



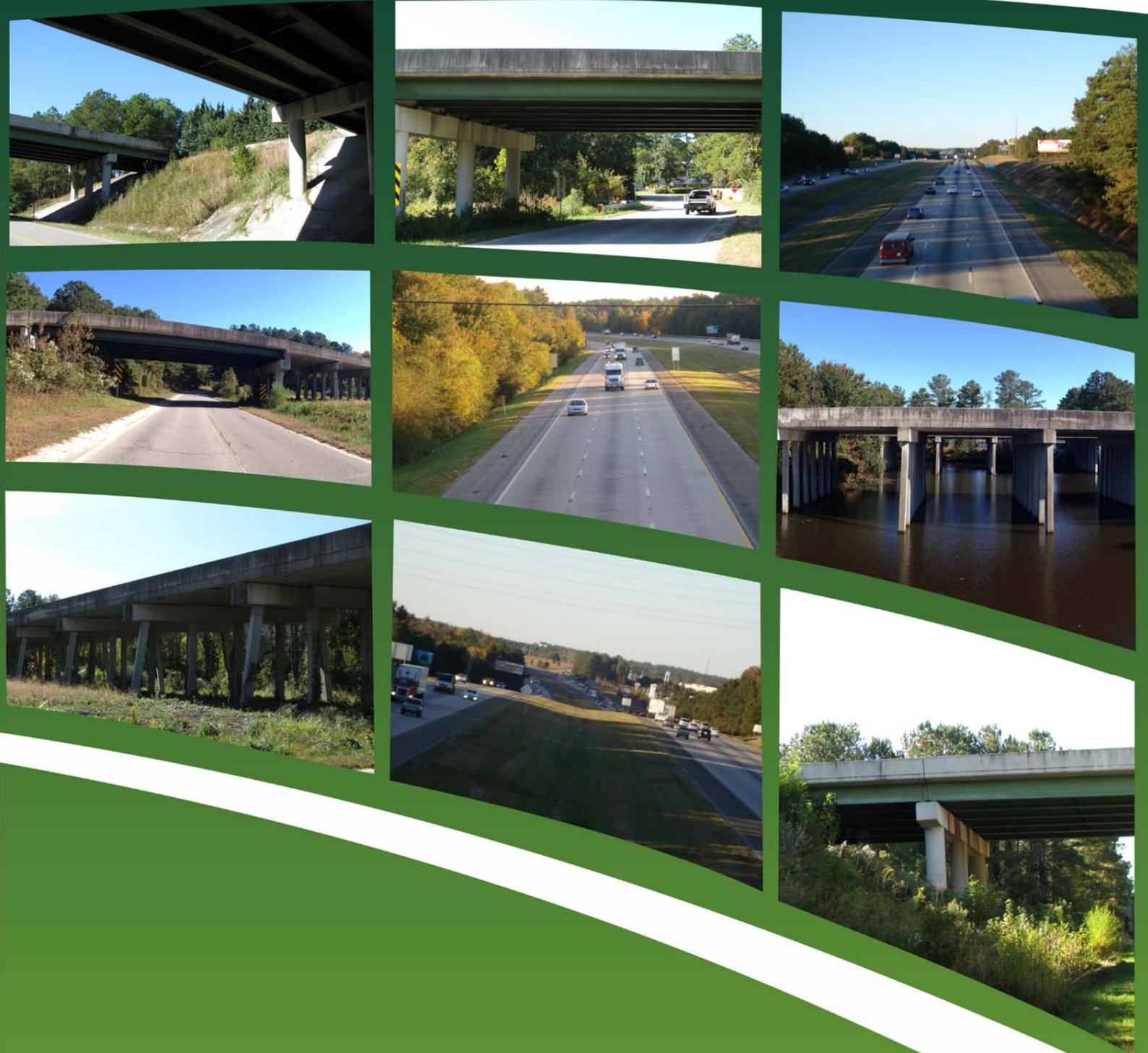
SCDOT

Interstate 77 Widening and Rehabilitation (from MM 15 - MM 27)

Project ID P027002

TRANSPORTATION MANAGEMENT PLAN

May 2016



Archer Western
A MEMBER OF The Walsh Construction Group

In close association with
INFRASTRUCTURE
CONSULTING & ENGINEERING



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I. PROJECT DESCRIPTION

The purpose of the proposed project is to improve operational efficiency and accommodate future traffic volumes along the interstate corridor. The proposed project is needed because the existing facility does not provide enough travel lanes for traffic through the area, resulting in traffic congestion starting as early as year 2017 when the segment of I-77 between SC-277 and Killian Road reaches its projected traffic capacity. The Project Limit and scope of the work is shown in **Figure 1**.

The segment of I-77 between SC 277 and Killian Road is projected to operate at level of service (LOS) E (see **Appendix A** for traffic data).

The proposed widening will provide the required number of lanes to operate at LOS D or better for the entire project corridor through design year 2037. The goals and objectives of the proposed project are to promote economic benefit, while avoiding environmental impacts and mitigating unavoidable impacts.

The value of the design-build contract is \$88.4 million. NTP was issued on March 6, 2016 and project is scheduled for substantial completion for July 2018.

The Project proposes widening I-77 from Percival Road (SC 12) to Killian Road (S-52) by adding a single travel lane in each direction to the existing median and repaving existing lanes. The 3-lane typical section in each direction is shown in **Figure 2** which is from SC 12 to SC 277 and the 4-lane typical section in each direction is shown in **Figure 3** which is from SC 277 to Killian Road (S-52).

