

State of Minnesota  
Department of Transportation

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**APPLICATION FOR  
SPECIAL EXPERIMENTAL PROJECT:  
ST. ANTHONY FALLS (I-35W) BRIDGE DESIGN-  
BUILD PROJECT**

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S.P. 2783-120; Federal Project: ER MN07(300)

**August 2007**

## A—INTRODUCTION

***The Design-Build Procurement Method along with A+B and a no excuses bonus clause.*** The Minnesota Department of Transportation (Mn/DOT) hereby submits this work plan of the proposed reconstruction of the St Anthony Falls (I-35W) Bridge Design-Build Project in the City of Minneapolis, County of Hennepin, State of Minnesota, for review and approval by the U. S. Department of Transportation (USDOT) as a project under the provisions of Special Experimental Project No. 14 (SEP 14). Approval is requested to use an innovative contracting practice of A+B bid with a no excuse bonus clause.

Mn/DOT is the governmental entity responsible for the design, construction, and maintenance of trunk highways throughout the State of Minnesota. As an integral part of that responsibility, Mn/DOT is continually seeking improved processes and procedures for efficiently and cost-effectively delivering on-time, high-quality highway projects to the citizens of the State of Minnesota.

Mn/DOT used the design -build methods of procuring contracts for the construction of its highways and bridges. The enactment of state legislation during the 2001 legislative session authorized Mn/DOT to use design-build as an alternative method of construction of its highways and bridges. A copy of Minnesota State Statute Sections 161.3410 to 161.3428 is attached hereto as **Exhibit A**.

***Existing Conditions.*** The St. Anthony Falls (I-35W) Bridge Design-Build Project is located in Hennepin County with Northerly limits of approximately University Ave and the Southerly limits of Washington Ave. A copy of the Index Map for the project is attached as **Exhibit B**.

The corridor is part of the National Highway System (NHS). The existing limited controlled-access freeway in this corridor has three through lanes in each direction.

***Project Description.*** The St Anthony Falls (I-35W) Bridge Design-Build Project is located in Hennepin County within the City of Minneapolis, Minnesota (MN).

- I-35W is a high priority Interregional Corridor (IRC) connecting the regional trade from Mexican to Canadian Border including the major cities of Kansas City, MO; Des Moines, IA; Dallas/Fort Worth, TX and the Twin Cities of St Paul and Minneapolis, MN. I-35W is part of the National Highway System (NHS) and functions as a Principal Arterial.

The Project is the design and construction of a Bridge over the Mississippi and associated roadway on I-35W. The construction limits extend Northerly limits of approximately University Ave and the Southerly limits of Washington Ave. A copy of the Index Map for the project is attached as **Exhibit B**.

## **B—PURPOSE**

The purpose of the project is to use an emergency contract to replace Bridge 9340 that collapsed on August 1, 2007. It is anticipated that a new structure and main line pavement will minimize or potentially eliminate the existing design deficiencies at the northern end of the project limits (east bank) of a sag vertical curve and substandard design speed. The Project generally consists of bridge construction, grading, surfacing, lighting, signing, ITS, and pavement markings.

Analysis indicated that expediting the design and construction period from a traditional bid build schedule of 2- 4-year time frame (not including the 1-2 years to design) to a more aggressive schedule using design-build (less than a two-year period) offers a more optimal project delivery process to save lives, time and dollars. The best mechanism that can achieve this aggressive schedule is the design-build method of procurement.

***Approval of Innovations.*** This procurement process will also allow Mn/DOT the opportunity to explore employing innovative processes for design, safety, quality, construction, repair, and maintenance. Mn/DOT requests that FHWA approve these following innovation:

- The contract will use an accelerated time line with a locked-incentive date (no excuse bonus)

***Expected Benefits.*** We expect the design-build with locked incentive date approach to produce the following benefits:

- Division or sharing of risks between the design-builder team and Mn/DOT, depending on who is best able to handle particular risks;
- The advantage of the size and scope of the project in attracting design-build innovation;
- Accelerated delivery of the project through the use of design-build procurement;
- Greater cost effectiveness because of:

Opportunities afforded by the design-build methodology to reduce owner involvement in conflicts between the designer and contractor in the design and construction process.

