm	Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	63.3	63.3		92.3	92.3			34.7	34.7		34.7	
Effective Green, g (s)	63.3	63.3		92.3	92.3			34.7	34.7		34.7	
Actuated g/C Ratio	0.45	0.45		0.66	0.66			0.25	0.25		0.25	
Clearance Time (s)	6.7	6.7		6.7	6.7			6.3	6.3		6.3	
Vehicle Extension (s)	4.9	4.9		4.3	4.9			4.3	4.3		4.3	
Lane Grp Cap (vph)	78	1480		325	2261			297	381		167	
v/s Ratio Prot		0.57		c0.20	0.52							
v/s Ratio Perm	0.50			c0.63				c0.32	0.12		0.12	
v/c Ratio	1.10	1.26		1.26	0.79			1.29	0.47		0.49	
Uniform Delay, d1	38.4	38.4		49.2	16.9			52.6	44.9		45.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	132.5	124.0		138.9	2.9			153.3	1.5		3.6	
Delay (s)	170.9	162.4		188.0	19.8			205.9	46.4		48.7	
Level of Service	F	F		F	B			F	D		D	
Approach Delay (s)		162.7			51.2			124.2			48.7	
Approach LOS		F			D			F			D	

Intersection Summary			
HCM Average Control Delay	106.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	112.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



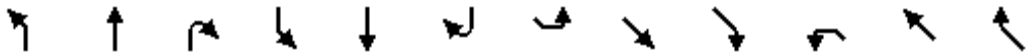
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	0	6	48	0	139	9	947	23	111	1392	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.90		1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719	1538		1607		1719	3426		1719	3430	
Flt Permitted		0.50	1.00		0.91		0.12	1.00		0.24	1.00	
Satd. Flow (perm)		906	1538		1475		213	3426		435	3430	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	19	0	7	53	0	154	10	1052	26	123	1547	26
RTOR Reduction (vph)	0	0	6	0	101	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	19	1	0	106	0	10	1076	0	123	1572	0
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)		11.4	11.4		11.4		51.6	51.6		51.6	51.6	
Effective Green, g (s)		11.4	11.4		11.4		51.6	51.6		51.6	51.6	
Actuated g/C Ratio		0.15	0.15		0.15		0.69	0.69		0.69	0.69	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		4.3	4.3		4.3		4.3	4.3		4.3	4.3	
Lane Grp Cap (vph)		138	234		224		147	2357		299	2360	
v/s Ratio Prot								0.31			c0.46	
v/s Ratio Perm		0.02	0.00		c0.07		0.05			0.28		
v/c Ratio		0.14	0.00		0.47		0.07	0.46		0.41	0.67	
Uniform Delay, d1		27.5	27.0		29.1		3.8	5.3		5.1	6.7	
Progression Factor		1.00	1.00		1.00		1.00	1.00		0.89	0.87	
Incremental Delay, d2		0.7	0.0		2.5		0.9	0.6		2.7	1.0	
Delay (s)		28.3	27.0		31.5		4.7	6.0		7.2	6.8	
Level of Service		C	C		C		A	A		A	A	
Approach Delay (s)		27.9			31.5			6.0			6.8	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



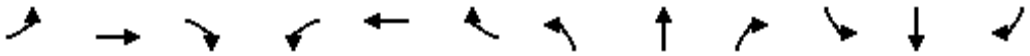
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1026	105	545	931	0	578	0	589	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0		6.0			
Lane Util. Factor		0.95		1.00	0.95		1.00		1.00			
Frt		0.99		1.00	1.00		1.00		0.85			
Flt Protected		1.00		0.95	1.00		0.95		1.00			
Satd. Flow (prot)		3390		1719	3438		1719		1538			
Flt Permitted		1.00		0.08	1.00		0.95		1.00			
Satd. Flow (perm)		3390		137	3438		1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1140	117	606	1034	0	642	0	654	0	0	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	79	0	0	0
Lane Group Flow (vph)	0	1252	0	606	1034	0	642	0	575	0	0	0
Turn Type				pm+pt			Prot		custom			
Protected Phases		2		1	6		4					
Permitted Phases				6					4			
Actuated Green, G (s)		47.0		91.0	91.0		47.0		47.0			
Effective Green, g (s)		47.0		91.0	91.0		47.0		47.0			
Actuated g/C Ratio		0.31		0.61	0.61		0.31		0.31			
Clearance Time (s)		6.0		6.0	6.0		6.0		6.0			
Vehicle Extension (s)		4.3		4.3	4.3		4.3		4.3			
Lane Grp Cap (vph)		1062		484	2086		539		482			
v/s Ratio Prot		0.37		c0.32	0.30		0.37					
v/s Ratio Perm				c0.44					c0.37			
v/c Ratio		1.18		1.25	0.50		1.19		1.19			
Uniform Delay, d1		51.5		48.0	16.6		51.5		51.5			
Progression Factor		0.91		1.16	0.15		1.00		1.00			
Incremental Delay, d2		89.5		122.6	0.5		103.3		105.8			
Delay (s)		136.3		178.5	2.9		154.8		157.3			
Level of Service		F		F	A		F		F			
Approach Delay (s)		136.3			67.8			156.1			0.0	
Approach LOS		F			E			F			A	

Intersection Summary			
HCM Average Control Delay	115.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



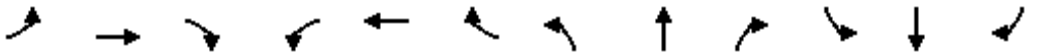
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	376	1228	0	0	1417	1062	0	0	0	59	0	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1719	3438			3438	1538				1719		1538
Flt Permitted	0.05	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	94	3438			3438	1538				1719		1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	418	1364	0	0	1574	1180	0	0	0	66	0	343
RTOR Reduction (vph)	0	0	0	0	0	248	0	0	0	0	0	87
Lane Group Flow (vph)	418	1364	0	0	1574	932	0	0	0	66	0	256
Turn Type	pm+pt					custom				custom		custom
Protected Phases	5	2										8
Permitted Phases	2				6	6				8		
Actuated Green, G (s)	115.0	115.0			81.0	81.0				23.0		23.0
Effective Green, g (s)	115.0	115.0			81.0	81.0				23.0		23.0
Actuated g/C Ratio	0.77	0.77			0.54	0.54				0.15		0.15
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0		6.0
Vehicle Extension (s)	4.3	4.3			4.3	4.3				4.3		4.3
Lane Grp Cap (vph)	375	2636			1857	831				264		236
v/s Ratio Prot	c0.21	0.40										c0.17
v/s Ratio Perm	c0.64				0.46	0.61				0.04		
v/c Ratio	1.11	0.52			0.85	1.12				0.25		1.08
Uniform Delay, d1	51.8	6.8			29.3	34.5				55.9		63.5
Progression Factor	0.77	1.84			1.00	1.00				1.00		1.00
Incremental Delay, d2	55.5	0.1			5.0	70.3				0.8		82.7
Delay (s)	95.2	12.6			34.3	104.8				56.7		146.2
Level of Service	F	B			C	F				E		F
Approach Delay (s)		31.9			64.5			0.0			131.8	
Approach LOS		C			E			A			F	

Intersection Summary			
HCM Average Control Delay	58.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	20	590	954	80	88	280	1973	304	21	1530	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1719	1547		1633	1649	1538	1719	3438	1538	1719	3425	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.06	1.00	1.00	0.07	1.00	
Satd. Flow (perm)	1719	1547		1633	1649	1538	117	3438	1538	129	3425	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	22	656	1060	89	98	311	2192	338	23	1700	44
RTOR Reduction (vph)	0	118	0	0	0	15	0	0	78	0	1	0
Lane Group Flow (vph)	44	560	0	572	577	83	311	2192	261	23	1743	0
Turn Type	Split			Split		Perm	pm+pt		Perm	Perm		
Protected Phases	4	4		8	8		5	2			6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)	25.0	25.0		32.0	32.0	32.0	75.0	75.0	75.0	56.0	56.0	
Effective Green, g (s)	25.0	25.0		32.0	32.0	32.0	75.0	75.0	75.0	56.0	56.0	
Actuated g/C Ratio	0.17	0.17		0.21	0.21	0.21	0.50	0.50	0.50	0.37	0.37	
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)	4.9	4.9		4.9	4.9	4.9	4.3	4.9	4.9	4.9	4.9	
Lane Grp Cap (vph)	287	258		348	352	328	197	1719	769	48	1279	
v/s Ratio Prot	0.03	c0.36		c0.35	0.35		0.14	c0.64			0.51	
v/s Ratio Perm						0.05	c0.65		0.17	0.18		
v/c Ratio	0.15	2.17		1.64	1.64	0.25	1.58	1.28	0.34	0.48	1.36	
Uniform Delay, d1	53.4	62.5		59.0	59.0	49.1	48.0	37.5	22.6	35.9	47.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.5	538.8		302.3	300.2	0.8	283.3	128.5	0.5	14.4	168.3	
Delay (s)	54.0	601.3		361.3	359.2	49.9	331.4	166.0	23.1	50.3	215.3	
Level of Service	D	F		F	F	D	F	F	C	D	F	
Approach Delay (s)		567.9			335.9			167.1			213.1	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	255.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.67		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	161.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

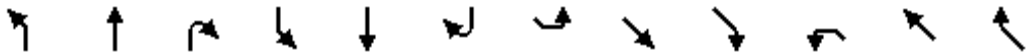


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	687	0	757	536	1800	0	0	2281	793
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Lane Util. Factor				0.95	0.95	0.88	0.97	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1633	1633	2707	3335	3438			3438	1538
Flt Permitted				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)				1633	1633	2707	3335	3438			3438	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	763	0	841	596	2000	0	0	2534	881
RTOR Reduction (vph)	0	0	0	0	0	34	0	0	0	0	0	175
Lane Group Flow (vph)	0	0	0	381	382	807	596	2000	0	0	2534	706
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8						6
Actuated Green, G (s)				31.0	31.0	31.0	19.0	107.0			82.0	82.0
Effective Green, g (s)				31.0	31.0	31.0	19.0	107.0			82.0	82.0
Actuated g/C Ratio				0.21	0.21	0.21	0.13	0.71			0.55	0.55
Clearance Time (s)				6.0	6.0	6.0	6.0	6.0			6.0	6.0
Vehicle Extension (s)				4.9	4.9	4.9	4.3	4.9			4.9	4.9
Lane Grp Cap (vph)				337	337	559	422	2452			1879	841
v/s Ratio Prot							c0.18	0.58			c0.74	
v/s Ratio Perm				0.23	0.23	c0.30						0.46
v/c Ratio				1.13	1.13	1.44	1.41	0.82			1.35	0.84
Uniform Delay, d1				59.5	59.5	59.5	65.5	14.7			34.0	28.5
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				89.2	90.3	209.5	199.2	2.5			160.5	8.3
Delay (s)				148.7	149.8	269.0	264.7	17.2			194.5	36.8
Level of Service				F	F	F	F	B			F	D
Approach Delay (s)		0.0			212.1			74.0			153.8	
Approach LOS		A			F			E			F	

Intersection Summary			
HCM Average Control Delay	138.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	183.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	0	1627	1068	1825	1143	0	709	0	705	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Lane Util. Factor		0.91	1.00	1.00	0.95		0.95	0.95	0.88			
Frt		1.00	0.85	1.00	1.00		1.00	1.00	0.85			
Flt Protected		1.00	1.00	0.95	1.00		0.95	0.95	1.00			
Satd. Flow (prot)		4940	1538	1719	3438		1633	1633	2707			
Flt Permitted		1.00	1.00	0.07	1.00		0.95	0.95	1.00			
Satd. Flow (perm)		4940	1538	123	3438		1633	1633	2707			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	1808	1187	2028	1270	0	788	0	783	0	0	0
RTOR Reduction (vph)	0	0	153	0	0	0	0	0	212	0	0	0
Lane Group Flow (vph)	0	1808	1034	2028	1270	0	394	394	571	0	0	0
Turn Type			Perm	pm+pt			Perm		Perm			
Protected Phases		2		1	6			4				
Permitted Phases			2	6			4		4			
Actuated Green, G (s)		52.6	52.6	121.2	120.6		16.9	16.9	16.9			
Effective Green, g (s)		52.6	52.6	121.2	120.6		16.9	16.9	16.9			
Actuated g/C Ratio		0.35	0.35	0.81	0.80		0.11	0.11	0.11			
Clearance Time (s)		6.4	6.4	5.8	6.4		6.1	6.1	6.1			
Vehicle Extension (s)		4.9	4.9	4.3	4.9		4.9	4.9	4.9			
Lane Grp Cap (vph)		1732	539	761	2764		184	184	305			
v/s Ratio Prot		0.37		c1.10	0.37							
v/s Ratio Perm			0.67	c1.05			c0.24	0.24	0.21			
v/c Ratio		1.04	1.92	2.66	0.46		2.14	2.14	1.87			
Uniform Delay, d1		48.7	48.7	39.4	4.6		66.5	66.5	66.5			
Progression Factor		1.00	1.00	1.00	1.00		1.00	1.00	1.00			
Incremental Delay, d2		34.1	419.9	753.0	0.2		531.3	531.3	404.6			
Delay (s)		82.8	468.6	792.4	4.8		597.9	597.9	471.2			
Level of Service		F	F	F	A		F	F	F			
Approach Delay (s)		235.7			489.1			534.7			0.0	
Approach LOS		F			F			F			A	

Intersection Summary			
HCM Average Control Delay	401.7	HCM Level of Service	F
HCM Volume to Capacity ratio	2.56		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	183.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	167	1677	2	10	1233	605	1006	2	519	6	2	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Lane Util. Factor	1.00	0.91			0.95	1.00	1.00	1.00			1.00	1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.85			1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00			0.96	1.00
Satd. Flow (prot)	1719	4939			3437	1538	1719	1539			1742	1538
Flt Permitted	0.09	1.00			0.92	1.00	0.75	1.00			0.78	1.00
Satd. Flow (perm)	156	4939			3154	1538	1360	1539			1414	1538
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	186	1863	2	11	1370	672	1118	2	577	7	2	13
RTOR Reduction (vph)	0	0	0	0	0	332	0	62	0	0	0	2
Lane Group Flow (vph)	186	1865	0	0	1381	340	1118	517	0	0	9	11
Turn Type	pm+pt			Perm		Perm	Perm			Perm		Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2			6		6	4			8		8
Actuated Green, G (s)	50.6	50.6			40.6	40.6	46.9	46.9			46.9	46.9
Effective Green, g (s)	50.6	50.6			40.6	40.6	46.9	46.9			46.9	46.9
Actuated g/C Ratio	0.46	0.46			0.37	0.37	0.43	0.43			0.43	0.43
Clearance Time (s)	5.8	6.4			6.4	6.4	6.1	6.1			6.1	6.1
Vehicle Extension (s)	4.3	4.9			4.9	4.9	4.9	4.9			4.9	4.9
Lane Grp Cap (vph)	131	2272			1164	568	580	656			603	656
v/s Ratio Prot	c0.05	0.38						0.34				
v/s Ratio Perm	c0.60				0.44	0.22	c0.82				0.01	0.01
v/c Ratio	1.42	0.82			1.19	0.60	1.93	0.79			0.01	0.02
Uniform Delay, d1	29.7	25.8			34.7	28.1	31.6	27.3			18.2	18.2
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2	227.5	2.8			92.8	2.5	423.8	7.2			0.0	0.0
Delay (s)	257.2	28.6			127.5	30.6	455.3	34.4			18.2	18.2
Level of Service	F	C			F	C	F	C			B	B
Approach Delay (s)		49.3			95.8			311.7			18.2	
Approach LOS		D			F			F			B	

Intersection Summary			
HCM Average Control Delay	142.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	145.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	69	160	50	2770	2206	71
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	77	178	56	3078	2451	79
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					1013	
pX, platoon unblocked	0.58	0.58	0.58			
vC, conflicting volume	4141	1265	2530			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	4977	0	2185			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	71	58			
cM capacity (veh/h)	0	620	132			

Direction, Lane #	WB 1	SE 1	SE 2	SE 3	NW 1	NW 2
Volume Total	254	56	1539	1539	1634	896
Volume Left	77	56	0	0	0	0
Volume Right	178	0	0	0	0	79
cSH	0	132	1700	1700	1700	1700
Volume to Capacity	635.99	0.42	0.91	0.91	0.96	0.53
Queue Length 95th (ft)	Err	46	0	0	0	0
Control Delay (s)	Err	50.7	0.0	0.0	0.0	0.0
Lane LOS	F	F				
Approach Delay (s)	Err	0.9			0.0	
Approach LOS	F					

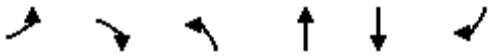
Intersection Summary			
Average Delay	430.4		
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	2290	549	113	1784	493	348
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	2544	610	126	1982	548	387
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				860		
pX, platoon unblocked					0.55	
vC, conflicting volume			3154		4092	1577
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			3154		4988	1577
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			0		0	0
cM capacity (veh/h)			92		0	95

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	1696	1458	786	1321	934
Volume Left	0	0	126	0	548
Volume Right	0	610	0	0	387
cSH	1700	1700	92	1700	0
Volume to Capacity	1.00	0.86	1.36	0.78	Err
Queue Length 95th (ft)	0	0	231	0	Err
Control Delay (s)	0.0	0.0	298.8	0.0	Err
Lane LOS			F		F
Approach Delay (s)	0.0		111.5		Err
Approach LOS					F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	189.5%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	30	8	2	1101	1518	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	33	9	2	1223	1687	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		5				
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				1176	378	
pX, platoon unblocked	0.89	0.83	0.83			
vC, conflicting volume	2304	844	1689			
vC1, stage 1 conf vol	1688					
vC2, stage 2 conf vol	616					
vCu, unblocked vol	1627	404	1421			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)	5.9					
tF (s)	3.5	3.3	2.2			
p0 queue free %	77	98	99			
cM capacity (veh/h)	148	488	382			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	42	2	612	612	1124	564
Volume Left	33	2	0	0	0	0
Volume Right	9	0	0	0	0	2
cSH	187	382	1700	1700	1700	1700
Volume to Capacity	0.23	0.01	0.36	0.36	0.66	0.33
Queue Length 95th (ft)	21	0	0	0	0	0
Control Delay (s)	31.3	14.5	0.0	0.0	0.0	0.0
Lane LOS	D	B				
Approach Delay (s)	31.3	0.0			0.0	
Approach LOS	D					

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	80	91	1531	6	80	2399
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	89	101	1701	7	89	2666
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			371			
pX, platoon unblocked	0.84	0.84			0.84	
vC, conflicting volume	3215	854			1708	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3255	450			1465	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	78			76	
cM capacity (veh/h)	4	461			372	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	190	1134	574	89	1333	1333
Volume Left	89	0	0	89	0	0
Volume Right	101	0	7	0	0	0
cSH	9	1700	1700	372	1700	1700
Volume to Capacity	21.18	0.67	0.34	0.24	0.78	0.78
Queue Length 95th (ft)	Err	0	0	23	0	0
Control Delay (s)	Err	0.0	0.0	17.7	0.0	0.0
Lane LOS	F			C		
Approach Delay (s)	Err	0.0		0.6		
Approach LOS	F					

Intersection Summary			
Average Delay	408.7		
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (veh/h)	23	1593	6	2	2187	14	3	0	267	25	0	6
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	26	1770	7	2	2430	16	3	0	297	28	0	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		939										
pX, platoon unblocked				0.84			0.84	0.84		0.84	0.84	0.84
vC, conflicting volume	2446			1777			3385	4270	1223	3341	4274	888
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2446			1543			3459	4513	1223	3406	4518	484
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	86			99			0	100	0	0	100	98
cM capacity (veh/h)	180			346			2	1	167	0	1	437

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SE 1	SE 2	NW 1	NW 2
Volume Total	26	1180	597	1217	1231	3	297	28	7
Volume Left	26	0	0	2	0	3	0	28	0
Volume Right	0	0	7	0	16	0	297	0	7
cSH	180	1700	1700	346	1700	2	167	0	437
Volume to Capacity	0.14	0.69	0.35	0.01	0.72	1.88	1.78	Err	0.02
Queue Length 95th (ft)	12	0	0	0	0	31	535	Err	1
Control Delay (s)	28.3	0.0	0.0	0.4	0.0	3569.0	420.1	Err	13.4
Lane LOS	D			A		F	F	F	B
Approach Delay (s)	0.4			0.2		455.0		Err	
Approach LOS						F		F	

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	90.8%	ICU Level of Service		E
Analysis Period (min)	15			

INTERCHANGE MODIFICATION REPORT
FOR
I-85/I-385 INTERCHANGE IMPROVEMENTS

GREENVILLE COUNTY, SOUTH CAROLINA

APPENDIX F

Prepared for:

South Carolina Department of Transportation

Prepared by:

Florence & Hutcheson
CONSULTING ENGINEERS

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Columbia, SC 29201
Tel. (803) 254-5800
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February 2012

CONTENTS

Capacity Analysis (HCS)

- Existing Conditions
  - Freeway Segments
  - Ramps
  - Weave Areas

CAPACITY ANALYSIS (HCS)
EXISTING CONDITIONS – FREEWAY SEGMENTS

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Begin to US276
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4134	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1148	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1669	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1669	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.9	mi/h
Number of lanes, N	3	
Density, D	27.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3878	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1077	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1566	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1566	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	26.1	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	US 276 EB to US 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4092	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1137	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1652	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1652	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	27.6	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	US 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3515	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	976	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1419	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1419	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	23.6	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	US-276 to Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4002	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1112	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1616	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1616	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	26.9	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-85NB C-D off - I-85NB C-D on
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2396	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	666	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	967	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	967	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	16.1	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	From NB C-D ROAD to I-385 RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2722	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	756	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1099	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1099	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	18.3	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-385 RAMP to PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4546	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1263	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1835	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1835	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.0	mi/h
Number of lanes, N	3	
Density, D	31.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2838	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	788	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1146	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1146	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	19.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	PELHAM ROAD to PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3494	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	971	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1411	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1411	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	23.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	PELHAM ROAD to END
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3954	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1098	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1596	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1596	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	26.6	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	BEGIN to US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4298	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1194	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1735	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1735	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.7	mi/h
Number of lanes, N	3	
Density, D	29.1	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3120	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	867	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1260	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1260	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	21.0	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	US 276 EB to US 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3527	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	980	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1424	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1424	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	23.7	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	US 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3172	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	881	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1281	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1281	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	21.4	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	US 276 WB to WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3753	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1043	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1515	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1515	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	25.3	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-85NB C-D off - I-85NB C-D on
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2154	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	598	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	870	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	870	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	14.5	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	from NB C-D ROAD to I-385 RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3296	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	916	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1331	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1331	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	22.2	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-385 RAMP to PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	5946	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1652	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2400	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2400	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	48.4	mi/h
Number of lanes, N	3	
Density, D	49.6	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4064	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1129	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1641	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1641	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	27.4	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	PELHAM ROAD to PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4942	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1373	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1995	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1995	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	3	
Density, D	34.9	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	PELHAM ROAD to END
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	5643	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1568	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2278	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2278	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	51.7	mi/h
Number of lanes, N	3	
Density, D	44.1	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	US276EB to Begin
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4680	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1300	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1889	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1889	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.5	mi/h
Number of lanes, N	3	
Density, D	32.3	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4256	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1182	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1718	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1718	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.7	mi/h
Number of lanes, N	3	
Density, D	28.8	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	US 276 WB to US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4937	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1371	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1993	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1993	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	3	
Density, D	34.8	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	US 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3891	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1081	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1571	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1571	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	26.2	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	Woodruff to US276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4321	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1200	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1744	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1744	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	3	
Density, D	29.3	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB C-D to WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3847	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1069	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1553	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1553	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	25.9	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB C-D off to C-D ROAD on
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2478	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	688	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1000	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1000	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	16.7	pc/mi/ln
Level of service, LOS	B	

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Analyst:	NJ
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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	PELHAM ROAD to C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	5042	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1401	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2035	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2035	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	56.6	mi/h
Number of lanes, N	3	
Density, D	36.0	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3708	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1030	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1497	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1497	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	25.0	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3400	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	944	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1373	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1373	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	22.9	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	END to PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	5027	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1396	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2029	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2029	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	56.7	mi/h
Number of lanes, N	3	
Density, D	35.8	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	US 276 EB to BEGIN
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	6027	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1674	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2433	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2433	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	47.4	mi/h
Number of lanes, N	3	
Density, D	51.3	pc/mi/ln
Level of service, LOS	F	

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	5454	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1515	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2202	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2202	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	53.4	mi/h
Number of lanes, N	3	
Density, D	41.2	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	US 276 WB TO US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	5892	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1637	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2379	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2379	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	49.0	mi/h
Number of lanes, N	3	
Density, D	48.6	pc/mi/ln
Level of service, LOS	F	

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	US 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	5268	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1463	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2127	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2127	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	38.7	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	WOODRUFF RD to US 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	5656	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1571	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2283	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2283	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	51.5	mi/h
Number of lanes, N	3	
Density, D	44.3	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB C-D on to WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4854	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1348	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1960	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1960	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	57.6	mi/h
Number of lanes, N	3	
Density, D	34.0	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB C-D off to C-D on
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3490	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	969	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1409	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1409	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	23.5	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	PELHAM ROAD to C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	5609	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1558	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2264	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2264	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	52.0	mi/h
Number of lanes, N	3	
Density, D	43.5	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4552	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1264	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1838	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1838	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.0	mi/h
Number of lanes, N	3	
Density, D	31.2	pc/mi/ln
Level of service, LOS	D	

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Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4000	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1111	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1615	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1615	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	26.9	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	END to PELHAM ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4662	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1295	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1882	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1882	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.6	mi/h
Number of lanes, N	3	
Density, D	32.1	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
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Date Performed:	4/19/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	BEGIN to BUTLER RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3299	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	916	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1998	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1998	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.0	mi/h
Number of lanes, N	2	
Density, D	37.0	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst:	NJ
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Date Performed:	4/19/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	BUTLER RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3010	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	836	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1823	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1823	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	33.2	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	4/19/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Butler Rd to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3841	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1067	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2326	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2326	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	48.2	mi/h
Number of lanes, N	2	
Density, D	48.3	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3146	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	874	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1905	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1905	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.7	mi/h
Number of lanes, N	2	
Density, D	34.8	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	WOODRUFF RD to I-85 NB RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4229	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1175	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1707	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1707	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.0	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-85 NB RAMP to I-85 SB RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3263	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	906	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1976	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1976	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.2	mi/h
Number of lanes, N	2	
Density, D	36.4	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-85 SB RAMP to I-385 NB RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2410	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	669	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1459	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1459	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	26.5	pc/mi/ln
Level of service, LOS	D	

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/15/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-385 NB ramp to Roper Mtn
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4064	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1129	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1230	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1230	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	22.4	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

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Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	ROPER MOUNTAIN RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2714	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	754	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1096	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1096	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	19.9	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

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Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	ROPER MTN RD to END
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3096	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	860	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1250	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1250	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	22.7	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	4/19/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	BEGIN to BUTLER RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3709	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1030	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2246	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2246	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	50.1	mi/h
Number of lanes, N	2	
Density, D	44.8	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

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Date Performed:	4/19/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	BUTLER RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3473	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	965	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2103	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2103	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	52.7	mi/h
Number of lanes, N	2	
Density, D	39.9	pc/mi/ln
Level of service, LOS	E	

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Analyst:	NJ
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Date Performed:	4/19/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Butler Rd to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4394	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1221	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2661	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2661	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	36.7	mi/h
Number of lanes, N	2	
Density, D	72.5	pc/mi/ln
Level of service, LOS	F	

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Analyst:	NJ
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Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3688	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1024	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2233	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2233	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	50.4	mi/h
Number of lanes, N	2	
Density, D	44.3	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	WOODRUFF RD to I-85 NB RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4690	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1303	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1893	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1893	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.8	mi/h
Number of lanes, N	3	
Density, D	34.6	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-85 NB RAMP to I-85 SB RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3641	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1011	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2205	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2205	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	51.0	mi/h
Number of lanes, N	2	
Density, D	43.3	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-85 SB RAMP to I-385 NB RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2854	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	793	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1728	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1728	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	31.4	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-85 RAMP to ROPER MNT RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4483	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1245	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1357	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1357	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	24.7	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

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Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	ROPER MOUNTAIN RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3724	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1034	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1503	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1503	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	27.3	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

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Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	ROPER MNT RD to END
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4423	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1229	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1786	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1786	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	32.5	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	4/19/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	BUTLER RD to BEGIN
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	1685	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	468	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1020	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1020	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	18.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	4/19/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	BUTLER RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	1466	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	407	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	888	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	888	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	16.1	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

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Date Performed:	4/19/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	WOODRUFF RD to BUTLER RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2187	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	608	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1324	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1324	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	24.1	pc/mi/ln
Level of service, LOS	C	

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Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	1997	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	555	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1209	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1209	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	22.0	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	I-85 NB RAMP to WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3184	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	884	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1285	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1285	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	23.4	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	I-85SB RAMP to I-85NB RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2719	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	755	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1647	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1647	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	29.9	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	I-385SB ramp to I-85SB ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	1612	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	448	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	976	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	976	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	17.7	pc/mi/ln
Level of service, LOS	B	

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Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	ROPER MTN RD to I-85 RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3028	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	841	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	917	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	917	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	16.7	pc/mi/ln
Level of service, LOS	B	

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Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	ROPER MOUNTAIN RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2313	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	643	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	934	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	934	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	17.0	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

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Date Performed:	3/16/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	END to ROPER MTN RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	2984	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	829	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1205	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1205	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	21.9	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	4/19/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	BUTLER RD to BEGIN
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4112	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1142	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2490	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2490	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	43.2	mi/h
Number of lanes, N	2	
Density, D	57.6	pc/mi/ln
Level of service, LOS	F	

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Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	BUTLER RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3696	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1027	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2238	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2238	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	50.3	mi/h
Number of lanes, N	2	
Density, D	44.5	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	4/19/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	WOODRUFF RD to BUTLER RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4443	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1234	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2690	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2690	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	35.4	mi/h
Number of lanes, N	2	
Density, D	75.9	pc/mi/ln
Level of service, LOS	F	

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Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3888	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1080	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2354	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2354	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	47.4	mi/h
Number of lanes, N	2	
Density, D	49.6	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	I-85 RAMP to WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4808	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1336	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1941	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1941	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.5	mi/h
Number of lanes, N	3	
Density, D	35.6	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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E-mail:

Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	I-85SB RAMP to I-85NB RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3929	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1091	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2379	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2379	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	46.7	mi/h
Number of lanes, N	2	
Density, D	50.9	pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	I-385SB RAMP to I-85SB RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	3284	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	912	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1989	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1989	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.1	mi/h
Number of lanes, N	2	
Density, D	36.8	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	ROPER MNT RD to I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	5705	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1585	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1727	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1727	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	31.4	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	ROPER MOUNTAIN RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4183	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1162	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1689	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1689	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	30.7	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/16/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	END to ROPER MTN RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Flow Inputs and Adjustments

Volume, V	4836	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1343	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1952	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1952	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.4	mi/h
Number of lanes, N	3	
Density, D	35.9	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

CAPACITY ANALYSIS (HCS)
EXISTING CONDITIONS – RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 EB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4134	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	256	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	214	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4134	256	214	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1148	71	59	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5007	306	256	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.621 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3224 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5007	6900	No
$v_{FO} = v_F - v_R$	4701	6900	No
v_R	306	2000	No
v_3 or v_{av34}	1783 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3224 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3224	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 25.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.521

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 62.8 mph

Space mean speed for all vehicles, S = 54.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 EB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3878	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	214	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	577	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3878	214	577	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1077	59	160	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4697	256	689	pcph

Estimation of V12 Merge Areas

L_{EQ} = 4458.39 (Equation 13-6 or 13-7)

P_{FM} = 0.980 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 4602 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4953	6900	No
v_3 or v_{av34}	95 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		No	

If yes, v_{12A} = 4602 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4953	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 40.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.802	
Space mean speed in ramp influence area,	S_R = 45.6	mph
Space mean speed in outer lanes,	S_0 = 60.0	mph
Space mean speed for all vehicles,	S = 45.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 EB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3878	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	214	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	256	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3878	214	256	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1077	59	71	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4697	256	306	pcph

Estimation of V12 Merge Areas

L_{EQ} = 151.42 (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2768 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4953	6900	No
v_3 or v_{av34}	1929 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2768 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4953	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.380	
Space mean speed in ramp influence area,	S_R = 53.2	mph
Space mean speed in outer lanes,	S_0 = 54.9	mph
Space mean speed for all vehicles,	S = 53.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 WB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4092	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	577	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	487	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4092	577	487	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1137	160	135	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4956	689	582	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.604 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3268 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4956	6900	No
$v_{FO} = v_F - v_R$	4267	6900	No
v_R	689	1900	No
v_3 or v_{av34}	1688 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3268 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3268	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.620	
Space mean speed in ramp influence area,	S_R = 48.8	mph
Space mean speed in outer lanes,	S_0 = 63.1	mph
Space mean speed for all vehicles,	S = 52.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 WB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4092	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	577	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	214	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4092	577	214	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1137	160	59	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4956	689	256	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1930.27 (Equation 13-12 or 13-13)

P_{FD} = 0.892 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4495 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4956	6900	No
$v_{FO} = v_F - v_R$	4267	6900	No
v_R	689	1900	No
v_3 or v_{av34}	461 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4495 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4495	4400	Yes

Level of Service Determination (if not F)

Density, $D_D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 39.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.620

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 50.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 WB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3515	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	487	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	577	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3515	487	577	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	976	135	160	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4257	582	689	pcph

Estimation of V12 Merge Areas

L_{EQ} = 446.35 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2524 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4839	6900	No
v_3 or v_{av34}	1733 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		No	

If yes, v_{12A} = 2524 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4839	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.375	
Space mean speed in ramp influence area,	S_R = 53.2	mph
Space mean speed in outer lanes,	S_0 = 55.6	mph
Space mean speed for all vehicles,	S = 54.1	mph

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 WB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4321	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	430	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1046	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4321	430	1046	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1200	119	291	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5233	514	1249	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.606 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3372 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5233	6900	No
$v_{FO} = v_F - v_R$	4719	6900	No
v_R	514	2000	No
v_3 or v_{av34}	1861 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3372 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3372	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 27.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.539

Space mean speed in ramp influence area, S_R = 50.3 mph

Space mean speed in outer lanes, S_0 = 62.5 mph

Space mean speed for all vehicles, S = 54.0 mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 EB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3891	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	1046	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	681	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3891	1046	681	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1081	291	189	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4712	1249	813	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5260.77 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 4712 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5961	6900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		No	

If yes, v_{12A} = 4712 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5961	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 48.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 1.813	
Space mean speed in ramp influence area,	S_R = 27.4	mph
Space mean speed in outer lanes,	S_0 = 60.0	mph
Space mean speed for all vehicles,	S = 27.4	mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 EB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3891	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	1046	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	430	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3891	1046	430	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1081	291	119	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4712	1249	514	pcph

Estimation of V12 Merge Areas

L_{EQ} = 367.13 (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2777 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5961	6900	No
v_3 or v_{av34}	1935 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2777 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5961	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.519	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = 54.8	mph
Space mean speed for all vehicles,	S = 51.9	mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 EB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4937	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	681	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	424	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	468	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4937	681	424	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1371	189	118	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5979	813	506	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.573 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3774 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5979	6900	No
$v_{FO} = v_F - v_R$	5166	6900	No
v_R	813	1900	No
v_3 or v_{av34}	2205 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3774 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3774	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 32.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.631

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 61.1 mph

Space mean speed for all vehicles, S = 52.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 EB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4937	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	681	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1046	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4937	681	1046	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1371	189	291	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5979	813	1249	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 8512.29 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5979 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5979	6900	No
$v_{FO} = v_F - v_R$	5166	6900	No
v_R	813	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5979 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5979	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 51.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.631

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 48.6 mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 EB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4256	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	424	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	681	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	470	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4256	424	681	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1182	118	189	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5154	506	813	pcph

Estimation of V12 Merge Areas

L_{EQ} = 338.24 (Equation 13-6 or 13-7)

P_{FM} = 0.591 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3049 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5660	6900	No
v_3 or v_{av34}	2105 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3049 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5660	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.432	
Space mean speed in ramp influence area,	S_R = 52.2	mph
Space mean speed in outer lanes,	S_0 = 54.2	mph
Space mean speed for all vehicles,	S = 52.9	mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 EB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4298	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	1178	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	407	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4298	1178	407	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1194	327	113	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5205	1407	486	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.565 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3553 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5205	6900	No
$v_{FO} = v_F - v_R$	3798	6900	No
v_R	1407	2000	No
v_3 or v_{av34}	1652 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3553 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3553	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.620

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 63.3 mph

Space mean speed for all vehicles, S = 52.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 EB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3120	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	407	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	355	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3120	407	355	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	867	113	99	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3779	486	424	pcph

Estimation of V12 Merge Areas

L_{EQ} = 2743.63 (Equation 13-6 or 13-7)

P_{FM} = 0.814 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3076 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4265	6900	No
v_3 or v_{av34}	703 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3076 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4265	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 30.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.437	
Space mean speed in ramp influence area,	S_R = 52.1	mph
Space mean speed in outer lanes,	S_0 = 59.3	mph
Space mean speed for all vehicles,	S = 53.2	mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 EB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3120	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	407	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1178	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3120	407	1178	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	867	113	327	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3779	486	1407	pcph

Estimation of V12 Merge Areas

L_{EQ} = 4.19 (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2227 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4265	6900	No
v_3 or v_{av34}	1552 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2227 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4265	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 23.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.359	
Space mean speed in ramp influence area,	S_R = 53.5	mph
Space mean speed in outer lanes,	S_0 = 56.2	mph
Space mean speed for all vehicles,	S = 54.5	mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 WB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3527	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	355	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	581	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3527	355	581	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	980	99	161	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4272	424	694	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.634 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2862 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4272	6900	No
$v_{FO} = v_F - v_R$	3848	6900	No
v_R	424	1900	No
v_3 or v_{av34}	1410 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2862 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2862	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 25.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.596

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 64.2 mph

Space mean speed for all vehicles, S = 53.4 mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 WB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3527	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	355	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	407	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3527	355	407	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	980	99	113	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4272	424	486	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 3546.62 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4272 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4272	6900	No
$v_{FO} = v_F - v_R$	3848	6900	No
v_R	424	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4272 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4272	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 37.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.596

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 49.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 WB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3172	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	581	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	355	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3172	581	355	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	881	161	99	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3842	694	424	pcph

Estimation of V12 Merge Areas

L_{EQ} = 381.50 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2278 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4536	6900	No
v_3 or v_{av34}	1564 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2278 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4536	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 24.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.364	
Space mean speed in ramp influence area,	S_R = 53.4	mph
Space mean speed in outer lanes,	S_0 = 56.2	mph
Space mean speed for all vehicles,	S = 54.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 WB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5656	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	388	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	624	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5656	388	624	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1571	108	173	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6850	463	745	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.567 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4087 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6850	6900	No
$v_{FO} = v_F - v_R$	6387	6900	No
v_R	463	2000	No
v_3 or v_{av34}	2763 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4150 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4150	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 34.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.535

Space mean speed in ramp influence area, S_R = 50.4 mph

Space mean speed in outer lanes, S_0 = 59.2 mph

Space mean speed for all vehicles, S = 53.5 mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 EB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5268	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	624	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	438	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5268	624	438	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1463	173	122	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6380	745	523	pcph

Estimation of V12 Merge Areas

L_{EQ} = 3384.24 (Equation 13-6 or 13-7)

P_{FM} = 0.876 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 5589 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7125	6900	Yes
v_3 or v_{av34}	791 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		No	

If yes, v_{12A} = 5589 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7125	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 51.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 2.497

Space mean speed in ramp influence area, S_R = 15.0 mph

Space mean speed in outer lanes, S_0 = 59.0 mph

Space mean speed for all vehicles, S = 16.4 mph

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 EB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5268	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	624	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	388	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5268	624	388	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1463	173	108	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6380	745	463	pcph

Estimation of V12 Merge Areas

L_{EQ} = 616.23 (Equation 13-6 or 13-7)

P_{FM} = 0.582 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3712 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7125	6900	Yes
v_3 or v_{av34}	2668 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3712 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7125	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.636	
Space mean speed in ramp influence area,	S_R = 48.5	mph
Space mean speed in outer lanes,	S_0 = 51.3	mph
Space mean speed for all vehicles,	S = 49.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 EB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5892	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	438	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	573	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	468	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5892	438	573	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1637	122	159	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7136	523	684	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.558 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4210 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7136	6900	Yes
$v_{FO} = v_F - v_R$	6613	6900	No
v_R	523	1900	No
v_3 or v_{av34}	2926 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4436 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4436	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.605	
Space mean speed in ramp influence area,	S_R = 49.1	mph
Space mean speed in outer lanes,	S_0 = 59.2	mph
Space mean speed for all vehicles,	S = 52.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 EB OFF-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5892	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	438	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	624	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5892	438	624	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1637	122	173	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7136	523	745	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 3813.08 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 7136 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7136	6900	Yes
$v_{FO} = v_F - v_R$	6613	6900	No
v_R	523	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 7136 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	7136	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 61.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.605	
Space mean speed in ramp influence area,	S_R = 49.1	mph
Space mean speed in outer lanes,	S_0 = 65.8	mph
Space mean speed for all vehicles,	S = 49.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 EB ON-RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5454	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	573	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	438	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	470	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5454	573	438	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1515	159	122	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6605	684	523	pcph

Estimation of V12 Merge Areas

L_{EQ} = 686.85 (Equation 13-6 or 13-7)

P_{FM} = 0.578 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3816 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7289	6900	Yes

v_3 or v_{av34} 2789 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3905 (Equation 13-15, 13-16, 18, or 19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7289	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.680	
Space mean speed in ramp influence area,	S_R = 47.8	mph
Space mean speed in outer lanes,	S_0 = 51.1	mph
Space mean speed for all vehicles,	S = 48.9	mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3847	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	474	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1369	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3847	474	1369	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1069	132	380	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4659	566	1635	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2808 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5225	6900	No
v_3 or v_{av34}	1851 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2808 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5225	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 25.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.354	
Space mean speed in ramp influence area,	S_R = 53.6	mph
Space mean speed in outer lanes,	S_0 = 55.1	mph
Space mean speed for all vehicles,	S = 54.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	WOODRUFF RD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4854	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	802	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1364	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4854	802	1364	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1348	223	379	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5879	958	1629	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3543 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6837	6900	No
v_3 or v_{av34}	2336 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		No	

If yes, v_{12A} = 3543 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6837	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 34.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.591	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 53.3	mph
Space mean speed for all vehicles,	S = 50.6	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4002	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1606	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	326	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	4500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4002	1606	326	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1112	446	91	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4847	1918	389	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.551 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3531 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4847	6900	No
$v_{FO} = v_F - v_R$	2929	6900	No
v_R	1918	2100	No
v_3 or v_{av34}	1316 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3531 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3531	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 31.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.471

Space mean speed in ramp influence area, S_R = 51.5 mph

Space mean speed in outer lanes, S_0 = 64.6 mph

Space mean speed for all vehicles, S = 54.5 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2396	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	326	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1824	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1060	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2396	326	1824	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	666	91	507	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2902	395	2209	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1729 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3297	6900	No
v_3 or v_{av34}	1173 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 1729 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3297	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 17.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.295	
Space mean speed in ramp influence area,	S_R = 54.7	mph
Space mean speed in outer lanes,	S_0 = 57.6	mph
Space mean speed for all vehicles,	S = 55.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2396	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	326	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1606	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	4500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2396	326	1606	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	666	91	446	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2902	395	1945	pcph

Estimation of V12 Merge Areas

L_{EQ} = 945.56 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1729 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3297	6900	No
v_3 or v_{av34}	1173 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 1729 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3297	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 17.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.295	
Space mean speed in ramp influence area,	S_R = 54.7	mph
Space mean speed in outer lanes,	S_0 = 57.6	mph
Space mean speed for all vehicles,	S = 55.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5042	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2564	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1369	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	5100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5042	2564	1369	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1401	712	380	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6106	3105	1658	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.465 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4499 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6106	6900	No
$v_{FO} = v_F - v_R$	3001	6900	No
v_R	3105	2100	Yes
v_3 or v_{av34}	1607 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4499 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4499	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 37.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.577

Space mean speed in ramp influence area, S_R = 49.6 mph

Space mean speed in outer lanes, S_0 = 63.5 mph

Space mean speed for all vehicles, S = 52.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2478	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1369	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	474	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2478	1369	474	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	688	380	132	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3001	1658	574	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1809 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4659	6900	No
v_3 or v_{av34}	1192 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1809 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4659	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 26.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.365	
Space mean speed in ramp influence area,	S_R = 53.4	mph
Space mean speed in outer lanes,	S_0 = 57.5	mph
Space mean speed for all vehicles,	S = 54.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2478	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1369	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2564	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	5100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2478	1369	2564	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	688	380	712	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3001	1658	3105	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1348.03 (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1809 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4659	6900	No
v_3 or v_{av34}	1192 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1809 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4659	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.365	
Space mean speed in ramp influence area,	S_R = 53.4	mph
Space mean speed in outer lanes,	S_0 = 57.5	mph
Space mean speed for all vehicles,	S = 54.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3753	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1599	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1142	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	4500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3753	1599	1142	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1043	444	317	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4545	1937	1383	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.557 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3390 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4545	6900	No
$v_{FO} = v_F - v_R$	2608	6900	No
v_R	1937	2100	No
v_3 or v_{av34}	1155 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3390 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3390	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 30.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.472

Space mean speed in ramp influence area, S_R = 51.5 mph

Space mean speed in outer lanes, S_0 = 65.2 mph

Space mean speed for all vehicles, S = 54.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2154	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1142	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2650	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1060	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2154	1142	2650	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	598	317	736	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2609	1383	3209	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1554 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3992	6900	No
v_3 or v_{av34}	1055 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 1554 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3992	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 23.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.336	
Space mean speed in ramp influence area,	S_R = 54.0	mph
Space mean speed in outer lanes,	S_0 = 58.0	mph
Space mean speed for all vehicles,	S = 55.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2154	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1142	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1599	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	4500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2154	1142	1599	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	598	317	444	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2609	1383	1937	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1094.29 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1554 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3992	6900	No
v_3 or v_{av34}	1055 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 1554 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3992	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 23.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.336	
Space mean speed in ramp influence area,	S_R = 54.0	mph
Space mean speed in outer lanes,	S_0 = 58.0	mph
Space mean speed for all vehicles,	S = 55.0	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5609	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2119	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1364	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	5100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5609	2119	1364	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1558	589	379	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6793	2566	1652	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.472 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4562 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6793	6900	No
$v_{FO} = v_F - v_R$	4227	6900	No
v_R	2566	2100	Yes
v_3 or v_{av34}	2231 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4562 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4562	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 38.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.529

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_0 = 61.0 mph

Space mean speed for all vehicles, S = 53.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3490	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1364	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	802	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3490	1364	802	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	969	379	223	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4227	1652	971	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2548 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5879	6900	No
v_3 or v_{av34}	1679 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2548 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5879	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 31.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.500	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = 55.8	mph
Space mean speed for all vehicles,	S = 52.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3490	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1364	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2119	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	5100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3490	1364	2119	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	969	379	589	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4227	1652	2566	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1609.11 (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2548 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5879	6900	No
v_3 or v_{av34}	1679 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2548 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5879	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 31.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.500	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = 55.8	mph
Space mean speed for all vehicles,	S = 52.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	I-385
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2722	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1824	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	326	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1060	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2722	1824	326	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	756	507	91	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3297	2179	389	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2042 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5476	6900	No
v_3 or v_{av34}	1255 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2042 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5476	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 28.0- pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.422	
Space mean speed in ramp influence area,	S_R = 52.4	mph
Space mean speed in outer lanes,	S_0 = 57.3	mph
Space mean speed for all vehicles,	S = 53.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	I-385
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3296	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	2650	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1142	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1060	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3296	2650	1142	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	916	736	317	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3992	3165	1364	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2473 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7157	6900	Yes
v_3 or v_{av34}	1519 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2473 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7157	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 38.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.252	
Space mean speed in ramp influence area,	S_R = 37.5	mph
Space mean speed in outer lanes,	S_0 = 56.3	mph
Space mean speed for all vehicles,	S = 40.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Road off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4546	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1708	vph
Length of first accel/decel lane	625	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	656	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1325	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4546	1708	656	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1263	474	182	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5506	2069	794	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.527 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3881 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5506	6900	No
$v_{FO} = v_F - v_R$	3437	6900	No
v_R	2069	2000	Yes
v_3 or v_{av34}	1625 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3881 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3881	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 32.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.614	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = 63.4	mph
Space mean speed for all vehicles,	S = 52.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd eb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2838	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	656	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	460	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2838	656	460	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	788	182	128	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3437	794	557	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2047 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4231	6900	No
v_3 or v_{av34}	1390 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2047 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4231	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 23.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.349	
Space mean speed in ramp influence area,	S_R = 53.7	mph
Space mean speed in outer lanes,	S_0 = 56.8	mph
Space mean speed for all vehicles,	S = 54.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd eb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2838	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	656	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1708	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2838	656	1708	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	788	182	474	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3437	794	2069	pcph

Estimation of V12 Merge Areas

L_{EQ} = 360.63 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2047 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4231	6900	No
v_3 or v_{av34}	1390 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2047 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4231	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.349	
Space mean speed in ramp influence area,	S_R = 53.7	mph
Space mean speed in outer lanes,	S_0 = 56.8	mph
Space mean speed for all vehicles,	S = 54.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd wb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3494	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	460	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	656	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3494	460	656	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	971	128	182	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4232	557	794	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2622 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4789	6900	No
v_3 or v_{av34}	1610 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2622 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4789	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 20.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.280	
Space mean speed in ramp influence area,	S_R = 55.0	mph
Space mean speed in outer lanes,	S_0 = 56.0	mph
Space mean speed for all vehicles,	S = 55.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5027	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1627	vph
Length of first accel/decel lane	1400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	308	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5027	1627	308	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1396	452	86	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6088	1970	373	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.517 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4100 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6088	6900	No
$v_{FO} = v_F - v_R$	4118	6900	No
v_R	1970	2100	No
v_3 or v_{av34}	1988 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4100 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4100	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 26.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.475

Space mean speed in ramp influence area, S_R = 51.4 mph

Space mean speed in outer lanes, S_0 = 62.0 mph

Space mean speed for all vehicles, S = 54.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd wb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3400	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	308	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1334	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2760	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3400	308	1334	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	944	86	371	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4118	373	1616	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2442 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4491	6900	No
v_3 or v_{av34}	1676 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2442 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4491	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 23.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.353	
Space mean speed in ramp influence area,	S_R = 53.6	mph
Space mean speed in outer lanes,	S_0 = 55.8	mph
Space mean speed for all vehicles,	S = 54.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd wb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3400	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	308	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1627	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3400	308	1627	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	944	86	452	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4118	373	1970	pcph

Estimation of V12 Merge Areas

L_{EQ} = 371.87 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2442 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4491	6900	No
v_3 or v_{av34}	1676 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		No	

If yes, v_{12A} = 2442 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4491	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 23.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.353	
Space mean speed in ramp influence area,	S_R = 53.6	mph
Space mean speed in outer lanes,	S_0 = 55.8	mph
Space mean speed for all vehicles,	S = 54.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd eb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3708	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1334	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	308	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3708	1334	308	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1030	371	86	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4491	1616	373	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2782 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6107	6900	No
v_3 or v_{av34}	1709 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2782 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6107	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 29.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.503	
Space mean speed in ramp influence area,	S_R = 50.9	mph
Space mean speed in outer lanes,	S_0 = 55.6	mph
Space mean speed for all vehicles,	S = 52.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Road off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5946	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1882	vph
Length of first accel/decel lane	625	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	878	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1325	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5946	1882	878	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1652	523	244	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7201	2279	1063	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.475 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4618 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7201	6900	Yes
$v_{FO} = v_F - v_R$	4922	6900	No
v_R	2279	2000	Yes
v_3 or v_{av34}	2583 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4618 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4618	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 38.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.633	
Space mean speed in ramp influence area,	S_R = 48.6	mph
Space mean speed in outer lanes,	S_0 = 59.6	mph
Space mean speed for all vehicles,	S = 52.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd eb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4064	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	878	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	701	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4064	878	701	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1129	244	195	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4922	1063	849	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2932 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5985	6900	No
v_3 or v_{av34}	1990 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2932 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5985	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.494	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = 54.6	mph
Space mean speed for all vehicles,	S = 52.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd eb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4064	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	878	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1882	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4064	878	1882	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1129	244	523	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4922	1063	2279	pcph

Estimation of V12 Merge Areas

L_{EQ} = 735.99 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2932 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5985	6900	No
v_3 or v_{av34}	1990 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2932 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5985	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 32.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.494	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = 54.6	mph
Space mean speed for all vehicles,	S = 52.2	mph

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd wb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4942	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	701	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	878	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4942	701	878	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1373	195	244	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5985	849	1063	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3708 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6834	6900	No
v_3 or v_{av34}	2277 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3708 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6834	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 31.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.558	
Space mean speed in ramp influence area,	S_R = 50.0	mph
Space mean speed in outer lanes,	S_0 = 53.6	mph
Space mean speed for all vehicles,	S = 51.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4662	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	662	vph
Length of first accel/decel lane	1400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	552	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4662	662	552	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1295	184	153	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5646	802	669	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.582 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3621 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5646	6900	No
$v_{FO} = v_F - v_R$	4844	6900	No
v_R	802	2100	No
v_3 or v_{av34}	2025 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3621 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3621	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 22.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.370

Space mean speed in ramp influence area, S_R = 53.3 mph

Space mean speed in outer lanes, S_0 = 61.8 mph

Space mean speed for all vehicles, S = 56.1 mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd wb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4000	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	552	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1057	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2760	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4000	552	1057	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1111	153	294	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4844	669	1280	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2872 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5513	6900	No
v_3 or v_{av34}	1972 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2872 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5513	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 29.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.423	
Space mean speed in ramp influence area,	S_R = 52.4	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd wb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4000	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	552	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	662	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4000	552	662	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1111	153	184	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4844	669	802	pcph

Estimation of V12 Merge Areas

L_{EQ} = 590.58 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2872 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5513	6900	No
v_3 or v_{av34}	1972 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2872 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5513	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 29.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.423	
Space mean speed in ramp influence area,	S_R = 52.4	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.2	mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/28/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd eb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4552	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1057	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	552	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4552	1057	552	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1264	294	153	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5513	1280	669	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3415 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6793	6900	No
v_3 or v_{av34}	2098 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3415 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6793	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.613	
Space mean speed in ramp influence area,	S_R = 49.0	mph
Space mean speed in outer lanes,	S_0 = 54.2	mph
Space mean speed for all vehicles,	S = 50.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/19/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3299	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	289	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	831	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3299	289	831	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	916	80	231	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3995	350	1006	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3995 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3995	4600	No
$v_{FO} = v_F - v_R$	3645	4600	No
v_R	350	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3995 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3995	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 25.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.329

