

RICK SNYDER GOVERNOR

# STATE OF MICHIGAN DEPARTMENT OF TRANSPORTATION LANSING

KIRK T. STEUDLE

July 11, 2012

Mr. David M. Calabrese, P.E. Engineering and Operations Manager Federal Highway Administration 315 West Allegan Street, Room 201 Lansing, Michigan 48933

Dear Mr. Calabrese:

Enclosure

CS 49023 – JN85619 US-2 Over the Cut River, Mackinac County Bridge Abutment Rehabilitation

The Michigan Department of Transportation is requesting approval for a Fixed Price Variable Scope procurement method for the above referenced project through the Federal Highway Administration's SEP-14 Program. Enclosed is the required work plan for your review.

Please contact Phil Grotenhuis of our Innovative Contracting Unit at 517-335-6678 or grotenhuisp@michigan.gov if you have questions.

Sincerely,

Mark A. Van Port Fleet, P.E., Director Bureau of Highway Development

Work Plan Special Experimental Project No. 14 (SEP-14) Michigan Department of Transportation Fixed Cost Variable Scope or Budget Contracting July 5, 2012

Project Number: 85619A Control Section: 49023 County: Mackinac

Project Scope: Bridge Abutment Rehabilitation

Route: US-2 over the Cut River

Contract Cost: Approximately \$800,000 (fixed)

## **Introduction & Background**

The Michigan Department of Transportation (MDOT) proposes to use fixed cost variable scope or build to budget contracting under the provisions of Special Experimental Project No. 14 (SEP-14) for the use of innovative contracting practices.

MDOT was awarded an Enhancement Grant for restoration of the existing sandstone fascia and mortared joints on the abutments of the Cut River Bridge (B01-49023) in Mackinac County (See Exhibit A for location map and pictures). The Cut River Bridge is eligible for inclusion on the National Register of Historic Places (NRHP) and the proposed work on the bridge is subject to review and approval by the Michigan State Historic Preservation Office (SHPO).

# **Purpose**

The purpose of this fixed cost variable scope or build to budget contracting method is to use a fixed dollar amount attached to the project to obtain the greatest amount of rehabilitation work. Because the proposed work is consistent throughout the Project, the MDOT expects to maximize the work that can be completed for a fixed budget by using this innovative contracting method.

### Scope

The proposed work involves removal of existing cement mortar material between the sandstone veneer panels on the bridge abutments and repointing of the joints with a mortar material with similar physical properties to the existing sandstone. Also the proposed mortar material would be used to reconstruct existing sandstone damaged due to freeze-thaw spalling and weather erosion damage. The material used for this work can be modified by addition of pigments to match the existing color and striation of the sandstone.

The contract format would be set up with a fixed cost amount based on the available enhancement funding. The sandstone panels have been broken down into 33 segments, or units, and will be prioritized based on surface appearance and visible distress. The bid tab would require bidding in sequential order beginning with the lump sum item for *Mobilization* and a lump sum item for *Training*, *Oversight and Prep Work* required by the material supplier for installation of the product. From that point each segment (1-33) of the sandstone bridge panels would be listed with the highest priority first, followed by each subsequent segment which would have a dollar amount bid in order of priority.

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SHPO and FHWA have approved the use of a specific grout product which meets the unique characteristics for this project. The approved material will be specified for the project grout work. The specifications for the project will require mandatory training in the preparation, mixing and use of the specialized grout material for all workers on the project as well as at least one MDOT inspector. The contractor will also be required to complete a test section on the structure prior to full production. The test section will be reviewed and accepted by MDOT and SHPO representatives on the basis of appearance and workmanship. Material source and training documentation will be required throughout the project. The trained MDOT inspector will have the authority to reject the work if it does not meet the criteria of the initial test section.

MDOT anticipates a requirement for attendance at a pre-bid meeting and as part of the bid submittal pre-qualification. The contractor that can complete the most work for the available dollars would be selected provided they meet the required insurance and bonding requirements.

#### **Schedule**

This project is expected to be advertised in MDOT's November 2012 letting. The contractor selection will be based on the lowest bid if all work is completed. If all work cannot be completed using the fixed dollar amount, the contractor completing the most rehabilitation work will be selected. In the event of a tie, bidders will be required to submit a revised bid, with the lowest bidder selected. Construction is expected to begin in Spring of 2013 with a completion date in August of 2013.

#### **Evaluation**

In order to evaluate the success of this innovative contracting method for this type of treatment, MDOT will assess amount of work completed under this contract compared to an amount MDOT estimates can be completed through a typical design-bid-build project. Industry interest and reaction to this procurement method will also be documented and reported.

