



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

September 14, 2010

Addendum No. 1

Contract No.: C 202587
TIP No.: R-3329/R-2559
County: Mecklenburg and Union Counties
Project Description: Monroe Connector/Bypass extending from US 74 near I-485 in Mecklenburg County to US 74 between the towns of Wingate and Marshville in Union County

RE: Addendum No. 1 to Final RFP

To Whom It May Concern:

Reference is made to the Final Request for Proposals dated August 31, 2010 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:

Page No. 18 of the Instructions to Proposers (ITP) *Submittal of Bid Documentation* has been revised. Please void Page No. 18 in your ITP and staple the revised Page No. 18 thereto.

Page No. 35 of the Instructions to Proposers (ITP) *Submittal of Bid Documentation* has been revised. Please void Page No. 35 in your ITP and staple the revised Page No. 35 thereto.

Page Nos. 106-108, 110, 112, and 113 of *Roadway Scope of Work* have been revised. Please void Page Nos. 106-108, 110, 112, and 113 and staple the revised Page Nos. 106-108, 110, 112, and 113 thereto.

Page No. 118 of *Structures Scope of Work* has been revised. Please void Page No. 118 and staple the revised Page No. 118 thereto.

Page No. 143 of *Traffic Management Scope of Work* has been revised. Please void Page No. 143 and staple the revised Page No. 143 thereto.

Page No. 157 of *Pavement Marking Scope of Work* has been revised. Please void Page No. 157 and staple the revised Page No. 157 thereto.

Page Nos. 159 and 160 of *Signing Scope of Work* have been revised. Please void Page Nos. 159 and 160 and staple the revised Page Nos. 159 and 160 thereto.

MAILING ADDRESS:
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1020 BIRCH RIDGE DRIVE
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Page Nos. 170-175 of *Environmental Permits Scope of Work* have been revised. Please void Page Nos. 170-175 and staple the revised Page Nos. 170-175 thereto.

Page Nos. 327, 346, and 357 of *Utility Construction Scope of Work* have been revised. Please void Page Nos. 327, 346, and 357 and staple the revised Page Nos. 327, 346, and 357 thereto.

Page No. 359 of *Aesthetic Design Scope of Work* has been revised. Please void Page No. 359 and staple the revised Page No. 359 thereto.

Page No. 430 *Glass Beads Standard Special Provision* has been revised. Please void Page No. 430 and staple the revised Page No. 430 thereto.

If you have any questions or need additional information, I can be reached by telephone at (919) 250-4128.

Sincerely,



R.A. Garris, PE
State Contract Officer

RAG/JDK

cc: Mr. Steve DeWitt, PE
Mr. Victor Barbour, PE
Mr. Rodger Rochelle, PE
Ms. Teresa Bruton, PE
Mr. Barry Moose, PE
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Mr. Shannon Sweitzer, PE
Mr. George Hoops, PE

TRC Members
File

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C202587 (R-3329/R-2559)

Instructions to Proposers

Mecklenburg and Union Counties

A. Definitions.

A Confidential Question is defined as a private query to NCTA containing information whose disclosure could alert others to certain details of doing business in a particular manner.

An Alternative Technical Concept is a private query to NCTA that requests a variance to the requirements of the RFP (Volume II) or other Contract Documents that is equal or better in quality or effect as determined by NCTA in its sole discretion and that have been used successfully in other states, preferably in comparable circumstances. The NCTA encourages Proposer's to present alternate details from other states for consideration on this project.

B. Confidential Questions.

Proposer will be permitted to ask Confidential Questions of NCTA, and neither the question nor the answer will be shared with other Design-Build Teams. NCTA, in its sole discretion, will determine if a question is considered confidential.

Confidential Questions arising prior to issuance of the final RFP Documents will be allowed during the industry review of the draft RFP Documents with the individual Proposer. NCTA will answer the Confidential Question verbally at the industry review meeting, if possible, and/or through subtle changes in the final RFP Documents, which will clarify the scope by either allowing or disallowing the request. To the greatest extent possible, the revision will be made in such a manner as to not disclose the Confidential Question.

After the issuance of the final RFP Documents, Confidential Questions may be asked by requesting a meeting with the NCDOT State Contract Officer. The request shall be in writing and provide sufficient detail to evaluate the magnitude of the request. Questions shall be of such magnitude as to warrant a special meeting. Minor questions will not be acknowledged or answered. After evaluation, the State Contract Officer will respond to the question in writing to Proposer and/or through subtle changes in the final RFP Documents as reflected in an Addendum, which will clarify the scope by either allowing or disallowing the request. To the greatest extent possible, the revision will be made in such a manner as to not disclose the Confidential Question. It is recommended that the Proposer familiarize themselves with Section 14.F of this ITP as it relates to Confidentiality and Public Disclosure.

If Proposer includes work based on the Confidential Questions and answers, the work shall be discussed in the Technical Proposal.

C. Alternative Technical Concepts.

Proposer may include an ATC in the Proposal only if the ATC has been received by NCTA by no later than ATC submittal deadline on the Procurement Timeline and it has been approved by NCTA (including conditionally approved ATCs, if all conditions are met).

The submittal deadline above applies only to initial ATC submittals. Resubmittal of an ATC that has been revised in response to NCTA's requests for further information concerning a prior submittal shall be received by NCTA no later than **2 weeks** before the Proposal submittal deadline.

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Proposer's attention is also directed to the Standard Special Provision entitled "Required Contract Provisions Federal-Aid Construction Projects" contained in the RFP (Volume II).

12. PRICE PROPOSAL DOCUMENTATION ESCROW.

A. General.

The Successful Proposer shall submit the original, unaltered Price Proposal Documentation, or a certified copy thereof, used to prepare the Price Proposal to the Department. Such documentation shall be placed in escrow with a banking institution or other bonded document storage facility selected by the Department and preserved by that institution or facility as specified in the following subsections of this Section 12.

For duration, use, and confidentiality of, and payment for, Price Proposal Documentation, reference the Project Special Provision entitled "Price Proposal Documentation" contained in the RFP (Volume II).

B. Price Proposal Documentation Defined.

The term "Price Proposal Documentation" as used in this Section 12 mean all written information, working papers, computer printouts, and electronic media, charts, and all other data compilations which contain or reflect information, data, and calculations used by the Successful Proposer in the preparation of their Price Proposal. The term includes but is not limited to, Design-Build Team equipment rates, Design-Build Team overhead rates, labor rates, efficiency or productivity factors, arithmetical calculations, and quotations from Subcontractors and material suppliers to the extent that such rates and quotations were used by the Successful Proposer in formulating and determining the Price Proposal. The term also includes any manuals which are standard to the industry used by the Successful Proposer in determining the Price Proposal. Such manuals may be included in the Price Proposal Documentation by reference. Such reference shall include the name and date of the publication and the publisher. The terms do not include documents provided by NCTA or NCDOT for use by the Successful Proposer in submitting its Proposal.

C. Submittal of Price Proposal Documentation.

A representative of the Successful Proposer shall deliver the original, unaltered Price Proposal Documentation or a certified copy thereof to the Department in a container suitable for sealing within ten (10) days after receipt of the notice of award. The container shall be clearly marked "Price Proposal Documentation" and shall also show on its face the Successful Proposer's name and address, the date of submittal, the Project name and contract number, and the County(ies) where the Project is located. Certified copies of Price Proposal Documentation must include a letter to the Department signed by the chief financial officer or equivalent office holder of the Successful Proposer stating that the enclosed documentation is an exact copy of the original documentation. The letter must include the signatory's name and title typed below the signature, and the signature shall be notarized at the bottom of the letter. The Department will not execute the Contract until the original, unaltered Price Proposal Documentation or a certified copy thereof has been received by the Department. The container shall be no larger than 15.5 inches in length by 12 inches wide by 11 inches high and shall be water resistant. The container shall be clearly marked "Bid

US 74, the horizontal and vertical curvature immediately adjacent to existing US 74 only, shall be designed and constructed to meet a minimum 60-mph design speed for a rolling urban freeway. The Design-Build Team shall provide all design criteria in the Technical Proposal. The limits of -Y- Line and service road construction shall be of sufficient length to tie to existing facilities based upon the current NCDOT guidelines and standards.

