

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

ROY COOPER GOVERNOR JAMES H. TROGDON, III Secretary

August 29, 2018

Addendum No. 1

Contract No.: TIP No.: County: Project Description:	C 204163 I-3819B/U-6039 Iredell I-40 / I-77 Interchange: I-40 from SR 2003 (Radio Road) to SR 2158 (Old Mocksville Road); I-77 from SR 2171 (Jane Sowers Road) to SR 2321 (East Broad Street); and SR 2321 (East Broad Street) from Vine Street to SR 2422 (Signal Hill Drive)
	from Vine Street to SR 2422 (Signal Hill Drive)

RE: Addendum No. 1 to Final RFP

October 16, 2018 Letting

To Whom It May Concern:

Reference is made to the Final Request for Proposals dated July 17, 2018 recently furnished to you on the above project. We have since incorporated changes, and have attached a copy of Addendum No. 1 for your information. Please note that all revisions have been highlighted in gray and are as follows:

The first, second and third pages of the *Table of Contents* have been revised. Please void the first, second and third pages in your proposal and staple the revised first, second and third pages thereto.

Page Nos. 2 and 3 of the *Other Liquidated Damages and Incentives* Project Special Provision have been revised. Please void Page Nos. 2 and 3 in your proposal and staple the revised Page Nos. 2 and 3 thereto.

Page No. 5 of the *Submittal of Quantities, Fuel Base Index Price and Opt-Out Option* Project Special Provision has been revised. Please void Page No. 5 in your proposal and staple the revised Page No. 5 thereto.

Page Nos. 47 and 48 of the *Price Adjustments for Asphalt Binder* Project Special Provision have been revised. Please void Page Nos. 47 and 48 in your proposal and staple the revised Page Nos. 47 and 48 thereto.

Page Nos. 51 and 52 of the *Geotextile for Pavement Stabilization* Project Special Provision have been revised. Please void Page Nos. 51 and 52 in your proposal and staple the revised Page Nos. 51 and 52 thereto.

Telephone: (919) 707-6900 Fax: (919) 250-4119 Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Page Nos. 88 and 89 of the *Work Zone Traffic Pattern Masking* Project Special Provision have been revised. Please void Page Nos. 88 and 89 in your proposal and staple the revised Page Nos. 88 and 89 thereto.

Page No. 135 of the *General Section* has been revised. Please void Page No. 135 in your proposal and staple the revised Page No. 135 thereto.

Page No. 143 of the *Roadway Scope of Work* has been revised. Please void Page No. 143 in your proposal and staple the revised Page No. 143 thereto.

Page Nos. 210 and 212 of the *Pavement Management Scope of Work* have been revised. Please void Page Nos. 210 and 212 in your proposal and staple the revised Page Nos. 210 and 212 thereto.

Page No. 224 of the *Right of Way Scope of Work* has been revised. Please void Page No. 224 in your proposal and staple the revised Page No. 224 thereto.

Page Nos. 257, 258, 262, 265, 266, and 267 of the *Transportation Management Scope of Work* have been revised. Please void Page Nos. 257, 258, 262, 265, 266, and 267 in your proposal and staple the revised Page Nos. 257, 258, 262, 265, 266, and 267 thereto.

Page No. 265A has been added to the *Transportation Management Scope of Work*. Please staple Page No. 265A into your proposal.

Page No. 280 of the *Utilities Coordination Scope of Work* has been revised. Please void Page No. 280 in your proposal and staple the revised Page No. 280 thereto.

Page Nos. 319, 320, 321, 322, 323, 324, 325, 326, 327, and 328 of the *Title VI and Nondiscrimination* Standard Special Provision have been revised. Please void Page Nos. 319, 320, 321, 322, 323, 324, 325, 326, 327, and 328 in your proposal and staple the revised Page Nos. 319, 320, 321, 322, 323, 324, 325, 326, 327, and 328 thereto.

If you have any questions or need additional information, I can be reached by telephone at (919) 707-6900.

Sincerely,

-DocuSigned by: Ronald E. Davenport, Jr.

Ronald E. Davenport, Jr., PE State Contract Officer

RED/mcw

cc: Ron Hancock, PE Mark Stafford, PE Teresa Bruton, PE Zak Hamidi, PE Tim McFadden, CPM File

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Itemized Proposal Sheet (TAN SHEET) Fuel Usage Factor Chart and Estimate of Quantities Listing of MBE / WBE Subcontractors Execution of Bid, Non-Collusion Affidavit, Debarment Certification and Gift Ban Certification Signature Sheet

DB1 G13

Liquidated Damages for Intermediate Contract Time #2 for lane narrowing and lane closure time restrictions for Broad Street, US 64, Eastside Drive and Old Mocksville Road are \$1,500.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #3 for road closure time restrictions for I-40 and I-77 including all collector distributors, ramps and loops are \$5,000.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #4 for road closure time restrictions for Broad Street and US 64 are \$2,500.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #5 for road closure time restrictions for Simonton Road are \$1,000.00 per calendar day or any portion thereof.

Liquidated Damages for Intermediate Contract Time #6 for road closure time restrictions for Eastside Drive are \$1500.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #7 for ramp / loop tie-in time restrictions for the I-77 / I-40 existing Loop B are \$5,000 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #8 for ramp / loop tie-in time restrictions for the I-77 / I-40 existing Loop C are \$5,000 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #9 for ramp / loop tie-in time restrictions for the I-77 / I-40 existing Loop D are \$5,000 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #10 for ramp / loop tie-in time restrictions for the Sullivan Road ramp to I-40 eastbound are \$5,000 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #11 for the lane reduction duration on the Broad Street Bridge over I-77 are \$1,000.00 per calendar day or any portion thereof.

Liquidated Damages for ITS apply to this project.

Liquidated Damages for Intermediate Contract Time #7 for failure to reestablish ITS fiber optic communications within 72 hours are \$2,500.00 per calendar day or any portion thereof.

Liquidated Damages for Intermediate Contract Time #8 for failure to provide a plan that defines 1) an anticipated ITS cellular communications disruption timeframe and 2) a plan of action for reestablishing ITS cellular communications a minimum of 21 days prior to a proposed disruption in service are \$10,000.00 per failure.

Damages for Erosion and Sedimentation Control efforts apply to this project.

Reference the Erosion and Sedimentation Control Scope of Work found elsewhere in this RFP for additional information under the Liquidated Damages Section.

PAYOUT SCHEDULE

(11-16-09)

No later than 12:00 o'clock noon on the sixth day after the opening of the Price Proposal, the responsive proposer with the lowest adjusted price shall submit a proposed Anticipated Monthly

2

Payout Schedule to the office of the State Contract Officer. The information shall be submitted in a sealed package with the outer wrapping clearly marked "Anticipated Monthly Payout Schedule" along with the Design-Build Team name and the contract number. The Anticipated Monthly Payout Schedule will be used by the Department to establish the monthly funding levels for this project. The Anticipated Monthly Payout Schedule shall parallel, and agree with, the project schedule the Design-Build Team submits as a part of their Technical Proposal. The schedule shall include a monthly percentage breakdown (in terms of the total contract amount percentages) of the work anticipated to be completed. The schedule shall begin with the Date of Availability and end with the Actual Completion Date proposed by the Design-Build Team. If the Payout Schedule is not submitted as stated herein, the Technical and Price Proposals will be considered irregular by the Department, and the bid may be rejected.

Submit updates of the Anticipated Monthly Payout Schedule on March 15, June 15, September 15, and December 15 of each calendar year until project acceptance. Submit all updates to the Resident Engineer with a copy to the State Construction Engineer at 1 South Wilmington St, 1543 Mail Service Center, Raleigh, NC 27699-1543.

MOBILIZATION

DB1 G15B

DB1 G16

(8-28-17)

Revise the 2018 Standard Specifications for Roads and Structures as follows:

Page 8-1, Subarticle 800-2, MEASUREMENT AND PAYMENT

Delete this subarticle in its entirety and replace with the following:

800-2 **MEASUREMENT AND PAYMENT**

Ten percent of the "Total Amount of Bid for Entire Project" shall be considered the lump sum amount for Mobilization. Partial payments for Mobilization will be made beginning with the first partial pay estimate paid on the contract. Payment will be made at the rate of 75 percent of the lump sum amount calculated for Mobilization. The remaining 25 percent will be paid with the partial pay estimate following approval of all permits required in the Environmental Permits Scope of Work for this project.

