STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

July 26, 2007

Addendum No. 1

Contract Number:	C 201752
TIP Number:	U-3412A
County:	Union
Project Description:	Martin Luther King, Jr. Boulevard (SR 1223) from Lancaster Avenue (NC 200) to Goldmine Road (SR 1162)
RE:	Distribution of Addendum No. 1

Dear Sir:

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 *Table of Contents* has been revised. Please void the *Table of Contents* and staple the revised *Table of Contents* thereto.

On pages 1 and 2, the *Other Liquidated Damages and Incentives* Project Special Provision has been revised. Please void pages 1 and 2 in your proposal and staple the revised pages 1 and 2 thereto.

On page 9, the *Schedule of Estimated Completion Progress* Project Special Provision has been revised. Please void page 9 in your proposal and staple the revised page 9 thereto.

On page 26, the *Clearing and Grubbing* Project Special Provision has been revised. Please void page 26 in your proposal and staple the revised page 26 thereto.

On pages 44 and 52, the *General Scope* and the *Technical Proposal Evaluation Criteria* of the General Section have been revised. Please void pages 44 and 52 in your proposal and staple the revised pages 44 and 52 thereto.

On pages 57 - 59, the *Roadway Scope of Work* has been revised. Please void pages 57 - 59 in your proposal and staple the revised pages 57 - 59 thereto.

On pages 64 and 66, the *Structures Scope of Work* has been revised. Please void pages 64 and 66 in your proposal and staple the revised pages 64 and 66 thereto.

On pages 82 and 83, the *Hydraulics Scope of Work* has been revised. Please void pages 82 and 83 in your proposal and staple the revised pages 82 and 83 thereto.

On pages 86 - 89, the *Traffic Control and Pavement Markings Scope of Work* has been revised. Please void pages 86 - 89 in your proposal and staple the revised pages 86 - 89 thereto.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
1591 MAIL SERVICE CENTER
RALEIGH NC 27699-1591

TELEPHONE: 919-250-4128
FAX: 919-250-4119
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LOCATION:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC

On page 98, the *Utilities Coordination Scope of Work* has been revised. Please void page 98 in your proposal and staple the revised page 98 thereto.

On page 104, the *Signals Scope of Work* has been revised. Please void page 104 in your proposal and staple the revised page 104 thereto.

If you have any questions or need additional information, I can be reached by telephone at (919) 250-4124.

Sincerely,

R.A. Garris, PE
Contract Officer

RAG/jmg

cc:
Mr. Steve Varnedoe, PE
Mr. Jon Nance, PE
Ms. Deborah Barbour, PE
Mr. Victor Barbour, PE

Mr. Art McMillan, PE
Mr. Clarence Coleman, PE (w/3)
Mr. Phillip Harris, PE
Mr. Carl Goode
Mr. Ron Hancock, PE
Mr. David Harris, PE
Mr. Randy Henegar, PE (w/)
Mr. Ron Davenport, PE (w/)
Mr. Van Argabright, PE
Mr. Jay McInnis, PE (w/)
Ms. Tawana Brooks, PE (w/3)
Mr. Rick Mason (w/)
Mr. David Naylor, PE
Mr. Joseph Ishak, PE (w/)
Mr. Ayman Alqudwah, PE (w/)
Mr. Roger Worthington, PE (w/)
Ms. Teresa Bruton, PE (w/4)
Ms. Marsha Sample (w/)
Mr. Allen Raynor, PE (w/)
Mr. Ronald Graham, PE (w/)
Mr. Scott Allen, PE (w/)
Mr. Rodger Rochelle, PE (w/)
Mr. Richard Hancock, PE (w/)
Mr. Ellis Powell, PE
Mr. Barry Moose, PE (w/)
Mr. Jay Bennett, PE
Mr. John Emerson, PE (w/)
Ms. Jennifer Brandenburg, PE (w/)
TRC Members
File

Ms. Anne Gamber PE – Hydraulics (w/)
Mr. John Pilipchuk, PE – Geotechnical (w/)
Dr. Clark Morrison, PE - Pavement Design (w/)
Mr. Barney Blackburn, PE - Erosion & Sed. Cont. (w/2)
Ms. Jackie Armstrong, EI – 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. Michelle Long, PE - Public Information (w/)
Mr. Neal Strickland - Right-of-Way (w/)
Ms. Elizabeth Lusk - Environmental Permits (w/)
Ms. Leilani Paugh - On-Site Mitigation (w/)
Mr. Tim Williams, PE - Signal Design (w/)
Mr. Jimmy Goodnight, PE – Roadway (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
Mr. Richard Mullinax, PE
Mr. Greg Thorpe, PE
Mr. Stuart Bourne, PE
Mr. Tony Wyatt, PE (w/)
Mr. Wayne Johnson, PE (w/)
Mr. Robert Memory, PE (w/)
Mr. James Dunlop, PE (w/)

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STANDARD SPECIAL PROVISIONS (YELLOW SHEETS)

*** PROJECT SPECIAL PROVISIONS ***

CONTRACT TIME AND LIQUIDATED DAMAGES

DB1 G04

The date of availability for this contract is **October 29, 2007** except that the Design-Build Team shall not begin ground disturbing activities, including utility relocations and tree harvesting, (this does not include permitted investigative borings covered under a Nationwide Permit No. 6) until the required permits have been acquired, as stipulated in the Environmental Permits Scope of Work contained elsewhere in this Request for Proposals (RFP). The Design-Build Team shall consider this factor in determining the proposed completion date for this project.

The completion date for this contract is defined as the date proposed in the Technical Proposal by the proposer who is awarded the project. The completion date thus proposed shall not be later than **October 1, 2010**.

