

MEMORANDUM

DEPARTMENT OF TRANSPORTATION

Staff Bridge Branch
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Date: April 1, 2002
To: All Bridge Rating Manual Users
From: Mark A. Leonard
Subject: CDOT Bridge Rating Manual Revisions

To provide for the AASHTOWare Virtis computer application, section eight, nine and thirteen of the CDOT Bridge Rating Manual have been updated and Appendix A has been added. An update to Section ten will be released by July 1, 2002. Please replace sections eight, nine, and thirteen entirely in your copy of the CDOT Bridge Rating Manual. These revisions are available electronically through the CDOT web page.

<http://www.dot.state.co.us/DevelopProjects/DesignSupport>

Effective July 1, 2002 CDOT will use the AASHTOWare Virtis computer application to perform bridge ratings. With the exception of post-tensioned and truss superstructures, all ratings performed after July 1, 2002 for bridges in CDOT right-of-way shall be based on Virtis, using the Load Factor Design Method (LFD). In addition to post-tensioned and truss superstructures, other bridges of unusual geometry or construction type may be waived from this requirement as individually reviewed and approved by the Staff Bridge Branch Bridge Rating Coordinator. Post-tensioned and truss superstructures shall be rated as provided for by the CDOT Bridge Rating Manual.

All of the instructions and examples in the CDOT Bridge Rating Manual use the strip method of analysis (see AASHTO LRFD 4.6.2) and the AASHTO LFD live load distribution factors. Until otherwise provided for by the CDOT Bridge Rating Manual, curved superstructures and bridges designed by a refined method of analysis (LRFD 4.6.3) shall be rated using Virtis and the strip method unless the Staff Bridge Branch Bridge Rating Coordinator approves an exception. Equivalent distribution factors for composite dead loads and live loads shall be used to obtain the appropriate rating for moment at the sections required by the CDOT Bridge Rating Manual (see AASHTO LRFD 4.6.3.1, modified here as may be required for composite dead loads).

The CDOT is currently using the AASHTO Load and Resistance Design Specifications (LRFD) for new bridges. These bridges shall be rated using the LFD method. A low LFD rating will not result in rejection of an LRFD design if all provisions of the LRFD specifications have been adequately satisfied.

For the maintenance of the CDOT's Opis/Virtis database it is essential to use the most current version of Virtis. Ratings submitted to CDOT that are based on older versions will be rejected. As of this date the current version is 4.0.4. Virtis can be obtained from Angel Williams, AASHTOWare Special Assistant, 202-624-5808. E-mail address is:

angelw@ashto.org

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Structural personnel should review and become familiar with these revisions. If you have any questions or recommendations for improvements please contact:

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