Space mean speed in ramp influence area, S_R = 54.1 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/19/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3010	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	831	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	289	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3010	831	289	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	836	231	80	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3645	1006	350	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3645 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4651	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3645 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4651	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 34.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.630	
Space mean speed in ramp influence area,	S_R = 48.7	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 48.7	mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/19/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2187	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	721	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	219	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2187	721	219	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	608	200	61	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2649	873	265	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2649 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2649	4600	No
$v_{FO} = v_F - v_R$	1776	4600	No
v_R	873	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2649 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2649	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 18.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.377

Space mean speed in ramp influence area, S_R = 53.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.2 mph

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/19/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	1466	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	219	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	721	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1466	219	721	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	407	61	200	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1775	265	873	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1775 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2040	4600	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 1775 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2040	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 11.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.216	
Space mean speed in ramp influence area,	S_R = 56.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 56.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/19/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3709	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	236	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	921	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3709	236	921	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1030	66	256	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4492	286	1115	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4492 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4492	4600	No
$v_{FO} = v_F - v_R$	4206	4600	No
v_R	286	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4492 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4492	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 29.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.324

Space mean speed in ramp influence area, S_R = 54.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.2 mph

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/19/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3473	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	921	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	236	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3473	921	236	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	965	256	66	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4206	1115	286	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4206 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5321	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4206 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5321	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 39.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.020	
Space mean speed in ramp influence area,	S_R = 41.6	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 41.6	mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/19/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4443	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	747	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	416	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4443	747	416	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1234	208	116	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5381	905	504	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5381 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5381	4600	Yes
$v_{FO} = v_F - v_R$	4476	4600	No
v_R	905	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5381 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5381	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 41.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.379

Space mean speed in ramp influence area, S_R = 53.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.2 mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/19/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3696	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	416	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	747	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3696	416	747	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1027	116	208	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4476	504	905	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4476 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4980	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4476 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4980	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 34.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.753

Space mean speed in ramp influence area, S_R = 46.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 46.4 mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3841	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	695	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1083	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3841	695	1083	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1067	193	301	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4652	842	1312	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4652 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4652	4600	Yes
$v_{FO} = v_F - v_R$	3810	4600	No
v_R	842	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4652 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4652	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 30.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.374	
Space mean speed in ramp influence area,	S_R = 53.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 53.3	mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3146	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1083	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	966	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3146	1083	966	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	874	301	268	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3810	1312	1170	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3810 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5122	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3810 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5122	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.876	
Space mean speed in ramp influence area,	S_R = 44.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 44.2	mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3146	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1083	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	695	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2860	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3146	1083	695	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	874	301	193	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3810	1312	842	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3810 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5122	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3810 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5122	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 37.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.876	
Space mean speed in ramp influence area,	S_R = 44.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 44.2	mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3184	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1187	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	190	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3400	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3184	1187	190	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	884	330	53	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3856	1438	230	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.597 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2883 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3856	6900	No
$v_{FO} = v_F - v_R$	2418	6900	No
v_R	1438	2100	No
v_3 or v_{av34}	973 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2883 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2883	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 20.0+ pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.427

Space mean speed in ramp influence area, S_R = 52.3 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 55.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3184	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1187	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	465	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	910	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3184	1187	465	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	884	330	129	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3856	1438	563	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 11170.63 Equation 13-12 or 13-13)

P_{FD} = 0.940 Using Equation 6

$v_{12} = v_R + (v - v_F) P_{FD}$ = 3712 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3856	6900	No
$v_{FO} = v - v_R$	2418	6900	No
v_R	1438	2100	No
v_3 or v_{av34}	144 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3712 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3712	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 27.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.427	
Space mean speed in ramp influence area,	S_R = 52.3	mph
Space mean speed in outer lanes,	S_0 = 65.8	mph
Space mean speed for all vehicles,	S = 52.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	1997	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	190	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1187	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1997	190	1187	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	555	53	330	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2419	230	1438	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2419 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2649	4600	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2419 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2649	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 16.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.241	
Space mean speed in ramp influence area,	S_R = 55.7	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 55.7	mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4394	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	706	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1002	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4394	706	1002	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1221	196	278	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5322	855	1214	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5322 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5322	4600	Yes
$v_{FO} = v_F - v_R$	4467	4600	No
v_R	855	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5322 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5322	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 36.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.375

Space mean speed in ramp influence area, S_R = 53.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.3 mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3688	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1002	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1049	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3688	1002	1049	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1024	278	291	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4467	1214	1270	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4467 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5681	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4467 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5681	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 42.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.366	
Space mean speed in ramp influence area,	S_R = 35.4	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 35.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3688	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1002	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	706	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2860	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3688	1002	706	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1024	278	196	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4467	1214	855	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4467 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5681	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4467 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5681	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 42.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.366	
Space mean speed in ramp influence area,	S_R = 35.4	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 35.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4808	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	920	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	555	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3400	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4808	920	555	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1336	256	154	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5823	1114	672	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.563 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3766 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5823	6900	No
$v_{FO} = v_F - v_R$	4709	6900	No
v_R	1114	2100	No
v_3 or v_{av34}	2057 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3766 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3766	4400	No

Level of Service Determination (if not F)

Density, $D_D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 27.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.398

Space mean speed in ramp influence area, S_R = 52.8 mph

Space mean speed in outer lanes, S_0 = 61.7 mph

Space mean speed for all vehicles, S = 55.7 mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4808	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	920	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	879	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	910	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4808	920	879	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1336	256	244	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5823	1114	1065	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 8855.44 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5823 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5823	6900	No
$v_{FO} = v_F - v_R$	4709	6900	No
v_R	1114	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5823 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5823	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 45.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.398

Space mean speed in ramp influence area, S_R = 52.8 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 52.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3888	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	555	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	920	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3888	555	920	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1080	154	256	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4709	672	1114	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4709 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5381	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4709 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5381	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 37.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.033

Space mean speed in ramp influence area, S_R = 41.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 41.4 mph

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 nb off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4229	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	40.0	mph
Volume on ramp	966	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	853	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4229	966	853	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1175	268	237	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5122	1170	1033	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1865.29 (Equation 13-12 or 13-13)

P_{FD} = 0.580 Using Equation 7

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3461 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5122	6900	No
$v_{FO} = v_F - v_R$	3952	6900	No
v_R	1170	2100	No
v_3 or v_{av34}	1661 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3461 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3461	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 25.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.468

Space mean speed in ramp influence area, S_R = 51.6 mph

Space mean speed in outer lanes, S_0 = 63.2 mph

Space mean speed for all vehicles, S = 54.9 mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 nb off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4229	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	40.0	mph
Volume on ramp	966	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1083	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4229	966	1083	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1175	268	301	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5122	1170	1312	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 13134.97 Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v - v_F) P_{FD}$ = 5122 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5122	6900	No
$v_{FO} = v - v_R$	3952	6900	No
v_R	1170	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5122 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5122	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 39.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.468

Space mean speed in ramp influence area, S_R = 51.6 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 51.6 mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 sb off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3263	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	853	vph
Length of first accel/decel lane	940	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1654	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3263	853	1654	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	906	237	459	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3952	1033	2003	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3952 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3952	4600	No
$v_{FO} = v_F - v_R$	2919	4600	No
v_R	1033	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3952 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3952	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 29.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.651

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 sb off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3263	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	853	vph
Length of first accel/decel lane	940	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	966	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3263	853	966	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	906	237	268	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3952	1033	1170	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3952 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3952	4600	No
$v_{FO} = v_F - v_R$	2919	4600	No
v_R	1033	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3952 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3952	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 29.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.651

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2410	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1654	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1350	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2410	1654	1350	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	669	459	375	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2919	2003	1635	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2919 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4922	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2919 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4922	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 14.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.361	
Space mean speed in ramp influence area,	S_R = 53.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 53.5	mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2410	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1654	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	853	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2410	1654	853	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	669	459	237	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2919	2003	1033	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2919 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4922	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2919 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4922	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 14.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.361	
Space mean speed in ramp influence area,	S_R = 53.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 53.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I85 off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3028	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	1416	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1107	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3028	1416	1107	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	841	393	308	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3667	1715	1341	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2223 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3667	9200	No
$v_{FO} = v_F - v_R$	1952	9200	No
v_R	1715	4400	No
v_3 or v_{av34}	722 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2223 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2223	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = -17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	D_S = 0.322	
Space mean speed in ramp influence area,	S_R = 54.2	mph
Space mean speed in outer lanes,	S_0 = 65.8	mph
Space mean speed for all vehicles,	S = 58.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85 off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3028	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	1416	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	715	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3028	1416	715	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	841	393	199	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3667	1715	866	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2223 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3667	9200	No
$v_{FO} = v_F - v_R$	1952	9200	No
v_R	1715	4400	No
v_3 or v_{av34}	722 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2223 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2223	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = -17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.322

Space mean speed in ramp influence area, S_R = 54.2 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 58.2 mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85 sb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	1612	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	1107	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	465	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1612	1107	465	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	448	308	129	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1952	1341	563	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1952 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3293	4600	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1952 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3293	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 23.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.360	
Space mean speed in ramp influence area,	S_R = 53.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 53.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85 sb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	1612	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	1107	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1416	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1612	1107	1416	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	448	308	393	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1952	1341	1715	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1952 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3293	4600	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1952 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3293	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 23.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.360	
Space mean speed in ramp influence area,	S_R = 53.5	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 53.5	mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2719	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	465	vph
Length of first accel/decel lane	920	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1187	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	920	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2719	465	1187	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	755	129	330	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3293	563	1438	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3293 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3856	4500	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3293 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3856	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 29.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.450

Space mean speed in ramp influence area, S_R = 49.1 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85 nb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2719	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	465	vph
Length of first accel/decel lane	920	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1107	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2719	465	1107	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	755	129	308	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3293	563	1341	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3293 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3856	4600	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3293 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3856	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 29.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.450	
Space mean speed in ramp influence area,	S_R = 51.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 51.9	mph

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 nb off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4690	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	40.0	mph
Volume on ramp	1049	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	787	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4690	1049	787	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1303	291	219	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5680	1270	953	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 1909.88 (Equation 13-12 or 13-13)

P_{FD} = 0.562 Using Equation 7

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3750 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5680	6900	No
$v_{FO} = v_F - v_R$	4410	6900	No
v_R	1270	2100	No
v_3 or v_{av34}	1930 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3750 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3750	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.477

Space mean speed in ramp influence area, S_R = 51.4 mph

Space mean speed in outer lanes, S_0 = 62.2 mph

Space mean speed for all vehicles, S = 54.6 mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 nb off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4690	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	40.0	mph
Volume on ramp	1049	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1002	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4690	1049	1002	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1303	291	278	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5680	1270	1214	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 11548.71 Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v - v_F) P_{FD}$ = 5680 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5680	6900	No
$v_{FO} = v - v_F - v_R$	4410	6900	No
v_R	1270	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5680 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5680	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 44.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.477

Space mean speed in ramp influence area, S_R = 51.4 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 51.4 mph

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 sb off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3641	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	787	vph
Length of first accel/decel lane	940	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1629	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3641	787	1629	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1011	219	453	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4410	953	1973	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4410 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4410	4600	No
$v_{FO} = v_F - v_R$	3457	4600	No
v_R	953	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4410 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4410	4400	Yes

Level of Service Determination (if not F)

Density, $D_D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 33.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.644

Space mean speed in ramp influence area, S_R = 48.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 sb off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3641	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	787	vph
Length of first accel/decel lane	940	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1049	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3641	787	1049	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1011	219	291	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4410	953	1270	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4410 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4410	4600	No
$v_{FO} = v_F - v_R$	3457	4600	No
v_R	953	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4410 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4410	4400	Yes

Level of Service Determination (if not F)

Density, $D_D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 33.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.644

Space mean speed in ramp influence area, S_R = 48.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2854	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1629	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	759	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2854	1629	759	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	793	453	211	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3457	1973	919	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM}) =$ 3457 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5430	4600	Yes

v_3 or v_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3457 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5430	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 18.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.716	
Space mean speed in ramp influence area,	S_R = 47.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 47.1	mph

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85 on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2854	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1629	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	787	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2854	1629	787	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	793	453	219	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3457	1973	953	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM}) =$ 3457 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5430	4600	Yes

v_3 or v_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3457 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5430	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 18.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.716	
Space mean speed in ramp influence area,	S_R = 47.1	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 47.1	mph

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I85 off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5705	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	2421	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	645	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5705	2421	645	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1585	673	179	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6909	2932	781	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3966 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6909	9200	No
$v_{FO} = v_F - v_R$	3977	9200	No
v_R	2932	4400	No
v_3 or v_{av34}	1471 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3966 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3966	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = -2.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.432

Space mean speed in ramp influence area, S_R = 52.2 mph

Space mean speed in outer lanes, S_0 = 64.0 mph

Space mean speed for all vehicles, S = 56.7 mph

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85 off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5705	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	2421	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1522	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5705	2421	1522	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1585	673	423	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6909	2932	1843	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3966 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6909	9200	No
$v_{FO} = v_F - v_R$	3977	9200	No
v_R	2932	4400	No
v_3 or v_{av34}	1471 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3966 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3966	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = -2.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.432

Space mean speed in ramp influence area, S_R = 52.2 mph

Space mean speed in outer lanes, S_0 = 64.0 mph

Space mean speed for all vehicles, S = 56.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85 sb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3284	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	645	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	879	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3284	645	879	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	912	179	244	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3977	781	1065	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3977 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4758	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3977 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4758	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 35.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.709	
Space mean speed in ramp influence area,	S_R = 47.2	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 47.2	mph

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85 sb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3284	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	645	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2421	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3284	645	2421	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	912	179	673	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3977	781	2932	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3977 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4758	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3977 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4758	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 35.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.709

Space mean speed in ramp influence area, S_R = 47.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 47.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3929	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	879	vph
Length of first accel/decel lane	920	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	920	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	920	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3929	879	920	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1091	244	256	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4758	1065	1114	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4758 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5823	4500	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4758 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5823	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 44.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.584	
Space mean speed in ramp influence area,	S_R = 34.4	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 34.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85 nb on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3929	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	879	vph
Length of first accel/decel lane	920	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	645	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3929	879	645	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1091	244	179	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4758	1065	781	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 4758 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5823	4600	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4758 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5823	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 44.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.584

Space mean speed in ramp influence area, S_R = 31.5 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 31.5 mph

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4064	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	1350	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	382	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4064	1350	382	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1129	375	106	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4922	1635	463	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2490 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4922	9200	No
$v_{FO} = v_F - v_R$	3287	9200	No
v_R	1635	4400	No
v_3 or v_{av34}	1216 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2490 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2490	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = -14.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.315

Space mean speed in ramp influence area, S_R = 54.3 mph

Space mean speed in outer lanes, S_0 = 65.0 mph

Space mean speed for all vehicles, S = 59.1 mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4064	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	1350	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1654	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4064	1350	1654	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1129	375	459	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4922	1635	2003	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2490 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4922	9200	No
$v_{FO} = v_F - v_R$	3287	9200	No
v_R	1635	4400	No
v_3 or v_{av34}	1216 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2490 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2490	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = -14.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.315

Space mean speed in ramp influence area, S_R = 54.3 mph

Space mean speed in outer lanes, S_0 = 65.0 mph

Space mean speed for all vehicles, S = 59.1 mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2714	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	382	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1350	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1950	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2714	382	1350	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	754	106	375	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3287	463	1635	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1943.10 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2036 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3750	6900	No
v_3 or v_{av34}	1251 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2036 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3750	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 15.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.203	
Space mean speed in ramp influence area,	S_R = 56.3	mph
Space mean speed in outer lanes,	S_0 = 57.3	mph
Space mean speed for all vehicles,	S = 56.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2984	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	671	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	715	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2984	671	715	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	829	186	199	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3614	813	866	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.632 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2584 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3614	6900	No
$v_{FO} = v_F - v_R$	2801	6900	No
v_R	813	2200	No
v_3 or v_{av34}	1030 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2584 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2584	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 16.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.241

Space mean speed in ramp influence area, S_R = 55.7 mph

Space mean speed in outer lanes, S_0 = 65.7 mph

Space mean speed for all vehicles, S = 58.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2313	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	715	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1416	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2313	715	1416	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	643	199	393	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2801	866	1715	pcph

Estimation of V12 Merge Areas

L_{EQ} = 6349.50 (Equation 13-6 or 13-7)

P_{FM} = 0.802 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2246 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3667	6900	No
v_3 or v_{av34}	555 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2246 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3667	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 19.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.244	
Space mean speed in ramp influence area,	S_R = 55.6	mph
Space mean speed in outer lanes,	S_0 = 59.8	mph
Space mean speed for all vehicles,	S = 56.2	mph

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2313	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	715	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	671	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2220	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2313	715	671	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	643	199	186	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2801	866	813	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1925.34 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1735 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3667	6900	No
v_3 or v_{av34}	1066 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1735 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3667	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 16.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.209

Space mean speed in ramp influence area, S_R = 56.2 mph

Space mean speed in outer lanes, S_0 = 58.0 mph

Space mean speed for all vehicles, S = 56.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4483	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	759	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	699	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4483	759	699	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1245	211	194	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5429	919	847	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2092 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5429	9200	No
$v_{FO} = v_F - v_R$	4510	9200	No
v_R	919	4400	No
v_3 or v_{av34}	1668 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2171 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2171	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = -17.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.251

Space mean speed in ramp influence area, S_R = 55.5 mph

Space mean speed in outer lanes, S_0 = 63.4 mph

Space mean speed for all vehicles, S = 60.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd off ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4483	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	759	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1629	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4483	759	1629	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1245	211	453	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5429	919	1973	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2092 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5429	9200	No
$v_{FO} = v_F - v_R$	4510	9200	No
v_R	919	4400	No
v_3 or v_{av34}	1668 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2171 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2171	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = -17.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.251

Space mean speed in ramp influence area, S_R = 55.5 mph

Space mean speed in outer lanes, S_0 = 63.4 mph

Space mean speed for all vehicles, S = 60.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3724	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	699	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	759	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1950	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3724	699	759	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1034	194	211	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4510	847	919	pcph

Estimation of V12 Merge Areas

L_{EQ} = 2287.00 (Equation 13-6 or 13-7)

P_{FM} = 0.598 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 2698 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5357	6900	No
v_3 or v_{av34}	1812 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2698 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5357	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 23.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.291	
Space mean speed in ramp influence area,	S_R = 54.8	mph
Space mean speed in outer lanes,	S_0 = 55.3	mph
Space mean speed for all vehicles,	S = 54.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4836	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	653	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1522	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4836	653	1522	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1343	181	423	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5857	791	1843	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.577 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3715 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5857	6900	No
$v_{FO} = v_F - v_R$	5066	6900	No
v_R	791	2200	No
v_3 or v_{av34}	2142 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3715 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3715	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 26.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.239

Space mean speed in ramp influence area, S_R = 55.7 mph

Space mean speed in outer lanes, S_0 = 61.4 mph

Space mean speed for all vehicles, S = 57.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4183	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1522	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2421	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4183	1522	2421	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1162	423	673	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5066	1843	2932	pcph

Estimation of V12 Merge Areas

L_{EQ} = 10855.24 Equation 13-6 or 13-7)

P_{FM} = 0.982 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 4973 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6909	6900	Yes
v_3 or v_{av34}	93 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4973 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6909	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 48.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 3.714

Space mean speed in ramp influence area, S_R = -6.9 mph

Space mean speed in outer lanes, S_0 = 60.0 mph

Space mean speed for all vehicles, S = mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	3/29/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2010
Description:	I-85/I-385 Existing

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4183	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1522	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	653	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2220	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4183	1522	653	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1162	423	181	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5066	1843	791	pcph

Estimation of V12 Merge Areas

L_{EQ} = 2619.13 (Equation 13-6 or 13-7)

P_{FM} = 0.594 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3010 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6909	6900	Yes
v_3 or v_{av34}	2056 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3010 (Equation 13-15, 13-16, 18, or 19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6909	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.656	
Space mean speed in ramp influence area,	S_R = 48.2	mph
Space mean speed in outer lanes,	S_0 = 54.4	mph
Space mean speed for all vehicles,	S = 49.9	mph

CAPACITY ANALYSIS (HCS)
EXISTING CONDITIONS – WEAVE AREAS

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85NB
Weaving Location:	US-276
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	420	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3301	214	577	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	917	59	160	0	
Trucks and buses	18	15	15	15	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.930	0.930	0.930	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3998	256	689	0	pc/h

Volume ratio, VR	0.191	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	68	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	281	lc/h
Total lane changes, LCALL	349	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.195

Average weaving speed, SW	52.6	mi/h
Average non-weaving speed, SNW	54.1	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	53.8	mi/h
Weaving segment density, D	23.0	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.620	
Weaving segment flow rate, v	4943	pc/h
Weaving segment capacity, cW	7310	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4446	420	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1992	c
		Maximum	Analyzed	
v/c ratio		1.00	0.620	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85SB
Weaving Location:	US-276
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	420	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3210	681	1046	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	892	189	291	0	
Trucks and buses	18	15	15	15	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.930	0.930	0.930	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3888	813	1249	0	pc/h

Volume ratio, VR	0.347	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	68	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	258	lc/h
Total lane changes, LCALL	326	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.185	

Average weaving speed, SW	53.0	mi/h
Average non-weaving speed, SNW	52.9	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	52.9	mi/h
Weaving segment density, D	28.1	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.859	
Weaving segment flow rate, v	5950	pc/h
Weaving segment capacity, cW	6354	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6089	420	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1866	c
		Maximum	Analyzed	
v/c ratio		1.00	0.859	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85NB C-D
Weaving Location:	b/t Woodruff & I-385
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	840	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	510	413	465	52	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	142	115	129	14	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	618	500	563	63	pc/h

Volume ratio, VR	0.610	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	82	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	18	lc/h
Total lane changes, LCALL	100	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.042	

Average weaving speed, SW	43.8	mi/h
Average non-weaving speed, SNW	42.2	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	43.2	mi/h
Weaving segment density, D	13.5	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.443	
Weaving segment flow rate, v	1744	pc/h
Weaving segment capacity, cW	3612	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	9134	840	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1615	c
		Maximum	Analyzed	
v/c ratio		1.00	0.443	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	I-385
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	483	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	452	853	1107	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	126	237	308	0	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	547	1033	1341	0	pc/h
Volume ratio, VR		0.813			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.049	
Weaving segment flow rate, v	2921	pc/h
Weaving segment capacity, cW	2554	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	11705	483	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1392	c
		Maximum	Analyzed	
v/c ratio		1.00	1.049	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	b/t I-385 & Woodruff
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	556	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	832	473	537	21	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	231	131	149	6	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1008	573	650	25	pc/h

Volume ratio, VR	0.542	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	25	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	129	lc/h
Total lane changes, LCALL	154	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.082

Average weaving speed, SW	42.7	mi/h
Average non-weaving speed, SNW	39.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	41.2	mi/h
Weaving segment density, D	27.4	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.681	
Weaving segment flow rate, v	2256	pc/h
Weaving segment capacity, cW	3039	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8323	556	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1656	c
		Maximum	Analyzed	
v/c ratio		1.00	0.681	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	3/17/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385NB
Weaving Location:	Woodruff to I-85
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1240	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2397	749	866	217	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	666	208	241	60	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2903	907	1049	263	pc/h

Volume ratio, VR	0.382	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	108	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	746	lc/h
Total lane changes, LCALL	854	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.168

Average weaving speed, SW	49.2	mi/h
Average non-weaving speed, SNW	46.8	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	47.7	mi/h
Weaving segment density, D	35.8	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.923	
Weaving segment flow rate, v	5122	pc/h
Weaving segment capacity, cW	5089	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6479	1240	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1849	c
		Maximum	Analyzed	
v/c ratio		1.00	0.923	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385SB
Weaving Location:	I-85 & Woodruff
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	909	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1572	425	1147	40	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	437	118	319	11	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1904	515	1389	48	pc/h
Volume ratio, VR		0.494			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	87	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	317	lc/h
Total lane changes, LCALL	404	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.119

Average weaving speed, SW	50.7	mi/h
Average non-weaving speed, SNW	48.8	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	49.8	mi/h
Weaving segment density, D	25.8	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.793	
Weaving segment flow rate, v	3856	pc/h
Weaving segment capacity, cW	4459	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7754	909	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1726	c
		Maximum	Analyzed	
v/c ratio		1.00	0.793	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85NB
Weaving Location:	US-276
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	420	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2765	355	407	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	768	99	113	0	
Trucks and buses	18	15	15	15	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.930	0.930	0.930	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3349	424	486	0	pc/h

Volume ratio, VR	0.214	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	68	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	147	lc/h
Total lane changes, LCALL	215	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.133	

Average weaving speed, SW	54.7	mi/h
Average non-weaving speed, SNW	54.9	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	54.9	mi/h
Weaving segment density, D	19.4	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.539	
Weaving segment flow rate, v	4259	pc/h
Weaving segment capacity, cW	7244	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4676	420	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1974	c
		Maximum	Analyzed	
v/c ratio		1.00	0.539	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85SB
Weaving Location:	US-276
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	420	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	4830	438	624	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1342	122	173	0	
Trucks and buses	18	15	15	15	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.930	0.930	0.930	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5850	523	745	0	pc/h

Volume ratio, VR	0.178	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	68	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	662	lc/h
Total lane changes, LCALL	730	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.350

Average weaving speed, SW	48.3	mi/h
Average non-weaving speed, SNW	51.5	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	50.9	mi/h
Weaving segment density, D	35.0	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.889	
Weaving segment flow rate, v	7118	pc/h
Weaving segment capacity, cW	7347	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4314	420	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	2002	c
		Maximum	Analyzed	
v/c ratio		1.00	0.889	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85NB C-D
Weaving Location:	b/t Woodruff & I-385
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	840	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	955	531	555	348	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	265	148	154	97	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1157	643	672	421	pc/h

Volume ratio, VR	0.455	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	82	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	203	lc/h
Total lane changes, LCALL	285	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.096

Average weaving speed, SW	42.4	mi/h
Average non-weaving speed, SNW	40.4	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	41.3	mi/h
Weaving segment density, D	23.4	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.549	
Weaving segment flow rate, v	2893	pc/h
Weaving segment capacity, cW	4833	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7300	840	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1756	c
		Maximum	Analyzed	
v/c ratio		1.00	0.549	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	I-385
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	483	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	213	645	787	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	59	179	219	0	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	258	781	953	0	pc/h

Volume ratio, VR 0.870

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	21	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	0	lc/h
Total lane changes, LCALL	21	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.019

Average weaving speed, SW	44.4	mi/h
Average non-weaving speed, SNW	40.2	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	43.8	mi/h
Weaving segment density, D	22.7	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.747	
Weaving segment flow rate, v	1992	pc/h
Weaving segment capacity, cW	2446	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	12468	483	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1333	c
		Maximum	Analyzed	
v/c ratio		1.00	0.747	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	b/t I-385 & Woodruff
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	556	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	679	321	685	135	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	189	89	190	38	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	822	389	830	164	pc/h

Volume ratio, VR 0.553

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	25	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	119	lc/h
Total lane changes, LCALL	144	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.078

Average weaving speed, SW	42.8	mi/h
Average non-weaving speed, SNW	39.7	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	41.4	mi/h
Weaving segment density, D	26.6	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.670	
Weaving segment flow rate, v	2205	pc/h
Weaving segment capacity, cW	3020	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8451	556	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1646	c
		Maximum	Analyzed	
v/c ratio		1.00	0.670	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385NB
Weaving Location:	b/t Woodruff & I-85
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1240	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2820	821	868	181	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	783	228	241	50	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3415	994	1051	219	pc/h
Volume ratio, VR		0.360			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.013	
Weaving segment flow rate, v	5679	pc/h
Weaving segment capacity, cW	5141	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6237	1240	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1868	c
		Maximum	Analyzed	
v/c ratio		1.00	1.013	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385SB
Weaving Location:	b/t I-85 & Woodruff
Analysis Year:	2010
Description:	I-85/I-385 Existing

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	909	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3277	611	652	268	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	910	170	181	74	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3969	740	790	325	pc/h

Volume ratio, VR	0.263	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.009	
Weaving segment flow rate, v	5824	pc/h
Weaving segment capacity, cW	5293	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	5187	909	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1923	c
		Maximum	Analyzed	
v/c ratio		1.00	1.009	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

TRAFFIC STUDY FOR
I-85/I-385 INTERCHANGE IMPROVEMENTS

GREENVILLE COUNTY, SOUTH CAROLINA

APPENDIX G

Prepared for:

SCDOT
South Carolina Department of Transportation

Prepared by:

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CONSULTING ENGINEERS

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August 2012

CONTENTS

Capacity Analysis (HCS)

- 2015 No-Build Conditions
  - Freeway Segments
  - Ramps
  - Weave Areas
- 2035 No-Build Conditions
  - Freeway Segments
  - Ramps
  - Weave Areas

CAPACITY ANALYSIS (HCS)
2015 NO-BUILD CONDITIONS – FREEWAY SEGMENTS

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	BEGIN TO US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4590	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1275	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1853	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1853	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.8	mi/h
Number of lanes, N	3	
Density, D	31.5	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	AT 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4314	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1198	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1742	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1742	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	3	
Density, D	29.2	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	US276 EB to US276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4551	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1264	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1837	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1837	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.0	mi/h
Number of lanes, N	3	
Density, D	31.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	at 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3924	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1090	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1584	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1584	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	26.4	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	US 276 to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4471	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1242	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1805	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1805	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.2	mi/h
Number of lanes, N	3	
Density, D	30.5	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
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Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-85NB CD off to I-85NB CD on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2665	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	740	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1076	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1076	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	17.9	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	FROM NB C-D ROAD TO I385RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3054	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	848	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1233	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1233	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	20.5	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I385 to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5209	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1447	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2103	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2103	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	55.4	mi/h
Number of lanes, N	3	
Density, D	38.0	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3351	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	931	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1353	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1353	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	22.5	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4102	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1139	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1656	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1656	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.9	mi/h
Number of lanes, N	3	
Density, D	27.6	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd to End
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4641	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1289	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1874	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1874	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.6	mi/h
Number of lanes, N	3	
Density, D	32.0	pc/mi/ln
Level of service, LOS	D	

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Analyst:	NJ
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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	BEGIN TO US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4760	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1322	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1922	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1922	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	3	
Density, D	33.1	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	AT 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3482	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	967	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1406	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1406	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	23.4	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	US276 EB to US276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3931	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1092	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1587	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1587	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	26.5	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	at 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3546	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	985	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1432	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1432	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	23.9	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	276 to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4188	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1163	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1691	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1691	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.8	mi/h
Number of lanes, N	3	
Density, D	28.3	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-85NB CD off to I-85NB CD on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2375	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	660	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	959	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	959	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	16.0	pc/mi/ln
Level of service, LOS	B	

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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	FROM NB C-D ROAD TO I-385 RAMP
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3706	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1029	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1496	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1496	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	24.9	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I385 to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	6703	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1862	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2706	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2706	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	37.8	mi/h
Number of lanes, N	3	
Density, D	71.6	pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4643	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1290	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1874	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1874	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.6	mi/h
Number of lanes, N	3	
Density, D	32.0	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5622	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1562	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2270	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2270	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	51.8	mi/h
Number of lanes, N	3	
Density, D	43.8	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd to End
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	6408	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1780	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2587	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2587	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	42.3	mi/h
Number of lanes, N	3	
Density, D	61.1	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	US 276 EB TO END
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5185	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1440	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2093	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2093	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	55.6	mi/h
Number of lanes, N	3	
Density, D	37.7	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4723	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1312	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1907	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1907	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.3	mi/h
Number of lanes, N	3	
Density, D	32.7	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	276 EB to 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5481	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1523	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2213	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2213	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	53.2	mi/h
Number of lanes, N	3	
Density, D	41.6	pc/mi/ln
Level of service, LOS	E	

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Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4346	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1207	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1754	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1754	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	3	
Density, D	29.4	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	Woodruff Rd to US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4824	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1340	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1947	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1947	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	57.8	mi/h
Number of lanes, N	3	
Density, D	33.7	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD on to Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4278	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1188	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1727	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1727	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.7	mi/h
Number of lanes, N	3	
Density, D	28.9	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD off to I-85SB CD on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2772	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	770	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1119	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1119	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd to I-385
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5805	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1613	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2344	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2344	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	49.9	mi/h
Number of lanes, N	3	
Density, D	46.9	pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4348	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1208	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1755	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1755	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	3	
Density, D	29.5	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4013	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1115	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1620	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1620	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	27.0	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/30/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	End to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5871	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1631	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2370	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2370	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	49.2	mi/h
Number of lanes, N	3	
Density, D	48.1	pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	US 276 TO BEGIN
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	6624	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1840	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2674	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2674	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	39.1	mi/h
Number of lanes, N	3	
Density, D	68.5	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	6000	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1667	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2422	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2422	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	47.7	mi/h
Number of lanes, N	3	
Density, D	50.7	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	276 EB to 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	6493	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1804	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2621	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2621	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	41.1	mi/h
Number of lanes, N	3	
Density, D	63.8	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5816	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1616	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2348	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2348	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	49.8	mi/h
Number of lanes, N	3	
Density, D	47.1	pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	Woodruff to US276WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	6247	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1735	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2522	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2522	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	44.6	mi/h
Number of lanes, N	3	
Density, D	56.6	pc/mi/ln
Level of service, LOS	F	

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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB C-D on to Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5322	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1478	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2149	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2149	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	54.5	mi/h
Number of lanes, N	3	
Density, D	39.4	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD off to I-85SB CD on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3832	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1064	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1547	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1547	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	25.8	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd to I-385
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	6307	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1752	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2546	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2546	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	43.7	mi/h
Number of lanes, N	3	
Density, D	58.2	pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5158	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1433	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2082	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2082	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	55.8	mi/h
Number of lanes, N	3	
Density, D	37.3	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4558	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1266	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1840	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1840	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.0	mi/h
Number of lanes, N	3	
Density, D	31.2	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/30/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	End to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5315	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1476	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2146	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2146	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	54.6	mi/h
Number of lanes, N	3	
Density, D	39.3	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	6/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Begin to Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3839	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1066	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1550	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1550	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	28.2	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	6/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3517	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	977	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1420	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1420	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	25.8	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Butler Rd to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4442	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1234	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1793	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1793	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	32.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
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Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3665	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1018	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1480	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1480	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	26.9	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Woodruff to I-85 nb off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4884	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1357	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1972	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1972	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.3	mi/h
Number of lanes, N	3	
Density, D	36.3	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-85NB ramp to I-85SB ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3745	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1040	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1512	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1512	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	27.5	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-85SB ramp to I-385NB ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2826	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	785	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1141	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1141	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	20.7	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-85 to Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4764	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1323	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1442	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1442	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	26.2	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Roper Mtn
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3171	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	881	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1280	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1280	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	23.3	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Roper Mtn Rd to End
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3622	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1006	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1462	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1462	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	26.6	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	6/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Begin to Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4295	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1193	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1734	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1734	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.5	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	6/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4033	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1120	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1628	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1628	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	29.6	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Butler Rd to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5057	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1405	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2042	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2042	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	53.6	mi/h
Number of lanes, N	3	
Density, D	38.1	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

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Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4268	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1186	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1723	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1723	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.3	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Woodruff Rd to I-85 nb off
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5399	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1500	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2180	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2180	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	51.4	mi/h
Number of lanes, N	3	
Density, D	42.4	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-85 nb off to I-85 sb off
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4185	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1163	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1690	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1690	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	30.7	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-85 sb off to I-385 on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3355	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	932	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1354	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1354	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	24.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-85 to Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5250	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1458	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1590	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1590	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	28.9	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4354	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1209	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1758	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1758	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	32.0	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Roper Mtn Rd to End
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5179	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1439	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2091	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2091	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	52.9	mi/h
Number of lanes, N	3	
Density, D	39.5	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	6/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Butler Rd to Begin
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2058	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	572	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	831	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	831	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	15.1	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

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Date Performed:	6/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	1814	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	504	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	732	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	732	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	13.3	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Woodruff Rd to Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2616	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	727	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1056	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1056	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	19.2	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2403	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	668	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	970	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	970	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	17.6	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	I-85 nb on to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3730	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1036	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1506	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1506	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	27.4	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	I-85SB ramp to I-85NB ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3195	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	888	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1290	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1290	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	23.5	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	I-385 off to I85 sb on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	1896	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	527	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	765	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	765	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	13.9	pc/mi/ln
Level of service, LOS	B	

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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Roper Mtn Rd to I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3548	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	986	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1074	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1074	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	19.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2704	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	751	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1092	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1092	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	19.9	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Date Performed:	3/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	End to Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3496	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	971	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1411	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1411	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	25.7	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst:	JP
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Date Performed:	6/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Butler Rd to Begin
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4766	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1324	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1924	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1924	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.6	mi/h
Number of lanes, N	3	
Density, D	35.2	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	6/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4303	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1195	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1737	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1737	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Woodruff Rd to Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5134	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1426	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2073	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2073	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	53.2	mi/h
Number of lanes, N	3	
Density, D	39.0	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4513	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1254	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1822	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1822	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	33.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	I-85 nb on to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5632	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1564	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2274	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2274	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	49.5	mi/h
Number of lanes, N	3	
Density, D	46.0	pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	I-85SB ramp to I-85NB ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4614	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1282	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1863	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1863	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.9	mi/h
Number of lanes, N	3	
Density, D	33.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

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Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	I-385 of to I-85 sb on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	3864	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1073	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1560	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1560	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	28.4	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
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Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Roper Mtn Rd to I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	6594	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1832	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1997	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1997	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.0	mi/h
Number of lanes, N	4	
Density, D	37.0	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4798	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1333	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1937	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1937	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.5	mi/h
Number of lanes, N	3	
Density, D	35.5	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	NJ
Agency or Company:	Florence & Hutcheson
Date Performed:	3/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	End to Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	5569	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1547	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2248	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2248	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	50.0	mi/h
Number of lanes, N	3	
Density, D	44.9	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

CAPACITY ANALYSIS (HCS)
2015 NO-BUILD CONDITIONS – RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4590	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	276	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	237	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4590	276	237	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1275	77	66	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5559	334	287	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.606 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3499 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5559	6900	No
$v_{FO} = v_F - v_R$	5225	6900	No
v_R	334	2000	No
v_3 or v_{av34}	2060 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3499 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3499	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 28.0+ pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.523

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 61.7 mph

Space mean speed for all vehicles, S = 54.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4314	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	237	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	627	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4314	237	627	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1198	66	174	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5225	287	759	pcph

Estimation of V12 Merge Areas

L_{EQ} = 4911.35 (Equation 13-6 or 13-7)

P_{FM} = 0.948 Using Equation 3

$v_{12} = v_F (P_{FM}) =$ 4951 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5512	6900	No
v_3 or v_{av34}	274 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4951 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5512	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 43.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 1.034	
Space mean speed in ramp influence area,	S_R = 41.4	mph
Space mean speed in outer lanes,	S_0 = 60.0	mph
Space mean speed for all vehicles,	S = 42.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4314	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	237	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	276	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4314	237	276	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1198	66	77	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5225	287	334	pcph

Estimation of V12 Merge Areas

L_{EQ} = 271.05 (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3079 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5512	6900	No
v_3 or v_{av34}	2146 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3079 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5512	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 29.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.413	
Space mean speed in ramp influence area,	S_R = 52.6	mph
Space mean speed in outer lanes,	S_0 = 54.1	mph
Space mean speed for all vehicles,	S = 53.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4551	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	627	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	547	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4551	627	547	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1264	174	152	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5512	759	662	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.587 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3550 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5512	6900	No
$v_{FO} = v_F - v_R$	4753	6900	No
v_R	759	1900	No
v_3 or v_{av34}	1962 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3550 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3550	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 31.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.626

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 62.1 mph

Space mean speed for all vehicles, S = 52.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4551	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	627	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	237	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4551	627	237	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1264	174	66	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5512	759	287	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 2048.65 (Equation 13-12 or 13-13)

P_{FD} = 0.915 Using Equation 6

$v_{12} = v_R + (v - v_F) P_{FD}$ = 5107 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5512	6900	No
$v_{FO} = v - v_F - v_R$	4753	6900	No
v_R	759	1900	No
v_3 or v_{av34}	405 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5107 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5107	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 44.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.626

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 49.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3924	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	547	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	627	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3924	547	627	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1090	152	174	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4752	662	759	pcph

Estimation of V12 Merge Areas

L_{EQ} = 569.40 (Equation 13-6 or 13-7)

P_{FM} = 0.585 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 2781 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5414	6900	No
v_3 or v_{av34}	1971 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2781 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5414	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.410	
Space mean speed in ramp influence area,	S_R = 52.6	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.4	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4824	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	478	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1135	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4824	478	1135	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1340	133	315	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5842	579	1375	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.587 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3670 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5842	6900	No
$v_{FO} = v_F - v_R$	5263	6900	No
v_R	579	2000	No
v_3 or v_{av34}	2172 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3670 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3670	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 30.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.545

Space mean speed in ramp influence area, S_R = 50.2 mph

Space mean speed in outer lanes, S_0 = 61.2 mph

Space mean speed for all vehicles, S = 53.8 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4346	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	1135	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	758	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4346	1135	758	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1207	315	211	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5263	1375	918	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5940.21 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 5263 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6638	6900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5263 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6638	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 54.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 3.278	
Space mean speed in ramp influence area,	S_R = 1.0	mph
Space mean speed in outer lanes,	S_0 = 60.0	mph
Space mean speed for all vehicles,	S = 1.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4346	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	1135	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	478	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4346	1135	478	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1207	315	133	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5263	1375	579	pcph

Estimation of V12 Merge Areas

L_{EQ} = 512.01 (Equation 13-6 or 13-7)

P_{FM} = 0.588 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3097 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6638	6900	No
v_3 or v_{av34}	2166 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3097 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6638	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 37.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.641	
Space mean speed in ramp influence area,	S_R = 48.5	mph
Space mean speed in outer lanes,	S_0 = 54.0	mph
Space mean speed for all vehicles,	S = 50.1	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT 48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5481	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	758	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	462	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	468	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5481	758	462	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1523	211	128	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6638	918	560	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.552 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4074 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6638	6900	No
$v_{FO} = v_F - v_R$	5720	6900	No
v_R	918	1900	No
v_3 or v_{av34}	2564 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4074 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4074	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 35.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.641

Space mean speed in ramp influence area, S_R = 48.5 mph

Space mean speed in outer lanes, S_0 = 59.7 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT 48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5481	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	758	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1135	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5481	758	1135	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1523	211	315	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6638	918	1375	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 8934.02 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 6638 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6638	6900	No
$v_{FO} = v_F - v_R$	5720	6900	No
v_R	918	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 6638 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	6638	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 57.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.641

Space mean speed in ramp influence area, S_R = 48.5 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 48.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4723	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	462	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	758	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	470	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4723	462	758	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1312	128	211	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5720	560	918	pcph

Estimation of V12 Merge Areas

L_{EQ} = 470.92 (Equation 13-6 or 13-7)

P_{FM} = 0.591 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3382 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6280	6900	No
v_3 or v_{av34}	2338 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3382 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6280	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.497	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = 53.2	mph
Space mean speed for all vehicles,	S = 51.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4760	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	1278	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	449	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4760	1278	449	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1322	355	125	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5765	1548	544	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.545 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3845 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5765	6900	No
$v_{FO} = v_F - v_R$	4217	6900	No
v_R	1548	2000	No
v_3 or v_{av34}	1920 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3845 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3845	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 31.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.632

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 62.2 mph

Space mean speed for all vehicles, S = 52.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3482	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	449	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	385	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3482	449	385	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	967	125	107	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4217	544	466	pcph

Estimation of V12 Merge Areas

L_{EQ} = 3015.40 (Equation 13-6 or 13-7)

P_{FM} = 0.840 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3543 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4761	6900	No
v_3 or v_{av34}	674 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3543 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4761	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 34.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.532	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = 59.4	mph
Space mean speed for all vehicles,	S = 51.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3482	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	449	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1278	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3482	449	1278	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	967	125	355	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4217	544	1548	pcph

Estimation of V12 Merge Areas

L_{EQ} = 110.33 (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2485 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4761	6900	No
v_3 or v_{av34}	1732 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		No	

If yes, v_{12A} = 2485 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4761	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.381	
Space mean speed in ramp influence area,	S_R = 53.1	mph
Space mean speed in outer lanes,	S_0 = 55.6	mph
Space mean speed for all vehicles,	S = 54.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 Nb
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3931	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	385	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	642	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3931	385	642	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1092	107	178	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4761	466	778	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.620 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3127 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4761	6900	No
$v_{FO} = v_F - v_R$	4295	6900	No
v_R	466	1900	No
v_3 or v_{av34}	1634 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3127 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3127	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 27.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.600

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 63.3 mph

Space mean speed for all vehicles, S = 53.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3931	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	385	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	449	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3931	385	449	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1092	107	125	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4761	466	544	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 3749.47 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4761 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4761	6900	No
$v_{FO} = v_F - v_R$	4295	6900	No
v_R	466	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4761 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4761	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 41.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.600	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = 65.8	mph
Space mean speed for all vehicles,	S = 49.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3546	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	642	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	385	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3546	642	385	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	985	178	107	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4295	778	466	pcph

Estimation of V12 Merge Areas

L_{EQ} = 496.42 (Equation 13-6 or 13-7)

P_{FM} = 0.590 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 2534 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5073	6900	No
v_3 or v_{av34}	1761 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 $v_{12}/2$	No	

If yes, v_{12A} = 2534 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5073	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.395	
Space mean speed in ramp influence area,	S_R = 52.9	mph
Space mean speed in outer lanes,	S_0 = 55.5	mph
Space mean speed for all vehicles,	S = 53.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6247	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	431	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	677	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6247	431	677	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1735	120	188	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7566	522	820	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.547 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4374 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7566	6900	Yes
$v_{FO} = v_F - v_R$	7044	6900	Yes
v_R	522	2000	No
v_3 or v_{av34}	3192 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4866 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4866	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 40.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.540

Space mean speed in ramp influence area, S_R = 50.3 mph

Space mean speed in outer lanes, S_0 = 59.2 mph

Space mean speed for all vehicles, S = 53.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5816	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	677	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	493	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5816	677	493	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1616	188	137	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7044	820	597	pcph

Estimation of V12 Merge Areas

L_{EQ} = 3863.08 (Equation 13-6 or 13-7)

P_{FM} = 0.922 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 6496 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7864	6900	Yes
v_3 or v_{av34}	548 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 6496 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7864	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 59.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 6.166

Space mean speed in ramp influence area, S_R = -51.0 mph

Space mean speed in outer lanes, S_0 = 59.8 mph

Space mean speed for all vehicles, S = mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5816	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	677	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	431	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5816	677	431	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1616	188	120	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7044	820	522	pcph

Estimation of V12 Merge Areas

L_{EQ} = 774.38 (Equation 13-6 or 13-7)

P_{FM} = 0.572 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 4028 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7864	6900	Yes
v_3 or v_{av34}	3016 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4344 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7864	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 42.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.982

Space mean speed in ramp influence area, S_R = 42.3 mph

Space mean speed in outer lanes, S_0 = 51.1 mph

Space mean speed for all vehicles, S = 45.0 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT 48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6493	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	493	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	624	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	468	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6493	493	624	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1804	137	173	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7864	597	756	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.536 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4492 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7864	6900	Yes
$v_{FO} = v_F - v_R$	7267	6900	Yes
v_R	597	1900	No
v_3 or v_{av34}	3372 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5164 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5164	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 44.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.612	
Space mean speed in ramp influence area,	S_R = 49.0	mph
Space mean speed in outer lanes,	S_0 = 59.2	mph
Space mean speed for all vehicles,	S = 52.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT 48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6493	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	493	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	677	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6493	493	677	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1804	137	188	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7864	597	820	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 3970.94 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 7864 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7864	6900	Yes
$v_{FO} = v_F - v_R$	7267	6900	Yes
v_R	597	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 7864 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	7864	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 68.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.612

Space mean speed in ramp influence area, S_R = 49.0 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 49.0 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6000	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	624	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	493	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	470	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6000	624	493	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1667	173	137	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7267	756	597	pcph

Estimation of V12 Merge Areas

L_{EQ} = 843.92 (Equation 13-6 or 13-7)

P_{FM} = 0.568 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 4126 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8023	6900	Yes
v_3 or v_{av34}	3141 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4567 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8023	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 43.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.095

Space mean speed in ramp influence area, S_R = 40.3 mph

Space mean speed in outer lanes, S_0 = 51.1 mph

Space mean speed for all vehicles, S = 43.4 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Woodruff Rd.
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4278	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	546	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1506	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4278	546	1506	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1188	152	418	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5181	661	1824	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3210 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5842	6900	No
v_3 or v_{av34}	1971 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3210 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5842	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 26.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.373	
Space mean speed in ramp influence area,	S_R = 53.3	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Woodruff Rd.
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5322	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	925	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1490	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5322	925	1490	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1478	257	414	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6446	1120	1805	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3993 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7566	6900	Yes
v_3 or v_{av34}	2453 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3993 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7566	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 35.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.834	
Space mean speed in ramp influence area,	S_R = 45.0	mph
Space mean speed in outer lanes,	S_0 = 52.6	mph
Space mean speed for all vehicles,	S = 47.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4471	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1806	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	389	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	4500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4471	1806	389	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1242	502	108	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5415	2157	465	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.525 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3869 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5415	6900	No
$v_{FO} = v_F - v_R$	3258	6900	No
v_R	2157	2100	Yes
v_3 or v_{av34}	1546 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3869 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3869	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 34.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.492

Space mean speed in ramp influence area, S_R = 51.1 mph

Space mean speed in outer lanes, S_0 = 63.7 mph

Space mean speed for all vehicles, S = 54.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2665	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	389	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2155	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1060	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2665	389	2155	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	740	108	599	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3228	471	2610	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1923 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3699	6900	No
v_3 or v_{av34}	1305 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1923 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3699	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 19.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.305	
Space mean speed in ramp influence area,	S_R = 54.5	mph
Space mean speed in outer lanes,	S_0 = 57.1	mph
Space mean speed for all vehicles,	S = 55.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2665	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	389	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1806	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	4500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2665	389	1806	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	740	108	502	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3228	471	2187	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1031.59 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1923 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3699	6900	No
v_3 or v_{av34}	1305 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1923 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3699	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 19.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.305	
Space mean speed in ramp influence area,	S_R = 54.5	mph
Space mean speed in outer lanes,	S_0 = 57.1	mph
Space mean speed for all vehicles,	S = 55.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5805	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	3033	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1506	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	5100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5805	3033	1506	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1613	843	418	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7031	3673	1824	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.415 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5067 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7031	6900	Yes
$v_{FO} = v_F - v_R$	3358	6900	No
v_R	3673	2100	Yes
v_3 or v_{av34}	1964 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5067 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5067	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 42.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.629	
Space mean speed in ramp influence area,	S_R = 48.7	mph
Space mean speed in outer lanes,	S_0 = 62.1	mph
Space mean speed for all vehicles,	S = 51.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2772	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1506	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	546	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2772	1506	546	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	770	418	152	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3357	1824	661	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2023 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5181	6900	No
v_3 or v_{av34}	1334 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2023 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5181	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 29.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.423	
Space mean speed in ramp influence area,	S_R = 52.4	mph
Space mean speed in outer lanes,	S_0 = 57.0	mph
Space mean speed for all vehicles,	S = 53.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2772	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1506	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	3033	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	5100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2772	1506	3033	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	770	418	843	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3357	1824	3673	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1459.73 (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2023 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5181	6900	No
v_3 or v_{av34}	1334 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2023 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5181	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 29.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.423

Space mean speed in ramp influence area, S_R = 52.4 mph

Space mean speed in outer lanes, S_0 = 57.0 mph

Space mean speed for all vehicles, S = 53.5 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4188	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1813	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1331	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	4500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4188	1813	1331	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1163	504	370	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5072	2196	1612	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.532 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3727 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5072	6900	No
$v_{FO} = v_F - v_R$	2876	6900	No
v_R	2196	2100	Yes
v_3 or v_{av34}	1345 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3727 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3727	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 33.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.496

Space mean speed in ramp influence area, S_R = 51.1 mph

Space mean speed in outer lanes, S_0 = 64.5 mph

Space mean speed for all vehicles, S = 54.1 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2375	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1331	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2997	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1060	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2375	1331	2997	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	660	370	833	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2876	1612	3630	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1713 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4488	6900	No
v_3 or v_{av34}	1163 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1713 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4488	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 26.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.371	
Space mean speed in ramp influence area,	S_R = 53.3	mph
Space mean speed in outer lanes,	S_0 = 57.6	mph
Space mean speed for all vehicles,	S = 54.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2375	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1331	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1813	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	4500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2375	1331	1813	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	660	370	504	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2876	1612	2196	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1200.43 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1713 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4488	6900	No
v_3 or v_{av34}	1163 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1713 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4488	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.371	
Space mean speed in ramp influence area,	S_R = 53.3	mph
Space mean speed in outer lanes,	S_0 = 57.6	mph
Space mean speed for all vehicles,	S = 54.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6307	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2475	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1490	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	5100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6307	2475	1490	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1752	688	414	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7638	2998	1805	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.431 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4998 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7638	6900	Yes
$v_{FO} = v_F - v_R$	4640	6900	No
v_R	2998	2100	Yes
v_3 or v_{av34}	2640 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4998 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4998	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 41.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.568