When observation periods are required by the special provisions, they are not a part of the work to be completed by the completion date and / or intermediate contract times. Should an observation period extend beyond the final completion date, the acceptable completion of the observation period shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are **Five Thousand Dollars ($ 5,000.00)** per calendar day. As an exception to this amount, where the contract has been determined to be substantially complete as defined by the Special Provision entitled "Substantial Completion" found elsewhere in this RFP, the liquidated damages will be reduced to **One Thousand Dollars ($ 1,000.00)** per calendar day.

Where the Design-Build Team who is awarded the contract has proposed a completion date for the contract as required above, but also has proposed an earlier date for substantial completion, then both of these proposed dates will become contract requirements.

Liquidated damages of **Five Thousand Dollars ($ 5,000.00)** per calendar day will be applicable to the early date for substantial completion proposed by the bidder. Liquidated damages of **One Thousand Dollars ($ 1,000.00)** per calendar day will be applicable to the final completion date proposed by the bidder where the Design-Build Team has proposed an earlier date for substantial completion.

OTHER LIQUIDATED DAMAGES AND INCENTIVES

(3/22/07) DB1 G11

Refer to the Traffic Control Scope of Work for more information on the following time restrictions and liquidated damages:

Liquidated Damages for Intermediate Contract Time #1 for lane narrowing, lane closure, holiday and special event time restrictions for NC 200, SR 1158, NC 75, NC 84, SR 1200, SR 1162 and Martin Luther King Jr. Boulevard are $1,000.00 per hour.

Liquidated Damage for Intermediate Contract Time #2 for road closure time restrictions for construction operations for NC 200, SR 1158, NC 75, NC 84, SR 1200, SR 1162 and Martin Luther King Jr. Boulevard, and Martin Luther King Jr. Blvd. access from NC 75 and NC 84 are $500.00 per 15 minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #3 for road closure time restrictions for Goldmine Road (SR 1162) are $3,000.00 per calendar day or any portion thereof.

Liquidated Damages for Intermediate Contract Time #4 for road closure time restrictions for Martin Luther King Jr. Boulevard (SR 1223) are $3,000.00 per calendar day or any portion thereof.

Erosion and Sedimentation Control Incentives:

The Design-Build Team will be eligible for an incentive in the amount of $40,000 if construction operations have been performed in accordance with all environmental regulations and the Specifications, and the Design-Build Team does not receive any violations (ICA, CICA, NOV and / or C&D) at any time during project construction.

Reference Erosion and Sedimentation Control Scope of Work for additional information.

Liquidated Damages for Erosion Control efforts apply to this project:

The Design-Build Team's first four violations shall result in a reduction of $10,000 from the $40,000 incentive noted above for each ICA, CICA, NOV, and / or C&D violation. Beginning with the fifth violation, Liquidated Damages in the amount of $10,000 per violation shall be deducted from the lump sum bid amount due the Design-Build Team.

Reference the Erosion and Sedimentation Control Scope of Work for additional information and additional Liquidated Damages.

PROJECT SCHEDULE

(08-3-06) DB1 G12

Description

Perform the work of developing, implementing, monitoring, updating and revising a Project Schedule. Utilize this Project Schedule in coordinating work activities with subcontractors, vendors, suppliers, utilities, railroads, NCDOT, and others, as may be needed, to construct the project.

Design-Build Team's Scheduling Representative

Designate a Design-Build Team authorized representative responsible for developing, updating, and revising the Design-Build Team's Project Schedule. The scheduling representative should attend all schedule related meetings and be capable of providing and presenting information related to the Project Schedule, updates, revisions and related impacts to construction activities, milestones and overall progress.

Project Schedule

The Design-Build Team shall submit a Project Schedule for review within thirty (30) calendar days of receiving the Notice of Award. The Department will review the Project Schedule within twenty-one (21) calendar days of receipt. The Design-Build Team shall make any necessary corrections or adjustments to the Project Schedule as necessitated by the Department's review

SCHEDULE OF ESTIMATED COMPLETION PROGRESS

(10-6-05) DB1 G58

The Design-Build Team's attention is directed to the Standard Special Provision entitled "Availability Of Funds - Termination Of Contracts" included elsewhere in this RFP. The Department of Transportation's schedule of estimated completion progress for this project as required by that Standard Special Provision is as follows:

Fiscal Year	Progress (Dollar Value)
2008 (07/01/07 – 06/30/08)	20 % of Total Amount Bid
2009 (07/01/08 – 06/30/09)	37 % of Total Amount Bid
2010 (07/01/09 – 06/30/10)	37 % of Total Amount Bid
2011 (07/01/10 – 06/30/11)	6 % of Total Amount Bid

The Design-Build Team shall also furnish its own progress schedule in accordance with Project Special Provision entitled “Project Schedule” (found elsewhere in this RFP). Any acceleration of the progress as shown by the Design-Build Team's progress schedule over the progress as shown above shall be subject to the approval of the Engineer.

SUBSTANTIAL COMPLETION

(3-22-07) DB1 G16

When the special provisions provide for a reduction in the rate of liquidated damages for the contract time or an intermediate contract time after the work is substantially complete, the work will be considered substantially complete when the following requirements are satisfied:

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

Upon apparent substantial completion of the entire project or the work required by an intermediate contract time, the Engineer will make an inspection of the work. If the inspection discloses the entire project or the work required by an intermediate contract time is substantially complete; the Engineer will notify the Design-Builder in writing that the work is substantially complete. If the inspection discloses the entire project or the work required by an intermediate contract time is not substantially complete, the Engineer will notify the Design-Builder in writing

In jurisdictional areas, hand clearing shall be required for installation of the woven wire fence along the proposed right of way adjacent to the future widened section.