- The design and construction of existing roadways not addressed in the *Final Year 2035 Build Traffic Operations Technical Memorandum* dated April 2009, as modified by the *Final Addendum to Year 2035 Build Traffic Operations Technical Memorandum*, shall be based upon the 2035 projected AADT traffic volumes provided by the NCTA.
- Facilities that have more than one functional classification shall be designed and constructed to the functional classification with a higher movement hierarchy.
- The March 30, 2010 Functional Design Map was designed using the 2035 design year toll traffic forecasts. Unless noted otherwise elsewhere in this RFP, the Design-Build Team shall incorporate the 2035 toll traffic analysis recommendations provided by NCTA in the design of the facility. All intersection turn lane lengths shall meet the current NCDOT standards where vehicle storage does not govern or the storage lengths shown in the *Final Year 2035 Build Traffic Operations Technical Memorandum* dated April 2009, as modified by the *Final Addendum to Year 2035 Build Traffic Operations Technical Memorandum* dated February 2010, whichever is greater. This determination shall be made by calculating the recommended treatment for turn lanes, incorporating the minimum deceleration lengths, as defined in the NCDOT Design Manual (Reference Section 9-1, Figure F-4A) and comparing the calculated values with the minimum turn lane lengths. The storage lengths noted in the aforementioned Technical Memorandum exclude the taper length. **Unless an interim design is pursued or unless otherwise noted herein, the lane configurations at interchanges shall meet or exceed the operational capacity of those provided in the above Technical Memorandum and Addendum thereto. Exclusive U-turns shall be provided in accordance with the March 30, 2010 Functional Design Map.**
- Excluding the US 601 interchange, the Design-Build Team may design and construct interim -Y- Line facilities at interchanges based on the 2025 toll traffic provided by the NCTA for the -Y- Lines from and including -Y116- eastward to the end of the project, provided the requirements noted below are met. The NCTA will not honor any requests for additional contract time or compensation for any efforts associated with the interim facilities, including but not limited to public involvement, additional design effort, additional construction effort and / or additional environmental agency coordination and approvals.
 - The Design-Build Team shall develop a traffic analysis, based on the aforementioned 2025 toll traffic, for all interim facilities that demonstrate the facility will operate at a Level of Service D or better. The 2025 toll traffic shall be used for all moves at a given interchange where an interim solution is designed and constructed, even if the 2025 traffic is greater than the 2035 traffic (e.g. Unionville Indian Trail Rd).

- All interim -Y- Line facilities must accommodate the ultimate design based on the 2035 toll traffic, while minimizing the extent of rework necessary to construct the ultimate section. For all interim -Y- Line facilities, the Design-Build Team shall prepare functional horizontal and vertical designs for the ultimate facilities, based on 2035 traffic, and include associated right of way limits on the Right of Way Plans.
- All interim -Y- Line structures over the mainline must allow future widening, to one side only, to accommodate the ultimate design based on 2035 toll traffic.
- As defined in this RFP, when sidewalk and/or bicycle accommodations are required or are to be accommodated on a facility, the interim -Y- Line facilities shall include the required sidewalk, required sidewalk accommodations, and / or required bicycle accommodations.
- Structures on the mainline over -Y- Lines shall be long enough to accommodate the ultimate -Y- Line design based on 2035 toll traffic.
- All interim -Y- Line structures must accommodate the vertical clearances required for the ultimate widened facilities.
- Indian Trail-Fairview Rd. is scheduled to be widened in 2011 as shown on the Indian Trail-Fairview Rd. Plans provided by the NCTA. The Design-Build Team shall design and construct the Indian Trail-Fairview Rd. interchange to tie to the proposed widening.
- The US 601 interchange design and construction shall be compatible with the design shown on the U-4024A (US 601) Public Hearing Map.
- Along the -L- Line, the Design-Build Team shall design and construct interchanges at existing US 74 on both ends of the project, Indian Trail-Fairview Road (SR 1520), Unionville-Indian Trail Road (SR 1367), Rocky River Road (SR 1514), US 601, NC 200 and Austin Chaney Road (SR 1758) as indicated on the March 30, 2010 Functional Design Map. The Design-Build Team shall design and construct an interchange at Forest Hills School Road (SR 1754), as indicated on the March 30, 2010 Functional Design Map; or design and construct roadways that provide the movements and capacity of the aforementioned interchange to and from existing US 74, west of the project, to the US 74 Bypass.
- Between Matthews Indian Trail Road and existing US 74, the Design Build Team shall design the four-lane, 23-foot median divided, McKee Road depicted on the March 30, 2010 Functional Design Map and include the necessary right-of-way limits on the plans. The Design Build Team shall construct the two western lanes of McKee Road to provide two-lane, two-way traffic. To the extent practicable, items constructed shall accommodate the future expansion to the four-lane divided facility with minimal rework and / or throw away construction. The McKee Road northern design and construction terminus shall be located north of -Y111A-, at approximately Station 21+00 -Y111-.
- The Design-Build Team will not be required to design or construct Forest Hills School Road between Phifer Road (SR 1753) and existing US 74.

- Unless noted otherwise elsewhere in this RFP, along the -L- Line, the Design-Build Team shall design and construct 14-foot outside shoulders, 4-foot of which shall be full depth paved shoulder and 8-foot of which shall be partial depth paved shoulder. Excluding the six-lane section at the west end of the project, the Design-Build Team shall design and construct 6-foot median shoulders, 4-foot of which shall be full depth paved shoulder along the -L- Line. (Reference the Pavement Management Scope of Work found elsewhere in this RFP). The Design-Build Team shall provide milled rumble strips along the -L- Line inside and outside paved shoulders, including acceleration, deceleration and auxiliary lanes and ramps to the back of the gore (12-foot width), in accordance with the July 2006 NCDOT *Roadway Standard Drawings*. (Reference the Pavement Management Scope of Work found elsewhere in this RFP)

- The Design-Build Team shall design and construct one-lane ramps that provide a minimum 16-foot lane width. The Design-Build Team shall design and construct two lane ramps only where dictated by capacity and shall have minimum 12-foot lanes. Unless noted otherwise elsewhere in this RFP, all ramps shall have 12-foot inside shoulders, four-foot of which shall be full depth paved shoulders. 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. The Design-Build Team shall design and construct one-lane loops that adhere to Exhibit 3-51, *Design Widths of Pavements for Turning Roadways*, shown in AASHTO's *A Policy on Geometric Design of Highways and Streets* (2004) - Case II / Condition C. Unless noted otherwise elsewhere in this RFP, 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 10-foot berm. The minimum loop design shall be 30-mph with a minimum 230-foot radius.

- The exit loop angular offsets shown on the March 30, 2010 Functional Design Map at Indian Trail - Fairview Road (SR 1520), Rocky River Road (SR 1514), Austin Chaney Road (SR 1758) and Forest Hills School Road (SR 1754) may be eliminated.