SUBSTANTIAL COMPLETION

(3-22-07)

When the special provisions provide for a reduction in the rate of liquidated damages for the contract

time or an intermediate contract time after the work is substantially complete, the work will be considered substantially complete when the following requirements are satisfied:

- 1. Through traffic has been placed along the project or along the work required by an intermediate contract time and the work is complete to the extent specified below, and all lanes and shoulders are open such that traffic can move unimpeded at the posted speed. Intersecting roads and service roads are complete to the extent that they provide the safe and convenient use of the facility by the public.
- 2. The final layers of pavement for all lanes and shoulders along the project or along the work required by an intermediate contract time are complete.
- 3. Excluding signs on intersecting roadways, all signs are complete and accepted.
- 4. All guardrails, drainage devices, ditches, excavation and embankment are complete.

certify that the quantities are reasonable for the specified period. The base index price for DIESEL #2 FUEL is **\$2.2375** per gallon.

(C) **Opt Out of Fuel Price Adjustment**

If the Design-Build Team elects not to pursue reimbursement for Fuel Price Adjustments, a quantity of zero shall be entered for all quantities in the *Fuel Usage Factor Chart and Estimate of Quantities* sheet and the declination box shall be checked. Failure to complete this form will mean that the Design-Build Team is declining the Fuel Price Adjustments for this project.

(D) **Change Option**

The proposer will not be permitted to change the option after the Price Proposal and the copy of the *Fuel Usage Factor Chart and Estimate of Quantities* sheet are submitted.

(E) **Failure to Submit**

Failure to submit the completed *Fuel Usage Factor Chart and Estimate of Quantities* sheet separately and in the Price Proposal will result in the Technical and Price Proposal being considered irregular by the Department and the Technical and Price Proposal may be rejected.

INDIVIDUAL MEETINGS WITH PROPOSERS

(9-1-11)

DB1 G048

The Department will provide at least two Question and Answer Sessions to meet with each proposer individually to specifically address questions regarding the draft Requests for Proposals.

After issuance of the First Industry Draft RFP, the Department will attempt to arrange a meeting between each individual proposer and the affected utility owners.

The Department will afford each proposer one additional meeting with the Department (maximum two-hour time limit) to discuss project specifics and address the proposer's concerns and questions. This meeting may occur at any time after the first Question and Answer Session with the proposers and before two weeks prior to the Technical and Price Proposals submittal date. The proposer shall request this meeting in writing to the State Contract Officer, providing the Department a minimum of one week advance notice of the requested date. The proposer shall also state in the request those disciplines within the Department that are requested to be in attendance. The Department makes no assurance that the request may be honored on that specific date or that all disciplines requested can be in attendance.

Additional individual meetings may be permitted in accordance with the *Alternative Technical Concepts and Confidential Questions* Project Special Provision found elsewhere in this RFP.

Determine Required Portland Cement Rate

The quantity of Portland cement required shall be 3.0 - 4.0 percent by weight of the aggregate. Mix 3.5% and 4.0% Portland cement, aggregate and water at 1.5% over optimum and cure for seven days. Select rate of cement that provides a minimum and maximum unconfined compressive strength of 500 psi and 800 psi at seven days, respectively.

Submittals for Review and Approval Prior to Construction

The Design-Build Team shall adhere to the following submittal guidelines:

- Submit all laboratory test results for review and approval
- Submit a sketch in plan view showing areas of the project to be stabilized by Cement Treated Base Course and application rates
- Submit any other documentation that supports the Design-Build Team's recommendations

Construction of Cement Treated Base Course

The Design-Build Team shall construct the Cement Treated Base Course as specified in Section 540 of the North Carolina Department of Transportation 2018 *Standard Specifications for Roads and Structures* except that Articles 540-5, 540-7 and 540-13 do not apply.

Unconfined Compressive Strength

For Cement Treated Base Course, the Design-Build Team shall make field specimens, cure them for seven days and test them in the laboratory. The minimum and maximum acceptable unconfined compressive strength for soil cement shall be 450 psi and 850 psi, respectively. One test shall be required for every 400 feet per lane width at random locations selected using random number tables.

Submittals for Review During Construction

The Design-Build Team shall submit the unconfined compressive strength test results for review and acceptance.

PRICE ADJUSTMENTS FOR ASPHALT BINDER

(9-1-11) (Rev. 8-2318)

DB6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the 2018 *Standard Specifications for Roads and Structures*.

Iredell County

The base price index for asphalt binder for plant mix is **\$553.33** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on August 1, 2018.

PRICE ADJUSTMENTS - ASPHALT CONCRETE PLANT MIX

(9-1-11) (Rev. 9-8-17)

DB6 R26

Revise the 2018 Standard Specifications for Roads and Structures as follows:

Page 6-15, Article 609-11 and Page 6-31, Article 610-14

Add the following paragraph before the first paragraph:

The "Asphalt Price" used to calculate any price adjustments set forth in this section shall be \$40.00 per theoretical ton. This price shall apply for all mix types.

FIELD OFFICE

(6-1-07) (Rev. 6-22-15)

DB 08-01

Description

This work consists of furnishing, erecting, equipping, and maintaining a field office for the exclusive use of Department Engineers and Inspectors at a location on the project approved by the Engineer. Provide a field office that complies with the current A.D.A. Design and Accessibility Standards, the National Electric Code, local, state, and federal regulations, and the following:

Procedures

The field office and equipment shall remain the property of the Design-Build Team upon completion of the contract. The field office must be separated from buildings and trailers used by the Design-Build Team and shall be erected and functional as an initial operation. Failure to have the field office functional when work first begins on the project will result in withholding payment of the Design-Build Team's monthly progress estimate. The field office must be operational throughout the duration of the project and be removed upon completion and final acceptance of the project.

Provide a field office that is weatherproof, tightly floored and roofed, constructed with an air space above the ceiling for ventilation, supported above the ground, has a width of at least ten feet, and the floor-to-ceiling height that is at least 7 feet 6 inches. Provide inside walls and a

Iredell County

GEOTEXTILE FOR PAVEMENT STABILIZATION

Description

Supply and install geotextile for pavement stabilization in accordance with the Geotechnical Engineering Scope of Work found elsewhere in this RFP. Geotextile for pavement stabilization shall be required below Aggregate Subgrade Type 1.

Materials

Refer to Division 10 of the 2018 2018 Standard Specifications for Roads and Structures.

ItemSectionGeotextiles1056

Provide Type 5 geotextile for geotextile for pavement stabilization that meets the following tensile strength requirements in the machine direction (MD) and cross-machine direction (CD):

GEOTEXTILE FOR PAVEMENT STABILIZATION REQUIREMENTS		
Tensile Strength	Requirement (MARV ^A)	Test Method
Tensile Strength @ 5% Strain (MD & CD ^A)	1,900 lb/ft	ASTM D4595
Ultimate Tensile Strength (MD & CD ^A)	4,800 lb/ft	ASTM D4595

A. MD, CD and MARV per Article 1056-3 of the 2018 *Standard Specifications for Roads and Structures*.

Construction Methods

Place geotextile for pavement stabilization below Aggregate Subgrade Type 1. Pull geotextiles taut so they are in tension and free of kinks, folds, wrinkles or creases. Install geotextile for pavement stabilization parallel to the survey or lane line in the MD and adjacent to each other in the CD. Geotextiles in the MD shall be overlapped 18". Geotextiles overlapped in the CD shall be overlapped 18". Completely cover subgrades with geotextile for pavement stabilization. Hold geotextiles in place with wire staples or anchor pins as needed.

Do not damage geotextile for pavement stabilization when placing aggregate. Do not operate heavy equipment on geotextiles. Place at least four inches of aggregate onto the geotextile prior to operating any heavy equipment on it. Replace any damaged geotextiles to the satisfaction of the Engineer.