EROSION & SEDIMENT CONTROL / STORMWATER CERTIFICATION

1-16-07 DB1 G180

General

Schedule and conduct construction activities in a manner that will minimize soil erosion and the resulting sedimentation and turbidity of surface waters. Comply with the requirements herein regardless of whether or not a National Pollutant Discharge Elimination System (NPDES) permit for the work is required.

Establish a chain of responsibility for operations and subcontractors' operations to ensure that the *Erosion and Sediment Control / Stormwater Pollution Prevention Plan* is implemented and maintained over the life of the contract.

(A) *Certified Supervisor* – Provide a certified Erosion & Sediment Control / Stormwater (E&SC/SW) Supervisor to manage the Design-Build Team and subcontractor(s) operations, insure compliance with Federal, State and Local ordinances and regulations, and to manage the Quality Control Program.

(B) *Certified Foreman* – Provide a certified, trained foreman for each construction operation that increases the potential for soil erosion or the possible sedimentation and turbidity of surface waters.

(C) *Certified Installer* – Provide a certified installer to install or direct the installation for erosion or sediment / stormwater control practices.

In the case of difference of opinion or interpretation of plan or contract requirements between the Design-Build Team and the Engineer, the Engineer's determination and decision will be final.

Roles and Responsibilities

(A) *Certified Erosion & Sediment Control / Stormwater Supervisor* - The Certified Supervisor shall be responsible for ensuring erosion and sediment control / stormwater is adequately implemented and maintained on the project and conducting the quality control program. The Certified Supervisor shall be on the project within 24 hours from initial exposure of an erodible surface to the project's final acceptance when questions or concerns arise with Erosion and Sedimentation Control / Stormwater issues. Perform the following duties:

(1) (a) Manage Operations - Coordinate and schedule the work of subcontractors so that erosion and sediment control / stormwater measures are fully executed for each operation and in a timely manner over the duration of the contract.

Guidelines", which by reference are incorporated and made a part of this contract. All submittals shall be made simultaneously to the State Alternative Delivery Engineer and the Resident Engineer. The Department will not accept subsequent submittals until prior submittal reviews have been completed for that item. The Design-Build Team shall inform the State Alternative Delivery Engineer in writing of any proposed changes to the NCDOT preliminary designs, Technical Proposal and / or previously reviewed submittals and obtain approval prior to incorporation. The Design-Build Team shall prioritize submittals in the event that multiple submittals are made based on the current schedule. All submittals shall include pertinent Special Provisions. No work shall be performed prior to Department review of the design submittals.

OVERVIEW

The Design-Build Project, U-3412A, is the extension of Martin Luther King, Jr. Boulevard (SR 1223) on new location from NC 200 (Lancaster Avenue) to SR 1162 (Goldmine Road) in Union County. The total project length is approximately 3 miles. A two-lane roadway on multi-lane right of way is proposed. It is anticipated that approximately 200 feet of right of way will be required to accommodate this facility.

Project services shall include but are not limited to:

- **Design Services** – completion of construction plans, including as-builts
- **Construction Services** – necessary to build and ensure workmanship of the designed facility.
- **Permit Preparation/Application**
- **Construction Engineering Inspection** – provided by NCDOT Division personnel.
- **Right of Way** – acquisition of right of way necessary to construct project.

The EA was approved on February 1, 2005
The FONSI was approved on August 17, 2006

GENERAL SCOPE

The scope of work for this project includes design, construction and management of the project. The design work includes all aspects to construct approximately 3 miles of a two-lane roadway and acquire right of way for a future four-lane divided facility. The designs shall meet all appropriate latest versions of *AASHTO Policy on Geometric Design of Highways and Streets, AASHTO LRFD Bridge Design Specifications, Manual of Uniform Traffic Control Devices,* and all NCDOT design policies that are current as of the Technical and Price Proposal submission date or the Best and Final Offer submission date.

With the exception of traffic signal installation, utility coordination and utility relocation, which shall be performed for the future four-lane divided facility, construction shall include, but not be limited to, all necessary clearing, grading, roadway, drainage, structures and erosion and sediment control work items for the proposed two-lane facility; and installation of the control of access fence for the future four-lane divided facility. Construction engineering and management will be the responsibility of the Design-Build Team. Construction shall comply with *2006 NCDOT Standard Specifications for Roadways and Structures* and any special provisions.

3. Long Term Maintenance – 8 points

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

4. Schedule and Milestones – 20 points

- Provide a detailed schedule for the project including both design and construction activities. The schedule shall show the sequence and continuity of operations, as well as the month of delivery of usable segments of the project.

- The schedule shall also include the Design-Build Team's final completion date and, if proposed, their substantial completion date. **These dates shall be clearly indicated on the Project Schedule and labeled "Final Completion Date" and "Substantial Completion Date"**.

5. Innovation – 10 points

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

6. Maintenance of Traffic and Safety Plan – 12 points

Maintenance of Traffic

- Describe any traffic control requirements that will be used for each construction phase.
- Describe how traffic will be maintained as appropriate and describe the Design-Build Team's understanding of any time restrictions noted in the RFP.
- Specifically describe how business, school, and residential access will be maintained, if applicable.
- Address how hauling will be conducted.
- If a temporary portable barrier system will be utilized, provide the type and why it is needed.
- Note the type of material to be installed for the Final Pavement Markings.
- If temporary shoring will be required, provide the type and why it is required.
- For those Intermediate Contract Times with calendar day time restrictions, indicate any proposed reductions.

Safety Plan

- Describe the safety considerations specific to the project.
- Discuss the Design-Build Team's overall approach to safety.

ROADWAY SCOPE OF WORK (7-20-07)

It should be noted that TIP Project U-3412A, as referenced herein, represents both U-3412A and U-3412B as delineated on the Combined Public Hearing Map.