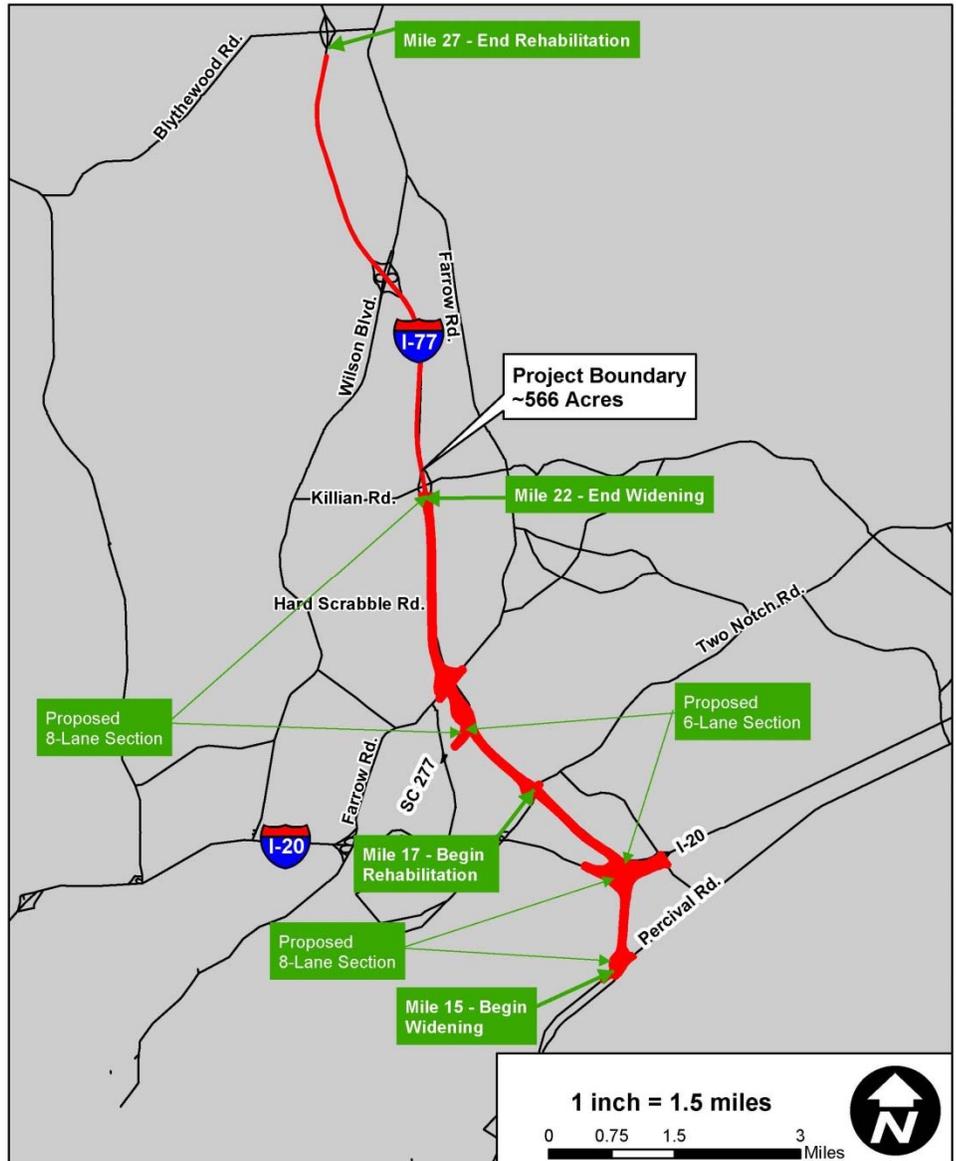
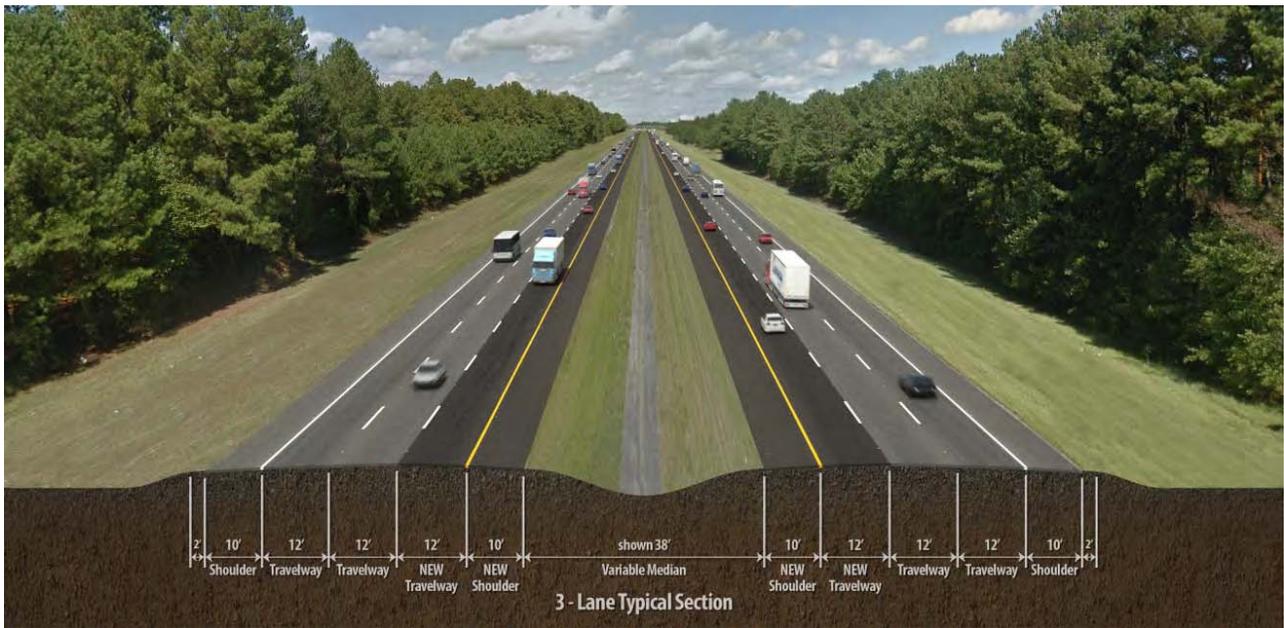
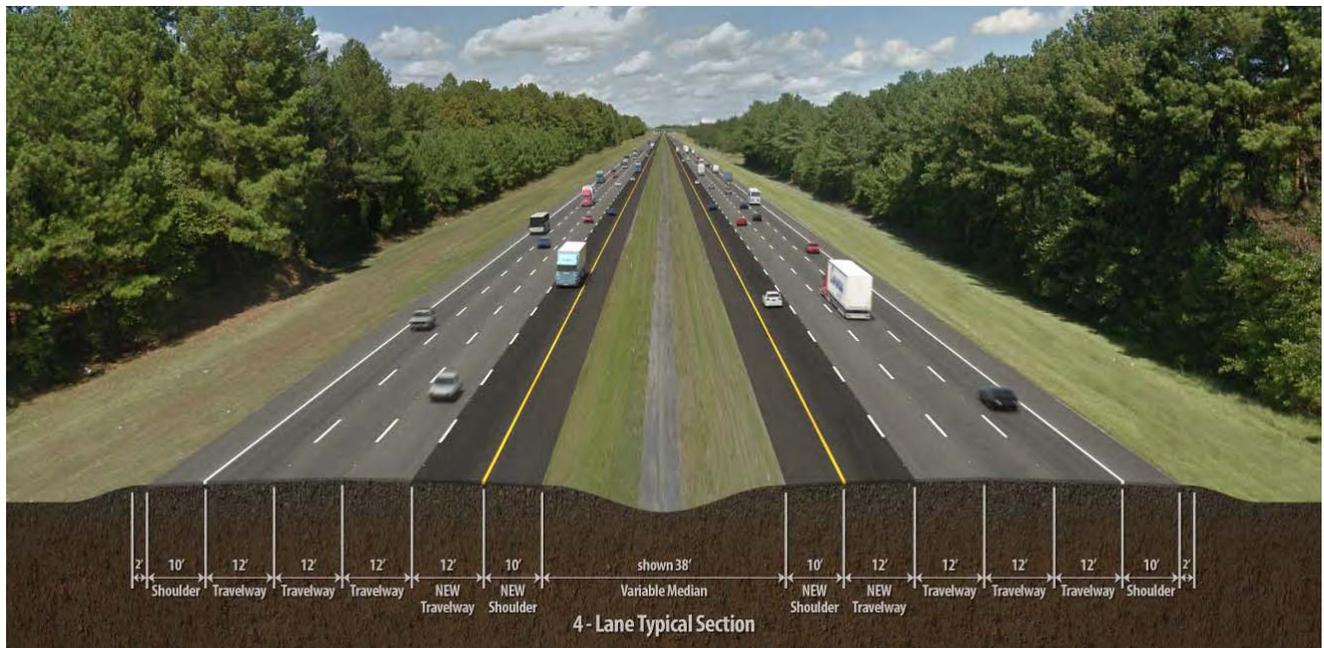