(SPECIAL)

FOUNDATIONS AND ANCHOR ROD ASSEMBLIES FOR METAL POLES

(1-17-12) (Rev. 9-8-17)

9, 14, 17

DB9 R05

Description

Foundations for metal poles include foundations for signals, cameras, overhead and dynamic message signs (DMS) and high mount and light standards supported by metal poles or upright trusses. Foundations consist of footings with pedestals and drilled piers with or without grade beams or wings. Anchor rod assemblies consist of anchor rods (also called anchor bolts) with nuts and washers on the exposed ends of rods and nuts and a plate or washers on the other ends of rods embedded in the foundation.

Construct concrete foundations with the required resistances and dimensions and install anchor rod assemblies in accordance with the contract and accepted submittals. Construct drilled piers consisting of cast-in-place reinforced concrete cylindrical sections in excavated holes. Provide temporary casings or polymer slurry as needed to stabilize drilled pier excavations. Use a prequalified Drilled Pier Contractor to construct drilled piers for metal poles. Define "excavation" and "hole" as a drilled pier excavation and "pier" as a drilled pier.

This provision does not apply to foundations for signal pedestals; see Section 1743 of the 2018 *Standard Specifications for Roads and Structures* and 2018 Roadway Standard Drawing No. 1743.01.

20% or more of the concealed pavement markings are revealed, it shall be replaced, at an 8" width to re-conceal the exposed pavement markings, and paid for as extra work in accordance with Subarticle 104-8-(A) of the NCDOT 2018 *Standard Specifications for Roads and Structures* at the unit price of \$0.50 per linear foot, unless the traffic pattern is to change within 30 days.

Construction Methods

A) Application Equipment

Except as allowed below, the equipment to apply Work Zone Traffic "Pattern Masking" material shall be truck mounted pneumatic or airless spray machines with suitable arrangement of atomizing nozzles and controls to assure complete and uniform coverage of the entire pavement surface with consistent thickness as required in this provision.

The Design-Build Team may only use hand applied manual application methods, or any other non-truck mounted application equipment or device, to install black material for applications shorter than 1,000 feet.

The application spray equipment shall be set up in such a manner to apply the Work Zone Traffic "Pattern Masking" material in spray pattern widths to ensure complete and uniform coverage of the entire travelway and to reduce the overlap from multiple passes. If the application equipment isn't equipped to spray a full 12-foot travel lane in a single pass, it shall be set-up to spray a minimum six- foot width. No more than two passes per travel lane will be allowed. A one inch overlap width shall be required when applying the material in widths less than the full width of a travel lane.

B) Material Application

Regardless of the temporary pattern / traffic shift width, the Work Zone Traffic "Pattern Masking" material shall be applied to the full width and length of the pavement surface. Specifically, throughout the limits of the traffic pattern / traffic shift changes, the Work Zone Traffic "Pattern Masking" material shall mask / conceal the existing pavement markings and provide a new black uniform surface for the placement of the revised pavement markings.

The Work Zone Pattern Masking material shall be applied to the pavement markings being concealed in two separate applications. The first application shall be applied directly onto the existing pavement markings, at a width equivalent to the width of the markings being concealed, at a uniform thickness of 20 mils. The first application does not require the application of anti-skid elements. The second application shall be applied on the pavement markings being concealed, as well as the entire pavement width, at a uniform thickness of 20 mils along with the anti-skid elements at a rate of 8 lbs/gallon or greater..

The Design-Build Team has the option of applying the two-coat masking application to the pavement markings in separate passes or in a single pass depending on how the application equipment is configured.

The masking / concealment of individual pavement marking edge lines, skips, mini skips, lane lines or gore lines shall be prohibited.

The Work Zone Traffic "Pattern Masking" material shall be applied at a uniform thickness of 20 mils directly onto the existing pavement.

C204163 (I-3819B / U-6039)

The Work Zone Traffic "Pattern Masking" material shall be set and / or cured in order to receive pavement markings within 10 minutes of installation according to the temperature requirements stated elsewhere in this provision.

C) Surface Preparation

- Asphalt The existing pavement surface shall be swept clean and prepared in accordance with the Manufacturer's recommendations to receive the Work Zone Traffic "Pattern Masking" material. Although, no existing pavement marking line removal is required, any loose, flaking or other laitance material including residual / loose or raised glass beads from existing markings shall be machine broomed or scarifed as directed by the Manufacturer before placing the Work Zone Traffic "Pattern Masking" material.
- **Concrete-** The *existing* concrete surface shall be swept clean and prepared in accordance with the manufacturer's recommendations to receive the Work Zone Pattern Masking material.

Although no existing pavement marking line removal is required, any loose, flaking, or other laitance material, including but not limited to residual / loose or raised glass beads from existing markings, shall be machine broomed or scarified, as directed by the manufacturer before placing the Work Zone "Pattern Masking" material.

NOTE: For newly placed concrete pavements, newly installed concrete bridge decks or existing concrete pavements that do not receive a surface treatment, Work Zone Pattern Masking material shall not be placed. The conflicting pavement marking lines shall be removed by water blasting methods only.

D) Temperature and Weather Limitations

Work Zone Traffic "Pattern Masking" material shall not be applied unless the ambient air temperature and the pavement temperature is 40° F or higher. Do not install Work Zone Traffic "Pattern Masking" material unless the pavement surface is completely dry. Do not install Work Zone Traffic "Pattern Masking" material within four hours of a significant rain event such as a thunderstorm with rainfall intensities equal to or greater than 1 inch / per hour. Always follow the Manufacturer's recommendations for placement during periods of excessive humidity.

E) Maintenance

There should be no required maintenance of the Work Zone Traffic "Pattern Masking" material. The Design-Build Team shall replace any Work Zone Traffic "Pattern Masking" material that prematurely fails to keep pavement markings masked / concealed and / or retain its black color, in the Department's sole discretion, for the full minimum 12-month duration. Any traffic control and / or material costs due to replacement shall be at no cost to the Department.

BLACK EPOXY PAVEMENT MARKING MATERIAL

(1-26-17)

Description

This work shall consist of applying black epoxy pavement marking material on concrete.

- Identify types of any retaining walls and / or sound barrier walls, if applicable.
- Describe any geotechnical investigations to be performed by the Design-Build Team and note any deviations to NCDOT requirements for subsurface investigations noted in the Geotechnical Scope of Work.
- If applicable, specify the extent of impacts to properties with contaminated soils, indicating the anticipated contamination excavation limits.
- Identify any aesthetic considerations not required herein that will be part of the design.
- Describe how utility conflicts will be addressed and any special utility design considerations. Describe how the Design-Build Team's design and construction methods minimize the Department's utility relocation costs.
- Describe how the design will affect the Department's right of way costs.

3. Long Term Maintenance – 5 points

- Describe any special materials, not referenced elsewhere in this RFP, incorporated into the project that would result in long term reduction in maintenance.
- Describe any special designs or construction methods that would reduce future maintenance costs to the Department.
- Estimate a minimum ten-year cost saving resulting from incorporation of these special materials, design or construction methods into the project.

4. Schedule and Milestones – 26 points

- Provide a detailed schedule for the project including both design and construction activities. The schedule shall show the sequence and continuity of operations, as well as the month of delivery of usable segments of the project.
- Indicate the specific construction activities that will occur outside jurisdictional resources prior to obtaining the environmental permits and their anticipated start date.
- Indicate how the Design-Build Team will maintain the project schedule if the right of way acquisition process, railroad agreements and / or utility relocations are delayed.
- Identify any self-imposed liquidated damages and associated Intermediate Contract Time(s), if applicable.
- Specify the duration, in days, for ICT #5.
- Specify the duration, in hours, for ICT #6.
- Specify the duration, in days, for ICT #11.
- The schedule shall also include the Design-Build Team's final completion date and, if proposed, their substantial completion date. These dates shall be clearly indicated on the Project Schedule and labeled "Final Completion Date" and "Substantial Completion Date".