- At the locations noted below, the Design-Build Team shall design and construct single exclusive turn lanes that accommodate a future second exclusive turn lane. As shown on the March 30, 2010 Functional Design Map, the Design-Build Team shall prepare functional horizontal and vertical designs for the future dual turn lanes and make a determination of the additional right of way required for the widening.
 - Frontage Road and McKee Road (future dual right turn lanes)
 - Monroe Connector / Bypass EB Loop at SR 1514 (Rocky River Road) (future dual left turn lanes)
 - Monroe Connector / Bypass EB Ramp at US 601 (future dual left turn lanes)
 - Monroe Connector / Bypass EB Ramp at NC 200 (future dual left and right turn lanes)

access to landlocked parcels, the Design-Build Team may modify the alignments of the required service roads.

- For Service Roads SR2A, SR2B, SR2C, SR7 and SR8, the Design-Build Team shall include lump sum costs for the design and construction as a single activity for each service road in their cost-loaded CPM. If during the right of way acquisition process, it is determined that these service roads are not economically viable, the NCTA shall have the option to alter the contract to delete the design and construction of these service roads.
- Locate and design SR6L and SR5 to allow for future widening to the south for a total width of 36-foot pavement.
- Any variations in the functional design and / or construction methods that nullify any decisions reached between the NCTA and the Environmental Agencies; and / or require additional coordination with the Environmental Agencies shall be the sole responsibility of the Design-Build Team. The NCTA will not allow any contract time extensions or additional compensation associated with any coordination or approval process resulting from design and / or construction modifications.
- The Design-Build Team shall not further impact any cultural, historical, or otherwise protected landmark beyond that shown on the March 30, 2010 Functional Design Map. The Design-Build Team's design or construction shall not require right of way or easements from the aforementioned features unless shown on the March 30, 2010 Functional Design Map.
- The Design-Build Team shall be responsible for developing a Design Noise Study, noise wall balloting, public involvement, geotechnical investigations, design, sound barrier wall envelopes, and construction in accordance with the requirements set out below:
 - For the purpose of the Technical and Price Proposals, the Design-Build Team shall determine and identify in the Technical Proposal the location and quantity (square footage for each wall) of sound barrier walls required based on the current NCDOT and FHWA Policies.
 - Following contract execution, the Design-Build Team shall be responsible for completing a Design Noise Study that incorporates the Design-Build Team's design, for the FHWA and NCDOT review and approval. This Design Noise Study shall be based on the NCDOT and FHWA Policies in effect at the time of the performance of this Design Noise Study. All preconstruction activities associated with this work shall be included in the lump sum amount bid for the entire project. For construction activities, an adjustment in contract amount due to any increases or decreases in the amount of sound barrier wall as compared to that shown in the Technical Proposal, directly resulting from future changes to the NCDOT or FHWA Noise Policies, will be compensated in accordance with Section 104 of the Standard Special Provision entitled Division One. In this case, the Department will also review the noise analysis that was used in the preparation of the Technical Proposal quantity.

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Roadway Scope of Work

Mecklenburg and Union Counties

honor any requests for additional contract time or compensation for completion of the required activities resulting from changes to the NCTA functional design.

- Design exceptions shall not be allowed for the -L- Line except at discrete points to accommodate structure supports, including all ramps, loops, and collector-distributors. NCDOT prefers not to have design exceptions for the -Y- Lines and service roads. If the Design-Build Team anticipates any design exceptions for the -Y- Lines or service roads, they shall be clearly noted in the Technical Proposal. Prior to requesting / incorporating a design exception into the Final Plans, the Design-Build Team must obtain prior conceptual approval from NCDOT and FHWA. If conceptual approval is obtained, the Design-Build Team shall be responsible for the development and approval of all design exceptions.
- The Design-Build Team shall submit Structure Recommendations and Design Criteria for Department and FHWA review and acceptance prior to submittal of the Preliminary Plans. The Design-Build Team shall develop Structure Recommendations that adhere to the format noted in the March 25, 2003 and September 1, 2004 memos from Mr. Jay Bennett, PE, NCDOT State Roadway Design Engineer. The design speed for all roadways shall be the greater of the minimum design speed for the facility type or the anticipated / actual posted speed plus five-mph.
- All guardrail and cable guiderail placement shall be in accordance with the July 2006 NCDOT *Roadway Standard Drawings* and / or approved details in lieu of standards. Along all 3:1 fill slopes, constructed at fill heights that are equal to or greater than 12 feet, the Design-Build Team shall install guardrail. Along all fill slopes that are steeper than 3:1, constructed at fill heights that are equal to or greater than six feet, the Design-Build Team shall install guardrail. The guardrail / guiderail design shall be submitted for review with the Preliminary Plans submittal.
- Unless otherwise noted in this RFP, the Design-Build Team shall design and construct bridge rail offsets that are the greatest of (1) as indicated in the NCDOT *Roadway Design Manual*, (2) equal to the entire width of the approach roadway paved shoulders, or (3) equal to the width to accommodate the future sidewalk as required in the Structure Scope of Work found elsewhere in this RFP. For long bridges that do not require future sidewalk accommodations, bridge rail offsets may be reduced from the aforementioned requirements (1) and (2) in accordance with the NCDOT *Roadway Design Manual*.
- The Design-Build Team shall design and construct ten-foot berms with five-foot sidewalks, wheel chair ramps and curb & gutter at the following locations:
 - McKee Road (Y-111) on the left (west) side from Matthews Indian Trail Road to the intersection with Y-111A
 - Stinson Hartis Rd (Y-116) on the left (west) side from the existing sidewalks and curb & gutter near the beginning of construction to the north end of the proposed bridge
 - Stallings Road (Y-113) on the right (east) side from Station 23+00± to across Y-114- and continuing along the left (north) side of -Y114- from Stallings Road (Y-113) to the end of radius at Station 26+00±
 - Indian Trail Fairview Road (Y-107) on the left (west) side from the beginning of construction to the intersection of Ramp C and thence on right (east) side to Station 50+00±

- SR6L on the right (north) side from the proposed sidewalk along Unionville-Indian Trail Road, across existing Poplin Rd, and to existing sidewalk at approximate Station 42+00
- Unionville-Indian Trail Road (Y-201) on the left (west) side beginning at Station 29+00±, to Poplin Road (Y-203) and continuing along Poplin Road (Y-203) on the left (west) side to 30 ft. beyond the intersection of existing Poplin Road
- All sidewalk and curb and gutter shall terminate at the intersection radius point
- The Design-Build Team shall design and construct an extension of the existing 10-foot multi-use concrete path right of US 74 (Y-112) to the property line between Parcel 99 and Parcel 100.
- On the following facilities, adjacent to curb and gutter sections, the Design-Build Team shall design and construct 14-foot wide outside lanes in both directions throughout the project limits:
 - Indian Trail Fairview Road (Y-107)
 - Unionville-Indian Trail Road (Y-201)
 - Poplin Road (Y-203) (Shown as Service Road SR15 on the Preliminary Plans provided by the NCTA)
- The Design-Build Team shall be responsible for the evaluation of the algebraic difference in rates of cross slope (roll-over) between existing shoulders and roadways and the associated suitability for carrying traffic during construction, if necessary. In the event that the roll-over is found to be unacceptable for the proposed temporary traffic patterns, the Design-Build Team shall be responsible for providing cross slopes that meet design standards and eliminate roll-over concerns.
- Within the vehicle recovery area, the Design-Build Team shall design and construct single face concrete barrier in front of all retaining walls, all elements acting as a retaining wall and all sound barrier walls that are subject to vehicular impact.
- Excluding haul roads, the Design-Build Team shall design and construct resurfacing grades for all roadways impacted by construction. All resurfacing grades shall adhere to the design criteria and standards, provide all required pavement wedging (Reference the Pavement Management Scope of Work found elsewhere in this RFP) and adhere to the minimum requirements noted below:
 - The Design-Build Team shall resurface all lanes and shoulders of an undivided facility throughout the limits of proposed widening and construction.
 - The Design-Build Team shall resurface each one-way roadway of a divided facility throughout the limits of the one-way roadway widening and construction, allowing varying resurfacing limits for the opposing directions of travel.
 - For both divided and undivided facilities, the Design-Build Team shall resurface all lanes and shoulders within the outermost construction limits of all proposed widening and construction, including any gaps along the facility where construction activities are not required.