Figure 1 – Project Limit & Scope



**Figure 2 – 3-Lane Typical Section in each direction
(from Percival Rd (SC 12) to SC 277)**



**Figure 3 – 4-Lane Typical Section in each direction
(from SC 277 to Killian Rd (S-52))**

In accordance with the document “*Rule on Work Safety and Mobility: Implementation, Maintenance and safety guidelines*” a Transportation Management Plan (TMP) is required. Depending on the project’s level of complexity, three types of transportation management have been established. **Category 1** projects are simple projects of minor roadway widening with usually a single phase of construction such as maintenance, utility or permitted projects that are anticipated to have minimal traffic impacts. **Category 2** projects are moderately complex projects such as construction of an additional through lane including bridge widening with usually multiple phases of construction that are anticipated to have



moderate traffic impacts. **Category 3** projects are highly complex projects including corridors of interstate and interchange reconstruction with high traffic volumes, multiple phased construction that are anticipated to have major traffic impacts beyond the project limits.

This Project is a Category 3 project requiring **Temporary Traffic Control Plan**, **Transportation Operations Plan** and **Public Communication Plan**.

II. TRAFFIC IMPACTS DURING CONSTRUCTION

The Temporary Traffic Control Plans (TTCP) plan integrates core design components and RFP restrictions which minimize traffic shifts and lane closures. It also delivers key segments of the Project to the traveling public prior to completion of the overall Project by using the following principles:

1. ***Maintain the majority of existing traffic movements as long as possible***
2. ***Construct the median widening away from traffic***
3. ***Lane closures will be utilized during off-peak traffic hours in order to minimize the impact to traveling public***
4. ***Work in multiple locations simultaneously to expedite the construction schedule (project segments)***
5. ***The number of travel lanes and all the traffic movements will be maintained for the duration of the project.***
6. ***Installation of a temporary signal at the new left turn lane on US 21 as a result of the southbound loop ramp detour and the bridge rehabilitation work for the I-77 / US 21 overpass.***
7. ***A reduced regulatory speed limit of 45 MPH shall be in effect during lane closures on interstate routes.***
8. ***A two-week notification shall be provided to the Resident Engineer prior to changes in traffic patterns.***
9. ***Lane closures will be coordinated with the RCE during sporting events, concerts, or other special events.***
10. ***Contractor will exercise care in its operations when working in proximity of adjacent properties to ensure there are no impacts outside of the project limits.***
11. ***Detour Plans have been developed for the US 21 Bridge (Southbound Lanes) Rehabilitation work.***



III. TEMPORARY TRAFFIC CONTROL PLAN (TTCP)

a. Project Segmentation

The Project is divided into four (4) segments to optimize the construction sequence, have the ability to open the new lanes by segment as they are completed, and to accommodate median access ramps. The segments are shown in **Figure 4**:

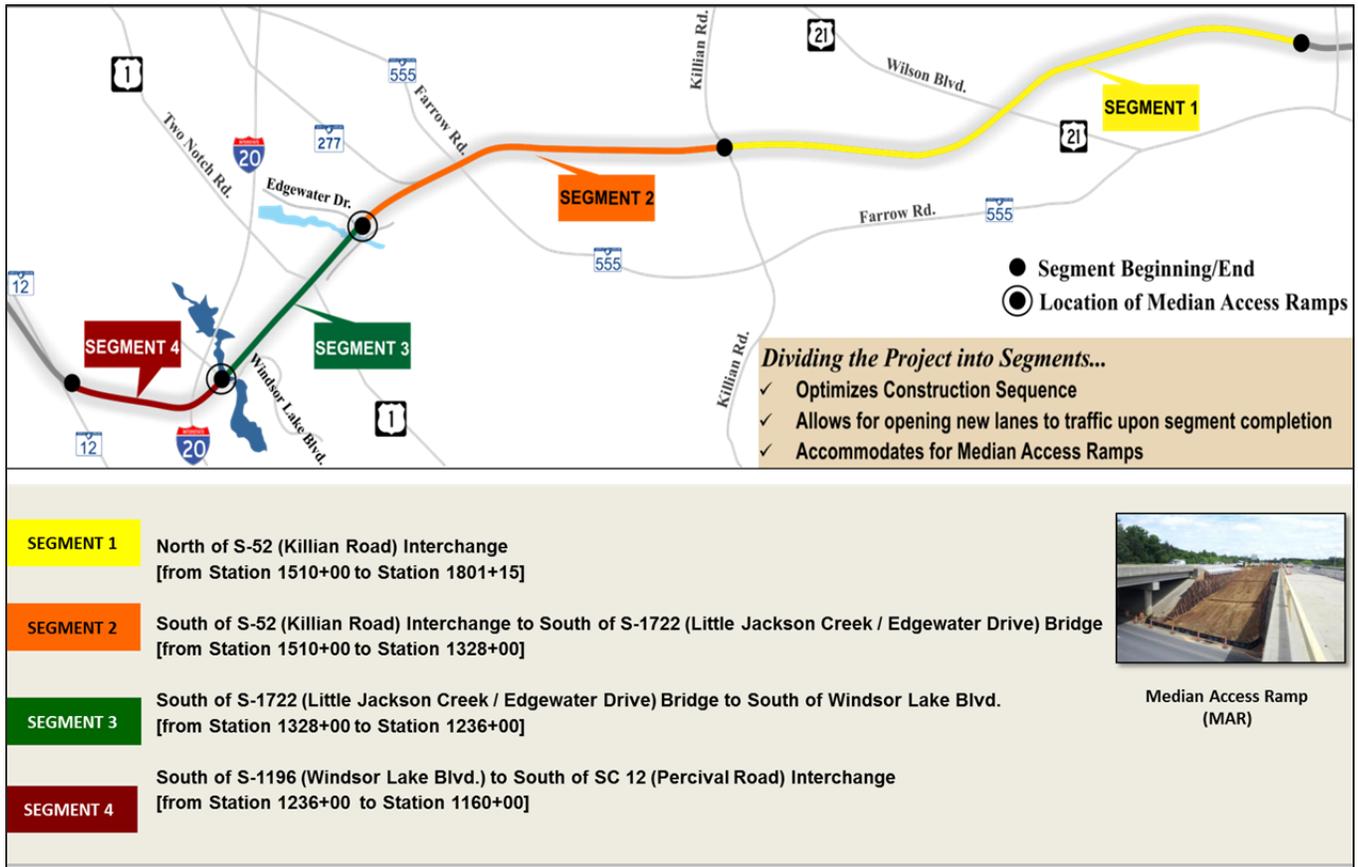


Figure 4 – Project Segmentation Map

In order to provide access to the median of I-77 and segregate construction activity and material delivery from vehicular traffic, two Median Access Ramps (MAR) are proposed. The first MAR serving the needs for the southern portion of the project will be built off of Windsor Lake Blvd. and the second MAR serving the middle and northern (if needed) portions of the Project will be built off of Edgewater Drive. Proposed configuration of a typical MAR is shown in **Figure 5** (next Page).

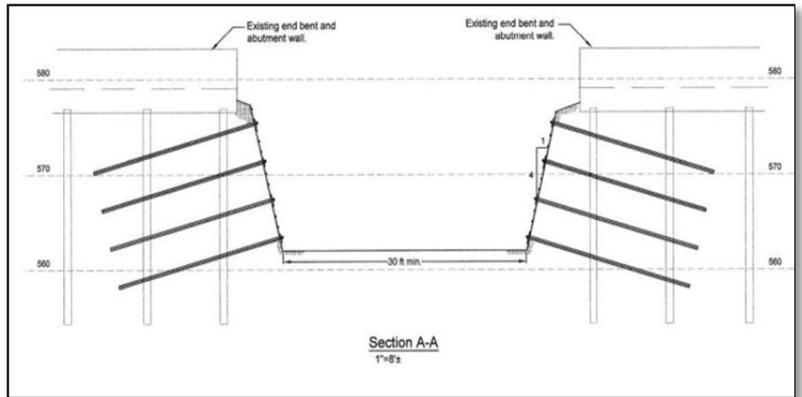
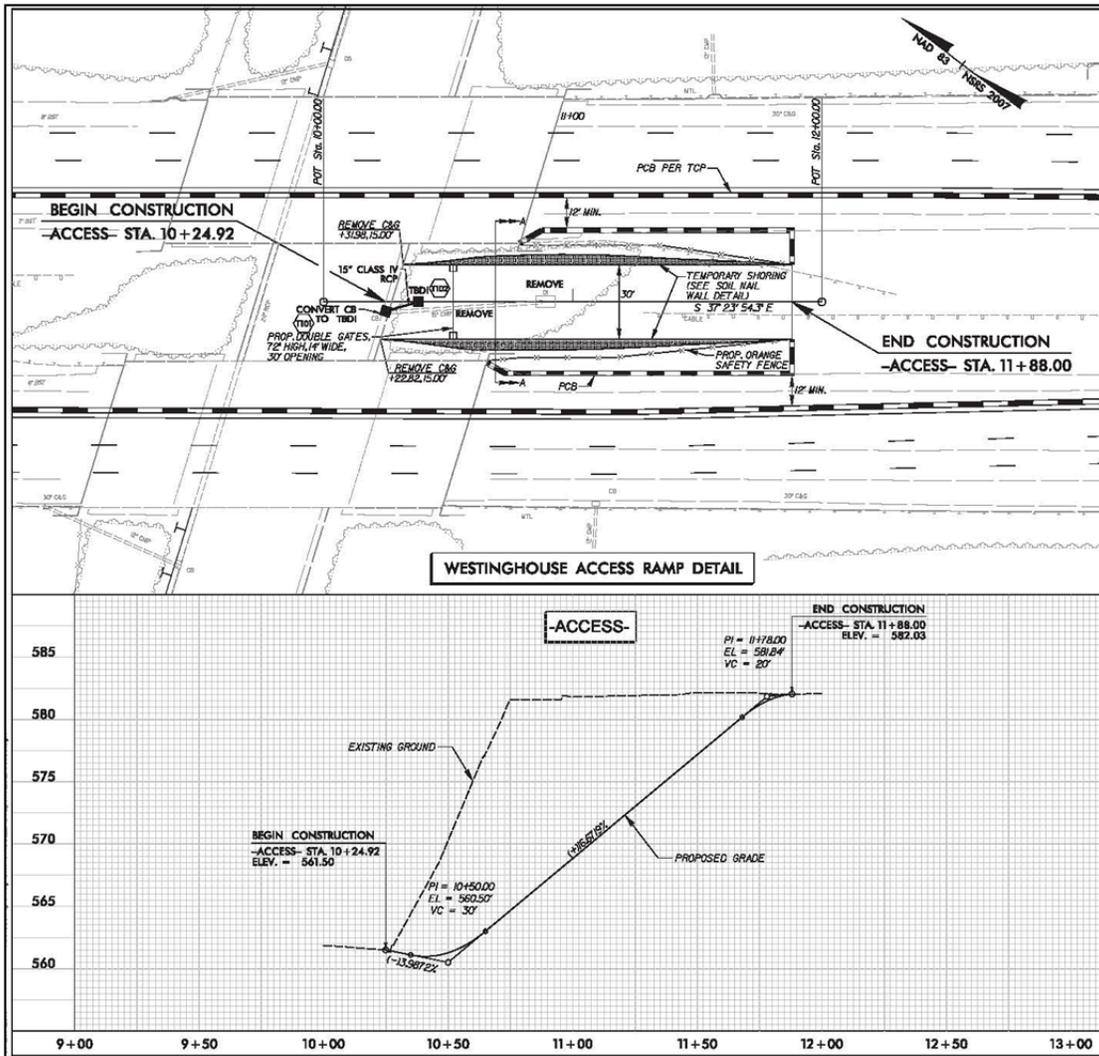


Figure 5 – Proposed Median Access Ramp Configuration



b. Construction Sequence

Due to minimal design effort required and quick turnaround on land disturbance permits the Project's first construction activities will begin in **Segment 1** (From Killian Rd. interchange to the north-end of the Project at MM 27). This work will include the I-77 SB pavement rehabilitation work and the US 21 (Wilson Boulevard) Bridge rehabilitation. The **Segment 1** work will be completed while the design and permitting phase of the other segments are underway. Once RFC plans are approved and the necessary permits (if any) have been acquired, **Segment 2** (Edgewater Dr. to Killian Rd. Interchange) and **Segment 3** (I-20 to Edgewater Dr.) construction will begin concurrently.