#### Reporting

MDOT will prepare and submit a report on this project to FHWA. The report will be submitted to FHWA within 6 months of the completion of the contract and final acceptance by the MDOT. The final report will contain an overall evaluation of the project along with any suggestions and recommendations for improving the process.

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# Exhibit A

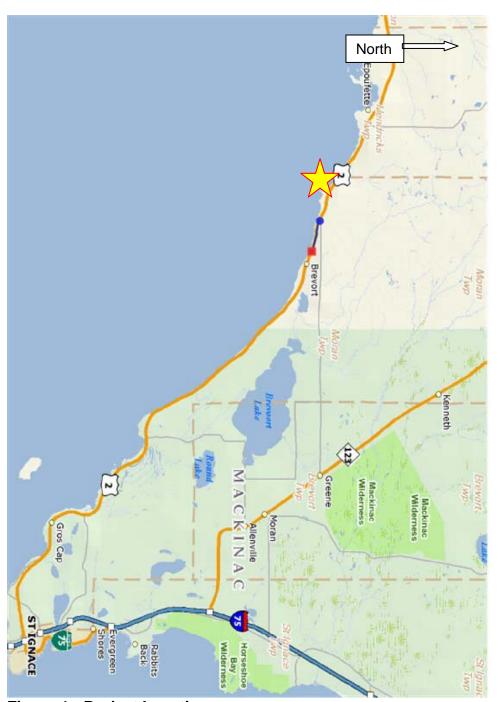
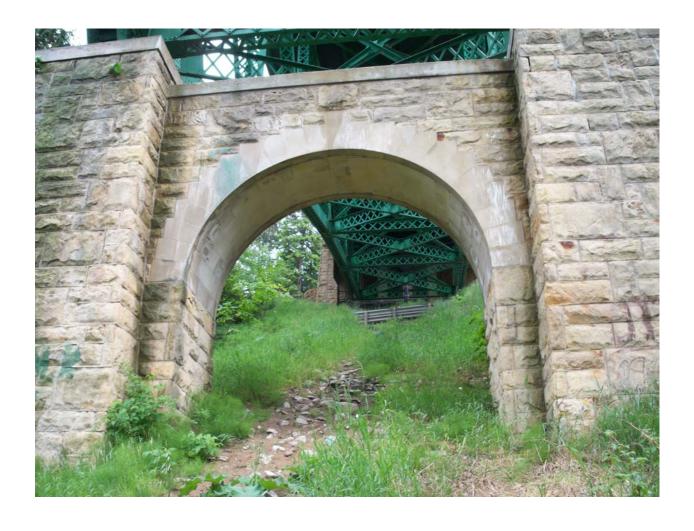


Figure 1 - Project Location

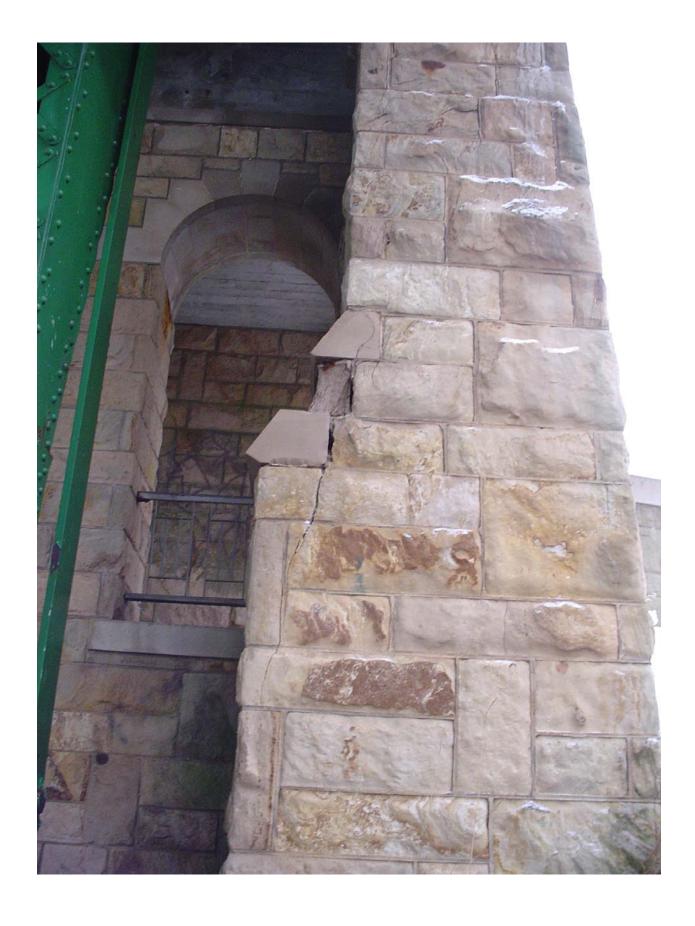
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