

Florence & Hutcheson
501 Huger Street
Columbia, SC 29201

Phone: (803)254-5800
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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 NB
From/To: BEGIN TO US 276 EB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6412	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1781	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1941	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1941	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	57.9	mi/h
Number of lanes, N	4	
Density, D	33.5	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 NB
From/To: AT 276 EB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6058	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1683	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1834	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1834	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.0	mi/h
Number of lanes, N	4	
Density, D	31.1	pc/mi/ln
Level of service, LOS	D	

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 NB
From/To: 276 EB to 276 WB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6388	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1774	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1934	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1934	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.0	mi/h
Number of lanes, N	4	
Density, D	33.4	pc/mi/ln
Level of service, LOS	D	

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Freeway/Direction: I-85 NB
From/To: at 276 WB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5563	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1545	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1684	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1684	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.9	mi/h
Number of lanes, N	4	
Density, D	28.1	pc/mi/ln
Level of service, LOS	D	

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 NB
From/To: US 276 to Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6350	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1764	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1923	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1923	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	4	
Density, D	33.1	pc/mi/ln
Level of service, LOS	D	

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Freeway/Direction: I-85 NB
From/To: I-85NB CD off to I-85NB CD on
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	3743	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1040	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1133	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

 LOS and Performance Measures

Flow rate, vp	1133	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	4	
Density, D	18.9	pc/mi/ln
Level of service, LOS	C	

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 NB
From/To: C-D Ramp to I-385 on
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4384	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1218	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1327	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1327	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	4	
Density, D	22.1	pc/mi/ln
Level of service, LOS	C	

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 NB
From/To: I-385 to Pelham Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7864	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2184	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2381	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2381	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	48.9	mi/h
Number of lanes, N	4	
Density, D	48.7	pc/mi/ln
Level of service, LOS	F	

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Freeway/Direction: I-85 NB
From/To: I-385 to Pelham Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7864	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2184	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1905	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1905	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.3	mi/h
Number of lanes, N	5	
Density, D	32.7	pc/mi/ln
Level of service, LOS	D	

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Freeway/Direction: I-85 NB
From/To: Pelham Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5404	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1501	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1636	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1636	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	4	
Density, D	27.3	pc/mi/ln
Level of service, LOS	D	

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Analysis Time Period: AM
Freeway/Direction: I-85 NB
From/To: Pelham Rd eb on to wb on
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	6535	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1815	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1979	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

 LOS and Performance Measures

Flow rate, vp	1979	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	57.4	mi/h
Number of lanes, N	4	
Density, D	34.5	pc/mi/ln
Level of service, LOS	D	

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 NB
From/To: Pelham Rd to End
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7392	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2053	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2238	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2238	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	52.6	mi/h
Number of lanes, N	4	
Density, D	42.5	pc/mi/ln
Level of service, LOS	E	

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Freeway/Direction: I-85 NB
From/To: BEGIN TO US 276 EB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6609	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1836	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2001	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2001	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	57.1	mi/h
Number of lanes, N	4	
Density, D	35.1	pc/mi/ln
Level of service, LOS	E	

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Freeway/Direction: I-85 NB
From/To: AT 276 EB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4933	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1370	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1494	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1494	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	4	
Density, D	24.9	pc/mi/ln
Level of service, LOS	C	

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 NB
From/To: 276 EB to 276 WB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	5550	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1542	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1680	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

 LOS and Performance Measures

Flow rate, vp	1680	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.9	mi/h
Number of lanes, N	4	
Density, D	28.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 NB
From/To: at 276 WB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5044	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1401	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1527	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1527	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	4	
Density, D	25.5	pc/mi/ln
Level of service, LOS	C	

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 Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 NB
From/To: US 276 to Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	5930	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1647	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1795	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

 LOS and Performance Measures

Flow rate, vp	1795	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.3	mi/h
Number of lanes, N	4	
Density, D	30.3	pc/mi/ln
Level of service, LOS	D	

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 Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 NB
From/To: I-85NB CD off to I-85NB CD on
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	3259	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	905	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	987	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

 LOS and Performance Measures

Flow rate, vp	987	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	4	
Density, D	16.5	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 NB
From/To: I-85NB C-D Ramp to I-385 on
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5346	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1485	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1619	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1619	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	4	
Density, D	27.0	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 NB
From/To: I-385 to Pelham Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	9734	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2704	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2947	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2947	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	27.1	mi/h
Number of lanes, N	4	
Density, D	108.9	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 NB
From/To: I-385 to Pelham Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	9734	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2704	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2358	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2358	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	49.6	mi/h
Number of lanes, N	5	
Density, D	47.6	pc/mi/ln
Level of service, LOS	F	