Space mean speed in ramp influence area, S_R = 49.8 mph

Space mean speed in outer lanes, S_0 = 59.4 mph

Space mean speed for all vehicles, S = 52.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3832	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1490	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	925	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3832	1490	925	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1064	414	257	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4641	1805	1120	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2797 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6446	6900	No
v_3 or v_{av34}	1844 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2797 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6446	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 34.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.629	
Space mean speed in ramp influence area,	S_R = 48.7	mph
Space mean speed in outer lanes,	S_0 = 55.2	mph
Space mean speed for all vehicles,	S = 50.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/30/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3832	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1490	vph
Length of first accel/decel lane	900	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2475	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	5100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3832	1490	2475	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1064	414	688	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4641	1805	2998	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1730.44 (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2797 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6446	6900	No
v_3 or v_{av34}	1844 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2797 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6446	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 34.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.629	
Space mean speed in ramp influence area,	S_R = 48.7	mph
Space mean speed in outer lanes,	S_0 = 55.2	mph
Space mean speed for all vehicles,	S = 50.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	I-385
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3054	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	2155	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	389	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1060	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3054	2155	389	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	848	599	108	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3699	2610	471	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2292 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6309	6900	No
v_3 or v_{av34}	1407 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2292 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6309	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.681	
Space mean speed in ramp influence area,	S_R = 47.7	mph
Space mean speed in outer lanes,	S_0 = 56.7	mph
Space mean speed for all vehicles,	S = 49.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	I-385
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3706	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	2998	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1331	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1060	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3706	2998	1331	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1029	833	370	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4488	3631	1612	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2780 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8119	6900	Yes
v_3 or v_{av34}	1708 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2780 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	8119	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 44.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 2.529	
Space mean speed in ramp influence area,	S_R = 14.5	mph
Space mean speed in outer lanes,	S_0 = 55.7	mph
Space mean speed for all vehicles,	S = 17.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Road
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5209	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1858	vph
Length of first accel/decel lane	625	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	751	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1325	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5209	1858	751	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1447	516	209	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6309	2250	910	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.499 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4275 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6309	6900	No
$v_{FO} = v_F - v_R$	4059	6900	No
v_R	2250	2000	Yes
v_3 or v_{av34}	2034 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12}/2	No	

If yes, v_{12A} = 4275 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4275	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 35.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.631

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 61.8 mph

Space mean speed for all vehicles, S = 52.2 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3351	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	751	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	539	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3351	751	539	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	931	209	150	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4058	910	653	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2417 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4968	6900	No
v_3 or v_{av34}	1641 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2417 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4968	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.391	
Space mean speed in ramp influence area,	S_R = 53.0	mph
Space mean speed in outer lanes,	S_0 = 55.9	mph
Space mean speed for all vehicles,	S = 53.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3351	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	751	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1858	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3351	751	1858	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	931	209	516	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4058	910	2250	pcph

Estimation of V12 Merge Areas

L_{EQ} = 518.35 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2417 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4968	6900	No
v_3 or v_{av34}	1641 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2417 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4968	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.391	
Space mean speed in ramp influence area,	S_R = 53.0	mph
Space mean speed in outer lanes,	S_0 = 55.9	mph
Space mean speed for all vehicles,	S = 53.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4102	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	539	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	751	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4102	539	751	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1139	150	209	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4968	653	910	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3078 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5621	6900	No
v_3 or v_{av34}	1890 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3078 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5621	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 24.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.349	
Space mean speed in ramp influence area,	S_R = 53.7	mph
Space mean speed in outer lanes,	S_0 = 55.0	mph
Space mean speed for all vehicles,	S = 54.1	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Road
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5871	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1858	vph
Length of first accel/decel lane	1400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	335	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5871	1858	335	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1631	516	93	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7110	2250	406	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.479 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4577 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7110	6900	Yes
$v_{FO} = v_F - v_R$	4860	6900	No
v_R	2250	2100	Yes
v_3 or v_{av34}	2533 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4577 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4577	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 31.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.501

Space mean speed in ramp influence area, S_R = 51.0 mph

Space mean speed in outer lanes, S_0 = 59.8 mph

Space mean speed for all vehicles, S = 53.8 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4013	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	335	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1457	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2760	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4013	335	1457	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1115	93	405	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4860	406	1765	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2881 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5266	6900	No
v_3 or v_{av34}	1979 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2881 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5266	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.392	
Space mean speed in ramp influence area,	S_R = 52.9	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4013	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	335	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1858	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4013	335	1858	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1115	93	516	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4860	406	2250	pcph

Estimation of V12 Merge Areas

L_{EQ} = 537.72 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2881 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5266	6900	No
v_3 or v_{av34}	1979 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2881 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5266	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.392	
Space mean speed in ramp influence area,	S_R = 52.9	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4348	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1457	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	335	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4348	1457	335	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1208	405	93	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5266	1765	406	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3262 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7031	6900	Yes
v_3 or v_{av34}	2004 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3262 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7031	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 34.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.781	
Space mean speed in ramp influence area,	S_R = 45.9	mph
Space mean speed in outer lanes,	S_0 = 54.6	mph
Space mean speed for all vehicles,	S = 48.1	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Road
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6704	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	2060	vph
Length of first accel/decel lane	625	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	979	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1325	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6704	2060	979	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1862	572	272	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8119	2495	1186	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.442 Using Equation 5

$v_{12} = v_R + (v - v_F) P_{FD}$ = 4982 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8119	6900	Yes
$v_{FO} = v - v_F - v_R$	5624	6900	No
v_R	2495	2000	Yes
v_3 or v_{av34}	3137 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5419 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5419	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 45.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.653

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 59.2 mph

Space mean speed for all vehicles, S = 51.4 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4644	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	979	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	786	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4644	979	786	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1290	272	218	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5624	1186	952	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3350 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6810	6900	No
v_3 or v_{av34}	2274 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3350 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6810	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 36.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.646	
Space mean speed in ramp influence area,	S_R = 48.4	mph
Space mean speed in outer lanes,	S_0 = 53.6	mph
Space mean speed for all vehicles,	S = 50.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4644	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	979	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2060	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4644	979	2060	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1290	272	572	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5624	1186	2495	pcph

Estimation of V12 Merge Areas

L_{EQ} = 912.54 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3350 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6810	6900	No
v_3 or v_{av34}	2274 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3350 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6810	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 36.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.646	
Space mean speed in ramp influence area,	S_R = 48.4	mph
Space mean speed in outer lanes,	S_0 = 53.6	mph
Space mean speed for all vehicles,	S = 50.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5623	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	786	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	979	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5623	786	979	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1562	218	272	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6810	952	1186	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4219 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7762	6900	Yes
v_3 or v_{av34}	2591 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4219 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7762	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 36.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.873	
Space mean speed in ramp influence area,	S_R = 44.3	mph
Space mean speed in outer lanes,	S_0 = 51.7	mph
Space mean speed for all vehicles,	S = 46.5	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Road
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5315	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	757	vph
Length of first accel/decel lane	1400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	600	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5315	757	600	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1476	210	167	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6437	917	727	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.557 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3991 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6437	6900	No
$v_{FO} = v_F - v_R$	5520	6900	No
v_R	917	2100	No
v_3 or v_{av34}	2446 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3991 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3991	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 26.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.381

Space mean speed in ramp influence area, S_R = 53.2 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 55.6 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4558	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	600	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1149	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2760	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4558	600	1149	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1266	167	319	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5520	727	1392	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3273 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6247	6900	No
v_3 or v_{av34}	2247 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3273 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6247	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.501	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = 53.7	mph
Space mean speed for all vehicles,	S = 51.9	mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4558	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	600	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	757	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4558	600	757	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1266	167	210	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5520	727	917	pcph

Estimation of V12 Merge Areas

L_{EQ} = 747.66 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3273 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6247	6900	No
v_3 or v_{av34}	2247 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3273 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6247	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.501	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = 53.7	mph
Space mean speed for all vehicles,	S = 51.9	mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5158	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1149	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	600	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5158	1149	600	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1433	319	167	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6247	1392	727	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3870 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7639	6900	Yes

v_3 or v_{av34} 2377 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 $v_{12}/2$ No

If yes, v_{12A} = 3870 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7639	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 36.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.938	
Space mean speed in ramp influence area,	S_R = 43.1	mph
Space mean speed in outer lanes,	S_0 = 53.0	mph
Space mean speed for all vehicles,	S = 45.8	mph

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/20/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3839	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	322	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	925	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3839	322	925	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1066	89	257	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4649	390	1120	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.626 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3055 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4649	6900	No
$v_{FO} = v_F - v_R$	4259	6900	No
v_R	390	2100	No
v_3 or v_{av34}	1594 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3055 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3055	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 17.0 pc/mi/ln D

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.333

Space mean speed in ramp influence area, S_R = 54.0 mph

Space mean speed in outer lanes, S_0 = 63.5 mph

Space mean speed for all vehicles, S = 56.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/20/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3517	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	925	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	332	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3517	925	332	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	977	257	92	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4259	1120	402	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1590.91 (Equation 13-6 or 13-7)

P_{FM} = 0.608 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2591 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5379	6900	No
v_3 or v_{av34}	1668 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2591 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5379	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.381	
Space mean speed in ramp influence area,	S_R = 53.1	mph
Space mean speed in outer lanes,	S_0 = 55.8	mph
Space mean speed for all vehicles,	S = 53.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/20/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2615	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	802	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	244	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2615	802	244	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	726	223	68	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3167	971	296	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.636 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2368 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3167	6900	No
$v_{FO} = v_F - v_R$	2196	6900	No
v_R	971	2100	No
v_3 or v_{av34}	799 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2368 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2368	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 15.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.385

Space mean speed in ramp influence area, S_R = 53.1 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 55.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/20/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	1813	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	244	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	802	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1813	244	802	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	504	68	223	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2196	296	971	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1150.69 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1360 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2492	6900	No
v_3 or v_{av34}	836 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 1360 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2492	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 8.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	M_S = 0.206	
Space mean speed in ramp influence area,	S_R = 56.3	mph
Space mean speed in outer lanes,	S_0 = 58.8	mph
Space mean speed for all vehicles,	S = 57.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/20/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4295	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	262	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1024	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4295	262	1024	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1193	73	284	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5202	317	1240	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.615 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3323 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5202	6900	No
$v_{FO} = v_F - v_R$	4885	6900	No
v_R	317	2100	No
v_3 or v_{av34}	1879 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3323 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3323	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 19.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.327	
Space mean speed in ramp influence area,	S_R = 54.1	mph
Space mean speed in outer lanes,	S_0 = 62.4	mph
Space mean speed for all vehicles,	S = 56.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/20/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4033	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1024	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	262	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4033	1024	262	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1120	284	73	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4884	1240	317	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1750.34 (Equation 13-6 or 13-7)

P_{FM} = 0.608 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2971 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6124	6900	No
v_3 or v_{av34}	1913 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2971 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6124	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 30.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.485	
Space mean speed in ramp influence area,	S_R = 51.3	mph
Space mean speed in outer lanes,	S_0 = 54.9	mph
Space mean speed for all vehicles,	S = 52.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/20/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5134	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	831	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	463	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5134	831	463	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1426	231	129	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6218	1006	561	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.558 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3916 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6218	6900	No
$v_{FO} = v_F - v_R$	5212	6900	No
v_R	1006	2100	No
v_3 or v_{av34}	2302 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3916 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3916	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 28.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.389

Space mean speed in ramp influence area, S_R = 53.0 mph

Space mean speed in outer lanes, S_0 = 60.7 mph

Space mean speed for all vehicles, S = 55.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date performed:	4/20/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4303	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	463	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	831	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4303	463	831	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1195	129	231	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5211	561	1006	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1852.61 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3228 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5772	6900	No
v_3 or v_{av34}	1983 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3228 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5772	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 25.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.358	
Space mean speed in ramp influence area,	S_R = 53.5	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4442	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	777	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1219	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4442	777	1219	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1234	216	339	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5380	941	1476	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.582 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3525 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5380	6750	No
$v_{FO} = v_F - v_R$	4439	6750	No
v_R	941	2100	No
v_3 or v_{av34}	1855 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3525 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3525	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 21.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.383

Space mean speed in ramp influence area, S_R = 50.0 mph

Space mean speed in outer lanes, S_0 = 57.0 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3665	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1219	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1139	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3665	1219	1139	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1018	339	316	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4439	1476	1379	pcph

Estimation of V12 Merge Areas

L_{EQ} = 6066.87 (Equation 13-6 or 13-7)

P_{FM} = 0.841 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3733 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5915	6750	No
v_3 or v_{av34}	706 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3733 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5915	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 38.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.935	
Space mean speed in ramp influence area,	S_R = 42.8	mph
Space mean speed in outer lanes,	S_0 = 54.3	mph
Space mean speed for all vehicles,	S = 43.9	mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3665	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1219	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	777	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2860	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3665	1219	777	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1018	339	216	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4439	1476	941	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1705.61 (Equation 13-6 or 13-7)

P_{FM} = 0.608 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2700 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5915	6750	No
v_3 or v_{av34}	1739 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2700 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5915	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 30.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.476	
Space mean speed in ramp influence area,	S_R = 48.8	mph
Space mean speed in outer lanes,	S_0 = 50.5	mph
Space mean speed for all vehicles,	S = 49.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3729	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1327	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	213	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3400	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3729	1327	213	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1036	369	59	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4516	1607	258	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.573 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3274 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4516	6750	No
$v_{FO} = v_F - v_R$	2909	6750	No
v_R	1607	2100	No
v_3 or v_{av34}	1242 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3274 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3274	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 23.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.443

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 59.4 mph

Space mean speed for all vehicles, S = 51.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3729	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1327	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	535	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	910	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3729	1327	535	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1036	369	149	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4516	1607	648	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 12287.62 Equation 13-12 or 13-13)

P_{FD} = 0.971 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4432 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4516	6750	No
$v_{FO} = v_F - v_R$	2909	6750	No
v_R	1607	2100	No
v_3 or v_{av34}	84 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4432 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4432	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 33.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.443	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 49.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2402	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	213	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1327	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2402	213	1327	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	667	59	369	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2909	258	1607	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1295.14 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1802 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3167	6750	No
v_3 or v_{av34}	1107 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 1802 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3167	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 12.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.217	
Space mean speed in ramp influence area,	S_R = 52.2	mph
Space mean speed in outer lanes,	S_0 = 52.8	mph
Space mean speed for all vehicles,	S = 52.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5057	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	789	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1131	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5057	789	1131	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1405	219	314	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6125	956	1370	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.563 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3866 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6125	6750	No
$v_{FO} = v_F - v_R$	5169	6750	No
v_R	956	2100	No
v_3 or v_{av34}	2259 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3866 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3866	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 24.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.384

Space mean speed in ramp influence area, S_R = 50.0 mph

Space mean speed in outer lanes, S_0 = 55.4 mph

Space mean speed for all vehicles, S = 51.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4268	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1131	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1214	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1240	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4268	1131	1214	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1186	314	337	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5169	1370	1470	pcph

Estimation of V12 Merge Areas

L_{EQ} = 6467.22 (Equation 13-6 or 13-7)

P_{FM} = 0.860 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 4447 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6539	6750	No
v_3 or v_{av34}	722 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		No	

If yes, v_{12A} = 4447 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6539	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 43.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 1.532	
Space mean speed in ramp influence area,	S_R = 35.1	mph
Space mean speed in outer lanes,	S_0 = 54.2	mph
Space mean speed for all vehicles,	S = 36.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4268	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1131	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	789	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2860	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4268	1131	789	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1186	314	219	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5169	1370	956	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1839.15 (Equation 13-6 or 13-7)

P_{FM} = 0.608 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3144 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6539	6750	No
v_3 or v_{av34}	2025 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3144 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6539	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.578

Space mean speed in ramp influence area, S_R = 47.5 mph

Space mean speed in outer lanes, S_0 = 49.5 mph

Space mean speed for all vehicles, S = 48.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5632	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1119	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	621	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3400	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5632	1119	621	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1564	311	173	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6821	1355	752	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.527 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4236 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6821	6750	Yes
$v_{FO} = v_F - v_R$	5466	6750	No
v_R	1355	2100	No
v_3 or v_{av34}	2585 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4236 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4236	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 31.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.420

Space mean speed in ramp influence area, S_R = 49.5 mph

Space mean speed in outer lanes, S_0 = 54.2 mph

Space mean speed for all vehicles, S = 51.2 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5632	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1119	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1018	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	910	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5632	1119	1018	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1564	311	283	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6821	1355	1233	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 9871.66 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 6821 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6821	6750	Yes
$v_{FO} = v_F - v_R$	5466	6750	No
v_R	1355	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 6821 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	6821	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 53.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.420

Space mean speed in ramp influence area, S_R = 49.5 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4513	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	621	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1119	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4513	621	1119	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1254	173	311	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5466	752	1355	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1948.05 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3386 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6218	6750	No
v_3 or v_{av34}	2080 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3386 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6218	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 28.0+ pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.430

Space mean speed in ramp influence area, S_R = 49.4 mph

Space mean speed in outer lanes, S_0 = 49.3 mph

Space mean speed for all vehicles, S = 49.4 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4884	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1139	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	919	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4884	1139	919	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1357	316	255	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5915	1379	1113	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 2466.66 (Equation 13-12 or 13-13)

P_{FD} = 0.568 Using Equation 7

$v_{12} = v_R + (v - v_F) P_{FD}$ = 3958 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5915	6750	No
$v_{FO} = v - v_F - v_R$	4536	6750	No
v_R	1379	2100	No
v_3 or v_{av34}	1957 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3958 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3958	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\ v_R - 0.009\ L_{12}$ = 29.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.422

Space mean speed in ramp influence area, S_R = 49.5 mph

Space mean speed in outer lanes, S_0 = 56.6 mph

Space mean speed for all vehicles, S = 51.7 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4884	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1139	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1219	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4884	1139	1219	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1357	316	339	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5915	1379	1476	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 14436.48 Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v - v_F) P_{FD}$ = 5915 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5915	6750	No
$v_{FO} = v - v_R$	4536	6750	No
v_R	1379	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5915 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5915	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 46.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.422	
Space mean speed in ramp influence area,	S_R = 49.5	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 49.5	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3745	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	919	vph
Length of first accel/decel lane	940	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1938	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3745	919	1938	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1040	255	538	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4536	1113	2347	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.595 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3151 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4536	6750	No
$v_{FO} = v_F - v_R$	3423	6750	No
v_R	1113	1900	No
v_3 or v_{av34}	1385 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3151 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3151	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 22.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.658

Space mean speed in ramp influence area, S_R = 46.4 mph

Space mean speed in outer lanes, S_0 = 58.8 mph

Space mean speed for all vehicles, S = 49.6 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3745	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	919	vph
Length of first accel/decel lane	940	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1139	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3745	919	1139	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1040	255	316	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4536	1113	1379	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.595 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3151 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4536	6750	No
$v_{FO} = v_F - v_R$	3423	6750	No
v_R	1113	1900	No
v_3 or v_{av34}	1385 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3151 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3151	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 22.9 pc/mi/ln D

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.658

Space mean speed in ramp influence area, S_R = 46.4 mph

Space mean speed in outer lanes, S_0 = 58.8 mph

Space mean speed for all vehicles, S = 49.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2826	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1938	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1593	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2826	1938	1593	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	785	538	443	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3423	2347	1929	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1900 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5770	6750	No
v_3 or v_{av34}	1523 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1956 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5770	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 9.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	M_S = 0.204	
Space mean speed in ramp influence area,	S_R = 52.3	mph
Space mean speed in outer lanes,	S_0 = 51.5	mph
Space mean speed for all vehicles,	S = 52.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2826	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1938	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	919	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2826	1938	919	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	785	538	255	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3423	2347	1113	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1900 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5770	6750	No
v_3 or v_{av34}	1523 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 1956 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5770	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 9.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	M_S = 0.204	
Space mean speed in ramp influence area,	S_R = 52.3	mph
Space mean speed in outer lanes,	S_0 = 51.5	mph
Space mean speed for all vehicles,	S = 52.1	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3548	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1652	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1299	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3548	1652	1299	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	986	459	361	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4297	2001	1573	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2598 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4297	9000	No
$v_{FO} = v_F - v_R$	2296	9000	No
v_R	2001	4200	No
v_3 or v_{av34}	849 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2598 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2598	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = -13.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.478

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3548	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1652	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	844	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3548	1652	844	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	986	459	234	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4297	2001	1022	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2598 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4297	9000	No
$v_{FO} = v_F - v_R$	2296	9000	No
v_R	2001	4200	No
v_3 or v_{av34}	849 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2598 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2598	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = -13.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.478

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.8 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1896	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	1299	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	535	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1896	1299	535	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	527	361	149	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2296	1573	648	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.608 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1397 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3869	6750	No
v_3 or v_{av34}	899 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 1397 (Equation 13-15, 13-16, 18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3869	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 21.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.331	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = 53.6	mph
Space mean speed for all vehicles,	S = 51.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1896	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	1299	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1652	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1896	1299	1652	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	527	361	459	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2296	1573	2001	pcph

Estimation of V12 Merge Areas

L_{EQ} = 482.97 (Equation 13-6 or 13-7)

P_{FM} = 0.608 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1397 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3869	6750	No
v_3 or v_{av34}	899 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		No	

If yes, v_{12A} = 1397 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3869	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 21.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.331	
Space mean speed in ramp influence area,	S_R = 50.7	mph
Space mean speed in outer lanes,	S_0 = 53.6	mph
Space mean speed for all vehicles,	S = 51.3	mph

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3194	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	535	vph
Length of first accel/decel lane	920	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1327	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	920	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3194	535	1327	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	887	149	369	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3868	648	1607	pcph

Estimation of V12 Merge Areas

L_{EQ} = 7724.48 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3868 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4516	6750	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3868 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4516	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 34.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.623

Space mean speed in ramp influence area, S_R = 46.9 mph

Space mean speed in outer lanes, S_0 = 55.0 mph

Space mean speed for all vehicles, S = 46.9 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3194	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	535	vph
Length of first accel/decel lane	920	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1299	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3194	535	1299	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	887	149	361	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3868	648	1573	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2333 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4516	6750	No
v_3 or v_{av34}	1535 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2333 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4516	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 22.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.343	
Space mean speed in ramp influence area,	S_R = 50.5	mph
Space mean speed in outer lanes,	S_0 = 51.3	mph
Space mean speed for all vehicles,	S = 50.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5399	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1214	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	830	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5399	1214	830	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1500	337	231	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6539	1470	1005	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 2527.65 (Equation 13-12 or 13-13)

P_{FD} = 0.548 Using Equation 7

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4247 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6539	6750	No
$v_{FO} = v_F - v_R$	5069	6750	No
v_R	1470	2100	No
v_3 or v_{av34}	2292 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4247 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4247	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 31.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	D_S = 0.430	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 55.3	mph
Space mean speed for all vehicles,	S = 51.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5399	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1214	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1131	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5399	1214	1131	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1500	337	314	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6539	1470	1370	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 12491.22 Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 6539 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6539	6750	No
$v_{FO} = v_F - v_R$	5069	6750	No
v_R	1470	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 6539 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	6539	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 51.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.430	
Space mean speed in ramp influence area,	S_R = 49.4	mph
Space mean speed in outer lanes,	S_0 = 60.3	mph
Space mean speed for all vehicles,	S = 49.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4185	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	830	vph
Length of first accel/decel lane	940	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1895	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4185	830	1895	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1163	231	526	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5069	1005	2295	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.587 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3391 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5069	6750	No
$v_{FO} = v_F - v_R$	4064	6750	No
v_R	1005	1900	No
v_3 or v_{av34}	1678 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3391 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3391	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 25.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.648

Space mean speed in ramp influence area, S_R = 46.6 mph

Space mean speed in outer lanes, S_0 = 57.7 mph

Space mean speed for all vehicles, S = 49.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4185	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	830	vph
Length of first accel/decel lane	940	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1214	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4185	830	1214	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1163	231	337	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5069	1005	1470	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.587 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3391 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5069	6750	No
$v_{FO} = v_F - v_R$	4064	6750	No
v_R	1005	1900	No
v_3 or v_{av34}	1678 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3391 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3391	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 25.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.648

Space mean speed in ramp influence area, S_R = 46.6 mph

Space mean speed in outer lanes, S_0 = 57.7 mph

Space mean speed for all vehicles, S = 49.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3355	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1895	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	896	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	3100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3355	1895	896	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	932	526	249	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4063	2295	1085	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2255 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6358	6750	No
v_3 or v_{av34}	1808 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2321 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6358	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 12.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.310	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = 50.5	mph
Space mean speed for all vehicles,	S = 50.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3355	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1895	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	830	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3355	1895	830	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	932	526	231	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4063	2295	1005	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2255 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6358	6750	No
v_3 or v_{av34}	1808 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2321 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6358	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 12.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.310	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = 50.5	mph
Space mean speed for all vehicles,	S = 50.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6594	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2730	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	750	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6594	2730	750	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1832	758	208	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7986	3306	908	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4523 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7986	9000	No
$v_{FO} = v_F - v_R$	4680	9000	No
v_R	3306	4200	No
v_3 or v_{av34}	1731 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4523 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4523	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 2.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.596

Space mean speed in ramp influence area, S_R = 47.3 mph

Space mean speed in outer lanes, S_0 = 57.5 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6594	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2730	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1796	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6594	2730	1796	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1832	758	499	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7986	3306	2175	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4523 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7986	9000	No
$v_{FO} = v_F - v_R$	4680	9000	No
v_R	3306	4200	No
v_3 or v_{av34}	1731 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4523 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4523	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 2.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.596

Space mean speed in ramp influence area, S_R = 47.3 mph

Space mean speed in outer lanes, S_0 = 57.5 mph

Space mean speed for all vehicles, S = 51.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3864	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	750	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1018	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3864	750	1018	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1073	208	283	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4680	908	1233	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.608 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2847 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5588	6750	No
v_3 or v_{av34}	1833 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2847 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5588	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 27.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.422	
Space mean speed in ramp influence area,	S_R = 49.5	mph
Space mean speed in outer lanes,	S_0 = 50.2	mph
Space mean speed for all vehicles,	S = 49.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3864	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	750	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2730	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3864	750	2730	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1073	208	758	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4680	908	3306	pcph

Estimation of V12 Merge Areas

L_{EQ} = 850.83 (Equation 13-6 or 13-7)

P_{FM} = 0.608 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2847 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5588	6750	No
v_3 or v_{av34}	1833 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2847 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5588	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 27.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.422	
Space mean speed in ramp influence area,	S_R = 49.5	mph
Space mean speed in outer lanes,	S_0 = 50.2	mph
Space mean speed for all vehicles,	S = 49.7	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4614	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	1018	vph
Length of first accel/decel lane	920	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1119	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	920	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4614	1018	1119	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1282	283	311	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5588	1233	1355	pcph

Estimation of V12 Merge Areas

L_{EQ} = 6513.17 (Equation 13-6 or 13-7)

P_{FM} = 0.936 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 5229 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6821	6750	Yes
v_3 or v_{av34}	359 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5229 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6821	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 49.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 2.763	
Space mean speed in ramp influence area,	S_R = 19.1	mph
Space mean speed in outer lanes,	S_0 = 55.0	mph
Space mean speed for all vehicles,	S = 19.8	mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4614	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	1018	vph
Length of first accel/decel lane	920	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	750	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4614	1018	750	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1282	283	208	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5588	1233	908	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.603 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3371 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6821	6750	Yes
v_3 or v_{av34}	2217 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3371 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6821	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 35.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.655	
Space mean speed in ramp influence area,	S_R = 46.5	mph
Space mean speed in outer lanes,	S_0 = 48.8	mph
Space mean speed for all vehicles,	S = 47.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4764	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1593	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	451	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4764	1593	451	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1323	443	125	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5770	1929	546	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2928 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5770	9000	No
$v_{FO} = v_F - v_R$	3841	9000	No
v_R	1929	4200	No
v_3 or v_{av34}	1421 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2928 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2928	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = -11.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.472

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 58.7 mph

Space mean speed for all vehicles, S = 53.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4764	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1593	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1938	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4764	1593	1938	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1323	443	538	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5770	1929	2347	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2928 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5770	9000	No
$v_{FO} = v_F - v_R$	3841	9000	No
v_R	1929	4200	No
v_3 or v_{av34}	1421 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2928 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2928	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = -11.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.472

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = 58.7 mph

Space mean speed for all vehicles, S = 53.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3171	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	451	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1593	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1950	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3171	451	1593	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	881	125	443	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3840	546	1929	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1556.00 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2379 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4386	6750	No
v_3 or v_{av34}	1461 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2379 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4386	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 18.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.259	
Space mean speed in ramp influence area,	S_R = 51.6	mph
Space mean speed in outer lanes,	S_0 = 51.5	mph
Space mean speed for all vehicles,	S = 51.6	mph

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3496	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	792	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	844	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3496	792	844	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	971	220	234	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4234	959	1022	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.610 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2957 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4234	6750	No
$v_{FO} = v_F - v_R$	3275	6750	No
v_R	959	2100	No
v_3 or v_{av34}	1277 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2957 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2957	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.384

Space mean speed in ramp influence area, S_R = 50.0 mph

Space mean speed in outer lanes, S_0 = 59.3 mph

Space mean speed for all vehicles, S = 52.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2704	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	844	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1652	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2704	844	1652	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	751	234	459	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3275	1022	2001	pcph

Estimation of V12 Merge Areas

L_{EQ} = 7408.37 (Equation 13-6 or 13-7)

P_{FM} = 0.844 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2765 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4297	6750	No
v_3 or v_{av34}	510 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2765 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4297	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 25.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.358	
Space mean speed in ramp influence area,	S_R = 50.3	mph
Space mean speed in outer lanes,	S_0 = 55.0	mph
Space mean speed for all vehicles,	S = 50.9	mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2704	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	844	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	792	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2220	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2704	844	792	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	751	234	220	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3275	1022	959	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1536.96 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2029 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4297	6750	No
v_3 or v_{av34}	1246 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2029 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4297	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 19.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.268

Space mean speed in ramp influence area, S_R = 51.5 mph

Space mean speed in outer lanes, S_0 = 52.3 mph

Space mean speed for all vehicles, S = 51.7 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5250	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	896	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	825	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5250	896	825	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1458	249	229	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6358	1085	999	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2456 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6358	9000	No
$v_{FO} = v_F - v_R$	5273	9000	No
v_R	1085	4200	No
v_3 or v_{av34}	1951 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2543 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2543	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = -14.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.396

Space mean speed in ramp influence area, S_R = 49.9 mph

Space mean speed in outer lanes, S_0 = 56.8 mph

Space mean speed for all vehicles, S = 53.8 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5250	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	896	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1895	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5250	896	1895	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1458	249	526	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6358	1085	2295	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2456 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6358	9000	No
$v_{FO} = v_F - v_R$	5273	9000	No
v_R	1085	4200	No
v_3 or v_{av34}	1951 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2543 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2543	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = -14.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.396

Space mean speed in ramp influence area, S_R = 49.9 mph

Space mean speed in outer lanes, S_0 = 56.8 mph

Space mean speed for all vehicles, S = 53.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4354	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	825	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	896	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1950	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4354	825	896	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1209	229	249	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5273	999	1085	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1959.61 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3263 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6272	6750	No
v_3 or v_{av34}	2010 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3263 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6272	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 28.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.463	
Space mean speed in ramp influence area,	S_R = 49.0	mph
Space mean speed in outer lanes,	S_0 = 49.6	mph
Space mean speed for all vehicles,	S = 49.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5569	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	771	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1796	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5569	771	1796	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1547	214	499	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6745	934	2175	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.548 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4121 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6745	6750	No
$v_{FO} = v_F - v_R$	5811	6750	No
v_R	934	2100	No
v_3 or v_{av34}	2624 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4121 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4121	4400	No

Level of Service Determination (if not F)

Density, $D_D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 29.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.382

Space mean speed in ramp influence area, S_R = 50.0 mph

Space mean speed in outer lanes, S_0 = 54.0 mph

Space mean speed for all vehicles, S = 51.5 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4798	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1796	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2730	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4798	1796	2730	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1333	499	758	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5811	2175	3306	pcph

Estimation of V12 Merge Areas

L_{EQ} = 12239.91 Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 5811 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7986	6750	Yes

v_3 or v_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5811 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7986	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 57.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 11.650

Space mean speed in ramp influence area, S_R = -96.5 mph

Space mean speed in outer lanes, S_0 = 55.0 mph

Space mean speed for all vehicles, S = mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	4/5/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4798	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1796	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	771	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2220	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4798	1796	771	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1333	499	214	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5811	2175	934	pcph

Estimation of V12 Merge Areas

L_{EQ} = 2326.40 (Equation 13-6 or 13-7)

P_{FM} = 0.613 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3560 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7986	6750	Yes

v_3 or v_{av34} 2251 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3560 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7986	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 39.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.393	
Space mean speed in ramp influence area,	S_R = 36.9	mph
Space mean speed in outer lanes,	S_0 = 48.7	mph
Space mean speed for all vehicles,	S = 39.6	mph

CAPACITY ANALYSIS (HCS)
2015 NO-BUILD CONDITIONS – WEAVE AREAS

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85NB
Weaving Location:	US-276
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	420	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3687	237	627	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1024	66	174	0	
Trucks and buses	18	15	15	15	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.930	0.930	0.930	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4465	283	749	0	pc/h

Volume ratio, VR	0.188	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	68	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	377	lc/h
Total lane changes, LCALL	445	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.237

Average weaving speed, SW	51.4	mi/h
Average non-weaving speed, SNW	53.4	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	53.0	mi/h
Weaving segment density, D	25.9	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.689	
Weaving segment flow rate, v	5497	pc/h
Weaving segment capacity, cW	7321	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4411	420	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1995	c
		Maximum	Analyzed	
v/c ratio		1.00	0.689	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85SB
Weaving Location:	US-276
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	420	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3588	758	1135	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	997	211	315	0	
Trucks and buses	18	15	15	15	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.930	0.930	0.930	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4345	905	1356	0	pc/h

Volume ratio, VR	0.342	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	68	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	352	lc/h
Total lane changes, LCALL	420	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.226

Average weaving speed, SW	51.7	mi/h
Average non-weaving speed, SNW	52.1	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	51.9	mi/h
Weaving segment density, D	31.8	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.942	
Weaving segment flow rate, v	6606	pc/h
Weaving segment capacity, cW	6433	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6042	420	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1870	c
		Maximum	Analyzed	
v/c ratio		1.00	0.942	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85NB C-D
Weaving Location:	Woodruff & I-385
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	840	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	636	413	486	122	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	177	115	135	34	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	770	500	589	148	pc/h

Volume ratio, VR	0.543	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	82	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	67	lc/h
Total lane changes, LCALL	149	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.058

Average weaving speed, SW	43.4	mi/h
Average non-weaving speed, SNW	41.8	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	42.6	mi/h
Weaving segment density, D	15.7	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.454	
Weaving segment flow rate, v	2007	pc/h
Weaving segment capacity, cW	4058	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8329	840	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1677	c
		Maximum	Analyzed	
v/c ratio		1.00	0.454	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	I-385
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	483	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	529	919	1299	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	147	255	361	0	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	641	1113	1573	0	pc/h
Volume ratio, VR		0.807			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.191	
Weaving segment flow rate, v	3327	pc/h
Weaving segment capacity, cW	2563	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	11634	483	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1397	c
		Maximum	Analyzed	
v/c ratio		1.00	1.191	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	I-385 & Woodruff
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	556	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	891	557	615	21	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	248	155	171	6	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1079	675	745	25	pc/h

Volume ratio, VR	0.563	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	25	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	144	lc/h
Total lane changes, LCALL	169	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.088

Average weaving speed, SW	42.6	mi/h
Average non-weaving speed, SNW	38.9	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	40.9	mi/h
Weaving segment density, D	30.9	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.771	
Weaving segment flow rate, v	2524	pc/h
Weaving segment capacity, cW	3004	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8567	556	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1637	c
		Maximum	Analyzed	
v/c ratio		1.00	0.771	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385NB
Weaving Location:	Woodruff & I-85
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1240	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	2743	922	1002	217	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	762	256	278	60	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3322	1117	1214	263	pc/h
Volume ratio, VR		0.394			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	191	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	640	lc/h
Total lane changes, LCALL	831	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.165

Average weaving speed, SW	49.3	mi/h
Average non-weaving speed, SNW	47.9	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	48.5	mi/h
Weaving segment density, D	30.5	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.971	
Weaving segment flow rate, v	5916	pc/h
Weaving segment capacity, cW	5588	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6614	1240	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1839	c
		Maximum	Analyzed	
v/c ratio		1.00	0.971	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	3/17/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385SB
Weaving Location:	I-85 & Woodruff
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	909	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1907	495	1287	40	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	530	138	358	11	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2310	600	1559	48	pc/h
Volume ratio, VR		0.478			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	154	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	208	lc/h
Total lane changes, LCALL	362	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.109

Average weaving speed, SW	51.1	mi/h
Average non-weaving speed, SNW	49.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	50.3	mi/h
Weaving segment density, D	22.5	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.900	
Weaving segment flow rate, v	4517	pc/h
Weaving segment capacity, cW	4607	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7570	909	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1740	c
		Maximum	Analyzed	
v/c ratio		1.00	0.900	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85NB
Weaving Location:	US-276
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	420	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3097	385	449	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	860	107	125	0	
Trucks and buses	18	15	15	15	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.930	0.930	0.930	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3751	460	536	0	pc/h

Volume ratio, VR	0.210	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	68	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	230	lc/h
Total lane changes, LCALL	298	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.172

Average weaving speed, SW	53.4	mi/h
Average non-weaving speed, SNW	54.3	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	54.1	mi/h
Weaving segment density, D	21.9	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.600	
Weaving segment flow rate, v	4747	pc/h
Weaving segment capacity, cW	7255	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4637	420	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1977	c
		Maximum	Analyzed	
v/c ratio		1.00	0.600	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85SB
Weaving Location:	US-276
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	420	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	5323	493	677	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1479	137	188	0	
Trucks and buses	18	15	15	15	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.930	0.930	0.930	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6447	589	809	0	pc/h

Volume ratio, VR	0.178	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	68	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	785	lc/h
Total lane changes, LCALL	853	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.395	

Average weaving speed, SW	47.3	mi/h
Average non-weaving speed, SNW	50.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	50.0	mi/h
Weaving segment density, D	39.3	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.980	
Weaving segment flow rate, v	7845	pc/h
Weaving segment capacity, cW	7347	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4315	420	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	2002	c
		Maximum	Analyzed	
v/c ratio		1.00	0.980	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85NB C-D
Weaving Location:	Woodruff & I-385
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	840	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1048	670	707	348	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	291	186	196	97	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1269	811	856	421	pc/h

Volume ratio, VR	0.497	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	1667	lc/h
Weaving lane changes, LCW	1749	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	226	lc/h
Total lane changes, LCALL	1975	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.444

Average weaving speed, SW	35.8	mi/h
Average non-weaving speed, SNW	27.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	31.2	mi/h
Weaving segment density, D	35.9	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.695	
Weaving segment flow rate, v	3357	pc/h
Weaving segment capacity, cW	4434	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7786	840	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1719	c
		Maximum	Analyzed	
v/c ratio		1.00	0.695	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	I-385
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	483	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	254	750	830	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	71	208	231	0	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	308	908	1005	0	pc/h

Volume ratio, VR 0.861

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	21	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	0	lc/h
Total lane changes, LCALL	21	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.019

Average weaving speed, SW	44.4	mi/h
Average non-weaving speed, SNW	39.7	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	43.7	mi/h
Weaving segment density, D	25.4	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.828	
Weaving segment flow rate, v	2221	pc/h
Weaving segment capacity, cW	2462	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	12346	483	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1342	c
		Maximum	Analyzed	
v/c ratio		1.00	0.828	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	I-385 & Woodruff
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	556	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	678	406	812	135	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	188	113	226	38	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	821	492	983	164	pc/h

Volume ratio, VR	0.600	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	25	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	119	lc/h
Total lane changes, LCALL	144	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.078

Average weaving speed, SW	42.8	mi/h
Average non-weaving speed, SNW	39.1	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	41.3	mi/h
Weaving segment density, D	29.8	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.767	
Weaving segment flow rate, v	2460	pc/h
Weaving segment capacity, cW	2941	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	9014	556	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1603	c
		Maximum	Analyzed	
v/c ratio		1.00	0.767	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385NB
Weaving Location:	Woodruff & I-85
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1240	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3235	950	1033	181	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	899	264	287	50	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3918	1151	1251	219	pc/h
Volume ratio, VR		0.367			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.001	
Weaving segment flow rate, v	6539	pc/h
Weaving segment capacity, cW	5994	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6317	1240	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1862	c
		Maximum	Analyzed	
v/c ratio		1.00	1.001	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385SB
Weaving Location:	I-85 & Woodruff
Analysis Year:	2015
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	909	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3763	750	851	268	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1045	208	236	74	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4557	908	1031	325	pc/h
Volume ratio, VR		0.284			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	154	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	728	lc/h
Total lane changes, LCALL	882	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.221

Average weaving speed, SW	47.8	mi/h
Average non-weaving speed, SNW	46.8	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	47.1	mi/h
Weaving segment density, D	36.2	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.895	
Weaving segment flow rate, v	6821	pc/h
Weaving segment capacity, cW	6991	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	5416	909	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1905	c
		Maximum	Analyzed	
v/c ratio		1.00	0.895	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

CAPACITY ANALYSIS (HCS)
2035 NO-BUILD CONDITIONS - FREEWAY SEGMENTS

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6960*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2810*	pc/h/ln
S	*33.4*	mph
D = v_p / S	*84.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-385 to Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9734*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3930*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85NB C-D Ramp to I-385 on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5346*	veh/h	Peak-Hour Factor, PHF	*0.90*	
AADT		veh/day	%Trucks and Buses, P_T	*18*	
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*	
Peak-Hr Direction Prop, D			General Terrain:	*Level*	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*	

Calculate Flow Adjustments

f_p	*1.00*		E_R	*1.2*
E_T	*1.5*		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2158*	pc/h/ln
S	*54.3*	mph
D = v_p / S	*39.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85NB CD off to I-85NB CD on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3259*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1316*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*21.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*US 276 to Woodruff Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5930*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2394*	pc/h/ln
S	*48.6*	mph
D = v_p / S	*49.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*at 276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5044*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2036*	pc/h/ln
S	*56.5*	mph
D = v_p / S	*36.0*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*276 EB to 276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5550*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2241*	pc/h/ln
S	*52.5*	mph
D = v_p / S	*42.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*AT 276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4933*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1991*	pc/h/ln
S	*57.2*	mph
D = v_p / S	*34.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*BEGIN TO US 276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6609*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2668*	pc/h/ln
S	*39.3*	mph
D = v_p / S	*67.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*End to Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9250*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3734*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6467*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2611*	pc/h/ln
S	*41.4*	mph
D = v_p / S	*63.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6910*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2790*	pc/h/ln
S	*34.3*	mph
D = v_p / S	*81.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd to I-385*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8859*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3576*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-85SB C-D off - I-85SB C-D on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3949*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1594*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*26.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-85SB C-D on - Woodruff*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6004*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2424*	pc/h/ln
S	*47.7*	mph
D = v_p / S	*50.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*TCA*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Woodruff Rd to US 276*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6840*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2761*	pc/h/ln
S	*35.5*	mph
D = v_p / S	*77.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6172*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2492*	pc/h/ln
S	*45.6*	mph
D = v_p / S	*54.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*at US 276*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7663*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3094*	pc/h/ln
S	*19.5*	mph
D = v_p / S	*158.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6598*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2664*	pc/h/ln
S	*39.4*	mph
D = v_p / S	*67.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*US 276 EB TO BEGIN*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7213*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2912*	pc/h/ln
S	*28.7*	mph
D = v_p / S	*101.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd to End*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7392*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2984*	pc/h/ln
S	*25.2*	mph
D = v_p / S	*118.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd eb on to wb on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6535*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2638*	pc/h/ln
S	*40.4*	mph
D = v_p / S	*65.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5404*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2182*	pc/h/ln
S	*53.8*	mph
D = v_p / S	*40.5*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-385 to Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7864*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3175*	pc/h/ln
S	*15.0*	mph
D = v_p / S	*212.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*C-D Ramp to I-385 on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4384*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1770*	pc/h/ln
S	*59.5*	mph
D = v_p / S	*29.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*NJ*	Highway/Direction of Travel	*I-85 NB*
Agency or Company	*Florence & Hutcheson*	From/To	*I-85NB CD off to I-85NB CD on*
Date Performed	*3/31/2011*	Jurisdiction	*Greenville, SC*
Analysis Time Period	*AM*	Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3743*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1511*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*25.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*US 276 to Woodruff Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6350*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2564*	pc/h/ln
S	*43.1*	mph
D = v_p / S	*59.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*at 276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5563*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2246*	pc/h/ln
S	*52.4*	mph
D = v_p / S	*42.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*276 EB to 276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6388*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2579*	pc/h/ln
S	*42.6*	mph
D = v_p / S	*60.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*AT 276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6058*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2446*	pc/h/ln
S	*47.0*	mph
D = v_p / S	*52.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*BEGIN TO US 276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6412*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2589*	pc/h/ln
S	*42.2*	mph
D = v_p / S	*61.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*End to Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7927*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3200*	pc/h/ln
S	*13.5*	mph
D = v_p / S	*236.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes
V - Hourly volume
v_p - Flow rate
LOS - Level of service
S - Speed
D - Density
FFS - Free-flow speed
BFFS - Base free-flow speed
DDHV - Directional design hour volume

Factor Location

E_R - Exhibits 11-10, 11-12
E_T - Exhibits 11-10, 11-11, 11-13
f_p - Page 11-18
LOS, S, FFS, v_p - Exhibits 11-2, 11-3
f_{LW} - Exhibit 11-8
f_{LC} - Exhibit 11-9
TRD - Page 11-11

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6789*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2741*	pc/h/ln
S	*36.4*	mph
D = v_p / S	*75.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7579*	veh/h	Peak-Hour Factor, PHF	*0.90*	
AADT		veh/day	%Trucks and Buses, P_T	*18*	
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*	
Peak-Hr Direction Prop, D			General Terrain:	*Level*	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*	

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3060*	pc/h/ln
S	*21.3*	mph
D = v_p / S	*143.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd to I-385*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9099*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3673*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-85SB C-D off - I-85SB C-D on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5200*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2099*	pc/h/ln
S	*55.5*	mph
D = v_p / S	*37.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-85SB C-D on - Woodruff Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7192*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2903*	pc/h/ln
S	*29.2*	mph
D = v_p / S	*99.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Woodruff Rd to US 276*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8610*	veh/h	Peak-Hour Factor, PHF	*0.90*	
AADT		veh/day	%Trucks and Buses, P_T	*18*	
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*	
Peak-Hr Direction Prop, D			General Terrain:	*Level*	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*	

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3476*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8006*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3232*	pc/h/ln
S	*11.6*	mph
D = v_p / S	*277.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*at US 276*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8897*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3592*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8183*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3304*	pc/h/ln
S	*7.3*	mph
D = v_p / S	*454.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*US 276 EB TO BEGIN*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9009*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3637*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*Nj*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd to End*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9468*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3822*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*NJ*
Agency or Company	*Florence & Hutcheson*
Date Performed	*3/31/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 No-Build*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8341*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3367*	pc/h/ln
S	*3.3*	mph
D = v_p / S	*1020.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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CAPACITY ANALYSIS (HCS)
2035 NO-BUILD CONDITIONS - WEAVE AREAS

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85NB C-D
Weaving Location:	Woodruff & I-385
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	840	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	921	636	790	181	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	256	177	219	50	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1115	770	957	219	pc/h

Volume ratio, VR 0.564

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	1727	lc/h
Weaving lane changes, LCW	1809	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	152	lc/h
Total lane changes, LCALL	1961	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.441

Average weaving speed, SW	35.8	mi/h
Average non-weaving speed, SNW	27.7	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	31.7	mi/h
Weaving segment density, D	32.1	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.720	
Weaving segment flow rate, v	3061	pc/h
Weaving segment capacity, cW	3903	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8586	840	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1657	c
		Maximum	Analyzed	
v/c ratio		1.00	0.720	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

I-85/I-385 No-Build

FREEWAY WEAVING WORKSHEET

General Information

Analyst	NJ
Agency/Company	Florence & Hutcheson
Date Performed	4/8/2011
Analysis Time Period	AM

Site Information

Freeway/Dir of Travel	I-85 SB
Weaving Segment Location	US-276
Analysis Year	2035

Project Description *I-85/I-385 No-Build*

Inputs

Weaving configuration	One-Sided	Segment type	Freeway
Weaving number of lanes, N	4	Freeway minimum speed, S_{MIN}	15
Weaving segment length, L_S	420ft	Freeway maximum capacity, C_{IFL}	2300
Freeway free-flow speed, FFS	60 mph	Terrain type	Level

Conversions to pc/h Under Base Conditions

	V (veh/h)	PHF	Truck (%)	RV (%)	E_T	E_R	f_{HV}	f_p	v (pc/h)
V_{FF}	5107	0.90	18	0	1.5	1.2	0.917	1.00	6185
V_{RF}	1491	0.90	18	0	1.5	1.2	0.917	1.00	1806
V_{FR}	1065	0.90	18	0	1.5	1.2	0.917	1.00	1290
V_{RR}	0	0.90	18	0	1.5	1.2	0.917	1.00	6185
V_{NW}	6185							V =	9281
V_W	3096								
VR	0.334								

Configuration Characteristics

Minimum maneuver lanes, N_{WL}	2 lc	Minimum weaving lane changes, LC_{MIN}	lc/h
Interchange density, ID	0.00 int/mi	Weaving lane changes, LC_W	lc/h
Minimum RF lane changes, LC_{RF}	0 lc/pc	Non-weaving lane changes, LC_{NW}	lc/h
Minimum FR lane changes, LC_{FR}	0 lc/pc	Total lane changes, LC_{ALL}	lc/h
Minimum RR lane changes, LC_{RR}	lc/pc	Non-weaving vehicle index, I_{NW}	

Weaving Segment Speed, Density, Level of Service, and Capacity

Weaving segment flow rate, v	9281 pc/h	Weaving intensity factor, W	
Weaving segment capacity, c_w	6601 veh/h	Weaving segment speed, S	mph
Weaving segment v/c ratio	1.290	Average weaving speed, S_W	mph
Weaving segment density, D	pc/mi/ln	Average non-weaving speed, S_{NW}	mph
Level of Service, LOS	F	Maximum weaving length, L_{MAX}	5947 ft

Notes

a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".
b. For volumes that exceed the weaving segment capacity, the level of service is "F".

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I-85/I-385 No-Build

FREEWAY WEAVING WORKSHEET

General Information

Analyst	NJ
Agency/Company	Florence & Hutcheson
Date Performed	4/8/2011
Analysis Time Period	AM

Site Information

Freeway/Dir of Travel	I-85 NB
Weaving Segment Location	US-276
Analysis Year	2035

Project Description *I-85/I-385 No-Build*

Inputs

Weaving configuration	One-Sided	Segment type	Freeway
Weaving number of lanes, N	4	Freeway minimum speed, S_{MIN}	15
Weaving segment length, L_S	416ft	Freeway maximum capacity, C_{IFL}	2300
Freeway free-flow speed, FFS	60 mph	Terrain type	Level

Conversions to pc/h Under Base Conditions

	V (veh/h)	PHF	Truck (%)	RV (%)	E_T	E_R	f_{HV}	f_p	v (pc/h)
V_{FF}	5233	0.90	18	0	1.5	1.2	0.917	1.00	6338
V_{RF}	825	0.90	18	0	1.5	1.2	0.917	1.00	999
V_{FR}	330	0.90	18	0	1.5	1.2	0.917	1.00	400
V_{RR}	0	0.90	18	0	1.5	1.2	0.917	1.00	6338
V_{NW}	6338							V =	7737
V_W	1399								
VR	0.181								

Configuration Characteristics

Minimum maneuver lanes, N_{WL}	2 lc	Minimum weaving lane changes, LC_{MIN}	0 lc/h
Interchange density, ID	0.00 int/mi	Weaving lane changes, LC_W	67 lc/h
Minimum RF lane changes, LC_{RF}	0 lc/pc	Non-weaving lane changes, LC_{NW}	761 lc/h
Minimum FR lane changes, LC_{FR}	0 lc/pc	Total lane changes, LC_{ALL}	828 lc/h
Minimum RR lane changes, LC_{RR}	lc/pc	Non-weaving vehicle index, I_{NW}	0.389

Weaving Segment Speed, Density, Level of Service, and Capacity

Weaving segment flow rate, v	7737 pc/h	Weaving intensity factor, W	0.389
Weaving segment capacity, c_w	7339 veh/h	Weaving segment speed, S	50.1 mph
Weaving segment v/c ratio	0.967	Average weaving speed, S_W	47.4 mph
Weaving segment density, D	38.6 pc/mi/ln	Average non-weaving speed, S_{NW}	50.7 mph
Level of Service, LOS	E	Maximum weaving length, L_{MAX}	4341 ft

Notes

a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".
b. For volumes that exceed the weaving segment capacity, the level of service is "F".

