



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

July 20, 2012

Addendum No. 1

Contract No.: C 202831
TIP No.: R-4902
County: Mecklenburg
Project Description: Widen I-485 from I-77 to Rea Road (SR 3624) south of Charlotte

RE: Addendum No. 1 to Final RFP

August 21, 2012 Letting

To Whom It May Concern:

Reference is made to the Final Request for Proposals dated July 17, 2012 recently furnished to you on the above project. We have since incorporated changes, and have attached a copy of Addendum No. 1 for your information. Please note that all revisions have been highlighted in gray and are as follows:

The second page of the *Table of Contents* has been revised. Please void the second page in your proposal and staple the revised second page thereto.

Page No. 70 of the *General Section* has been revised. Please void Page No. 70 in your proposal and staple the revised Page No. 70 thereto.

Page No. 85 of the *Roadway Scope of Work* has been revised. Please void Page No. 85 in your proposal and staple the revised Page No. 85 thereto.

Page Nos. 97 and 98 of the *Structures Scope of Work* have been revised. Please void Page Nos. 97 and 98 in your proposal and staple the revised Page Nos. 97 and 98 thereto.

Page No. 161 of the *Erosion and Sedimentation Control Scope of Work* has been revised. Please void Page No. 161 in your proposal and staple the revised Page No. 161 thereto.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT UNIT
1591 MAIL SERVICE CENTER
RALEIGH NC 27699-1591

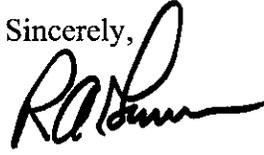
TELEPHONE: 919-707-6900
FAX: 919-250-4119

WEBSITE: WWW.NCDOT.ORG

LOCATION:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC

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

Sincerely,

A handwritten signature in black ink, appearing to read "R.A. Garris", written in a cursive style.

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

cc: Barry Moose, PE
Victor Barbour, PE
Rodger Rochelle, PE
Teresa Bruton, PE
Project File

GENERAL	69
SCOPES OF WORK	
Roadway.....	85
Pavement Management.....	93
Structures.....	96
Geotechnical Engineering.....	99
Hydraulics.....	108
Traffic Management.....	110
Signing.....	128
ITS Conduit System.....	133
Pavement Markings.....	137
Signals.....	139
Railroad Coordination.....	143
Utilities Coordination.....	146
Geoenvironmental.....	152
Erosion and Sedimentation Control.....	153
Lighting.....	163
Environmental Permits.....	164
Public Information.....	169
STANDARD SPECIAL PROVISIONS	
Plant and Pest Quarantines.....	171
Gifts from Vendors and Contractors.....	171
Bridge Approach Fills.....	172
Preparation of Subgrade and Base.....	174
Asphalt Pavements – Superpave.....	174
Asphalt Paver – Fixed and Mobile String Line.....	175
Asphalt Binder Content of Asphalt Plant Mixes.....	175
Asphalt Plant Mixtures.....	176
Final Surface Testing – Asphalt Pavements.....	176
Remove and Stockpile Existing Guardrail.....	177
Guardrail Anchor Units, Type M-350.....	177
Guardrail Anchor Units, Type 350.....	178
Impact Attenuator Units, Type 350.....	179
Preformed Scour Hole with Level Spreader Apron.....	181
Subsurface Drainage.....	182
Street Signs and Markers and Route Markers.....	182
Materials.....	183
Select Material, Class III, Type 3.....	184
Temporary Shoring.....	185
Truck Mounted Changeable Message Signs (CMS).....	196
Coordination of Lighting Work.....	197
On-the-Job Training.....	197
Availability of Funds.....	200

submitted in accordance with the “*Design-Build Submittal Guidelines*”, which by reference are incorporated and made a part of this contract. All submittals shall be made simultaneously to the Transportation Program Management Director 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 Transportation Program Management Director 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 proposed improvements shall consist of providing a six-lane divided facility from west of I-77 to Rea Road (SR 3624) in Mecklenburg County. The project shall widen approximately 9.2 miles of I-485.

Project services shall include, but are not limited to:

- **Design Services** – completion of construction plans, including Record Drawings
- **Construction Services** – necessary to build and ensure workmanship of the designed facility
- **Permit Preparation / Application** - development of all documents for required permits
- **Right of Way** – acquisition of right of way necessary to construct project

~~The Categorical Exclusion was approved on July 18, 2012.~~

Construction Engineering Inspection will be provided by the NCDOT Division personnel.

GENERAL SCOPE

The scope of work for this project includes design, construction and management of the project. The design work includes all aspects to widen approximately 9.2 miles of I-485 to a six-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.

Construction shall include, but not be limited to, all necessary clearing, grading, roadway, drainage, structures, utility coordination and relocation, and erosion and sediment control work

ROADWAY SCOPE OF WORK (7-20-12)

Throughout this RFP, for reference purposes only, the eastbound direction extends from I-77 to Rea Road (SR 3624).