The March 30, 2010 Functional Design Map details a bridge on Forest Hills School Road over CSX Railroad. As noted in the Roadway Scope of Work, the Design-Build Team will not be required to design and construct Forest Hills School Road between Phifer Road (SR 1753) and existing US 74. Therefore, the bridge on Forest Hills School Road over CSX Railroad will not be constructed.

All bridges shall meet approved Roadway typical sections and grades. Bridge geometry (width, length, skew, span arrangement, etc.) shall be in accordance with approved Structure Recommendation and approved Hydraulic Bridge Survey Reports.

For bridges crossing over Monroe Connector/Bypass, any interior bents in the median shall be located at the center of the median or placed to account for future lane widening.

The bridges over the Monroe Connector/Bypass shall have sufficient length and vertical clearance to accommodate future loops in the locations required in the Roadway Scope of Work.

All bridges shall have sufficient width, length, and barrier rail to provide sidewalk and bicycle accommodations constructed as part of this project as noted in the Roadway Scope of Work.

Bridge lengths shall be designed and constructed to allow room under the bridge for a future curb and gutter section with sidewalk in a ten foot wide berm at the locations noted below. Bridge widths shall be designed and constructed to provide adequate width for placement of future sidewalk on the bridge at these locations:

- US 601 (Y-302) on both sides
- Austin Chaney Road (Y-308) on the right (east) side

Bridge length over Faith Church Road (Y-110) and Secrest Shortcut Road (Y-109) shall be set to accommodate a future four lane boulevard section with a 23-foot median, curb and gutter section with future sidewalk in a ten-foot wide berm on both sides. There are no specific requirements regarding which side the future widening will occur.

Bridge lengths over Rays Fork shall accommodate a future 10 ft. wide greenway on the east side of Rays Fork with a minimum of 12 feet vertical clearance.

The bridges over CSXT shall have span lengths to allow for one future track on both sides of the existing track on 15 ft. centers.

The minimum vertical clearance over CSXT is 23'-0". The minimum vertical clearance over all roadways shall be at least that shown in the Roadway Design Manual per the given facility type. All vertical clearances shall be set to accommodate future widening of those facilities identified for future widening in this RFP.

A live load rating chart for girders will be required on the bridge plans. The load rating shall be in accordance with the August 21, 2009 LRFR Load Factors (Rev. Dec. 2009) memo and AASHTO's Manual for Bridge Evaluation.

14. The Design-Build Team shall provide a smooth pavement surface for traffic at all times.
15. The toll facility shall not be open to traffic until the project is substantially complete and toll equipment is operational. During construction, the toll facility shall not be used for temporary offsite detours.
16. The Design-Build Team shall take steps to minimize disruptions to existing roadway facilities during construction and shall demonstrate how the design, traffic control phasing and construction minimizes inconvenience to the motorist on these facilities.
17. For all areas affected by construction, the Design-Build Team shall develop and submit to the Engineer for approval a Congestion and Incident Management Plan. The plan shall include coordination with emergency response providers such as law enforcement, fire, and EMS services. This plan shall also include project contact information, potential detour routes, towing services, and other associated information.
18. The Design-Build Team shall investigate pedestrian facilities and maintain facilities during construction.
19. The Design-Build Team shall construct Line SR16, Line Y-114 and Line Y-114A prior to closing the existing access from US 74 to Forest Park Road, Union West Blvd. or Sherin Lane.

B. Traffic Management Plan requirements:

The Design-Build Team shall select a Private Engineering Firm (PEF) that has experience designing and sealing Traffic Management Plans for the North Carolina Department of Transportation (NCDOT) on comparable projects. The Design Build Team shall list projects in the Technical Proposal including a description and similarity to the subject project that the Traffic Management Designer developed.

The Design-Build Team shall develop Traffic Management Plans that maintain all types of traffic (motorists, bicyclists, and pedestrians within the highway, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA), Title II, Paragraph 35.130) as defined by the *Manual for Uniform Traffic Control Devices (MUTCD)*.

The Traffic Management Plans shall adhere to the “Design-Build Submittal Guidelines” and the “Guidelines for Preparation of Traffic Control and Pavement Marking Plans for Design-Build Projects”, which by reference are incorporated herein and are a part of the contract. These documents are available on the Design-Build website.

The Work Zone Traffic Control web site contains useful information that may be needed for the design of the Traffic Management Plans and Pavement Marking Plans.

<http://www.ncdot.org/doh/preconstruct/wztc/>

Road	Marking	Marker
-L- Lines and Ramps	Polyurea with Highly Reflective Elements*	Snowplowable (Raised on bridge decks)
-Y- Lines and Service Roads	Polyurea with Highly Reflective Elements	(Raised)**

* On diamond ground concrete pavement, remove longitudinal grooves by grinding method prior to installing polyurea pavement makings.

** Provide snowplowable markers for existing roads that currently have snowplowable markers.

If markings are placed on diamond ground surfaces, remove longitudinal grooves prior to installation. Black contrast markings may be polyurea or epoxy material.

On concrete surfaces, use Heated-in-place Thermoplastic or Cold Applied Plastic (Type II or III) markings for stop bars, symbols, characters and diagonals.

On asphalt surfaces, use Heated-in-place Thermoplastic or Extruded Thermoplastic markings for stop bars, symbols, characters and diagonals.

Use water blasting or grinding where diamond grinding is not performed on concrete to remove curing compound and surface laitance.

All US routes and the Monroe Bypass require 50% wider markings, i.e., lane lines, edge lines and skips shall be 6 Inches wide.

The Design-Build Team shall tie proposed pavement marking lines to existing pavement marking lines.

The Design-Build Team shall replace any pavement markings that have been damaged by the end of each day's operation.

Build Team shall be responsible for sizing, fabricating, locating and installing all Type E (warning and regulatory signs) and Type F signs (route marker assemblies), and milemarkers.

The Design-Build Team shall be responsible for the design, fabrication and installation of all signs required for superstreet traffic pattern. A detail for superstreet signing may be found at the following website:

<http://www.ncdot.org/doh/preconstruct/traffic/congestion/docs/superstreet.pdf>

The Design-Build Team shall design, fabricate and install milemarkers every half mile on the project. Each milemarker location shall have two milemarkers mounted back to back on one U-post on the outside shoulder for each direction of travel on the mainline. The milemarker designs shall be in accordance with the Intermediate Enhanced Reference Location Signs (D10-5) referenced in the *Standard Highway Signs (2004 Edition)* and detailed in the Monroe Connector / Bypass Signing Schematic dated August, 2010.