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 NB
From/To: Pelham Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6960	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1933	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2107	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2107	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	55.3	mi/h
Number of lanes, N	4	
Density, D	38.1	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 NB
From/To: Pelham Rd WB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	8341	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2317	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2525	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2525	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	44.5	mi/h
Number of lanes, N	4	
Density, D	56.8	pc/mi/ln
Level of service, LOS	F	

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 Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 NB
From/To: Pelham Rd to End
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	9468	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2630	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2867	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

 LOS and Performance Measures

Flow rate, vp	2867	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	30.8	mi/h
Number of lanes, N	4	
Density, D	92.9	pc/mi/ln
Level of service, LOS	F	

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 Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: US 276 EB TO BEGIN
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	7213	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2004	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2184	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

 LOS and Performance Measures

Flow rate, vp	2184	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	53.8	mi/h
Number of lanes, N	4	
Density, D	40.6	pc/mi/ln
Level of service, LOS	E	

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: 276 EB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6598	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1833	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1998	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1998	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	57.1	mi/h
Number of lanes, N	4	
Density, D	35.0-	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: at US 276
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7663	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2129	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2320	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2320	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	50.6	mi/h
Number of lanes, N	4	
Density, D	45.9	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: 276 WB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6172	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1714	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1869	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1869	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	58.7	mi/h
Number of lanes, N	4	
Density, D	31.8	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: Woodruff Rd to US 276
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6840	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1900	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2071	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2071	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	56.0	mi/h
Number of lanes, N	4	
Density, D	37.0	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: I-385 ON to Woodruff
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6004	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1668	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1818	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1818	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	59.1	mi/h
Number of lanes, N	4	
Density, D	30.7	pc/mi/ln
Level of service, LOS	D	

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 Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: I-385 OFF to I-385 ON
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	3949	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1097	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1196	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

 LOS and Performance Measures

Flow rate, vp	1196	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	4	
Density, D	19.9	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: Pelham Rd to I-385
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	8859	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2461	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2682	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2682	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	38.7	mi/h
Number of lanes, N	4	
Density, D	69.2	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: Pelham Rd to I-385
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	8859	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2461	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2146	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2146	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	54.6	mi/h
Number of lanes, N	5	
Density, D	39.3	pc/mi/ln
Level of service, LOS	E	

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: Pelham Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6910	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1919	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2092	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2092	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	55.6	mi/h
Number of lanes, N	4	
Density, D	37.6	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: Pelham Rd WB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6467	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1796	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1958	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	1958	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	57.7	mi/h
Number of lanes, N	4	
Density, D	34.0	pc/mi/ln
Level of service, LOS	D	

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-85 SB
From/To: End to Pelham Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	9250	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2569	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2801	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2801	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	33.8	mi/h
Number of lanes, N	4	
Density, D	82.9	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: US 276 EB TO BEGIN
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	9009	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2503	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2728	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2728	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	36.9	mi/h
Number of lanes, N	4	
Density, D	73.9	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: 276 EB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	8183	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2273	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2478	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2478	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	46.0	mi/h
Number of lanes, N	4	
Density, D	53.9	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: at US 276
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	8897	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2471	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2694	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2694	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	38.3	mi/h
Number of lanes, N	4	
Density, D	70.4	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: 276 WB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	8006	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2224	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2424	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2424	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	47.7	mi/h
Number of lanes, N	4	
Density, D	50.8	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: Woodruff Rd to US 276
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	8610	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2392	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2607	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2607	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	41.6	mi/h
Number of lanes, N	4	
Density, D	62.7	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: I-385 ON to Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7192	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1998	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2178	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2178	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	53.9	mi/h
Number of lanes, N	4	
Density, D	40.4	pc/mi/ln
Level of service, LOS	E	

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 Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: I-385 off to I-385 on
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	5200	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1444	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1574	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

 LOS and Performance Measures

Flow rate, vp	1574	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	60.0	mi/h
Number of lanes, N	4	
Density, D	26.2	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: Pelham Rd to I-385
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	9099	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2528	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2755	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2755	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	35.8	mi/h
Number of lanes, N	4	
Density, D	77.0	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: Pelham Rd to I-385
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	9099	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2528	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2204	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2204	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	53.4	mi/h
Number of lanes, N	5	
Density, D	41.3	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: Pelham Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7579	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2105	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2295	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2295	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	51.2	mi/h
Number of lanes, N	4	
Density, D	44.8	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: Pelham Rd WB
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6789	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1886	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2056	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2056	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	56.2	mi/h
Number of lanes, N	4	
Density, D	36.6	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-85 SB
From/To: End to Pelham Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7927	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2202	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2400	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	60.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	60.0	mi/h