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HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385SB
Weaving Location:	Roper Mtn & I-85
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1780	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1977	1053	2290	306	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	549	293	636	85	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2394	1275	2773	371	pc/h
Volume ratio, VR		0.594			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.687	
Weaving segment flow rate, v	6813	pc/h
Weaving segment capacity, cW	3706	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8948	1780	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1702	c
		Maximum	Analyzed	
v/c ratio		1.00	1.687	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/8/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385NB
Weaving Location:	I-85 & Roper Mtn
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	2500	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3206	1284	1793	1283	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	891	357	498	356	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3883	1555	2172	1554	pc/h
Volume ratio, VR		0.407			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.553	
Weaving segment flow rate, v	9164	pc/h
Weaving segment capacity, cW	5414	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6756	2500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1924	c
		Maximum	Analyzed	
v/c ratio		1.00	1.553	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385SB
Weaving Location:	I-85 & Woodruff
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	909	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3293	730	1802	87	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	915	203	501	24	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3988	884	2182	105	pc/h
Volume ratio, VR		0.428			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.278	
Weaving segment flow rate, v	7159	pc/h
Weaving segment capacity, cW	5141	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7000	909	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1834	c
		Maximum	Analyzed	
v/c ratio		1.00	1.278	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385NB
Weaving Location:	Woodruff & I-85
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1240	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	4244	1429	1498	335	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1179	397	416	93	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5140	1731	1814	406	pc/h
Volume ratio, VR		0.390			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.477	
Weaving segment flow rate, v	9091	pc/h
Weaving segment capacity, cW	5647	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6569	1240	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1892	c
		Maximum	Analyzed	
v/c ratio		1.00	1.477	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	I-385 & Woodruff
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	556	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1221	801	834	115	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	339	223	232	32	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1479	970	1010	139	pc/h

Volume ratio, VR	0.550	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.092	
Weaving segment flow rate, v	3598	pc/h
Weaving segment capacity, cW	3024	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8420	556	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1648	c
		Maximum	Analyzed	
v/c ratio		1.00	1.092	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	I-385
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	483	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	839	1183	2065	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	233	329	574	0	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1016	1433	2501	0	pc/h
Volume ratio, VR		0.795			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.757	
Weaving segment flow rate, v	4950	pc/h
Weaving segment capacity, cW	2585	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	11470	483	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1409	c
		Maximum	Analyzed	
v/c ratio		1.00	1.757	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	I-385 & Woodruff
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	556	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	880	537	1112	344	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	244	149	309	96	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1066	650	1347	417	pc/h
Volume ratio, VR		0.574			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.070	
Weaving segment flow rate, v	3480	pc/h
Weaving segment capacity, cW	2985	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8702	556	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1627	c
		Maximum	Analyzed	
v/c ratio		1.00	1.070	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85SB C-D
Weaving Location:	I-385
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	483	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	416	1001	1172	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	116	278	326	0	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	504	1212	1419	0	pc/h
Volume ratio, VR		0.839			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.148	
Weaving segment flow rate, v	3135	pc/h
Weaving segment capacity, cW	2505	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	12053	483	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1365	c
		Maximum	Analyzed	
v/c ratio		1.00	1.148	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85NB C-D
Weaving Location:	Woodruff & I-385
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	840	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1596	1047	1140	525	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	443	291	317	146	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1933	1268	1381	636	pc/h

Volume ratio, VR 0.508

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.104	
Weaving segment flow rate, v	5218	pc/h
Weaving segment capacity, cW	4337	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7916	840	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1709	c
		Maximum	Analyzed	
v/c ratio		1.00	1.104	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

I-85/I-385 No-Build

FREEWAY WEAVING WORKSHEET

General Information

Analyst	NJ
Agency/Company	Florence & Hutcheson
Date Performed	4/4/2011
Analysis Time Period	PM

Site Information

Freeway/Dir of Travel	I-85SB
Weaving Segment Location	US-276
Analysis Year	2035

Project Description *I-85/I-385 No-Build*

Inputs

Weaving configuration	One-Sided	Segment type	Freeway
Weaving number of lanes, N	4	Freeway minimum speed, S_{MIN}	15
Weaving segment length, L_S	420ft	Freeway maximum capacity, C_{IFL}	2300
Freeway free-flow speed, FFS	60 mph	Terrain type	Level

Conversions to pc/h Under Base Conditions

	V (veh/h)	PHF	Truck (%)	RV (%)	E_T	E_R	f_{HV}	f_p	v (pc/h)
V_{FF}	7292	0.90	18	0	1.5	1.2	0.917	1.00	8831
V_{RF}	891	0.90	18	0	1.5	1.2	0.917	1.00	1079
V_{FR}	714	0.90	18	0	1.5	1.2	0.917	1.00	865
V_{RR}	0	0.90	18	0	1.5	1.2	0.917	1.00	8831
V_{NW}	8831							V =	10775
V_W	1944								
VR	0.180								

Configuration Characteristics

Minimum maneuver lanes, N_{WL}	2 lc	Minimum weaving lane changes, LC_{MIN}	lc/h
Interchange density, ID	0.00 int/mi	Weaving lane changes, LC_W	lc/h
Minimum RF lane changes, LC_{RF}	0 lc/pc	Non-weaving lane changes, LC_{NW}	lc/h
Minimum FR lane changes, LC_{FR}	0 lc/pc	Total lane changes, LC_{ALL}	lc/h
Minimum RR lane changes, LC_{RR}	lc/pc	Non-weaving vehicle index, I_{NW}	

Weaving Segment Speed, Density, Level of Service, and Capacity

Weaving segment flow rate, v	10775 pc/h	Weaving intensity factor, W	
Weaving segment capacity, c_w	7339 veh/h	Weaving segment speed, S	mph
Weaving segment v/c ratio	1.347	Average weaving speed, S_W	mph
Weaving segment density, D	pc/mi/ln	Average non-weaving speed, S_{NW}	mph
Level of Service, LOS	F	Maximum weaving length, L_{MAX}	4337 ft

Notes

a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".
b. For volumes that exceed the weaving segment capacity, the level of service is "F".

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I-85/I-385 No-Build

FREEWAY WEAVING WORKSHEET

General Information

Analyst	NJ
Agency/Company	Florence & Hutcheson
Date Performed	4/8/2011
Analysis Time Period	PM

Site Information

Freeway/Dir of Travel	I-85 NB
Weaving Segment Location	US-276
Analysis Year	2035

Project Description *I-85/I-385 No-Build*

Inputs

Weaving configuration	One-Sided	Segment type	Freeway
Weaving number of lanes, N	4	Freeway minimum speed, S_{MIN}	15
Weaving segment length, L_S	416ft	Freeway maximum capacity, C_{IFL}	2300
Freeway free-flow speed, FFS	60 mph	Terrain type	Level

Conversions to pc/h Under Base Conditions

	V (veh/h)	PHF	Truck (%)	RV (%)	E_T	E_R	f_{HV}	f_p	v (pc/h)
V_{FF}	4427	0.90	18	0	1.5	1.2	0.917	1.00	5362
V_{RF}	617	0.90	18	0	1.5	1.2	0.917	1.00	747
V_{FR}	506	0.90	18	0	1.5	1.2	0.917	1.00	613
V_{RR}	0	0.90	18	0	1.5	1.2	0.917	1.00	5362
V_{NW}	5362							V =	6722
V_W	1360								
VR	0.202								

Configuration Characteristics

Minimum maneuver lanes, N_{WL}	2 lc	Minimum weaving lane changes, LC_{MIN}	0 lc/h
Interchange density, ID	0.00 int/mi	Weaving lane changes, LC_W	67 lc/h
Minimum RF lane changes, LC_{RF}	0 lc/pc	Non-weaving lane changes, LC_{NW}	560 lc/h
Minimum FR lane changes, LC_{FR}	0 lc/pc	Total lane changes, LC_{ALL}	627 lc/h
Minimum RR lane changes, LC_{RR}	lc/pc	Non-weaving vehicle index, I_{NW}	0.312

Weaving Segment Speed, Density, Level of Service, and Capacity

Weaving segment flow rate, v	6722 pc/h	Weaving intensity factor, W	0.312
Weaving segment capacity, c_w	7277 veh/h	Weaving segment speed, S	51.4 mph
Weaving segment v/c ratio	0.847	Average weaving speed, S_W	49.3 mph
Weaving segment density, D	32.7 pc/mi/ln	Average non-weaving speed, S_{NW}	51.9 mph
Level of Service, LOS	D	Maximum weaving length, L_{MAX}	4560 ft

Notes

a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".
b. For volumes that exceed the weaving segment capacity, the level of service is "F".

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HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385SB
Weaving Location:	Roper Mtn & I-85
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1780	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3938	2242	3318	651	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1094	623	922	181	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4769	2715	4018	788	pc/h
Volume ratio, VR		0.548			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	2.805	
Weaving segment flow rate, v	12290	pc/h
Weaving segment capacity, cW	4019	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8391	1780	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1794	c
		Maximum	Analyzed	
v/c ratio		1.00	2.805	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/8/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385NB
Weaving Location:	I-85 & Roper Mtn
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	2500	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	4634	724	2240	720	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1287	201	622	200	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5612	877	2713	872	pc/h

Volume ratio, VR 0.356

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.496	
Weaving segment flow rate, v	10074	pc/h
Weaving segment capacity, cW	6179	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6196	2500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1967	c
		Maximum	Analyzed	
v/c ratio		1.00	1.496	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385SB
Weaving Location:	I-85 & Woodruff
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	909	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	5865	1145	1487	427	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1629	318	413	119	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	7103	1387	1801	517	pc/h
Volume ratio, VR		0.295			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.389	
Weaving segment flow rate, v	10808	pc/h
Weaving segment capacity, cW	7141	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	5530	909	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1946	c
		Maximum	Analyzed	
v/c ratio		1.00	1.389	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385NB
Weaving Location:	Woodruff & I-85
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1240	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	4966	1393	1619	256	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1379	387	450	71	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6014	1687	1961	310	pc/h
Volume ratio, VR		0.366			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.520	
Weaving segment flow rate, v	9972	pc/h
Weaving segment capacity, cW	6019	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6301	1240	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1913	c
		Maximum	Analyzed	
v/c ratio		1.00	1.520	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

CAPACITY ANALYSIS (HCS)
2035 NO-BUILD CONDITIONS - RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Columbia, SC 29201

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	6/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6789	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	790	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1520	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2760	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6789	790	1520	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1886	219	422	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8222	957	1841	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4875 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9179	6900	Yes
v_3 or v_{av34}	3347 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5522 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9179	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 52.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 2.828	
Space mean speed in ramp influence area,	S_R = 9.1	mph
Space mean speed in outer lanes,	S_0 = 51.1	mph
Space mean speed for all vehicles,	S = 12.0	mph

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035
Project Description	I-85/I-385 No-Build		

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Acceleration Lane Length, L_A		☑ Yes	☑ On
☑ No	☐ Off	Deceleration Lane Length L_D	650	☐ No	☐ Off
L_{up} =	ft	Freeway Volume, V_F	6840	L_{down} =	500 ft
V_u =	veh/h	Ramp Volume, V_R	668	V_D =	1491 veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6840	0.90	Level	18	0	0.917	1.00	8284
Ramp	668	0.90	Level	18	0	0.917	1.00	809
UpStream								
DownStream	1491	0.90	Level	18	0	0.917	1.00	1806

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.516 using Equation (Exhibit 13-7)

V_{12} = 4664 pc/h

V_3 or V_{av34} 3620 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 5584 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	8284	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	7475	Exhibit 13-8	6900	Yes
V_R	809	Exhibit 13-10	2000	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4664	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 46.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.566 (Exhibit 13-12)

S_R = 49.8 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 52.5 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Acceleration Lane Length, L_A	550	☐ Yes	☐ On
☐ No	☑ Off	Deceleration Lane Length L_D		☑ No	☐ Off
L_{up} =	2800 ft	Freeway Volume, V_F	6467	L_{down} =	ft
V_u =	2783 veh/h	Ramp Volume, V_R	443	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6467	0.90	Level	18	0	0.917	1.00	7832
Ramp	443	0.90	Level	18	0	0.917	1.00	537
UpStream	2783	0.90	Level	18	0	0.917	1.00	3371
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1201.77 (Equation 13-6 or 13-7)

P_{FM} = 0.593 using Equation (Exhibit 13-6)

V_{12} = 4644 pc/h

V_3 or V_{av34} 3188 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 5132 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8369	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5669	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 46.0 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.418 (Exibit 13-11)

S_R= 34.5 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 38.5 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	6/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6467	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	443	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1949	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2760	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6467	443	1949	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1796	123	541	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7832	537	2360	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4644 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8369	6900	Yes
v_3 or v_{av34}	3188 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5132 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8369	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 46.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.418	
Space mean speed in ramp influence area,	S_R = 34.5	mph
Space mean speed in outer lanes,	S_0 = 51.1	mph
Space mean speed for all vehicles,	S = 38.5	mph

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Acceleration Lane Length, L_A	900	☐ Yes	☐ On
☐ No	☑ Off	Deceleration Lane Length L_D		☑ No	☐ Off
L_{up} =	5100 ft	Freeway Volume, V_F	5200	L_{down} =	ft
V_u =	3899 veh/h	Ramp Volume, V_R	1992	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	45.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5200	0.90	Level	18	0	0.917	1.00	6298
Ramp	1992	0.90	Level	18	0	0.917	1.00	2413
UpStream	3899	0.90	Level	18	0	0.917	1.00	4722
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 2215.15 (Equation 13-6 or 13-7)

P_{FM} = 0.603 using Equation (Exhibit 13-6)

V_{12} = 3796 pc/h

V_3 or V_{av34} 2502 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8711	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6209	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 47.2 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 2.179 (Exibit 13-11)

S_R= 20.8 mph (Exhibit 13-11)

S_0= 52.3 mph (Exhibit 13-11)

S = 25.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Road
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 1400	L_{down} = 2000 ft
V_u = veh/h	Freeway Volume, V_F: 7927	V_D = 790 veh/h
	Ramp Volume, V_R: 1138	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7927	0.90	Level	18	0	0.917	1.00	9600
Ramp	1138	0.90	Level	18	0	0.917	1.00	1378
UpStream								
DownStream	790	0.90	Level	18	0	0.917	1.00	957

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.457 using Equation (Exhibit 13-7)

V_{12} = 5132 pc/h

V_3 or V_{av34} 4468 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 6900 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9600	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	8222	Exhibit 13-8	6900	Yes
V_R	1378	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5132	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 51.0 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.422 (Exhibit 13-12)

S_R = 52.4 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 54.1 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 900	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 2250 ft
V_u = veh/h	Freeway Volume, V_F: 5200	V_D = 1418 veh/h
	Ramp Volume, V_R: 1992	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5200	0.90	Level	18	0	0.917	1.00	6298
Ramp	1992	0.90	Level	18	0	0.917	1.00	2413
UpStream								
DownStream	1418	0.90	Level	18	0	0.917	1.00	1717

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.603 using Equation (Exhibit 13-6)

V_{12} = 3796 pc/h

V_3 or V_{av34} 2502 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8711	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6209	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 47.2 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 2.179 (Exibit 13-11)

S_R= 20.8 mph (Exhibit 13-11)

S_0= 52.3 mph (Exhibit 13-11)

S = 25.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Acceleration Lane Length, L_A	900	☐ Yes	☐ On
☐ No	☑ Off	Deceleration Lane Length L_D		☑ No	☐ Off
L_{up} =	5100 ft	Freeway Volume, V_F	3949	L_{down} =	ft
V_u =	4910 veh/h	Ramp Volume, V_R	2055	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	45.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3949	0.90	Level	18	0	0.917	1.00	4783
Ramp	2055	0.90	Level	18	0	0.917	1.00	2489
UpStream	4910	0.90	Level	18	0	0.917	1.00	5947
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1907.21 (Equation 13-6 or 13-7)

P_{FM} = 0.603 using Equation (Exhibit 13-6)

V_{12} = 2883 pc/h

V_3 or V_{av34} 1900 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7272	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5372	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 40.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.080 (Exibit 13-11)

S_R= 40.6 mph (Exhibit 13-11)

S_0= 55.0 mph (Exhibit 13-11)

S = 43.5 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Road
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{up} = ft
V_u = veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	1400
Freeway Volume, V_F	9250
Ramp Volume, V_R	2783
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{down} = 2000 ft
V_D = 443 veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	9250	0.90	Level	18	0	0.917	1.00	11203
Ramp	2783	0.90	Level	18	0	0.917	1.00	3371
UpStream								
DownStream	443	0.90	Level	18	0	0.917	1.00	537

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = using Equation (Exhibit 13-6)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)
S_R = mph (Exhibit 13-11)
S_0 = mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = 0.325 using Equation (Exhibit 13-7)
V_{12} = 5915 pc/h
V_3 or V_{av34} 5288 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes, V_{12a} = 8503 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	11203	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	7832	Exhibit 13-8	6900	Yes
V_R	3371	Exhibit 13-10	2100	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5915	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 64.8 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.601 (Exhibit 13-12)
S_R = 49.2 mph (Exhibit 13-12)
S_0 = 59.2 mph (Exhibit 13-12)
S = 51.3 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 900	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 2250 ft
V_u = veh/h	Freeway Volume, V_F: 3949	V_D = 836 veh/h
	Ramp Volume, V_R: 2055	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3949	0.90	Level	18	0	0.917	1.00	4783
Ramp	2055	0.90	Level	18	0	0.917	1.00	2489
UpStream								
DownStream	836	0.90	Level	18	0	0.917	1.00	1012

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.603 using Equation (Exhibit 13-6)

V_{12} = 2883 pc/h

V_3 or V_{av34} 1900 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7272	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5372	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 40.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.080 (Exibit 13-11)

S_R= 40.6 mph (Exhibit 13-11)

S_0= 55.0 mph (Exhibit 13-11)

S = 43.5 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-85 SB C-D to Woodruff
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	881 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1066.99$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/25/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-85 SB C-D to I-85SB
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	1992 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 2412.53$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: F

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-85 SB C-D to Woodruff
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	916 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1109.38$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/25/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-85 SB C-D to I-85SB
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	2055 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 2488.83$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: F

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-385SB to I-85SB/Woodruff
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	1456 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1763.38$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: D

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-385SB to I-85SB/Woodruff
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	949 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1149.34$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-85SB C-D to I-385 SB
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	1172 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1419.42$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-85SB C-D to I-385 SB
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	2065 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 2500.94$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: F

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-385 NB Entrance to I-85SB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	1001 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1212.32$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-385 NB Entrance to I-85SB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	1183 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1432.74$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: D

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB C-D
Junction:	I-385 NB
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3899	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2311	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1001	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3899	2311	1001	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1083	642	278	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4722	2799	1212	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4722 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4722	4500	Yes
$v_{FO} = v_F - v_R$	1923	4500	No
v_R	2799	2100	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4722 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4722	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 31.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.550	
Space mean speed in ramp influence area,	S_R = 47.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 47.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB C-D
Junction:	I-385 NB
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4910	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2006	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1183	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4910	2006	1183	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1364	557	329	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5947	2429	1433	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5947 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5947	4500	Yes
$v_{FO} = v_F - v_R$	3518	4500	No
v_R	2429	2100	Yes
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5947 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5947	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 41.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.517

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.3 mph

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{up} = ft
V_u = veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	600
Freeway Volume, V_F	9099
Ramp Volume, V_R	3899
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{down} = 5100 ft
V_D = 1992 veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	9099	0.90	Level	18	0	0.917	1.00	11020
Ramp	3899	0.90	Level	18	0	0.917	1.00	4722
UpStream								
DownStream	1992	0.90	Level	18	0	0.917	1.00	2413

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = using Equation (Exhibit 13-6)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)
S_R = mph (Exhibit 13-11)
S_0 = mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = 0.267 using Equation (Exhibit 13-7)
V_{12} = 6405 pc/h
V_3 or V_{av34} 4615 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes, V_{12a} = 8320 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	11020	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	6298	Exhibit 13-8	6900	No
V_R	4722	Exhibit 13-10	2100	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	6405	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 70.4 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.723 (Exhibit 13-12)
S_R = 47.0 mph (Exhibit 13-12)
S_0 = 59.2 mph (Exhibit 13-12)
S = 49.5 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 600	L_{down} = 5100 ft
V_u = veh/h	Freeway Volume, V_F: 8859	V_D = 2055 veh/h
	Ramp Volume, V_R: 4910	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8859	0.90	Level	18	0	0.917	1.00	10729
Ramp	4910	0.90	Level	18	0	0.917	1.00	5947
UpStream								
DownStream	2055	0.90	Level	18	0	0.917	1.00	2489

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.218 using Equation (Exhibit 13-7)

V_{12} = 6990 pc/h

V_3 or V_{av34} 3739 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 8029 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	10729	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	4782	Exhibit 13-8	6900	No
V_R	5947	Exhibit 13-10	2100	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	6990	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 67.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.833 (Exhibit 13-12)

S_R = 45.0 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 47.9 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Woodruff Rd.
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{up} = 2250 ft
V_u = 1992 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	1500
Deceleration Lane Length L_D	
Freeway Volume, V_F	7192
Ramp Volume, V_R	1418
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7192	0.90	Level	18	0	0.917	1.00	8710
Ramp	1418	0.90	Level	18	0	0.917	1.00	1717
UpStream	1992	0.90	Level	18	0	0.917	1.00	2413
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = 0.619 using Equation (Exhibit 13-6)
V_{12} = 5396 pc/h
V_3 or V_{av34} 3314 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 6010 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10427	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	7727	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 55.6 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 9.034 (Exibit 13-11)
S_R= -102.6 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Woodruff Rd.
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Acceleration Lane Length, L_A	1500	☐ Yes	☐ On
☐ No	☐ Off	Deceleration Lane Length L_D		☑ No	☐ Off
L_{up} =	2250 ft	Freeway Volume, V_F	6004	L_{down} =	ft
V_u =	2055 veh/h	Ramp Volume, V_R	836	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	45.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6004	0.90	Level	18	0	0.917	1.00	7272
Ramp	836	0.90	Level	18	0	0.917	1.00	1012
UpStream	2055	0.90	Level	18	0	0.917	1.00	2489
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 4505 pc/h

V_3 or V_{av34} 2767 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 4572 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8284	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5584	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 39.2 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.224 (Exibit 13-11)

S_R= 38.0 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 41.4 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 450 ft
V_u = 506 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	550
Deceleration Lane Length L_D	
Freeway Volume, V_F	5044
Ramp Volume, V_R	886
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	30.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	5044	0.90	Level	18	0	0.917	1.00	6109
Ramp	886	0.90	Level	18	0	0.917	1.00	1073
UpStream	506	0.90	Level	18	0	0.917	1.00	613
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 947.75 (Equation 13-6 or 13-7)
P_{FM} = 0.561 using Equation (Exhibit 13-6)
V_{12} = 3430 pc/h
V_3 or V_{av34} 2679 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No
If Yes,V_{12a} = 3490 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7182	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4563	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 37.1 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.662 (Exibit 13-11)
S_R= 48.1 mph (Exhibit 13-11)
S_0= 51.6 mph (Exhibit 13-11)
S = 49.3 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 450 ft
V_u = 825 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	550
Deceleration Lane Length L_D	
Freeway Volume, V_F	5563
Ramp Volume, V_R	787
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	30.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5563	0.90	Level	18	0	0.917	1.00	6737
Ramp	787	0.90	Level	18	0	0.917	1.00	953
UpStream	825	0.90	Level	18	0	0.917	1.00	999
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1056.46 (Equation 13-6 or 13-7)
P_{FM} = 0.555 using Equation (Exhibit 13-6)
V_{12} = 3736 pc/h
V_3 or V_{av34} 3001 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 4037 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7690	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4990	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 40.5 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.861 (Exibit 13-11)
S_R= 44.5 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 46.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Acceleration Lane Length, L_A		☐ Yes	☐ On
☐ No	☐ Off	Deceleration Lane Length L_D	420	☑ No	☐ Off
L_{up} =	420 ft	Freeway Volume, V_F	5550	L_{down} =	ft
V_u =	617 veh/h	Ramp Volume, V_R	506	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	25.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5550	0.90	Level	18	0	0.917	1.00	6722
Ramp	506	0.90	Level	18	0	0.917	1.00	613
UpStream	617	0.90	Level	18	0	0.917	1.00	747
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 4172.76 (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 6722 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6722	Exhibit 13-8	6900	No
$V_{FO} = V_F - V_R$	6109	Exhibit 13-8	6900	No
V_R	613	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	6722	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 58.3 (pc/mi/ln)

LOS = E (Exhibit 13-2)

Speed Determination

D_s = 0.613 (Exhibit 13-12)

S_R = 49.0 mph (Exhibit 13-12)

S_0 = 65.8 mph (Exhibit 13-12)

S = 49.0 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Acceleration Lane Length, L_A: 1500	☑ No ☐ Off
L_{up} = 2800 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 1381 veh/h	Freeway Volume, V_F: 8341	V_D = veh/h
	Ramp Volume, V_R: 1127	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8341	0.90	Level	18	0	0.917	1.00	10102
Ramp	1127	0.90	Level	18	0	0.917	1.00	1365
UpStream	1381	0.90	Level	18	0	0.917	1.00	1673
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 6258 pc/h

V_3 or V_{av34} = 3844 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 7402 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	11467	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8767	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 63.8 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 25.220 (Exibit 13-11)

S_R = -394.0 mph (Exhibit 13-11)

S_0 = 51.1 mph (Exhibit 13-11)

S = 374.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Acceleration Lane Length, L_A		☑ Yes	☑ On
☑ No	☐ Off	Deceleration Lane Length L_D	420	☐ No	☐ Off
L_{up} =	ft	Freeway Volume, V_F	5550	L_{down} =	450 ft
V_u =	veh/h	Ramp Volume, V_R	506	V_D =	886 veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	25.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5550	0.90	Level	18	0	0.917	1.00	6722
Ramp	506	0.90	Level	18	0	0.917	1.00	613
UpStream								
DownStream	886	0.90	Level	18	0	0.917	1.00	1073

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.564 using Equation (Exhibit 13-7)

V_{12} = 4057 pc/h

V_3 or V_{av34} 2665 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6722	Exhibit 13-8	6900	No
$V_{FO} = V_F - V_R$	6109	Exhibit 13-8	6900	No
V_R	613	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4057	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 35.4 (pc/mi/ln)

LOS = E (Exhibit 13-2)

Speed Determination

D_s = 0.613 (Exhibit 13-12)

S_R = 49.0 mph (Exhibit 13-12)

S_0 = 59.3 mph (Exhibit 13-12)

S = 52.6 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Acceleration Lane Length, L_A		☐ Yes	☐ On
☐ No	☐ Off	Deceleration Lane Length L_D	420	☑ No	☐ Off
L_{up} =	420 ft	Freeway Volume, V_F	6388	L_{down} =	ft
V_u =	330 veh/h	Ramp Volume, V_R	825	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	25.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6388	0.90	Level	18	0	0.917	1.00	7737
Ramp	825	0.90	Level	18	0	0.917	1.00	999
UpStream	330	0.90	Level	18	0	0.917	1.00	400
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 2311.78 (Equation 13-12 or 13-13)

P_{FD} = 0.990 using Equation (Exhibit 13-7)

V_{12} = 7673 pc/h

V_3 or V_{av34} 64 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7737	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	6738	Exhibit 13-8	6900	No
V_R	999	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	7673	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 66.5 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.648 (Exhibit 13-12)

S_R = 48.3 mph (Exhibit 13-12)

S_0 = 65.8 mph (Exhibit 13-12)

S = 48.4 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{up} = 2800 ft
V_u = 1131 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	1500
Deceleration Lane Length L_D	
Freeway Volume, V_F	6535
Ramp Volume, V_R	857
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6535	0.90	Level	18	0	0.917	1.00	7915
Ramp	857	0.90	Level	18	0	0.917	1.00	1038
UpStream	1131	0.90	Level	18	0	0.917	1.00	1370
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = 0.619 using Equation (Exhibit 13-6)
V_{12} = 4903 pc/h
V_3 or V_{av34} 3012 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 5215 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8953	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6253	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 44.4 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 2.212 (Exibit 13-11)
S_R= 20.2 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 24.7 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 420	L_{down} = 450 ft
V_u = veh/h	Freeway Volume, V_F: 6388	V_D = 787 veh/h
	Ramp Volume, V_R: 825	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6388	0.90	Level	18	0	0.917	1.00	7737
Ramp	825	0.90	Level	18	0	0.917	1.00	999
UpStream								
DownStream	787	0.90	Level	18	0	0.917	1.00	953

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.521 using Equation (Exhibit 13-7)

V_{12} = 4507 pc/h

V_3 or V_{av34} 3230 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 5037 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7737	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	6738	Exhibit 13-8	6900	No
V_R	999	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4507	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 43.8 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.648 (Exhibit 13-12)

S_R = 48.3 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 51.6 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 500 ft
V_u = 1676 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	420
Deceleration Lane Length L_D	
Freeway Volume, V_F	4933
Ramp Volume, V_R	617
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4933	0.90	Level	18	0	0.917	1.00	5974
Ramp	617	0.90	Level	18	0	0.917	1.00	747
UpStream	1676	0.90	Level	18	0	0.917	1.00	2030
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 529.77 (Equation 13-6 or 13-7)
P_{FM} = 0.587 using Equation (Exhibit 13-6)
V_{12} = 3508 pc/h
V_3 or V_{av34} 2466 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6721	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4255	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 35.7 (pc/mi/ln)
LOS = E (Exhibit 13-2)

Speed Determination

M_S = 0.575 (Exibit 13-11)
S_R= 49.7 mph (Exhibit 13-11)
S_0= 52.5 mph (Exhibit 13-11)
S = 50.7 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 1300 ft
V_u = 2774 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	650
Deceleration Lane Length L_D	
Freeway Volume, V_F	6960
Ramp Volume, V_R	1381
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	30.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6960	0.90	Level	18	0	0.917	1.00	8429
Ramp	1381	0.90	Level	18	0	0.917	1.00	1673
UpStream	2774	0.90	Level	18	0	0.917	1.00	3360
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1617.03 (Equation 13-6 or 13-7)
P_{FM} = 0.576 using Equation (Exhibit 13-6)
V_{12} = 4851 pc/h
V_3 or V_{av34} 3578 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 5729 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10102	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	7402	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 58.4 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 6.675 (Exibit 13-11)
S_R= -60.2 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Acceleration Lane Length, L_A	650	☐ Yes	☐ On
☐ No	☑ Off	Deceleration Lane Length L_D		☑ No	☐ Off
L_{up} =	4500 ft	Freeway Volume, V_F	3259	L_{down} =	ft
V_u =	2671 veh/h	Ramp Volume, V_R	2087	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	45.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3259	0.90	Level	18	0	0.917	1.00	3947
Ramp	2087	0.90	Level	18	0	0.917	1.00	2528
UpStream	2671	0.90	Level	18	0	0.917	1.00	3235
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1625.65 (Equation 13-6 or 13-7)

P_{FM} = 0.596 using Equation (Exhibit 13-6)

V_{12} = 2351 pc/h

V_3 or V_{av34} 1596 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6475	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4879	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 38.3 (pc/mi/ln)

LOS = E (Exhibit 13-2)

Speed Determination

M_S = 0.775 (Exibit 13-11)

S_R= 46.0 mph (Exhibit 13-11)

S_0= 56.1 mph (Exhibit 13-11)

S = 48.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☐ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 420	☐ No ☑ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 420 ft
V_u = veh/h	Freeway Volume, V_F: 4933	V_D = 506 veh/h
	Ramp Volume, V_R: 617	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4933	0.90	Level	18	0	0.917	1.00	5974
Ramp	617	0.90	Level	18	0	0.917	1.00	747
UpStream								
DownStream	506	0.90	Level	18	0	0.917	1.00	613

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 3966.61 (Equation 13-6 or 13-7)

P_{FM} = 0.932 using Equation (Exhibit 13-6)

V_{12} = 5569 pc/h

V_3 or V_{av34} 405 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6721	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6316	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 51.8 (pc/mi/ln)

LOS = E (Exhibit 13-2)

Speed Determination

M_S = 2.458 (Exibit 13-11)

S_R= 15.8 mph (Exhibit 13-11)

S_0= 60.0 mph (Exhibit 13-11)

S = 16.5 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 650	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 2900 ft
V_u = veh/h	Freeway Volume, V_F: 6960	V_D = 1127 veh/h
	Ramp Volume, V_R: 1381	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6960	0.90	Level	18	0	0.917	1.00	8429
Ramp	1381	0.90	Level	18	0	0.917	1.00	1673
UpStream								
DownStream	1127	0.90	Level	18	0	0.917	1.00	1365

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 using Equation (Exhibit 13-6)

V_{12} = 5021 pc/h

V_3 or V_{av34} 3408 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 5729 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10102	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	7402	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 58.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 6.675 (Exibit 13-11)

S_R= -60.2 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 650	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 1060 ft
V_u = veh/h	Freeway Volume, V_F: 3259	V_D = 4388 veh/h
	Ramp Volume, V_R: 2087	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3259	0.90	Level	18	0	0.917	1.00	3947
Ramp	2087	0.90	Level	18	0	0.917	1.00	2528
UpStream								
DownStream	4388	0.90	Level	18	0	0.917	1.00	5314

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 using Equation (Exhibit 13-6)

V_{12} = 2351 pc/h

V_3 or V_{av34} 1596 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6475	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4879	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 38.3 (pc/mi/ln)

LOS = E (Exhibit 13-2)

Speed Determination

M_S = 0.775 (Exibit 13-11)

S_R= 46.0 mph (Exhibit 13-11)

S_0= 56.1 mph (Exhibit 13-11)

S = 48.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 500 ft
V_u = 354 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	420
Deceleration Lane Length L_D	
Freeway Volume, V_F	6058
Ramp Volume, V_R	330
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6058	0.90	Level	18	0	0.917	1.00	7337
Ramp	330	0.90	Level	18	0	0.917	1.00	400
UpStream	354	0.90	Level	18	0	0.917	1.00	429
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 747.20 (Equation 13-6 or 13-7)
P_{FM} = 0.574 using Equation (Exhibit 13-6)
V_{12} = 4208 pc/h
V_3 or V_{av34} 3129 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 4637 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7737	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5037	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 41.9 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.901 (Exibit 13-11)
S_R= 43.8 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 46.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Acceleration Lane Length, L_A	650	☐ Yes	☐ On
☐ No	☑ Off	Deceleration Lane Length L_D		☑ No	☐ Off
L_{up} =	1300 ft	Freeway Volume, V_F	5404	L_{down} =	ft
V_u =	2460 veh/h	Ramp Volume, V_R	1131	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5404	0.90	Level	18	0	0.917	1.00	6545
Ramp	1131	0.90	Level	18	0	0.917	1.00	1370
UpStream	2460	0.90	Level	18	0	0.917	1.00	2979
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1149.01 (Equation 13-6 or 13-7)

P_{FM} = 0.596 using Equation (Exhibit 13-6)

V_{12} = 3899 pc/h

V_3 or V_{av34} 2646 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7915	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5269	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 41.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.039 (Exibit 13-11)

S_R= 41.3 mph (Exhibit 13-11)

S_0= 51.4 mph (Exhibit 13-11)

S = 44.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Acceleration Lane Length, L_A	650	☐ Yes	☐ On
☐ No	☑ Off	Deceleration Lane Length L_D		☑ No	☐ Off
L_{up} =	4500 ft	Freeway Volume, V_F	3743	L_{down} =	ft
V_u =	2607 veh/h	Ramp Volume, V_R	641	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	45.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3743	0.90	Level	18	0	0.917	1.00	4533
Ramp	641	0.90	Level	18	0	0.917	1.00	776
UpStream	2607	0.90	Level	18	0	0.917	1.00	3157
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1376.13 (Equation 13-6 or 13-7)

P_{FM} = 0.596 using Equation (Exhibit 13-6)

V_{12} = 2700 pc/h

V_3 or V_{av34} 1833 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5309	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3476	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 28.2 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.389 (Exibit 13-11)

S_R= 53.0 mph (Exhibit 13-11)

S_0= 55.2 mph (Exhibit 13-11)

S = 53.7 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☐ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 420	☐ No ☑ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 420 ft
V_u = veh/h	Freeway Volume, V_F: 6058	V_D = 825 veh/h
	Ramp Volume, V_R: 330	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6058	0.90	Level	18	0	0.917	1.00	7337
Ramp	330	0.90	Level	18	0	0.917	1.00	400
UpStream								
DownStream	825	0.90	Level	18	0	0.917	1.00	999

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 6464.35 (Equation 13-6 or 13-7)

P_{FM} = 1.000 using Equation (Exhibit 13-6)

V_{12} = 7337 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7737	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	7737	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 63.0 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 9.237 (Exibit 13-11)

S_R = -106.3 mph (Exhibit 13-11)

S_0 = 60.0 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 650	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 2900 ft
V_u = veh/h	Freeway Volume, V_F: 5404	V_D = 857 veh/h
	Ramp Volume, V_R: 1131	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	5404	0.90	Level	18	0	0.917	1.00	6545
Ramp	1131	0.90	Level	18	0	0.917	1.00	1370
UpStream								
DownStream	857	0.90	Level	18	0	0.917	1.00	1038

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 using Equation (Exhibit 13-6)

V_{12} = 3899 pc/h

V_3 or V_{av34} 2646 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7915	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5269	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 41.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.039 (Exibit 13-11)

S_R= 41.3 mph (Exhibit 13-11)

S_0= 51.4 mph (Exhibit 13-11)

S = 44.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 650	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 1060 ft
V_u = veh/h	Freeway Volume, V_F: 3743	V_D = 3480 veh/h
	Ramp Volume, V_R: 641	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3743	0.90	Level	18	0	0.917	1.00	4533
Ramp	641	0.90	Level	18	0	0.917	1.00	776
UpStream								
DownStream	3480	0.90	Level	18	0	0.917	1.00	4215

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 using Equation (Exhibit 13-6)

V_{12} = 2700 pc/h

V_3 or V_{av34} 1833 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5309	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3476	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 28.2 (pc/mi/ln)

LOS = D (Exhibit 13-2)

Speed Determination

M_S = 0.389 (Exibit 13-11)

S_R= 53.0 mph (Exhibit 13-11)

S_0= 55.2 mph (Exhibit 13-11)

S = 53.7 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/25/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	I-85NB C-D to I-85NB
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	2087 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 2527.59$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: F

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/25/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	I-85NB C-D to I-85NB
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	641 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 776.32$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: B

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	I-385 SB from I-85 NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4308	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1572	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1665	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4308	1572	1665	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1197	437	463	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5217	1878	1989	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5217 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5217	4500	Yes
$v_{FO} = v_F - v_R$	3339	4500	No
v_R	1878	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5217 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5217	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 35.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.467	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 48.9	mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	I-85NB C-D to I-385
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	1572 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1903.87$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: D

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Pre-Diverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4308	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1197	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1739	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1739	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD PostDiverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2736	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	760	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1657	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1657	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	30.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	I-385 SB from I-85 NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4308	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1572	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	649	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4308	1572	649	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1197	437	180	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5217	1878	775	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5217 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5217	4500	Yes
$v_{FO} = v_F - v_R$	3339	4500	No
v_R	1878	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5217 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5217	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 35.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.467

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	I-385 SB from I-85 NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2528	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	817	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	971	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2528	817	971	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	702	227	270	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3062	976	1160	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3062 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3062	4500	No
$v_{FO} = v_F - v_R$	2086	4500	No
v_R	976	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3062 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3062	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.386

Space mean speed in ramp influence area, S_R = 50.0 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.0 mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	I-85NB C-D to I-385
Jurisdiction	Greenville, SC
Analysis Year	2015 No-Build

Flow Inputs

Volume, V	949 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1149.34$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Pre-Diverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2596	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	721	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1048	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1048	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	19.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD PostDiverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	1711	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	475	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1036	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1036	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	18.8	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	I-385 SB from I-85 NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2528	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	817	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1070	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2528	817	1070	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	702	227	297	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3062	976	1278	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3062 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3062	4500	No
$v_{FO} = v_F - v_R$	2086	4500	No
v_R	976	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3062 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3062	4400	No

Level of Service Determination (if not F)

Density, $D_D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.386

Space mean speed in ramp influence area, S_R = 50.0 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.0 mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff NB - I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	1665 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 2016.50$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: E

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Pre-Merge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2643	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	734	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1600	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1600	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	29.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Post-Merge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	4308	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1197	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1739	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1739	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Woodruff NB to I-85NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2643	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1665	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1548	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2643	1665	1548	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	734	463	430	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3201	2017	1875	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3201 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5218	4500	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3201 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5218	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 40.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.978	
Space mean speed in ramp influence area,	S_R = 42.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 42.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Woodruff NB to I-85NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2643	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1665	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1572	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2643	1665	1572	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	734	463	437	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3201	2017	1904	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3201 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5218	4500	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3201 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5218	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 40.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.978	
Space mean speed in ramp influence area,	S_R = 42.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 42.3	mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff NB - I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	971 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1175.99$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Pre-Merge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	1557	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	433	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	943	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	943	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	17.1	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/26/2012
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Post-Merge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Flow Inputs and Adjustments

Volume, V	2528	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	702	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1021	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1021	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Woodruff NB to I-85NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1557	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	971	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	255	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1557	971	255	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	433	270	71	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1886	1176	309	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1886 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3062	4500	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1886 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3062	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.341	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Woodruff NB to I-85NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1557	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	971	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	817	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1557	971	817	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	433	270	227	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1886	1176	989	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1886 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3062	4500	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1886 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3062	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.341	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.6	mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff Loop to I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	1548 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1874.80$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: D

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff Loop to I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	255 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 308.83$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: A

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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501 Huger Street
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Phone: (803)254-5800 Fax: (803)929-0334
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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2671	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1576	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1548	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2671	1576	1548	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	742	438	430	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3235	1882	1849	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3235 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3235	4500	No
$v_{FO} = v_F - v_R$	1353	4500	No
v_R	1882	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3235 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3235	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 18.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.467

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.9 mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff Loop to I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	1576 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1908.71$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: D

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 No-Build

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2607	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1305	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	255	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2607	1305	255	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	724	363	71	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3157	1559	305	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3157 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3157	4500	No
$v_{FO} = v_F - v_R$	1598	4500	No
v_R	1559	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3157 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3157	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 17.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.438

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.3 mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff Loop to I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 No-Build

Flow Inputs

Volume, V	1305 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1580.50$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: D

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48A)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 700	L_{down} = 500 ft
V_u = veh/h	Freeway Volume, V_F: 6609	V_D = 617 veh/h
	Ramp Volume, V_R: 1676	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6609	0.90	Level	18	0	0.917	1.00	8004
Ramp	1676	0.90	Level	18	0	0.917	1.00	2030
UpStream								
DownStream	617	0.90	Level	18	0	0.917	1.00	747

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.467 using Equation (Exhibit 13-7)

V_{12} = 4817 pc/h

V_3 or V_{av34} 3187 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 5304 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	8004	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	5974	Exhibit 13-8	6900	No
V_R	2030	Exhibit 13-10	2000	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4817	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 43.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.676 (Exhibit 13-12)

S_R = 47.8 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 51.1 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Road
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 625	L_{down} = 1325 ft
V_u = veh/h	Freeway Volume, V_F: 9734	V_D = 1381 veh/h
	Ramp Volume, V_R: 2774	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 35.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	9734	0.90	Level	18	0	0.917	1.00	11789
Ramp	2774	0.90	Level	18	0	0.917	1.00	3360
UpStream								
DownStream	1381	0.90	Level	18	0	0.917	1.00	1673

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.311 using Equation (Exhibit 13-7)

V_{12} = 5979 pc/h

V_3 or V_{av34} 5810 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 9089 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	11789	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	8429	Exhibit 13-8	6900	Yes
V_R	3360	Exhibit 13-10	2000	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5979	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 76.8 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.730 (Exhibit 13-12)

S_R = 46.9 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 49.2 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	I385
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Acceleration Lane Length, L_A: 1500	☑ No ☐ Off
L_{up} = 1060 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 2087 veh/h	Freeway Volume, V_F: 5346	V_D = veh/h
	Ramp Volume, V_R: 4388	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 55.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	5346	0.90	Level	18	0	0.917	1.00	6475
Ramp	4388	0.90	Level	18	0	0.917	1.00	5314
UpStream	2087	0.90	Level	18	0	0.917	1.00	2528
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 4011 pc/h

V_3 or V_{av34} 2464 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	11789	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	9325	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 66.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 43.894 (Exibit 13-11)

S_R= -730.1 mph (Exhibit 13-11)

S_0= 52.5 mph (Exhibit 13-11)

S = 345.0 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp			Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N	3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A		☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D	350	L_{down} = 4500 ft
V_u = veh/h	Freeway Volume, V_F	5930	V_D = 2087 veh/h
	Ramp Volume, V_R	2671	
	Freeway Free-Flow Speed, S_{FF}	60.0	
	Ramp Free-Flow Speed, S_{FR}	45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5930	0.90	Level	18	0	0.917	1.00	7182
Ramp	2671	0.90	Level	18	0	0.917	1.00	3235
UpStream								
DownStream	2087	0.90	Level	18	0	0.917	1.00	2528

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.432 using Equation (Exhibit 13-7)

V_{12} = 4939 pc/h

V_3 or V_{av34} 2243 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7182	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	3947	Exhibit 13-8	6900	No
V_R	3235	Exhibit 13-10	2100	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4939	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 43.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.589 (Exhibit 13-12)

S_R = 49.4 mph (Exhibit 13-12)

S_0 = 61.0 mph (Exhibit 13-12)

S = 52.5 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48A)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 700	L_{down} = 500 ft
V_u = veh/h	Freeway Volume, V_F: 6412	V_D = 330 veh/h
	Ramp Volume, V_R: 354	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6412	0.90	Level	18	0	0.917	1.00	7766
Ramp	354	0.90	Level	18	0	0.917	1.00	429
UpStream								
DownStream	330	0.90	Level	18	0	0.917	1.00	400

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.546 using Equation (Exhibit 13-7)

V_{12} = 4436 pc/h

V_3 or V_{av34} 3330 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 5066 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7766	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	7337	Exhibit 13-8	6900	Yes
V_R	429	Exhibit 13-10	2000	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4436	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 41.5 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.532 (Exhibit 13-12)

S_R = 50.4 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 53.2 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Road
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Acceleration Lane Length, L_A		☑ Yes	☑ On
☑ No	☐ Off	Deceleration Lane Length L_D	625	☐ No	☐ Off
L_{up} =	ft	Freeway Volume, V_F	7864	L_{down} =	1325 ft
V_u =	veh/h	Ramp Volume, V_R	2460	V_D =	1131 veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	35.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7864	0.90	Level	18	0	0.917	1.00	9524
Ramp	2460	0.90	Level	18	0	0.917	1.00	2979
UpStream								
DownStream	1131	0.90	Level	18	0	0.917	1.00	1370

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.385 using Equation (Exhibit 13-7)

V_{12} = 5498 pc/h

V_3 or V_{av34} 4026 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 6824 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9524	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	6545	Exhibit 13-8	6900	No
V_R	2979	Exhibit 13-10	2000	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5498	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 57.3 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.696 (Exhibit 13-12)

S_R = 47.5 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 50.3 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	I385
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Acceleration Lane Length, L_A: 1500	☑ No ☐ Off
L_{up} = 1060 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 641 veh/h	Freeway Volume, V_F: 4384	V_D = veh/h
	Ramp Volume, V_R: 3480	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 55.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	4384	0.90	Level	18	0	0.917	1.00	5310
Ramp	3480	0.90	Level	18	0	0.917	1.00	4215
UpStream	641	0.90	Level	18	0	0.917	1.00	776
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 3290 pc/h

V_3 or V_{av34} 2020 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9525	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	7505	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 52.7 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 7.243 (Exibit 13-11)

S_R= -70.4 mph (Exhibit 13-11)

S_0= 54.5 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{up} = ft
V_u = veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	350
Freeway Volume, V_F	6350
Ramp Volume, V_R	2607
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{down} = 4500 ft
V_D = 641 veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6350	0.90	Level	18	0	0.917	1.00	7691
Ramp	2607	0.90	Level	15	0	0.930	1.00	3114
UpStream								
DownStream	641	0.90	Level	15	0	0.930	1.00	766

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = using Equation (Exhibit 13-6)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)
S_R = mph (Exhibit 13-11)
S_0 = mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = 0.424 using Equation (Exhibit 13-7)
V_{12} = 5057 pc/h
V_3 or V_{av34} 2634 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7691	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	4577	Exhibit 13-8	6900	No
V_R	3114	Exhibit 13-10	2100	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5057	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 44.6 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.578 (Exhibit 13-12)
S_R = 49.6 mph (Exhibit 13-12)
S_0 = 59.4 mph (Exhibit 13-12)
S = 52.6 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Acceleration Lane Length, L_A: 500	☑ No ☐ Off
L_{up} = 470 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 714 veh/h	Freeway Volume, V_F: 8183	V_D = veh/h
	Ramp Volume, V_R: 826	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	8183	0.90	Level	18	0	0.917	1.00	9911
Ramp	826	0.90	Level	18	0	0.917	1.00	1000
UpStream	714	0.90	Level	18	0	0.917	1.00	865
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1461.95 (Equation 13-6 or 13-7)

P_{FM} = 0.529 using Equation (Exhibit 13-6)

V_{12} = 5241 pc/h

V_3 or V_{av34} 4670 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 7211 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10911	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8211	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 65.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 14.653 (Exibit 13-11)

S_R= -203.7 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 868.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 470 ft
V_u = 1065 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	500
Deceleration Lane Length L_D	
Freeway Volume, V_F	6598
Ramp Volume, V_R	615
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6598	0.90	Level	18	0	0.917	1.00	7991
Ramp	615	0.90	Level	18	0	0.917	1.00	745
UpStream	1065	0.90	Level	18	0	0.917	1.00	1290
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 996.50 (Equation 13-6 or 13-7)
P_{FM} = 0.558 using Equation (Exhibit 13-6)
V_{12} = 4460 pc/h
V_3 or V_{av34} 3531 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 5291 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8736	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6036	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 49.1 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.927 (Exibit 13-11)
S_R= 25.3 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 30.0 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT 48A)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Acceleration Lane Length, L_A:	☑ No ☐ Off
L_{up} = 420 ft	Deceleration Lane Length L_D: 420	L_{down} = ft
V_u = 891 veh/h	Freeway Volume, V_F: 8897	V_D = veh/h
	Ramp Volume, V_R: 714	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	8897	0.90	Level	18	0	0.917	1.00	10775
Ramp	714	0.90	Level	18	0	0.917	1.00	865
UpStream	891	0.90	Level	18	0	0.917	1.00	1079
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 4263.39 (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 10775 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	10775	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	9910	Exhibit 13-8	6900	Yes
V_R	865	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	10775	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 93.1 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.636 (Exhibit 13-12)

S_R = 48.6 mph (Exhibit 13-12)

S_0 = 65.8 mph (Exhibit 13-12)

S = 48.6 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT 48A)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 420	L_{down} = 468 ft
V_u = veh/h	Freeway Volume, V_F: 8897	V_D = 826 veh/h
	Ramp Volume, V_R: 714	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8897	0.90	Level	18	0	0.917	1.00	10775
Ramp	714	0.90	Level	18	0	0.917	1.00	865
UpStream								
DownStream	826	0.90	Level	18	0	0.917	1.00	1000

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.451 using Equation (Exhibit 13-7)

V_{12} = 5333 pc/h

V_3 or V_{av34} 5442 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 8075 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	10775	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	9910	Exhibit 13-8	6900	Yes
V_R	865	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5333	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 69.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.636 (Exhibit 13-12)

S_R = 48.6 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 50.8 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT 48A)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Acceleration Lane Length, L_A:	☑ No ☐ Off
L_{up} = 420 ft	Deceleration Lane Length L_D: 420	L_{down} = ft
V_u = 1491 veh/h	Freeway Volume, V_F: 7663	V_D = veh/h
	Ramp Volume, V_R: 1065	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7663	0.90	Level	18	0	0.917	1.00	9281
Ramp	1065	0.90	Level	18	0	0.917	1.00	1290
UpStream	1491	0.90	Level	18	0	0.917	1.00	1806
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 9687.65 (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 9281 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9281	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	7991	Exhibit 13-8	6900	Yes
V_R	1290	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	9281	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 80.3 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.674 (Exhibit 13-12)

S_R = 47.9 mph (Exhibit 13-12)

S_0 = 65.8 mph (Exhibit 13-12)

S = 47.9 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT 48A)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 420	L_{down} = 468 ft
V_u = veh/h	Freeway Volume, V_F: 7663	V_D = 615 veh/h
	Ramp Volume, V_R: 1065	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7663	0.90	Level	18	0	0.917	1.00	9281
Ramp	1065	0.90	Level	18	0	0.917	1.00	1290
UpStream								
DownStream	615	0.90	Level	18	0	0.917	1.00	745

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.469 using Equation (Exhibit 13-7)

V_{12} = 5035 pc/h

V_3 or V_{av34} 4246 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 6581 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9281	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	7991	Exhibit 13-8	6900	Yes
V_R	1290	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5035	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 57.1 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.674 (Exhibit 13-12)

S_R = 47.9 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 50.7 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 500 ft
V_u = 604 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	420
Deceleration Lane Length L_D	
Freeway Volume, V_F	8006
Ramp Volume, V_R	891
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8006	0.90	Level	18	0	0.917	1.00	9696
Ramp	891	0.90	Level	18	0	0.917	1.00	1079
UpStream	604	0.90	Level	18	0	0.917	1.00	732
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1397.33 (Equation 13-6 or 13-7)
P_{FM} = 0.533 using Equation (Exhibit 13-6)
V_{12} = 5163 pc/h
V_3 or V_{av34} 4533 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 6996 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10775	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8075	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 65.3 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 12.831 (Exibit 13-11)
S_R= -171.0 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 1911.9 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{up} = 2800 ft
V_u = 790 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	1500
Deceleration Lane Length L_D	
Freeway Volume, V_F	7579
Ramp Volume, V_R	1520
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7579	0.90	Level	18	0	0.917	1.00	9179
Ramp	1520	0.90	Level	18	0	0.917	1.00	1841
UpStream	790	0.90	Level	18	0	0.917	1.00	957
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = 0.619 using Equation (Exhibit 13-6)
V_{12} = 5686 pc/h
V_3 or V_{av34} 3493 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 6479 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	11020	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8320	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 60.1 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 16.196 (Exibit 13-11)
S_R= -231.5 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 650.8 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

L_{up} = ft

V_u = veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	420
Deceleration Lane Length L_D	
Freeway Volume, V_F	8006
Ramp Volume, V_R	891
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp

☑ Yes ☐ On

☐ No ☑ Off

L_{down} = 420 ft

V_D = 714 veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8006	0.90	Level	18	0	0.917	1.00	9696
Ramp	891	0.90	Level	18	0	0.917	1.00	1079
UpStream								
DownStream	714	0.90	Level	18	0	0.917	1.00	865

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 5597.26 (Equation 13-6 or 13-7)

P_{FM} = 1.000 using Equation (Exhibit 13-6)

V_{12} = 9696 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10775	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	10775	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 86.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 186.761 (Exibit 13-11)

S_R = -3301.7 mph (Exhibit 13-11)

S_0 = 60.0 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 500 ft
V_u = 668 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	420
Deceleration Lane Length L_D	
Freeway Volume, V_F	6172
Ramp Volume, V_R	1491
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6172	0.90	Level	18	0	0.917	1.00	7475
Ramp	1491	0.90	Level	18	0	0.917	1.00	1806
UpStream	668	0.90	Level	18	0	0.917	1.00	809
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1077.61 (Equation 13-6 or 13-7)
P_{FM} = 0.553 using Equation (Exhibit 13-6)
V_{12} = 4131 pc/h
V_3 or V_{av34} 3344 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 4775 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9281	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6581	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 53.3 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 3.113 (Exibit 13-11)
S_R= 4.0 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 5.4 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Acceleration Lane Length, L_A: 1500	☑ No ☐ Off
L_{up} = 2800 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 443 veh/h	Freeway Volume, V_F: 6910	V_D = veh/h
	Ramp Volume, V_R: 1949	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6910	0.90	Level	18	0	0.917	1.00	8369
Ramp	1949	0.90	Level	18	0	0.917	1.00	2360
UpStream	443	0.90	Level	18	0	0.917	1.00	537
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 5185 pc/h

V_3 or V_{av34} 3184 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 5669 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10729	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8029	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 57.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 12.154 (Exibit 13-11)

S_R= -158.8 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 4668.4 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☐ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 420	☐ No ☑ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 420 ft
V_u = veh/h	Freeway Volume, V_F: 6172	V_D = 1065 veh/h
	Ramp Volume, V_R: 1491	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6172	0.90	Level	18	0	0.917	1.00	7475
Ramp	1491	0.90	Level	18	0	0.917	1.00	1806
UpStream								
DownStream	1065	0.90	Level	18	0	0.917	1.00	1290

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 8347.35 (Equation 13-6 or 13-7)

P_{FM} = 1.000 using Equation (Exhibit 13-6)

V_{12} = 7475 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9281	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	9281	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 74.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 42.155 (Exibit 13-11)

S_R = -698.8 mph (Exhibit 13-11)