Project Details

- The Design-Build Team shall design and construct a two-lane facility on new location, unless noted otherwise, that will serve as the extension of Martin Luther King Jr. Boulevard (SR 1223) from NC 200 (Lancaster Highway) to Goldmine Road (SR 1162). Unless otherwise noted herein, the Design-Build Team shall design and construct the –L– Line providing access, widening and improvements as indicated on the Preliminary Plans and Alternate One of the Combined Public Hearing Map provided by the Department. Both the southern and northern project termini shall transition to the existing two-lane paved shoulder typical sections. The limits of –L– Line construction shall be of sufficient length to tie to existing based upon the current NCDOT guidelines and standards. The Design-Build Team shall minimize impacts to the two schools along the –L– Line.

- Martin Luther King Jr. Boulevard (SR 1223) shall be designed as a two-lane facility that meets a 50-mph design speed for a rolling urban minor arterial. In tangent sections, the two-lane Martin Luther King Jr. Boulevard (SR 1223) facility shall be designed and constructed with "roof top" cross slopes. The Design-Build Team shall provide all other design criteria in the Technical Proposal for review and acceptance prior to submittal of Preliminary Plans. 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 5 mph.

- The Design-Build Team shall prepare functional horizontal and vertical designs (line and grade) for a future four-lane divided facility, with a 23-foot median, along Martin Luther King Jr. Boulevard. The Design-Build Team shall design and construct the proposed two-lane facility such that widening for the future four-lane facility shall occur with minimal impacts to the constructed two-lane roadway. The two-lane roadway shall be designed such that the future widening shall occur as much as possible along one side of the constructed facility. The Design-Build Team shall make a determination of, and provide right of way services that acquire, the additional right of way required for the future four-lane divided facility. The right of way shall be wide enough to include all cross-sectional elements for the four-lane divided facility throughout the project limits, excluding future median U-Turn bulb-outs. (Reference the Right of Way Scope of Work.)

- The Design-Build Team shall design and construct at-grade intersections as required by the Preliminary Plans provided by the Department. With the exception of the eastbound left turn lanes on Goldmine Road and NC 84, and the southbound left turn lane on Martin Luther King Jr. Boulevard at the NC 75 "ramp", the turn lane lengths shall meet the current NCDOT standards or the August 4, 2006 Traffic Analysis, whichever is greater. The aforementioned three left turn lanes shall adhere to the current NCDOT standards. The design vehicle for all turning movements shall be a WB-50.

- The Design-Build Team shall design and construct –Y– Lines and cul-de-sacs, providing access, widening and improvements as indicated on the Preliminary Plans and Combined Public Hearing Map provided by the Department. The limits of –Y– Line construction shall be of sufficient length to tie to existing based upon the current NCDOT guidelines and standards.

- Along the -L- Line, all –Y– Lines and the ramp the Design-Build Team shall design and construct shoulder widths that adhere to the NCDOT Design Manual, four-foot of which shall be full depth paved shoulders. Functional classifications that have a defined usable shoulder width shall have the appropriately wider overall shoulder width.

- Milled rumble strips will not be required.

- 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.

- Concurrence Point 4A, Avoidance and Minimization, has been reached with the Environmental Agencies. Any variations in the Department's proposed design and or construction methods that nullify Concurrence Point 4A and / or require additional coordination with the Environmental Agencies is the sole responsibility of the Design-Build Team. The Department shall not allow any contract time extensions associated with this additional coordination. (Reference Environmental Permits Scope of Work).

- The Design-Build Team shall design and construct resurfacing grades for all roadways impacted by construction, excluding haul roads. The Design-Build Team shall design and construct grades that adhere to the design criteria and standards, providing all required pavement wedging.

- The maximum allowable permanent cut or fill slope shall be 2:1, unless noted otherwise in this RFP.

- Contingent on obtaining environmental agencies approval, the Design-Build Team may perform grading operations outside jurisdictional areas within the proposed right of way to obtain borrow material. This additional grading shall not in any way be detrimental to, or result in additional expense for, the future widening to a four-lane divided facility. The Design-Build Team shall not flatten the proposed cut slopes to obtain borrow material.

- The Design-Build Team shall inform the State Alternative Delivery Engineer, in writing, of any proposed changes to the NCDOT preliminary design, previously reviewed submittals or the Design-Build Team's Technical Proposal and obtain approval prior to incorporation. The Design-Build Team shall note in the Technical Proposal any proposed deviations to the Combined Public Hearing Map or the Preliminary Plans provided by the Department. The Design-Build Team shall be responsible for any activities, as deemed necessary by the Department or the FHWA, resulting from changes to the NCDOT preliminary design, including but not limited to, public involvement and NEPA re-evaluation. The Department shall not honor any requests for additional

contract time or compensation for completion of the required activities resulting from changes to the NCDOT preliminary design

- No Design Exceptions shall be allowed for the proposed two-lane facility or the future four-lane facility on Martin Luther King Jr. Boulevard. NCDOT prefers not to have design exceptions for the –Y– Lines. If the Design-Build Team anticipates any design exceptions, they shall be clearly noted in the Technical Proposal. Prior to requesting / incorporating a design exception, the Design-Build Team must obtain prior conceptual approval from the State Alternative Delivery Engineer and FHWA. If approval is obtained, the Design-Build Team shall be responsible for the development and approval of all design exceptions.

- The Design-Build Team shall place rebar and caps with carsonite posts for right of way monument locations for all parcels, as directed by the Engineer. The Department shall furnish the caps and carsonite posts in accordance with Department policy.

- The Design-Build Team shall submit Structure Recommendations and Design Criteria for NCDOT and FHWA review and acceptance prior to submittal of the Preliminary Plans developed by the Design-Build Team. 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, State Roadway Design Engineer.