5. Innovation – 5 points

• Identify any aspects of the design or construction elements that the Design-Build Team considers innovative. Include a description of alternatives that were considered whether implemented or not.

distributor roads outside the mainline 30-foot clear zone, the Design-Build Team shall design and construct minimum ten-foot inside shoulders, four-foot of which shall be full depth paved shoulder, and minimum 12-foot outside shoulders, four-foot of which shall be full depth paved shoulder.

- The Design-Build Team shall design and construct one-lane ramps that provide a minimum 16-foot lane width; and two-lane ramps that provide minimum 12-foot lanes. Unless noted otherwise elsewhere in this RFP, all ramps shall have 14-foot outside shoulders, four-foot of which shall be full depth paved shoulders and 12-foot inside shoulders, four-foot of which shall be full depth paved shoulders.
- The Design-Build Team shall design and construct all directional ramps to meet a 50-mph design speed using the 0.06 maximum superelevation table. The Design-Build Team shall design and construct all bridges on directional ramps with a four-foot outside bridge rail offset and a 12-foot inside rail offset.
- The Design-Build Team shall design and construct loops that adhere to Table 3-29, *Design Widths of Pavements for Turning Roadways*, shown in the 2011 AASHTO *A Policy on Geometric Design of Highways and Streets* Case II / Condition C for one-lane loops; Case III / Condition C for two-lane loops. All loops shall have 12-foot outside shoulders, four-foot of which shall be full depth paved shoulders. All loops shall have 2'-6" curb and gutter along the inside edge of pavement, with a 14-foot berm. Excluding the proposed loops at the Broad Street interchange, the minimum loop design shall be 30-mph with a minimum 230-foot radius.
- The Design-Build Team shall design and construct a minimum 1000-foot three-lane approach to the -RPCA- and -RPC- split.
- Unless noted otherwise elsewhere in this RFP, the Design-Build Team shall design and construct -Y- Lines, ramps, service roads, and cul-de-sacs / turnarounds providing the same or better sidewalks, access, widening, improvements and traffic measures of effectiveness, in the Department's sole discretion, included in the Preliminary Roadway Plans provided by the Department. The limits of -Y- Line construction shall be of sufficient length to tie to existing based upon the current NCDOT guidelines and standards.
- Excluding transitions required to tie to existing and / or steeper cross slopes (0.025 maximum) required to eliminate hydroplaning, the I-40 and I-77 normal crown cross slope shall be 0.02. The I-40 and I-77 crown point shall be located such that the inside lane in each direction of travel slopes towards the median and the remaining lanes slope towards the outside. Prior to the beginning of the I-40 and I-77 full typical section width, the Design-Build Team shall transition the existing pavement structure and crown point to tie to existing.
- I-40 and I-77 are full control of access facilities. The Design-Build Team shall bring to the Design-Build Unit's attention any deviations from the proposed control of access and / or right of way shown on the Preliminary Roadway Plans provided by the Department. The proposed right of way and / or control of access limits may deviate in proximity to cultural, historic, or otherwise protected landmarks, including cemeteries, to eliminate / minimize impacts. Prior to negotiating right of way, easement and / or control of access with property

I-40 PAVEMENT DESIGN

I-40 Travel Lane Pavement Design

Excluding narrow widening and tapers, the pavement design for the I-40 travel lanes shall consist of the following:

14.0" doweled jointed concrete 3.0" B25.0C 1.25" S9.5B 12" Type 1 Aggregate Subgrade (*Aggregate Subgrade* Standard Special Provision found elsewhere in this RFP)

The transverse joints shall be uniformly spaced 15 feet apart.

I-40 Full-Depth Median Shoulder and I-40 Full-Depth Outside Shoulder Pavement Design

Throughout the project limits, excluding narrow widening and tapers, the pavement design for the I-40 median paved shoulder and the I-40 outside paved shoulder shall consist of the following:

14.0" undoweled jointed concrete 3.0" B25.0C 1.25" S9.5B 12" Type 1 Aggregate Subgrade (*Aggregate Subgrade* Standard Special Provision found elsewhere in this RFP)

I-40 Narrow Widening and Taper Pavement Design

For narrow widening and tapers, the pavement design for the I-40 travel lanes, I-40 median paved shoulder and I-40 outside paved shoulder shall consist of the following:

3.0"	S9.5D
3.0"	I19.0C
12.5"	B25.0C

OTHER REQUIREMENTS

Unless noted otherwise elsewhere in this RFP, all longitudinal joints shall be located on a lane line or lane midpoint. Solely to shift a longitudinal joint to one of the aforementioned locations, a maximum 840-foot transition, that locates the longitudinal joint elsewhere, will be allowed. The Design-Build Team shall indicate in the Technical Proposal how longitudinal joints will be located on a lane line or lane midpoint.

The subgrade stabilization shown in the tables below shall consist of 12" of Type 1 Aggregate Subgrade (Reference the *Aggregate Subgrade* Standard Special Provision found elsewhere in this RFP)

Cement treated base course shall be in accordance with the *Cement Treated Base* Course Project Special Provision found elsewhere in this RFP.

Other pavement designs for this project shall be as listed in the tables below:

C204163 (I-3819B / U-6039)

For the -Y- Lines, ramps, and loops pavement designs noted in the tables above, the Design-Build Team may substitute an ABC layer for the asphalt base course layer. If such an alternative is proposed, the thickness of the ABC layer, used as a substitute for the asphalt base course layer, shall be equal to twice the proposed asphalt base course thickness specified for the roadway. If an asphalt surface course is placed directly on an ABC layer, the Design-Build Team shall apply prime coat over the ABC layer.

The Design-Build Team shall maintain the same pavement design throughout the -Y- Line, ramp, and loop, construction limits. In the Technical Proposal, the Design-Build Team shall specify the base option chosen (ABC or asphalt) for all -Y- Lines, ramps, and loops.

Unless noted otherwise elsewhere in this RFP, the Design-Build Team shall resurface the existing pavement of all -Y- Lines and ramps with a minimum depth that equals the full thickness of the surface course as provided in the table above. (Reference the Roadway Scope of Work found elsewhere in this RFP).

Throughout the construction limits that consist solely of pavement marking obliterations and / or revisions, the Design-Build Team shall uniformly overlay the existing pavement with a pavement depth that equals half the full thickness of the surface course as provided in the tables above.

On all ramps and loops, the adjacent through lane pavement design shall extend to the back of the gore (12-foot width).

For all greenways, the pavement design shall consist of 2.0" of S9.5B, 6.0" of ABC and a Soil Stabilization Geotextile Fabric. Construction of all greenways shall be consistent with the *Greenways and Multi-Use Paths* Project Special Provision found elsewhere in this RFP.

Longitudinal joints of all surface course layers shall not be located in the final traffic pattern wheel path. If applicable, the Design-Build Team shall indicate in the Technical Proposal where all underlying longitudinal joints will be located and demonstrate how the underlying longitudinal joint location will minimize reflective cracking.

Unless noted otherwise elsewhere in this RFP, the minimum widened width shall be six feet. The minimum widened width may be reduced to four feet only if the Design-Build Team demonstrates that their equipment properly compacts narrow widening and obtains prior Department written approval. Tapers that tie proposed pavement to existing pavement are excluded from the narrow widening requirements noted above. Throughout this Scope of Work, "narrow widening" shall be defined as the four-foot or six-foot width described above.

