



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

LYNDO TIPPETT  
SECRETARY

May 16, 2008

**Addendum No. 1**

RE: Contract ID: C201918  
TIP Number: R-2606B  
County: Randolph  
Project Description: US 311 Bypass from north of Spencer Road (SR 1929) to US 220

**July 25, 2008 Letting**

To Whom It May Concern:

Reference is made to the Request for Proposal recently furnished to you on the above project. The following revisions have been made to the Request for Proposal:

The COVER PAGE has been revised. Please void the COVER PAGE and staple the revised COVER PAGE thereto.

The first and second pages of the TABLE OF CONTENTS have been revised. Please void the first and second pages of the TABLE OF CONTENTS and staple the revised first and second pages of the TABLE OF CONTENTS thereto.

Page 50 of the GENERAL SECTION has been revised. Please void page 50 and staple the revised page 50 thereto.

Pages 61 – 62 of the ROADWAY SCOPE OF WORK have been revised. Please void pages 61 - 62 in your proposal and staple the revised pages 61 - 62 thereto.

Page 71 of the STRUCTURES SCOPE OF WORK has been revised. Please void page 71 in your proposal and staple the revised page 71 thereto

Page 88 of the HYDRAULICS SCOPE OF WORK has been revised. Please void page 88 in your proposal and staple the revised page 88 thereto.

As required in the Request for Proposals, your Team is required to participate in a 30-minute presentation, followed by an oral interview with the Department's Technical Review Committee on **July 23, 2008 in the Project Services Riverwood Conference Room (Century Center Building B)** at 1020 Birch Ridge Drive, Raleigh, NC. Each Team should note the meeting start time scheduled for them.

**MAILING ADDRESS:**  
NC DEPARTMENT OF TRANSPORTATION  
ALTERNATIVE DELIVERY UNIT  
1595 MAIL SERVICE CENTER  
RALEIGH NC 27699-1595

TELEPHONE: 919-250-4234  
FAX: 919-212-5711

WEBSITE: [WWW.DOH.DOT.STATE.NC.US](http://WWW.DOH.DOT.STATE.NC.US)

**LOCATION:**  
CENTURY CENTER COMPLEX  
ENTRANCE B-1  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC

C 201918 (R-2606B)  
Randolph County  
Addendum No. 1  
May 16, 2008

<b>Company</b>	<b>Time</b>
Barnhill Contracting Company	8:30 am
Bell and Wright Constructors, LLC, A Joint Venture	10:30 am
Team United, A Joint Venture	1:00 pm

Please contact the other members of your Design-Build Team and inform them of this appointment. A maximum of **ten (10)** people from the Design-Build Team may attend.

Please note that 12 copies of the Technical Proposal will be required for submittal **no later than 4:00 pm (EST) on July 3, 2008.**

Sincerely,

R.A. Garris, P.E.  
Contract Officer

cc: Mr. Steve Varnedoe, PE  
Mr. Jon Nance, PE  
Ms. Deborah Barbour, PE  
Mr. Victor Barbour, PE  
Mr. Art McMillan, PE (w/)  
Mr. Clarence Coleman, PE (w/3)  
Mr. Phillip Harris, PE  
Mr. Ed Lewis  
Mr. Ron Hancock, PE (w/)  
Mr. David Harris, PE  
Mr. Jay Twisdale, PE (w/)  
Mr. Ron Davenport, PE (w/)  
Mr. Tim Johnson, PE (w/)  
Ms. John Olinger, PE (w/3)  
Mr. Robert Stone II, PE (w/)  
Mr. Jeff Loflin, PE (w/)  
Mr. Alfred Grandy (w/)  
Mr. Eric Midkiff, PE (w/)  
Mr. Joseph Ishak, PE (w/)  
Ms. Vickie Davis, PE (w/)  
Mr. Mike Stanley, PE  
Mr. Michael Penney, PE (w/)  
Mr. Ayman Alqudwah, PE (w/)  
Ms. BenJetta L. Johnson, PE (w/)  
Ms. Teresa Bruton, PE (w/4)  
Ms. Marsha Sample (w/)  
Mr. Allen Raynor, PE (w/)  
Mr. Rodger Rochelle, PE (w/)  
Mr. Ellis Powell, PE (w/)  
Mr. Jay Bennett, PE (w/)  
Mr. Dan Holderman, PE (w/)  
Ms. Jennifer Brandenburg, PE (w/)  
Mr. Fred Adams, (w/)  
TRC Members (w/)

