



Division of Transportation  
System Development  
Bureau of Structures  
PO Box 7916  
Madison, WI 53707-7916

Jim Doyle, Governor  
Frank J. Busalacchi, Secretary  
Internet: [www.dot.wisconsin.gov](http://www.dot.wisconsin.gov)

Telephone: Area Code-Tel. #: 608-266-8489  
Facsimile (FAX): 608-261-6277  
E-mail: [william.dreher@dot.state.wi.us](mailto:william.dreher@dot.state.wi.us)

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DATE: 6/1/2010

TO: Consultant Bridge Design Staff

FROM: William C. Dreher, P.E.  
Chief Structures Design Engineer  
Bureau of Structures

SUBJECT: WisDOT Review of Consultant Prepared Structure Plans

I would like to highlight a recent change to the organization in the Bureau of Structures (BOS). BOS has formed a new unit - Consultant Review, Contracting & Hydraulics - which is responsible for providing oversight and accountability of consultant structure design contracts for the Wisconsin Department of Transportation (WisDOT). Our main objective is for BOS to be able to demonstrate that structure designs and structure plans we are procuring from consultants are being designed adequately and accurately, to appropriate requirements, standards, and policies, and that structure plans are complete, constructible, and are in accordance with approved details. This organizational change will extend the evaluations and reviews we currently perform on hydrologic and hydraulic analyses, structure sizing, and preliminary structure plans, to final structure designs, load ratings, special provisions, and final structure plans.

With that objective in mind, the Bureau of Structures is working to ensure that all design consultants have an adequate Quality Assurance/Quality Control (QA/QC) policy and appropriate procedures in place to ensure quality. We are requiring that all consultant design firms that provide structure design services for WisDOT, have their own customized **QA/QC plan and procedures**. Each consultant is required to **submit an electronic copy of their QA/QC plan and procedures to BOS by 9/1/2010**. The QA/QC plan and procedures shall include as a minimum:

- Procedures to detect and correct bridge design errors before the design plans are made final.
- A means for verifying that the appropriate design calculations have been performed, that the calculations are accurate, and that the capacity of the load-carrying members is adequate with regard to the expected service loads of the structure.
- A means for verifying the completeness, constructability and accuracy of the structure plans.
- Verification that independent checks, reviews and ratings were performed.

A **QA/QC verification summary sheet** will also be required as part of every final structure plan submittal, demonstrating that the QA/QC plan and procedures were followed for that structure. The QA/QC verification summary sheet shall include the signoff or initialing by each individual that performed the tasks (design, checking, plan review, technical review, etc.) documented in the QA/QC plan and procedures. The summary sheet must be submitted with the final structure plans as part of the Electronic Plan (EPlan) submittal process.

There are a couple of additional issues that need to be addressed in order for BOS to perform consultant structure plan oversight in a timely manner. In order to avoid delays in project lettings,

**complete final structure plans must be submitted for review two months in advance of PS&E submittal** to WisDOT, as indicated in 19-10-45 of the Facilities Design Manual. This time is needed to adequately evaluate and review the final structure plans, special provisions and computations, and allow for any necessary revisions.

In addition, final structure plans are to be submitted **only** when the structure plans are in complete compliance with your QA/QC plan and are ready for final review by BOS. Subsequent submittals of final structure plans **will not be accepted without prior BOS approval**.

In summary, the following steps are required:

- **Submit an electronic copy of your QA/QC plan and procedures to BOS by 9/1/2010. Send to Mike Williams at: [michael.williams@dot.wi.gov](mailto:michael.williams@dot.wi.gov)**
- **Submit a QA/QC verification summary sheet with every final structure plan submittal, beginning on or before 9/1/2010.**
- **Submit final structure plans only when they are in compliance with your QA/QC plan, they are stamped and signed, and they are ready for final review by BOS.**

If you have any questions, please contact one of the following staff members from the Consultant Review, Contracting & Hydraulics Unit:

Dave Genson	Unit Supervisor	608-266-8491
Mike Williams	Consultant Bridge Project Engineer	608-266-5089
Kristin Revello	Consultant Bridge Project Engineer	608-266-5090
Chris Foltman	Consultant Bridge Project Specialist	608-266-5094