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ADDENDUM #8

RFP# 7551608

**TITLE: DESIGN/BUILD SERVICES FOR THE WOOD RIVER
VALLEY BRIDGE #404**

SUBMISSION DEADLINE: JULY 12, 2017 – 11:30 A.M.

Please see attached revisions.

A handwritten signature in cursive script that reads "Lisa Hill".

Lisa Hill
Chief Buyer

June 23, 2017

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION DEPARTMENT OF ADMINISTRATION
DIVISION OF PURCHASES BID NO. 7551608

RHODE ISLAND DEPARTMENT OF TRANSPORTATION RHODE ISLAND CONTRACT NO.2017-DB-019
FEDERAL-AID PROJECT NO. FAP Nos: BH0-0404(001)

Wood River Valley Bridge No. 404, I-95 North & South (7T-A)

CITY/TOWN OF Hopkinton
COUNTY OF Washington

NOTICE TO PROSPECTIVE BIDDERS

ADDENDUM NO. 8 Prospective bidders and all concerned are hereby notified of the following changes in the Plans, Specifications, Proposal and Distribution of Quantities for this contract. These changes shall be incorporated in the Plans, Specifications, Proposal and Distribution of Quantities, and shall become an integral part of the Contract Documents.

A. Contract Documents

1. Volume 2 – Project Technical Requirements, Page 12 of 55

Revise Section **d. Seismic Loading** as shown in the attached document.

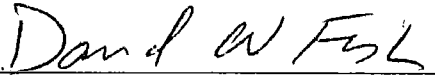
2. Volume 2 – Project Technical Requirements, Pages 39 to 41 of 55

Revise Section **2.9.4.2** as shown in the attached document.

3. BTC Plan Sheet 34 of 46

Revision #2: Existing sole plate note has been modified on the “Proposed Bearing Replacement At Pier” detail.

ADDENDUM NO. 8



Administrator, Division of Project Management

- d. **Seismic Loading** – The DB-Contractor shall be aware that this structure is classified as a **Critical Bridge** per Section 3.6.4 of the RIDOT LRFD Bridge Design Manual. Seismic analysis shall conform to Section 3.6 of the RIDOT LRFD Bridge Design Manual and the latest edition of the AASHTO LRFD Bridge Design Specification, including all interims. The DB-Contractor shall design the replacement bearings and substructure modifications (i.e. connection to superstructure and bearing support lengths) to meet those requirements as well. A multi-mode spectral method of analysis is required in accordance with Section 4.5 of the RIDOT LRFD Bridge Design Manual.

Site Classification shall be assumed as “DC”, based on the pier spread footings being founded on rock, however the DB-Contractor can perform a subsurface investigation and analysis to confirm an alternative Site Classification if desired.

In general, seismic retrofit work is limited to bearing design, superstructure to substructure connections, providing adequate longitudinal and lateral restraint for seismic forces at bearings and correcting deficiencies in support length. The intent is to not retrofit pier columns, pier foundations, and abutment foundations for seismic forces.

- e. **Load Rating** – Following the completion of the rehabilitation the DB-Contractor will be responsible for producing a load rating report for the bridge. The load rating analysis and report shall be in accordance with the RIDOT Guidelines for Load and Resistance Factor Rating (LRFR) – DRAFT January 2017.
- f. **Hydraulic & Vertical Clearance** – The rehabilitation of the structure shall not reduce the current minimum vertical clearance beneath the bridge.
- g. **Accelerated Bridge Construction (ABC)** – Upon RIDOT's approval, the DB-Contractor has the option of using ABC methods such as prefabricated components, etc. The DB-Contractor is responsible for designing and detailing the ABC system in the contract plans.
- h. **Support of Excavation** – Any temporary or permanent support of excavation that is necessary to maintain the safety of the traveling public, the structural integrity of nearby structures including utilities, shall be considered critical and shall be designed and detailed in the plans. The DB-Contractor is responsible for designing and detailing the support of excavation in the set of contract plans. Excavation support systems may require approval from but not limited to RIDEM Wetlands Program, Water Quality Program, Dams Program and or ACOE. Consideration should be given to the excavation support systems with regards to the above regulations.
- i. **Temporary Support and Jacking** – The DB-Contractor is responsible for designing and detailing the temporary support and jacking system, as necessary for the replacement of all the bridge bearings.

2.9.4.2 Geotechnical Investigation at BMP Locations

The DB-Contractor shall perform a geotechnical investigation for the proposed BMP location(s) to determine the suitability of the underlying soils for infiltration. Data collected during this investigation will be used to:

- Determine the infiltration rate of the soil
- Estimate groundwater levels
- Assess the potential for any large debris, boulders, or ledge (within the test area) that may influence excavation of the BMP areas
- Design the basin

It is assumed that the geotechnical investigation will include three (3) test pits for each of the proposed BMP sites. Test pits will be logged by a Competent Soils Professional using the visual-manual procedure (ASTM D2488) and USDA Textural Classification. One (1) soil sample will be collected from the site and will be sent to a geotechnical laboratory to be analyzed for classification of soils for engineering purposes (ASTM D2487) including grain size distribution and Atterberg limits. Depth to ground water will be recorded for each test pit, if applicable. GPS will be used to determine the location of each test pit. All geotechnical investigation will be confined within RIDOT right-of-way.