Ms. Anne Gamber, PE – Hydraulics (w/)  
Dr. John Pilipchuk, LG, PE – Geotechnical (w/)  
Dr. Clark Morrison, PE - Pavement Design (w/)  
Mr. Barney Blackburn, PE - Erosion & Sed. Cont. (w/2)  
Ms. Jackie Armstrong, PE – Roadway (w/)  
Mr. Mitch Hendee, PE - Traffic Control (w/)  
Mr. David Boyd - Utility Coordination (w/)  
Mr. Lonnie Brooks, PE - Structures / Railroad (w/)  
Mr. Cyrus Parker, PE - Geo-Environmental (w/)  
Mr. Tim McFadden – Signing (w/)  
Ms. Tammy Stewart - Public Information (w/)  
Mr. Neal Strickland - Right-of-Way (w/)  
Ms. Elizabeth Lusk - Environmental Permits (w/)  
Ms. Leilani Paugh - On-Site Mitigation (w/)  
Mr. Doug Taylor, PE (w/)  
Mr. Ted Walls, PE – Roadway (w/)  
Mr. Roger Worthington, PE – Utility Construction (w/)  
Mr. Calvin Leggett, PE  
Mr. Doug Allison  
Dr. Judith Corley-Lay, PE  
Mr. Njoroge Wainaina, PE  
Mr. Dave Henderson, PE  
Mr. Ron King, PE  
Mr. Greg Perfetti, PE  
Mr. Don Lee  
Ms. Pamela L. Alexander, PE  
Mr. Greg Thorpe, PE  
Mr. Stuart Bourne, PE  
Mr. Tony Wyatt, PE (w/)  
Mr. Wayne Johnson, PE (w/)  
Mr. Robert Memory, PE (w/)  
Ms. Betty Rawls, (w/)  
File

-- STATE OF NORTH CAROLINA--  
DEPARTMENT OF TRANSPORTATION  
RALEIGH, N.C.

**FINAL RFP**

**DESIGN-BUILD PROJECT**

**TIP R-2606B**

**April 30, 2008**



*VOID FOR BIDDING*

DATE AND TIME OF TECHNICAL AND PRICE PROPOSAL SUBMISSION: **July 3, 2008 BY 4:00 PM**

DATE AND TIME OF PRICE PROPOSAL OPENING: **July 25, 2008 AT 10:00 AM**

CONTRACT ID: C 201918

WBS ELEMENT NO. 34480.3.GV1

FEDERAL-AID NO. NHF-0311(23)

COUNTY: Randolph

ROUTE NO. US 311 / I-74

MILES: 7.92

LOCATION: US 311 Bypass from north of Spencer Road (SR 1929) to US 220 – Future I-74

TYPE OF WORK: DESIGN-BUILD AS SPECIFIED IN THE SCOPE OF WORK  
CONTAINED IN THE REQUEST FOR PROPOSALS

**NOTICE:**

ALL PROPOSERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE PROPOSER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. PROPOSERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOT WITHSTANDING THESE LIMITATIONS ON BIDDING, THE PROPOSER WHO IS AWARDED ANY PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING, REGARDLESS OF FUNDING SOURCES.

