



**BRIDGE ADVISORY**  
**Construction & Technology Division**  
**Bridge Operations Section**

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BRIDGE ADVISORY NUMBER: BA-2010-06

DATE: October 4, 2010

SUBJECT: Licensing and use of AASHTOWare Virtis Software

ISSUED BY: Beckie Curtis, Load Rating Engineer

REVIEWED BY: David Juntunen, Bridge Operations Engineer

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## **PURPOSE**

The recent FHWA Program Review of Load Rating and Posting of Michigan Bridges has found that there is a large backlog of local agency bridges that may not be in compliance with load rating requirements. To address this finding, MDOT is developing, in partnership with CRAM and MML, an action plan to assure local agency load rating compliance with NBIS.

In an effort to standardize load ratings and improve quality control and oversight, MDOT has purchased a super-site license of AASHTOWare Virtis. This license will allow local agencies and/or their consultants to obtain a license of the software at **no cost**.

## **BACKGROUND**

The NBIS requires that all bridges be load rated for capacity in accordance with the AASHTO Manual for Bridge Evaluation (formerly the Manual for Condition Evaluation of Bridges). Virtis is a comprehensive bridge rating tool developed by AASHTO. For an agencies' bridge inventory, the product stores detailed bridge descriptions sufficient for structural analysis. Virtis is the tool for rating bridge superstructures in accordance with the AASHTO Manual for Bridge Evaluation. The concept of storing generic bridge descriptions in a database is a powerful one with many user and agency benefits. Among the benefits are:

- Rating a bridge using multiple analysis programs from the same description and input;
- Upgrading and/or replacing components of the system, including the structural analysis engine, specification checking software, and user interface while preserving the basic bridge data;
- Ability to analyze design, legal and permit loads;
- Maintenance of a bridge model that may be easily updated for future specification changes or analyzed under the specifications of design (such as either LFR or LRFR);
- Maintenance of a bridge model to meet NBIS load rating documentation requirements;

For additional information on the capabilities of AASHTOWare Virtis, please refer to the AASHTOWare Catalog:

[http://www.aashtoware.org/Documents/FY2011\\_Catalog\\_Final-6-4-10.pdf](http://www.aashtoware.org/Documents/FY2011_Catalog_Final-6-4-10.pdf)

### **LICENSING THE SOFTWARE – BRIDGE OWNER**

The Virtis software may be licensed at no cost by any local agency within Michigan. To license the software, please complete the following steps:

- Complete the Non-Member Software Request Form, included for your use and which may be found at:
  - [http://www.aashtoware.org/Documents/FY2011\\_Non-Member%20Forms.pdf](http://www.aashtoware.org/Documents/FY2011_Non-Member%20Forms.pdf)
- On the line for Purchase Order Number, indicate “Michigan DOT Agency Sponsored License”
- Select the option for “Virtis Special Consultant Option” and change the cost from \$2700 to \$0
- Submit the form to AASHTO (see page 4 of the software request form for AASHTO contact information)
  - Send a copy to MDOT
    - by email to [mdot-virtis-support@michigan.gov](mailto:mdot-virtis-support@michigan.gov)
    - by fax to 517-322-5664 Attention: Load Rating
    - by mail to:  
Load Rating  
8885 Ricks Rd  
PO Box 30049  
Lansing, MI 48909
- Complete the supplemental licensing agreement with AASHTO

### **LICENSING THE SOFTWARE – CONSULTING ENGINEER**

The Virtis software may be licensed at no cost by a consultant working for a local agency within Michigan. To license the software, please complete the following steps:

- Consultants must submit a letter or email stating their understanding and agreement that the license may only be used on bridges within the State of Michigan. This must be received before AASHTO will license the software.
  - by email to [mdot-virtis-support@michigan.gov](mailto:mdot-virtis-support@michigan.gov)
  - by fax to 517-322-5664 Attention: Load Rating
  - by mail to:  
Load Rating  
8885 Ricks Rd  
PO Box 30049  
Lansing, MI 48909
- MDOT will notify AASHTO of all authorized consultants on October 29, 2010.
  - Submitting the letter of understanding after this date may result in delay in obtaining MDOT authorization.

- Complete the Non-Member Software Request Form, included for your use and which may be found at:
  - [http://www.aashtoware.org/Documents/FY2011\\_Non-Member%20Forms.pdf](http://www.aashtoware.org/Documents/FY2011_Non-Member%20Forms.pdf)
- On the line for Purchase Order Number, indicate “Michigan DOT Agency Sponsored License”
- Select the option for “Virtis Special Consultant Option” and change the cost from \$2700 to \$0
- Submit the form to AASHTO (see page 4 of the software request form for AASHTO contact information)
  - Send a copy to MDOT
    - by email to [mdot-virtis-support@michigan.gov](mailto:mdot-virtis-support@michigan.gov)
    - by fax to 517-322-5664 Attention: Load Rating
    - by mail to:  
Load Rating  
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PO Box 30049  
Lansing, MI 48909
- Complete the supplemental licensing agreement with AASHTO

## **TRAINING AND SUPPORT**

Support regarding installation of the software is available through the AASHTO Contractor. Limited support for use of the software in performing the load rating will be provided by MDOT by emailing [mdot-virtis-support@michigan.gov](mailto:mdot-virtis-support@michigan.gov) or contacting Beckie Curtis at 517-322-1186.

Tutorials and Virtis files, including the Michigan analysis vehicles, are available on the MDOT Bridge Operations Website, [http://www.michigan.gov/mdot/0,1607,7-151-9625\\_24768---,00.html](http://www.michigan.gov/mdot/0,1607,7-151-9625_24768---,00.html)

Training sessions are currently being scheduled, and information regarding dates and locations of the training will be sent when available.