The DB-Contractor shall work with RIDOT to obtain the necessary access permits to complete the work, and will work with RIDOT personnel who will provide site access support for traffic management if necessary. The DB-Contractor shall be responsible for completing all required Transportation Management Plans associated with the geotechnical investigations and shall be responsible for providing required traffic control in accordance with the MUTCD.

1. ~~Geotechnical Investigation Plan~~

~~All geotechnical work shall be prepared in accordance with the criteria set forth in this Subsection by a Design Professional with a minimum of ten (10) years of geotechnical engineering experience in the State of Rhode Island. All design calculations and plans shall be prepared, checked, signed and stamped by a Professional Engineer registered in the State of Rhode Island. Design Builder shall prepare a Geotechnical Investigation Plan and submit it to the RIDOT within 15 Calendar Days of NTP. The plan shall include the criteria or rationale used in developing the plan, and shall identify the locations of all field investigation sites, in situ testing sites, and borings, together with their depths, sampling intervals, and a description of both the field and laboratory testing programs utilized. The plan shall also include a traffic control plan, a safety/hazard analysis plans, and a list of all permits required to perform the geotechnical investigation.~~

2. Subsurface Investigation and Data Analysis

- a. **General** – Design-Builder shall be familiar with available geotechnical, geologic, seismic, hydrogeology, and soils literature, shall be familiar with the existing site conditions, both native and man-made, shall interpret the existing geotechnical data pertaining to the Project Site, and shall perform all additional subsurface investigations and field and laboratory testing as may be necessary to satisfy itself as to (a) the nature of the soil, rock, groundwater, and subsurface conditions across the Project Site and all variations in groundwater and subsurface conditions; ~~(b) the geological formations within, and attributes of, the Project Site;~~ (c) the nature of the Work to be performed; (d) appropriate methods of construction; ~~(e) critical combinations of loading;~~ ~~(f) seismic liquefaction potential of site;~~ and (g) all other factors impacting evaluation.

Laboratories shall be certified and shall have documentation of calibration within the last year for all Equipment used for testing.

Information obtained using a pocket penetrometer or field torvane shall not be the primary means for development of geotechnical parameters.

- b. **Requirements** – Design-Builder must comply with the following in performing field and laboratory investigations:

- 1) **Supervision** – All boring and in-situ testing and inspection, and all laboratory classification and testing, shall be performed by geologists or geotechnical engineers under the direct supervision of a Design Professional with a minimum of 10 years experience in the performance and supervision of geotechnical investigations.
- 2) **Location and Ground Surface Elevation** – Design-Builder shall determine the coordinate location and ground surface elevation for each boring and field investigation site, and shall show the coordinates, station and offset, and elevation for each individual boring log or investigation record. Coordinates, station and offset shall be referenced to the Project survey control. Elevations shall be referenced to the Project datum and horizontal control system.
- 3) **Logs** – Final boring ~~and rock core~~ logs shall be prepared ~~and submitted using geotechnical software by gINT software.~~

Design-Builder shall classify Soil in accordance with the “Standard Classification of Soils for Engineering Properties” (Unified Soil Classification System) ASTM D2487-00, and “Standard Practice for Description and Identification of Soils” (Visual-Manual Procedure) ASTM D2488-00.

3. Geotechnical Design Report

- a. **Final Geotechnical Interpretive Report / Final Geotechnical Data Report** – Design-Builder shall document all geotechnical data and findings, including without limitation a summary of existing information, results of the field subsurface investigations and mapping, results from the laboratory tests, and geotechnical ~~and foundation analyses and design. The documentation shall be consolidated in the form of a Final Geotechnical Interpretive Report (FGIR) and Final Geotechnical Data Report signed and stamped by a Design Professional Engineer registered in the State of Rhode Island. Design Builder shall prepare the FGIR and Final Geotechnical Data Report in accordance with the RIDOT standards and RIDOT Bridge Design Manual, and shall ensure that the recommendations shown in the FGIR meet all Contract requirements.~~
- b. **Geotechnical Recommendations** – Design-Builder shall use the findings and recommendations ~~shown in the FGIR to develop the foundation design for the Structures~~ BMP design(s).

2.9.4.3 Coordination with Other Agencies

The DB-Contractor shall coordinate all drainage issues with affected regulatory agencies that have interest or jurisdiction over the Project. The DB-Contractor shall copy RIDOT on all correspondence, promptly advise of any direct contact and give advance notice of any meetings and/or hearings with affected regulatory agencies.

2.9.4.4 Hydraulic Design of Structures

Hydraulic design and analysis is required for all structures that span over waterways and shall be in conformance with any applicable Laws.

Freeboard for all bridges shall set a minimum of two (2) ft. above the Design High Water (DHW) elevation for a 50 year flood event and a minimum of one (1) ft. for the 100-year flood event. The determination of riprap requirements shall be based on the FHWA Publication, Bridge Scour and Stream Instability Countermeasures, Hydraulic Engineering Circular No. 23 (HEC-23). Further requirement shall be the FHWA Publication, Design of Riprap Revetment, and Hydraulic Engineering Circular No. 11 (HEC-11).

1. Bridge deck drainage shall be provided as necessary to keep the ten (10) year event for a five (5) minute interval from spreading into the travel lanes.
2. Bridge deck drainage shall be contained on the bridge deck prior to passing through the bridge deck scuppers to a downspout drainage system. Bridge deck drainage shall not be allowed to pass through the bridge parapets or median barriers. Where drainage scuppers and drain pipes are used, pipes shall be located inside of the exterior girder.