\_\_\_\_\_  
5% BID BOND OR BID DEPOSIT REQUIRED  
\_\_\_\_\_

**TABLE OF CONTENTS**

**COVER SHEET**

**PROPOSAL SHEETS**

<b>PROJECT SPECIAL PROVISIONS</b>	<b>(GREEN SHEETS)</b>	<b>PAGE NO.</b>
Contract Time and Liquidated Damages .....		1
Other Liquidated Damages and Incentives .....		1-2
Solid Waste Material in Embankments Alternate Bids .....		2-3
Progress Schedule .....		3-4
Payout Schedule .....		4-5
Mobilization .....		5
Submittal of Quantities, Fuel Base Index Price and Opt-Out Option .....		5-6
Partnering.....		6-7
Execution of Signature Sheets and Debarment Certification .....		7
Submission of Design-Build Proposal .....		7-8
Confidential Questions .....		8-9
Value Analysis .....		9
Schedule of Estimated Completion Progress .....		9
Substantial Completion .....		9-10
Disadvantaged Business Enterprise .....		10-20
Certification for Federal-Aid Contracts .....		20-21
U. S. Department of Transportation Hotline .....		21
Subsurface Information .....		21
Cooperation Between Contractors .....		22
Bid Documentation .....		22-25
Twelve Month Guarantee .....		25-26
Outsourcing Outside U.S.A .....		26
Clearing and Grubbing .....		26
SHPO Documentation for Borrow / Waste Sites .....		26-27
Erosion & Sediment Control / Stormwater Certification .....		27-32
Procedure for Monitoring Borrow Pit Discharge .....		32-34
Building and Appurtenance Removal / Demolition .....		34
Cement and Lime Stabilization of Subgrade Soils .....		35-39
Embankment Monitoring .....		39-40
Price Adjustments for Asphalt Binder .....		40
Price Adjustments - Asphalt Concrete Plant Mix .....		40
Field Office .....		41-43
Chipped Waste Tires in Embankments .....		43-44
Coal Fly Ash in Embankments .....		44-45
<b>GENERAL</b>	<b>(GREEN SHEETS)</b>	<b>46-59</b>

**SCOPES OF WORK** (GREEN SHEETS)

Roadway .....	60-65
Pavement Management .....	66-68
Structures .....	69-71
Railroad Coordination.....	72-74
Geotechnical Engineering .....	75-83
GeoEnvironmental .....	84-87
Hydraulics .....	88
Signing .....	89-92
Traffic Control and Pavement Markings .....	93-105
Utilities Coordination .....	106-110
Right of Way .....	111-113
Erosion and Sedimentation Control .....	114-119
On-Site Mitigation.....	120-127
Public Information .....	128-129
Environmental Permits .....	130-135

**STANDARD SPECIAL PROVISIONS** (YELLOW SHEETS)

Plant and Pest Quarantines .....	136
Shallow Undercut .....	136-137
Shoulder and Fill Slope Material .....	137
Flowable Fill.....	138
Reinforced Bridge Approach Fill .....	138-140
Aggregate Base Course .....	140-141
Preparation of Subgrade and Base.....	141
Asphalt Pavements - Superpave .....	141-149
Asphalt Paver – Fixed and Mobile String Line.....	150
Asphalt Binder Content of Asphalt Plant Mixes .....	150
Final Surface Testing – Asphalt Pavements .....	150-154
Cable Guiderail.....	154
Impact Attenuator Units, Type 350 .....	154-155
Fence.....	155
Street Signs and Markers and Route Markers .....	156
Steel U-Channel Posts .....	156
Shipping Signs .....	156
Aggregate Production .....	156-157
Concrete Brick and Block Production.....	157
Portland Cement Concrete (Alkali-Silica Reaction) .....	157-158
Glass Beads .....	158
Engineering Fabrics Table 1056-1 .....	158
Paint Sampling and Testing .....	158-159
Portable Concrete Barrier .....	159
Temporary Shoring .....	159-166
Changeable Message Signs .....	166
Pavement Marking Lines.....	166-167

the person or persons were “formerly involved” while employed by the State. The restriction period shall be for the duration of the contracted project with which the person was involved. *Former Involvement* shall be defined as active participation in any of the following activities:

- Drafting the contract
- Defining the scope of the contract
- Selection of the Design-Build Team
- Negotiation of the cost of the contract (including calculating manhours or fees); and
- Administration of the contract.

An exception to these terms may be granted when recommended by the Secretary and approved by the Board of Transportation.

Failure to comply with the terms stated above in this section shall be grounds for termination of this contract and / or not being considered for selection of work on future contracts for a period of one year.

### **SUBMITTAL OF TECHNICAL AND PRICE PROPOSALS**

**Technical and / or Price Proposals that do not adhere to all the requirements noted below may be considered non-responsive and may result in the Department not considering the Design-Build Team for award of the contract or reading their Price Proposal publicly.**

#### **GENERAL**

Technical and Price Proposals will be accepted until **4:00 p.m. Local Time on Thursday, July 3, 2008**, at the office of the State Contract Officer:

Mr. Randy A. Garris, PE  
Project Services Unit  
1020 Birch Ridge Drive  
Century Center Complex Bldg. B  
Raleigh, NC 27610

**No Proposals will be accepted after the time specified.**

Proposals shall be submitted in 2 separate, sealed parcels containing the Technical Proposal in one and the Price Proposal in the other parcel.