Project Details

- The Design-Build Team shall design and construct an additional through lane in each direction of I-485, providing a minimum 46-foot median, from the eastern terminus of the existing I-485 dual bridges over I-77 to just west of Rea Road (SR 3624) in Mecklenburg County. Unless noted otherwise elsewhere in this RFP, the Design-Build Team shall design and construct the -L- Line providing the same or better access, widening, improvements and level of service included in the R-4902 Design Public Meeting Map provided by the Department. The limits of -L- Line construction shall be of sufficient length to tie to existing based upon the current NCDOT guidelines and standards. The mainline shall be designed and constructed to meet a 70-mph design speed for a level freeway designed to interstate standards. At a minimum, the US 521 northbound to I-485 westbound flyover shall be designed and constructed to meet a 50-mph design speed. The Design-Build Team shall provide all other design criteria in the Technical Proposal.
- The Design-Build Team shall design and construct the I-485 / US 521 interchange in accordance with the interchange configuration depicted on the Design Public Meeting Map. Any deviation to this interchange configuration shall require an approved Alternative Technical Concept. (Reference the Alternative Technical Concepts and Confidential Questions Project Special Provision found elsewhere in this RFP)
- The Design-Build Team shall extend the proposed I-485 westbound auxiliary lane shown on the Design Public Hearing Map to the I-485 exit loop at the NC 51 interchange. Specifically, the Design-Build Team shall design and construct a mainline westbound auxiliary lane from the US 521 northbound to I-485 westbound flyover to the I-485 exit loop that accesses NC 51 southbound. For all disciplines, the Design-Build Team shall include all preconstruction and construction costs required for the aforementioned auxiliary lane extension in the lump sum price bid for the entire project. The Design-Build Team is not required to include any designs associated with the auxiliary lane extension in the Technical Proposal.
- Along the -L- Line, the Design-Build Team shall provide 12-foot outside shoulders, ten-foot of which shall be paved shoulders. The Design-Build Team shall provide ten-foot full depth paved outside shoulders adjacent to proposed mainline widening, including but not limited to adjacent to the proposed auxiliary lane and all permanent outside widening.
- From east of I-77 to east of US 521, the Design-Build Team shall design and construct 22-foot median shoulders along the -L- Line. The 12 feet of the median shoulders adjacent to the mainline travel lane shall be designed and constructed to accommodate a future travel lane with appropriate cross slope. The remaining ten feet of the median shoulders shall be full depth paved shoulders with appropriate concrete median barrier.
- From east of US 521 to the eastern project terminus, the Design-Build Team shall design and construct 14-foot median shoulders, 12-foot of which shall be full depth paved shoulders.

The Design-Build Team shall be responsible for all required railroad coordination to construct the widening of -L- (I-485) under existing Bridge No. 645, including but not limited to securing Railroad Agreements. (Reference the Railroad Coordination Scope of Work found elsewhere in this RFP)

All existing reinforced concrete box culverts (RCBC) shall be retained. It is anticipated that the existing RCBC will not require additional conveyance or lengthening. However, the Design-Build Team shall lengthen the existing reinforced concrete box culverts as required by the Design-Build Team's design and / or construction methods.

All bridges shall meet approved roadway typical sections and grades. Bridge geometry (width, length, skew, span arrangement, etc.) shall be in accordance with the accepted Structure Recommendations prepared by the Design-Build Team.

Cored slab, box beam, fracture critical, cast-in-place deck slab and deck girder bridges will not be allowed on this project.

All proposed bridge barrier rails shall be jersey shaped barrier rail, per Standard Drawing CBR1. Precast barrier rails will not be allowed.

The empirical method for deck design will not be allowed.

A live load rating chart for both existing and proposed girders shall be included with the bridge plans and shall state design assumptions and methodology used in the load rating calculations. Regardless of the rating of existing girders, these girders do not need to be replaced. The load rating shall be in accordance with the NCDOT *Structure Design Manual* (including policy memos) and *AASHTO's Manual for Bridge Evaluation*.

Sound barrier walls shall be in accordance with Structure Standards SBW1 and SBW2 and the Sound Barrier Wall Project Special Provision located on the Structure Design Unit website or alternate details and special provisions approved by the NCDOT Structure Design Unit, Geotechnical Engineering Unit, and Human Environment Unit. Concrete piles are permitted provided adequate connection details are used.

Bridge Widening and Rehabilitation

The Design-Build Team shall provide closure pours with cross-joint reinforcement / dowels. Intermediate diaphragms are not required in the closure bay. The Design-Build Team shall provide bent diaphragms in the closure bay and the plans shall reflect that these diaphragms be connected and bolts tensioned prior to the deck pour. Diaphragms for all other bays shall be included as per the NCDOT *Structure Design Manual* (including policy memos).

The Design-Build Team shall replace all preformed compression joints with unarmored, sawed foam joint seals and elastomeric concrete.

At the structures noted below, the Design-Build Team shall remove and replace the existing expansion joints:

- I-485 eastbound and westbound bridges over Little Sugar Creek
- I-485 eastbound and westbound bridges over NC 51 (Pineville-Matthews Road)

At the structures noted below, the type of expansion joint seal in the widening shall match the existing expansion joint seal. The Design-Build Team shall remove the existing expansion joint seal

glands and replace with new expansion joint seal glands that are continuous across the whole structure. The Design-Build Team shall galvanize or metalize all existing hold down plates.