In areas where the existing paved shoulders are proposed to be incorporated into a permanent travel lane, the Design-Build Team shall be responsible for evaluating the existing paved shoulder regarding its suitability for carrying the projected traffic volumes. In the event that the existing paved shoulder is found to be inadequate, the Design-Build Team shall be responsible for upgrading the existing paved shoulder to an acceptable level or replacing the existing paved shoulder. The Design-Build Team shall submit their evaluation and proposed use of existing paved shoulders to the Design-Build Unit for review and acceptance or rejection.

appraisals required solely for condemned parcels), negotiation and relocation services required for all right of way, control of access and easements, including but not limited to permanent utility easements, necessary for completion of the project in accordance with G.S. 136-28.1 of the General Statutes of North Carolina, as amended, and in accordance with the requirements set forth in the Uniform Appraisal Standards and General Legal Principles for Highway Right of Way, the North Carolina Department of Transportation's Right of Way Manual, the North Carolina Department of Transportation's Rules and Regulations for the Use of Right of Way Consultants, the Code of Federal Regulations, and Chapter 133 of the General Statutes of North Carolina from Section 133-5 through 133-18, hereby incorporated by reference, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. The Design-Build Team shall also field stake all right of way, control of access and easements, including but not limited to utility easements, in accordance with the requirements noted above. For a list of firms currently approved, the Design-Build Team should contact Mr. Neal Strickland, in the NCDOT Right of Way Unit, at 919-707-4364. The Design-Build Team shall perform the services as set forth herein and furnish and deliver to the Department reports accompanied by all documents, including but not limited to all electronic design files and revisions, necessary for the settlement of claims and the recordation of deeds, or necessary for condemnation proceedings covering said properties. The Design-Build Team, acting as an agent on behalf of the State of North Carolina, shall provide right of way acquisition services for TIP I-3819B / U-6039 in Iredell County.

- Acquisition services required outside of the project construction limits due solely to an allowable rise in the floodplain water elevation on insurable structures will be considered extra work and paid for in accordance with Article 104-7 of the 2018 NCDOT *Standard Specifications for Roads and Structures*.
- A Department representative will be available to provide technical guidance on right of way acquisition procedures and to make timely decisions on approving relocation benefits and approving administrative adjustment settlements on behalf of the Department over and above the authority granted to the Department Right of Way Consultant Project Managers.
- The Design-Build Team shall submit a right of way project tracking report and right of way quality control plan to the Department. The Department standard forms and documents shall be used to the extent possible.
- The Design-Build Team shall provide a current title certificate for each parcel as of the date of closing or the date of filing of condemnation, unless required otherwise in the NCDOT April 2015 *Right of Way Manual*.
- The Department will prepare all Condemnation Maps. The Design-Build Team shall prepare all Final Condemnation Reports. Upon approval of the Final Condemnation Report, the Department will required a minimum of eight weeks to file the condemnation claim. For all plan revisions on condemned parcels that modify the area acquired, modify the control of access and / or impact the appraised value, the Design-Build Team shall be responsible for the following:

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Work Zone Traffic Control website noted below for examples and *Guidelines on the Use of Positive Protection in Work Zones*.

https://connect.ncdot.gov/projects/WZTC/Pages/Design-Resources.aspx

- The Design-Build Team shall adhere to the AASHTO *Roadside Design Guide* in determining the length of need, flare rate, and clear zone. The Design-Build Team shall adhere to the possible deflection of the proposed temporary barrier system in accordance with NCHRP-350 *Recommended Procedures for the Safety Performance Evaluation of Highway Features* deflections from crash testing and MASH (2016 AASHTO Manual for Assessing Safety Hardware). Providing less than the minimum deflection distance shall require the use of anchored temporary barrier systems in accordance with the 2018 NCDOT *Standard Specifications for Roads and Structures*.
- When temporary barrier is used continuously on one or both sides of a direction of I-40 or I-77 travel for a distance greater than one mile, the Design-Build Team shall provide a paved motorist breakdown area on the right side of the I-40 and I-77 travel way every mile, unless the outside paved shoulder width (clear distance between edge of travel lane and face of barrier) is ten feet or greater. All breakdown areas shall be a minimum of one thousand feet long and fourteen feet wide, ten feet of which shall be pavement. All breakdown areas shall be identified on the project with Changeable Message Signs and / or Stationary Signs placed in advance of each breakdown area, as approved by the Department. Prior to incorporation, the Design-Build Team shall submit a temporary pavement design for the breakdown areas. (Reference the Pavement Management Scope of Work found elsewhere in this RFP)
- The Design-Build Team shall not place temporary barrier systems utilized for traffic control on unpaved surfaces.
- The Design-Build Team shall not place temporary barrier within 200 feet of any merging taper, including but not limited to, existing and proposed ramp merges, lane drop merges, and / or temporary lane closure merges. All lanes shall first be closed using channelizing devices and pavement markings.
- When barrier is placed on a roadway shoulder, the Design-Build Team shall install shoulder closure signs and devices in advance of the barrier in accordance with the NCDOT Roadway Standard Drawings.
- The Design-Build Team shall not place temporary barrier in the gore area.
- The Design Build Team will be permitted to maintain a minimum one-foot offset (shy distance) from the edge of an open travel lane to proposed and existing bridge barrier rails, proposed and existing median barrier, and temporary portable concrete barrier **ONLY** in the following locations:

1. Both directions of I-77, from 400 feet north of the existing I-77 bridge over Ramp -YRPBD- to 400 feet south of the existing I-77 bridge over Ramp -YRPBD-.

2. Ramp -YRPD-, from the existing bridge over the tributary to Fourth Creek to 400 feet east of the existing bridge over the tributary to Fourth Creek.

Except for short term median crossovers, the design speed for temporary alignments of Interstate, US, and NC routes shall not be lower than the current posted speed limit. The minimum allowable design speed for temporary alignments on secondary roads shall be the higher of 10 mph below the posted speed limit or 35 mph.

The 2018 *Roadway Standard Drawing* No. 1101.11 shall be used to calculate the length of temporary merges for lane closures and temporary traffic shifts. For temporary traffic patterns that will remain in place for a period longer than three days, including but not limited to traffic shifts, merges, and temporary alignments, breaks in the superelevation and / or breaks in a normal crown section will not be allowed within the shifting taper. Excluding the aforementioned temporary traffic patterns, breaks in the superelevation and / or crown breaks in a normal crown section shall only occur on a lane line or lane midpoint, and shall not exceed 0.04. For I-40 and I-77, the length of all straight line shift tapers shall be a minimum full "L" (L=width of traffic shift multiplied by the posted speed limit in mph). In addition, solid white lane lines shall be used in lieu of skip lines to separate the travel lanes through the shift.

Temporary traffic shifts that are not covered by a standard or require vertical grades shall be considered a temporary alignment. All temporary alignments shall adhere to the NCDOT *Roadway Design Manual*, AASHTO *A Policy on Geometric Design of Highways and Streets* and the TRB *Highway Capacity Manual*.

All onsite detours shall meet the minimum number of existing lanes per direction and shall adhere to all temporary alignment requirements noted elsewhere in the RFP. A pavement transition, suitable for the posted speed limit shall be provided at all onsite detour interfaces.

The Design Build Team shall provide a smooth pavement surface for traffic at all times. The Design Build Team shall not place traffic on pavement containing rumble strips.

Maintain access to all residences, schools, bus stops, mass transit facilities (park and ride lots), emergency services and businesses at all times. Prior to incorporation, obtain written approval from the Engineer on method to maintain access.

At all times, maintain pedestrian facility access, provide temporary pedestrian facilities (concrete, asphalt, or other suitable material as approved by the Engineer), and / or provide a pedestrian detour at all locations where the open pedestrian travelway has been closed and / or removed by the Design-Build Team's construction operations. Prior to incorporation, all pedestrian detours shall receive Department written approval. For additional pedestrian requirements reference the NCDOT Work Zone Traffic Control website noted below for *Guidelines for the Level of Pedestrian Accommodation in Work Zones* July 2018:

https://connect.ncdot.gov/projects/WZTC/Pages/PedSafety.aspx

Through traffic traveling in the same direction shall not be split. (i.e. separation by any type of barrier, bridge piers, existing or proposed median, etc.).

The Design Build Team shall not place I-40 or I-77 traffic on an offsite detour.

Except as allowed in ICT #3, median crossovers will not be allowed.

Except as allowed in ICT #3 through ICT #7, offsite detours will not be allowed.

Unless the ramp / loop traffic has been shifted to a temporary ramp / loop alignment that provides the same or better traffic operations, in the Department's sole discretion, the Design-Build Team shall not permanently close any existing ramp / loop until 1) the proposed ramp / loop that will carry the corresponding traffic is open to traffic and fully operational; and 2) any proposed traffic signal at the proposed ramp / loop terminal for the corresponding traffic is operational.