- There are no noise walls required on this project as currently designed for the two-lane or future four-lane facility. 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 noise report (and subsequent correspondence between the Department and FHWA) will be provided to the Design-Build Team to assist in determination of anticipated additional noise impact on current receptors due to a design change. If noise walls are required as a result of design deviations, the Design-Build Team shall be responsible for all costs associated with the walls, including, but not limited to, public involvement, geotechnical investigation, shaft and wall designs and construction.

- Martin Luther King Jr. Boulevard (SR 1223) is a partial control of access facility. However, full control of access shall be provided for the area encompassed by Martin Luther King Jr. Boulevard, the "ramp" and NC 75. The Design-Build Team shall bring to the Department's attention any deviations from the proposed control of access shown on the Combined Public Hearing Map provided by the Department. All parcels with 2000 feet of frontage, or less, along Martin Luther King Jr. Boulevard (SR 1223) shall be provided only one access point, unless otherwise approved by the Engineer. For those parcels with less than 2000 feet of frontage along Martin Luther King Jr. Boulevard (SR 1223) and access along another roadway, access may be denied along Martin Luther King Jr. Boulevard (SR 1223). For parcels currently without existing driveways, the Design-Build Team shall only be responsible for providing control of access breaks, not for the construction of driveway stubouts. The Design-Build Team shall be responsible for coordination with and approval by the NCDOT of

STRUCTURES SCOPE OF WORK (07-19-07)

Project Details

The Design-Build Team shall be responsible for all structures necessary to complete the project. The following structures are anticipated:

- Bridge on –L– over NC 75.
- Bridge on –L– over CSX Railroad.
- Bridge on –L– over Bearskin Creek
- Structure for Dry Fork Creek near Sta. 155+00 +/- –L– (preliminary roadway plans dated 11/21/06)
- One Box Culvert on unnamed tributary near Sta. 68+60 +/- –L– (preliminary roadway plans dated 11/21/06)
- Structure for Dry Fork Creek near Sta. 16+80 +/- –Y6– (preliminary roadway plans dated 11/21/06)

** NOTE ** Deleted paragraph on bridge on -L- over Bearskin Creek.

The existing bridge at Sta. 16+80 –Y6– shall be removed.

Size of box culverts to be determined by the Design-Build Team.

The vertical and horizontal clearances for the bridge over NC 75 shall accommodate a future four-lane divided arterial with a 30-foot median.

** NOTE ** Revised and relocated paragraph on railroad minimum vertical and horizontal clearances.

All bridge barrier rails shall be jersey shaped barriers per Standard Drawing CBR1.

Shoulder piers for grade separations shall be avoided when possible. MSE walls in front of end bents are allowed provided ample room remains underneath the bridge for clear recovery on the proposed roadway or (2) future widening to six lanes, whichever governs.

A live load rating chart for girders will be required on the bridge plans.

At bridge locations along the -L- line, the Design-Build Team shall be responsible for either attaching a conduit system to the bridge structure or installing a conduit system underground. See Signals scope of work for conduit location and details.

General

The Design-Build Team's primary structural design firm shall be on the Highway Design Branch list of firms qualified for Structure Design and maintain an office in North Carolina.

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 Overhead Design and Coordination:

The minimum vertical clearance over the railroad, including future track, is 23'-0". The minimum horizontal clearances for the railroad, measured perpendicular to the track, shall be 33'-0" south of the existing track center and 40'-0" to the north of the existing track center. These clearances are to accommodate a future 8' wide access road to the south of the existing track and a future track to the north of the existing track. (Reference the December 27, 2006 letter from DMJM Harris.). Crashwalls on interior bents shall not be permitted.

There are approximately 16 trains per day operating at a maximum speed of 40 miles per hour at this location (Milepost SF-307.72)

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

Reference Railroad Coordination Scope of Work.

HYDRAULICS SCOPE OF WORK (07-18-07)

Project Details

- The Design-Build Team shall be responsible for determining the structure type and size for the Dry Fork Creek structures (–L– and –Y– Lines), as well as the length for the bridge over Bearskin Creek to ensure compliance with Union County and FEMA requirements.

- Note that the far southern end of the project slightly infringes on the tributaries to Beaverdam Creek which are WS-IV streams in a protected watershed. No hazardous spill basins are required.
- No vertical low point shall be allowed on any bridge or approach slabs.
- The Design-Build Team shall investigate natural channel design for crossing near stream S2c. (Reference On-Site Mitigation Scope of Work)
- The Design-Build Team shall conduct the 4B & 4C meetings. All associated work resulting from the agencies' and the Department's hydraulics review and permit review shall be the responsibility of the Design-Build Team.
- The Design-Build Team shall provide roadway plans with contours (1/2 size plans) for the 4B meeting and hydraulic plans and permit impact sheets (1/2 size plans) and permit documentation for the 4C meeting to the State Alternative Delivery Engineer 5 weeks before respective meetings. The Design-Build Team shall provide minutes of the above meetings to the Department within 3 business days.
- The Design-Build Team shall not discharge additional storm water from the bridge or approaching roadways into the railroad right-of-way.
- The Design-Build Team shall prepare permit drawings for an Individual Section 404 permit and Individual 401 Water Quality Certification for the 2-lane design.
- The Design-Build Team shall utilize the preliminary Hec Ras models provided by the Department for the bridge for Bearskin Creek and the structures for Dry Fork Creek and coordinate the final hydraulic design and impacts to the floodway and floodplain with Union County and NC Floodplain Mapping. Note that these are preliminary Hec Ras models and are subject to change. The final models are anticipated to be available in the next few months and shall be acquired through the Department and used by the Design-Build Team in their design and the preparation of the CLOMR submittal.
- The Design-Build Team shall be responsible for compiling all FEMA CLOMR and LOMR Forms, Letters, and Mapping for NCDOT submittal. No construction activity shall occur in FEMA regulated floodplains prior to obtaining an approved CLOMR. Department will be responsible for all associated fees.
- The Design-Build Team shall design and construct drainage for a 2-lane facility.