Segment 3 encompasses all of the bridge widening work which must be completed early in order to provide construction access to the median work zone at the south-end of the project. As shown in the TMP / MOT Plans, temporary concrete barrier will be installed on I-77 (from I-20 Bridges to Windsor Lake) and on I-20 at the Flyover Ramp "E" to segregate the work zone from the motorists.

Construction activities for the bridge widenings will occur during the day but will receive all major deliveries during night-time operations to minimize the impacts to traffic. The dual mainline widening over Edgewater / Little Jackson Creek and Windsor Lake will be constructed first and the median work zone will be accessed through the respective MARs.

The bridge structures in **Segment 3** will be completed simultaneously with the rehabilitation and widening work in **Segment 2** (Edgewater Rd. to Killian Rd. Interchange and the SC 277 middle lane merge). In order to construct the **Segment 2** rehabilitation and widening, the I-77 traffic will be shifted to the outside shoulder and temporary concrete barrier will be installed.

Concrete paving operations in **Segment 2** will occur at night. New stormwater installations and rehabilitation to the existing system will be completed in this segment at this time. **Figure 5** reflects the location of the travel lanes and work zones during this phase.

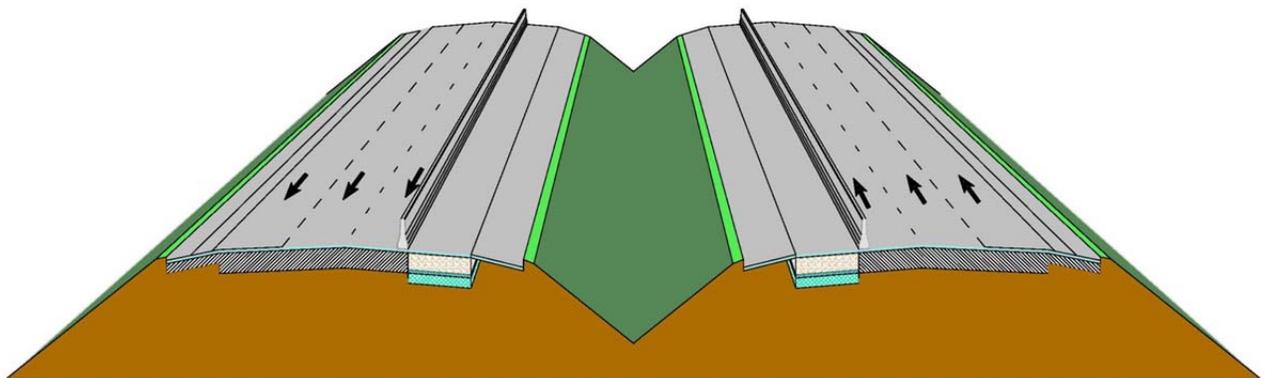


Figure 5 – Median Widening including PCC Slab Construction & Median regrading / Storm Drainage Work

Once the bridge and median widening north of Edgewater Dr. have been completed (**Segment 2**), the roadway construction crews will begin the widening from Percival Road to Edgewater Dr. (**Segments 3** and **4**). Road Construction will start on the North side of **Segment 3** at Edgewater Dr. and move south. New stormwater installations and rehabilitation to the existing system will be completed in this segment at this time.



As in **Segment 2**, concrete paving operations will occur at night. Immediately following the completion of the PCC pavement widening, the temporary concrete barrier will be removed (see **Figure 6**). The section of I-77 at SC 277 will be striped and open to four lanes with the SC 277 lane drop in its ultimate lane geometrics. The asphalt overlays including the cross slope correction for **Segments 2, 3 and 4** and final OGFC placement for all segments will begin, depending on paving season, in 2-mile to 4-mile sections. The asphalt cross slope correction and overlay work will be accomplished using standard lane closures.

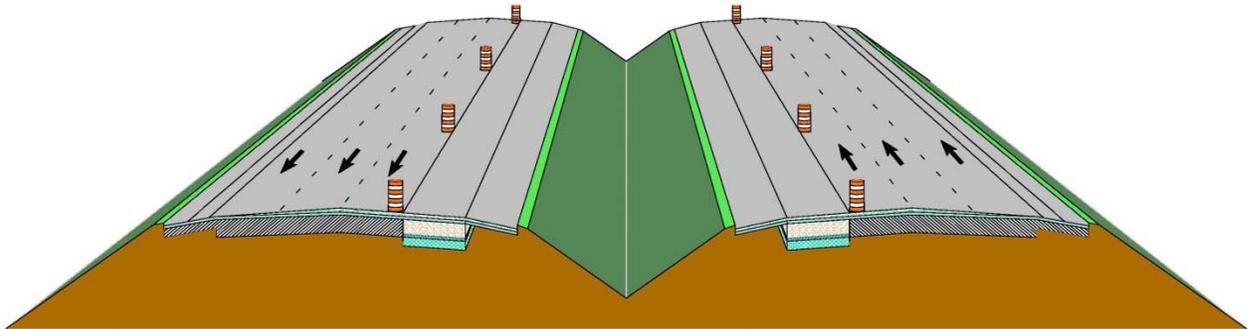
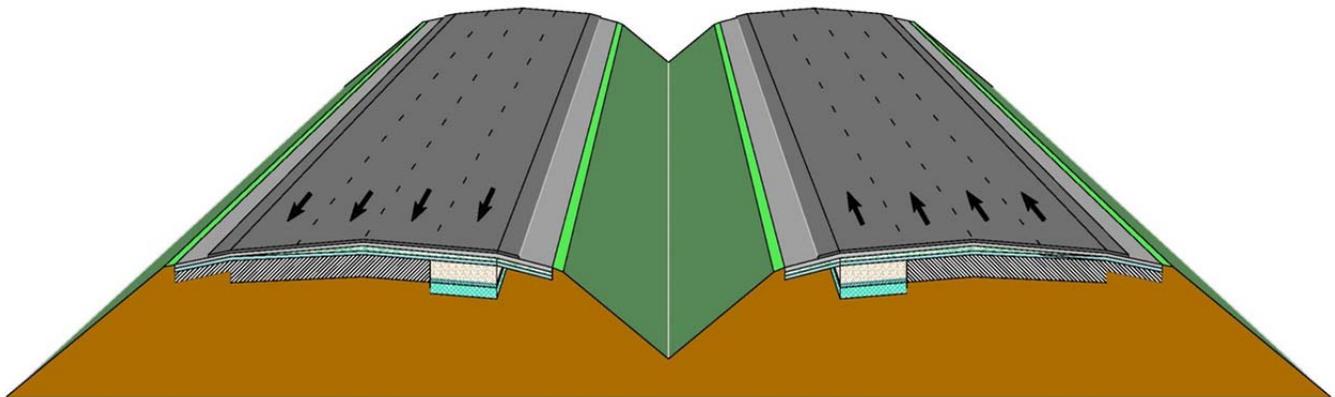