- I-485 eastbound and westbound bridges over SR 1128 (Westinghouse Boulevard)
- I-485 eastbound and westbound bridges over McMullen Creek

For bridges that require widening, the Design-Build Team shall overlay the existing and widened decks and approach slabs with latex modified concrete. (Reference the *Repair of Bridge Decks and Approach Pavement with Latex Modified Concrete* and *Latex Modified Concrete* Project. Special Provisions found elsewhere in this RFP) The Design-Build Team shall mill or hydro-demolition the existing decks and approach slabs to perform Class I and Class IA Surface Preparation on all widened bridges. To allow the Department to complete a drag chain investigation immediately following the milling operation, the Design-Build Team shall provide written notification a minimum of 21 days prior to completing the milling operation. The Design-Build Team shall provide Class II and / or Class III Surface Preparation, for areas which are found to be unsound or delaminated as determined by the Engineer. In such case, the Class II and Class III repairs will be paid for as extra work in accordance with Subarticle 104-8(A) of the 2012 *Standard Specifications for Roads and Structures* at the price of \$300 per square yard and \$700 per square yard, respectively.

The Design-Build Team may analyze existing substructure and foundation elements using the design standards / specifications that were current at the time of the original design.

Using System 4 of Article 442-7 of the 2012 *Standard Specifications for Roads and Structures*, the Design-Build Team shall paint the free ends of the existing and proposed steel beams / girders for Bridge Nos. 606 and 607.

The Design-Build Team shall repair and extend the existing concrete and / or rip rap slope protection completely across the median, forming continuous slope protection at all widened bridges. The slope protection shall extend up the slope to the end of end bent wings in the median.

General

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

Design shall be in accordance with the latest edition of the AASHTO *LRFD Bridge Design Specifications* (with exceptions noted in the NCDOT *Structure Design Manual*), NCDOT LRFD Driven Pile Foundation Design Policy, NCDOT *Structure Design Manual* (including policy memos) and NCDOT Bridge Policy Manual except as noted otherwise elsewhere in this RFP.

Construction and materials shall be in accordance with NCDOT 2012 *Standard Specifications for Roads and Structures*, NCDOT Structure Design Unit Project Special Provisions and NCDOT Structure Design Unit Standard Drawings.

Alternate designs, details or construction practices (such as those employed by other states, but not standard practice in North Carolina) are subject to Department review and approval, and will be evaluated on a case by case basis.

Attachment of sign structures to bridges will not be allowed.

Any required bridge attachments (e.g. signal lines) will not be allowed in the overhang of grade separations. Casting of conduit in the bridge deck or barrier rail will not be allowed.

Access facilities for maintenance and inspection will not be required.

***** Approved Tall Fescue Cultivars**

2nd Millennium	Duster	Magellan	Rendition
Avenger	Endeavor	Masterpiece	Scorpion
Barlexas	Escalade	Matador	Shelby
Barlexas II	Falcon II, III, IV & V	Matador GT	Signia
Barrera	Fidelity	Millennium	Silverstar
Barrington	Finesse II	Montauk	Southern Choice II
Biltmore	Firebird	Mustang 3	Stetson
Bingo	Focus	Olympic Gold	Tarheel
Bravo	Grande II	Padre	Titan Ltd
Cayenne	Greenkeeper	Paraiso	Titanium
Chapel Hill	Greystone	Picasso	Tomahawk
Chesapeake	Inferno	Piedmont	Tacer
Constitution	Justice	Pure Gold	Trooper
Chipper	Jaguar 3	Prospect	Turbo
Coronado	Kalahari	Quest	Ultimate
Coyote Kentucky 31	Rebel	Exeda	Watchdog
Davinci	Kitty Hawk	Rebel Sentry	Wolfpack
Dynasty	Kitty Hawk 2000	Regiment II	
Dominion	Lexington	Rembrandt	

From January 1 – December 31, the Design-Build Team shall apply and additional 20# of Sericea Lespedeza on cut and fill slopes 2:1 or steeper.

Fertilizer shall be 10-20-20 analysis or a different analysis that provides a 1-2-2 ratio applied at a rate that provides the same amount of plant food as a 10-20-20 analysis and as directed.

Soil Analysis

If vegetation establishment indicates a deficiency in soil nutrients or an incurred pH level is present, the Design-Build Team shall take soil samples and apply additional soil amendments to the affected area and as directed.

Fertilizer Topdressing

Fertilizer used for topdressing shall be 10-20-20 analysis applied at a rate of 500 pounds per acre; or a different analysis that provides a 1-2-2 ratio applied at a rate that provides the same amount of plant food as a 10-20-20 analysis and as directed.

Fertilizer used for waste and borrow areas shall be 16-8-8 grade applied at a rate of 500 pounds per acre; or a different analysis that provides a 2-1-1 ratio applied at a rate that provides the same amount of plant food as a 16-8-8 analysis and as directed.