The Design-Build Team shall not permanently close SR 2333 (Eastside Drive) until 1) the proposed realignment of SR 2333 (Eastside Drive) is open to traffic and fully operational;

If an emergency condition should occur, a RCN shall be provided to NCDOT within two (2) days after the event. For non-NCDOT controlled facilities, the Design-Build Team shall immediately notify the controlling government entity.

II. Project Operations Requirements

The following are Time Restrictions and notes that shall be included with the Transportation Management Plan General Notes, unless noted otherwise elsewhere in this RFP:

A. Time Restrictions

1. Intermediate Contract Times #1 and #2 for Lane Narrowing, Lane Closure, Holiday and Special Event Restrictions.

** NOTE ** Deleted paragraph excluding the existing center turn lane on Broad Street bridge over I-77.

The Design-Build Team shall maintain the existing traffic pattern and shall not close or narrow a lane of traffic during the times below.

Road Name	Day	Time Restrictions
I-40 and I-77 (including all collector	Monday through Friday	6:00 a.m. to 8:00 p.m.
distributors, ramps and loops)	Saturday and Sunday	8:00 a.m. to 9:00 p.m.
Broad Street, US 64, Eastside Drive and Old Mocksville Road	Monday through Friday	6:00 a.m. to 9:00 am and 4:00 pm to 7:00 pm
Broad Street (Applies only when number of lanes have	Monday through Friday	6:00 a.m. to 8:00 p.m.
been reduced in a long term temporary pattern as permitted in ICT #8)	Saturday and Sunday	8:00 a.m. to 9:00 p.m.

The Design-Build Team shall not install, reset and / or remove any traffic control device during the times listed above.

In addition, the Design-Build Team shall not close or narrow a lane of traffic on I-40 or I-77 (including all collector distributors, ramps, and loops), detain and / or alter the traffic flow on or during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy. At a minimum, these requirements / restrictions shall apply to the following schedules:

- (a) For New Year's between the hours of 6:00 a.m. December 31st and 8:00 p.m. January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday then from 8:00 p.m. the following Tuesday.
- (b) For Easter, between the hours of 6:00 a.m. Thursday and 8:00 p.m. Monday.

Prior to the continuous road closure, the Design-Build Team shall install a Department approved off-site detour route. The Design-Build Team shall maintain access to all driveways within the closure at all times. Simonton Road shall be reopened to traffic within the allotted road closure duration.

The date of availability shall be the date the Design-Build Team elects to close **Simonton Road.** The Design-Build Team shall provide the Engineer a minimum of 30 days written notice prior to the date of availability. The date of completion shall be the number of calendar days proposed by the Design-Build Team in the Technical Proposal, and such number of calendar days proposed shall not be greater than the days noted above.

Liquidated Damages for Intermediate Contract Time #5 for the above road closure time restrictions for Simonton Road are \$1,000.00 per calendar day or any portion thereof.

4. Intermediate Contract Time # 6 for Continuous Road Closure of Eastside Drive

One road closure with an approved offsite detour will be permitted to tie-in the proposed Eastside Drive alignment for no more than 59 consecutive hours. Prior to the continuous road closure, the Design-Build Team shall install a Department approved off-site detour route. Eastside Drive shall be reopened to traffic in the final signalized pattern within the allotted road closure duration.

The time of availability shall be the time the Design-Build Team elects to close Eastside Drive. The Design-Build Team shall provide the Engineer a minimum of 30 days written notice prior to the time of availability. The time of completion shall be the number of consecutive hours proposed by the Design-Build Team in the Technical Proposal, and such number of hours proposed shall not be greater than the hours noted above.

Liquidated Damages for Intermediate Contract Time #6 for the above road closure time restrictions for Eastside Drive are \$1500.00 per 15-minute period or any portion thereof.

5. Intermediate Contract Times #7 through # 10 for Ramp / Loop Tie-Ins

One continuous road closure, with an approved offsite detour, will be permitted to tie-in existing ramps / loops for the maximum durations listed below. Prior to the road closure, the Design-Build Team shall install a Department approved off-site detour route. The existing ramp / loop shall be completely reopened to traffic within the allotted road closure duration.

At the I-40 / I-77 interchange, the Design Build Team shall not concurrently close the entrance ramp and entrance loop for the same direction of I-40 or I-77. The Design-Build Team shall not concurrently close any ramp or loop at adjacent interchanges.

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Intermediate Contract Times #7	<pre>through #10 for</pre>	Ramp / Loop	Tie-Ins are as listed
in the table below:			

Intermediate Contract Time #	Ramp / Loop	Day and Time Road Closure Allowed	Duration	Liquidated Damages (per 15-minute period or any portion thereof)
#7	I-40 / I-77 interchange - Existing Loop B (I-40 WB to I-77 SB)	From Friday at 9:00 p.m. until Monday at 5:00 a.m.	56 Consecutive Hours	\$5,000.00
#8	I-40 / I-77 interchange - Existing Loop C (I-77 SB to I-40 EB)	From Friday at 9:00 p.m. until Monday at 5:00 a.m.	56 Consecutive Hours	\$5,000.00
#9	I-40 / I-77 interchange - Existing Loop D (I-40 EB to I-77 NB)	From Friday at 9:00 p.m. until Monday at 5:00 a.m.	56 Consecutive Hours	\$5,000.00
#10	Sullivan Road Ramp to I-40 EB	From Friday at 9:00 p.m. until Monday at 5:00 a.m.	56 Consecutive Hours	\$5,000.00

6. Intermediate Contract Time #11 for Long Term Lane Reduction on Broad Street Bridge over I-77

With implementation of the following temporary traffic pattern, the Design Build Team will be permitted one long term reduction in the number of travel lanes on the Broad Street Bridge over I-77 for no more than **365 consecutive calendar days**:

- a) Two westbound through lanes across the Broad Street Bridge over I-77
- b) One eastbound through lane across the Broad Street Bridge over I-77
- c) No center turn lane across the Broad Street Bridge over I-77
- d) An exclusive left turn lane, with a minimum 100-foot storage at the signalized entrance, from eastbound Broad Street to Newtowne Plaza
- e) An exclusive left turn lane, with a minimum 100-foot storage at the signalized intersection, from eastbound Broad Street to the I-77 southbound loop
- f) An exclusive left turn lane, with a minimum 100-foot storage at the signalized intersection, from westbound Broad Street to the I-77 northbound loop
- g) Pedestrian access across the Broad Street Bridge over I-77 shall be maintained at all times. (The Design-Build Team will not be allowed to detour pedestrians off-site.)

Traffic shall be placed into the final pattern on the proposed bridge within the allotted lane reduction duration.

The date of availability shall be the date the Design-Build Team elects to reduce the number of travel lanes and shift traffic into the temporary pattern noted above. The Design-Build Team shall provide the Engineer a minimum of 30 days written notice prior to the date of availability. The date of completion shall be the number of calendar days

proposed by the Design-Build Team in the Technical Proposal, and such number of calendar days proposed shall not be greater than the days noted above.

Liquidated Damages for Intermediate Contract Time #11 for the above lane reduction duration on the Broad Street Bridge over I-77 are \$1,000.00 per calendar day or any portion thereof.

B. Hauling Restrictions

The Design-Build Team shall adhere to the hauling restrictions noted in the 2018 NCDOT *Standard Specifications for Roads and Structures*.

The Design-Build Team shall conduct all hauling operations as follows:

- The Design-Build Team shall not conduct any hauling operations against the flow of traffic of an open travelway unless an approved temporary traffic barrier or guardrail separates the traffic from the hauling operation.
- The Design-Build Team shall not haul during the holiday time and special events time restrictions listed in ICT #1 and ICT #2, unless the hauling operation occurs completely behind temporary traffic barrier or guardrail and does not impact traffic operations.
- All hauling entrances, exits, and crossings shall be shown on the TMP and be in accordance with the 2018 NCDOT Roadway Standard Drawings or the *Typical Median Access Areas* Project Special Provision found elsewhere in this RFP. All hauling entrances, exits, and median access point locations shall be approved by the Department prior to installation.
- Haul vehicles shall not enter and / or exit an open travel lane at speeds more than 10 mph below the posted speed limit.
- Hauling operations that perpendicularly cross a roadway shall require TMP and shall be subject to the time restrictions, and holiday, holiday weekend and special event time restrictions listed in ICT #1 and ICT #2.