LOS and Performance Measures

Flow rate, vp	2400	pc/h/ln
Free-flow speed, FFS	60.0	mi/h
Average passenger-car speed, S	48.4	mi/h
Number of lanes, N	4	
Density, D	49.6	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 NB
From/To: Begin to Butler Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5999	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1666	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2422	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2422	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	45.4	mi/h
Number of lanes, N	3	
Density, D	53.3	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 NB
From/To: Butler Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5548	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1541	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2240	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2240	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	50.2	mi/h
Number of lanes, N	3	
Density, D	44.6	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 10/14/2011
Analysis Time Period: AM
Freeway/Direction: I-385 NB
From/To: Butler Rd to Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6847	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1902	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2073	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2073	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	53.2	mi/h
Number of lanes, N	4	
Density, D	39.0	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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 Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 NB
From/To: Butler Rd to Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	6847	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1902	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2764	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	2764	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	32.1	mi/h
Number of lanes, N	3	
Density, D	86.2	pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 8/25/2011
Analysis Time Period: AM
Freeway/Direction: I-385 NB
From/To: Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3068	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	852	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1239	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1239	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	22.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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 Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 8/25/2011
Analysis Time Period: AM
Freeway/Direction: I-385 NB
From/To: Woodruff Rd to I-85 SB on
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	4490	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1247	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1813	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	1813	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	33.0	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst: JP
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Date Performed: 8/25/2011
Analysis Time Period: AM
Freeway/Direction: I-385 NB
From/To: I-85SB ramp - I-85NB ramp
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6496	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1804	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1967	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1967	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	54.3	mi/h
Number of lanes, N	4	
Density, D	36.2	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 8/25/2011
Analysis Time Period: AM
Freeway/Direction: I-385 NB
From/To: I-85 to Roper Mtn Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7566	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2102	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1833	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1833	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	5	
Density, D	33.3	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 NB
From/To: Roper Mtn Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4999	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1389	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2018	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2018	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	53.8	mi/h
Number of lanes, N	3	
Density, D	37.5	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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 Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 NB
From/To: Roper Mtn Rd to End
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	5726	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1591	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2312	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	2312	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	48.5	mi/h
Number of lanes, N	3	
Density, D	47.6	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 NB
From/To: Begin to Butler Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6638	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1844	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2680	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2680	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	35.9	mi/h
Number of lanes, N	3	
Density, D	74.7	pc/mi/ln
Level of service, LOS	F	

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 Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 NB
From/To: Butler Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	6270	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1742	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2531	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	2531	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	41.8	mi/h
Number of lanes, N	3	
Density, D	60.5	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 10/14/2011
Analysis Time Period: PM
Freeway/Direction: I-385 NB
From/To: Butler Rd to Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7708	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2141	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2334	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2334	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	48.0	mi/h
Number of lanes, N	4	
Density, D	48.7	pc/mi/ln
Level of service, LOS	F	

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 Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 NB
From/To: Butler Rd to Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	7708	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2141	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	3112	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	3112	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	12.5	mi/h
Number of lanes, N	3	
Density, D	249.0	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 8/25/2011
Analysis Time Period: PM
Freeway/Direction: I-385 NB
From/To: Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4041	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1123	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1631	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1631	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	29.7	pc/mi/ln
Level of service, LOS	D	

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 Operational Analysis

Analyst: JP
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Date Performed: 8/25/2011
Analysis Time Period: PM
Freeway/Direction: I-385 NB
From/To: Woodruff Rd to I-85 SB on
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	5358	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1488	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2163	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	2163	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	51.7	mi/h
Number of lanes, N	3	
Density, D	41.8	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst: JP
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Date Performed: 8/25/2011
Analysis Time Period: PM
Freeway/Direction: I-385 NB
From/To: I-85SB ramp - I-85NB ramp
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7669	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2130	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2322	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2322	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	48.3	mi/h
Number of lanes, N	4	
Density, D	48.1	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed: 8/25/2011
Analysis Time Period: PM
Freeway/Direction: I-385 NB
From/To: I-85 to Roper Mtn Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	8318	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2311	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2015	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	5	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2015	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	53.9	mi/h
Number of lanes, N	5	
Density, D	37.4	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 NB
From/To: Roper Mtn Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6874	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1909	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2775	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2775	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	31.5	mi/h
Number of lanes, N	3	
Density, D	88.0	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 NB
From/To: Roper Mtn Rd to End
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	8203	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2279	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	3312	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	3312	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 SB
From/To: Butler Rd to Begin
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3541	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	984	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1430	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1430	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	26.0	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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 Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 SB
From/To: Butler Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	3199	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	889	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1291	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	1291	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	23.5	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 10/14/2011
Analysis Time Period: AM
Freeway/Direction: I-385 SB
From/To: Woodruff Rd to Butler Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4326	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1202	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1310	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1310	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	23.8	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