S_0 = 60.0 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 650	L_{down} = 500 ft
V_u = veh/h	Freeway Volume, V_F: 8610	V_D = 891 veh/h
	Ramp Volume, V_R: 604	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8610	0.90	Level	18	0	0.917	1.00	10428
Ramp	604	0.90	Level	18	0	0.917	1.00	732
UpStream								
DownStream	891	0.90	Level	18	0	0.917	1.00	1079

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.466 using Equation (Exhibit 13-7)

V_{12} = 5247 pc/h

V_3 or V_{av34} 5181 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 7728 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	10428	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	9696	Exhibit 13-8	6900	Yes
V_R	732	Exhibit 13-10	2000	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5247	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 64.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.559 (Exhibit 13-12)

S_R = 49.9 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 52.0 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	4/5/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 No-Build

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Acceleration Lane Length, L_A	550	☐ Yes	☐ On
☐ No	☑ Off	Deceleration Lane Length L_D		☑ No	☐ Off
L_{up} =	2800 ft	Freeway Volume, V_F	6789	L_{down} =	ft
V_u =	1138 veh/h	Ramp Volume, V_R	790	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6789	0.90	Level	18	0	0.917	1.00	8222
Ramp	790	0.90	Level	18	0	0.917	1.00	957
UpStream	1138	0.90	Level	18	0	0.917	1.00	1378
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1375.11 (Equation 13-6 or 13-7)

P_{FM} = 0.593 using Equation (Exhibit 13-6)

V_{12} = 4875 pc/h

V_3 or V_{av34} 3347 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 5522 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9179	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6479	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 52.1 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 2.828 (Exibit 13-11)

S_R= 9.1 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 12.0 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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TRAFFIC STUDY
FOR
I-85/I-385 INTERCHANGE IMPROVEMENTS

GREENVILLE COUNTY, SOUTH CAROLINA

APPENDIX H

Prepared for:

South Carolina Department of Transportation

Prepared by:

Florence & Hutcheson

CONSULTING ENGINEERS

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August 2012

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Capacity Analysis (HCS)

- 2015 Alternate 4A Conditions
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  - Ramps
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CAPACITY ANALYSIS (HCS)
2015 ALTERNATE 4A CONDITIONS – FREEWAY SEGMENTS

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	BEGIN TO US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4590	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1275	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1853	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1853	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.8	mi/h
Number of lanes, N	3	
Density, D	31.5	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	AT 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4314	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1198	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1742	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1742	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	3	
Density, D	29.2	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	276 EB to 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4551	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1264	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1837	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1837	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.0	mi/h
Number of lanes, N	3	
Density, D	31.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	at 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3924	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1090	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1584	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1584	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	26.4	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	US 276 to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4471	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1242	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1805	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1805	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.2	mi/h
Number of lanes, N	3	
Density, D	30.5	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-85NB CD off to I-85NB CD on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2665	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	740	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1076	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1076	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	17.9	pc/mi/ln
Level of service, LOS	B	

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Analyst:	JP
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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	C-D Ramp to I-385 on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3054	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	848	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1233	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1233	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	20.5	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-385 to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5209	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1447	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1577	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1577	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	4	
Density, D	26.3	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3351	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	931	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1353	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1353	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	22.5	pc/mi/ln
Level of service, LOS	C	

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Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd eb on to wb on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4102	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1139	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1656	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1656	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.9	mi/h
Number of lanes, N	3	
Density, D	27.6	pc/mi/ln
Level of service, LOS	D	

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Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd to End
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4641	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1289	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1874	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1874	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.6	mi/h
Number of lanes, N	3	
Density, D	32.0	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	BEGIN TO US 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4760	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1322	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1922	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1922	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	3	
Density, D	33.1	pc/mi/ln
Level of service, LOS	D	

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Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	AT 276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3482	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	967	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1406	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1406	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	23.4	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	276 EB to 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3931	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1092	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1587	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1587	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	26.5	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	at 276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3546	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	985	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1432	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1432	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	23.9	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	US 276 to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4188	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1163	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1691	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1691	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.8	mi/h
Number of lanes, N	3	
Density, D	28.3	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-85NB CD off to I-85NB CD on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2375	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	660	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	959	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	959	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	16.0	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-85NB C-D Ramp to I-385 on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3706	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1029	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1496	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1496	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	24.9	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-385 to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6703	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1862	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2030	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2030	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	56.6	mi/h
Number of lanes, N	4	
Density, D	35.8	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4642	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1289	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1874	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1874	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.6	mi/h
Number of lanes, N	3	
Density, D	32.0	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5621	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1561	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2269	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2269	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	51.9	mi/h
Number of lanes, N	3	
Density, D	43.7	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Pelham Rd to End
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6407	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1780	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2587	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2587	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	42.3	mi/h
Number of lanes, N	3	
Density, D	61.1	pc/mi/ln
Level of service, LOS	F	

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Analyst:	JP
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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	US 276 EB TO BEGIN
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5185	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1440	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2093	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2093	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	55.6	mi/h
Number of lanes, N	3	
Density, D	37.7	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst:	JP
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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4723	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1312	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1907	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1907	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.3	mi/h
Number of lanes, N	3	
Density, D	32.7	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	JP
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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	at US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5481	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1523	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2213	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2213	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	53.2	mi/h
Number of lanes, N	3	
Density, D	41.6	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4346	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1207	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1754	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1754	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	3	
Density, D	29.4	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	Woodruff Rd to US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4824	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1340	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1947	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1947	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	57.8	mi/h
Number of lanes, N	3	
Density, D	33.7	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-385 ON to Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4278	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1188	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1727	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1727	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.7	mi/h
Number of lanes, N	3	
Density, D	28.9	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-385 OFF to I-385 ON
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2772	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	770	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1119	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1119	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd to I-385
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5805	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1613	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1758	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1758	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.5	mi/h
Number of lanes, N	4	
Density, D	29.5	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4348	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1208	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1755	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1755	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	3	
Density, D	29.5	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4013	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1115	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1620	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1620	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	27.0	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	End to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5871	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1631	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2370	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2370	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	49.2	mi/h
Number of lanes, N	3	
Density, D	48.1	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst:	JP
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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	US 276 EB TO BEGIN
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6624	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1840	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2674	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2674	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	39.1	mi/h
Number of lanes, N	3	
Density, D	68.5	pc/mi/ln
Level of service, LOS	F	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	276 EB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6000	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1667	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2422	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2422	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	47.7	mi/h
Number of lanes, N	3	
Density, D	50.7	pc/mi/ln
Level of service, LOS	F	

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Analyst:	JP
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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	at US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6493	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1804	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2621	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2621	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	41.1	mi/h
Number of lanes, N	3	
Density, D	63.8	pc/mi/ln
Level of service, LOS	F	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	276 WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5816	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1616	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2348	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2348	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	49.8	mi/h
Number of lanes, N	3	
Density, D	47.1	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	Woodruff Rd to US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6247	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1735	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2522	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2522	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	44.6	mi/h
Number of lanes, N	3	
Density, D	56.6	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-385 ON to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5322	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1478	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2149	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2149	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	54.5	mi/h
Number of lanes, N	3	
Density, D	39.4	pc/mi/ln
Level of service, LOS	E	

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Analyst:	JP
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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-385 off to I-385 on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3832	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1064	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1547	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1547	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	25.8	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd to I-385
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6307	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1752	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1910	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1910	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.3	mi/h
Number of lanes, N	4	
Density, D	32.8	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5158	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1433	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2082	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2082	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	55.8	mi/h
Number of lanes, N	3	
Density, D	37.3	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	Pelham Rd WB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4558	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1266	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1840	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1840	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.0	mi/h
Number of lanes, N	3	
Density, D	31.2	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	End to Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5315	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1476	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2146	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2146	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	54.6	mi/h
Number of lanes, N	3	
Density, D	39.3	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Begin to Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3839	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1066	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1550	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1550	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	28.2	pc/mi/ln
Level of service, LOS	D	

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Analyst:	JP
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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3517	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	977	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1420	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1420	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	25.8	pc/mi/ln
Level of service, LOS	C	

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Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Butler Rd to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4442	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1234	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1793	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1793	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	32.6	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1843	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	512	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	744	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	744	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	13.5	pc/mi/ln
Level of service, LOS	B	

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Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Woodruff Rd to I-85 SB on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2826	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	785	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1141	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1141	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	20.7	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-85SB ramp - I-85NB ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4031	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1120	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1220	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1220	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	22.2	pc/mi/ln
Level of service, LOS	C	

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Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-85 to Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4764	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1323	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1154	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1154	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	21.0	pc/mi/ln
Level of service, LOS	C	

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Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3171	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	881	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1280	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1280	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	23.3	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	Roper Mtn Rd to End
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3622	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1006	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1462	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1462	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	26.6	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Begin to Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4295	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1193	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1734	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1734	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.5	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4033	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1120	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1628	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1628	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	29.6	pc/mi/ln
Level of service, LOS	D	

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Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Butler Rd to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5057	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1405	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2042	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2042	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	53.6	mi/h
Number of lanes, N	3	
Density, D	38.1	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2452	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	681	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	990	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	990	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	18.0	pc/mi/ln
Level of service, LOS	B	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Woodruff Rd to I-85 SB on
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3355	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	932	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1354	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1354	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	24.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-85SB ramp - I-85NB ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4826	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1341	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1461	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1461	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	26.6	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-85 to Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5250	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1458	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1272	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1272	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	23.1	pc/mi/ln
Level of service, LOS	C	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4354	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1209	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1758	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1758	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	32.0	pc/mi/ln
Level of service, LOS	D	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	Roper Mtn Rd to End
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5179	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1439	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2091	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2091	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	52.9	mi/h
Number of lanes, N	3	
Density, D	39.5	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst:	JP
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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Butler Rd to Begin
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2058	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	572	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	831	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	831	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	15.1	pc/mi/ln
Level of service, LOS	B	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1814	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	504	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	732	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	732	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	13.3	pc/mi/ln
Level of service, LOS	B	

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Analyst:	JP
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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Woodruff Rd to Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2616	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	727	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1056	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1056	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	19.2	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1393	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	387	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	562	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	562	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	10.2	pc/mi/ln
Level of service, LOS	A	

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Operational Analysis

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	I-85 to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1916	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	532	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	773	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	773	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	14.1	pc/mi/ln
Level of service, LOS	B	

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	Roper Mtn Rd to I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3528	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	980	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1068	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1068	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	19.4	pc/mi/ln
Level of service, LOS	C	

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Freeway/Direction:	I-385 SB
From/To:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2684	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	746	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1084	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1084	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	19.7	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	End to Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3496	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	971	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1411	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1411	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	25.7	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Butler Rd to Begin
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4766	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1324	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1924	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1924	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.6	mi/h
Number of lanes, N	3	
Density, D	35.2	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4303	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1195	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1737	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1737	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Woodruff Rd to Butler Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5134	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1426	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2073	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2073	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	53.2	mi/h
Number of lanes, N	3	
Density, D	39.0	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3110	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	864	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1256	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1256	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	22.8	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	I-85 to Woodruff Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3976	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1104	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1605	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1605	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	29.2	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Roper Mtn Rd to I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6482	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1801	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1963	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1963	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.3	mi/h
Number of lanes, N	4	
Density, D	36.1	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

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Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4686	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1302	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1892	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1892	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.8	mi/h
Number of lanes, N	3	
Density, D	34.5	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	End to Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5569	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1547	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2248	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2248	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	50.0	mi/h
Number of lanes, N	3	
Density, D	44.9	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

CAPACITY ANALYSIS (HCS)
2015 ALTERNATE 4A CONDITIONS – RAMPS

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4590	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	276	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	237	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4590	276	237	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1275	77	66	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5559	334	287	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.606 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3499 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5559	6900	No
$v_{FO} = v_F - v_R$	5225	6900	No
v_R	334	2000	No
v_3 or v_{av34}	2060 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3499 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3499	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 28.0+ pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.523

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 61.7 mph

Space mean speed for all vehicles, S = 54.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4314	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	237	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	627	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4314	237	627	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1198	66	174	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5225	287	759	pcph

Estimation of V12 Merge Areas

L_{EQ} = 4911.35 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 3

$v_{12} = v_F (P_{FM}) =$ 5225 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5512	6900	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5225 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5512	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 45.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 1.266	
Space mean speed in ramp influence area,	S_R = 37.2	mph
Space mean speed in outer lanes,	S_0 = 60.0	mph
Space mean speed for all vehicles,	S = 37.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4314	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	237	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	276	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4314	237	276	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1198	66	77	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5225	287	334	pcph

Estimation of V12 Merge Areas

L_{EQ} = 271.05 (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3079 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5512	6900	No
v_3 or v_{av34}	2146 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3079 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5512	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 29.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.413	
Space mean speed in ramp influence area,	S_R = 52.6	mph
Space mean speed in outer lanes,	S_0 = 54.1	mph
Space mean speed for all vehicles,	S = 53.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4551	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	627	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	547	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4551	627	547	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1264	174	152	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5512	759	662	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.587 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3550 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5512	6900	No
$v_{FO} = v_F - v_R$	4753	6900	No
v_R	759	1900	No
v_3 or v_{av34}	1962 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3550 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3550	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 31.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.626

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 62.1 mph

Space mean speed for all vehicles, S = 52.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Columbia, SC 29201

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4551	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	627	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	237	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4551	627	237	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1264	174	66	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5512	759	287	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 2048.65 (Equation 13-12 or 13-13)

P_{FD} = 0.915 Using Equation 6

$v_{12} = v_R + (v - v_F) P_{FD}$ = 5107 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5512	6900	No
$v_{FO} = v - v_F - v_R$	4753	6900	No
v_R	759	1900	No
v_3 or v_{av34}	405 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5107 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5107	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 44.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.626

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 49.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3924	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	547	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	627	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3924	547	627	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1090	152	174	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4752	662	759	pcph

Estimation of V12 Merge Areas

L_{EQ} = 569.40 (Equation 13-6 or 13-7)

P_{FM} = 0.585 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 2781 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5414	6900	No
v_3 or v_{av34}	1971 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2781 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5414	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 28.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.410	
Space mean speed in ramp influence area,	S_R = 52.6	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.4	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4824	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	478	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1135	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4824	478	1135	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1340	133	315	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5842	579	1375	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.587 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3670 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5842	6900	No
$v_{FO} = v_F - v_R$	5263	6900	No
v_R	579	2000	No
v_3 or v_{av34}	2172 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3670 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3670	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 30.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.545

Space mean speed in ramp influence area, S_R = 50.2 mph

Space mean speed in outer lanes, S_0 = 61.2 mph

Space mean speed for all vehicles, S = 53.8 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4346	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	1135	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	758	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4346	1135	758	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1207	315	211	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5263	1375	918	pcph

Estimation of V12 Merge Areas

L_{EQ} = 5940.21 (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 5263 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6638	6900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5263 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6638	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 54.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 3.278	
Space mean speed in ramp influence area,	S_R = 1.0	mph
Space mean speed in outer lanes,	S_0 = 60.0	mph
Space mean speed for all vehicles,	S = 1.0	mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4346	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	1135	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	478	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4346	1135	478	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1207	315	133	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5263	1375	579	pcph

Estimation of V12 Merge Areas

L_{EQ} = 512.01 (Equation 13-6 or 13-7)

P_{FM} = 0.588 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3097 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6638	6900	No
v_3 or v_{av34}	2166 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3097 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6638	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 37.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.641	
Space mean speed in ramp influence area,	S_R = 48.5	mph
Space mean speed in outer lanes,	S_0 = 54.0	mph
Space mean speed for all vehicles,	S = 50.1	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT 48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5481	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	758	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	462	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	468	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5481	758	462	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1523	211	128	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6638	918	560	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.552 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4074 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6638	6900	No
$v_{FO} = v_F - v_R$	5720	6900	No
v_R	918	1900	No
v_3 or v_{av34}	2564 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4074 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4074	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 35.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.641

Space mean speed in ramp influence area, S_R = 48.5 mph

Space mean speed in outer lanes, S_0 = 59.7 mph

Space mean speed for all vehicles, S = 52.3 mph

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Diverge Analysis

Analyst:	JP
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Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT 48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5481	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	758	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1135	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5481	758	1135	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1523	211	315	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6638	918	1375	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 8934.02 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 6638 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6638	6900	No
$v_{FO} = v_F - v_R$	5720	6900	No
v_R	918	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 6638 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	6638	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 57.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.641

Space mean speed in ramp influence area, S_R = 48.5 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 48.5 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4723	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	462	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	758	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	470	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4723	462	758	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1312	128	211	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5720	560	918	pcph

Estimation of V12 Merge Areas

L_{EQ} = 470.92 (Equation 13-6 or 13-7)

P_{FM} = 0.591 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3382 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6280	6900	No
v_3 or v_{av34}	2338 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3382 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6280	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.497	
Space mean speed in ramp influence area,	S_R = 51.1	mph
Space mean speed in outer lanes,	S_0 = 53.2	mph
Space mean speed for all vehicles,	S = 51.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4760	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	1278	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	449	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4760	1278	449	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1322	355	125	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5765	1548	544	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.545 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3845 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5765	6900	No
$v_{FO} = v_F - v_R$	4217	6900	No
v_R	1548	2000	No
v_3 or v_{av34}	1920 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3845 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3845	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 31.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.632

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = 62.2 mph

Space mean speed for all vehicles, S = 52.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3482	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	449	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	385	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3482	449	385	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	967	125	107	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4217	544	466	pcph

Estimation of V12 Merge Areas

L_{EQ} = 3015.40 (Equation 13-6 or 13-7)

P_{FM} = 0.840 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 3543 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4761	6900	No
v_3 or v_{av34}	674 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3543 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4761	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 34.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.532	
Space mean speed in ramp influence area,	S_R = 50.4	mph
Space mean speed in outer lanes,	S_0 = 59.4	mph
Space mean speed for all vehicles,	S = 51.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3482	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	449	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1278	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3482	449	1278	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	967	125	355	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4217	544	1548	pcph

Estimation of V12 Merge Areas

L_{EQ} = 110.33 (Equation 13-6 or 13-7)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2485 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4761	6900	No
v_3 or v_{av34}	1732 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		No	

If yes, v_{12A} = 2485 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4761	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.381	
Space mean speed in ramp influence area,	S_R = 53.1	mph
Space mean speed in outer lanes,	S_0 = 55.6	mph
Space mean speed for all vehicles,	S = 54.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3931	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	385	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	642	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3931	385	642	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1092	107	178	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4761	466	778	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.620 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3127 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4761	6900	No
$v_{FO} = v_F - v_R$	4295	6900	No
v_R	466	1900	No
v_3 or v_{av34}	1634 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3127 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3127	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 27.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.600

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = 63.3 mph

Space mean speed for all vehicles, S = 53.3 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3931	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	385	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	449	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3931	385	449	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1092	107	125	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4761	466	544	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 3749.47 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4761 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4761	6900	No
$v_{FO} = v_F - v_R$	4295	6900	No
v_R	466	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4761 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4761	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 41.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	D_S = 0.600	
Space mean speed in ramp influence area,	S_R = 49.2	mph
Space mean speed in outer lanes,	S_0 = 65.8	mph
Space mean speed for all vehicles,	S = 49.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3546	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	642	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	385	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	450	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3546	642	385	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	985	178	107	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4295	778	466	pcph

Estimation of V12 Merge Areas

L_{EQ} = 496.42 (Equation 13-6 or 13-7)

P_{FM} = 0.590 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 2534 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5073	6900	No
v_3 or v_{av34}	1761 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 $v_{12}/2$	No	

If yes, v_{12A} = 2534 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5073	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.395	
Space mean speed in ramp influence area,	S_R = 52.9	mph
Space mean speed in outer lanes,	S_0 = 55.5	mph
Space mean speed for all vehicles,	S = 53.8	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT48B)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6247	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	431	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	677	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6247	431	677	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1735	120	188	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7566	522	820	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.547 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4374 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7566	6900	Yes
$v_{FO} = v_F - v_R$	7044	6900	Yes
v_R	522	2000	No
v_3 or v_{av34}	3192 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4866 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4866	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 40.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.540

Space mean speed in ramp influence area, S_R = 50.3 mph

Space mean speed in outer lanes, S_0 = 59.2 mph

Space mean speed for all vehicles, S = 53.1 mph

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5816	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	677	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	493	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5816	677	493	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1616	188	137	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7044	820	597	pcph

Estimation of V12 Merge Areas

L_{EQ} = 3863.08 (Equation 13-6 or 13-7)

P_{FM} = 0.922 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 6496 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7864	6900	Yes
v_3 or v_{av34}	548 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 6496 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7864	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 59.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 6.166

Space mean speed in ramp influence area, S_R = -51.0 mph

Space mean speed in outer lanes, S_0 = 59.8 mph

Space mean speed for all vehicles, S = mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5816	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	677	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	431	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5816	677	431	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1616	188	120	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7044	820	522	pcph

Estimation of V12 Merge Areas

L_{EQ} = 774.38 (Equation 13-6 or 13-7)

P_{FM} = 0.572 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 4028 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7864	6900	Yes
v_3 or v_{av34}	3016 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4344 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7864	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 42.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.982

Space mean speed in ramp influence area, S_R = 42.3 mph

Space mean speed in outer lanes, S_0 = 51.1 mph

Space mean speed for all vehicles, S = 45.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT 48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6493	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	493	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	624	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	468	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6493	493	624	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1804	137	173	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7864	597	756	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.536 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4492 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7864	6900	Yes
$v_{FO} = v_F - v_R$	7267	6900	Yes
v_R	597	1900	No
v_3 or v_{av34}	3372 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5164 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5164	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 44.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.612	
Space mean speed in ramp influence area,	S_R = 49.0	mph
Space mean speed in outer lanes,	S_0 = 59.2	mph
Space mean speed for all vehicles,	S = 52.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276 (EXIT 48A)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6493	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	25.0	mph
Volume on ramp	493	vph
Length of first accel/decel lane	420	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	677	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	420	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6493	493	677	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1804	137	188	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7864	597	820	pcph

Estimation of V12 Diverge Areas

L_{EQ} = 3970.94 (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 6

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 7864 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7864	6900	Yes
$v_{FO} = v_F - v_R$	7267	6900	Yes
v_R	597	1900	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 7864 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	7864	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 68.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.612

Space mean speed in ramp influence area, S_R = 49.0 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 49.0 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	US 276
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6000	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	25.0	mph
Volume on ramp	624	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	493	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	470	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6000	624	493	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1667	173	137	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7267	756	597	pcph

Estimation of V12 Merge Areas

L_{EQ} = 843.92 (Equation 13-6 or 13-7)

P_{FM} = 0.568 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 4126 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8023	6900	Yes
v_3 or v_{av34}	3141 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4567 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8023	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 43.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.095

Space mean speed in ramp influence area, S_R = 40.3 mph

Space mean speed in outer lanes, S_0 = 51.1 mph

Space mean speed for all vehicles, S = 43.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Woodruff Rd.
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4278	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	546	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1506	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4278	546	1506	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1188	152	418	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5181	661	1824	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3210 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5842	6900	No
v_3 or v_{av34}	1971 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3210 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5842	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 26.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.373	
Space mean speed in ramp influence area,	S_R = 53.3	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Woodruff Rd.
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5322	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	925	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1490	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5322	925	1490	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1478	257	414	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6446	1120	1805	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3993 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7566	6900	Yes
v_3 or v_{av34}	2453 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3993 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7566	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 35.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.834	
Space mean speed in ramp influence area,	S_R = 45.0	mph
Space mean speed in outer lanes,	S_0 = 52.6	mph
Space mean speed for all vehicles,	S = 47.2	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4471	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1806	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane	0	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	389	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	7300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4471	1806	389	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1242	502	108	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5415	2157	465	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3623 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5415	6900	No
$v_{FO} = v_F - v_R$	3258	6900	No
v_R	2157	4200	No
v_3 or v_{av34}	1792 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3623 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3623	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 29.1 pc/mi/ln D

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.492

Space mean speed in ramp influence area, S_R = 51.1 mph

Space mean speed in outer lanes, S_0 = 62.7 mph

Space mean speed for all vehicles, S = 54.5 mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	1/24/2012
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2665	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	389	vph
Length of first accel/decel lane	1450	ft
Length of second accel/decel lane	285	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2155	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	5000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2665	389	2155	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	740	108	599	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3228	471	2610	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1792 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3699	6900	No
v_3 or v_{av34}	1436 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 1844 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3699	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 3.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	M_S = 0.074	
Space mean speed in ramp influence area,	S_R = 58.7	mph
Space mean speed in outer lanes,	S_0 = 56.8	mph
Space mean speed for all vehicles,	S = 58.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	1/24/2012
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2665	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	389	vph
Length of first accel/decel lane	1450	ft
Length of second accel/decel lane	285	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1806	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	5600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2665	389	1806	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	740	108	502	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3228	471	2187	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1792 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3699	6900	No
v_3 or v_{av34}	1436 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 1844 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3699	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 3.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	M_S = 0.074	
Space mean speed in ramp influence area,	S_R = 58.7	mph
Space mean speed in outer lanes,	S_0 = 56.8	mph
Space mean speed for all vehicles,	S = 58.0	mph

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB - I-85SB CD PostDiverge
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3832	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1064	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1547	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1547	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	25.8	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB - I-85SB CD Pre-Diverge
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5805	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1613	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1406	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1406	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	5	
Density, D	23.4	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB - I-85SB CD (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3033	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	843	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1224	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1224	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	22.3	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	I-385 Ramps
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2772	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1506	vph
Length of first accel/decel lane	750	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	546	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	4300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2772	1506	546	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	770	418	152	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3357	1824	661	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1863 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5181	6900	No
v_3 or v_{av34}	1494 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 1918 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5181	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 15.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.216	
Space mean speed in ramp influence area,	S_R = 56.1	mph
Space mean speed in outer lanes,	S_0 = 56.6	mph
Space mean speed for all vehicles,	S = 56.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	I-385 Ramps
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2772	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1506	vph
Length of first accel/decel lane	750	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	3033	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	7500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2772	1506	3033	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	770	418	843	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3357	1824	3673	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1863 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5181	6900	No
v_3 or v_{av34}	1494 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1918 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5181	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 15.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.216	
Space mean speed in ramp influence area,	S_R = 56.1	mph
Space mean speed in outer lanes,	S_0 = 56.6	mph
Space mean speed for all vehicles,	S = 56.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4188	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1813	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane	0	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1331	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	7300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4188	1813	1331	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1163	504	370	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5072	2166	1590	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3474 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5072	6900	No
$v_{FO} = v_F - v_R$	2906	6900	No
v_R	2166	4200	No
v_3 or v_{av34}	1598 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3474 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3474	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 27.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.493

Space mean speed in ramp influence area, S_R = 51.1 mph

Space mean speed in outer lanes, S_0 = 63.5 mph

Space mean speed for all vehicles, S = 54.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2375	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1331	vph
Length of first accel/decel lane	1450	ft
Length of second accel/decel lane	285	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2997	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	5000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2375	1331	2997	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	660	370	833	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2876	1612	3630	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1596 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4488	6900	No
v_3 or v_{av34}	1280 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1643 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4488	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 10.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.135	
Space mean speed in ramp influence area,	S_R = 57.6	mph
Space mean speed in outer lanes,	S_0 = 57.4	mph
Space mean speed for all vehicles,	S = 57.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	C-D ROAD
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2375	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1331	vph
Length of first accel/decel lane	1450	ft
Length of second accel/decel lane	285	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1813	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	5600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2375	1331	1813	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	660	370	504	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2876	1612	2196	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1596 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4488	6900	No
v_3 or v_{av34}	1280 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1643 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4488	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 10.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.135	
Space mean speed in ramp influence area,	S_R = 57.6	mph
Space mean speed in outer lanes,	S_0 = 57.4	mph
Space mean speed for all vehicles,	S = 57.5	mph

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB - I-85SB CD PostDiverge
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3832	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1064	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1547	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1547	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	25.8	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB - I-85SB CD Pre-Diverge
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6307	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1752	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1528	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1528	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	5	
Density, D	25.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB - I-85SB CD (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2475	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	688	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	999	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	999	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	18.2	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	I-385 Ramps
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3832	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1490	vph
Length of first accel/decel lane	750	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	925	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	4300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3832	1490	925	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1064	414	257	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4641	1805	1120	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2576 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6446	6900	No
v_3 or v_{av34}	2065 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2652 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6446	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 20.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.387	
Space mean speed in ramp influence area,	S_R = 53.0	mph
Space mean speed in outer lanes,	S_0 = 54.6	mph
Space mean speed for all vehicles,	S = 53.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	I-385 Ramps
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3832	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1490	vph
Length of first accel/decel lane	750	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2475	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	7500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3832	1490	2475	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1064	414	688	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4641	1805	2998	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2576 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6446	6900	No
v_3 or v_{av34}	2065 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2652 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6446	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 20.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.387	
Space mean speed in ramp influence area,	S_R = 53.0	mph
Space mean speed in outer lanes,	S_0 = 54.6	mph
Space mean speed for all vehicles,	S = 53.5	mph

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-85 to I-85NB (Post-Merge)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5209	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1447	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1262	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1262	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	5	
Density, D	21.0	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-85 to I-85NB (Pre-Merge)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3054	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	848	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1233	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1233	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	20.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-85 to I-85NB (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2155	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	599	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	870	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	870	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	15.8	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-85 to I-85NB (Post-Merge)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6703	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1862	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1624	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1624	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	5	
Density, D	27.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-85 to I-85NB (Pre-Merge)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3706	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1029	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1496	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1496	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	3	
Density, D	24.9	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-85 to I-85NB (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2997	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	833	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1210	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1210	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	22.0	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Road
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5209	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1858	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	751	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1325	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5209	1858	751	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1447	516	209	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6309	2250	910	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.499 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4275 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6309	6900	No
$v_{FO} = v_F - v_R$	4059	6900	No
v_R	2250	2000	Yes
v_3 or v_{av34}	2034 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4275 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4275	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.631

Space mean speed in ramp influence area, S_R = 48.7 mph

Space mean speed in outer lanes, S_0 = 61.8 mph

Space mean speed for all vehicles, S = 52.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3351	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	751	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	539	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3351	751	539	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	931	209	150	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4058	910	653	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2417 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4968	6900	No
v_3 or v_{av34}	1641 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2417 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4968	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.391	
Space mean speed in ramp influence area,	S_R = 53.0	mph
Space mean speed in outer lanes,	S_0 = 55.9	mph
Space mean speed for all vehicles,	S = 53.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3351	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	751	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1858	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3351	751	1858	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	931	209	516	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4058	910	2250	pcph

Estimation of V12 Merge Areas

L_{EQ} = 518.35 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2417 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4968	6900	No
v_3 or v_{av34}	1641 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2417 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4968	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 26.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.391	
Space mean speed in ramp influence area,	S_R = 53.0	mph
Space mean speed in outer lanes,	S_0 = 55.9	mph
Space mean speed for all vehicles,	S = 53.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4102	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	539	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	751	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4102	539	751	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1139	150	209	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4968	653	910	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3078 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5621	6900	No
v_3 or v_{av34}	1890 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3078 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5621	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 24.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.349	
Space mean speed in ramp influence area,	S_R = 53.7	mph
Space mean speed in outer lanes,	S_0 = 55.0	mph
Space mean speed for all vehicles,	S = 54.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Road
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5871	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1858	vph
Length of first accel/decel lane	1400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	335	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5871	1858	335	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1631	516	93	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7110	2250	406	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.479 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4577 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7110	6900	Yes
$v_{FO} = v_F - v_R$	4860	6900	No
v_R	2250	2100	Yes
v_3 or v_{av34}	2533 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4577 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4577	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 31.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.501

Space mean speed in ramp influence area, S_R = 51.0 mph

Space mean speed in outer lanes, S_0 = 59.8 mph

Space mean speed for all vehicles, S = 53.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4013	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	335	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1457	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2760	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4013	335	1457	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1115	93	405	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4860	406	1765	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2881 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5266	6900	No
v_3 or v_{av34}	1979 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2881 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5266	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.392	
Space mean speed in ramp influence area,	S_R = 52.9	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4013	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	335	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1858	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4013	335	1858	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1115	93	516	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4860	406	2250	pcph

Estimation of V12 Merge Areas

L_{EQ} = 537.72 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2881 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5266	6900	No
v_3 or v_{av34}	1979 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2881 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5266	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.392	
Space mean speed in ramp influence area,	S_R = 52.9	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4348	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1457	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	335	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4348	1457	335	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1208	405	93	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5266	1765	406	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3262 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7031	6900	Yes
v_3 or v_{av34}	2004 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3262 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7031	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 34.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.781	
Space mean speed in ramp influence area,	S_R = 45.9	mph
Space mean speed in outer lanes,	S_0 = 54.6	mph
Space mean speed for all vehicles,	S = 48.1	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Road
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6703	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	2061	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	979	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1325	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6703	2061	979	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1862	573	272	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8118	2496	1186	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.442 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4982 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8118	6900	Yes
$v_{FO} = v_F - v_R$	5622	6900	No
v_R	2496	2000	Yes
v_3 or v_{av34}	3136 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5418 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5418	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 37.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.653	
Space mean speed in ramp influence area,	S_R = 48.3	mph
Space mean speed in outer lanes,	S_0 = 59.2	mph
Space mean speed for all vehicles,	S = 51.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4642	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	979	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	786	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4642	979	786	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1289	272	218	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5622	1186	952	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3349 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6808	6900	No
v_3 or v_{av34}	2273 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3349 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6808	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 36.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.646	
Space mean speed in ramp influence area,	S_R = 48.4	mph
Space mean speed in outer lanes,	S_0 = 53.6	mph
Space mean speed for all vehicles,	S = 50.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4642	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	979	vph
Length of first accel/decel lane	650	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2061	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4642	979	2061	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1289	272	573	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5622	1186	2496	pcph

Estimation of V12 Merge Areas

L_{EQ} = 912.11 (Equation 13-6 or 13-7)

P_{FM} = 0.596 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3349 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6808	6900	No
v_3 or v_{av34}	2273 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3349 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6808	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 36.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable,	M_S = 0.646	
Space mean speed in ramp influence area,	S_R = 48.4	mph
Space mean speed in outer lanes,	S_0 = 53.6	mph
Space mean speed for all vehicles,	S = 50.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5621	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	786	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	979	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5621	786	979	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1561	218	272	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6808	952	1186	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4218 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7760	6900	Yes
v_3 or v_{av34}	2590 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4218 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7760	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 36.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.872	
Space mean speed in ramp influence area,	S_R = 44.3	mph
Space mean speed in outer lanes,	S_0 = 51.7	mph
Space mean speed for all vehicles,	S = 46.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Road
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5315	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	757	vph
Length of first accel/decel lane	1400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	600	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5315	757	600	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1476	210	167	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6437	917	727	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.557 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3991 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6437	6900	No
$v_{FO} = v_F - v_R$	5520	6900	No
v_R	917	2100	No
v_3 or v_{av34}	2446 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3991 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3991	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 26.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.381

Space mean speed in ramp influence area, S_R = 53.2 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 55.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4558	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	600	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1149	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2760	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4558	600	1149	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1266	167	319	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5520	727	1392	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3273 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6247	6900	No
v_3 or v_{av34}	2247 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3273 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6247	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.501	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = 53.7	mph
Space mean speed for all vehicles,	S = 51.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4558	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	600	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	757	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4558	600	757	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1266	167	210	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5520	727	917	pcph

Estimation of V12 Merge Areas

L_{EQ} = 747.66 (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3273 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6247	6900	No
v_3 or v_{av34}	2247 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3273 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6247	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 32.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.501	
Space mean speed in ramp influence area,	S_R = 51.0	mph
Space mean speed in outer lanes,	S_0 = 53.7	mph
Space mean speed for all vehicles,	S = 51.9	mph

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5158	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1149	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	600	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5158	1149	600	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1433	319	167	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6247	1392	727	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3870 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7639	6900	Yes

v_3 or v_{av34} 2377 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 $v_{12}/2$ No

If yes, v_{12A} = 3870 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7639	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 36.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.938	
Space mean speed in ramp influence area,	S_R = 43.1	mph
Space mean speed in outer lanes,	S_0 = 53.0	mph
Space mean speed for all vehicles,	S = 45.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3839	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	322	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	925	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3839	322	925	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1066	89	257	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4649	390	1120	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.626 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3055 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4649	6900	No
$v_{FO} = v_F - v_R$	4259	6900	No
v_R	390	2100	No
v_3 or v_{av34}	1594 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3055 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3055	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 17.0 pc/mi/ln D

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.333

Space mean speed in ramp influence area, S_R = 54.0 mph

Space mean speed in outer lanes, S_0 = 63.5 mph

Space mean speed for all vehicles, S = 56.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	3517	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	925	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	322	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3517	925	322	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	977	257	89	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4259	1120	390	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1590.91 (Equation 13-6 or 13-7)

P_{FM} = 0.608 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2591 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5379	6900	No
v_3 or v_{av34}	1668 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2591 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5379	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.381	
Space mean speed in ramp influence area,	S_R = 53.1	mph
Space mean speed in outer lanes,	S_0 = 55.8	mph
Space mean speed for all vehicles,	S = 53.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	2616	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	802	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	244	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2616	802	244	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	727	223	68	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3168	971	296	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.636 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2369 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3168	6900	No
$v_{FO} = v_F - v_R$	2197	6900	No
v_R	971	2100	No
v_3 or v_{av34}	799 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2369 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2369	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 15.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.385

Space mean speed in ramp influence area, S_R = 53.1 mph

Space mean speed in outer lanes, S_0 = 65.8 mph

Space mean speed for all vehicles, S = 55.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	1814	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	244	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	802	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1814	244	802	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	504	68	223	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2197	296	971	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1150.90 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1361 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2493	6900	No
v_3 or v_{av34}	836 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1361 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	2493	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 8.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	M_S = 0.206	
Space mean speed in ramp influence area,	S_R = 56.3	mph
Space mean speed in outer lanes,	S_0 = 58.8	mph
Space mean speed for all vehicles,	S = 57.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4295	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	262	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1024	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4295	262	1024	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1193	73	284	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5202	317	1240	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.615 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3323 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5202	6900	No
$v_{FO} = v_F - v_R$	4885	6900	No
v_R	317	2100	No
v_3 or v_{av34}	1879 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3323 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3323	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 19.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	D_S = 0.327	
Space mean speed in ramp influence area,	S_R = 54.1	mph
Space mean speed in outer lanes,	S_0 = 62.4	mph
Space mean speed for all vehicles,	S = 56.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4033	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1024	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	262	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2960	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4033	1024	262	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1120	284	73	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4884	1240	317	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1750.34 (Equation 13-6 or 13-7)

P_{FM} = 0.608 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2971 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6124	6900	No
v_3 or v_{av34}	1913 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2971 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6124	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 30.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable,	M_S = 0.485	
Space mean speed in ramp influence area,	S_R = 51.3	mph
Space mean speed in outer lanes,	S_0 = 54.9	mph
Space mean speed for all vehicles,	S = 52.4	mph

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd off-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	5134	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	831	vph
Length of first accel/decel lane	1000	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	463	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5134	831	463	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1426	231	129	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6218	1006	561	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.558 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3916 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6218	6900	No
$v_{FO} = v_F - v_R$	5212	6900	No
v_R	1006	2100	No
v_3 or v_{av34}	2302 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3916 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3916	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 28.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.389

Space mean speed in ramp influence area, S_R = 53.0 mph

Space mean speed in outer lanes, S_0 = 60.7 mph

Space mean speed for all vehicles, S = 55.6 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Butler Rd on-ramp
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4303	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	463	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	831	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2570	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4303	463	831	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1195	129	231	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5211	561	1006	pcph

Estimation of V12 Merge Areas

L_{EQ} = 1852.61 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3228 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5772	6900	No
v_3 or v_{av34}	1983 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3228 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5772	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 25.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.358	
Space mean speed in ramp influence area,	S_R = 53.5	mph
Space mean speed in outer lanes,	S_0 = 54.7	mph
Space mean speed for all vehicles,	S = 53.9	mph

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-385NB - I-385NB CD Post-Div
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1843	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	512	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	744	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	744	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	13.5	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-385NB - I-385NB CD (Pre-Div)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4442	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1234	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1076	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1076	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	19.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 NB
From/To:	I-385NB - I-385NB CD (Ramp)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2599	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	722	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1049	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1049	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	19.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff - I-385 NB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1843	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	983	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1843	983		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	512	273		v
Trucks and buses	18	18		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	0.917	0.917	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2232	1191	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.594 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1326 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3423	6750	No
v_3 or v_{av34}	906 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1326 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3423	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 20.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.315	
Space mean speed in ramp influence area,	S_R = 50.9	mph
Space mean speed in outer lanes,	S_0 = 53.5	mph
Space mean speed for all vehicles,	S = 51.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-385 SB to Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1916	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	523	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1612	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1916	523	1612	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	532	145	448	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2320	633	1952	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.673 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1768 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2320	6750	No
$v_{FO} = v_F - v_R$	1687	6750	No
v_R	633	2100	No
v_3 or v_{av34}	552 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 1768 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1768	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 19.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.355

Space mean speed in ramp influence area, S_R = 50.4 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 52.4 mph

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	I-385SB C-D - I-385SB PostMrge
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2616	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	727	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	634	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	634	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	11.5	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	I-385SB C-D - I-385SB PreMerge
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1393	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	387	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	562	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	562	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	10.2	pc/mi/ln
Level of service, LOS	A	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	AM
Freeway/Direction:	I-385 SB
From/To:	I-385SB C-D - I-385SB (Ramp)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1223	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	340	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	494	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	494	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	9.0	pc/mi/ln
Level of service, LOS	A	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-385 SB C-D - I-385SB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1393	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1223	vph
Length of first accel/decel lane	1150	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1393	1223		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	387	340		v
Trucks and buses	18	18		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	0.917	0.917	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	1687	1481	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 936 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3168	6750	No
v_3 or v_{av34}	751 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34} > 2700 pc/h?		No	
Is v_3 or v_{av34} > 1.5 v_{12} /2		Yes	

If yes, v_{12A} = 964 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	3168	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 0.0+ pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable,	M_S = 0.024	
Space mean speed in ramp influence area,	S_R = 54.7	mph
Space mean speed in outer lanes,	S_0 = 54.2	mph
Space mean speed for all vehicles,	S = 54.6	mph

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-385NB - I-385NB CD Post-Div
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2452	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	681	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	990	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	990	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	18.0	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-385NB - I-385NB CD (Pre-Div)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5057	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1405	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1225	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1225	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	22.3	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 NB
From/To:	I-385NB - I-385NB CD (Ramp)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2605	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	724	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1052	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1052	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	19.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Woodruff - I-385 NB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2452	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	903	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2452	903		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	681	251		v
Trucks and buses	18	18		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	0.917	0.917	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2970	1094	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.594 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1765 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4064	6750	No
v_3 or v_{av34}	1205 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1765 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4064	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 23.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.335	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = 52.5	mph
Space mean speed for all vehicles,	S = 51.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-385 SB to Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3976	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	866	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	2506	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3976	866	2506	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1104	241	696	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4815	1049	3035	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.591 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3276 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4815	6750	No
$v_{FO} = v_F - v_R$	3766	6750	No
v_R	1049	2100	No
v_3 or v_{av34}	1539 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 3276 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3276	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 32.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.392

Space mean speed in ramp influence area, S_R = 49.9 mph

Space mean speed in outer lanes, S_0 = 58.2 mph

Space mean speed for all vehicles, S = 52.3 mph

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	I-385SB C-D - I-385SB PostMrge
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5134	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1426	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1244	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1244	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	22.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	I-385SB C-D - I-385SB PreMerge
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3110	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	864	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1256	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1256	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	22.8	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/23/2011
Analysis Time Period:	PM
Freeway/Direction:	I-385 SB
From/To:	I-385SB C-D - I-385SB (Ramp)
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2024	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	562	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	817	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	817	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	14.9	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-385 SB C-D - I-385SB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3110	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	2024	vph
Length of first accel/decel lane	1150	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent Ramp		vph
Position of adjacent Ramp		
Type of adjacent Ramp		
Distance to adjacent Ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3110	2024		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	864	562		v
Trucks and buses	18	18		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	0.917	0.917	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3767	2451	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2091 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6218	6750	No
v_3 or v_{av34}	1676 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2152 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6218	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 16.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.368	
Space mean speed in ramp influence area,	S_R = 50.2	mph
Space mean speed in outer lanes,	S_0 = 51.0	mph
Space mean speed for all vehicles,	S = 50.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85SB to I-385NB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2826	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1205	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	733	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2826	1205	733	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	785	335	204	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3423	1459	888	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1900 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4882	6750	No
v_3 or v_{av34}	1523 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1956 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4882	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 15.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.154	
Space mean speed in ramp influence area,	S_R = 53.0	mph
Space mean speed in outer lanes,	S_0 = 51.5	mph
Space mean speed for all vehicles,	S = 52.5	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85NB to I-385NB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4031	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	733	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1205	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4031	733	1205	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1120	204	335	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4882	888	1459	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.107 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 521 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5770	9000	No
v_3 or v_{av34}	2180 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 1952 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5770	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 17.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.223	
Space mean speed in ramp influence area,	S_R = 52.1	mph
Space mean speed in outer lanes,	S_0 = 51.5	mph
Space mean speed for all vehicles,	S = 51.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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501 Huger Street
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-385SB to I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3528	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	1612	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	0	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	523	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3528	1612	523	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	980	448	145	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4273	1952	633	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2555 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4273	9000	No
$v_{FO} = v_F - v_R$	2321	9000	No
v_R	1952	4400	No
v_3 or v_{av34}	859 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2555 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2555	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = -0.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.344

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 54.1 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85SB to I-385NB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3355	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1471	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	424	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3355	1471	424	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	932	409	118	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4063	1782	514	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 2255 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5845	6750	No
v_3 or v_{av34}	1808 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2321 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5845	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 20.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.271	
Space mean speed in ramp influence area,	S_R = 51.5	mph
Space mean speed in outer lanes,	S_0 = 50.5	mph
Space mean speed for all vehicles,	S = 51.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	I-85NB to I-385NB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4826	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	424	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1471	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4826	424	1471	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1341	118	409	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5845	514	1782	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.154 Using Equation 4

$v_{12} = v_F (P_{FM})$ = 897 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6359	9000	No
v_3 or v_{av34}	2474 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	Yes	

If yes, v_{12A} = 2338 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6359	4600	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 18.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.224	
Space mean speed in ramp influence area,	S_R = 52.1	mph
Space mean speed in outer lanes,	S_0 = 50.5	mph
Space mean speed for all vehicles,	S = 51.2	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	I-385SB to I-85
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	55.0	mph
Volume on freeway	6482	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	2506	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	0	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	866	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6482	2506	866	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1801	696	241	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7850	3035	1049	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4287 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7850	9000	No
$v_{FO} = v_F - v_R$	4815	9000	No
v_R	3035	4400	No
v_3 or v_{av34}	1781 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4287 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4287	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = 14.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.441

Space mean speed in ramp influence area, S_R = 49.3 mph

Space mean speed in outer lanes, S_0 = 57.3 mph

Space mean speed for all vehicles, S = 52.6 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4764	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	1593	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	451	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4764	1593	451	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1323	443	125	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5770	1929	546	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2703 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4905	9000	No
$v_{FO} = v_F - v_R$	2976	9000	No
v_R	1929	4400	No
v_3 or v_{av34}	1101 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2703 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2703	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = -13.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.342

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 59.9 mph

Space mean speed for all vehicles, S = 54.4 mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4764	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	1593	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	733	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4764	1593	733	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1323	443	204	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5770	1929	888	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2703 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4905	9000	No
$v_{FO} = v_F - v_R$	2976	9000	No
v_R	1929	4400	No
v_3 or v_{av34}	1101 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2703 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2703	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = -13.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.342

Space mean speed in ramp influence area, S_R = 50.6 mph

Space mean speed in outer lanes, S_0 = 59.9 mph

Space mean speed for all vehicles, S = 54.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3171	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	451	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1593	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1950	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3171	451	1593	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	881	125	443	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3840	546	1929	pcph

Estimation of V12 Merge Areas

L_{EQ} = 2079.20 (Equation 13-6 or 13-7)

P_{FM} = 0.611 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 2347 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4386	6750	No
v_3 or v_{av34}	1493 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2347 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4386	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 18.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.226	
Space mean speed in ramp influence area,	S_R = 52.1	mph
Space mean speed in outer lanes,	S_0 = 51.4	mph
Space mean speed for all vehicles,	S = 51.8	mph

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3496	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	812	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	844	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3496	812	844	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	971	226	234	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4234	983	1022	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.609 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2963 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4234	6750	No
$v_{FO} = v_F - v_R$	3251	6750	No
v_R	983	2200	No
v_3 or v_{av34}	1271 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2963 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2963	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 19.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.256

Space mean speed in ramp influence area, S_R = 51.7 mph

Space mean speed in outer lanes, S_0 = 59.3 mph

Space mean speed for all vehicles, S = 53.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2684	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	844	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1612	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2684	844	1612	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	746	234	448	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3251	1022	1952	pcph

Estimation of V12 Merge Areas

L_{EQ} = 7226.95 (Equation 13-6 or 13-7)

P_{FM} = 0.837 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 2721 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4273	6750	No
v_3 or v_{av34}	530 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2721 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4273	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 24.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.321	
Space mean speed in ramp influence area,	S_R = 50.8	mph
Space mean speed in outer lanes,	S_0 = 54.9	mph
Space mean speed for all vehicles,	S = 51.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2684	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	844	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	812	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2220	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2684	844	812	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	746	234	226	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3251	1022	983	pcph

Estimation of V12 Merge Areas

L_{EQ} = 2055.02 (Equation 13-6 or 13-7)

P_{FM} = 0.619 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2014 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4273	6750	No
v_3 or v_{av34}	1237 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2014 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	4273	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 19.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable,	M_S = 0.237	
Space mean speed in ramp influence area,	S_R = 51.9	mph
Space mean speed in outer lanes,	S_0 = 52.3	mph
Space mean speed for all vehicles,	S = 52.0	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5250	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	896	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	825	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1900	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5250	896	825	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1458	249	229	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6358	1085	999	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2208 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5405	9000	No
$v_{FO} = v_F - v_R$	4320	9000	No
v_R	1085	4400	No
v_3 or v_{av34}	1598 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2208 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2208	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_D$ = -17.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.266

Space mean speed in ramp influence area, S_R = 51.5 mph

Space mean speed in outer lanes, S_0 = 58.0 mph

Space mean speed for all vehicles, S = 55.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	5	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5250	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	896	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	424	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	3100	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5250	896	424	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1458	249	118	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6358	1085	514	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2208 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5405	9000	No
$v_{FO} = v_F - v_R$	4320	9000	No
v_R	1085	4400	No
v_3 or v_{av34}	1598 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 2208 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2208	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = -17.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.266

Space mean speed in ramp influence area, S_R = 51.5 mph

Space mean speed in outer lanes, S_0 = 58.0 mph

Space mean speed for all vehicles, S = 55.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 NB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4354	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	825	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	896	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1950	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4354	825	896	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1209	229	249	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5273	999	1085	pcph

Estimation of V12 Merge Areas

L_{EQ} = 2482.81 (Equation 13-6 or 13-7)

P_{FM} = 0.586 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3089 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6272	6750	No
v_3 or v_{av34}	2184 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3089 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	6272	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 27.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.389	
Space mean speed in ramp influence area,	S_R = 49.9	mph
Space mean speed in outer lanes,	S_0 = 48.9	mph
Space mean speed for all vehicles,	S = 49.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	5569	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	55.0	mph
Volume on ramp	883	vph
Length of first accel/decel lane	1100	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1796	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	2500	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5569	883	1796	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1547	245	499	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6745	1069	2175	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.542 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4147 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6745	6750	No
$v_{FO} = v_F - v_R$	5676	6750	No
v_R	1069	2200	No
v_3 or v_{av34}	2598 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 4147 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4147	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 30.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.264

Space mean speed in ramp influence area, S_R = 51.6 mph

Space mean speed in outer lanes, S_0 = 54.1 mph

Space mean speed for all vehicles, S = 52.5 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4686	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1796	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2506	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1780	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4686	1796	2506	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1302	499	696	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5675	2175	3035	pcph

Estimation of V12 Merge Areas

L_{EQ} = 11236.58 Equation 13-6 or 13-7)

P_{FM} = 0.997 Using Equation 3

$v_{12} = v_F (P_{FM})$ = 5657 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7850	6750	Yes
v_3 or v_{av34}	18 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5657 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7850	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 56.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 9.984	
Space mean speed in ramp influence area,	S_R = -74.8	mph
Space mean speed in outer lanes,	S_0 = 55.0	mph
Space mean speed for all vehicles,	S =	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	9/23/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-385 SB
Junction:	Roper Mtn Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	4686	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	55.0	mph
Volume on ramp	1796	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	883	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	2220	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4686	1796	883	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1302	499	245	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5675	2175	1069	pcph

Estimation of V12 Merge Areas

L_{EQ} = 2820.50 (Equation 13-6 or 13-7)

P_{FM} = 0.582 Using Equation 2

$v_{12} = v_F (P_{FM})$ = 3300 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7850	6900	Yes
v_3 or v_{av34}	2375 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3300 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	7850	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 37.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.087	
Space mean speed in ramp influence area,	S_R = 40.4	mph
Space mean speed in outer lanes,	S_0 = 53.0	mph
Space mean speed for all vehicles,	S = 43.6	mph

CAPACITY ANALYSIS (HCS)
2015 ALTERNATE 4A CONDITIONS – WEAVE AREAS

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	9/28/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85NB
Weaving Location:	I-85NB @ US276
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	416	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3687	237	627	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1024	66	174	0	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4465	287	759	0	pc/h

Volume ratio, VR	0.190	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	67	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	375	lc/h
Total lane changes, LCALL	442	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.237	

Average weaving speed, SW	51.4	mi/h
Average non-weaving speed, SNW	53.4	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	53.0	mi/h
Weaving segment density, D	26.0	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.691	
Weaving segment flow rate, v	5511	pc/h
Weaving segment capacity, cW	7314	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4432	416	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1993	c
		Maximum	Analyzed	
v/c ratio		1.00	0.691	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	9/28/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85SB
Weaving Location:	I-85SB @ US276
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	420	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3588	758	1135	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	997	211	315	0	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4345	918	1375	0	pc/h

Volume ratio, VR	0.345	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	68	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	352	lc/h
Total lane changes, LCALL	420	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.226

Average weaving speed, SW	51.7	mi/h
Average non-weaving speed, SNW	52.0	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	51.9	mi/h
Weaving segment density, D	32.0	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.955	
Weaving segment flow rate, v	6638	pc/h
Weaving segment capacity, cW	6374	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6076	420	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1867	c
		Maximum	Analyzed	
v/c ratio		1.00	0.955	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	9/28/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85NB
Weaving Location:	I-85NB CD bt Woodruff & I-385
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	840	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	636	413	486	122	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	177	115	135	34	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	770	500	589	148	pc/h