The Design-Build Team shall address how hauling will be conducted in the Technical Proposal, including but not limited to, hauling of any materials to and from the site and hauling material within the NCDOT right of way.

Excluding hauling operations that are conducted entirely behind a temporary traffic barrier or guardrail, single vehicle hauling shall not be allowed ingress and egress from any open travel lane during the following time restrictions:

Road Name	Day	Time Restrictions
I-40 and I-77		6:00 am. To 9:00 am
(including all collector	Monday through Friday	and
distributors, ramps and loops)		4:00 pm to 7:00 pm

For Single Vehicle Hauling

Excluding hauling operations that are conducted entirely behind a temporary traffic barrier or guardrail, multi-vehicle hauling shall not be allowed ingress and egress from any open travel lane during the following time restrictions:

Road Name	Road Name Day and Time	
I-40 and I-77	Monday through Friday	6:00 a.m. to 8:00 p.m.
(including all collector		
distributors, ramps and loops)	Saturday and Sunday	8:00 a.m. to 9:00 p.m.
		6:00 a.m. to 9:00 am
All other roads	Monday through Friday	and
		4:00 pm to 7:00 pm

For Multi-Vehicle Hauling

C. Lane and Shoulder Closure Requirements

On two-lane, two-way facilities, the Design-Build Team shall not install more than one (1) lane closure on any roadway within the project limits or in conjunction with project, measured from the beginning of the merger taper to the end of the lane closure. The maximum length of lane closure shall be one (1) mile for a single lane closure measured from the beginning of the merge taper to the end of the lane closure.

On multilane facilities, the Design-Build Team shall not install more than two (2) simultaneous lane closures in any one direction, and shall provide a minimum of two (2) miles between lane closures, measured from the end of one closure to the first sign of the next lane closure. The maximum length of each lane closure shall be two (2) miles for a single lane closure and two and a half (2.5) miles for a double lane closure, measured from the beginning of the first merge taper to the end of the lane closure.

The Design-Build Team shall remove lane closure devices from the lane when work is not being performed behind the lane closure or when a lane closure is no longer needed.

When barrier is placed on the roadway shoulder, the Design-Build Team shall install shoulder closure signs and devices in advance of the barrier using the 2018 NCDOT *Roadway Standard Drawings*.

When personnel and / or equipment are working within 15 feet of an open travel lane, the Design-Build Team shall close the nearest open shoulder using the 2018 NCDOT *Roadway Standard Drawings*, unless the work area is protected by an approved temporary traffic barrier or guardrail.

When personnel and / or equipment are working on the shoulder adjacent to an undivided facility and within five feet of an open travel lane, the Design-Build Team shall, at a minimum, close the nearest open travel lane using the 2018 NCDOT *Roadway Standard Drawings*, unless the work area is protected by an approved temporary traffic barrier or guardrail.

When personnel and / or equipment are working on the shoulder adjacent to a divided facility and within ten feet of an open travel lane, the Design-Build Team shall, at a minimum, close the nearest open travel lane using the 2018 NCDOT *Roadway Standard Drawings*, unless the work area is protected by an approved temporary traffic barrier or guardrail.

When personnel and / or equipment are working within a lane of travel of an undivided or divided facility, the Design-Build Team shall, at minimum, close the lane using the 2018 NCDOT *Roadway Standard Drawings*. The Design-Build Team shall conduct the work so that all personnel and / or equipment remain within the closed travel lane.

The Design-Build Team shall not perform work involving heavy equipment within 15 feet of the edge of travel way when work is being performed behind a lane closure on the opposite side of the travel way.

UTILITIES COORDINATION SCOPE OF WORK (8-1-18)

The Design-Build Team shall obtain the services of a Professional Services Firm (PSF) knowledgeable in the NCDOT Utility Coordination Process involved with utility relocation / installation and highway construction. The aforementioned PSF shall be responsible for coordinating all utility relocations, removals and / or adjustments where the Design-Build Team and utility owner, with concurrence from the Department, determine that such work is essential for highway safety and performance of the required highway construction. Coordination shall be for all utilities whether or not they are specifically identified in this Scope of Work and shall include any necessary utility agreements when applicable. NCDOT will be the approving authority for all utility agreements and approval of plans.

During the procurement phase, the Department will allow no direct contact, either by phone, e-mail or in person, between the Design-Build Team and utility owners until after meetings between each individual proposer and the affected utility owners. After the aforementioned meetings, and during the life of the project, the Design-Build Team will only be allowed direct contact with the utility owners when the aforementioned PSF is present. (Reference the *Individual Meeting with Proposers* Project Special Provision found elsewhere in this RFP)

In accordance with the requirements herein, the Design-Build Team shall relocate / coordinate the relocation of all existing facilities that are 1) within existing or proposed full control of access and only accessible from a freeway through lane and / or a directional ramp, 2) in physical conflict with construction, 3) within the existing or proposed right of way and structurally inadequate, and / or 4) within the existing or proposed right of way and consist of unacceptable material. (Reference the NCDOT Policies and Procedures for Accommodating Utilities on Highway Rights of Way – January 1, 1975, Revised April 1, 1993) Proposed / relocated underground facilities that are located beneath the pavement structure shall only be allowed to cross the roadway as close to perpendicular as possible.

Project Details

The Design-Build Team shall be responsible for verifying the utility locations, type of facilities, and identifying the utility owners in order to coordinate the relocation of any utilities, known and unknown, in conflict with the project. The following utilities are known to be located within the project construction limits:

TITLE VI AND NONDISCRIMINATION

(6-28-77)(Rev 5/2/18)

Revise the 2018 Standard Specifications for Roads and Structures as follows:

Replace Article 103-4(B) with the following:

The North Carolina Department of Transportation is committed to carrying out the U.S. Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts.

The provisions of this section related to United States Department of Transportation (US DOT) Order 1050.2A, Title 49 Code of Federal Regulations (CFR) part 21, 23 United States Code (U.S.C.) 140 and 23 CFR part 200 (or 49 CFR 303, 49 U.S.C. 5332 or 49 U.S.C. 47123) are applicable to all North Carolina Department of Transportation (NCDOT) contracts and to all related subcontracts, material supply, engineering, architectural and other service contracts, regardless of dollar amount. Any Federal provision that is specifically required not specifically set forth is hereby incorporated by reference.

(1) Title VI Assurances (USDOT Order 1050.2A, Appendix A)

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(a) Compliance with Regulations

The contractor (hereinafter includes consultants) shall comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

(b) Nondiscrimination

The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

(c) Solicitations for Subcontractors, Including Procurements of Materials and Equipment

In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

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(d) Information and Reports

The contractor shall provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor shall so certify to the Recipient or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

(e) Sanctions for Noncompliance:

In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, the Recipient will impose such contract sanctions as it and / or the FHWA may determine to be appropriate, including, but not limited to:

- (i) Withholding payments to the contractor under the contract until the contractor complies; and / or
- (ii) Cancelling, terminating, or suspending a contract, in whole or in part.
- (f) Incorporation of Provisions

The contractor shall include the provisions of paragraphs (a) through (f) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor shall take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

(2) Title VI Nondiscrimination Program (23 CFR 200.5(p))

The North Carolina Department of Transportation (NCDOT) has assured the USDOT that, as a condition to receiving federal financial assistance, NCDOT will comply with Title VI of the Civil Rights Act of 1964 and all requirements imposed by Title 49 CFR Part 21 and related nondiscrimination authorities to ensure that no person shall, on the ground of race, color, national origin, limited English proficiency, sex, age, or disability (including religion / creed or income-level, where applicable), be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any programs, activities, or services conducted or funded by NCDOT. Contractors and other organizations under contract or agreement with NCDOT must also comply with Title VI and related authorities, therefore:

(a) During the performance of this contract or agreement, contractors (e.g. subcontractors, consultants, vendors, prime contractors) shall be responsible for

complying with NCDOT's Title VI Program. Contractors are not required to prepare or submit Title VI Programs. To comply with this section, the prime contractor shall:

- 1. Post NCDOT's Notice of Nondiscrimination and the Contractor's own Equal Employment Opportunity (EEO) Policy in conspicuous locations accessible to all employees, applicants and subcontractors on the jobsite.
- 2. Physically incorporate the required Title VI clauses into all subcontracts on federally-assisted and state-funded NCDOT projects, and ensure inclusion by subcontractors into all lower-tier subcontracts.
- 3. Required Solicitation Language. The Contractor shall include the following notification in all solicitations for bids and requests for work or material, regardless of funding source:

"The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 US.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. In accordance with other related nondiscrimination authorities, bidders and contractors will also not be discriminated against on the grounds of sex, age, disability, low-income level, creed / religion, or limited English proficiency in consideration for an award."