- Transfer of the risk of not completing on time and within budget to the design-build team by requiring that the project be delivered on a fixed-price basis with a guaranteed completion date; and
- Ensured quality through (a) the promotion of innovative design and construction and (b) the provision of a warranty to be bonded by the design-builder team.

***Minnesota Model Project.*** If successful, this procurement may become the model for other emergency highway projects in Minnesota.

## C—SCOPE

The scope of this SEP 14 request is limited to the St. Anthony Falls (I-35W) Bridge Design-Build Project. The process, as described in this section, will provide for the competitive best-value procurement of a design-Build team to design, construct, and warrant the construction of the I-35W Bridge.

***RFQ Issuance and SOQs.*** On August 4, 2007, Mn/DOT issued an RFQ seeking responses from design-build teams interested in prequalifying to submit proposals for the St Anthony Falls (I-35W) Bridge Design-Build Project. The RFQ requires each design-build team to submit an SOQ by August 8, 2007. A copy of the St Anthony Falls (I-35W) Bridge RFQ is attached as **Exhibit C**. A standardized Mn/DOT procedure has been established to evaluate the SOQs.

***RFP Issuance and Proposals.*** Following a one day evaluation period, a shortlist of three to five Design-Build teams were identified on August 8, 2007. Each pre-qualified design-build team (proposer) will be provided with an RFP and allowed to submit technical and a price proposal for the project. Technical Proposals will be due on approximately August 31, 2007 and with Price Proposals due on September 3, 2007.. Mn/DOT will award the project on a best-value basis, based on technical qualifications, time and price. A Copy of the St Anthony Falls (I-35W) Bridge Design-Build Project SOQ Evaluation Manual is attached as **Exhibit D**.

***Development of RFP Draft.*** Inasmuch as the procurement is still in the planning stages, the draft of the St. Anthony Falls (I-35W) Bridge RFP, nor have the final proposal evaluation criteria been established. Drafts of these documents will be provided to FHWA for review and comment as they are developed with Final RFP approval expected August 17, 2007.

***Selection of Design-Builder.*** The selection process will comply with applicable state and local laws. The best-value selection process requires that the selection committee evaluate and score the technical proposals. Any technical proposal deemed non-responsive will be rejected without opening the price proposal. The technical proposal scores will be announced prior to the opening of the cost proposals. Each proposer's cost will then be divided by the score of its technical proposal to obtain an adjusted score. The responsive and responsible proposer, with the lowest adjusted score will be selected.

***Goals.*** The Purpose of this project is to reconstruction the I-35W Bridge using an Emergency Contract with Design-Build using an A+B contract procurement with a no excuse bonus clause to expedite the construction as well as maintain mobility, and develop a solution compatible within its setting.

The following goals have been established for the Project:

1. Safety
  - Provide a safe Project area for workers, the traveling public, community and emergency services during the execution of the Project.
  - Provide a solution consistent with Mn/DOT design and construction standards.
  - Provide a solution adaptable to the recovery efforts of the collapsed bridge.
2. Quality
  - Implement a quality management system that ensures the requirements of the Project will be met or exceeded.
  - Reduce future maintenance costs by providing a high-quality project.
3. Schedule
  - Complete construction by December of 2008.

4. Environmental Compliance
  - Provide a quality product with minimal impacts to the environment while using context sensitive solutions.
5. Budget
  - Implement innovative solutions to maximize the return on taxpayer investment by reducing costs and improving quality of the transportation system.
6. Aesthetics
  - Utilize visual quality techniques to incorporate the bridge into the surrounding environment.
7. Public Relations
  - Coordinate, address, mitigate and incorporate stakeholder challenges into the project.
8. Innovation
  - Provide cost effective and long lasting solutions that will improve safety, mobility, and improve quality.
9. Partnering
  - Use effective partnering techniques to ensure that a safe, high quality, cost effective project is delivered in a timely manner.