Volume ratio, VR 0.543

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	82	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	67	lc/h
Total lane changes, LCALL	149	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.058

Average weaving speed, SW	43.4	mi/h
Average non-weaving speed, SNW	41.8	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	42.6	mi/h
Weaving segment density, D	15.7	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.454	
Weaving segment flow rate, v	2007	pc/h
Weaving segment capacity, cW	4058	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8329	840	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1677	c
		Maximum	Analyzed	
v/c ratio		1.00	0.454	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	9/28/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385 NB C-D
Weaving Location:	Woodruff to I-85
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	Two-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	2000	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	908	231	914	5	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	252	64	254	1	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1100	280	1107	6	pc/h
Volume ratio, VR		0.002			

Configuration Characteristics

Number of maneuver lanes, NWL	0	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF		lc/pc
Minimum FR lane changes, LCFR		lc/pc
Minimum RR lane changes, LCRR	2	lc/pc
Minimum weaving lane changes, LCMIN	12	lc/h
Weaving lane changes, LCW	76	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	1211	lc/h
Total lane changes, LCALL	1287	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.160

Average weaving speed, SW	49.5	mi/h
Average non-weaving speed, SNW	48.9	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	48.9	mi/h
Weaving segment density, D	25.5	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.635	
Weaving segment flow rate, v	2493	pc/h
Weaving segment capacity, cW	3602	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	5750	2000	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1963	c
		Maximum	Analyzed	
v/c ratio		1.00	0.635	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	9/28/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385 SB C-D
Weaving Location:	I-85 to Woodruff
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1335	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	536	474	1286	61	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	149	132	357	17	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	649	574	1557	74	pc/h

Volume ratio, VR 0.747

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	2131	lc/h
Weaving lane changes, LCW	2244	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	295	lc/h
Total lane changes, LCALL	2539	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.375

Average weaving speed, SW	44.1	mi/h
Average non-weaving speed, SNW	35.1	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	41.4	mi/h
Weaving segment density, D	23.0	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.609	
Weaving segment flow rate, v	2854	pc/h
Weaving segment capacity, cW	4300	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	9283	1335	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1642	c
		Maximum	Analyzed	
v/c ratio		1.00	0.609	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	9/28/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85NB
Weaving Location:	I-85NB @ US276
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	416	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3097	385	449	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	860	107	125	0	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3751	466	544	0	pc/h

Volume ratio, VR	0.212	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	67	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	228	lc/h
Total lane changes, LCALL	295	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.172

Average weaving speed, SW	53.4	mi/h
Average non-weaving speed, SNW	54.3	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	54.1	mi/h
Weaving segment density, D	22.0	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.603	
Weaving segment flow rate, v	4761	pc/h
Weaving segment capacity, cW	7248	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4661	416	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1975	c
		Maximum	Analyzed	
v/c ratio		1.00	0.603	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	9/28/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85SB
Weaving Location:	I-85SB @ US276
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	420	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	5323	493	677	0	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1479	137	188	0	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6447	597	820	0	pc/h

Volume ratio, VR	0.180	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	0	lc/h
Weaving lane changes, LCW	68	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	785	lc/h
Total lane changes, LCALL	853	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.395	

Average weaving speed, SW	47.3	mi/h
Average non-weaving speed, SNW	50.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	49.9	mi/h
Weaving segment density, D	39.4	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.983	
Weaving segment flow rate, v	7864	pc/h
Weaving segment capacity, cW	7343	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	4335	420	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	2001	c
		Maximum	Analyzed	
v/c ratio		1.00	0.983	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	9/28/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85NB
Weaving Location:	I-85NB CD bt Woodruff & I-385
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	840	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1048	670	707	348	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	291	186	196	97	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1269	811	856	421	pc/h

Volume ratio, VR 0.497

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	1667	lc/h
Weaving lane changes, LCW	1749	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	226	lc/h
Total lane changes, LCALL	1975	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.444

Average weaving speed, SW	35.8	mi/h
Average non-weaving speed, SNW	27.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	31.2	mi/h
Weaving segment density, D	35.9	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.695	
Weaving segment flow rate, v	3357	pc/h
Weaving segment capacity, cW	4434	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7786	840	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1719	c
		Maximum	Analyzed	
v/c ratio		1.00	0.695	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	9/28/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385 NB C-D
Weaving Location:	Woodruff to I-85
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	Two-Sided	
Number of lanes, N	2	ln
Weaving segment length, LS	2000	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1049	165	767	63	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	291	46	213	18	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1270	200	929	76	pc/h

Volume ratio, VR 0.031

Configuration Characteristics

Number of maneuver lanes, NWL	0	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF		lc/pc
Minimum FR lane changes, LCFR		lc/pc
Minimum RR lane changes, LCRR	2	lc/pc
Minimum weaving lane changes, LCMIN	152	lc/h
Weaving lane changes, LCW	216	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	1193	lc/h
Total lane changes, LCALL	1409	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.171

Average weaving speed, SW	49.1	mi/h
Average non-weaving speed, SNW	48.0	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	48.0	mi/h
Weaving segment density, D	25.8	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.637	
Weaving segment flow rate, v	2475	pc/h
Weaving segment capacity, cW	3565	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6012	2000	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1943	c
		Maximum	Analyzed	
v/c ratio		1.00	0.637	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	9/28/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385 CD SB
Weaving Location:	I-85 to Woodruff
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1335	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	613	790	1003	228	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	170	219	279	63	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	742	957	1215	276	pc/h

Volume ratio, VR	0.681	

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	2172	lc/h
Weaving lane changes, LCW	2285	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	355	lc/h
Total lane changes, LCALL	2640	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.387

Average weaving speed, SW	43.8	mi/h
Average non-weaving speed, SNW	34.3	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	40.2	mi/h
Weaving segment density, D	26.4	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.623	
Weaving segment flow rate, v	3190	pc/h
Weaving segment capacity, cW	4695	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8450	1335	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1706	c
		Maximum	Analyzed	
v/c ratio		1.00	0.623	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

CAPACITY ANALYSIS (HCS)
2035 ALTERNATE 4A CONDITIONS – FREEWAY SEGMENTS

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*US 276 EB TO BEGIN*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9009*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3637*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd to End*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9468*	veh/h	Peak-Hour Factor, PHF	*0.90*	
AADT		veh/day	%Trucks and Buses, P_T	*18*	
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*	
Peak-Hr Direction Prop, D			General Terrain:	*Level*	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*	

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3822*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8341*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3367*	pc/h/ln
S	*3.3*	mph
D = v_p / S	*1020.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6960*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2810*	pc/h/ln
S	*33.4*	mph
D = v_p / S	*84.1*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-385 to Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9734*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2947*	pc/h/ln
S	*27.1*	mph
D = v_p / S	*108.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85NB C-D Ramp to I-385 on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5346*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2158*	pc/h/ln
S	*54.3*	mph
D = v_p / S	*39.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85NB CD off to I-85NB CD on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3259*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1316*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*21.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*US 276 to Woodruff Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5930*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2394*	pc/h/ln
S	*48.6*	mph
D = v_p / S	*49.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*at 276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5044*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2036*	pc/h/ln
S	*56.5*	mph
D = v_p / S	*36.0*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*276 EB to 276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5550*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2241*	pc/h/ln
S	*52.5*	mph
D = v_p / S	*42.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*AT 276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4933*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1991*	pc/h/ln
S	*57.2*	mph
D = v_p / S	*34.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*BEGIN TO US 276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6609*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2668*	pc/h/ln
S	*39.3*	mph
D = v_p / S	*67.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*End to Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9250*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3734*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6467*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2611*	pc/h/ln
S	*41.4*	mph
D = v_p / S	*63.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6910*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2790*	pc/h/ln
S	*34.3*	mph
D = v_p / S	*81.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd to I-385*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8859*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2682*	pc/h/ln
S	*38.7*	mph
D = v_p / S	*69.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-385 OFF to I-385 ON*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3949*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1594*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*26.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-385 ON to Woodruff*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6004*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2424*	pc/h/ln
S	*47.7*	mph
D = v_p / S	*50.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Woodruff Rd to US 276*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6840*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2761*	pc/h/ln
S	*35.5*	mph
D = v_p / S	*77.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6172*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2492*	pc/h/ln
S	*45.6*	mph
D = v_p / S	*54.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*at US 276*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7663*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3094*	pc/h/ln
S	*19.5*	mph
D = v_p / S	*158.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6598*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2664*	pc/h/ln
S	*39.4*	mph
D = v_p / S	*67.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*US 276 EB TO BEGIN*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7213*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2912*	pc/h/ln
S	*28.7*	mph
D = v_p / S	*101.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd to End*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7392*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2984*	pc/h/ln
S	*25.2*	mph
D = v_p / S	*118.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd eb on to wb on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6535*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2638*	pc/h/ln
S	*40.4*	mph
D = v_p / S	*65.2*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5404*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2182*	pc/h/ln
S	*53.8*	mph
D = v_p / S	*40.5*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-385 to Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7864*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2381*	pc/h/ln
S	*48.9*	mph
D = v_p / S	*48.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*C-D Ramp to I-385 on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4384*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1770*	pc/h/ln
S	*59.5*	mph
D = v_p / S	*29.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85NB CD off to I-85NB CD on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3743*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1511*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*25.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*US 276 to Woodruff Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6350*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2564*	pc/h/ln
S	*43.1*	mph
D = v_p / S	*59.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
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LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*at 276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5563*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2246*	pc/h/ln
S	*52.4*	mph
D = v_p / S	*42.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*276 EB to 276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6388*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2579*	pc/h/ln
S	*42.6*	mph
D = v_p / S	*60.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*AT 276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6058*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2446*	pc/h/ln
S	*47.0*	mph
D = v_p / S	*52.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*BEGIN TO US 276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6412*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2589*	pc/h/ln
S	*42.2*	mph
D = v_p / S	*61.3*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*End to Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7927*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3200*	pc/h/ln
S	*13.5*	mph
D = v_p / S	*236.9*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6789*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2741*	pc/h/ln
S	*36.4*	mph
D = v_p / S	*75.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7579*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3060*	pc/h/ln
S	*21.3*	mph
D = v_p / S	*143.7*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Pelham Rd to I-385*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9099*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2755*	pc/h/ln
S	*35.8*	mph
D = v_p / S	*77.0*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-385 off to I-385 on*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5200*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2099*	pc/h/ln
S	*55.5*	mph
D = v_p / S	*37.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-385 ON to Woodruff Rd*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7192*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2903*	pc/h/ln
S	*29.2*	mph
D = v_p / S	*99.5*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*Woodruff Rd to US 276*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8610*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3476*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*276 WB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8006*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3232*	pc/h/ln
S	*11.6*	mph
D = v_p / S	*277.8*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*at US 276*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8897*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3592*	pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS		
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)		pc/h/ln
S		mph
D = v_p / S		pc/mi/ln
Required Number of Lanes, N		

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*7/7/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*276 EB*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8183*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*3304*	pc/h/ln
S	*7.3*	mph
D = v_p / S	*454.4*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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CAPACITY ANALYSIS (HCS)
2035 ALTERNATE 4A CONDITIONS – RAMPS

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Acceleration Lane Length, L_A: 550	☑ No ☐ Off
L_{up} = 2800 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 2783 veh/h	Freeway Volume, V_F: 6467	V_D = veh/h
	Ramp Volume, V_R: 443	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6467	0.90	Level	18	0	0.917	1.00	7832
Ramp	443	0.90	Level	18	0	0.917	1.00	537
UpStream	2783	0.90	Level	18	0	0.917	1.00	3371
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1201.77 (Equation 13-6 or 13-7)

P_{FM} = 0.593 using Equation (Exhibit 13-6)

V_{12} = 4644 pc/h

V_3 or V_{av34} 3188 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 5132 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8369	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5669	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 46.0 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.418 (Exibit 13-11)

S_R= 34.5 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 38.5 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/9/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6467	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	443	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1949	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2760	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6467	443	1949	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1796	123	541	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7832	537	2360	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4644 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8369	6900	Yes
v_3 or v_{av34}	3188 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	Yes	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 5132 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8369	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 46.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 1.418	
Space mean speed in ramp influence area,	S_R = 34.5	mph
Space mean speed in outer lanes,	S_0 = 51.1	mph
Space mean speed for all vehicles,	S = 38.5	mph

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	I-385 Ramps
Date Performed	8/24/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Acceleration Lane Length, L_A	750	☐ Yes	☐ On
☐ No	☑ Off	Deceleration Lane Length L_D		☑ No	☐ Off
L_{up} =	7500 ft	Freeway Volume, V_F	5200	L_{down} =	ft
V_u =	3899 veh/h	Ramp Volume, V_R	1992	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	45.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5200	0.90	Level	18	0	0.917	1.00	6298
Ramp	1992	0.90	Level	18	0	0.917	1.00	2413
UpStream	3899	0.90	Level	18	0	0.917	1.00	4722
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 3495 pc/h

V_3 or V_{av34} 2803 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 3598 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8711	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6011	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 32.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.642 (Exibit 13-11)

S_R= 30.4 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 34.8 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Road
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{up} = ft
V_u = veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	1400
Freeway Volume, V_F	7927
Ramp Volume, V_R	1138
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{down} = 2000 ft
V_D = 790 veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7927	0.90	Level	18	0	0.917	1.00	9600
Ramp	1138	0.90	Level	18	0	0.917	1.00	1378
UpStream								
DownStream	790	0.90	Level	18	0	0.917	1.00	957

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = using Equation (Exhibit 13-6)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)
S_R = mph (Exhibit 13-11)
S_0 = mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = 0.457 using Equation (Exhibit 13-7)
V_{12} = 5132 pc/h
V_3 or V_{av34} 4468 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes, V_{12a} = 6900 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9600	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	8222	Exhibit 13-8	6900	Yes
V_R	1378	Exhibit 13-10	2100	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5132	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 51.0 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.422 (Exhibit 13-12)
S_R = 52.4 mph (Exhibit 13-12)
S_0 = 59.2 mph (Exhibit 13-12)
S = 54.1 mph (Exhibit 13-13)

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HCS 2010: Basic Freeway Segments Release 6.2

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-85SB (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1992	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	553	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1206	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1206	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	21.9	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-85SB CD - I-85SB Pre-Merge*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5200*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2099*	pc/h/ln
S	*55.5*	mph
D = v_p / S	*37.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-85SB CD - I-85SB Post-Merge*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7192*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2178*	pc/h/ln
S	*53.9*	mph
D = v_p / S	*40.4*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	I-385 Ramps
Date Performed	8/24/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 750	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 4300 ft
V_u = veh/h	Freeway Volume, V_F: 5200	V_D = 1418 veh/h
	Ramp Volume, V_R: 1992	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5200	0.90	Level	18	0	0.917	1.00	6298
Ramp	1992	0.90	Level	18	0	0.917	1.00	2413
UpStream								
DownStream	1418	0.90	Level	18	0	0.917	1.00	1717

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 3495 pc/h

V_3 or V_{av34} 2803 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 3598 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8711	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6011	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 32.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.642 (Exibit 13-11)

S_R= 30.4 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 34.8 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	I-385 Ramps
Date Performed	8/24/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Acceleration Lane Length, L_A: 750	☑ No ☐ Off
L_{up} = 7500 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 4910 veh/h	Freeway Volume, V_F: 3949	V_D = veh/h
	Ramp Volume, V_R: 2055	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	3949	0.90	Level	18	0	0.917	1.00	4783
Ramp	2055	0.90	Level	18	0	0.917	1.00	2489
UpStream	4910	0.90	Level	18	0	0.917	1.00	5947
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2655 pc/h

V_3 or V_{av34} 2128 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2733 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7272	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5222	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 26.3 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.774 (Exibit 13-11)

S_R= 46.1 mph (Exhibit 13-11)

S_0= 54.4 mph (Exhibit 13-11)

S = 48.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Road
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 1400	L_{down} = 2000 ft
V_u = veh/h	Freeway Volume, V_F: 9250	V_D = 443 veh/h
	Ramp Volume, V_R: 2783	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	9250	0.90	Level	18	0	0.917	1.00	11203
Ramp	2783	0.90	Level	18	0	0.917	1.00	3371
UpStream								
DownStream	443	0.90	Level	18	0	0.917	1.00	537

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.325 using Equation (Exhibit 13-7)

V_{12} = 5915 pc/h

V_3 or V_{av34} 5288 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 8503 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	11203	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	7832	Exhibit 13-8	6900	Yes
V_R	3371	Exhibit 13-10	2100	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5915	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 64.8 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.601 (Exhibit 13-12)

S_R = 49.2 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 51.3 mph (Exhibit 13-13)

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HCS 2010: Basic Freeway Segments Release 6.2

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-85SB (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2055	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	571	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1244	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1244	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	22.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-85SB CD - I-85SB Pre-Merge*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3949*	veh/h	Peak-Hour Factor, PHF	*0.90*	
AADT		veh/day	%Trucks and Buses, P_T	*18*	
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*	
Peak-Hr Direction Prop, D			General Terrain:	*Level*	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*	

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1594*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*26.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*JP*	Highway/Direction of Travel	*I-85 SB*
Agency or Company	*Florence & Hutcheson*	From/To	*I-85SB CD - I-85SB Post-Merge*
Date Performed	*8/24/2011*	Jurisdiction	*Greenville, SC*
Analysis Time Period	*AM*	Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6004*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1818*	pc/h/ln
S	*59.1*	mph
D = v_p / S	*30.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	I-385 Ramps
Date Performed	8/24/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 750	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 4300 ft
V_u = veh/h	Freeway Volume, V_F: 3949	V_D = 836 veh/h
	Ramp Volume, V_R: 2055	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3949	0.90	Level	18	0	0.917	1.00	4783
Ramp	2055	0.90	Level	18	0	0.917	1.00	2489
UpStream								
DownStream	836	0.90	Level	18	0	0.917	1.00	1012

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2655 pc/h

V_3 or V_{av34} 2128 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2733 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7272	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5222	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 26.3 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.774 (Exibit 13-11)

S_R= 46.1 mph (Exhibit 13-11)

S_0= 54.4 mph (Exhibit 13-11)

S = 48.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/25/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	To I-85 SB
From/To	I-385 SB to I-85SB
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	1992 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 2412.53$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: F

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/25/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	To I-85 SB
From/To	I-385 SB to I-85SB
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	2055 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 2488.83$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: F

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	To I-85 SB
From/To	I-385SB to I-85SB
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	1112 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1346.76$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	To I-85 SB
From/To	I-385SB to I-85SB
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	890 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1077.89$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-85SB C-D to I-385 SB
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	1172 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1419.42$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-85SB C-D to I-385 SB
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	2065 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 2500.94$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: F

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	1/31/2012
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB C-D
Junction:	I-385NB & Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2727	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	416	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2727	416		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	758	116		v
Trucks and buses	18	18		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	0.917	0.917	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3303	504	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3303 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3303	4500	No
$v_{FO} = v_F - v_R$	2799	4500	No
v_R	504	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3303 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3303	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 32.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.343

Space mean speed in ramp influence area, S_R = 50.5 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.5 mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/31/2012
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-85SB CD - I-385NB/Wdrf (Ramp)
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	416 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 503.82$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: A

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/31/2012
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-385NB/Wdrf PreDi
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2727	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	758	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1651	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1651	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	30.0	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/31/2012
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-385NB/Wdrf PosDi
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2311	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	642	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1399	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1399	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	25.4	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	1/31/2012
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB C-D
Junction:	I-385NB & Woodruff
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2845	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	839	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2845	839		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	790	233		v
Trucks and buses	18	18		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

Heavy vehicle adjustment, fHV	0.917	0.917	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3446	1016	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3446 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3446	4500	No
$v_{FO} = v_F - v_R$	2430	4500	No
v_R	1016	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3446 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3446	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 33.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.389

Space mean speed in ramp influence area, S_R = 49.9 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.9 mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/31/2012
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 SB C-D
From/To	I-85SB CD - I-385NB/Wdrf (Ramp)
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	839 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1016.12$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/31/2012
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-385NB/Wdrf PreDi
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2845	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	790	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1723	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1723	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	31.3	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/31/2012
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-385NB/Wdrf PosDi
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2006	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	557	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1215	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1215	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	22.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/9/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB C-D
Junction:	I-385
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	3899	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2311	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	416	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1850	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3899	2311	416	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1083	642	116	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4722	2799	504	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3664 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4722	6750	No
$v_{FO} = v_F - v_R$	1923	6750	No
v_R	2799	4200	No
v_3 or v_{av34}	1058 pc/h	(Equation 13-14 or 13-17)	
Is v_3 or v_{av34}	> 2700 pc/h?	No	
Is v_3 or v_{av34}	> 1.5 v_{12} /2	No	

If yes, v_{12A} = 3664 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3664	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 23.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.550

Space mean speed in ramp influence area, S_R = 47.9 mph

Space mean speed in outer lanes, S_0 = 60.3 mph

Space mean speed for all vehicles, S = 49.8 mph

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/30/2012
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-85SB (Ramp)
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1172	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	326	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	710	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	710	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	12.9	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/30/2012
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-85SB Pre-Diverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3899	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1083	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1574	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1574	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	28.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/30/2012
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-85SB PostDiverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2727	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	758	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1651	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1651	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	30.0	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/9/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 SB C-D
Junction:	I-385
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4910	vph

Off Ramp Data

Side of freeway	Left	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2006	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	839	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1850	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4910	2006	839	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1364	557	233	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5947	2429	1016	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4012 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5947	6750	No
$v_{FO} = v_F - v_R$	3518	6750	No
v_R	2429	4200	No
v_3 or v_{av34}	1935 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 4012 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4012	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086 v_R - 0.009 L_D$ = 27.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.517

Space mean speed in ramp influence area, S_R = 48.3 mph

Space mean speed in outer lanes, S_0 = 57.5 mph

Space mean speed for all vehicles, S = 50.6 mph

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	1/30/2012
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-85SB (Ramp)
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2065	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	574	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1250	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1250	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	22.7	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Date Performed:	1/30/2012
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-85SB Pre-Diverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4910	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1364	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1982	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1982	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.2	mi/h
Number of lanes, N	3	
Density, D	36.6	pc/mi/ln
Level of service, LOS	E	

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Date Performed:	1/30/2012
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB CD - I-85SB PostDiverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2845	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	790	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1723	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1723	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	31.3	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 SB
From/To:	I-85SB - I-85SB CD (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3899	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1083	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1574	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1574	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	28.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-85SB - I-85SB CD Pre-Diverge*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9099*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2204*	pc/h/ln
S	*53.4*	mph
D = v_p / S	*41.3*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-85SB - I-85SB CD PostDiverge*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5200*	veh/h	Peak-Hour Factor, PHF	*0.90*	
AADT		veh/day	%Trucks and Buses, P_T	*18*	
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*	
Peak-Hr Direction Prop, D			General Terrain:	*Level*	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*	

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2099*	pc/h/ln
S	*55.5*	mph
D = v_p / S	*37.8*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 SB
From/To:	I-85SB - I-85SB CD (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4910	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1364	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1982	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1982	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.2	mi/h
Number of lanes, N	3	
Density, D	36.6	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

BASIC FREEWAY SEGMENTS WORKSHEET

General Information		Site Information	
Analyst	*JP*	Highway/Direction of Travel	*I-85 SB*
Agency or Company	*Florence & Hutcheson*	From/To	*I-85SB - I-85SB CD Pre-Diverge*
Date Performed	*8/24/2011*	Jurisdiction	*Greenville, SC*
Analysis Time Period	*AM*	Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*8859*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs			Calc Speed Adj and FFS		
Lane Width		ft			
Rt-Side Lat. Clearance		ft	f_{LW}		mph
Number of Lanes, N	*5*		f_{LC}		mph
Total Ramp Density, TRD		ramps/mi	TRD Adjustment		mph
FFS (measured)	*60.0*	mph	FFS	*60.0*	mph
Base free-flow Speed, BFFS		mph			

LOS and Performance Measures			Design (N)	
Operational (LOS)			Design (N)	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2146*	pc/h/ln	Design LOS	
S	*54.6*	mph	v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
D = v_p / S	*39.3*	pc/mi/ln	S	mph
LOS	*E*		D = v_p / S	pc/mi/ln
			Required Number of Lanes, N	

Glossary		Factor Location	
N - Number of lanes	S - Speed	E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
V - Hourly volume	D - Density	E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
v_p - Flow rate	FFS - Free-flow speed	f_p - Page 11-18	TRD - Page 11-11
LOS - Level of service	BFFS - Base free-flow speed	LOS, S, FFS, v_p - Exhibits 11-2, 11-3	
DDHV - Directional design hour volume			

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 SB*
From/To	*I-85SB - I-85SB CD PostDiverge*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3949*	veh/h	Peak-Hour Factor, PHF	*0.90*	
AADT		veh/day	%Trucks and Buses, P_T	*18*	
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*	
Peak-Hr Direction Prop, D			General Terrain:	*Level*	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*	

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1594*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*26.6*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Woodruff Rd.
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{up} = 2250 ft
V_u = 1992 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	1500
Deceleration Lane Length L_D	
Freeway Volume, V_F	7192
Ramp Volume, V_R	1418
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7192	0.90	Level	18	0	0.917	1.00	8710
Ramp	1418	0.90	Level	18	0	0.917	1.00	1717
UpStream	1992	0.90	Level	18	0	0.917	1.00	2413
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = 0.619 using Equation (Exhibit 13-6)
V_{12} = 5396 pc/h
V_3 or V_{av34} 3314 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 6010 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10427	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	7727	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 55.6 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 9.034 (Exibit 13-11)
S_R= -102.6 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Woodruff Rd.
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp

☑ Yes ☑ On

☐ No ☐ Off

L_{up} = 2250 ft

V_u = 2055 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	1500
Deceleration Lane Length L_D	
Freeway Volume, V_F	6004
Ramp Volume, V_R	836
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp

☐ Yes ☐ On

☑ No ☐ Off

L_{down} = ft

V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	6004	0.90	Level	18	0	0.917	1.00	7272
Ramp	836	0.90	Level	18	0	0.917	1.00	1012
UpStream	2055	0.90	Level	18	0	0.917	1.00	2489
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 4505 pc/h

V_3 or V_{av34} 2767 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 4572 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8284	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5584	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 39.2 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.224 (Exibit 13-11)

S_R= 38.0 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 41.4 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 450 ft
V_u = 506 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	550
Deceleration Lane Length L_D	
Freeway Volume, V_F	5044
Ramp Volume, V_R	886
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	30.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5044	0.90	Level	18	0	0.917	1.00	6109
Ramp	886	0.90	Level	18	0	0.917	1.00	1073
UpStream	506	0.90	Level	18	0	0.917	1.00	613
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 947.75 (Equation 13-6 or 13-7)
P_{FM} = 0.561 using Equation (Exhibit 13-6)
V_{12} = 3430 pc/h
V_3 or V_{av34} 2679 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No
If Yes,V_{12a} = 3490 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7182	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4563	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 37.1 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.662 (Exibit 13-11)
S_R= 48.1 mph (Exhibit 13-11)
S_0= 51.6 mph (Exhibit 13-11)
S = 49.3 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 450 ft
V_u = 825 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	550
Deceleration Lane Length L_D	
Freeway Volume, V_F	5563
Ramp Volume, V_R	787
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	30.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5563	0.90	Level	18	0	0.917	1.00	6737
Ramp	787	0.90	Level	18	0	0.917	1.00	953
UpStream	825	0.90	Level	18	0	0.917	1.00	999
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1056.46 (Equation 13-6 or 13-7)
P_{FM} = 0.555 using Equation (Exhibit 13-6)
V_{12} = 3736 pc/h
V_3 or V_{av34} 3001 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 4037 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7690	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4990	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 40.5 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.861 (Exibit 13-11)
S_R= 44.5 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 46.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Acceleration Lane Length, L_A		☐ Yes	☐ On
☐ No	☐ Off	Deceleration Lane Length L_D	420	☑ No	☐ Off
L_{up} =	420 ft	Freeway Volume, V_F	5550	L_{down} =	ft
V_u =	617 veh/h	Ramp Volume, V_R	506	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	25.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5550	0.90	Level	18	0	0.917	1.00	6722
Ramp	506	0.90	Level	18	0	0.917	1.00	613
UpStream	617	0.90	Level	18	0	0.917	1.00	747
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 4172.76 (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 6722 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6722	Exhibit 13-8	6900	No
$V_{FO} = V_F - V_R$	6109	Exhibit 13-8	6900	No
V_R	613	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	6722	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 58.3 (pc/mi/ln)

LOS = E (Exhibit 13-2)

Speed Determination

D_s = 0.613 (Exhibit 13-12)

S_R = 49.0 mph (Exhibit 13-12)

S_0 = 65.8 mph (Exhibit 13-12)

S = 49.0 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Acceleration Lane Length, L_A: 1500	☑ No ☐ Off
L_{up} = 2800 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 1381 veh/h	Freeway Volume, V_F: 8341	V_D = veh/h
	Ramp Volume, V_R: 1127	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	8341	0.90	Level	18	0	0.917	1.00	10102
Ramp	1127	0.90	Level	18	0	0.917	1.00	1365
UpStream	1381	0.90	Level	18	0	0.917	1.00	1673
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.619 using Equation (Exhibit 13-6)

V_{12} = 6258 pc/h

V_3 or V_{av34} 3844 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 7402 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	11467	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8767	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 63.8 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 25.220 (Exibit 13-11)

S_R= -394.0 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 374.6 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 420	L_{down} = 450 ft
V_u = veh/h	Freeway Volume, V_F: 5550	V_D = 886 veh/h
	Ramp Volume, V_R: 506	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5550	0.90	Level	18	0	0.917	1.00	6722
Ramp	506	0.90	Level	18	0	0.917	1.00	613
UpStream								
DownStream	886	0.90	Level	18	0	0.917	1.00	1073

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.564 using Equation (Exhibit 13-7)

V_{12} = 4057 pc/h

V_3 or V_{av34} 2665 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	6722	Exhibit 13-8	6900	No
$V_{FO} = V_F - V_R$	6109	Exhibit 13-8	6900	No
V_R	613	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4057	Exhibit 13-8	4400:All	No

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 35.4 (pc/mi/ln)

LOS = E (Exhibit 13-2)

Speed Determination

D_s = 0.613 (Exhibit 13-12)

S_R = 49.0 mph (Exhibit 13-12)

S_0 = 59.3 mph (Exhibit 13-12)

S = 52.6 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☑ On	Acceleration Lane Length, L_A		☐ Yes	☐ On
☐ No	☐ Off	Deceleration Lane Length L_D	420	☑ No	☐ Off
L_{up} =	420 ft	Freeway Volume, V_F	6388	L_{down} =	ft
V_u =	330 veh/h	Ramp Volume, V_R	825	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	25.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6388	0.90	Level	18	0	0.917	1.00	7737
Ramp	825	0.90	Level	18	0	0.917	1.00	999
UpStream	330	0.90	Level	18	0	0.917	1.00	400
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 2311.78 (Equation 13-12 or 13-13)

P_{FD} = 0.990 using Equation (Exhibit 13-7)

V_{12} = 7673 pc/h

V_3 or V_{av34} 64 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7737	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	6738	Exhibit 13-8	6900	No
V_R	999	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	7673	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 66.5 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.648 (Exhibit 13-12)

S_R= 48.3 mph (Exhibit 13-12)

S_0= 65.8 mph (Exhibit 13-12)

S = 48.4 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{up} = 2800 ft
V_u = 1131 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	1500
Deceleration Lane Length L_D	
Freeway Volume, V_F	6535
Ramp Volume, V_R	857
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6535	0.90	Level	18	0	0.917	1.00	7915
Ramp	857	0.90	Level	18	0	0.917	1.00	1038
UpStream	1131	0.90	Level	18	0	0.917	1.00	1370
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = 0.619 using Equation (Exhibit 13-6)
V_{12} = 4903 pc/h
V_3 or V_{av34} 3012 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 5215 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8953	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6253	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 44.4 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 2.212 (Exibit 13-11)
S_R= 20.2 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 24.7 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Acceleration Lane Length, L_A		☑ Yes	☑ On
☑ No	☐ Off	Deceleration Lane Length L_D	420	☐ No	☐ Off
L_{up} =	ft	Freeway Volume, V_F	6388	L_{down} =	450 ft
V_u =	veh/h	Ramp Volume, V_R	825	V_D =	787 veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	25.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6388	0.90	Level	18	0	0.917	1.00	7737
Ramp	825	0.90	Level	18	0	0.917	1.00	999
UpStream								
DownStream	787	0.90	Level	18	0	0.917	1.00	953

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.521 using Equation (Exhibit 13-7)

V_{12} = 4507 pc/h

V_3 or V_{av34} 3230 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 5037 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7737	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	6738	Exhibit 13-8	6900	No
V_R	999	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4507	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 43.8 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.648 (Exhibit 13-12)

S_R = 48.3 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 51.6 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 500 ft
V_u = 1676 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	420
Deceleration Lane Length L_D	
Freeway Volume, V_F	4933
Ramp Volume, V_R	617
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4933	0.90	Level	18	0	0.917	1.00	5974
Ramp	617	0.90	Level	18	0	0.917	1.00	747
UpStream	1676	0.90	Level	18	0	0.917	1.00	2030
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 529.77 (Equation 13-6 or 13-7)
P_{FM} = 0.587 using Equation (Exhibit 13-6)
V_{12} = 3508 pc/h
V_3 or V_{av34} 2466 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6721	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4255	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 35.7 (pc/mi/ln)
LOS = E (Exhibit 13-2)

Speed Determination

M_S = 0.575 (Exibit 13-11)
S_R= 49.7 mph (Exhibit 13-11)
S_0= 52.5 mph (Exhibit 13-11)
S = 50.7 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☑ Yes	☐ On	Acceleration Lane Length, L_A	650	☐ Yes	☐ On
☐ No	☑ Off	Deceleration Lane Length L_D		☑ No	☐ Off
L_{up} =	1300 ft	Freeway Volume, V_F	6960	L_{down} =	ft
V_u =	2774 veh/h	Ramp Volume, V_R	1381	V_D =	veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6960	0.90	Level	18	0	0.917	1.00	8429
Ramp	1381	0.90	Level	18	0	0.917	1.00	1673
UpStream	2774	0.90	Level	18	0	0.917	1.00	3360
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1617.03 (Equation 13-6 or 13-7)

P_{FM} = 0.576 using Equation (Exhibit 13-6)

V_{12} = 4851 pc/h

V_3 or V_{av34} 3578 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 5729 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10102	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	7402	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 58.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 6.675 (Exibit 13-11)

S_R= -60.2 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Acceleration Lane Length, L_A: 1450	☑ No ☐ Off
L_{up} = 5600 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 2671 veh/h	Freeway Volume, V_F: 3259	V_D = veh/h
	Ramp Volume, V_R: 2087	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3259	0.90	Level	18	0	0.917	1.00	3947
Ramp	2087	0.90	Level	18	0	0.917	1.00	2528
UpStream	2671	0.90	Level	18	0	0.917	1.00	3235
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2191 pc/h

V_3 or V_{av34} 1756 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2255 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6475	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4783	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 21.6 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.500 (Exibit 13-11)

S_R= 51.0 mph (Exhibit 13-11)

S_0= 55.7 mph (Exhibit 13-11)

S = 52.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{up} = ft
V_u = veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	420
Deceleration Lane Length L_D	
Freeway Volume, V_F	4933
Ramp Volume, V_R	617
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{down} = 420 ft
V_D = 506 veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	4933	0.90	Level	18	0	0.917	1.00	5974
Ramp	617	0.90	Level	18	0	0.917	1.00	747
UpStream								
DownStream	506	0.90	Level	18	0	0.917	1.00	613

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 3966.61 (Equation 13-6 or 13-7)
P_{FM} = 0.932 using Equation (Exhibit 13-6)
V_{12} = 5569 pc/h
V_3 or V_{av34} 405 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6721	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6316	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 51.8 (pc/mi/ln)
LOS = E (Exhibit 13-2)

Speed Determination

M_S = 2.458 (Exibit 13-11)
S_R = 15.8 mph (Exhibit 13-11)
S_0 = 60.0 mph (Exhibit 13-11)
S = 16.5 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R = mph (Exhibit 13-12)
S_0 = mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 650	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 2900 ft
V_u = veh/h	Freeway Volume, V_F: 6960	V_D = 1127 veh/h
	Ramp Volume, V_R: 1381	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6960	0.90	Level	18	0	0.917	1.00	8429
Ramp	1381	0.90	Level	18	0	0.917	1.00	1673
UpStream								
DownStream	1127	0.90	Level	18	0	0.917	1.00	1365

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 using Equation (Exhibit 13-6)

V_{12} = 5021 pc/h

V_3 or V_{av34} = 3408 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 5729 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10102	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	7402	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 58.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 6.675 (Exibit 13-11)

S_R = -60.2 mph (Exhibit 13-11)

S_0 = 51.1 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	8/24/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 1450	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 5000 ft
V_u = veh/h	Freeway Volume, V_F: 3259	V_D = 4388 veh/h
	Ramp Volume, V_R: 2087	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3259	0.90	Level	18	0	0.917	1.00	3947
Ramp	2087	0.90	Level	18	0	0.917	1.00	2528
UpStream								
DownStream	4388	0.90	Level	18	0	0.917	1.00	5314

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2191 pc/h

V_3 or V_{av34} 1756 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2255 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	6475	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	4783	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 21.6 (pc/mi/ln)

LOS = C (Exhibit 13-2)

Speed Determination

M_S = 0.500 (Exibit 13-11)

S_R= 51.0 mph (Exhibit 13-11)

S_0= 55.7 mph (Exhibit 13-11)

S = 52.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Acceleration Lane Length, L_A: 420	☑ No ☐ Off
L_{up} = 500 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 354 veh/h	Freeway Volume, V_F: 6058	V_D = veh/h
	Ramp Volume, V_R: 330	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6058	0.90	Level	18	0	0.917	1.00	7337
Ramp	330	0.90	Level	18	0	0.917	1.00	400
UpStream	354	0.90	Level	18	0	0.917	1.00	429
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 747.20 (Equation 13-6 or 13-7)

P_{FM} = 0.574 using Equation (Exhibit 13-6)

V_{12} = 4208 pc/h

V_3 or V_{av34} 3129 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 4637 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7737	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5037	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 41.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 0.901 (Exibit 13-11)

S_R= 43.8 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 46.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 1300 ft
V_u = 2460 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	650
Deceleration Lane Length L_D	
Freeway Volume, V_F	5404
Ramp Volume, V_R	1131
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	30.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5404	0.90	Level	18	0	0.917	1.00	6545
Ramp	1131	0.90	Level	18	0	0.917	1.00	1370
UpStream	2460	0.90	Level	18	0	0.917	1.00	2979
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1149.01 (Equation 13-6 or 13-7)
P_{FM} = 0.596 using Equation (Exhibit 13-6)
V_{12} = 3899 pc/h
V_3 or V_{av34} 2646 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7915	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5269	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 41.9 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.039 (Exibit 13-11)
S_R= 41.3 mph (Exhibit 13-11)
S_0= 51.4 mph (Exhibit 13-11)
S = 44.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Acceleration Lane Length, L_A: 1450	☑ No ☐ Off
L_{up} = 5600 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 2607 veh/h	Freeway Volume, V_F: 3743	V_D = veh/h
	Ramp Volume, V_R: 641	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	3743	0.90	Level	18	0	0.917	1.00	4533
Ramp	641	0.90	Level	18	0	0.917	1.00	776
UpStream	2607	0.90	Level	18	0	0.917	1.00	3157
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2516 pc/h

V_3 or V_{av34} 2017 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2590 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5309	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3366	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 11.4 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

M_S = 0.147 (Exibit 13-11)

S_R= 57.3 mph (Exhibit 13-11)

S_0= 54.8 mph (Exhibit 13-11)

S = 56.4 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☐ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 420	☐ No ☑ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 420 ft
V_u = veh/h	Freeway Volume, V_F: 6058	V_D = 825 veh/h
	Ramp Volume, V_R: 330	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6058	0.90	Level	18	0	0.917	1.00	7337
Ramp	330	0.90	Level	18	0	0.917	1.00	400
UpStream								
DownStream	825	0.90	Level	18	0	0.917	1.00	999

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 6464.35 (Equation 13-6 or 13-7)

P_{FM} = 1.000 using Equation (Exhibit 13-6)

V_{12} = 7337 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7737	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	7737	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 63.0 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 9.237 (Exibit 13-11)

S_R = -106.3 mph (Exhibit 13-11)

S_0 = 60.0 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 650	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 2900 ft
V_u = veh/h	Freeway Volume, V_F: 5404	V_D = 857 veh/h
	Ramp Volume, V_R: 1131	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5404	0.90	Level	18	0	0.917	1.00	6545
Ramp	1131	0.90	Level	18	0	0.917	1.00	1370
UpStream								
DownStream	857	0.90	Level	18	0	0.917	1.00	1038

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.596 using Equation (Exhibit 13-6)

V_{12} = 3899 pc/h

V_3 or V_{av34} 2646 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	7915	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	5269	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 41.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.039 (Exibit 13-11)

S_R= 41.3 mph (Exhibit 13-11)

S_0= 51.4 mph (Exhibit 13-11)

S = 44.2 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	8/24/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 1450	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 5000 ft
V_u = veh/h	Freeway Volume, V_F: 3743	V_D = 3480 veh/h
	Ramp Volume, V_R: 641	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	3743	0.90	Level	18	0	0.917	1.00	4533
Ramp	641	0.90	Level	18	0	0.917	1.00	776
UpStream								
DownStream	3480	0.90	Level	18	0	0.917	1.00	4215

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.555 using Equation (Exhibit 13-6)

V_{12} = 2516 pc/h

V_3 or V_{av34} 2017 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☑ Yes ☐ No

If Yes,V_{12a} = 2590 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	5309	Exhibit 13-8		No

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	3366	Exhibit 13-8	4600:All	No

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 11.4 (pc/mi/ln)

LOS = B (Exhibit 13-2)

Speed Determination

M_S = 0.147 (Exibit 13-11)

S_R= 57.3 mph (Exhibit 13-11)

S_0= 54.8 mph (Exhibit 13-11)

S = 56.4 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/25/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	I-85NB C-D to I-85NB
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	2087 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 2527.59$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: F

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	1/24/2012
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	I-85NB C-D to I-385NB
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2736	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	649	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1572	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2736	649	1572	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	760	180	437	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3314	775	1878	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3314 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3314	4500	No
$v_{FO} = v_F - v_R$	2539	4500	No
v_R	775	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3314 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3314	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 32.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.368

Space mean speed in ramp influence area, S_R = 50.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.2 mph

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/22/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-85NB CD - I-85NB
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2087	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	580	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1264	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1264	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	23.0	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/25/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	I-85NB C-D to I-85NB
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	641 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 776.32$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: B

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	1/24/2012
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	I-85NB C-D to I-385NB
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1711	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1070	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	817	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1711	1070	817	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	475	297	227	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2072	1278	976	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2072 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	2072	4500	No
$v_{FO} = v_F - v_R$	794	4500	No
v_R	1278	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12}/2 No

If yes, v_{12A} = 2072 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2072	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 22.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.413

Space mean speed in ramp influence area, S_R = 49.6 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.6 mph

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	9/22/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-85NB CD - I-85NB
Jurisdiction:	Greenville, SC
Analysis Year:	2015
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	389	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	108	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	236	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	236	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	4.3	pc/mi/ln
Level of service, LOS	A	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	I-385 SB from I-85 NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4308	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1572	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1665	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4308	1572	1665	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1197	437	463	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5217	1878	1989	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5217 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5217	4500	Yes
$v_{FO} = v_F - v_R$	3339	4500	No
v_R	1878	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5217 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5217	4400	Yes

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 35.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	D_S = 0.467	
Space mean speed in ramp influence area,	S_R = 48.9	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 48.9	mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/30/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	I-85NB C-D to I-385
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	1572 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1903.87$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: D

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Basic Freeway Segments Release 6.2

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Pre-Diverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4308	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1197	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1739	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1739	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.2

Florence & Hutcheson
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD PostDiverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2736	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	760	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1657	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1657	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	30.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	I-385 SB from I-85 NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	4308	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1572	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	649	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4308	1572	649	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1197	437	180	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5217	1878	775	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5217 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5217	4500	Yes
$v_{FO} = v_F - v_R$	3339	4500	No
v_R	1878	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5217 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5217	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 35.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.467

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.9 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	I-385 SB from I-85 NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2528	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	817	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	971	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2528	817	971	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	702	227	270	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3062	976	1160	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3062 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3062	4500	No
$v_{FO} = v_F - v_R$	2086	4500	No
v_R	976	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3062 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3062	4400	No

Level of Service Determination (if not F)

Density, $D = 4.252 + 0.0086\, v_R - 0.009\, L_{12}$ = 17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.386

Space mean speed in ramp influence area, S_R = 50.0 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.0 mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/30/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	I-85NB C-D to I-385
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	817 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 989.48$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: B

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Basic Freeway Segments Release 6.2

Florence & Hutcheson
501 Huger Street
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Pre-Diverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2528	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	702	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1021	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1021	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.2

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E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD PostDiverge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1711	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	475	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1036	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1036	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	18.8	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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E-mail:

Diverge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB C-D
Junction:	I-385 SB from I-85 NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2528	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	817	vph
Length of first accel/decel lane	1500	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1070	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2528	817	1070	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	702	227	297	v
Trucks and buses	18	15	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00 %	0.00 %	0.00 %	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.930	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3062	976	1278	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3062 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3062	4500	No
$v_{FO} = v_F - v_R$	2086	4500	No
v_R	976	2100	No
v_3 or v_{av34}	0 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3062 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3062	4400	No

Level of Service Determination (if not F)

Density, $D_D = 4.252 + 0.0086 v_R - 0.009 L_{12}$ = 17.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.386

Space mean speed in ramp influence area, S_R = 50.0 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 50.0 mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/31/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff NB - I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	1665 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 2016.50$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: E

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Basic Freeway Segments Release 6.2

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Pre-Merge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2643	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	734	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1600	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1600	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	29.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.2

Florence & Hutcheson
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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/31/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Post-Merge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4308	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1197	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1739	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1739	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Woodruff NB to I-85NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2643	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1665	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1548	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2643	1665	1548	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	734	463	430	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3201	2017	1875	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3201 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5218	4500	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3201 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5218	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 40.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.978	
Space mean speed in ramp influence area,	S_R = 42.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 42.3	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 NB
Junction:	Woodruff NB to I-85NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	2643	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1665	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1572	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2643	1665	1572	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	734	463	437	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3201	2017	1904	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 3201 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5218	4500	Yes

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3201 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	5218	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 40.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 0.978	
Space mean speed in ramp influence area,	S_R = 42.3	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 42.3	mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/31/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff NB - I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	971 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1175.99$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: C

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

HCS 2010: Basic Freeway Segments Release 6.2

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Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Pre-Merge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	1557	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	433	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	943	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	943	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	17.1	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.2

Florence & Hutcheson
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E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/31/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	Woodruff I-85NB CD Post-Merge
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2528	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	702	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1021	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1021	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Woodruff NB to I-85NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1557	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	971	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	255	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1557	971	255	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	433	270	71	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1886	1176	309	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1886 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3062	4500	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1886 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3062	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.341	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.6	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
501 Huger Street
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Phone: (803)254-5800 Fax: (803)929-0334
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Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/24/2011
Analysis time period:	AM
Freeway/Dir of Travel:	I-85 NB
Junction:	Woodruff NB to I-85NB C-D
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1557	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	971	vph
Length of first accel/decel lane	700	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	817	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	700	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1557	971	817	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	433	270	227	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1886	1176	989	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_F (P_{FM})$ = 1886 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3062	4500	No

v_3 or v_{av34} = 0 pc/h (Equation 13-14 or 13-17)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 1886 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{R12}	3062	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	M_S = 0.341	
Space mean speed in ramp influence area,	S_R = 50.6	mph
Space mean speed in outer lanes,	S_0 = N/A	mph
Space mean speed for all vehicles,	S = 50.6	mph

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff Loop to I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	1548 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1874.80$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: D

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff Loop to I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	255 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 308.83$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: A

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff Loop to I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	1576 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1908.71$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: D

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

SINGLE LANE
BASIC FREEWAY SEGMENT WORKSHEET

General Information

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM

Site Information

Highway/Dir of Travel	I-85 NB C-D
From/To	Woodruff Loop to I-85NB C-D
Jurisdiction	Greenville, SC
Analysis Year	2035 Alternate 4A

Flow Inputs

Volume, V	1305 veh/h	Peak Hour Factor, PHF	0.90
Driver Population, f_P	1	%Trucks and Buses, P_T	18%
General Terrain	Level	%RVs, P_R	0%

LOS and Performance Measures

$$f_{HV} = \frac{1}{1+ P_T(E_T-1)+P_R(E_R-1)} = 0.91743$$

$$V_P = \frac{V}{PHF*N*f_{HV}*f_P} = 1580.50$$

LOS	V_P (pc/h/ln)
A	600
B	990
C	1430
D	1910
E	2250

LOS: D

* From Exhibit 23-2 of the 2000 HCM - Maximum Service Flow Rate for a BFS with a FFS of 55mph.