General

- The Design-Build Team shall develop all drainage designs in accordance with criteria provided in the North Carolina Division of Highways *"Guidelines for Drainage Studies and Hydraulics Design-1999"* and the addendum *"Handbook of Design for Highway Drainage Studies-1973"* and the NCDOT Hydraulic Unit web page.
- The Design-Build Team shall hold a pre-design meeting with NCDOT.
- The Design-Build Team shall develop drainage design plans using the current version of Microstation and Geopak software required by NCDOT and shall be in English units. The plans shall follow NCDOT CADD standards including but not limited to NCDOT's file naming convention, leveling chart, and file folder structure.
- For pipes up to 48" in diameter and not located under travelways or curb and gutter, Type S or Type D, HDPE pipe meeting the requirements of Article 1032-10 of the *2006 NCDOT Standard Specifications for Roads and Structures* or Aluminized Corrugated Steel Pipe, Type IR meeting the requirements of Article 1032-3(A)-7 of the *2006 NCDOT Standard Specifications for Roads and Structures* may be used instead of Reinforced Concrete Pipe, Class III. Installation of both alternate pipe materials shall conform to the requirements of Section 300 of the Standard Specifications for Method A, except that the minimum cover shall be at least 12 inches. HDPE Pipe shall not be allowed beneath the travelway, median or curb and gutter of the future four-lane divided facility.
- The Design-Build Team shall use 2:1 side slopes in wetlands and stream areas.
- The Design-Build Team shall avoid ditches in wetlands.
- The Design-Build Team shall prepare Culvert Survey Reports or Bridge Survey Reports for all crossings conveying greater than a 72" pipe capacity that are proposed, extended, replaced, or rehabilitated.
- The Design-Build Team shall develop a Stormwater Management Plan.
- The Design-Build Team shall analyze pre and post designs for increases in discharge and take appropriate action in accordance with the above guidelines to make sure additional drainage is adequately handled. Design-Build Teams are not responsible for addressing the adequacy of pipe systems outside of the NCDOT right of way.

Information Supplied:

- Preliminary Hec Ras models for Bearskin Creek and Dry Fork Creek.
- Drainage work files

TRAFFIC CONTROL AND PAVEMENT MARKINGS SCOPE OF WORK (07/24/07)

I. Traffic Control Plans

A. Design Parameters

The Design-Build Team shall prepare the Traffic Control and Pavement Marking Plans for this project following the parameters listed below:

1. Maintain a minimum of one 11-foot lane in each direction on all roadways, unless otherwise noted below.
2. Maintain existing shoulder widths unless there is a permanent obstruction, i.e. curb and gutter, guardrail, etc. In addition, if any traffic control device is utilized, then a minimum 2-foot offset (shy distance) shall be required from the edge of travel lane to the traffic control device.
3. The lowest allowable design speed for all temporary alignments shall be the higher of 10 mph below the posted speed limit or 35 mph. The Design-Build Team shall not anticipate a speed reduction ordinance (see below).
4. Roadway Standard Drawing 1101.11 shall be used for merge and shift tapers. All other temporary designs shall follow the NCDOT Roadway Design Manual, 2004 AASHTO A Policy on Geometric Design of Highways and Streets and the most current Highway Capacity Manual.
5. Maintain access to all residents, schools and businesses at all times, unless otherwise noted below.
6. All road closures are subject to Department approval. The Design-Build Team shall be responsible for investigating all detour routes, including, but not limited to, analyzing the traffic capacity, investigating impacts to emergency services and schools and determining improvements required to accommodate the detoured traffic. Prior to utilizing a detour, the Design-Build Team shall be responsible for obtaining Department approval and installing improvements required to accommodate the detoured traffic. Proposed offsite detours shall not have any at-grade railroad crossings.

Construction shall not begin until the first phase submittal meets the requirements of the RFP. The Staging Concept and Preliminary Pavement Marking Plans shall meet the RFP requirements before the first phase submittal can be submitted. Construction shall not begin on subsequent phase submittals until they meet the requirements of the RFP, the "*Guidelines for Preparation of Traffic Control and Pavement Marking Plans for Design-Build Projects*", and the "*Design-Build Submittal Guidelines*". If a temporary traffic barrier system will be used, the Staging Concept shall identify the proposed type of barrier system for approval by the State Alternative Delivery Engineer.

The Work Zone Traffic Control website contains useful information that may be needed for the traffic control design.

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

B. Traffic Control and Final Pavement Marking Plan requirements:

The Design-Build Team shall select a Private Engineering Firm (PEF) that has a minimum of five years of designing and sealing Traffic Control and Pavement Marking Plans for the Department on comparable projects. The Technical Proposal shall list projects, including description and similarity to the subject project, designed by the PEF.

The Design-Build Team shall develop Traffic Control and Pavement Marking Plans that maintain all types of traffic, pedestrian traffic and be ADA complaint using the following at a minimum, the 2006 Roadway Standard Drawings, 2006 Standard Specifications for Roadways and Structures, 2003 Manual on Uniform Traffic Control Devices, "*Design-*

Build Submittal Guidelines" and "*Guidelines for Preparation of Traffic Control and Pavement Marking Plans for Design-Build Projects*".

** NOTE ** Revised and relocated Section C to the Technical Proposal Evaluation Criteria located elsewhere in the RFP (Reference the General Section).