Figure 6 - Completed PCC Slab Construction & Removal of Portable Barriers

The completed pavement typical section is shown in **Figure 7** below:



**Figure 7 - Completed Pavement Section
'Composite' Median Pavement Widening & Asphalt Overlays**

A minimum width of 11 feet will be maintained for the temporary travel lanes, along with a minimum total width of 5 feet on paved shoulders, on interstate and intermediate to high speed primary routes. Traffic control operations will be followed as per the SCDOT standard drawing numbers specified in **Appendix B**. All traffic control devices used will meet the 2007 Standard specifications and the requirements as mentioned in Exhibit 4d of the RFP.

Law enforcement officers will be utilized for major lane closures and traffic switches. The use of flaggers to control construction vehicles and work zones will be coordinated with RCE on an as-needed basis.



IV. Transportation Operations Plan

The Operations Plan includes strategies to manage traffic operations to minimize delays, increase motorist safety and provide a safe environment for work activities. Traffic incidents are events that disrupt the normal flow of traffic in travel lanes, usually caused by crashes, breakdowns or debris in travel lanes.

The key to improving operations is the ability to monitor traffic conditions and make adjustments to traffic operations based on observed changes. This includes methods to quickly respond to incidents and restore vehicle throughput in the work zone.

Success in identifying and responding to incidents is based on improving detection, verification, response and clearance of crashes and other blockages in the work zone. The critical element in incident response is effective communication.

a. Contact Information

ANY TIME THERE IS AN EMERGENCY, THE FIRST NUMBER DIALED SHOULD BE 9-1-1

The Project MOT Manager or designated representative will be the 24/7 primary point of contact for all traffic control deficiencies or traffic incidents. A single cell phone will be designated as the traffic control emergency hot line and this number will be distributed to all necessary parties:

- *I-77 Project Team*
- *SCDOT*
- *Emergency Responders*
- *Key Stakeholders*

This cell phone will always be turned on and will be carried by the MOT Superintendent or designated representative at all times. Calls to this number will be answered immediately. Upon notification of a traffic incident, a Contractor's representative will be dispatched.

- | | |
|--|---------------------------|
| • Enrique Gomez (Safety Manager): | Phone Number _____ |
| • Jacob Brown (MOT Supervisor): | Phone Number _____ |

b. Incident Management Plan - Emergency Procedures

The I-77 Design-Build Team will use the following strategies to improve incident response and minimize impacts to traffic operations and safety:

Utilize technology and processes to shorten the time to detect and verify incidents.

This will be accomplished by taking advantage of existing traffic monitoring processes by the SC 511 system, which is designed to detect incidents and communicate traffic details to the motoring public. These ITS systems are well suited for detection and verification of crashes along limited access facilities for work zone management purposes and the I-77 Design-Build Team will work closely to establish a focus area within the I-77 corridor.

Shorten the time needed to respond to incidents with correct personnel and equipment.



Planning and coordinating with incident response agencies is the most effective way to shorten response times. Communication with first responders is a critical element of the process.

While SCDOT's Traffic Operations Office operates the successful SHEP Highway Emergency Response Team for first responders, the coordination between law enforcement and the jurisdictional fire and ambulance and rescue responders will be done to maximize communication efforts between different responding parties with jurisdiction on the Project.

Minimize the amount of capacity lost due to the incident and response equipment.

Depending on the impact of the incident, capacity will be restored using one or combination of methods including: using the shoulders for temporary through lanes, opening lanes used during work activities and utilizing detours, both within the limited access R/W or on surface streets.

Shorten the time need to clear the incident from the travel lanes.

One of the principal goals of the current SCDOT incident response program is to clear the travel lanes. We will examine the policy and processes and make improvements where possible.

Provide for the rapid notification of travelers upstream of the incident to encourage use of alternate routes or travel at a different time.

This is currently being done though the SC 511 system, with permanent dynamic message boards. Depending on the impact of the incident, portable CMS signs will supplement the permanent signs, and pre-planned detours will be communicated to drivers.

Determining which course of action is appropriate for each incident is based on experience and will be made by the MOT Manager. In all cases, hazardous road conditions or traffic control deficiencies will be corrected immediately. Non-hazardous conditions or traffic control deficiencies will be remedied within 48 hours.

Additional concerns regarding traffic conditions, existing traffic control, traffic lane requirements, visibility restrictions, problems of access, pedestrian traffic, or other issues in relation to signage, barricades, lights, and/or other traffic control devices that do not pose an imminent safety hazard, will be directed to the Project MOT Manager.

Any questions from outside agencies or organizations (media) should be directed to the Public Relation Team. Any instances that involve spills or other environmental impacts should be directed toward the Environmental Compliance Team.

c. Operational Efficiency and Safety Initiatives

The following Table illustrates additional initiatives taken for the operational efficiency and safety of the Project:



a. Minimize temporary lane or ramp detours

<u>APPROACH</u>	<u>BENEFITS</u>
1. Utilize median access points via local side roads (MARs at Edgewater Dr. and Windsor Lake Blvd.)	<ul style="list-style-type: none"> ✓ Minimizes Impacts to traffic ✓ Maintains consistent driver expectancy ✓ Maximizes facility capacity ✓ Maximizes construction productivity and reduces schedule duration ✓ Segregates work zone deliveries from main-line traffic
2. Limit short-term lane closures to night-time operations mainly during full depth patching, placement of portable concrete barrier, and asphalt paving.	
3. Maintain ramps with temporary paving or utilizing the shoulder.	
4. Limit ramp detour to one. During the deck rehabilitation and approach slab replacement of the US 21 overpass, the US 21 SB entrance loop to I-77 SB will be closed. Traffic will be rerouted to the existing US 21 NB entrance ramp to access I-77 SB by means of a temporary left turn lane with signal.	