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48A)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Acceleration Lane Length, L_A		☑ Yes	☑ On
☑ No	☐ Off	Deceleration Lane Length L_D	700	☐ No	☐ Off
L_{up} =	ft	Freeway Volume, V_F	6609	L_{down} =	500 ft
V_u =	veh/h	Ramp Volume, V_R	1676	V_D =	617 veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6609	0.90	Level	18	0	0.917	1.00	8004
Ramp	1676	0.90	Level	18	0	0.917	1.00	2030
UpStream								
DownStream	617	0.90	Level	18	0	0.917	1.00	747

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.467 using Equation (Exhibit 13-7)

V_{12} = 4817 pc/h

V_3 or V_{av34} 3187 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 5304 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	8004	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	5974	Exhibit 13-8	6900	No
V_R	2030	Exhibit 13-10	2000	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4817	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 43.6 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.676 (Exhibit 13-12)

S_R = 47.8 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 51.1 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Road
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 1500	L_{down} = 1325 ft
V_u = veh/h	Freeway Volume, V_F: 9734	V_D = 1381 veh/h
	Ramp Volume, V_R: 2774	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 35.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	9734	0.90	Level	18	0	0.917	1.00	11789
Ramp	2774	0.90	Level	18	0	0.917	1.00	3360
UpStream								
DownStream	1381	0.90	Level	18	0	0.917	1.00	1673

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.311 using Equation (Exhibit 13-7)

V_{12} = 5979 pc/h

V_3 or V_{av34} 5810 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 9089 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	11789	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	8429	Exhibit 13-8	6900	Yes
V_R	3360	Exhibit 13-10	2000	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5979	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 68.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.730 (Exhibit 13-12)

S_R = 46.9 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 49.2 mph (Exhibit 13-13)

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HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-85 to I-85NB (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4388	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1219	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1771	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1771	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	32.2	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85 to I-85NB (Pre-Merge)*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5346*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2158*	pc/h/ln
S	*54.3*	mph
D = v_p / S	*39.7*	pc/mi/ln
LOS	*E*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85 to I-85NB (Post-Merge)*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*9734*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*2358*	pc/h/ln
S	*49.6*	mph
D = v_p / S	*47.6*	pc/mi/ln
LOS	*F*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	8/24/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 350	L_{down} = 7300 ft
V_u = veh/h	Freeway Volume, V_F: 5930	V_D = 2087 veh/h
	Ramp Volume, V_R: 2671	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 45.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	5930	0.90	Level	18	0	0.917	1.00	7182
Ramp	2671	0.90	Level	15	0	0.930	1.00	3190
UpStream								
DownStream	2087	0.90	Level	15	0	0.930	1.00	2493

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.450 using Equation (Exhibit 13-7)

V_{12} = 4986 pc/h

V_3 or V_{av34} 2196 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7182	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	3992	Exhibit 13-8	6900	No
V_R	3190	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4986	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 40.8 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.585 (Exhibit 13-12)

S_R = 49.5 mph (Exhibit 13-12)

S_0 = 61.2 mph (Exhibit 13-12)

S = 52.5 mph (Exhibit 13-13)

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HCS 2010: Basic Freeway Segments Release 6.2

Florence & Hutcheson
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Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	PM
Freeway/Direction:	I-85 NB
From/To:	I-85NB - I-85NB CD (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2671	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	742	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1617	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1617	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	29.4	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85NB - I-85NB CD Pre-Diverge*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*5930*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1795*	pc/h/ln
S	*59.3*	mph
D = v_p / S	*30.3*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*PM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85NB - I-85NB CD PostDiverge*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3259*	veh/h	Peak-Hour Factor, PHF	*0.90*	
AADT		veh/day	%Trucks and Buses, P_T	*18*	
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*	
Peak-Hr Direction Prop, D			General Terrain:	*Level*	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*	

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1316*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*21.9*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48A)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 700	L_{down} = 500 ft
V_u = veh/h	Freeway Volume, V_F: 6412	V_D = 330 veh/h
	Ramp Volume, V_R: 354	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6412	0.90	Level	18	0	0.917	1.00	7766
Ramp	354	0.90	Level	18	0	0.917	1.00	429
UpStream								
DownStream	330	0.90	Level	18	0	0.917	1.00	400

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.546 using Equation (Exhibit 13-7)

V_{12} = 4436 pc/h

V_3 or V_{av34} 3330 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 5066 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7766	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	7337	Exhibit 13-8	6900	Yes
V_R	429	Exhibit 13-10	2000	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4436	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 41.5 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.532 (Exhibit 13-12)

S_R = 50.4 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 53.2 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	Pelham Road
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 1500	L_{down} = 1325 ft
V_u = veh/h	Freeway Volume, V_F: 7864	V_D = 1131 veh/h
	Ramp Volume, V_R: 2460	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 35.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7864	0.90	Level	18	0	0.917	1.00	9524
Ramp	2460	0.90	Level	18	0	0.917	1.00	2979
UpStream								
DownStream	1131	0.90	Level	18	0	0.917	1.00	1370

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.385 using Equation (Exhibit 13-7)

V_{12} = 5498 pc/h

V_3 or V_{av34} 4026 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 6824 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9524	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	6545	Exhibit 13-8	6900	No
V_R	2979	Exhibit 13-10	2000	Yes

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5498	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 49.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.696 (Exhibit 13-12)

S_R = 47.5 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 50.3 mph (Exhibit 13-13)

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HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-85 to I-85NB (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3480	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	967	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1405	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1405	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	25.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85 to I-85NB (Pre-Merge)*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*4384*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1770*	pc/h/ln
S	*59.5*	mph
D = v_p / S	*29.8*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 10-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85 to I-85NB (Post-Merge)*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*7864*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*5*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1905*	pc/h/ln
S	*58.3*	mph
D = v_p / S	*32.7*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 NB
Agency or Company	Florence & Hutcheson	Junction	C-D ROAD
Date Performed	8/24/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{up} = ft
V_u = veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	
Deceleration Lane Length L_D	350
Freeway Volume, V_F	6350
Ramp Volume, V_R	2607
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{down} = 7300 ft
V_D = 641 veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6350	0.90	Level	18	0	0.917	1.00	7691
Ramp	2607	0.90	Level	15	0	0.930	1.00	3114
UpStream								
DownStream	641	0.90	Level	15	0	0.930	1.00	766

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = using Equation (Exhibit 13-6)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)
S_R = mph (Exhibit 13-11)
S_0 = mph (Exhibit 13-11)
S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = 0.450 using Equation (Exhibit 13-7)
V_{12} = 5174 pc/h
V_3 or V_{av34} 2517 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	7691	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	4577	Exhibit 13-8	6900	No
V_R	3114	Exhibit 13-10	4200	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5174	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 42.4 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.578 (Exhibit 13-12)
S_R = 49.6 mph (Exhibit 13-12)
S_0 = 59.9 mph (Exhibit 13-12)
S = 52.6 mph (Exhibit 13-13)

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HCS 2010: Basic Freeway Segments Release 6.2

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	JP
Agency or Company:	Florence & Hutcheson
Date Performed:	8/24/2011
Analysis Time Period:	AM
Freeway/Direction:	I-85 NB
From/To:	I-85NB - I-85NB CD (RAMP)
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2607	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	724	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1579	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1579	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	2	
Density, D	28.7	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85NB - I-85NB CD Pre-Diverge*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*6350*	veh/h	Peak-Hour Factor, PHF	*0.90*
AADT		veh/day	%Trucks and Buses, P_T	*18*
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*
Peak-Hr Direction Prop, D			General Terrain:	*Level*
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*

Calculate Flow Adjustments

f_p	*1.00*	E_R	*1.2*
E_T	*1.5*	$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*4*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1923*	pc/h/ln
S	*58.1*	mph
D = v_p / S	*33.1*	pc/mi/ln
LOS	*D*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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BASIC FREEWAY SEGMENTS WORKSHEET

General Information

Analyst	*JP*
Agency or Company	*Florence & Hutcheson*
Date Performed	*8/24/2011*
Analysis Time Period	*AM*

Site Information

Highway/Direction of Travel	*I-85 NB*
From/To	*I-85NB - I-85NB CD PostDiverge*
Jurisdiction	*Greenville, SC*
Analysis Year	*2035*

Project Description *I-85/I-385 Alternate 4A*

☑ Oper.(LOS) ☐ Des.(N) ☐ Planning Data

Flow Inputs

Volume, V	*3743*	veh/h	Peak-Hour Factor, PHF	*0.90*	
AADT		veh/day	%Trucks and Buses, P_T	*18*	
Peak-Hr Prop. of AADT, K			%RVs, P_R	*0*	
Peak-Hr Direction Prop, D			General Terrain:	*Level*	
DDHV = AADT x K x D		veh/h	Grade % Length Up/Down %	*mi*	

Calculate Flow Adjustments

f_p	*1.00*		E_R	*1.2*
E_T	*1.5*		$f_{HV} = 1/[1+P_T(E_T - 1) + P_R(E_R - 1)]$	*0.917*

Speed Inputs

Lane Width		ft
Rt-Side Lat. Clearance		ft
Number of Lanes, N	*3*	
Total Ramp Density, TRD		ramps/mi
FFS (measured)	*60.0*	mph
Base free-flow Speed, BFFS		mph

Calc Speed Adj and FFS

f_{LW}		mph
f_{LC}		mph
TRD Adjustment		mph
FFS	*60.0*	mph

LOS and Performance Measures

Operational (LOS)

v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	*1511*	pc/h/ln
S	*60.0*	mph
D = v_p / S	*25.2*	pc/mi/ln
LOS	*C*	

Design (N)

Design (N)

Design LOS	
v_p = (V or DDHV) / (PHF x N x f_{HV} x f_p)	pc/h/ln
S	mph
D = v_p / S	pc/mi/ln
Required Number of Lanes, N	

Glossary

N - Number of lanes	S - Speed
V - Hourly volume	D - Density
v_p - Flow rate	FFS - Free-flow speed
LOS - Level of service	BFFS - Base free-flow speed
DDHV - Directional design hour volume	

Factor Location

E_R - Exhibits 11-10, 11-12	f_{LW} - Exhibit 11-8
E_T - Exhibits 11-10, 11-11, 11-13	f_{LC} - Exhibit 11-9
f_p - Page 11-18	TRD - Page 11-11
LOS, S, FFS, v_p - Exhibits 11-2, 11-3	

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Acceleration Lane Length, L_A: 500	☑ No ☐ Off
L_{up} = 470 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 714 veh/h	Freeway Volume, V_F: 8183	V_D = veh/h
	Ramp Volume, V_R: 826	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	8183	0.90	Level	18	0	0.917	1.00	9911
Ramp	826	0.90	Level	18	0	0.917	1.00	1000
UpStream	714	0.90	Level	18	0	0.917	1.00	865
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1461.95 (Equation 13-6 or 13-7)

P_{FM} = 0.529 using Equation (Exhibit 13-6)

V_{12} = 5241 pc/h

V_3 or V_{av34} 4670 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 7211 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10911	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8211	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 65.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 14.653 (Exibit 13-11)

S_R= -203.7 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 868.1 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 470 ft
V_u = 1065 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	500
Deceleration Lane Length L_D	
Freeway Volume, V_F	6598
Ramp Volume, V_R	615
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	6598	0.90	Level	18	0	0.917	1.00	7991
Ramp	615	0.90	Level	18	0	0.917	1.00	745
UpStream	1065	0.90	Level	18	0	0.917	1.00	1290
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 996.50 (Equation 13-6 or 13-7)
P_{FM} = 0.558 using Equation (Exhibit 13-6)
V_{12} = 4460 pc/h
V_3 or V_{av34} 3531 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 5291 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	8736	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6036	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 49.1 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 1.927 (Exibit 13-11)
S_R= 25.3 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 30.0 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT 48A)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Acceleration Lane Length, L_A:	☑ No ☐ Off
L_{up} = 420 ft	Deceleration Lane Length L_D: 420	L_{down} = ft
V_u = 891 veh/h	Freeway Volume, V_F: 8897	V_D = veh/h
	Ramp Volume, V_R: 714	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8897	0.90	Level	18	0	0.917	1.00	10775
Ramp	714	0.90	Level	18	0	0.917	1.00	865
UpStream	891	0.90	Level	18	0	0.917	1.00	1079
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R= mph (Exhibit 13-11)

S_0= mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 4263.39 (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 10775 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	10775	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	9910	Exhibit 13-8	6900	Yes
V_R	865	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	10775	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 93.1 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.636 (Exhibit 13-12)

S_R= 48.6 mph (Exhibit 13-12)

S_0= 65.8 mph (Exhibit 13-12)

S = 48.6 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT 48A)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 420	L_{down} = 468 ft
V_u = veh/h	Freeway Volume, V_F: 8897	V_D = 826 veh/h
	Ramp Volume, V_R: 714	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8897	0.90	Level	18	0	0.917	1.00	10775
Ramp	714	0.90	Level	18	0	0.917	1.00	865
UpStream								
DownStream	826	0.90	Level	18	0	0.917	1.00	1000

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.451 using Equation (Exhibit 13-7)

V_{12} = 5333 pc/h

V_3 or V_{av34} 5442 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 8075 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	10775	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	9910	Exhibit 13-8	6900	Yes
V_R	865	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5333	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 69.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.636 (Exhibit 13-12)

S_R = 48.6 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 50.8 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT 48A)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☑ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☐ Off	Acceleration Lane Length, L_A:	☑ No ☐ Off
L_{up} = 420 ft	Deceleration Lane Length L_D: 420	L_{down} = ft
V_u = 1491 veh/h	Freeway Volume, V_F: 7663	V_D = veh/h
	Ramp Volume, V_R: 1065	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	$v = V/PHF \times f_{HV} \times f_p$
Freeway	7663	0.90	Level	18	0	0.917	1.00	9281
Ramp	1065	0.90	Level	18	0	0.917	1.00	1290
UpStream	1491	0.90	Level	18	0	0.917	1.00	1806
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = 9687.65 (Equation 13-12 or 13-13)

P_{FD} = 1.000 using Equation (Exhibit 13-7)

V_{12} = 9281 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9281	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	7991	Exhibit 13-8	6900	Yes
V_R	1290	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	9281	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = 80.3 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.674 (Exhibit 13-12)

S_R = 47.9 mph (Exhibit 13-12)

S_0 = 65.8 mph (Exhibit 13-12)

S = 47.9 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT 48A)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 420	L_{down} = 468 ft
V_u = veh/h	Freeway Volume, V_F: 7663	V_D = 615 veh/h
	Ramp Volume, V_R: 1065	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7663	0.90	Level	18	0	0.917	1.00	9281
Ramp	1065	0.90	Level	18	0	0.917	1.00	1290
UpStream								
DownStream	615	0.90	Level	18	0	0.917	1.00	745

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.469 using Equation (Exhibit 13-7)

V_{12} = 5035 pc/h

V_3 or V_{av34} 4246 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 6581 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	9281	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	7991	Exhibit 13-8	6900	Yes
V_R	1290	Exhibit 13-10	1900	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5035	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 57.1 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.674 (Exhibit 13-12)

S_R = 47.9 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 50.7 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 500 ft
V_u = 604 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	420
Deceleration Lane Length L_D	
Freeway Volume, V_F	8006
Ramp Volume, V_R	891
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8006	0.90	Level	18	0	0.917	1.00	9696
Ramp	891	0.90	Level	18	0	0.917	1.00	1079
UpStream	604	0.90	Level	18	0	0.917	1.00	732
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1397.33 (Equation 13-6 or 13-7)
P_{FM} = 0.533 using Equation (Exhibit 13-6)
V_{12} = 5163 pc/h
V_3 or V_{av34} 4533 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 6996 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10775	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8075	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 65.3 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 12.831 (Exibit 13-11)
S_R= -171.0 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 1911.9 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{up} = 2800 ft
V_u = 790 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	1500
Deceleration Lane Length L_D	
Freeway Volume, V_F	7579
Ramp Volume, V_R	1520
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	7579	0.90	Level	18	0	0.917	1.00	9179
Ramp	1520	0.90	Level	18	0	0.917	1.00	1841
UpStream	790	0.90	Level	18	0	0.917	1.00	957
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = 0.619 using Equation (Exhibit 13-6)
V_{12} = 5686 pc/h
V_3 or V_{av34} = 3493 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes, V_{12a} = 6479 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	11020	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8320	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 60.1 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 16.196 (Exibit 13-11)
S_R = -231.5 mph (Exhibit 13-11)
S_0 = 51.1 mph (Exhibit 13-11)
S = 650.8 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} = pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R = mph (Exhibit 13-12)
S_0 = mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☐ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 420	☐ No ☑ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 420 ft
V_u = veh/h	Freeway Volume, V_F: 8006	V_D = 714 veh/h
	Ramp Volume, V_R: 891	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8006	0.90	Level	18	0	0.917	1.00	9696
Ramp	891	0.90	Level	18	0	0.917	1.00	1079
UpStream								
DownStream	714	0.90	Level	18	0	0.917	1.00	865

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 5597.26 (Equation 13-6 or 13-7)

P_{FM} = 1.000 using Equation (Exhibit 13-6)

V_{12} = 9696 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10775	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	10775	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 86.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 186.761 (Exibit 13-11)

S_R = -3301.7 mph (Exhibit 13-11)

S_0 = 60.0 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☐ On
☐ No ☑ Off
L_{up} = 500 ft
V_u = 668 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	420
Deceleration Lane Length L_D	
Freeway Volume, V_F	6172
Ramp Volume, V_R	1491
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	25.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6172	0.90	Level	18	0	0.917	1.00	7475
Ramp	1491	0.90	Level	18	0	0.917	1.00	1806
UpStream	668	0.90	Level	18	0	0.917	1.00	809
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1077.61 (Equation 13-6 or 13-7)
P_{FM} = 0.553 using Equation (Exhibit 13-6)
V_{12} = 4131 pc/h
V_3 or V_{av34} 3344 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 4775 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9281	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6581	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 53.3 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 3.113 (Exibit 13-11)
S_R= 4.0 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 5.4 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp
☑ Yes ☑ On
☐ No ☐ Off
L_{up} = 2800 ft
V_u = 443 veh/h

Number of Lanes, N	3
Acceleration Lane Length, L_A	1500
Deceleration Lane Length L_D	
Freeway Volume, V_F	6910
Ramp Volume, V_R	1949
Freeway Free-Flow Speed, S_{FF}	60.0
Ramp Free-Flow Speed, S_{FR}	45.0

Downstream Adj Ramp
☐ Yes ☐ On
☑ No ☐ Off
L_{down} = ft
V_D = veh/h

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6910	0.90	Level	18	0	0.917	1.00	8369
Ramp	1949	0.90	Level	18	0	0.917	1.00	2360
UpStream	443	0.90	Level	18	0	0.917	1.00	537
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)
P_{FM} = 0.619 using Equation (Exhibit 13-6)
V_{12} = 5185 pc/h
V_3 or V_{av34} 3184 pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No
If Yes,V_{12a} = 5669 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	10729	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	8029	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 57.6 (pc/mi/ln)
LOS = F (Exhibit 13-2)

Speed Determination

M_S = 12.154 (Exibit 13-11)
S_R= -158.8 mph (Exhibit 13-11)
S_0= 51.1 mph (Exhibit 13-11)
S = 4668.4 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)
P_{FD} = using Equation (Exhibit 13-7)
V_{12} = pc/h
V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No
Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No
If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)
LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)
S_R= mph (Exhibit 13-12)
S_0= mph (Exhibit 13-12)
S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☐ On
☑ No ☐ Off	Acceleration Lane Length, L_A: 420	☐ No ☑ Off
L_{up} = ft	Deceleration Lane Length L_D:	L_{down} = 420 ft
V_u = veh/h	Freeway Volume, V_F: 6172	V_D = 1065 veh/h
	Ramp Volume, V_R: 1491	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 25.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6172	0.90	Level	18	0	0.917	1.00	7475
Ramp	1491	0.90	Level	18	0	0.917	1.00	1806
UpStream								
DownStream	1065	0.90	Level	18	0	0.917	1.00	1290

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 8347.35 (Equation 13-6 or 13-7)

P_{FM} = 1.000 using Equation (Exhibit 13-6)

V_{12} = 7475 pc/h

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☑ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9281	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	9281	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = 74.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 42.155 (Exibit 13-11)

S_R = -698.8 mph (Exhibit 13-11)

S_0 = 60.0 mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R = mph (Exhibit 13-12)

S_0 = mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☐ Yes ☐ On	Number of Lanes, N: 3	☑ Yes ☑ On
☑ No ☐ Off	Acceleration Lane Length, L_A:	☐ No ☐ Off
L_{up} = ft	Deceleration Lane Length L_D: 650	L_{down} = 500 ft
V_u = veh/h	Freeway Volume, V_F: 8610	V_D = 891 veh/h
	Ramp Volume, V_R: 604	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	8610	0.90	Level	18	0	0.917	1.00	10428
Ramp	604	0.90	Level	18	0	0.917	1.00	732
UpStream								
DownStream	891	0.90	Level	18	0	0.917	1.00	1079

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.466 using Equation (Exhibit 13-7)

V_{12} = 5247 pc/h

V_3 or V_{av34} 5181 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 7728 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	10428	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	9696	Exhibit 13-8	6900	Yes
V_R	732	Exhibit 13-10	2000	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	5247	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 64.9 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.559 (Exhibit 13-12)

S_R = 49.9 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 52.0 mph (Exhibit 13-13)

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RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	Pelham Rd
Date Performed	8/9/2011	Jurisdiction	Greenville, SC
Analysis Time Period	PM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Downstream Adj Ramp
☑ Yes ☐ On	Number of Lanes, N: 3	☐ Yes ☐ On
☐ No ☑ Off	Acceleration Lane Length, L_A: 550	☑ No ☐ Off
L_{up} = 2800 ft	Deceleration Lane Length L_D:	L_{down} = ft
V_u = 1138 veh/h	Freeway Volume, V_F: 6789	V_D = veh/h
	Ramp Volume, V_R: 790	
	Freeway Free-Flow Speed, S_{FF}: 60.0	
	Ramp Free-Flow Speed, S_{FR}: 30.0	

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6789	0.90	Level	18	0	0.917	1.00	8222
Ramp	790	0.90	Level	18	0	0.917	1.00	957
UpStream	1138	0.90	Level	18	0	0.917	1.00	1378
DownStream								

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = 1375.11 (Equation 13-6 or 13-7)

P_{FM} = 0.593 using Equation (Exhibit 13-6)

V_{12} = 4875 pc/h

V_3 or V_{av34} 3347 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes,V_{12a} = 5522 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}	9179	Exhibit 13-8		Yes

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}	6479	Exhibit 13-8	4600:All	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734 v_R + 0.0078 V_{12} - 0.00627 L_A$

D_R = 52.1 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

M_S = 2.828 (Exibit 13-11)

S_R= 9.1 mph (Exhibit 13-11)

S_0= 51.1 mph (Exhibit 13-11)

S = 12.0 mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = using Equation (Exhibit 13-7)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes,V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F		Exhibit 13-8		
$V_{FO} = V_F - V_R$		Exhibit 13-8		
V_R		Exhibit 13-10		

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086 V_{12} - 0.009 L_D$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

D_s = (Exhibit 13-12)

S_R= mph (Exhibit 13-12)

S_0= mph (Exhibit 13-12)

S = mph (Exhibit 13-13)

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HCS 2010: Freeway Merge and Diverge Segments Release 6.1

Florence & Hutcheson
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Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Merge Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date performed:	8/9/2011
Analysis time period:	PM
Freeway/Dir of Travel:	I-85 SB
Junction:	Pelham Rd
Jurisdiction:	Greenville, SC
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	60.0	mph
Volume on freeway	6789	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	790	vph
Length of first accel/decel lane	550	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1520	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2760	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6789	790	1520	vph
Peak-hour factor, PHF	0.90	0.90	0.90	
Peak 15-min volume, v15	1886	219	422	v
Trucks and buses	18	18	18	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	

Heavy vehicle adjustment, fHV	0.917	0.917	0.917	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8222	957	1841	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0.593 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4875 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9179	6900	Yes
v_3 or v_{av34}	3347 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5522 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	9179	4600	Yes

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A$ = 52.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable,	M_S = 2.828	
Space mean speed in ramp influence area,	S_R = 9.1	mph
Space mean speed in outer lanes,	S_0 = 51.1	mph
Space mean speed for all vehicles,	S = 12.0	mph

RAMPS AND RAMP JUNCTIONS WORKSHEET

General Information / Site Information

Analyst	JP	Freeway/Dir of Travel	I-85 SB
Agency or Company	Florence & Hutcheson	Junction	US 276 (EXIT48B)
Date Performed	7/8/2011	Jurisdiction	Greenville, SC
Analysis Time Period	AM	Analysis Year	2035

Project Description I-85/I-385 Alternate 4A

Inputs

Upstream Adj Ramp		Number of Lanes, N	3	Downstream Adj Ramp	
☐ Yes	☐ On	Acceleration Lane Length, L_A		☑ Yes	☑ On
☑ No	☐ Off	Deceleration Lane Length L_D	650	☐ No	☐ Off
L_{up} =	ft	Freeway Volume, V_F	6840	L_{down} =	500 ft
V_u =	veh/h	Ramp Volume, V_R	668	V_D =	1491 veh/h
		Freeway Free-Flow Speed, S_{FF}	60.0		
		Ramp Free-Flow Speed, S_{FR}	30.0		

Conversion to pc/h Under Base Conditions

(pc/h)	V (Veh/hr)	PHF	Terrain	%Truck	%Rv	f_{HV}	f_p	v = V/PHF x f_{HV} x f_p
Freeway	6840	0.90	Level	18	0	0.917	1.00	8284
Ramp	668	0.90	Level	18	0	0.917	1.00	809
UpStream								
DownStream	1491	0.90	Level	18	0	0.917	1.00	1806

Merge Areas

Estimation of v_{12}

$V_{12} = V_F (P_{FM})$

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = using Equation (Exhibit 13-6)

V_{12} = pc/h

V_3 or V_{av34} pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☐ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☐ No

If Yes, V_{12a} = pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_{FO}		Exhibit 13-8		

Flow Entering Merge Influence Area

	Actual	Max Desirable		Violation?
V_{R12}		Exhibit 13-8		

Level of Service Determination (if not F)

$D_R = 5.475 + 0.00734\ v_R + 0.0078\ V_{12} - 0.00627\ L_A$

D_R = (pc/mi/ln)

LOS = (Exhibit 13-2)

Speed Determination

M_S = (Exibit 13-11)

S_R = mph (Exhibit 13-11)

S_0 = mph (Exhibit 13-11)

S = mph (Exhibit 13-13)

Diverge Areas

Estimation of v_{12}

$V_{12} = V_R + (V_F - V_R)P_{FD}$

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.516 using Equation (Exhibit 13-7)

V_{12} = 4664 pc/h

V_3 or V_{av34} 3620 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2,700 pc/h? ☑ Yes ☐ No

Is V_3 or V_{av34} > 1.5 * V_{12}/2 ☐ Yes ☑ No

If Yes, V_{12a} = 5584 pc/h (Equation 13-16, 13-18, or 13-19)

Capacity Checks

	Actual	Capacity		LOS F?
V_F	8284	Exhibit 13-8	6900	Yes
$V_{FO} = V_F - V_R$	7475	Exhibit 13-8	6900	Yes
V_R	809	Exhibit 13-10	2000	No

Flow Entering Diverge Influence Area

	Actual	Max Desirable		Violation?
V_{12}	4664	Exhibit 13-8	4400:All	Yes

Level of Service Determination (if not F)

$D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$

D_R = 46.4 (pc/mi/ln)

LOS = F (Exhibit 13-2)

Speed Determination

D_s = 0.566 (Exhibit 13-12)

S_R = 49.8 mph (Exhibit 13-12)

S_0 = 59.2 mph (Exhibit 13-12)

S = 52.5 mph (Exhibit 13-13)

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CAPACITY ANALYSIS (HCS)
2035 ALTERNATE 4A CONDITIONS – WEAVE AREAS

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/4/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385 SB
Weaving Location:	Roper Mtn to I-85
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1780	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1977	1053	2290	306	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	549	293	636	85	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2394	1275	2773	371	pc/h
Volume ratio, VR		0.594			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.687	
Weaving segment flow rate, v	6813	pc/h
Weaving segment capacity, cW	3706	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8948	1780	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1702	c
		Maximum	Analyzed	
v/c ratio		1.00	1.687	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
E-mail:

Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385 SB C-D
Weaving Location:	I-85 to Woodruff
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1335	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1051	730	1832	87	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	292	203	509	24	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1273	884	2219	105	pc/h

Volume ratio, VR 0.692

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	3103	lc/h
Weaving lane changes, LCW	3216	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	430	lc/h
Total lane changes, LCALL	3646	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.499

Average weaving speed, SW	41.7	mi/h
Average non-weaving speed, SNW	25.5	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	34.9	mi/h
Weaving segment density, D	42.8	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.887	
Weaving segment flow rate, v	4481	pc/h
Weaving segment capacity, cW	4637	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8596	1335	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1695	c
		Maximum	Analyzed	
v/c ratio		1.00	0.887	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385 NB C-D
Weaving Location:	Woodruff to I-85
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2000	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1158	7	1498	335	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	322	2	416	93	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1402	8	1814	406	pc/h

Volume ratio, VR 0.502

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	8	lc/h
Weaving lane changes, LCW	153	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	879	lc/h
Total lane changes, LCALL	1032	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.134

Average weaving speed, SW	50.3	mi/h
Average non-weaving speed, SNW	49.1	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	49.7	mi/h
Weaving segment density, D	24.3	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.759	
Weaving segment flow rate, v	3630	pc/h
Weaving segment capacity, cW	4387	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7849	2000	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1803	c
		Maximum	Analyzed	
v/c ratio		1.00	0.759	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	1/11/2012
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385 NB C-D
Weaving Location:	Woodruff to I-85
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1500	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1158	1429	1498	335	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	322	397	416	93	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1402	1731	1814	406	pc/h

Volume ratio, VR 0.662

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	2	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.013	
Weaving segment flow rate, v	5353	pc/h
Weaving segment capacity, cW	4849	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8218	1500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1736	c
		Maximum	Analyzed	
v/c ratio		1.00	1.013	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	1/11/2012
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385 NB C-D
Weaving Location:	Woodruff to I-85
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1500	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1158	1429	1498	335	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	322	397	416	93	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1402	1731	1814	406	pc/h
Volume ratio, VR		0.662			

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	2	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.013	
Weaving segment flow rate, v	5353	pc/h
Weaving segment capacity, cW	4849	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8218	1500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1736	c
		Maximum	Analyzed	
v/c ratio		1.00	1.013	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	1/10/2012
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-385 NB C-D
Weaving Location:	Woodruff to I-85
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1500	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1158	1429	1498	335	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	322	397	416	93	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1402	1731	1814	406	pc/h
Volume ratio, VR		0.662			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.477	
Weaving segment flow rate, v	5353	pc/h
Weaving segment capacity, cW	3325	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	9784	1500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1616	c
		Maximum	Analyzed	
v/c ratio		1.00	1.477	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	7/8/2011
Analysis Time Period:	AM
Freeway/Dir of Travel:	I-85NB
Weaving Location:	I-85NB CD bt Woodruff & I-385
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	840	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	921	636	790	181	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	256	177	219	50	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1115	770	957	219	pc/h

Volume ratio, VR 0.564

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	1727	lc/h
Weaving lane changes, LCW	1809	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	152	lc/h
Total lane changes, LCALL	1961	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.441

Average weaving speed, SW	35.8	mi/h
Average non-weaving speed, SNW	27.7	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	31.7	mi/h
Weaving segment density, D	32.1	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.720	
Weaving segment flow rate, v	3061	pc/h
Weaving segment capacity, cW	3903	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8586	840	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1657	c
		Maximum	Analyzed	
v/c ratio		1.00	0.720	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

I-85/I-385 Alternate 4A

FREEWAY WEAVING WORKSHEET

General Information

Analyst	JP
Agency/Company	Florence & Hutcheson
Date Performed	7/8/2011
Analysis Time Period	AM

Site Information

Freeway/Dir of Travel	I-85SB
Weaving Segment Location	I-85SB @ US276
Analysis Year	2035

Project Description *I-85/I-385 Alternate 4A*

Inputs

Weaving configuration	One-Sided	Segment type	Freeway
Weaving number of lanes, N	4	Freeway minimum speed, S_{MIN}	15
Weaving segment length, L_S	420ft	Freeway maximum capacity, C_{IFL}	2300
Freeway free-flow speed, FFS	60 mph	Terrain type	Level

Conversions to pc/h Under Base Conditions

	V (veh/h)	PHF	Truck (%)	RV (%)	E_T	E_R	f_{HV}	f_p	v (pc/h)
V_{FF}	5107	0.90	18	0	1.5	1.2	0.917	1.00	6185
V_{RF}	1491	0.90	18	0	1.5	1.2	0.917	1.00	1806
V_{FR}	1065	0.90	18	0	1.5	1.2	0.917	1.00	1290
V_{RR}	0	0.90	18	0	1.5	1.2	0.917	1.00	6185
V_{NW}	6185							V =	9281
V_W	3096								
VR	0.334								

Configuration Characteristics

Minimum maneuver lanes, N_{WL}	2 lc	Minimum weaving lane changes, LC_{MIN}	lc/h
Interchange density, ID	0.00 int/mi	Weaving lane changes, LC_W	lc/h
Minimum RF lane changes, LC_{RF}	0 lc/pc	Non-weaving lane changes, LC_{NW}	lc/h
Minimum FR lane changes, LC_{FR}	0 lc/pc	Total lane changes, LC_{ALL}	lc/h
Minimum RR lane changes, LC_{RR}	lc/pc	Non-weaving vehicle index, I_{NW}	

Weaving Segment Speed, Density, Level of Service, and Capacity

Weaving segment flow rate, v	9281 pc/h	Weaving intensity factor, W	
Weaving segment capacity, c_w	6601 veh/h	Weaving segment speed, S	mph
Weaving segment v/c ratio	1.290	Average weaving speed, S_W	mph
Weaving segment density, D	pc/mi/ln	Average non-weaving speed, S_{NW}	mph
Level of Service, LOS	F	Maximum weaving length, L_{MAX}	5947 ft

Notes

a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".
b. For volumes that exceed the weaving segment capacity, the level of service is "F".

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I-85/I-385 Alternate 4A

FREEWAY WEAVING WORKSHEET

General Information

Analyst	NJ
Agency/Company	Florence & Hutcheson
Date Performed	7/8/2011
Analysis Time Period	AM

Site Information

Freeway/Dir of Travel	I-85NB
Weaving Segment Location	I-85NB @ US276
Analysis Year	2035

Project Description *I-85/I-385 Alternate 4A*

Inputs

Weaving configuration	One-Sided	Segment type	Freeway
Weaving number of lanes, N	4	Freeway minimum speed, S_{MIN}	15
Weaving segment length, L_S	416ft	Freeway maximum capacity, C_{IFL}	2300
Freeway free-flow speed, FFS	60 mph	Terrain type	Level

Conversions to pc/h Under Base Conditions

	V (veh/h)	PHF	Truck (%)	RV (%)	E_T	E_R	f_{HV}	f_p	v (pc/h)
V_{FF}	5233	0.90	18	0	1.5	1.2	0.917	1.00	6338
V_{RF}	825	0.90	18	0	1.5	1.2	0.917	1.00	999
V_{FR}	330	0.90	18	0	1.5	1.2	0.917	1.00	400
V_{RR}	0	0.90	18	0	1.5	1.2	0.917	1.00	6338
V_{NW}	6338							V =	7737
V_W	1399								
VR	0.181								

Configuration Characteristics

Minimum maneuver lanes, N_{WL}	2 lc	Minimum weaving lane changes, LC_{MIN}	0 lc/h
Interchange density, ID	0.00 int/mi	Weaving lane changes, LC_W	67 lc/h
Minimum RF lane changes, LC_{RF}	0 lc/pc	Non-weaving lane changes, LC_{NW}	761 lc/h
Minimum FR lane changes, LC_{FR}	0 lc/pc	Total lane changes, LC_{ALL}	828 lc/h
Minimum RR lane changes, LC_{RR}	lc/pc	Non-weaving vehicle index, I_{NW}	0.389

Weaving Segment Speed, Density, Level of Service, and Capacity

Weaving segment flow rate, v	7737 pc/h	Weaving intensity factor, W	0.389
Weaving segment capacity, c_w	7339 veh/h	Weaving segment speed, S	50.1 mph
Weaving segment v/c ratio	0.967	Average weaving speed, S_W	47.4 mph
Weaving segment density, D	38.6 pc/mi/ln	Average non-weaving speed, S_{NW}	50.7 mph
Level of Service, LOS	E	Maximum weaving length, L_{MAX}	4341 ft

Notes

a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".
b. For volumes that exceed the weaving segment capacity, the level of service is "F".

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385 SB
Weaving Location:	Roper Mtn to I-85
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1780	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	3938	2242	3318	651	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1094	623	922	181	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4769	2715	4018	788	pc/h
Volume ratio, VR		0.548			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	2.805	
Weaving segment flow rate, v	12290	pc/h
Weaving segment capacity, cW	4019	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8391	1780	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2300	1794	c
		Maximum	Analyzed	
v/c ratio		1.00	2.805	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Phone: (803)254-5800 Fax: (803)929-0334
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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/8/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385 NB
Weaving Location:	I-85 to Roper Mtn
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	2500	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	4634	724	2240	720	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	1287	201	622	200	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5612	877	2713	872	pc/h
Volume ratio, VR		0.356			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	0	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.496	
Weaving segment flow rate, v	10074	pc/h
Weaving segment capacity, cW	6179	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	6196	2500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1967	c
		Maximum	Analyzed	
v/c ratio		1.00	1.496	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385 CD SB
Weaving Location:	I-85 to Woodruff
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1335	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	825	1145	1659	427	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	229	318	461	119	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	999	1387	2009	517	pc/h

Volume ratio, VR 0.691

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	3396	lc/h
Weaving lane changes, LCW	3509	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	458	lc/h
Total lane changes, LCALL	3967	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W 0.534

Average weaving speed, SW	41.1	mi/h
Average non-weaving speed, SNW	22.7	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	32.9	mi/h
Weaving segment density, D	49.8	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.970	
Weaving segment flow rate, v	4912	pc/h
Weaving segment capacity, cW	4644	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	8582	1335	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1696	c
		Maximum	Analyzed	
v/c ratio		1.00	0.970	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	NJ
Agency/Co.:	Florence & Hutcheson
Date Performed:	4/14/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385 NB C-D
Weaving Location:	Woodruff to I-85
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	2000	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	804	76	1619	256	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	223	21	450	71	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	974	92	1961	310	pc/h

Volume ratio, VR	0.615	

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN	92	lc/h
Weaving lane changes, LCW	237	lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW	771	lc/h
Total lane changes, LCALL	1008	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.132	

Average weaving speed, SW	50.3	mi/h
Average non-weaving speed, SNW	49.0	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	49.8	mi/h
Weaving segment density, D	22.3	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.855	
Weaving segment flow rate, v	3337	pc/h
Weaving segment capacity, cW	3579	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	9204	2000	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1699	c
		Maximum	Analyzed	
v/c ratio		1.00	0.855	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	1/11/2012
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385 NB C-D
Weaving Location:	Woodruff to I-85
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1500	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	804	1393	1619	256	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	223	387	450	71	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	974	1687	1961	310	pc/h

Volume ratio, VR 0.740

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	2	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW	0	
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.042	
Weaving segment flow rate, v	4932	pc/h
Weaving segment capacity, cW	4341	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	9193	1500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1661	c
		Maximum	Analyzed	
v/c ratio		1.00	1.042	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	1/11/2012
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385 NB C-D
Weaving Location:	Woodruff to I-85
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, LS	1500	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	804	1393	1619	256	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	223	387	450	71	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	974	1687	1961	310	pc/h
Volume ratio, VR		0.740			

Configuration Characteristics

Number of maneuver lanes, NWL	3	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	2	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.042	
Weaving segment flow rate, v	4932	pc/h
Weaving segment capacity, cW	4341	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	9193	1500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1661	c
		Maximum	Analyzed	
v/c ratio		1.00	1.042	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	1/10/2012
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-385 NB C-D
Weaving Location:	Woodruff to I-85
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	1500	ft
Freeway free-flow speed, FFS	55	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	804	1393	1619	256	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	223	387	450	71	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	974	1687	1961	310	pc/h
Volume ratio, VR		0.740			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	0	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.520	
Weaving segment flow rate, v	4932	pc/h
Weaving segment capacity, cW	2977	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	10759	1500	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1542	c
		Maximum	Analyzed	
v/c ratio		1.00	1.520	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	JP
Agency/Co.:	Florence & Hutcheson
Date Performed:	7/8/2011
Analysis Time Period:	PM
Freeway/Dir of Travel:	I-85NB
Weaving Location:	I-85NB CD bt Woodruff & I-385
Analysis Year:	2035
Description:	I-85/I-385 Alternate 4A

Inputs

Segment Type	C-D Roadway/ Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, LS	840	ft
Freeway free-flow speed, FFS	45	mi/h
Minimum segment speed, SMIN	15	mi/h
Freeway maximum capacity, cIFL	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

	Volume Components				
	VFF	VRF	VFR	VRR	
Volume, V	1596	1047	1140	525	veh/h
Peak hour factor, PHF	0.90	0.90	0.90	0.90	
Peak 15-min volume, v15	443	291	317	146	
Trucks and buses	18	18	18	18	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.917	0.917	0.917	0.917	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1933	1268	1381	636	pc/h
Volume ratio, VR		0.508			

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	0.00	int/mi
Minimum RF lane changes, LCRF	1	lc/pc
Minimum FR lane changes, LCFR	1	lc/pc
Minimum RR lane changes, LCRR		lc/pc
Minimum weaving lane changes, LCMIN		lc/h
Weaving lane changes, LCW		lc/h
Non-weaving vehicle index, INW		
Non-weaving lane change, LCNW		lc/h
Total lane changes, LCALL		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W

Average weaving speed, SW		mi/h
Average non-weaving speed, SNW		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.104	
Weaving segment flow rate, v	5218	pc/h
Weaving segment capacity, cW	4337	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Minimum	Maximum	Actual	Note
Weaving length (ft)	300	7916	840	a,b
		Maximum	Analyzed	
Density-based capacty, cIWL (pc/h/ln)		2250	1709	c
		Maximum	Analyzed	
v/c ratio		1.00	1.104	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

I-85/I-385 Alternate 4A

FREEWAY WEAVING WORKSHEET

General Information

Analyst	JP
Agency/Company	Florence & Hutcheson
Date Performed	7/8/2011
Analysis Time Period	PM

Site Information

Freeway/Dir of Travel	I-85SB
Weaving Segment Location	I-85SB @ US276
Analysis Year	2035

Project Description *I-85/I-385 Alternate 4A*

Inputs

Weaving configuration	One-Sided	Segment type	Freeway
Weaving number of lanes, N	4	Freeway minimum speed, S_{MIN}	15
Weaving segment length, L_S	420ft	Freeway maximum capacity, C_{IFL}	2300
Freeway free-flow speed, FFS	60 mph	Terrain type	Level

Conversions to pc/h Under Base Conditions

	V (veh/h)	PHF	Truck (%)	RV (%)	E_T	E_R	f_{HV}	f_p	v (pc/h)
V_{FF}	7292	0.90	18	0	1.5	1.2	0.917	1.00	8831
V_{RF}	891	0.90	18	0	1.5	1.2	0.917	1.00	1079
V_{FR}	714	0.90	18	0	1.5	1.2	0.917	1.00	865
V_{RR}	0	0.90	18	0	1.5	1.2	0.917	1.00	8831
V_{NW}	8831							V =	10775
V_W	1944								
VR	0.180								

Configuration Characteristics

Minimum maneuver lanes, N_{WL}	2 lc	Minimum weaving lane changes, LC_{MIN}	lc/h
Interchange density, ID	0.00 int/mi	Weaving lane changes, LC_W	lc/h
Minimum RF lane changes, LC_{RF}	0 lc/pc	Non-weaving lane changes, LC_{NW}	lc/h
Minimum FR lane changes, LC_{FR}	0 lc/pc	Total lane changes, LC_{ALL}	lc/h
Minimum RR lane changes, LC_{RR}	lc/pc	Non-weaving vehicle index, I_{NW}	

Weaving Segment Speed, Density, Level of Service, and Capacity

Weaving segment flow rate, v	10775 pc/h	Weaving intensity factor, W	
Weaving segment capacity, c_w	7339 veh/h	Weaving segment speed, S	mph
Weaving segment v/c ratio	1.347	Average weaving speed, S_W	mph
Weaving segment density, D	pc/mi/ln	Average non-weaving speed, S_{NW}	mph
Level of Service, LOS	F	Maximum weaving length, L_{MAX}	4337 ft

Notes

a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".
b. For volumes that exceed the weaving segment capacity, the level of service is "F".

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I-85/I-385 Alternate 4A

FREEWAY WEAVING WORKSHEET

General Information

Analyst	JP
Agency/Company	Florence & Hutcheson
Date Performed	7/8/2011
Analysis Time Period	PM

Site Information

Freeway/Dir of Travel	I-85NB
Weaving Segment Location	I-85NB @ US276
Analysis Year	2035

Project Description *I-85/I-385 Alternate 4A*

Inputs

Weaving configuration	One-Sided	Segment type	Freeway
Weaving number of lanes, N	4	Freeway minimum speed, S_{MIN}	15
Weaving segment length, L_S	416ft	Freeway maximum capacity, C_{IFL}	2300
Freeway free-flow speed, FFS	60 mph	Terrain type	Level

Conversions to pc/h Under Base Conditions

	V (veh/h)	PHF	Truck (%)	RV (%)	E_T	E_R	f_{HV}	f_p	v (pc/h)
V_{FF}	4427	0.90	18	0	1.5	1.2	0.917	1.00	5362
V_{RF}	617	0.90	18	0	1.5	1.2	0.917	1.00	747
V_{FR}	506	0.90	18	0	1.5	1.2	0.917	1.00	613
V_{RR}	0	0.90	18	0	1.5	1.2	0.917	1.00	5362
V_{NW}	5362							V =	6722
V_W	1360								
VR	0.202								

Configuration Characteristics

Minimum maneuver lanes, N_{WL}	2 lc	Minimum weaving lane changes, LC_{MIN}	0 lc/h
Interchange density, ID	0.00 int/mi	Weaving lane changes, LC_W	67 lc/h
Minimum RF lane changes, LC_{RF}	0 lc/pc	Non-weaving lane changes, LC_{NW}	560 lc/h
Minimum FR lane changes, LC_{FR}	0 lc/pc	Total lane changes, LC_{ALL}	627 lc/h
Minimum RR lane changes, LC_{RR}	lc/pc	Non-weaving vehicle index, I_{NW}	0.312

Weaving Segment Speed, Density, Level of Service, and Capacity

Weaving segment flow rate, v	6722 pc/h	Weaving intensity factor, W	0.312
Weaving segment capacity, c_w	7277 veh/h	Weaving segment speed, S	51.4 mph
Weaving segment v/c ratio	0.847	Average weaving speed, S_W	49.3 mph
Weaving segment density, D	32.7 pc/mi/ln	Average non-weaving speed, S_{NW}	51.9 mph
Level of Service, LOS	D	Maximum weaving length, L_{MAX}	4560 ft

Notes

a. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments".
b. For volumes that exceed the weaving segment capacity, the level of service is "F".

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INTERCHANGE MODIFICATION REPORT
FOR
I-85/I-385 INTERCHANGE IMPROVEMENTS

GREENVILLE COUNTY, SOUTH CAROLINA

APPENDIX I

Prepared for:

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South Carolina Department of Transportation

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August 2012

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CORSIM ANALYSIS
2035 NO-BUILD CONDITIONS – AM LINK SEGMENTS

		Freeway Section			Link Length (ft)	Classification	Density (pc/mi.ln)												Segment	Avg. Dens.	LOS
		FROM	TO			(F,R,W)	Median over 5 runs												Length	Peak Hr.	
	2035 AM NO BUILD						7:00	7:15	7:30	7:45	8:00	8:15	8:30	**8:45**	9:00	9:15	9:30	9:45			
		LAURENS RD. ON RAMP		USN 970 DSN 980 Li	1471	R	4.9	7.0	11.9	16.2	21.0	24.9	29.3	31.3	29.1	25.1	21.2	19.0			
				USN 980 DSN 1000 Li	3758		5.3	7.4	12.7	17.6	22.9	27.3	31.6	34.2	32.3	27.6	23.4	21.0			
1				USN 1000 DSN 1010 L	1875	F	5.6	7.8	13.6	18.9	24.5	29.7	35.3	48.6	52.8	34.2	25.5	22.8	6357	42.6	E
				USN 1010 DSN 1015 L	724		5.7	7.9	13.7	19.3	25.7	31.3	47.9	70.6	71.0	56.7	26.8	23.7			
13			WOODRUFF RD. OFF RAMP	USN 1015 DSN 1020 L	1147	R	5.1	7.0	12.1	17.2	22.9	28.9	37.5	43.2	44.0	41.7	24.3	21.2	1147	43.2	E
		WOODRUFF RD. OFF RAMP		USN 1020 DSN 1030 L	1470		3.3	4.4	7.8	10.5	13.8	16.8	19.3	20.9	20.2	18.2	15.0	12.6			
3				USN 1030 DSN 1040 L	728	F	3.2	4.3	7.7	10.5	13.7	16.7	19.3	20.7	20.0	17.7	15.0	12.6	4522	20.7	C
			WOODRUFF RD. ON RAMP	USN 1040 DSN 1050 L	2324		3.3	4.3	7.5	10.4	13.7	16.7	19.2	20.6	19.9	17.7	15.1	12.6			
14		WOODRUFF RD. ON RAMP	I-385 ON RAMP	USN 1050 DSN 1060 L	1011	R	3.8	5.0	8.2	11.5	14.5	17.7	20.7	23.5	23.1	19.3	15.3	13.6	1011	23.5	C
15	**I-85 NB**	I-385 ON RAMP		USN 1060 DSN 1070 L	1491	R	10.0	11.8	17.4	25.0	30.5	42.2	55.2	65.5	64.3	51.7	38.3	27.9	1491	65.5	E
				USN 1070 DSN 1080 L	814		14.1	16.4	23.5	31.6	35.8	41.7	46.8	52.1	51.3	47.2	39.9	34.9			
				USN 1080 DSN 1090 L	800		13.9	16.1	22.9	29.9	33.8	39.1	43.1	46.9	47.9	41.9	36.2	32.6			
				USN 1090 DSN 1100 L	1511		13.8	15.9	22.6	29.7	33.5	38.5	42.2	43.4	44.7	40.5	35.7	32.3			
				USN 1100 DSN 1110 L	1090		13.6	15.7	22.2	29.6	33.3	38.0	41.2	42.3	44.0	41.2	36.2	32.5			
5				USN 1110 DSN 1120 L	1090	F	13.6	15.7	22.1	29.4	33.3	37.7	41.1	42.0	43.7	41.4	36.3	32.3	9615	46.1	F
				USN 1120 DSN 1130 L	1093		13.5	15.5	22.4	29.5	33.4	37.6	40.7	41.7	44.2	48.6	36.4	32.0			
				USN 1130 DSN 1140 L	1093		13.6	15.5	22.2	29.3	33.4	37.5	41.0	41.8	52.1	58.3	36.4	32.1			
				USN 1140 DSN 1150 L	1692		13.6	15.4	22.1	29.3	33.5	38.1	47.1	51.0	74.4	72.0	38.3	32.1			
				USN 1150 DSN 1155 L	432		13.8	15.7	22.2	30.3	35.8	44.7	57.2	64.8	67.3	66.4	42.5	34.4			
			PELHAM RD. OFF RAMP	USN 1155 DSN 1160 L	1260	R	12.4	14.0	19.7	27.1	31.6	37.0	42.7	45.2	45.5	44.8	37.0	31.0			
24	**I-85 NB CD**	WOODRUFF RD. ON RAMP	I-385 SB OFF RAMP	USN 1410 DSN 1420 L	829	W	5.2	6.7	8.7	11.3	13.2	13.9	14.9	14.3	14.2	13.5	11.3	10.8	829	14.3	B
		PELHAM RD. ON RAMP		USN 1510 DSN 1515 L	1386	R	22.0	25.0	33.1	86.6	144.7	153.3	155.5	150.0	152.0	152.5	145.4	151.4			
				USN 1515 DSN 1520 L	440		24.3	27.3	34.5	97.1	155.2	163.8	164.0	159.7	163.6	161.1	155.3	161.9			
				USN 1520 DSN 1530 L	1106		24.4	27.1	34.3	104.5	156.9	163.2	164.7	158.2	162.7	162.2	153.6	160.8			
				USN 1530 DSN 1540 L	1106		24.4	27.3	34.6	121.0	157.7	162.0	163.8	158.0	162.1	161.5	154.9	159.4			
6				USN 1540 DSN 1550 L	1090	F	24.5	27.1	35.9	139.0	157.9	162.6	160.6	161.1	162.0	160.2	155.1	157.7	6879	153.2	F
				USN 1550 DSN 1560 L	1089		24.5	26.8	50.6	146.8	157.4	162.8	160.4	160.8	161.8	159.4	158.8	161.3			
				USN 1560 DSN 1570 L	1492		24.7	26.8	75.8	144.3	146.6	146.5	148.5	152.1	148.8	148.7	147.5	147.0			
				USN 1570 DSN 1575 L	556		26.0	29.3	81.9	94.3	98.2	97.6	98.4	101.0	94.8	96.1	96.2	94.8			
16			I-385 OFF RAMP	USN 1575 DSN 1580 L	1261	R	22.8	29.9	52.2	61.6	64.1	62.1	62.6	63.2	62.8	62.0	64.1	62.7	1261	63.2	E
	I-85 SB	I-385 OFF RAMP		USN 1580 DSN 1590 L	1499		12.1	12.9	14.6	13.5	12.4	12.1	12.2	12.6	11.9	12.8	12.5	12.1			
4				USN 1590 DSN 1600 L	1500	F	12.1	12.8	14.7	13.2	12.2	11.9	12.1	12.3	11.8	12.4	12.5	11.9	5165	12.4	B
				USN 1600 DSN 1610 L	1623		12.2	12.8	14.7	13.1	12.3	11.9	11.9	12.3	11.6	12.2	12.5	11.5			
			I-385 ON RAMP	USN 1610 DSN 1620 L	543		12.2	12.7	14.7	13.1	12.4	12.0	11.9	12.3	11.6	12.3	12.6	11.6			
17		I-385 ON RAMP		USN 1620 DSN 1630 L	1401	R	14.5	15.3	18.3	16.9	16.6	16.2	17.0	17.4	16.4	16.9	17.2	15.7	1401	17.4	B
			WOODRUFF RD. ON RAMP	USN 1630 DSN 1640 L	1400	F	17.4	18.3	22.1	20.5	19.9	19.2	20.3	20.6	19.4	20.3	20.3	19.1			
		WOODRUFF RD. ON RAMP		USN 1640 DSN 1650 L	1297	R	17.6	18.6	22.9	22.9	22.5	22.1	23.1	23.7	21.3	22.2	22.1	21.0			
2				USN 1650 DSN 1660 L	1297	F	19.5	20.7	25.2	24.8	23.9	24.1	24.8	24.8	23.6	24.4	24.6	22.9	5057	23.7	C
				USN 1660 DSN 1662 L	3760		18.5	19.3	23.2	22.7	22.5	22.5	23.2	23.3	22.3	22.2	23.3	21.1			
			LAURENS RD. OFF RAMP	USN 1662 DSN 1663 L	1467	R	15.7	16.4	19.8	19.4	19.6	19.3	19.9	20.1	19.1	18.9	20.0	18.2			
		I-385 NB ON RAMP	I-385 SB OFF RAMP	USN 1720 DSN 1730 L	514	W	18.8	19.3	22.3	23.8	23.3	21.1	22.2	23.7	21.5	22.1	24.2	20.7			
25	**I-85 SB CD**	I-385 SB ON RAMP		USN 1750 DSN 1755 L	262	W	11.3	11.9	14.4	15.0	16.6	17.1	17.1	17.0	17.0	17.2	15.7	15.7	499	17.9	B
			WOODRUFF RD. OFF RAMP	USN 1755 DSN 1760 L	237		11.9	12.4	15.4	15.4	17.6	18.6	17.6	18.9	19.8	17.9	16.4	16.6			
12		ROPER MTN. RD. ON RAMP		USN 2020 DSN 2030 L	265	R	12.3	13.9	17.6	21.3	24.2	26.5	27.5	27.1	25.9	24.5	22.9	22.3	265	27.1	C
21			I-85 OFF RAMP	USN 2030 DSN 2040 L	1543	R	12.0	13.4	17.0	20.5	23.5	25.8	27.0	26.9	25.7	24.0	22.6	21.8	1543	26.9	C
		I-85 OFF RAMP		USN 2040 DSN 2050 L	277	F	8.1	8.7	11.3	13.6	15.5	16.8	17.5	17.4	16.9	16.0	15.1	14.4			
				USN 2050 DSN 2060 L	637	F	8.1	8.7	11.3	13.5	15.4	16.6	17.4	17.2	16.9	15.8	15.0	14.4			
				USN 2060 DSN 2070 L	615	F	8.1	8.7	11.4	13.5	15.4	16.6	17.3	17.4	17.0	15.8	15.0	14.5			
			I-85 SB ON RAMP	USN 2070 DSN 2080 L	674	F	8.1	8.8	11.3	13.4	15.5	16.7	17.4	17.4	17.0	15.7	15.1	14.5			
22		I-85 SB ON RAMP		USN 2080 DSN 2090 L	1030	R	12.4	13.3	16.2	18.7	19.7	20.8	21.5	21.7	20.8	20.1	19.8	18.1	1030	21.7	C
			I-85 NB ON RAMP	USN 2090 DSN 2100 L	1030	F	14.5	15.8	19.1	22.1	24.0	25.0	25.7	26.3	25.5	23.9	23.6	21.5			
23	**I-385 SB**	I-85 NB ON RAMP	WOODRUFF RD. OFF RAMP	USN 2100 DSN 2110 L	943	R	12.6	13.8	17.0	20.2	22.3	23.8	24.4	24.4	25.7	22.1	21.7	19.4	943	24.4	C
10		I-85 NB ON RAMP	WOODRUFF RD. OFF RAMP	USN 2100 DSN 2110 L	943	F	SAME AS SECTION 23												943	24.4	C
27		I-85 NB ON RAMP	WOODRUFF RD. OFF RAMP	USN 2100 DSN 2110 L	943	W	SAME AS SECTION 23												943	24.4	C
		WOODRUFF RD. OFF RAMP		USN 2110 DSN 2120 L	329	F	9.5	10.3	13.4	15.3	17.8	18.8	18.5	18.8	17.8	17.4	16.4	15.6			
				USN 2120 DSN 2130 L	1425	F	9.5	10.3	13.4	15.3	17.7	18.7	18.6	18.7	17.9	17.3	16.3	15.6			
			WOODRUFF RD. ON RAMP	USN 2130 DSN 2140 L	1213	F	9.5	10.3	13.3	15.1	17.8	18.6	18.5	18.6	18.0	17.3	16.3	15.7			
		WOODRUFF RD. ON RAMP		USN 2140 DSN 2150 L	1242	R	8.3	9.0	11.3	13.2	15.3	15.9	16.0	15.8	15.4	14.8	13.6	13.5			
8				USN 2150 DSN 2160 L	1242	F	10.4	11.4	14.2	16.7	19.5	20.1	20.3	19.9	19.4	18.7	17.2	17.0	2358	20.1	C
				USN 2160 DSN 2170 L	1116		10.4	11.5	14.4	16.8	20.0	20.3	20.6	20.3	19.8	18.9	17.6	17.4			
			BUTLER RD. OFF RAMP	USN 2170 DSN 2180 L	1115	R	10.6	11.4	14.5	17.2	20.0	20.6	20.7	20.8	20.1	19.3	17.8	17.4			