Grading Only” on the R-2606A Final Plans provided by the Department. (Reference the Pavement Management and Signing Scopes of Work)

- Unless noted otherwise, the Design-Build Team shall design and construct an interchange at US 220 that provides direct connections with design speeds of 60-mph. The Design-Build Team shall design and construct a one-lane loop for the US 311 eastbound to US 220 northbound movement.
- 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 that provide minimum 12-foot lanes. All ramps shall have 12-foot inside shoulders, four-foot of which shall be full depth paved shoulders and 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 B. All loops shall have 12-foot outside shoulders, four-foot of which shall be full depth paved shoulders and 2'-6" curb and gutter along the inside edge of pavement, with a 14-foot berm. The minimum loop design speed shall be 30-mph with a minimum 250-foot radius.
- The Design-Build Team shall design and construct -Y- Lines, ramps, service roads and cul-de-sacs, providing access, widening and improvements as indicated on the R-2606 Design Public Hearing Map. The limits of -Y- Line and service road construction shall be of sufficient length to tie to existing based upon the current NCDOT guidelines and standards.
- The US 311 Bypass is a full control of access facility. The Design-Build Team shall bring to the State Alternative Delivery Engineer's attention any deviations from the proposed control of access shown on the R-2606 Design Public Hearing Map. Prior to negotiating with property owners, the Design-Build Team shall delineate the control of access on the Right of Way Plans for the Department's review and acceptance. The Design-Build Team shall be responsible for coordinating with, and obtaining approval from, the NCDOT for the woven wire fence placement. The Design-Build Team shall be responsible for installation of the woven wire fence.
- Unless noted otherwise elsewhere in this RFP, all guardrail and cable guiderail placement shall be in accordance with the July 2006 NCDOT *Standard Drawings* and / or approved details in lieu of standards. The guardrail / guiderail design shall be submitted for review with the Preliminary Plans submittal.
- The Design-Build Team shall design and construct bridge rail offsets as indicated in the NCDOT *Roadway Design Manual* or that are equal to the approach roadway paved shoulders, whichever is greater. Bridge rail offsets for long bridges may be reduced from the aforementioned requirement in accordance with the NCDOT *Roadway Design Manual*.
- The Department has followed a modified Merger 01 Process used by the environmental agencies and the Department to obtain environmental permits for this highway project.

Any variations in the Department's proposed design and / or construction methods that nullify any concurrence points obtained or decisions reached between the Department and the environmental agencies; and / or require additional coordination with the Environmental Agencies shall be the sole responsibility of the Design-Build Team. The Department shall 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 or topographic feature beyond that shown on the R-2606 Design Public Hearing Map. The Design-Build Team shall not acquire right of way or easements from the aforementioned features unless shown on the R-2606 Design Public Hearing Map.
- The Design-Build Team shall be responsible for the sound barrier wall design and construction listed in the Final Design Noise Report, including any geotechnical investigations necessary to design the foundations. The Design- Build Team shall be responsible for the wall envelope details. If the Design-Build Team revises the horizontal and / or vertical alignments such that greater noise impacts are possible on surrounding receptors, the Design-Build Team shall re-analyze and complete a revised noise report, if necessary, for NCDOT and FHWA review and acceptance. The original Final Design Noise Report will be provided to the Design-Build Team to assist in their determination of anticipated additional noise impact on current receptors due to a design change. If adjustments to, or addition of, sound barrier walls are required as a result of design deviations, the Design-Build Team shall be responsible for all costs associated with the adjustments and / or additions.
- The Design-Build Team shall design and construct resurfacing grades for all roadways impacted by construction, excluding haul roads. At a minimum, the Design-Build Team shall resurface all lanes and shoulders of an undivided facility throughout the limits of proposed widening and construction. At a minimum, 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. At a minimum, 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. Additionally, the Design-Build Team shall resurface all existing facilities to the limits of pavement marking obliterations / revisions. The Design-Build Team shall design and construct grades that adhere to the design criteria and standards, providing all required pavement wedging. (Reference the Pavement Management Scope of Work)
- The maximum allowable cut and fill slope shall be 2:1, unless noted otherwise elsewhere in this RFP. The slopes in the interchange area shall follow the requirements set forth in the *Roadway Design Guidelines for Design-Build Projects* located on the Design-Build web site. Inside the interchange quadrants the maximum slope allowed shall be 4:1. The maximum slope allowed for direct connections shall be 2:1.
- The Design-Build Team shall inform the State Alternative Delivery Engineer, in writing, of any proposed changes to the NCDOT preliminary design, previously reviewed

For concrete girders, torsional stresses in girders resulting from falsework and other dead loads shall not exceed one quarter of the cracking torque. Torsional stresses due to all dead loads and live loads shall not exceed one half of the cracking torque. Cracking torque of prestressed concrete girders shall be computed in accordance with ACI 318-02, Section 11.6.1. For steel girders, lateral flange bending stresses shall not exceed 2000 psi.