The Design-Build Team shall design, fabricate and install Thru Bolts for Type A Signs in accordance with the NCDOT Roadway Standard Drawing No. 901.10 dated January 2008. The revised Roadway Standard Drawing is located at the following website:

<http://www.ncdot.org/doh/preconstruct/traffic/congestion/SIGN/signstd/>

All sign designs shall be included in the Signing Plans. All sign designs shall be prepared using the 5.1 version of GuidSign software. The latest GuidSign updates are located at the following website:

<http://www.ncdot.org/doh/preconstruct/traffic/congestion/SIGN/default.html>

Electronic Toll Collection Signing

The Design-Build Team shall be responsible for the design, fabrication, and installation of all toll road signs in accordance with the Toll Facility Signing Requirements, dated August 4, 2010, provided by the NCTA. The background for toll guide signs shall be green. Electronic Toll Collection Signing logo pictographs, details provided by NCTA, shall be used on the ETC signs. Design of signs containing logos shall be in accordance with Chapter 2F of the *MUTCD*.

Customer Service Center Signing

The Customer Service Center location has not yet been established. Regardless, the Design-Build Team shall be responsible for the design, fabrication, and installation of all Customer Service Center signs including mainline, ramp, and trailblazer signs in accordance with the Toll Facility Signing Requirements (TS-3) provided by the NCTA. Electronic Toll Collection Signing logo pictographs, provided by NCTA, shall be used on the Customer Service Center signs.

Logo Signs

The Design-Build Team is responsible for reconfiguring the Logo signing for I-485 Exit 51 according to the Monroe Connector / Bypass Signing Schematic dated August, 2010. This includes

removal of existing Logo signs, designing, locating, and installing new Logo signs (blue service signs with specific business panels included on signs), and relocating existing Logo business panels.

Sign Maintenance

The Design-Build Team shall maintain all existing ground mounted and overhead signs that are affected by construction, including temporary installations of Guide and Logo Signs on supports, overhead assemblies, foundations, lighting systems and any other element of the sign system in accordance with Section 908-3(C) of *2006 Standard Specifications for Roads and Structures* to ensure signs are properly maintained and visible during project construction. If damage occurs to the Logo Signs or the business panels during construction or installation, notify the Division Logo Coordinator as soon as possible. The Design-Build Team shall be responsible for replacement of Logo Signs or Logo business panels should damage occur. If the Logo Signs are removed and disposed of per the RFC signing plans, the business panels on the signs shall be removed and returned to the Division Logo Coordinator. The order of preference for Logo Signs shall be maintained during project construction (see MUTCD section 2F.02).

Temporary Signs

The Design-Build Team shall be responsible for designing, fabricating, and installing temporary signs and supports. Reference the Signing Section of the Traffic Management Scope of Work found elsewhere in this RFP for additional temporary signing requirements.

Sign Locations

The Design-Build Team shall be responsible for determining the station locations for all signs. To avoid sign placement in locations where their usefulness will be short-lived, the Design-Build Team shall coordinate the proposed sign locations with existing and future projects through NCTA and NCDOT.

Ground Mounted Support Designs

The Design-Build Team is responsible for all design, fabrication, and installation of ground mounted supports and signs. The latest version of the support program is located at the following website:

<http://www.ncdot.org/doh/preconstruct/traffic/congestion/SIGN/default.html>

Exit Gore signs and signing located in the median shall be on omni-directional breakaway supports.

Overhead Sign Assemblies

The Design-Build Team shall be responsible for the design, fabrication, and installation of new overhead sign assemblies for the project as identified on the Monroe Connector / Bypass Signing Schematic dated August, 2010.

ENVIRONMENTAL PERMITS SCOPE OF WORK (09-12-10)

The NCTA will obtain a conceptual US Army Corps of Engineers Section 404 Permit and a NC Department of Natural Resources (NCDENR), Division of Water Quality (DWQ) Section 401 Water Quality Certification for the project corridor. This permit is based on the current functional design plans for the project and the permitting agencies will not authorize construction based on this permit. Final permits will be required prior to construction. The Design-Build Team may pursue permit modifications to the Monroe Connector (west of US 601) independent of the Monroe Bypass (east of US 601) or vice versa. This scope of work outlines the Design-Build Team's responsibilities related to the final permitting of the project.

General

The NCTA will not allow direct contact between the Design-Build Team and representatives of the environmental agencies either by phone, e-mail or in person, without representatives of the NCTA or the NCDOT Transportation Program Management Unit present. A representative from NCTA and the NCDOT Transportation Program Management Unit shall be included on all correspondence.

The Design-Build Team shall be responsible for preparing all documents necessary for the NCTA to obtain the final environmental permits for the project. Major permit modifications are required for the US Army Corps of Engineers Section 404 Permit and the NCDENR, Division of Water Quality (DWQ) Section 401 Water Quality Certification. The Design-Build Team shall also acquire an NCDENR State Stormwater Permit. The Design-Build Team shall not begin ground-disturbing activities, including utility relocation in jurisdictional areas, until the environmental permits have been issued (this does not include permitted investigative borings covered under Nationwide Permit # 6).

The Design-Build Team may begin other utility relocation work prior to obtaining the aforementioned permits provided that (1) the Department is notified in writing prior to these activities; (2) such activities are outside jurisdictional resources. Upon consultation with the NCDOT Project Development and Environmental Analysis (PDEA) Natural Environment Unit, a meeting may be required with the permitting agencies prior to beginning work.

NCTA is utilizing a SAFETEA-LU Section 6002 compliant Project Coordination Plan for coordinating with environmental resource and regulatory agencies on this project. This process is being used in lieu of the Merger 01 Process, and while it includes the same general milestones as the Merger 01 Process, written concurrence from agency representatives is not required to advance the project development and permitting process. NCTA has advanced the project through identification of avoidance and minimization measures (equivalent to Concurrence Point 4A in the Merger 01 Process).

The Design-Build Team shall be responsible for advancing the project through the remainder of hydraulic design and permit impact reviews (equivalent to Concurrence Point 4B and 4C). Any variations in the NCTA's proposed design and/or construction methods that require additional coordination with the environmental agencies shall be the sole responsibility of the Design-Build Team. The NCTA shall not allow any contract time extensions associated with this additional coordination. The Design-Build Team shall follow the appropriate details in the document titled

“Project Coordination Plan for the Monroe Connector/Bypass Project” contained in Appendix A-5 of the Draft EIS as well as the document titled “Merger 01 Implementation Team – Merger 01 Process Information” which will be provided to the teams on the Reduced Candidates List.

The Design-Build Team shall provide roadway plans and permit impact sheets (half-size plans) to the NCDOT Director of Transportation Program Management a minimum of five weeks before the respective meetings.

The Design-Build Team shall clearly identify in their Technical Proposal what months they would like the NCTA to schedule agency coordination meetings to review the hydraulic design and permit drawings. Failure on the part of the Design-Build Team to meet these dates as identified in their Technical Proposal, places all responsibility for associated delays solely on the Design-Build Team.

Unless otherwise noted in this RFP, the Design-Build Team shall be bound by the terms of all signed planning documents and approved minutes and commitments of all agency coordination meetings and shall be held accountable for meeting all permit conditions. The Design-Build Team shall be required to staff any personnel the Design-Build Team deems necessary to provide permit compliance.

The Design-Build Team shall develop and implement an Environmental and Permit Monitoring Plan. The Design-Build Team shall engage the person that prepared the project permit application, unless otherwise approved, to provide impartial environmental and permit monitoring services during each phase of construction, including but not limited to construction runoff water quality device inspections, hazardous material spill reporting and response, compliance with USACE Section 404 Permit requirements, NCDENR 401 Certifications, and notifications of archaeological discoveries. This individual shall also be responsible for coordinating, leading and preparing minutes for monthly resource agency field reviews.

The permitting agencies do not anticipate re-visiting the jurisdictional determinations made to date on the project.