		BUTLER RD. ON RAMP		USN 3010 DSN 3015 L	1212	R	22.5	25.9	35.4	70.8	105.6	117.0	120.1	98.7	109.8	112.7	93.6	111.7			
7				USN 3015 DSN 3020 L	569	F	27.2	31.1	40.7	53.9	110.7	124.7	126.8	94.8	115.1	112.9	92.1	119.5	1717	96.6	F
				USN 3020 DSN 3030 L	1148		27.3	31.4	41.1	49.9	105.5	120.0	119.2	97.4	109.1	106.9	92.9	117.8			
			WOODRUFF RD. OFF RAMP	USN 3030 DSN 3040 L	1148	R	24.7	28.1	36.6	56.1	94.2	110.3	106.0	93.2	96.1	96.3	85.6	104.8			
		WOODRUFF RD. OFF RAMP		USN 3040 DSN 3050 L	160	F	22.6	25.4	32.8	38.8	37.4	31.8	33.1	39.3	37.0	38.8	40.0	35.7			
				USN 3050 DSN 3060 L	1212	F	22.6	25.5	32.9	37.1	32.7	28.0	28.8	34.9	31.3	33.3	35.3	30.5			
			WOODRUFF RD. ON RAMP	USN 3060 DSN 3070 L	1441	F	22.7	25.5	33.0	36.9	32.1	27.1	28.2	34.0	29.8	32.3	34.5	29.5			
26		WOODRUFF RD. ON RAMP	I-85 NB OFF RAMP	USN 3070 DSN 3080 L	1274	W	16.6	18.6	23.8	27.9	25.1	23.0	22.0	25.7	22.8	23.1	25.2	22.0	1274	25.7	C
9		WOODRUFF RD. ON RAMP	I-85 NB OFF RAMP	USN 3070 DSN 3080 L	1274	F	SAME AS SECTION 9												1274	25.7	C
18	**I-385 NB**	WOODRUFF RD. ON RAMP	I-85 NB OFF RAMP	USN 3070 DSN 3080 L	1274	R	SAME AS SECTION 9												1274	25.7	C
		I-85 NB OFF RAMP		USN 3080 DSN 3085 L	1080	F	13.4	14.8	19.0	22.1	20.9	18.9	17.0	19.8	18.8	19.0	20.4	18.0			
19			I-85 SB OFF RAMP	USN 3085 DSN 3090 L	702	R	10.7	11.9	15.3	17.7	16.8	15.1	13.6	15.9	15.1	15.3	16.4	14.5	702	15.9	B
		I-85 SB OFF RAMP		USN 3090 DSN 3095 L	369	F	10.5	11.6	14.5	17.0	16.4	14.3	12.9	15.2	14.9	14.4	15.3	14.0			
				USN 3095 DSN 3100 L	645	F	10.5	11.5	14.5	16.9	16.4	14.4	13.0	15.2	15.1	14.3	15.5	14.0			
			I-85 ON RAMP	USN 3100 DSN 3110 L	399	F	10.6	11.6	14.5	17.0	16.5	14.4	13.1	15.3	15.1	14.2	15.5	14.1			
20		I-85 ON RAMP		USN 3110 DSN 3120 L	215	R	10.9	11.6	14.2	15.8	16.9	16.0	15.2	16.1	16.0	15.3	15.9	14.4	215	16.1	B
				USN 3120 DSN 3130 L	622	R	12.7	13.7	17.0	18.9	20.5	20.0	19.4	20.0	19.6	18.5	19.0	17.9			
11				USN 3130 DSN 3140 L	1820	F	13.4	14.3	17.7	19.7	21.1	19.3	18.8	19.5	19.8	18.9	19.8	18.0	1820	19.5	C
			ROPER MTN. RD. OFF RAMP	USN 3140 DSN 3150 L	505	R	13.8	14.8	18.4	20.5	22.0	20.0	19.7	20.3	20.3	19.4	20.7	18.7			

CORSIM ANALYSIS
2035 NO-BUILD CONDITIONS – PM LINK SEGMENTS

		Freeway Section			Link Length (ft)	Classification	Density (pc/mi.ln)												Segment	Avg. Dens.	LOS
		FROM	TO			(F,R,W)	Median over 5 runs												Length	Peak Hr.	
	2035 AM NO BUILD						7:00	7:15	7:30	7:45	8:00	8:15	8:30	**8:45**	9:00	9:15	9:30	9:45			
		LAURENS RD. ON RAMP		USN 970 DSN 980 Li	1471	R	21.7	22.6	26.0	108.0	192.2	189.3	183.7	163.1	183.6	184.3	188.0	183.9			
				USN 980 DSN 1000 Li	3758		23.9	25.3	49.8	165.1	203.2	202.0	192.1	182.9	194.6	199.2	202.2	193.4			
1				USN 1000 DSN 1010 L	1875	F	25.9	29.7	113.0	182.6	187.8	188.4	174.6	176.1	179.7	185.8	189.7	181.5	6357	172.1	F
				USN 1010 DSN 1015 L	724		27.4	44.1	101.8	114.9	109.0	113.6	106.7	106.0	108.3	112.2	111.1	109.3			
13			WOODRUFF RD. OFF RAMP	USN 1015 DSN 1020 L	1147	R	25.4	45.0	66.9	79.7	78.7	75.3	77.5	76.7	74.8	76.3	77.3	74.5	1147	76.7	E
		WOODRUFF RD. OFF RAMP		USN 1020 DSN 1030 L	1470		13.6	13.5	12.8	9.6	7.6	7.4	10.2	11.4	9.7	8.5	8.8	9.8			
3				USN 1030 DSN 1040 L	728	F	13.6	13.3	12.4	9.5	7.4	7.2	10.3	10.9	9.6	8.4	8.4	9.5	4522	11.1	B
			WOODRUFF RD. ON RAMP	USN 1040 DSN 1050 L	2324		13.5	13.3	12.7	9.4	7.6	7.1	10.1	10.9	9.5	8.4	8.1	9.4			
14		WOODRUFF RD. ON RAMP	I-385 ON RAMP	USN 1050 DSN 1060 L	1011	R	22.5	21.3	29.1	16.8	14.3	13.5	17.6	20.0	17.0	15.3	14.4	15.6	1011	20.0	B
15	**I-85 NB**	I-385 ON RAMP		USN 1060 DSN 1070 L	1491	R	63.3	63.2	68.9	60.8	50.9	50.4	50.8	57.7	58.8	50.3	42.4	46.6	1491	57.7	E
				USN 1070 DSN 1080 L	814		47.2	46.4	49.3	44.2	40.7	40.1	42.3	43.6	43.0	40.9	37.1	39.5			
				USN 1080 DSN 1090 L	800		43.5	42.6	44.2	41.2	37.6	37.6	39.3	40.1	39.3	38.3	34.9	36.2			
				USN 1090 DSN 1100 L	1511		42.6	41.8	43.4	40.5	37.1	36.7	38.1	39.8	38.5	38.1	34.9	35.5			
				USN 1100 DSN 1110 L	1090		42.2	41.3	42.2	40.5	37.0	36.5	37.5	39.6	37.9	37.8	34.4	35.1			
5				USN 1110 DSN 1120 L	1090	F	41.9	41.3	41.8	41.0	37.0	36.2	37.4	39.6	37.9	38.1	34.4	35.1	9615	41.0	E
				USN 1120 DSN 1130 L	1093		41.4	41.3	41.9	41.4	36.9	36.1	37.8	39.4	37.8	38.1	34.7	35.2			
				USN 1130 DSN 1140 L	1093		41.2	41.4	41.7	41.6	36.9	36.0	37.7	39.7	37.8	38.0	35.2	35.3			
				USN 1140 DSN 1150 L	1692		47.0	46.5	50.1	46.6	37.5	36.1	38.1	42.5	38.1	38.9	36.2	35.8			
				USN 1150 DSN 1155 L	432		57.7	57.6	59.9	57.7	41.7	39.0	42.8	49.9	45.1	43.7	42.9	39.6			
			PELHAM RD. OFF RAMP	USN 1155 DSN 1160 L	1260	R	42.4	43.1	43.2	42.1	35.1	34.5	36.2	38.5	37.6	37.6	35.9	34.1			
24	**I-85 NB CD**	WOODRUFF RD. ON RAMP	I-385 SB OFF RAMP	USN 1410 DSN 1420 L	829	W	20.8	20.2	22.0	19.8	20.5	21.6	91.5	55.1	37.7	21.1	22.0	27.5	829	55.1	F
		PELHAM RD. ON RAMP		USN 1510 DSN 1515 L	1386	R	31.9	112.5	153.7	150.9	151.6	162.5	186.1	189.2	185.3	183.3	179.1	179.9			
				USN 1515 DSN 1520 L	440		34.1	142.1	163.3	158.5	161.2	177.3	204.8	208.0	205.6	199.3	193.5	193.1			
				USN 1520 DSN 1530 L	1106		39.8	153.7	163.1	159.5	161.4	183.0	208.0	206.6	202.8	198.5	193.4	193.0			
				USN 1530 DSN 1540 L	1106		70.2	152.9	162.7	159.6	160.8	184.4	203.3	203.4	203.0	195.2	194.9	193.7			
6				USN 1540 DSN 1550 L	1090	F	94.0	152.3	164.2	161.4	161.5	187.5	202.4	204.2	201.3	193.3	196.0	192.0	6879	192.1	F
				USN 1550 DSN 1560 L	1089		117.3	153.8	163.3	161.4	159.7	188.4	202.5	202.9	200.6	193.2	197.4	188.8			
				USN 1560 DSN 1570 L	1492		134.8	145.3	151.1	151.1	148.3	173.7	180.6	180.4	180.8	175.4	176.7	171.8			
				USN 1570 DSN 1575 L	556		100.5	99.8	97.5	101.4	97.9	104.5	104.4	114.5	107.5	107.1	105.9	105.2			
16			I-385 OFF RAMP	USN 1575 DSN 1580 L	1261	R	65.8	64.1	64.4	63.0	62.4	73.2	72.3	73.1	69.5	71.0	69.7	70.5	1261	73.1	E
	I-85 SB	I-385 OFF RAMP		USN 1580 DSN 1590 L	1499		13.4	13.2	12.2	11.9	12.5	8.7	6.8	7.9	7.3	7.8	8.8	8.1			
4				USN 1590 DSN 1600 L	1500	F	13.2	13.1	12.1	12.0	12.2	8.6	7.0	7.7	7.1	7.7	8.8	7.9	5165	7.6	A
				USN 1600 DSN 1610 L	1623		13.0	13.2	12.0	12.0	12.1	8.7	7.1	7.4	7.0	7.9	8.7	7.8			
			I-385 ON RAMP	USN 1610 DSN 1620 L	543		13.1	13.4	11.9	11.9	12.2	8.8	7.2	7.3	7.0	7.7	8.6	7.8			
17		I-385 ON RAMP		USN 1620 DSN 1630 L	1401	R	18.1	18.2	17.3	17.5	17.6	13.0	12.1	11.7	12.4	12.9	13.2	12.6	1401	11.7	B
			WOODRUFF RD. ON RAMP	USN 1630 DSN 1640 L	1400	F	21.7	21.7	20.6	20.7	20.6	15.7	14.7	14.1	14.4	15.5	15.9	15.0			
		WOODRUFF RD. ON RAMP		USN 1640 DSN 1650 L	1297	R	26.1	26.1	25.1	25.0	25.1	20.3	18.6	19.0	18.7	20.4	20.2	19.5			
2				USN 1650 DSN 1660 L	1297	F	28.0	27.9	26.5	26.6	26.5	22.3	20.1	20.1	20.2	21.9	21.8	20.8	5057	19.3	C
				USN 1660 DSN 1662 L	3760		26.1	25.9	24.6	25.0	24.5	21.1	18.6	19.0	18.6	20.3	20.1	19.6			
			LAURENS RD. OFF RAMP	USN 1662 DSN 1663 L	1467	R	22.6	22.5	20.9	21.8	21.3	18.3	16.0	16.2	15.7	17.4	17.1	16.9			
		I-385 NB ON RAMP	I-385 SB OFF RAMP	USN 1720 DSN 1730 L	514	W	20.7	20.0	20.2	20.3	105.5	144.1	146.8	146.2	146.7	147.6	143.7	143.4			
25	**I-85 SB CD**	I-385 SB ON RAMP		USN 1750 DSN 1755 L	262	W	18.9	19.1	19.5	19.6	20.6	17.1	18.0	17.0	17.9	18.3	17.6	18.4	499	17.8	B
			WOODRUFF RD. OFF RAMP	USN 1755 DSN 1760 L	237		19.6	20.0	20.1	20.9	22.7	19.5	18.6	18.6	19.2	19.6	18.4	20.8			
12		ROPER MTN. RD. ON RAMP		USN 2020 DSN 2030 L	265	R	33.6	36.6	42.9	54.1	74.7	89.8	99.1	89.0	88.8	90.5	90.3	92.8	265	89.0	E
21			I-85 OFF RAMP	USN 2030 DSN 2040 L	1543	R	32.9	35.6	43.5	49.1	64.8	72.6	82.9	73.9	82.4	80.2	80.0	80.5	1543	73.9	E
		I-85 OFF RAMP		USN 2040 DSN 2050 L	277	F	22.9	26.0	29.0	30.1	51.8	86.4	110.9	85.5	112.3	92.6	97.8	97.2			
				USN 2050 DSN 2060 L	637	F	22.7	25.4	28.3	29.0	85.0	115.8	157.0	150.6	154.7	142.7	150.2	143.4			
				USN 2060 DSN 2070 L	615	F	22.9	25.4	28.4	29.3	128.9	154.2	162.2	159.9	157.5	153.5	163.8	157.2			
			I-85 SB ON RAMP	USN 2070 DSN 2080 L	674	F	22.9	25.5	28.4	36.2	154.2	163.2	160.7	159.7	159.6	154.6	160.5	159.2			
22		I-85 SB ON RAMP		USN 2080 DSN 2090 L	1030	R	25.6	27.2	31.1	67.4	122.7	130.3	127.0	128.1	126.0	122.6	128.2	125.7	1030	128.1	E
			I-85 NB ON RAMP	USN 2090 DSN 2100 L	1030	F	30.8	34.3	53.7	101.5	112.5	118.0	117.0	113.3	115.0	112.7	115.2	116.2			
23	**I-385 SB**	I-85 NB ON RAMP	WOODRUFF RD. OFF RAMP	USN 2100 DSN 2110 L	943	R	31.3	47.5	81.9	83.8	85.1	85.1	86.2	87.6	84.4	87.3	85.1	85.3	943	87.6	E
10		I-85 NB ON RAMP	WOODRUFF RD. OFF RAMP	USN 2100 DSN 2110 L	943	F	SAME AS SECTION 23												943	87.6	F
27		I-85 NB ON RAMP	WOODRUFF RD. OFF RAMP	USN 2100 DSN 2110 L	943	W	SAME AS SECTION 23												943	87.6	F
		WOODRUFF RD. OFF RAMP		USN 2110 DSN 2120 L	329	F	27.9	29.3	32.2	31.3	31.5	29.5	30.8	31.2	29.8	32.8	30.7	33.6			
				USN 2120 DSN 2130 L	1425	F	27.5	28.3	31.8	29.9	29.2	27.8	28.4	28.8	27.9	30.7	27.9	30.7			
			WOODRUFF RD. ON RAMP	USN 2130 DSN 2140 L	1213	F	27.5	28.3	31.5	29.5	28.3	26.8	27.9	28.6	27.8	29.6	27.2	29.6			
		WOODRUFF RD. ON RAMP		USN 2140 DSN 2150 L	1242	R	25.2	26.0	28.7	27.4	27.0	25.7	26.1	29.2	25.8	26.0	24.4	26.1			
8				USN 2150 DSN 2160 L	1242	F	31.5	32.4	36.2	42.1	33.8	32.1	32.5	36.2	33.3	33.0	30.7	32.7	2358	41.7	E
				USN 2160 DSN 2170 L	1116		33.4	35.3	41.8	54.6	49.3	41.3	35.0	47.7	47.5	37.7	32.4	34.8			
			BUTLER RD. OFF RAMP	USN 2170 DSN 2180 L	1115	R	33.5	35.9	47.6	59.7	61.6	53.4	36.7	56.9	43.7	42.9	34.2	37.7			

		BUTLER RD. ON RAMP		USN 3010 DSN 3015 L	1212	R	63.9	83.3	101.7	93.8	96.4	99.3	87.9	114.9	98.1	114.0	113.5	110.9			
7				USN 3015 DSN 3020 L	569	F	56.7	57.4	95.5	89.2	92.7	105.4	68.3	123.0	95.8	119.4	115.1	112.1	1717	117.1	F
				USN 3020 DSN 3030 L	1148		49.8	55.2	94.4	91.3	94.2	94.5	77.4	114.2	97.5	115.7	113.2	111.2			
			WOODRUFF RD. OFF RAMP	USN 3030 DSN 3040 L	1148	R	43.6	55.9	95.4	78.6	87.5	82.4	81.3	102.0	88.2	105.2	102.2	103.6			
		WOODRUFF RD. OFF RAMP		USN 3040 DSN 3050 L	160	F	39.5	38.6	37.6	39.5	39.5	39.4	40.2	34.2	41.7	38.7	38.9	37.1			
				USN 3050 DSN 3060 L	1212	F	38.9	37.7	32.8	38.4	34.9	34.3	37.1	29.9	37.8	38.8	38.9	31.7			
			WOODRUFF RD. ON RAMP	USN 3060 DSN 3070 L	1441	F	39.4	37.7	32.1	37.9	34.5	33.6	36.6	28.9	37.4	38.3	39.2	30.9			
26		WOODRUFF RD. ON RAMP	I-85 NB OFF RAMP	USN 3070 DSN 3080 L	1274	W	28.3	27.2	25.4	27.8	26.8	26.4	27.8	22.7	26.9	26.9	27.4	22.6	1274	22.7	C
9		WOODRUFF RD. ON RAMP	I-85 NB OFF RAMP	USN 3070 DSN 3080 L	1274	F	SAME AS SECTION 9												1274	22.7	C
18	**I-385 NB**	WOODRUFF RD. ON RAMP	I-85 NB OFF RAMP	USN 3070 DSN 3080 L	1274	R	SAME AS SECTION 9												1274	22.7	C
		I-85 NB OFF RAMP		USN 3080 DSN 3085 L	1080	F	23.4	22.3	21.3	22.2	22.4	22.0	22.4	18.4	22.3	23.2	23.4	18.3			
19			I-85 SB OFF RAMP	USN 3085 DSN 3090 L	702	R	18.7	18.3	17.2	17.8	18.1	17.7	23.6	27.0	17.9	19.7	26.3	15.4	702	27.0	C
		I-85 SB OFF RAMP		USN 3090 DSN 3095 L	369	F	19.2	18.8	17.5	18.5	17.6	17.6	18.1	15.3	17.7	15.5	16.8	15.3			
				USN 3095 DSN 3100 L	645	F	19.3	18.6	17.8	18.6	17.6	17.5	17.9	15.3	17.8	14.8	16.1	15.2			
			I-85 ON RAMP	USN 3100 DSN 3110 L	399	F	19.2	18.4	18.1	18.7	17.6	17.4	18.0	15.4	17.7	14.8	16.0	15.3			
20		I-85 ON RAMP		USN 3110 DSN 3120 L	215	R	16.6	16.4	16.2	15.8	16.1	15.1	14.4	12.9	14.2	13.1	13.5	13.8	215	12.9	B
				USN 3120 DSN 3130 L	622	R	20.1	19.7	19.4	18.6	19.0	18.0	16.9	15.4	16.5	16.0	16.4	16.3			
11				USN 3130 DSN 3140 L	1820	F	20.9	20.6	20.1	19.8	20.2	19.1	18.2	16.4	17.6	16.2	16.9	17.2	1820	16.4	B
			ROPER MTN. RD. OFF RAMP	USN 3140 DSN 3150 L	505	R	21.3	20.9	20.6	20.0	20.5	19.6	18.6	16.8	17.9	16.5	17.1	17.6			

CORSIM ANALYSIS
2035 ALTERNATE 4A CONDITIONS – AM LINK SEGMENTS

		Freeway Section			Link Length (ft)	Classification	Density (pc/mi.ln)												Segment	Avg. Dens.	LOS
		FROM	TO			(F,R,W)	Median over 5 runs												Length	Peak Hr.	
	2035 AM BUILD						7:00	7:15	7:30	7:45	8:00	8:15	8:30	**8:45**	9:00	9:15	9:30	9:45			
		LAURENS RD. ON RAMP		USN 970 DSN 980 Link_Freeway	1471	R	5.0	7.1	11.8	16.3	21.1	24.8	28.9	31.5	29.3	24.9	21.1	19.0			
1				USN 980 DSN 1000 Link_Freeway	3758	F	5.3	7.5	12.7	17.9	22.9	27.0	31.4	34.5	33.0	27.7	23.3	20.9	6357	49.4	F
				USN 1000 DSN 1010 Link_Freeway	1875		5.8	7.9	13.5	19.0	24.8	29.3	34.9	69.4	82.3	37.7	25.5	22.7			
				USN 1010 DSN 1015 Link_Freeway	724		5.8	7.9	13.7	19.5	25.6	30.5	48.8	74.8	75.2	56.4	26.8	23.3			
13			WOODRUFF RD. OFF RAMP	USN 1015 DSN 1020 Link_Freeway	1147	R	5.2	7.1	12.3	17.4	22.9	27.7	36.7	43.9	42.8	37.4	24.5	21.0	1147	43.9	E
3		WOODRUFF RD. OFF RAMP		USN 1020 DSN 1030 Link_Freeway	1470	F	3.3	4.5	7.6	10.6	14.3	17.0	18.9	20.0	20.4	18.5	14.5	13.0	6374	18.3	C
				USN 1030 DSN 1040 Link_Freeway	728		3.3	4.5	7.6	10.7	14.2	17.0	18.8	19.8	20.1	18.3	14.4	13.0			
				USN 1040 DSN 1050 Link_Freeway	2324		3.3	4.5	7.4	10.6	14.1	16.9	18.6	19.7	19.9	18.4	14.5	13.0			
				USN 1050 DSN 1060 Link_Freeway	1011		2.3	3.0	4.9	7.3	9.5	11.3	12.5	13.1	13.4	12.5	9.8	8.7			
			WOODRUFF RD. ON RAMP	USN 1060 DSN 1070 Link_Freeway	841		2.7	3.6	6.0	9.0	11.5	13.9	15.4	16.3	16.5	15.3	12.0	10.7			
14	**I-85 NB**	WOODRUFF RD. ON RAMP		USN 1070 DSN 1080 Link_Freeway	1463	R	3.4	4.5	7.5	11.1	14.2	17.3	19.2	20.3	20.6	19.2	15.1	13.3	1463	20.3	C
				USN 1080 DSN 1090 Link_Freeway	800	F	3.6	4.8	7.9	11.8	14.9	18.4	20.3	21.7	22.3	20.4	16.1	14.0			
15A			I-385 ON RAMP	USN 1090 DSN 1095 Link_Freeway	800	F	3.6	4.8	7.9	11.8	15.0	18.4	20.4	21.8	22.2	20.6	16.2	13.9	800	21.8	C
15C		I-385 ON RAMP		USN 1095 DSN 1100 Link_Freeway	711	R	6.2	7.0	10.0	14.0	16.4	18.7	21.2	21.2	21.1	19.3	17.5	15.2	711	21.2	C
5				USN 1100 DSN 1110 Link_Freeway	1090	F	7.4	8.3	11.8	16.1	19.6	22.7	24.6	25.4	26.2	23.3	20.4	18.5	6490	28.4	D
				USN 1110 DSN 1120 Link_Freeway	1090		8.9	10.0	14.1	18.8	23.1	26.4	28.6	29.4	29.4	26.9	23.7	21.9			
				USN 1120 DSN 1130 Link_Freeway	1093		8.8	10.1	14.0	18.4	23.0	25.8	28.3	28.8	28.9	26.7	23.3	21.6			
				USN 1130 DSN 1140 Link_Freeway	1093		8.8	10.1	13.9	18.4	22.9	25.8	28.2	28.8	29.2	26.4	23.3	21.6			
				USN 1140 DSN 1150 Link_Freeway	1692		8.8	10.1	13.8	18.3	22.9	26.0	28.2	28.8	29.2	26.6	23.2	21.5			
				USN 1150 DSN 1155 Link_Freeway	432		9.0	10.1	13.9	18.5	23.1	26.8	29.7	30.3	32.1	27.9	24.1	22.0			
			PELHAM RD. OFF RAMP	USN 1155 DSN 1160 Link_Freeway	1260	R	9.6	10.7	14.8	20.0	25.3	31.4	34.7	39.6	43.5	33.7	27.7	24.2			
26	**I-85 NB CD**	WOODRUFF RD. ON RAMP	I-385 SB OFF RAMP	USN 1450 DSN 1460 Link_Freeway	829	W	5.6	6.6	9.0	11.3	12.7	13.5	14.2	14.5	13.9	13.5	12.1	10.9	829	14.5	B
		PELHAM RD. ON RAMP		USN 1510 DSN 1515 Link_Freeway	1386	R	18.0	20.5	25.2	29.5	30.2	30.3	30.1	29.1	28.5	28.3	27.4	27.6			
6				USN 1515 DSN 1520 Link_Freeway	440	F	18.1	20.4	25.3	29.3	30.2	30.2	30.1	29.1	28.5	28.3	27.2	27.8	3742	29.9	D
				USN 1520 DSN 1530 Link_Freeway	1106		18.0	20.4	25.3	29.3	30.4	30.1	30.0	29.3	28.7	28.3	27.4	27.6			
				USN 1530 DSN 1540 Link_Freeway	1106		18.0	20.3	25.3	29.2	30.4	30.3	29.9	29.3	28.7	28.4	27.4	27.7			
				USN 1540 DSN 1550 Link_Freeway	1090		18.3	20.7	26.1	30.9	33.8	34.0	32.2	31.6	30.8	30.1	28.8	28.9			
16A			I-85 SB CD OFF RAMP	USN 1550 DSN 1560 Link_Freeway	1089	R	15.5	17.1	22.2	27.0	29.5	30.3	28.2	27.6	26.2	26.1	24.9	24.6	1089	27.6	C
16B		I-85 SB CD OFF RAMP		USN 1560 DSN 1570 Link_Freeway	1492	F	10.1	10.6	14.2	16.6	16.5	16.4	16.6	15.6	15.6	15.8	15.5	15.9	1492	15.6	B
16C		I-85 SB CD RAMP	I-85 SB CD RAMP	USN 1560 DSN 1785 Link_Freeway	1384	R	15.0	16.7	20.7	23.6	25.1	26.0	24.6	24.5	23.7	23.2	22.8	22.1	1384	24.5	C
				USN 1570 DSN 1580 Link_Freeway	1817	F	10.1	10.4	13.9	16.5	16.3	16.4	16.5	15.6	15.7	15.6	15.4	16.0			
	I-85 SB			USN 1580 DSN 1590 Link_Freeway	1499	F	10.1	10.4	14.0	16.5	16.5	16.4	16.7	15.6	15.8	15.7	15.5	15.9			
				USN 1590 DSN 1600 Link_Freeway	1500	F	10.1	10.4	14.0	16.5	16.5	16.4	16.6	15.4	15.9	15.5	15.6	15.9			
			I-385 ON RAMP	USN 1600 DSN 1610 Link_Freeway	1623	F	10.2	10.5	13.7	16.5	16.4	16.5	16.6	15.6	15.9	15.5	15.8	15.9			
17		I-385 ON RAMP		USN 1610 DSN 1620 Link_Freeway	543	R	9.1	9.9	12.3	14.6	15.8	16.0	16.1	15.0	15.0	14.8	14.9	14.8	543	15.0	B
4				USN 1620 DSN 1630 Link_Freeway	1401	F	12.1	13.1	16.5	19.8	21.5	22.1	22.5	20.4	20.2	20.4	20.2	20.2	4098	23.5	C
				USN 1630 DSN 1640 Link_Freeway	1400		14.9	16.2	20.1	23.9	25.8	26.5	26.7	25.0	24.6	24.7	24.6	24.2			
			WOODRUFF RD. ON RAMP	USN 1640 DSN 1650 Link_Freeway	1297		14.9	16.0	20.1	23.9	25.7	26.3	26.7	25.2	24.9	24.7	24.2	24.1			
18		WOODRUFF RD. ON RAMP		USN 1650 DSN 1660 Link_Freeway	1297	R	13.6	15.1	18.5	23.4	25.1	26.6	25.7	24.9	24.0	23.5	22.9	22.3	1297	24.9	C
2				USN 1660 DSN 1662 Link_Freeway	3760	F	15.8	17.3	21.4	26.4	28.3	29.4	29.1	28.4	27.1	26.7	26.2	25.6	3760	28.4	D
			LAURENS RD. OFF RAMP	USN 1662 DSN 1663 Link_Freeway	1467	R	13.6	14.6	18.4	22.6	24.6	25.3	24.9	24.6	23.4	22.7	22.1	22.1			
12		ROPER MTN. RD. ON RAMP		USN 2020 DSN 2030 Link_Freeway	265	R	12.5	13.9	17.2	21.0	23.7	26.1	27.1	26.0	24.9	23.6	22.8	22.4	265	26.0	C
23			I-85 OFF RAMP	USN 2030 DSN 2040 Link_Freeway	1820	R	12.2	13.4	16.8	20.7	23.6	26.0	27.9	26.8	25.0	23.7	22.7	22.2	1820	26.8	C
		I-85 OFF RAMP		USN 2040 DSN 2060 Link_Freeway	637	F	8.7	9.2	11.6	14.0	16.0	17.1	18.4	17.8	17.2	16.5	15.3	14.9			
24			I-385 SB CD OFF RAMP	USN 2060 DSN 2070 Link_Freeway	615	R	7.8	8.3	10.3	12.4	14.3	15.3	16.3	16.0	15.4	14.6	13.8	13.4	615	16.0	B
10		I-385 SB CD OFF RAMP		USN 2070 DSN 2080 Link_Freeway	674	F	6.1	6.3	8.3	9.8	10.8	12.2	13.1	12.6	12.1	11.1	10.8	10.8	6644	12.6	B
				USN 2080 DSN 2090 Link_Freeway	1030		6.2	6.3	8.3	9.8	10.8	12.2	13.0	12.5	12.0	11.1	10.9	10.8			
				USN 2090 DSN 2100 Link_Freeway	1030		6.1	6.3	8.3	9.9	10.8	12.2	13.0	12.5	12.1	11.0	11.0	10.7			
	I-385 SB			USN 2100 DSN 2110 Link_Freeway	943		6.1	6.4	8.3	9.9	11.0	12.2	13.0	12.6	11.9	11.1	11.0	10.7			
				USN 2110 DSN 2120 Link_Freeway	329		6.2	6.3	8.3	9.7	11.0	12.2	13.0	12.5	11.9	11.1	10.9	10.6			
				USN 2120 DSN 2130 Link_Freeway	1425		6.2	6.4	8.3	9.8	10.9	12.1	13.0	12.5	12.1	11.1	10.8	10.7			
				USN 2130 DSN 2140 Link_Freeway	1213		6.2	6.3	8.4	9.8	10.9	12.1	12.9	12.7	12.2	11.1	11.1	10.7			
25A			WOODRUFF RD. ON RAMP	USN 2140 DSN 2145 Link_Freeway	233	F	6.2	6.3	8.4	9.8	11.0	12.1	13.0	12.7	12.1	11.0	11.3	10.7	233	12.7	B
25C		WOODRUFF RD. ON RAMP		USN 2145 DSN 2150 Link_Freeway	1008	R	5.4	5.9	7.5	9.3	9.9	10.8	11.0	10.8	10.1	9.7	9.5	9.2	1008	10.8	B
8				USN 2150 DSN 2160 Link_Freeway	1242	F	7.4	7.9	10.2	12.6	13.5	14.8	15.2	14.7	13.8	13.4	13.0	12.6	2358	15.2	B
				USN 2160 DSN 2170 Link_Freeway	1116		7.9	8.4	10.9	13.2	14.4	15.6	16.3	15.7	14.7	14.5	13.8	13.4			
			BUTLER RD. OFF RAMP	USN 2170 DSN 2180 Link_Freeway	1115	R	8.1	8.5	11.1	13.4	14.8	15.8	16.4	16.0	15.0	14.9	14.1	13.7			
28	**I-385 SB CD**	I-85 NB CD ON RAMP	WOODRUFF RD. OFF RAMP	USN 2410 DSN 2420 Link_Freeway	1186	W	10.8	11.6	14.1	17.3	20.6	23.7	24.2	23.2	22.5	19.8	18.6	17.2	1186	23.2	C
25B		I-385 SB CD RAMP	I-385 SB CD RAMP	USN 2460 DSN 2145 Link_Freeway	320	R	4.4	4.9	6.0	8.0	7.9	8.1	8.3	8.0	7.9	7.6	7.3	7.1	320	8.0	A
		BUTLER RD. ON RAMP		USN 3010 DSN 3015 Link_Freeway	1212	R	13.5	15.1	19.5	23.7	25.6	25.4	25.0	24.7	24.5	24.1	24.0	23.6			
7				USN 3015 DSN 3020 Link_Freeway	569	F	12.0	13.5	17.4	21.3	23.1	23.0	22.7	22.3	22.0	21.8	21.6	21.3	1717	20.4	C
				USN 3020 DSN 3030 Link_Freeway	1148		10.7	11.9	15.4	18.7	20.4	20.1	19.9	19.5	19.4	19.1	19.0	18.7			
19A			I-385 NB CD OFF RAMP	USN 3030 DSN 3040 Link_Freeway	360	R	10.6	11.9	15.3	18.7	20.4	20.2	20.0	19.5	19.5	19.2	19.0	18.8	360	19.5	B
19B		I-385 NB CD OFF RAMP		USN 3040 DSN 3050 Link_Freeway	948	F	9.6	11.0	14.3	17.4	19.5	18.7	19.1	18.7	18.6	18.5	18.2	18.0	948	18.7	C

19C		I-385 NB CD RAMP	I-385 NB CD RAMP	USN 3040 DSN 3310 Link_Freeway	831	R	8.1	8.7	11.1	13.4	14.4	14.5	13.8	14.0	13.5	13.4	13.5	13.6	831	14.0	B
				USN 3050 DSN 3060 Link_Freeway	1212	F	9.6	11.0	14.2	17.3	19.3	18.7	19.1	18.7	18.5	18.4	18.1	18.0			
				USN 3060 DSN 3070 Link_Freeway	1441	F	9.7	10.9	14.3	17.3	19.4	18.7	19.2	18.6	18.6	18.6	18.2	17.8			
	I-385 NB			USN 3070 DSN 3080 Link_Freeway	1274	F	9.7	10.7	14.2	17.2	19.5	18.7	19.2	18.8	18.6	18.8	18.3	17.9			
			WOODRUFF RD. ON RAMP	USN 3080 DSN 3085 Link_Freeway	929	F	9.7	10.6	14.2	17.3	19.4	18.9	19.2	18.8	18.6	18.6	18.2	17.9			
20		WOODRUFF RD. ON RAMP		USN 3085 DSN 3090 Link_Freeway	1222	R	10.0	11.6	15.1	18.4	20.9	20.5	20.2	20.2	19.5	18.9	18.7	17.6	1222	20.2	C
9			I-85 ON RAMP	USN 3090 DSN 3095 Link_Freeway	210	F	12.7	14.7	19.2	23.2	26.3	26.0	25.5	25.5	24.5	23.9	23.8	22.5	210	25.5	C
21		I-85 ON RAMP		USN 3095 DSN 3100 Link_Freeway	435	R	11.2	12.7	16.2	19.3	21.8	21.3	21.0	21.1	20.4	19.9	19.5	18.7	435	21.1	C
				USN 3100 DSN 3110 Link_Freeway	399	R	11.2	12.7	16.1	19.2	21.7	21.1	21.0	21.0	20.3	19.8	19.4	18.7			
				USN 3110 DSN 3120 Link_Freeway	215	R	11.2	12.6	16.1	19.3	21.7	21.2	21.1	21.0	20.3	19.8	19.5	18.7			
				USN 3120 DSN 3130 Link_Freeway	622	F	11.2	12.5	16.1	19.3	21.7	21.2	21.1	21.0	20.3	19.8	19.6	18.6			
22				USN 3130 DSN 3140 Link_Freeway	1820	F	12.3	13.5	17.7	21.5	24.3	24.1	24.3	24.5	23.4	22.6	22.4	20.9	1820	24.5	C
11			ROPER MTN. RD. OFF RAMP	USN 3140 DSN 3150 Link_Freeway	505	R	14.1	15.4	20.2	24.6	28.2	27.7	28.0	28.2	26.9	25.9	25.9	23.8	505	28.2	D
27	**I-385 NB CD**	WOODRUFF RD. ON RAMP		USN 3350 DSN 3360 Link_Freeway	672	W	6.8	7.1	9.1	11.2	12.1	12.3	12.0	11.4	11.5	11.0	10.9	11.2	1939	14.7	B
			I-85 NB OFF RAMP	USN 3360 DSN 3370 Link_Freeway	1267		9.8	10.3	13.0	16.2	17.5	17.8	17.3	16.5	16.6	16.0	15.8	16.4			
15B		I-85 NB CD RAMP	I-85 NB CD RAMP	USN 3540 DSN 1095 Link_Freeway	1002	R	8.8	9.5	12.1	14.6	16.3	17.4	17.6	17.3	16.6	16.1	15.6	15.4	1002	17.3	B

CORSIM ANALYSIS
2035 ALTERNATE 4A CONDITIONS – PM LINK SEGMENTS

		Freeway Section			Link Length (ft)	Classification	Density (pc/mi.ln)												Segment	Avg. Dens.	LOS
		FROM	TO			(F,R,W)	Median over 5 runs												Length	Peak Hr.	
	2035 PM BUILD						4:00	4:15	4:30	4:45	5:00	5:15	5:30	**5:45**	6:00	6:15	6:30	6:45			
		LAURENS RD. ON RAMP		USN 970 DSN 980 Link_Freeway	1471	R	25.4	26.4	30.2	34.4	66.3	114.7	116.1	106.3	119.0	64.5	19.3	17.4			
				USN 980 DSN 1000 Link_Freeway	3758		27.8	28.9	32.7	43.9	103.5	120.6	117.8	106.7	125.7	99.4	26.8	19.0			
1				USN 1000 DSN 1010 Link_Freeway	1875	F	30.1	31.1	37.2	88.8	106.0	112.7	113.8	102.0	117.0	109.1	72.1	20.5	6357	101.5	F
				USN 1010 DSN 1015 Link_Freeway	724		32.8	34.2	56.7	78.3	81.1	77.7	80.5	73.5	83.2	84.4	70.5	21.3			
13			WOODRUFF RD. OFF RAMP	USN 1015 DSN 1020 Link_Freeway	1147	R	30.5	31.0	39.5	44.3	46.5	44.8	45.7	47.5	52.9	49.2	44.4	19.1	1147	47.5	E
		WOODRUFF RD. OFF RAMP		USN 1020 DSN 1030 Link_Freeway	1470		17.3	17.8	19.3	19.9	17.9	19.1	19.1	19.4	18.5	18.8	17.8	12.3			
				USN 1030 DSN 1040 Link_Freeway	728		17.4	17.7	19.4	19.6	17.1	18.7	18.9	18.6	17.9	18.4	17.8	12.3			
3				USN 1040 DSN 1050 Link_Freeway	2324	F	17.4	17.7	19.3	19.3	17.0	18.5	18.9	18.5	17.8	18.4	18.1	12.3	6374	17.8	B
				USN 1050 DSN 1060 Link_Freeway	1011		12.3	12.9	14.0	14.3	12.6	13.5	14.3	13.8	13.0	13.2	12.7	9.0			
			WOODRUFF RD. ON RAMP	USN 1060 DSN 1070 Link_Freeway	841		15.2	15.7	17.1	17.7	15.4	16.5	17.5	17.1	16.0	16.3	15.8	11.0			
14	**I-85 NB**	WOODRUFF RD. ON RAMP		USN 1070 DSN 1080 Link_Freeway	1463	R	18.9	19.7	21.6	22.1	19.6	20.6	21.9	21.6	20.2	20.5	20.2	13.7	1463	21.6	C
				USN 1080 DSN 1090 Link_Freeway	800	F	20.0	20.9	23.2	23.4	20.8	22.3	23.3	23.1	21.2	21.9	21.9	14.6			
15A			I-385 ON RAMP	USN 1090 DSN 1095 Link_Freeway	800	F	20.2	20.9	23.3	23.3	20.9	22.4	23.7	23.2	21.5	22.0	22.1	14.7	800	23.2	C
15C		I-385 ON RAMP		USN 1095 DSN 1100 Link_Freeway	711	R	21.6	24.3	26.0	31.8	28.9	24.4	21.4	20.3	21.7	19.8	21.2	18.5	711	20.3	C
				USN 1100 DSN 1110 Link_Freeway	1090		25.6	28.1	29.1	31.8	31.4	27.5	25.7	24.7	27.2	24.3	26.9	23.0			
				USN 1110 DSN 1120 Link_Freeway	1090		29.6	30.7	33.3	33.4	33.3	31.1	31.4	30.3	30.6	29.1	32.2	26.4			
5				USN 1120 DSN 1130 Link_Freeway	1093	F	28.5	29.5	32.1	32.5	32.7	31.4	31.3	48.2	31.2	38.1	31.7	31.4	6490	70.3	F
				USN 1130 DSN 1140 Link_Freeway	1093		28.3	29.3	31.9	32.4	36.6	49.1	37.6	85.6	44.6	75.2	31.4	31.5			
				USN 1140 DSN 1150 Link_Freeway	1692		31.1	31.9	34.5	44.1	69.5	109.5	75.8	122.8	93.0	118.2	58.7	35.2			
				USN 1150 DSN 1155 Link_Freeway	432		30.5	32.4	38.5	71.5	92.7	98.9	89.3	97.7	96.3	97.9	93.3	37.9			
			PELHAM RD. OFF RAMP	USN 1155 DSN 1160 Link_Freeway	1260	R	34.1	36.9	44.7	60.9	67.5	64.0	64.6	61.8	63.7	64.6	65.1	41.8			
26	**I-85 NB CD**	WOODRUFF RD. ON RAMP	I-385 SB OFF RAMP	USN 1450 DSN 1460 Link_Freeway	829	W	19.8	20.2	21.6	23.0	22.1	22.7	22.8	21.9	22.2	21.2	19.7	18.0	829	21.9	C
		PELHAM RD. ON RAMP		USN 1510 DSN 1515 Link_Freeway	1386	R	22.2	23.3	26.7	29.1	30.2	30.1	29.4	28.2	28.2	27.3	26.6	26.1			
				USN 1515 DSN 1520 Link_Freeway	440		22.2	23.3	26.6	29.2	30.2	30.0	29.5	28.2	28.1	27.3	26.6	26.1			
6				USN 1520 DSN 1530 Link_Freeway	1106	F	22.2	23.3	26.6	29.2	30.2	30.1	29.6	28.2	28.1	27.4	26.7	26.2	3742	28.8	D
				USN 1530 DSN 1540 Link_Freeway	1106		22.2	23.2	26.5	29.2	30.3	30.1	29.6	28.5	28.1	27.3	26.9	26.1			
				USN 1540 DSN 1550 Link_Freeway	1090		22.7	23.9	27.6	32.4	32.6	33.1	31.9	29.9	29.7	28.7	27.7	27.2			
16A			I-85 SB CD OFF RAMP	USN 1550 DSN 1560 Link_Freeway	1089	R	19.2	20.4	23.5	28.1	29.6	28.8	28.1	26.1	25.6	24.9	23.6	23.3	1089	26.1	C
16B		I-85 SB CD OFF RAMP		USN 1560 DSN 1570 Link_Freeway	1492	F	12.0	12.5	14.5	16.2	16.5	16.5	16.3	15.8	15.5	15.2	15.2	14.7	1492	15.8	B
16C		I-85 SB CD RAMP	I-85 SB CD RAMP	USN 1560 DSN 1785 Link_Freeway	1384	R	18.8	19.3	21.9	24.5	24.4	24.7	24.7	23.4	23.9	22.5	21.5	21.5	1384	23.4	C
				USN 1570 DSN 1580 Link_Freeway	1817	F	12.0	12.6	14.3	16.2	16.5	16.7	16.3	15.8	15.4	15.4	15.2	14.8			
	I-85 SB			USN 1580 DSN 1590 Link_Freeway	1499	F	12.0	12.5	14.4	16.1	16.6	16.8	16.2	15.8	15.6	15.5	15.2	14.7			
				USN 1590 DSN 1600 Link_Freeway	1500	F	12.3	12.5	14.5	16.0	16.7	16.9	16.2	15.8	15.6	15.3	15.2	14.6			
			I-385 ON RAMP	USN 1600 DSN 1610 Link_Freeway	1623	F	12.4	12.3	14.4	16.1	16.8	16.8	16.4	15.9	15.6	15.4	15.2	14.7			
17		I-385 ON RAMP		USN 1610 DSN 1620 Link_Freeway	543	R	13.5	13.6	15.5	16.9	17.4	15.9	15.6	14.9	15.2	14.9	15.4	14.9	543	14.9	B
				USN 1620 DSN 1630 Link_Freeway	1401		18.3	18.6	21.2	23.7	24.0	22.2	21.8	20.3	21.0	20.5	21.3	20.3			
4				USN 1630 DSN 1640 Link_Freeway	1400	F	22.3	22.2	25.2	28.0	28.3	26.3	26.1	24.7	25.0	24.7	25.4	24.4	4098	23.2	C
			WOODRUFF RD. ON RAMP	USN 1640 DSN 1650 Link_Freeway	1297		22.0	22.2	25.1	27.8	28.1	26.3	26.1	24.6	24.9	24.7	25.4	24.2			
18		WOODRUFF RD. ON RAMP		USN 1650 DSN 1660 Link_Freeway	1297	R	23.1	23.4	26.5	29.3	29.8	26.9	27.1	26.2	26.4	25.9	27.1	24.8	1297	26.2	C
2				USN 1660 DSN 1662 Link_Freeway	3760	F	26.0	26.3	29.0	31.7	32.7	30.7	30.1	29.5	29.4	29.0	29.8	27.9	3760	29.5	D
			LAURENS RD. OFF RAMP	USN 1662 DSN 1663 Link_Freeway	1467	R	22.5	22.7	25.0	27.2	28.2	26.5	25.8	25.3	25.1	24.7	25.5	24.0			
12		ROPER MTN. RD. ON RAMP		USN 2020 DSN 2030 Link_Freeway	265	R	30.5	33.1	40.1	48.5	99.1	127.0	122.5	128.4	130.0	121.1	117.4	111.6	265	128.4	E
23			I-85 OFF RAMP	USN 2030 DSN 2040 Link_Freeway	1820	R	31.7	35.7	49.4	60.0	67.2	91.8	90.0	91.0	90.6	86.1	85.6	79.0	1820	91.0	E
		I-85 OFF RAMP		USN 2040 DSN 2060 Link_Freeway	637	F	19.7	22.0	24.6	26.0	39.8	73.9	72.9	81.2	77.7	74.3	75.0	66.1			
24			I-385 SB CD OFF RAMP	USN 2060 DSN 2070 Link_Freeway	615	R	17.4	19.5	21.2	22.0	45.9	69.6	71.8	74.1	74.7	74.2	74.3	72.8	615	74.1	E
		I-385 SB CD OFF RAMP		USN 2070 DSN 2080 Link_Freeway	674		13.6	15.0	16.6	17.2	17.4	12.5	11.2	11.6	11.0	12.3	13.0	14.0			
				USN 2080 DSN 2090 Link_Freeway	1030		13.6	15.0	16.6	17.2	17.1	12.3	11.1	11.3	11.0	12.0	12.8	14.0			
				USN 2090 DSN 2100 Link_Freeway	1030		13.6	15.0	16.7	17.1	17.1	12.4	11.0	11.0	11.0	12.0	12.8	13.9			
10	**I-385 SB**			USN 2100 DSN 2110 Link_Freeway	943	F	13.6	15.0	16.7	16.9	17.2	12.4	11.0	10.9	11.0	11.9	12.6	14.0	6644	11.1	B
				USN 2110 DSN 2120 Link_Freeway	329		13.5	15.0	16.6	16.7	17.3	12.4	10.9	11.1	11.1	12.0	12.4	14.3			
				USN 2120 DSN 2130 Link_Freeway	1425		13.5	14.9	16.7	16.5	17.5	12.5	11.0	11.0	11.0	12.0	12.2	14.3			
				USN 2130 DSN 2140 Link_Freeway	1213		13.4	15.0	16.6	16.6	17.2	12.8	11.0	11.0	10.8	11.9	12.1	14.0			
25A			WOODRUFF RD. ON RAMP	USN 2140 DSN 2145 Link_Freeway	233	F	13.4	14.9	16.7	16.7	16.9	12.9	10.9	11.1	10.9	11.8	12.2	13.7	233	11.1	B
25C		WOODRUFF RD. ON RAMP		USN 2145 DSN 2150 Link_Freeway	1008	R	11.2	12.3	13.6	13.3	13.9	11.2	10.7	10.8	10.8	11.0	11.7	11.6	1008	10.8	B
				USN 2150 DSN 2160 Link_Freeway	1242		15.4	16.8	18.4	18.3	18.9	15.6	14.5	14.8	14.6	15.1	16.0	15.9			
8				USN 2160 DSN 2170 Link_Freeway	1116	F	16.5	17.9	19.8	19.6	19.9	16.8	15.7	15.8	15.4	15.7	17.1	17.0	2358	15.3	B
			BUTLER RD. OFF RAMP	USN 2170 DSN 2180 Link_Freeway	1115	R	17.1	18.2	20.1	19.8	20.4	17.5	16.0	16.1	15.6	15.6	17.1	17.5			
28	**I-385 SB CD**	I-85 NB CD ON RAMP	WOODRUFF RD. OFF RAMP	USN 2410 DSN 2420 Link_Freeway	1186	W	18.1	19.9	70.3	125.9	127.5	133.0	130.9	131.8	131.4	127.9	130.5	125.4	1186	131.8	F
25B		I-385 SB CD RAMP	I-385 SB CD RAMP	USN 2460 DSN 2145 Link_Freeway	320	R	8.3	8.6	8.9	9.0	9.8	9.3	9.8	9.4	9.1	9.9	9.4	8.6	320	9.4	A
		BUTLER RD. ON RAMP		USN 3010 DSN 3015 Link_Freeway	1212	R	22.5	23.9	25.3	26.6	26.1	25.9	25.3	24.9	24.9	24.0	23.9	23.7			
7				USN 3015 DSN 3020 Link_Freeway	569	F	20.3	21.5	22.9	24.1	23.7	23.4	22.8	22.6	22.5	21.8	21.5	21.3	1717	20.8	C
				USN 3020 DSN 3030 Link_Freeway	1148		17.8	18.9	20.1	21.0	20.8	20.6	20.1	19.9	19.8	19.1	19.1	18.7			
19A			I-385 NB CD OFF RAMP	USN 3030 DSN 3040 Link_Freeway	360	R	17.8	18.9	20.1	21.1	20.8	20.7	20.1	19.8	19.8	19.2	19.1	18.8	360	19.8	B
19B		I-385 NB CD OFF RAMP		USN 3040 DSN 3050 Link_Freeway	948	F	16.7	17.8	18.9	20.1	19.7	18.9	19.1	18.6	18.5	18.7	18.2	17.9	948	18.6	C

19C		I-385 NB CD RAMP	I-385 NB CD RAMP	USN 3040 DSN 3310 Link_Freeway	831	R	12.5	13.6	14.4	14.7	14.9	15.0	14.5	14.3	14.1	13.4	13.5	12.9	831	14.3	B
				USN 3050 DSN 3060 Link_Freeway	1212	F	16.7	17.7	19.0	20.1	19.6	19.0	18.9	18.5	18.6	18.3	18.2	17.9			
				USN 3060 DSN 3070 Link_Freeway	1441	F	16.5	17.6	18.9	20.2	19.5	19.1	18.8	18.7	18.6	18.2	18.2	17.9			
	I-385 NB			USN 3070 DSN 3080 Link_Freeway	1274	F	16.5	17.7	19.0	20.2	19.6	19.2	18.7	18.8	18.5	18.3	18.3	18.0			
			WOODRUFF RD. ON RAMP	USN 3080 DSN 3085 Link_Freeway	929	F	16.7	17.6	19.1	20.1	19.5	19.3	18.6	19.0	18.6	18.3	18.2	17.9			
20		WOODRUFF RD. ON RAMP		USN 3085 DSN 3090 Link_Freeway	1222	R	17.5	18.2	19.5	20.3	20.1	19.9	19.4	19.4	19.0	18.7	19.2	17.8	1222	19.4	B
9			I-85 ON RAMP	USN 3090 DSN 3095 Link_Freeway	210	F	22.3	22.7	24.6	25.6	25.2	25.0	24.7	24.3	24.1	23.6	24.3	22.5	210	24.3	C
21		I-85 ON RAMP		USN 3095 DSN 3100 Link_Freeway	435	R	19.7	20.3	22.9	23.9	24.1	23.7	23.7	23.0	22.2	22.0	22.1	20.9	435	23.0	C
				USN 3100 DSN 3110 Link_Freeway	399	R	19.5	20.2	22.6	24.0	24.1	23.6	23.5	22.9	22.3	21.9	22.1	20.8			
				USN 3110 DSN 3120 Link_Freeway	215	R	19.5	20.2	22.6	24.0	24.0	23.7	23.5	22.8	22.3	21.9	22.2	20.9			
				USN 3120 DSN 3130 Link_Freeway	622	F	19.4	20.3	22.6	24.0	24.0	23.8	23.5	22.9	22.3	22.0	22.2	20.9			
22				USN 3130 DSN 3140 Link_Freeway	1820	F	24.2	25.6	28.1	30.0	29.6	29.2	29.0	28.6	27.9	27.3	27.0	25.2	1820	28.6	D
11			ROPER MTN. RD. OFF RAMP	USN 3140 DSN 3150 Link_Freeway	505	R	28.0	28.9	31.7	34.2	34.3	33.3	32.6	33.5	32.0	31.0	30.9	29.0	505	33.5	D
27	**I-385 NB CD**	WOODRUFF RD. ON RAMP		USN 3350 DSN 3360 Link_Freeway	672	W	10.6	11.2	11.8	12.0	12.0	12.4	12.2	11.6	12.0	11.5	10.9	11.1	1939	15.0	B
			I-85 NB OFF RAMP	USN 3360 DSN 3370 Link_Freeway	1267		15.3	16.1	17.0	17.3	17.6	17.7	17.7	16.8	17.6	16.8	15.9	15.9			
15B		I-85 NB CD RAMP	I-85 NB CD RAMP	USN 3540 DSN 1095 Link_Freeway	1002	R	18.5	19.3	20.6	21.7	21.2	17.6	16.6	15.6	16.8	16.4	17.1	18.1	1002	15.6	B