Bracing shall be installed prior to any application of loads from screed equipment or work platform bridges. Bracing shall be removed after the deck is cured.

**Railroad Design and Coordination:**

The Design-Build Team shall provide a 25-foot minimum horizontal clearance from the centerline of existing and future tracks to any substructure unit. Crashwalls on interior bents will not be permitted.

On the south side of the existing track, the design and construction shall include provisions for a future track, as well as a continuous eight-foot wide maintenance road. The Design-Build Team shall provide a minimum 14'-0" horizontal distance between the existing and future track centerlines. The Design-Build Team shall provide a minimum 18'0" horizontal distance between the future outside track centerline and the maintenance road outside edge. All distances shall be measured perpendicular to the track centerlines.

The Design-Build Team shall provide a 23-foot minimum vertical clearance over the Norfolk Southern Railroad.

Approximately four trains per day make a round-trip between High Point and Asheboro. The maximum train speed is 25 mph.

Only NSC may grant exceptions to their guidelines or *AREMA*.

Reference Railroad Coordination Scope of Work.

**HYDRAULICS SCOPE OF WORK** (05-15-08)**Project Details**

The Design Build Team shall:

- Hold a pre-design meeting with the State Alternative Delivery Engineer and Hydraulic Review Engineer upon acceptance of the Preliminary Roadway Plans.
- Design and install all Storm Drainage systems within the project limits.
- Analyze existing culverts and cross pipes adjacent to the project and within existing right of way. Replace any deficient (structurally and / or hydraulically) pipes and / or culverts.
- Prepare Pre and Post Analysis for increases in discharge and take appropriate action in accordance with the guidelines stated below this section to make sure additional drainage is adequately handled. No increase in discharge shall be allowed into Railroad Right of Way.
- Provide Culvert and Bridge Survey Reports for structures in accordance with the guidelines stated below this section.
- Provide methods to manage debris accumulation inside the culverts.
- Design and install Hazardous Spill Basins throughout Watershed Critical Areas in accordance with Appendix O of the Guidelines for Drainage Studies and Hydraulics Design - 1999.
- In proximity to the proposed US 220 loop, the Design-Build Team shall minimize, and if at all possible, avoid impacts to Back Creek. If the US 220 loop impacts Back Creek, the Design-Build Team shall design and construct a channel relocation outside the construction limits that mitigates the impacts. The channel relocation requirements, including but not limited to length, shall be as required by the environmental agencies.
- Provide a State Stormwater Permit and Stormwater Management Plan, and allow time for a pre-application meeting with the appropriate Regional DWQ Office contact.
- Provide permit drawings and calculations for USACE 404 permit and NCDWQ Section 401.
- Adhere to the current Randleman Lake Reservoir Buffer Rules.
- Conduct 4B and 4C Merger 01 interagency meetings that include NCDOT PDEA-NEU, NCDOT Alternative Delivery Unit and interested environmental agencies to review the hydraulic design and permit sites prior to submittal of the environmental permit applications. All work resulting from the hydraulics and permit reviews shall be the responsibility of the Design-Build Team. The Design-Build Team shall provide hydraulics plans and permit impact sheets to the State Alternative Delivery Engineer a minimum of five weeks prior to the appropriate interagency meeting. The Design-Build Team shall take minutes of the meeting and provide them to the Department within three business days.

**General**

All design shall be in accordance with criteria provided in the North Carolina Division of Highways "Guidelines for Drainage Studies and Hydraulics Design-1999", the addendum "Handbook of Design for Highway Drainage Studies-1973", North Carolina Department of Transportation "Best Management Practices for Construction and Maintenance Activities-2003" and the North Carolina Division of Highways Hydraulics Unit web-site:

<http://www.ncdot.org/doh/preconstruct/highway/hydro/>