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 Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 SB
From/To: Woodruff Rd to Butler Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	4326	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1202	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1746	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	1746	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.7	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

Analyst: JP
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Date Performed: 8/8/2011
Analysis Time Period: AM
Freeway/Direction: I-385 SB
From/To: Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	2242	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	623	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	905	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	905	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	16.5	pc/mi/ln
Level of service, LOS	B	

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Operational Analysis

Analyst: JP
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Date Performed: 8/8/2011
Analysis Time Period: AM
Freeway/Direction: I-385 SB
From/To: I-85 to Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	3060	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	850	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1235	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1235	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	22.5	pc/mi/ln
Level of service, LOS	C	

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Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 SB
From/To: Roper Mtn Rd to I-85
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5597	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1555	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1695	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1695	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	4	
Density, D	30.8	pc/mi/ln
Level of service, LOS	D	

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 SB
From/To: Roper Mtn Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	4238	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1177	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	1711	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	1711	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	55.0	mi/h
Number of lanes, N	3	
Density, D	31.1	pc/mi/ln
Level of service, LOS	D	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: AM
Freeway/Direction: I-385 SB
From/To: End to Roper Mtn Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5543	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1540	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2238	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2238	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	50.3	mi/h
Number of lanes, N	3	
Density, D	44.5	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 SB
From/To: Butler Rd to Begin
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7376	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2049	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2978	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2978	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	20.7	mi/h
Number of lanes, N	3	
Density, D	143.6	pc/mi/ln
Level of service, LOS	F	

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 SB
From/To: Butler Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	6726	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1868	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2715	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	2715	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	34.3	mi/h
Number of lanes, N	3	
Density, D	79.1	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 10/14/2011
Analysis Time Period: PM
Freeway/Direction: I-385 SB
From/To: Woodruff Rd to Butler Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7893	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2193	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2390	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2390	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	46.4	mi/h
Number of lanes, N	4	
Density, D	51.5	pc/mi/ln
Level of service, LOS	F	

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 Operational Analysis

Analyst: JP
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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 SB
From/To: Woodruff Rd to Butler Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	7893	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2193	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	3186	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	3186	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	7.6	mi/h
Number of lanes, N	3	
Density, D	420.8	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

Analyst: JP
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Date Performed: 8/8/2011
Analysis Time Period: PM
Freeway/Direction: I-385 SB
From/To: Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	5040	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1400	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2035	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2035	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	53.6	mi/h
Number of lanes, N	3	
Density, D	37.9	pc/mi/ln
Level of service, LOS	E	

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Operational Analysis

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Date Performed: 8/8/2011
Analysis Time Period: PM
Freeway/Direction: I-385 SB
From/To: I-85 to Woodruff Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	6352	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1764	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2564	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2564	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	40.6	mi/h
Number of lanes, N	3	
Density, D	63.2	pc/mi/ln
Level of service, LOS	F	

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Operational Analysis

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 SB
From/To: Roper Mtn Rd to I-85
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	9977	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2771	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	3021	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, FLW	-	mi/h
Lateral clearance adjustment, FLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	3021	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	18.2	mi/h
Number of lanes, N	4	
Density, D	166.1	pc/mi/ln
Level of service, LOS	F	

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Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 SB
From/To: Roper Mtn Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

Flow Inputs and Adjustments

Volume, V	7084	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1968	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	2860	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

LOS and Performance Measures

Flow rate, vp	2860	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S	27.3	mi/h
Number of lanes, N	3	
Density, D	104.9	pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS 2010: Basic Freeway Segments Release 6.1

Florence & Hutcheson
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 Operational Analysis

Analyst: JP
Agency or Company: Florence & Hutcheson
Date Performed: 7/7/2011
Analysis Time Period: PM
Freeway/Direction: I-385 SB
From/To: End to Roper Mtn Rd
Jurisdiction: Greenville, SC
Analysis Year: 2035
Description: I-85/I-385 Alternate 4A

 Flow Inputs and Adjustments

Volume, V	8498	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2361	v
Trucks and buses	18	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.917	
Driver population factor, fp	1.00	
Flow rate, vp	3431	pc/h/ln

 Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	55.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	55.0	mi/h

 LOS and Performance Measures

Flow rate, vp	3431	pc/h/ln
Free-flow speed, FFS	55.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.