II. Project Operations Requirements

The following are Time Restrictions and notes that shall be included with the Traffic Control Plans General Notes:

A. Time Restrictions

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

As a minimum, the Design-Build Team shall maintain existing traffic patterns and not close or narrow a lane during the times below. When traffic is placed into the final pattern for any roadway, that will become the minimal traffic pattern and the following time restrictions will still apply.

Road name	Times
NC 200, Cornith Church Rd (SR 1158), NC 75, NC 84, Dickerson Blvd (SR 1200), Goldmine Rd (SR 1162) and Martin Luther King Jr. Blvd (SR 1223)	Monday to Thursday – 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. Friday - 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 9:00 p.m.

The Design-Build Team shall not install, maintain or remove any traffic control device required for narrowing or closing a lane during the times listed above.

In addition to the lane narrowing and closure restrictions stated above, during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy on the roadways listed here within, the Design-Build Team shall not close or narrow a lane of traffic, detain the traffic flow or alter the traffic flow. As a minimum, these requirements / restrictions apply to the following schedules:

(a) For New Year's between the hours of 7:00 a.m. December 31st to 6:00 p.m. January 3rd. If New Year's Day is on a Friday, Saturday or a Sunday, then from 7:00 a.m. the Friday before New Year's Day to 6:00 p.m. the following Tuesday.

(b) For Easter, between the hours of 7:00 a.m. the Friday before Easter and 6:00 p.m. the Tuesday after Easter.

(c) For Memorial Day, between the hours of 7:00 a.m. the Friday before Memorial Day to 6:00 p.m. the Wednesday after Memorial Day.

(d) For Independence Day, between the hours of 7:00 a.m. July 3rd and 6:00 p.m. July 6th. If Independence Day is on a Friday, Saturday or Sunday, between the hours of 7:00 a.m. the Thursday before Independence Day and 6:00 p.m. the Tuesday after Independence Day.

(e) For Labor Day, between the hours of 7:00 a.m. the Friday before Labor Day to 6:00 p.m. the Wednesday after Labor Day.

(f) For Thanksgiving, between the hours of 7:00 a.m. the Tuesday before Thanksgiving to 6:00 p.m. the Tuesday of the following week.

(g) For Christmas, between the hours of 7:00 a.m. the Friday before the week of Christmas Day and 6:00 p.m. the following Tuesday after the week of Christmas Day.

(h) For NASCAR events at Charlotte, NC and Darlington, SC, from 7:00 a.m. the Friday before the event to 6:00 p.m. Monday after the event.

(i) For the Pageland Watermelon Festival in Pageland, SC, from 4:00 p.m. the Thursday before the event to 9:00 a.m. the Monday after the event.

Liquidated Damages for Intermediate Contract Time #1 for the above lane narrowing, lane closure, holiday and special event time restrictions for NC 200, SR 1158, NC 75, NC 84, SR 1200, SR 1162 and Martin Luther King Jr. Boulevard are $1,000.00 per hour.

2. Intermediate Contract Time #2 for Road Closure Restrictions for Construction Operations.

As a minimum, the Design-Build Team shall maintain the existing traffic pattern for all roadways and follow the road closure restrictions listed below. When a road closure is used, the Design-Build Team shall reopen the travel lanes by the end of the road closure duration to allow the traffic queue to deplete before re-closing the roadway.

The Design-Build Team may close NC 200, Cornith Church Rd (SR 1158), NC 75, NC 84, Dickerson Blvd (SR 1200), Goldmine Rd (SR 1162), and Martin Luther King Jr. Blvd. for the construction operations listed below. Road closures shall not be utilized during the following time restrictions.

Sunday to Saturday - 6:00 a.m. - 9:00 p.m.

Maximum road closure duration of **30 minutes** shall be allowed for the following operations:

- Traffic shifts, including tie-in work and placement of pavement markings.
- Tie-in work for -L- and / or -Y- Lines.

Maximum road closure duration of **60 minutes** shall be allowed for girder installation.

** NOTE ** Revised and relocated paragraph on road closures.

Liquidated Damages for Intermediate Contract Time #2 for the above road closure time restrictions for NC 200, SR 1158, NC 75, NC 84, SR 1200, SR 1162 and Martin Luther King Jr. Boulevard are $500.00 per 15 minute period or any portion thereof.

3. Intermediate Contract Time #3 for closure of Goldmine Road (SR 1162) for proposed structure construction at –Y6- Station 16+80 +/-.

To construct the proposed structure at approximately Station 16+80 -Y6-, the Design-Build Team will be allowed to close Goldmine Road (SR 1162) from approximately Station 13+00 to 20+00 -Y6- one time. During this road closure the Design-Build Team shall maintain traffic on an approved offsite detour. This road closure shall be allowed for no longer than **120 consecutive calendar days or shorter amount of time as indicated in the Technical Proposal.**

Liquidated Damages for Intermediate Contract Time #3 for the above road closure time restrictions for Goldmine Road (SR 1162) will be accessed after the 120 consecutive calendars indicated above or the shorter duration indicated in the Technical Proposal. Liquidated Damages for Contract Time #3 are $3,000.00 per calendar day or any portion thereof.

4. Intermediate Contract Time #4 for closure of Martin Luther King Jr. Boulevard (SR 1223) for proposed structure construction at approximately Stations 65+60 and 68+60 -L-.

The Design-Build Team will be allowed to close a short section of Martin Luther King Jr. Boulevard (SR 1223), in proximity to the associated drainage structure, one time for replacement of each of the proposed drainage structures at approximately Station 65+60 and 68+60 -L- for no longer than **7 and 45 consecutive calendar days, respectively.**

At all times during the aforementioned road closure, access to and from all access points along Martin Luther King Jr. Boulevard shall be maintained; Martin Luther King Jr. Boulevard shall provide access and connectivity to alternate routes; and schools shall not be in session.