b. Minimize the number of traffic shifts for mainline I-77

<u>APPROACH</u>	<u>BENEFITS</u>
1. Limit the traffic shifts to one per segment by moving traffic to the outside for median widening work and then shift the traffic to the final lane configuration for outside work and final pavement overlay.	<ul style="list-style-type: none"> ✓ Improves safety to the traveling public by providing consistent driver expectancy ✓ Reduces traffic shifts over the life of the construction period ✓ Maximizes construction work zone size and overall productivity thereby reducing schedule duration
2. Locate construction away from existing traffic to the maximum extent possible to minimize driver distraction.	
3. Use portable concrete barrier to separate traffic from construction activity.	



c. Minimize impacts of construction activities in the median by limiting median access points along I-77 mainline and reducing or limiting ingress/egress from mainline to the median

<u>APPROACH</u>	<u>BENEFITS</u>
1. Construct median access ramps (MAR) at Edgewater Dr. and Windsor Lake Blvd. for daily access of construction crews, minor construction equipment and routine material deliveries.	✓ Reduces conflicts between slower moving construction vehicles and faster moving traveling public
2. Limit delivery of major construction equipment and material delivery to night-time operations only.	✓ Reduces conflict on I-77 due to substantially lower traffic volumes.

d. Minimize or avoid traffic impacts to Killian Road ramps

<u>APPROACH</u>	<u>BENEFITS</u>
1. Hold existing outside edge of pavement (EOP) at I-77 NB exit ramp and shift all widening work to median, thus extending I-77 NB slightly for transition.	✓ Eliminates outside widening of exit ramp
2. Perform I-77 SB entrance ramp construction immediately after completion of I-77 widening by shifting traffic to the newly constructed pavement in the median to maintain ramp operation.	✓ Avoids conflict with traffic exiting I-77 ✓ Provides sufficient ramp lane width for driver expectation and consistency
3. Place portable concrete barrier to separate traffic for construction activity on I-77 SB entrance ramp.	✓ Maximizes construction work zone size and overall productivity thereby reducing schedule duration

e. Minimize or avoid traffic impacts to I-20

<u>APPROACH</u>	<u>BENEFITS</u>
1. Minimize the width of the work zone in the median of I-20 for the construction of the I-77 substructure elements.	✓ Reduces the length of the traffic shift on I-20
2. Substructure elements on both I-77 bridges will be constructed in the median simultaneously. Upon completion, the I-20 median barrier will be reconstructed and traffic will be returned to its original location.	✓ Improve safety to the traveling public by providing consistent driver expectancy
3. Erection of beams and placement of deck concrete on the I-77 bridge widenings will occur at night.	✓ Minimize impacts to traffic



f. Minimize impacts of US 21 Bridge work and minimize or avoid use of temporary signal

<u>APPROACH</u>	<u>BENEFITS</u>
<ol style="list-style-type: none"> Shift and split traffic on I-77 SB lanes only in stages. Close I-77 SB Ramp during the US 21 SB overpass deck rehabilitation and approach & transitional slab replacement. 	<ul style="list-style-type: none"> ✓ Has no impacts to I-77 NB traffic since all lanes will be maintained throughout the rehabilitation
<ol style="list-style-type: none"> Construct temporary left turn lane and signal to detour traffic to the existing US 21 NB entrance ramp to I-77 SB. 	<ul style="list-style-type: none"> ✓ Eliminates the need for construction of two cross overs from the SB lanes to NB lanes ✓ Reduces construction time and costs by closing the loop for a minimal time period ✓ Improves safety to the traveling public by placing the detour on US 21 and not on I-77

g. Early completion of work required at the merge of SC 277 northbound on-ramp

<u>APPROACH</u>	<u>BENEFITS</u>
<ol style="list-style-type: none"> Segment 2 will be the first section widened. 	<ul style="list-style-type: none"> ✓ Less impact to traveling public
<ol style="list-style-type: none"> SC 277 merge will be scheduled as first construction activity in Segment 2. 	<ul style="list-style-type: none"> ✓ Eliminates dangerous middle lane merge early in construction. ✓ Final lane configuration for the merge will be open to traffic early in construction schedule



V. PUBLIC INFORMATION PLAN

a. General

This Community and Public Relations Plan is intended to provide direction for public involvement activities to be conducted by the Design Build Team on the I-77 Widening project in Richland County, South Carolina and contains objectives and techniques that will be used by the Design Build Team for public involvement and information dissemination.

It further provides those policies and procedures which individuals and media organizations should utilize when gathering data about the I-77 Widening project or when responding to newsworthy events related to the project.

b. Public Information Contacts

The Design Build Team Public Information Coordinator (PIC) will act as a point of contact for information relating to the I-77 Widening project to assist affected stakeholders, citizens, the news media, governmental agencies and municipalities, transportation and emergency services, local businesses, schools and neighborhood groups. The PIC prepares project news notifications, provides project status updates, coordinates public meetings (if required), project related presentations, designs and distributes publications of project materials.

The designated contacts for public information coordination are listed below. No other members of the Design Build Team for the I-77 Widening project are authorized to release information concerning newsworthy events, including information about emergency situations on or around the project site. It should be noted that information, quotes or project data provided by anyone other than the Public Information Coordinator or SCDOT's public information designee do not represent the SCDOT or its opinions or views. All inquiries should be directed as follows:

Lynda Monroe

Public Information Coordinator

Infrastructure Consulting & Engineering, PLLC

803-726-3162 (Direct)

803-899-2512 (Cell)

Email : lynda.monroe@ice-eng.com

Susie Bender

Social Media Coordinator

Infrastructure Consulting & Engineering, PLLC

843-872-1602 (cell)

Email: susie.bender@ice-eng.com



c. Identified Target Audiences

A detailed list of contacts for newsworthy information dissemination will be developed. A database will be maintained for the duration of the project. The list contains contact information for the following groups: State Senator(s) and Representative(s)

- Chairman of the County Council
- County Administrator/Manager
- County Planner
- City Mayor (as appropriate)
- City Manager (as appropriate)
- Transportation services
- Emergency services
- Neighborhood groups and private homes
- Industry and businesses
- Chamber(s) of Commerce
- Individual schools effected by the project
- Public School District(s) and Transportation Office(s)
- Post Office
- Any other organization as deemed necessary by the Department

These groups will be entered into a database and will receive project newsletters, emergency information, traffic reports, and all other informational materials related to the I-77 Widening project. The distribution lists for this project will be included in this plan in the Appendix.

d. Progress Report / Website Updates

The Design Build Team will prepare bi-weekly project reports for the Project RCE to ensure SCDOT and the website has the most accurate information possible regarding the I-77 Widening project. This information may include but is not limited to: construction photos, traffic control phasing, graphic illustrations, construction activities, schedule changes or updates, or any other information pertinent to the I-77 Widening project.

