

**ATTACHMENT 40 – LETTER TO THE NATIONAL TRANSPORTATION
SAFETY BOARD FROM THE MINNESOTA DEPARTMENT OF
TRANSPORTATION DATED MARCH 6, 2008**

(3 pages)



Minnesota Department of Transportation

Office of Bridges & Structures

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Daniel Walsh
National Transportation Safety Board
Office of Highway Safety
624 Six Flags Drive
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Arlington, TX 76011

Dear Mr. Walsh:

In our meeting of February 21, 2008, we described our current process to review consultant plans for routine bridges. Those reviews are conducted by our in house design staff according to the guidelines in our Mn/DOT LRFD Bridge Design Manual.

For complex structures that are designed by consultants we have implemented a peer review process on recent projects. We will be utilizing peer reviews for similar projects in the future. Examples of complex bridges include segmental concrete structures, cable supported structures, and other bridge types that are less frequently used on our system.

You requested a description of the peer review process we employed on the Crosstown Project designed in 2005-2006, and the I35W emergency replacement bridge currently under design. Those descriptions are provided below:

Crosstown Project

The Crosstown Project on I35W and Trunk Highway 62 on the southern border of Minneapolis included twenty-four bridges. Six of those structures are precast segmental concrete box girders. These are the first precast segmental used in Minnesota. We employed three firms to each design two of the segmental bridges. It was important that the designs were consistent in details for constructability and fabrication economy. We also chose to include a peer process for design reviews rather than perform with our staff. Our in house designers were fully booked on their own design projects at the time.

To achieve those goals, we took three steps. First, one firm Parsons Brinckerhoff, was designated as lead firm to establish standard details, design criteria, and coordinate with the other two firms to ensure consistent application. URS Corporation and Parson Transportation were the other two firms. Secondly, for quality assurance, each firm was required to complete an independent design and analysis check for the segmental box girders with personnel completely independent from the main design team. Finally,

Parsons Brinckerhoff performed a "quality assurance peer review" of the plans prepared by URS and Parson Transportation. This peer review was not a complete plans check. They reviewed the design for post-tensioned requirements, erection sequence, and conformance with the intent of the segmental design standards.

These bridges have since gone to contract and are under construction. The substructures are being built and segments are being cast at an offsite facility.

I35W Emergency Replacement

The I35W Bridge is a fast tracked Design Build Project. The bridge type selected by the contractor, Flatiron Construction, is a concrete box girder with portions cast-in-place on false work and the main span precast segmental. Figg Engineering is the designer for the Design Build contractor. As part of the design process, Figg is conducting an independent check of their design. This is commonly done in the industry.

Mn/DOT retained Parsons Transportation to assist in performing the owner's review of the Figg Engineering design. To facilitate coordination and communication, Mn/DOT's project specifications required the Design Build team be co-housed with Mn/DOT and our peer review consultant. The peer review process by Parson's and Mn/DOT is occurring concurrently with the Figg design. As portions of the design are completed, Figg submits the plans and calculations for review and comment. Design assumptions and decisions are discussed and resolved between Figg, Parsons and Mn/DOT on a daily basis.

Should you have further questions on this information please do not hesitate to call.

Sincerely,



Daniel Dorgan
State Bridge Engineer