The successful completion of this project depends on the achievement of these goals. Mn/DOT believes that the design-build, best-value along with time and cost procurement process provides the greatest opportunity to achieve these goals. Mn/DOT believes that the typical design-bid-build process, replete with full design review, quality control/quality assurance performed only by Mn/DOT, and multiple designers and contractors, would prove too costly and too lengthy, and would not stimulate the innovative design and construction ideas that Mn/DOT seeks.

## **D—SCHEDULE**

Mn/DOT's goal is to complete the reconstruction of the St Anthony Falls (I-35W) Bridge Design-Build Project no later than November 1, 2008. To achieve this goal, the follow preliminary schedule has been established:

The deadline for submitting RFQ questions and the SOQ due date stated below apply to this RFQ. Mn/DOT also anticipates the following additional Project milestone dates. This schedule is subject to revision by the RFP and addenda to this RFQ.

### Phase I – Request for Qualifications

Issue RFQ	August 3, 2007 *
Deadline for submitting RFQ questions	August 8, 2007 *
SOQ due date	August 8, 2007 *
Evaluation of SOQs	August 8, 2007 *
Notify short listed Submitters	August 8, 2007 *

### Phase II – Request for Proposals

Issue RFP	August 17, 2007
Technical Proposals Due	August 31, 2007
Price Proposals Due	September 3, 2007
Price Proposals opened	September 4, 2007
Project Award	September 5, 2007

\* *Completed*

## **E—EVALUATION MEASURES**

After completion, the project will be evaluated on a range of factors. Its success influences whether Mn/DOT implements similar procurement methods in the future. The key factors are as follows:

***Fixed Price.*** An important component of the analysis of the proposer’s ability to produce cost savings will be its ability to avoid change orders and cost overruns, which are common in traditional publicly constructed projects.

***Time Savings.*** Mn/DOT will compare the estimated schedule required if the project were procured in a traditional manner with the actual schedule achieved, will evaluate the ability to deliver the project by the scheduled completion date or the completion date proposed, and will attempt to quantify the value of that earlier completion.

***Innovation in Design and Construction.*** Mn/DOT will analyze the design-builder’s innovative design and construction ideas and concepts that evolved as a byproduct of the design-build process.

***Quality and Warranty.*** Key components of the project will be the ultimate quality of the work; life-cycle maintenance and repair costs; and the strength of any applicable warranty of both structures and pavement. Comparisons will be made with the performance and history of other Minnesota highway projects to evaluate the success and benefits of the design-build approach and, specifically, any outsourcing of maintenance/repair obligations and any applicable warranty.

***Responsiveness to Local Concerns.*** Because the project will not be designed in the traditional fashion, each of the proposers will be required to address issues raised by representatives of the community. Mn/DOT will evaluate the success of the process based on the design-builder’s response to such concerns.

***Impact of Incentives.*** Mn/DOT is proposing several types of incentives on this project to promote safety, improve quality, decrease contract time (no excuse bonus), and improve public relations. Mn/DOT will evaluate the effectiveness of these incentives.

## F—REPORTING

Mn/DOT anticipates that it will file with the FHWA at least one type of report for the St Anthony Falls (I-35W) Bridge Design Build project:

**Initial Report.** The initial report will be filed within the first year of the execution of the design-build contract and will be a preliminary analysis of the design-build procurement. This report will:

- Describe the process used to select the design-build team;
- Identify any reaction by the industry to use of the design-build concept;
- The environment approval process;
- The funding approval process;
- Document key differences in the proposals received compared to those expected under a design-bid-build procurement; and
- Discuss any major problems or issues that have occurred.

**Final Report.** A final report will be submitted within 90 days following final contract acceptance of the project. This report will:

- Provide an overall evaluation of the Design-Build procurement and process;
- Evaluate the completed project against the same factors described in Section E;
- Describe lessons learned, pitfalls to avoid, and suggestions for improvements on future innovative procurements;
- Document contract complications encountered and claims made during construction;
- Indicate and evaluate innovations in design or construction; and
- Emphasize and focus upon the quality and timeliness and how it was affected by the design-build concept.

Mn/DOT believes the procedures described herein will result in very successful project. Mn/DOT looks forward to working with the FHWA as the project progresses and to providing FHWA and others with the benefits of Mn/DOT's experience with a design-build project.