David Bland (blanddw@scdot.org) with SCDOT will be the primary contact person for the initial coordination. The items that will be sent to David to create the I-77 Widening page on the SCDOT website are:

- *Project Description and Limits*
- *Overall general schedule (construction begin date – estimated completion date)*
- *Contact Information*
- *Project Team*
- *Graphic of Project Limits and Segments*
- *Work Zone ITS*
- *List of Work Scheduled to begin*

This information will be sent to David no later than May 1, 2016.



e. Traffic Alerts / Impacts to Public

The Project Construction Manager will have constant communication with the PIC regarding traffic conditions, alerts, delays, lane closures or any other issues that may impact the public due to I-77 Widening Construction. For major long term impacts such as lane shifts and/or ramp closures, the PIC will inform SCDOT (John Burns and copy Allen Thompson) at least 21 calendar days in advance with the exception of emergency situations in which case the SCDOT will be notified immediately.

f. Social Media

The design-build public relations team will develop and maintain an I-77 Facebook Project page and Twitter account which will be consistently maintained and properly labeled. Prior to publishing, the team will obtain post approval from the RCE. In addition, posts will be forwarded to the SCDOT Communications office for the purpose of re-posting through SCDOT social media sites.

The I-77 Widening social media sites will be registered through SCDOT and will abide by all SCDOT social media policies. Interaction through the following social media would keep traveling public informed and engaged.

Social Media Outlet	Rationale for Use	Objectives
Facebook	The most widely used social network in the world provides an opportunity to achieve an unlimited number of “friends/followers” that can easily share project progress and achievements within their personal network. An I-77 Facebook project page will allow for positive messaging about the Project, while still providing easy navigation to project specific pages, as necessary.	<ul style="list-style-type: none"> • Build a Project identity that enhances credibility and develops into a recognizable icon. • Increase awareness of the Project scope, the implementation process, and overall goals. • Provide links to additional sources of Project information. • Encourage Project participation from all Stakeholders.
Twitter / Google Plus	Twitter and Google Plus are effective, viral tools to spread succinct messages, updates, videos, and photos. Both will be useful when announcing completed milestones, changes to traffic conditions, and anticipated schedules.	<ul style="list-style-type: none"> • Same objectives as Facebook, but also an opportunity for constant communication, promotion, and engagement of Stakeholders, even when Sponsors are not facilitating dialogue.
Google Alert	Provides automated emails to monitor activities online relating to the Project.	<ul style="list-style-type: none"> • Track and analyze online Project communications.

g. SC 511

The Design-Build Team’s PIC, Lynda Monroe, will develop a Design-Build Team contact list to include the Project Manager, Construction Manager, Public Information Coordinator, and SCDOT RCE and assistant RCE and distribute to Mike Bowman, Dan Campbell, and John Wood with 511 to familiarize the operators with field staff.



A designated contractor representative will be responsible for contacting 511 to inform the operators of construction activities scheduled each day. Calls will be placed prior to construction activities starting, during construction (should changes occur due to early completion, weather, an incident at the site, etc.) and when the activities have been completed and traffic is no longer affected.

If changes occur and 511 is not notified but receives information that is not consistent with the report, the operator will contact the first person listed on the contact list to verify the alert.

Quarterly meetings will be held in order to keep the 511 Traffic Management Center, SC Highway Patrol, and SHEP Responders aware of upcoming events and scheduled construction milestones. SCDOT RCE and RCE Assistant, Archer Western Project Manager and Construction Manager will be in attendance and Design-Build Team's PIC will facilitate.

SC 511 information will be included on Social Media accounts, the SCDOT I-77 Widening Project Website, in press releases, and in all distributed public information materials.

h. Public Information Meetings

The Design Build Team will hold a public informational meeting prior to the beginning of construction. Upon the SCDOT's approval of public information meeting times, dates and locations, notifications will be disseminated through media news releases, social media, paid advertisements, and notification signs (on gatorboard). Information relating to the meetings will also be mailed to governmental agencies, affected stakeholders, affected municipalities, local businesses, and affected schools.



APPENDIX A

Peak Hour Directional Volumes & LOS (2017 & 2037)

Route	Termini From	Termini To	Year	Peak Hour Directional				
				Volume	No-Build		Build	
					Existing # of Lanes in Each Direction	LOS	Proposed # of Lanes in Each Direction	LOS
I-77	SC 12	I-20	2013	4,281	3	C	-	-
I-77	SC 12	I-20	2017	4,452	3	D	4	C
I-77	SC 12	I-20	2027	4,942	3	D	4	C
I-77	SC 12	I-20	2037	5,432	3	E	4	C
I-77	I-20	SC 277	2013	2,902	2	D	-	-
I-77	I-20	SC 277	2017	3,018	2	D	3	B
I-77	I-20	SC 277	2027	3,350	2	D	3	C
I-77	I-20	SC 277	2037	3,682	2	E	3	C
I-77	SC 277	Killian Road	2013	4,952	3	D	-	-
I-77	SC 277	Killian Road	2017	5,150	3	E	4	C
I-77	SC 277	Killian Road	2027	5,717	3	E	4	D
I-77	SC 277	Killian Road	2037	6,283	3	F	4	D



APPENDIX B

APPLICABLE STANDARD DRAWINGS

601-005-00	605-035-01	605-410-00	610-310-00
601-010-00	605-035-02	605-415-00	610-315-00
601-015-00	605-105-00	605-420-00	610-320-00
601-020-00	605-110-00	605-425-00	610-325-00
601-105-00	605-115-01	605-430-00	610-405-00
601-115-00	605-115-02	610-005-00	610-410-00
601-150-00	605-120-01	610-015-00	610-415-01
601-205-01	605-120-02	610-020-00	610-415-02
601-205-02	605-125-01	610-025-00	610-420-00
602-005-00	605-125-02	610-030-00	610-450-01
604-005-00	605-205-01	610-035-00	610-450-02
605-005-01	605-205-02	610-040-00	610-450-03
605-005-02	605-205-03	610-105-01	610-475-01
605-005-03	605-205-04	610-105-02	610-475-02
605-005-04	605-205-05	610-105-03	610-480-01
605-005-05	605-305-00	610-110-01	610-480-02
605-005-06	605-310-01	610-110-02	610-485-01
605-010-01	605-310-02	610-110-03	610-490-01
605-010-02	605-310-03	610-115-01	610-491-01
605-015-00	605-310-04	610-115-02	610-491-02
605-020-00	605-315-00	610-115-03	610-491-03
605-025-01	605-320-00	610-120-00	610-492-01
605-025-02	605-325-00	610-205-00	610-492-02
605-025-03	605-330-00	610-210-00	610-510-00
605-025-04	605-335-00	610-215-00	610-515-00
605-030-01	605-340-00	610-305-00	610-605-00
605-030-02	605-405-00	610-306-00	610-610-00