- 4. Physically incorporate the FHWA-1273, in its entirety, into all subcontracts and subsequent lower tier subcontracts on Federal-aid highway construction contracts only.
- 5. Provide language assistance services (i.e., written translation and oral interpretation), free of charge, to LEP employees and applicants. Contact NCDOT OCR for further assistance, if needed.
- 6. For assistance with these Title VI requirements, contact the NCDOT Title VI Nondiscrimination Program at 1-800-522-0453.
- (b) Subrecipients (e.g. cities, counties, LGAs, planning organizations) may be required to prepare and submit a Title VI Plan to NCDOT, including Title VI Assurances and / or agreements. Subrecipients must also ensure compliance by their contractors and subrecipients with Title VI. (23 CFR 200.9(b)(7))
- (c) If reviewed or investigated by NCDOT, the contractor or subrecipient agrees to take affirmative action to correct any deficiencies found within a reasonable time period, not to exceed 90 calendar days, unless additional time is granted by NCDOT. (23 CFR 200.9(b)(15))

- (d) The Contractor shall be responsible for notifying subcontractors of NCDOT's External Discrimination Complaints Process.
 - 1. Applicability

Title VI and related laws protect participants and beneficiaries (e.g., members of the public and contractors) from discrimination by NCDOT employees, subrecipients and contractors, regardless of funding source.

2. Eligibility

Any person, or class of persons, who believes he / she has been subjected to discrimination based on race, color, national origin, Limited English Proficiency (LEP), sex, age, or disability (and religion in the context of employment, aviation, or transit) may file a written complaint. The law also prohibits intimidation or retaliation of any sort.

3. Time Limits and Filing Options

Complaints may be filed by the affected individual(s) or a representative and must be filed no later than 180 calendar days after the following:

- (i) The date of the alleged act of discrimination; or
- (ii) The date when the person(s) became aware of the alleged discrimination; or
- (iii) Where there has been a continuing course of conduct, the date on which that conduct was discontinued or the latest instance of the conduct.

Title VI and related discrimination complaints may be submitted to the following entities:

- North Carolina Department of Transportation, Office of Civil Rights, Title VI Program, 1511 Mail Service Center, Raleigh, NC 27699-1511; toll free 1-800-522-0453
- Federal Highway Administration, North Carolina Division Office, 310 New Bern Avenue, Suite 410, Raleigh, NC 27601; 919-747-7010
- US Department of Transportation, Departmental Office of Civil Rights, External Civil Rights Programs Division, 1200 New Jersey Avenue, SE, Washington, DC 20590; 202-366-4070
- 4. Format for Complaints

Complaints must be in writing and signed by the complainant(s) or a representative, and include the complainant's name, address, and telephone number. Complaints received by fax or e-mail will be acknowledged and processed. Allegations received by telephone will be reduced to writing and provided to the complainant for confirmation or revision before processing. Complaints will be accepted in other languages, including Braille.

5. Discrimination Complaint Form

Contact NCDOT Civil Rights to receive a full copy of the Discrimination Complaint Form and procedures.

6. Complaint Basis

Allegations must be based on issues involving race, color, national origin (LEP), sex, age, disability, or religion (in the context of employment, aviation or transit). "Basis" refers to the complainant's membership in a protected group category.

TABLE 103-1				
COMPLAINT BASIS				
Protected Categories	Definition	Examples	Applicable Nondiscrimination Authorities	
Race and Ethnicity	An individual belonging to one of the accepted racial groups; or the perception, based usually on physical characteristics that a person is a member of a racial group	Black / African American, Hispanic / Latino, Asian, American Indian / Alaska Native, Native Hawaiian / Pacific Islander, White	Title VI of the Civil Rights Act of 1964; 49 CFR Part 21; 23 CFR 200; 49 U.S.C. 5332(b); 49 U.S.C. 47123. (Executive Order 13166)	
Color	Color of skin, including shade of skin within a racial group	Black, White, Brown, Yellow, etc.		
National Origin (Limited English Proficiency)	Place of birth. Citizenship is not a factor. (Discrimination based on language or a person's accent is also covered)	Mexican, Cuban, Japanese, Vietnamese, Chinese	(
Sex	Gender. The sex of an individual. <i>Note:</i> Sex under this program does not include sexual orientation.	Women and Men	1973 Federal-Aid Highway Act; 49 U.S.C. 5332(b); 49 U.S.C. 47123.	
Age	Persons of any age	21-year-old person	Age Discrimination Act of 1975 49 U.S.C. 5332(b); 49 U.S.C. 47123.	
Disability	Physical or mental impairment, permanent or temporary, or perceived.	Blind, alcoholic, para-amputee, epileptic, diabetic, arthritic	Section 504 of the Rehabilitation Act of 1973; Americans with Disabilities Act of 1990	
Religion (in the context of employment) (Religion / Creed in all aspects of any aviation or transit-related construction)	An individual belonging to a religious group; or the perception, based on distinguishable characteristics that a person is a member of a religious group. In practice, actions taken as a result of the moral and ethical beliefs as to what is right and wrong, which are sincerely held with the strength of traditional religious views. <i>Note:</i> Does not have to be associated with a recognized religious group or church; if an individual sincerely holds to the belief, it is a protected religious practice.	Muslim, Christian, Sikh, Hindu, etc.	Title VII of the Civil Rights Act of 1964; 23 CFR 230; FHWA-1273 Required Contract Provisions. (49 U.S.C. 5332(b); 49 U.S.C. 47123)	

(3) **Pertinent Nondiscrimination Authorities**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest agrees to comply with the following non-discrimination statutes and authorities, including, but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects)
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex)
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability) and 49 CFR Part 27
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age)
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex)
- (g) The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not)
- (h) Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38
- (i) The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex)
- (j) Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations

- (k) Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English Proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100)
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq)
- (m)Title VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000e et seq., Pub. L. 88-352), (prohibits employment discrimination on the basis of race, color, religion, sex, or national origin).

(4) Additional Title VI Assurances

**The following Title VI Assurances (Appendices B, C and D) shall apply, as applicable

(a) Clauses for Deeds Transferring United States Property (1050.2A, Appendix B)

The following clauses shall be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4.

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the North Carolina Department of Transportation (NCDOT) will accept title to the lands and maintain the project constructed thereon in accordance with the North Carolina General Assembly, the Regulations for the Administration of the Federal-Aid Highway Program, and the policies and procedures prescribed by the Federal Highway Administration of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the NCDOT all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto the North Carolina Department of Transportation (NCDOT) and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the NCDOT, its successors and assigns.

The NCDOT, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]* (2) that the NCDOT will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended [, and (3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

(b) Clauses for Transfer of Real Property Acquired or Improved Under the Activity, Facility, or Program (1050.2A, Appendix C)

The following clauses shall be included in deeds, licenses, leases, permits, or similar instruments entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(a):

- 1. The (grantee, lessee, permittee, etc. as appropriate) for himself / herself, his / her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
 - (i.) In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

- 2. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. *
- 3. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

(c) Clauses for Construction / Use / Access to Real Property Acquired Under the Activity, Facility or Program (1050.2A, Appendix D)

The following clauses shall be included in deeds, licenses, permits, or similar instruments / agreements entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(b):

- 1. The (grantee, licensee, permittee, etc., as appropriate) for himself / herself, his / her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
- 2. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued. *
- 3. With respect to deeds, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. *

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)