Major Permit Application Process

It shall be the Design-Build Team's responsibility to acquire information and prepare permit drawings that reflect the impacts and minimization efforts, including those resulting from agency coordination, and as designed by the Design-Build Team. Further it shall be the Design-Build Team's responsibility to provide these permit impact sheets (drawings) depicting the design and construction details to the NCTA as part of the permit application package. The Design-Build Team shall be responsible for developing the permit application for all jurisdictional impacts. The permit application shall include all utility relocations. The permit application shall consist of, at a minimum, the following:

- Cover Letter
- Minutes from the agency coordination meetings to review the hydraulic design and permit impacts
- Permit drawings
- Half-size plans
- Completed forms (Section 404 ENG 4345, etc.) appropriate for impacts

In addition to the above, the Design-Build Team shall provide an electronic package of the 401 Certification application and drawings to USACE and DWQ concurrent with the paper copies. Guidance for preparing these electronic documents will be provided by the Department.

Direct coordination between the Design-Build Team, the NCDOT's Director of Transportation Program Management, NCTA and the NCDOT PDEA Natural Environment Unit shall be necessary to ensure proper permit application development. Upon completion of the permit application package, the Design-Build Team shall concurrently forward the package to the NCTA and the NCDOT's Director of Transportation Program Management for review and approval. The NCTA will subsequently forward the package to the appropriate agencies to have the permit application placed on public notice.

The Design-Build Team may pursue permit modifications to the Monroe Connector (west of US 601) independent of the Monroe Bypass (east of US 601), for a total of two permit modification packages for the project. The Design-Build Team shall not submit additional applications to further develop a "staged permitting" process to expedite construction activities in a phased fashion.

Any temporary construction measures, including de-watering, construction access, etc. shall be addressed in the permit application. Impacts that result from so-called temporary measures may not be judged to be temporary impacts by the agencies. These issues must be addressed and reviewed by the Department prior to the agency coordination meetings to review the hydraulic design and permit impacts and resolved with the agencies during these meetings.

The Design-Build Team shall clearly indicate the location of and impacts of haul roads and utility relocations on jurisdictional areas. The Design-Build Team shall identify all proposed borrow and waste sites. These details shall be included in the permit application data. Further, the Design-Build Team shall describe the methods of construction of all structures. The description of the temporary impacts (haul roads, utility relocations, work bridges, etc.) shall include restoration plans, schedules, and disposal plans. This information shall be included in the permit application. This information shall also be part of the data presented at the agency coordination meetings for hydraulic design and permit impacts review.

The NCTA hereby commits to ensuring, to the greatest extent possible, that the footprint of the impacts in areas under the jurisdiction of the federal Clean Water Act shall not be increased during the Design-Build effort. All fill material shall be immediately stabilized and maintained to prevent sediment from entering adjacent waters or wetlands. The Design-Build Team shall be responsible for ensuring that the design and construction of the project will not impair the movement of aquatic life.

Requests made for modifications to the permits obtained by the Design-Build Team shall only be allowed if the Engineer determines it to be in the best interest of the Department and shall be strongly discouraged. The Design-Build Team shall not take an iterative approach to hydraulic design issues. The hydraulic design shall be complete prior to permit application.

Major Permit Timeframe

The Design-Build Team should expect it to take up to 11 months to accurately and adequately complete all designs necessary for permit application, submit the permit application request and

obtain approval for the permits from the environmental agencies. Agency review time will be approximately 90 days from receipt of a “complete” package. No requests for additional contract time or compensation shall be allowed if the permits are obtained within this 11-month period. With the exception of location and survey work, utility relocations in upland areas, and separately permitted investigative borings no mobilization of men, materials, or equipment for site investigation or construction of project shall occur prior to obtaining the permits, either within the 11-month period or beyond the 11-month period. This limitation does not preclude the off-site fabrication of bridge members or equipment. The NCTA will not honor any requests for additional contract time or compensation, including idle equipment or mobilization or demobilization costs, for the Design-Build Team mobilizing men, materials (or ordering materials), or equipment prior to obtaining all permits. The NCTA will consider requests for contract time extensions for obtaining the permits only if the Design-Build Team has pursued the work with due diligence, the delay is beyond the Team’s control, and the 11-month period has been exceeded. If time were granted, it would be only for that time exceeding the 11-month period. This 11-month period is considered to begin on the date of Notice to Proceed.

In the event that the Design-Build Team elects to pursue separate permit modifications for the two sections divided by US 601, this 11-month period applies to the first permit modification submitted. For the permit modification for the second section, the timeframe will be reduced to 7 months but will begin with the date of the hydraulic review meeting with the agencies.

The Design-Build Team needs to be aware that the timeframes listed above to review any permit applications and/or modifications begin only after a fully complete and 100% accurate submittal.

Mitigation Responsibilities of the Design-Build Team

The NCTA will be responsible for compensatory mitigation for unavoidable impacts to wetlands and surface waters due to project construction not to exceed the amount denoted in the North Carolina Ecosystem Enhancement Program (EEP) acceptance letter dated June 24, 2010.

The Final EIS identifies four potential on-site enhancement mitigation sites. The Design-Build Team shall submit to the NCTA anticipated right-of-way limits that would be required to include these sites based on an approved Conceptual Design Plan for enhancement developed by the Design-Build Team. In addition, the Design-Build Team shall provide the approximate acreage of the additional right-of-way, beyond that needed to construct the project, which would be needed to purchase each on-site mitigation site. This information shall be submitted no later than 7 weeks prior to the hydraulics review meeting with the environmental agencies. The NCTA will then make a determination of the economic feasibility of these sites and advise the Design-Build Team of any on-site mitigation that shall be designed by the Design-Build Team and included in the permit application. The NCTA will provide any narrative and details to the Design-Build Team for the permit application. In the event that on-site mitigation at any of these four sites requires any construction by the Design-Build Team, said work will be paid for in accordance with Section 104-8(A) of the Standard Special Provision entitled Division One. The Design-Build Team will not be held responsible for monitoring these mitigation sites.

Any changes proposed by the Design-Build Team to any design or construction details provided by the NCTA or NCDOT shall be approved by the Department prior to being submitted to the environmental regulatory and resource agencies for their approval. Unless directed by the NCTA, should additional jurisdictional impacts result from revised design/construction details, suitable compensatory mitigation for wetlands and/or streams shall be the sole responsibility of

the Design-Build Team. Therefore, it is important to note that additional mitigation shall be approved by the agencies and such approval shall require, at a minimum, the preparation and approval of a mitigation plan before permits are approved and before construction shall commence. If suitable on-site mitigation is unavailable, then the mitigation may be obtained through the EEP.

The Design-Build Team shall analyze all new areas to be impacted that have not been analyzed during the NEPA process and preparation of permit applications. This analysis shall include performing all environmental assessments. These assessments shall require the Design-Build Team to engage the services of a competent environmental consultant to conduct a full environmental investigation to include, but not be limited to, Federally Listed Threatened and Endangered Species, wetlands, streams, avoidance and minimization in jurisdictional areas, Rapanos forms, compensatory mitigation, FEMA compliance, and historical, archaeological, and cultural resources surveys in these areas. The environmental consultant shall obtain concurrence through NCTA from the United States Fish and Wildlife Service to document compliance with Section 7 of the *Endangered Species Act* for those species requiring such concurrence. In addition, the Design-Build Team shall identify additional mitigation required; identify the amount of time the modification will take beyond the 11-month period; and fulfill any other regulatory agencies' requirements to obtain the permit. Any contract extensions resulting from additional environmental assessments required by the Design-Build Team's design and/or construction details impacting areas outside those previously analyzed through the NEPA Process shall be solely at the NCTA's discretion.