Liquidated Damages for Intermediate Contract Time #4 for the above road closure time restrictions for Martin Luther King Jr. Boulevard (SR 1223) are $3,000.00 per calendar day or any portion thereof.

5. Hauling Restrictions

The Design-Build Team shall adhere to the hauling restrictions noted in the *2006 NCDOT Standard Specifications for Roads and Structures.*

The Design-Build Team shall not conduct any hauling operations against the flow of traffic of an open travelway unless the work area is protected by an approved temporary traffic barrier or guardrail.

Hauling vehicles shall not leave or enter an open travel lane at less than 10 mph below the posted speed limit unless flaggers or lane closure operations are utilized. All entrances and exits for hauling to the work zone shall follow the Roadway Standard Drawings.

B. Lane and Shoulder Closure Requirements

The Design-Build Team shall not install more than 2.0 miles of lane closures on any roadway within the project limits, measured from the beginning of the merge taper to the end of the lane closure.

Within the project limits, the Design-Build Team shall not install more than one lane closure, in any one direction, on any roadway. A lane closure may be installed in opposing directions (maximum of one in each direction) as long as a minimum distance of four miles is maintained between the lane closure limits.

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

The cost in relocating CATV due to the highway construction shall be the responsibility of the CATV Company; however, under the following conditions the NCDOT will bear the relocation expense:

(A) If the CATV Company can validate a recorded easement for facilities outside the maintained NCDOT rights of way.

(B) The adjustment is needed on existing utility poles to accommodate for a proposed NCDOT Traffic Management System Fiber Optic Communication Cable Project.

The NCDOT shall not permit CATV to place poles within the highway rights of way but will allow down guys for their facilities within the highway rights of way. Under most circumstances, the CATV Company will continue a joint-use attachment with the local Power and Telephone Company. If the CATV proposed relocation places buried facilities within the highway rights of way then plans and encroachment agreements shall be required by the NCDOT.

IV. If the Design-Build Team elects to make arrangements with a utility company to incorporate a new utility installation or relocation as part of the highway construction, the utility work done by the Design-Build Team and the associated costs for the work shall be negotiated and agreed upon between the Design-Build Team and the utility company.

If the Design-Build Team's design and / or construction requires the relocation of existing water or sewer facilities, designs shall be coordinated with the NCDOT Utility Unit. The costs for all engineering charges associated with the design for relocation of these existing water and / or sewer facilities shall be the responsibility of the Design-Build Team. The Design-Build Team shall develop designs; prepare all plans for needed agreements and permits; submit permits directly to the agencies and obtain approval from the agencies. The Design-Build Team shall be responsible for all permit fees.

The Design-Build Team shall make arrangements to relocate water or sewer line facilities in which the entities are covered under *General Statute 136-27.1* or occupying a compensable interest. The non-betterment costs associated with this work will be borne by NCDOT and shall be addressed in accordance with Article 104-7 of the Standard Special Provisions, Division One, contained elsewhere in this RFP.

If total property acquisition is unavoidable due to encroachment into wells and / or septic systems, then the Design-Build Team shall investigate and determine if extending water and / or sewer lines to the affected property is cost effective. If the Department concurs with the determination that a utility extension is cost effective, the costs associated with the utility construction shall be addressed in accordance with Article 104-7 of the Standard Special Provisions, Division One, contained elsewhere in this RFP.

If the Design-Build Team is requested, in writing, by an entity to relocate facilities not impacted by the project's construction, upgrade or incorporate new water and sewer facilities as part of the highway construction, designs shall be coordinated with the Utility Owner and NCDOT Utility Unit. The associated design and construction costs shall be negotiated and agreed upon between the Design-

The Design-Build Team shall be responsible for running Fiber Optic communications cable to the existing traffic signal controller cabinet location at SR 1223 (MLK Jr. Blvd. / Dickerson Blvd.) at US 74 and coiling a sufficient amount of fiber optic cable in the same quadrant of the existing cabinet location. This Fiber Optic communications cable will be used for future interconnection and coordination (by others) with the existing US 74 Closed Loop Signal System.

The Design-Build Team shall not attach fiber optic communications cable to the City of Monroe's streetlights.

The Design-Build Team shall be responsible for pursuing necessary agreements with the CSX Railroad Company for running communications cable.

At bridge locations, the Design-Build Team shall be responsible for either attaching a conduit system to the bridge structure or installing a conduit system underground. As a minimum, the conduit system shall consist of providing a 4-inch outerduct conduit with four 1-inch innerduct conduits if attached to the bridge. Should the conduit system be installed underground, the Design-Build Team shall provide a minimum of four (4), 1-inch conduits (including an outer duct conduit if necessary). The Design-Build Team shall be responsible for coordinating, locating and installing the conduit system with the appropriate entities / agencies that will be affected. These conduits will be provided for routing the fiber optics communications cable (12-fiber) and spare conduits for future ITS expansion.

Utility Make-Ready Plans

In conjunction with the development of the Communications Cable and Conduit Routing Plans and Traffic Signal Plans, the Design-Build Team shall also develop a set of **Utility Make-Ready Plans**

Communications Cable & Conduit Routing Plans, and Project Special Provisions

Prior to construction, the Design-Build Team shall provide a detailed set of Communications Cable & Conduit Routing Plans, and Project Special Provisions for the Department’s review and approval. No construction related to the installation of the communications system shall begin until NCDOT has approved the RFC plans and specifications.

The Communications Cable & Conduit Routing Plans, and Project Special Provisions shall consist of three major items listed below:

- Communications Cable & Conduit Routing Plans (with Cable Termination Plans)
- Project Special Provisions
- Catalog Cut Sheets