STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

February 15, 2013

Addendum No. 2

Contract No.:	C 203166
TIP Nos.:	I-5338 & I-5311
County:	Wake
Project Description:	I-40 / US 64 pavement reconstruction from west of SR 1319 (Jones Franklin Road) to I-440 / US 64 (Exit 301) and the I-440 / US 64 pavement reconstruction from I-40 / US 64 (Exit 301) to north of US 64 / US 264 (Knightdale Bypass)
RE:	Addendum No. 2 to Final RFP

To Whom It May Concern:

Reference is made to the Final Request for Proposals dated January 29, 2013 recently furnished to you on the above project. We have since incorporated changes, and have attached a copy of Addendum No. 2 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 Nos. 191 and 193 of the *Traffic Signals Scope of Work* have been revised. Please void Page Nos. 191 and 193 in your proposal and staple the revised Page Nos. 191 and 193 thereto.

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

Sincerely,

R. A. Garris, PE
Contract Officer

RAG/lib
Cc: Wally Bowman, PE
Teresa Bruton, PE
Victor Barbour, PE
Lonnie Brooks, PE
Rodger Rochelle, PE
File

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
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1591 MAIL SERVICE CENTER
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LOCATION:
CENTURY CENTER COMPLEX
ENTRANCE B-3
1020 BIRCH RIDGE DRIVE
RALEIGH NC

TRAFFIC SIGNALS SCOPE OF WORK (2-15-13)

I. General

The Design-Build Team shall design and prepare plans for the temporary traffic signal installations required by the construction phasing and / or detour routes. Based on the Department's design, new traffic signals and revisions to permanent traffic signals, with respect to hardware, poles, signal heads and / or phasing, are not anticipated. However, the Design-Build Team shall design and prepare plans for all new / modified permanent traffic signals resulting from design revisions and / or construction methods. The Design-Build Team shall replace all inductive detection loops for all reconstructed loops and ramps. Unless the affected travel lane(s) is closed to traffic, as allowed elsewhere in this RFP, the Design-Build Team shall immediately repair all inductive detection loops, including those on -Y- Lines, damaged during construction. All damaged inductive detective loops shall be repaired / replaced and fully operational prior to the lane(s) being reopened.

The Design-Build Team shall select a Private Engineering Firm (PEF) that has experience designing traffic signal plans for NCDOT on comparable projects. The Technical Proposal shall list projects, including description and similarity to the subject project.

A pre-design meeting shall take place between the NCDOT ITS & Signals Unit, the NCDOT Division 5 Traffic Engineer, the Design-Build Team, the City of Raleigh Transportation Operations Division and any other pertinent NCDOT personnel before signal designs begin. Signal Plan submittals shall only be reviewed and accepted by the Department after this pre-design meeting. The Design-Build Team shall concurrently provide plan submittals to the Department and the City of Raleigh. However, the Department will ultimately be responsible for the traffic signal submittal reviews and comments. All Traffic Signal Plans shall be accepted by the ITS & Signals Unit prior to beginning traffic signal construction or plan implementation.

The Design-Build Team shall coordinate and implement all signal designs at the appropriate time as directed by the Engineer. The Design-Build Team shall maintain, monitor and / or adjust traffic signals, both traffic and pedestrians, as needed throughout the project. The Design-Build Team shall design, implement and field evaluate / verify modifications to the existing coordinated signal system timing plans during construction to accommodate traffic pattern changes. If the Design-Build Team's final traffic pattern(s) differs from the existing traffic pattern(s), the Design-Build Team shall design, implement and field evaluate / verify modification to the coordinated signal system timing plans for the final traffic pattern, including but not limited to traffic responsive plans that are dependent on the traffic demands and / or projections. All signal system timing plans shall be reviewed and accepted by the Department prior to implementation. The Design-Build Team shall be responsible for the design and implementation of all temporary signal designs needed to maintain traffic during construction. **Throughout the project construction, the Design-Build Team shall maintain full actuation and system communication between the traffic signals located within the project limits.**

The NCDOT ITS & Signals Unit will assign Signal Inventory Numbers (SIN) for each new permanent signalized location. Once all the new permanent traffic signal locations have been finalized and accepted by the Department, the Design-Build Team shall submit a written request for the SINs to the NCDOT ITS & Signals Unit. At a minimum, this request shall list each signal location that requires a SIN and include the following:

- County
- Nearest Municipality

Liquidated damages for Intermediate Contract Time #17 for failure to repair a traffic signal inductive detection loop damaged during construction and restore traffic operation within 24 hours are $1,500.00 per 24-hour period or any portion thereof.

IV. Timing and Traffic Signal Plans

The Design-Build Team shall incorporate all new permanent traffic signals on this project into the Raleigh Signal System, which is currently being upgraded as part of TIP Project C-4923, and provide equipment that is compatible with the Raleigh Signal System. The existing traffic signals are monitored by the City of Raleigh at the Raleigh Traffic Operations Center, located on the ground floor of the Raleigh Municipal Building. The City of Raleigh has established timing plans for each signalized intersection to most efficiently progress vehicles at all times of the day.

The Design-Build Team shall adjust all traffic signal timing plans required by project detours, traffic patterns and / or construction. For all traffic signal timing plan modifications, the Design-Build Team shall concurrently submit documentation that supports the change to the NCDOT Division 5 Traffic Engineer and the City of Raleigh for review and acceptance a minimum of two weeks prior to implementation. The Design-Build Team shall not implement any traffic signal timing adjustments prior to the NCDOT acceptance.

For all modified traffic signals, the Design-Build Team shall document the changes in the field log book in the traffic signal cabinet. If a traffic signal maximum green time is changed, the Design-Build Team shall document the revision in the aforementioned traffic signal field log book; but a new Traffic Signal Plan will not be required. **The Design-Build Team shall not modify any signal phasing, yellow clearance time or all red clearance time without a revised Traffic Signal Plan reviewed and accepted by the Department and signed and sealed by a Professional Engineer licensed to practice in North Carolina.**

In the event that a new permanent traffic signal is required, the Design-Build Team shall design and prepare Traffic Signal Plans for the traffic signal installation. This work shall include, but not be limited to, the preparation of Traffic Signal Plans, Metal Pole Loading Diagrams, Electrical and Programming Details, Utility Make-Ready Plans, Communications Cable & Conduit Routing Plans and Project Special Provisions, as necessary.

All new permanent traffic signal designs shall incorporate the use of 2070L equipment operating NCDOT licensed OASIS software or SE-PAC software compatible with the Raleigh Signal System, as appropriate, including but not limited to base adapters / extenders and NCDOT standard metal strain poles or metal poles with mast arms as the signal supports (unless otherwise noted). All final traffic signal designs shall utilize inductive loop detection.

V. Signal Communications Required for New Permanent Traffic Signals

For all new permanent traffic signals, the Design-Build Team shall install, re-design, and / or maintain a fiber optic communications system which serves as the communications medium between existing, new and / or future traffic signals as part of the Raleigh Signal System.