If any staging areas are located outside the project right-of-way, the Design-Build Team shall engage the services of a competent environmental consultant to conduct a full environmental investigation to include, but not be limited to, Federally Listed Threatened and Endangered Species, wetlands, streams, avoidance and minimization in jurisdictional areas, compensatory mitigation, FEMA compliance, and historical, archaeological, and cultural resources surveys in these areas.

Commitments

The NCTA is committed to incorporating all reasonable and practicable design features to avoid and minimize wetland impacts and to provide full compensatory mitigation of all wetland impacts. Avoidance measures were taken during the planning and NEPA Process and minimization measures were incorporated as part of the project's functional design. The Design-Build Team shall incorporate these avoidance and minimization features, plus any minimization identified during agency coordination efforts, into the design.

Prior to any utility relocation and throughout construction of the project, the Design-Build Team shall clearly demark the two Schweinitz's Sunflower populations identified in the Project Commitments of the Final EIS with a tree protection fence. A field meeting with the Department shall be held in order to assist the Design-Build Team with the demarcation of this area. Disturbance of the Sunflower population shall be prohibited, including disturbance by utility relocation / construction. Upon completion of construction, the Design-Build Team shall install woven wire fence and place "No Mowing" signs as directed by the Department to permanently protect these two populations.

If any construction staging, storage, refueling, borrow pit or spoil areas are chosen within the Goose Creek or Six Mile Creek watersheds, the Design-Build Team will notify the NCTA, who

will coordinate with the NCDOT Division Environmental Officer and USFWS to develop BMPs for each site to avoid/minimize the potential for adverse effects.

The Design-Build Team shall implement a turbidity water quality testing program for the main stem of Stewarts Creek to evaluate the performance of BMPs. The turbidity testing program shall be submitted to NCTA for review and approval prior to implementation. At a minimum, testing shall be completed upstream and downstream of the construction area to determine periodic baselines, as well as during and after qualifying storm events. A qualifying storm event is defined as having ½" of rain or more over any 24 hour period. For qualifying storm events, a minimum of 3 samples per day shall be taken to characterize discharges associated with construction activity from the entire project disturbed area. After construction begins in the area, results of the testing shall be furnished to the Engineer on a monthly basis or when requested by the Engineer.

All work by the Design-Build Team shall be accomplished in strict compliance with the plans submitted with the Section 404 and 401 permit applications and in compliance with all conditions of all permits and certifications issued by the agencies. The Design-Build Team shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of the permits.

As a condition of the 401 permit, where construction of the project requires draining of any ponds, the Design-Build Team shall develop a Pond Drainage Plan and submit to the NCTA and the environmental regulatory agencies for approval to include but not limited to pond size, past use, and control structure of the pond; classification, buffer requirements and flow of the receiving waters; procedures and rate of water drawdown; sediment control measures; water quality monitoring procedures; any plant or wildlife species concerns or considerations and fish relocation plan. This drainage plan shall also address procedures avoiding the inundation of a receiving body of water with deoxygenated or nutrient rich water resulting in impacts to aquatic life or algae bloom and procedures for maintaining downstream channel stability. Verify if the ponds being drained or ponds downstream and receiving the drainage water are on the NC DENR Dam Safety Inventory List. If such ponds are contained in the NC DENR Inventory List, follow all NC DENR Dam Safety procedures.

Unless noted otherwise elsewhere in this RFP, the Design-Build Team shall strictly adhere to these commitments, as well as others, including but not limited to, those included in the planning documents, all permits and interagency meetings.

Archeological Sites

If the Design-Build Team discovers any previously unknown historic or archeological remains while accomplishing the authorized work, they shall immediately notify the NCTA and NCDOT Staff Archaeologist who will initiate the required State/Federal coordination. A representative from the NCDOT Transportation Program Management Unit shall also be notified. All questions regarding these sites shall be addressed to Mr. Matthew Wilkerson, NCDOT PDEA Human Environment Unit, Archaeology Section.

Addendum No. 1 September 14, 2010

C202587 (R-3329, R-2559) Utility Construction Scope of Work Mecklenburg and Union Counties

For all steel encasement pipes installed for future utilities, obtain and use elevations and inverts from the utility owner requesting the betterment.

All pipe joints that require restraint per the Utility Construction Criteria dated August 18, 2010, or the *2006 NCDOT Standard Specifications*, shall be mechanically restrained.

Union County Requirements

All Union County water and sewer mains crossing under pavement shall be placed within a steel encasement pipe.

All water line 12 inches in diameter and larger to be ductile iron Pipe. Water line less than 12 inches in diameter shall be C-900 DR18 rated pipe with the exception of 2-inch pipe which may be PVC SDR 21.

Union County utilities will require permitting through NCDENR and NCDWQ. This process will entail a satisfactory review by the Union County Public Works Department and a subsequent submission of a permit application to the appropriate regulatory agency.

Union County typical easement requirements are 15 feet for water lines and 20 feet for sewer lines.

City of Monroe Requirements:

All water and sewer mains crossing under pavement shall be encased per the City of Monroe Standard Specifications and Details Manual.

All sanitary sewer plans shall contain the 100 year flood elevation, stationing and metes and bounds or in lieu of the metes and bounds, the flow angle can be specified at each manhole.

All sanitary sewers that are to be constructed with ductile iron pipe shall be sewer rated with Protecto 401 coating and shall be noted on the plans in both plan and profile.

All lines and sanitary sewers to be abandoned in place under pavement shall be filled with flowable fill and noted as such on the plans.

The City of Monroe will need to know, in advance of final approval of plans, all the utilities that are to be located within a shared easement with the City of Monroe water lines and sanitary sewers. Adequate separation shall be agreed upon in advance and shall be maintained.

All water meters that are to be removed permanently shall be returned to the City of Monroe Operations Center.

Unless otherwise noted, cross side water services shall be 1-inch services.

Addendum No. 1 September 14, 2010

C202587 (R-3329, R-2559) Utility Construction Scope of Work Mecklenburg and Union Counties

The Design-Build Team shall install line stops with bypass at each tie-in location in order to perform the tie-ins and keep the force main in service at all times.

Conflict #35 – Refer to the Utility Construction Preliminary Routing Plans R-3329 & R-2559, Sheets UC-27 through UC-29.

The utility owner has approximately 2,298 lf of 16-inch ductile iron pipe Sanitary Force Main and one Air Release Valve within the existing right-of-way of Unionville Indian Trail Road (-Y201-) and Poplin Road that are within the proposed control of access limits Station 22+30 Rt. 28.2 to Station 48+30 Lt. 98.2 -Y201-.

The Design-Build Team shall relocate the 16-inch sanitary force main within the proposed right-of-way and outside of the control of access limits. The force main shall be placed in a 24-inch steel encasement pipe at all road crossings. Union County requests calculations on the loss of pumping capacity due to the added number of bends/fittings on the relocated Sanitary Force Main. The Design-Build Team shall install line stops with bypass at each tie-in location in order to perform the tie-ins and keep the force main in service at all times.

Conflict #35A – Refer to the Utility Construction Preliminary Routing Plans R-3329 & R-2559, Sheet UC-31.

The utility owner has approximately 563 lf of 16-inch ductile iron pipe Sanitary Force Main within the existing right-of-way of Poplin Road Station 31+49.66 Lt. 57.7 to Station 37+00 Rt. 17.7 SR15.

The Design-Build Team shall relocate the 16-inch Sanitary Force Main along the east side of the proposed right-of-way of Poplin Road. The Design-Build Team shall install two 16-inch Line Stops with bypass in order to keep the force main in service at all times.

Conflict #60A – Refer to the Utility Construction Preliminary Routing Plans R-3329 & R-2559, Sheet UC-55.

The utility owner has a proposed 24-inch sanitary force main project nearing final design and will be constructed by the owner during construction of this project. The Design-Build Team shall coordinate their construction activities to facilitate performance of this work by the owner. The proposed alignment of the force main has been shown on the plans. Approximately 501 lf of 24-inch sanitary force main crosses through the control of access limits of the proposed Monroe Bypass (-L36-) and then continues within a proposed utility easement adjacent to the north side of the existing right-of-way of Monroe Ansonville Road (-Y306-).

No conflict is anticipated with this force main as the design engineer for the utility owner is aware of this project and was given digital files of the preliminary road design to coordinate their force main design. The Design-Build Team shall coordinate with Union County and obtain the As-Built records of the 24-inch sanitary force main to evaluate and verify no conflict exists with the proposed roadway design.

Addendum No. 1 September 14, 2010

C202587 (R-3329, R-2559) Utility Construction Scope of Work Mecklenburg and Union Counties

The utility owner has approximately 414 lf of 6-inch ductile iron water line and one valve located within the existing NCDOT right-of-way from Station 105+72 Lt. 110 to Station 106+05 Rt. 296 -L2- that crosses US-74 and the I-485 exit ramp. The waterline provides service to the NCDOT facilities located within the interchange.

No action needed unless otherwise impacted by the Design-Build Team's final design or construction methods.

Conflict #75 – Refer to the Utility Construction Preliminary Routing Plans R-3329 & R-2559, Sheets UC-2A and UC-2.

The utility owner has approximately 2,364 lf of 16-inch ductile iron water line, 2 valves, 2 air release valves in manholes, 5 water meters, and 1 blow off assembly located within the existing NCDOT right-of-way from Station 104+50 Rt. 292 to Station 127+77 Rt. 102 -L2- located parallel to the right-of-way line along the I-485 exit ramp and US-74 east.

The Design-Build Team shall install the 16" waterline adjacent to the new control of access line beginning near CPCC Lane. The existing 16" waterline on CPCC Lane shall be connected to the relocated 16" water line. New water meters shall be installed at the proposed control of access line where affected properties are to remain. New RPZ devices shall be installed on water service lines as needed per existing conditions and connected to the new water meters and the existing customer service lines.

Conflict #76 – Refer to the Utility Construction Preliminary Routing Plans R-3329 & R-2559, Sheet UC-2.

The utility owner has approximately 227 lf of 12-inch ductile iron water line and one valve that crosses US-74 within the proposed control of access from Station 125+06 Rt. 102 to Station 125+06 Lt. 125 -L2-. The waterline is connected to the 16" waterline on the southwest side of US-74 and travels along the northwest side of Independence Commerce Drive.

The existing 12" water line shall be extended and connect to the relocated 16" water line on the southwest side of US-74 (L2). No other action needed unless otherwise impacted by the Design-Build Team's final design or construction methods.

Proposals and will be part of the technical scoring evaluation; including both mandatory and voluntary aesthetic treatments.

Stained concrete services shall also contain an anti-graffiti coating.

References to proprietary products in the Guide or herein are used to establish a standard and not to exclude the use of other products. When approved by the Engineer, products that equal or exceed the standards of the specified products may be used.

Bridge Aesthetics

Bridges shall have the Regional Architecture theme applied to locations visible to motorists and in accordance with the Bridge Elements Table in the Guide. The theme is comprised of brick and stone textures as indicated in the Guide. Bridge walls shall have base courses of a stone texture with the upper walls showing a brick texture. Copings shall also have a stone texture to match the base. If median piers exist, the base of the external piers shall have a stone textured base and coping as well as brick textures on the piers. The base of piers located in the median of the Monroe Parkway shall be designed to be compatible with the double-faced concrete barrier rail that will be required when future lanes are constructed. No aesthetic treatment is required for portions of the bridges concealed by barrier rail. Bridges are classified as Major, Minor or Intermediate based upon preliminary designs and alignments. Major bridges showcase a feature Decorative Pilaster. The pilaster design is reminiscent of a clock tower and features a stone texture base and cap with cast stone details, arch features and regional icons that will be selected by the adjacent local municipality. Another feature of a Major Bridge is a traditional arched span. The arched span may be structural, faux, or other approved designs. The arch features cast stone keystones and brick header and running bond courses.

The appearance/mass of the final design of the bridge and pilaster feature shall remain in scale with the size of the bridge.

Bridge barrier rails shall meet all applicable AASHTO standards and NCHRP 350 testing requirements. Metal rail on parapets will be permissible to meet pedestrian and bicycle height requirements. If metal rail is utilized, it shall be treated to blend with the regional architectural theme. Pedestrian fencing is not required on the project; however, fencing may be used in lieu of the NCDOT's standards for metal rail to provide pedestrian and bicyclist safety on bridges that accommodate pedestrians and/or bicyclists. The Design-Build Team shall provide their choice for pedestrian accommodations along with details within their Aesthetics Details Package (Pre-Bid).

Tolling Gantry

The gantry structures shall have round uprights, consistent with the sign structure supports depicted in the guide, attaching to concrete bases that are compatible with or incorporate the double-faced median concrete barrier rail that will be required when future lanes are constructed. The outside gantry bases will be compatible in appearance to the bases located in the median.

Addendum No. 1 September 14, 2010

C202587 (R-3329, R-2559)

Standard Special Provisions

Mecklenburg and Union Counties

the WPS provided and preapproved by the Department. These preapproved WPS are available from the Materials and Tests Unit or at:

http://www.ncdot.org/doh/operations/materials/structural/appr_proc.html.

Use non-prequalified welds only if approved by the Engineer. Submit WPS for all non-prequalified welds to the Engineer for approval. At no cost to the Department, demonstrate their adequacy in accordance with the requirements of the Bridge Welding Code.

EXCAVATION, TRENCHING, PIPE LAYING & BACKFILLING FOR UTILITIES

(2-17-09)

DB15 R001

Revise the *2006 Standard Specifications for Roads and Structures* as follows:

Page 15-5, Article 1505-4 Repair of Pavements, Sidewalks and Driveways, first paragraph, add at the end of the first sentence

in accordance with Section 848.

PAINT SAMPLING AND TESTING:

(8-15-06)

DB10 R 45

Revise the *2006 Standard Specifications for Roads and Structures* as follows:

Page 10-190, Article 1080-4, Delete the first paragraph and replace with the following:

All paint will be sampled, either at the point of manufacture or at the point of destination. Inspection and sampling will be performed at the point of manufacture wherever possible. The Design-Build Team shall not begin painting until the analysis of the paint has been performed, and the paint has been accepted.

GLASS BEADS:

(7-18-06)(Rev 10-19-10)

DB10 R35

Revise the *2006 Standard Specifications* as follows:

Page 10-223, 1087-4(A) Composition, add the following as the fourth paragraph:

Glass beads shall have no more than 75 parts per million of arsenic as determined by the United States Environmental Protection Agency Method 6010B in conjunction with the United States Environmental Protection Agency Method 3052 modified.

Page 10-223, 1087-4(C) Gradation & Roundness, delete the last paragraph and replace the second sentence of the first paragraph with the following:

All Drop-On and Intermixed Glass Beads shall be tested in accordance with ASTM D1155.

Page 10-226, 1087-8 Material Certification, add the following below the first sentence:

Glass Beads (for paint, thermoplastic and polyurea) – Type 3 Material Certification for no more than 75 parts per million of arsenic