

PennDOT e-Notification

Bureau of Solutions Management
Highway Applications Division



STLRFD

No. 019
Sept. 16, 2024

Release of Version 2.9.0.0

The Department's LRFD Steel Girder Design and Rating (STLRFD) program has been revised as described in the attached "Summary of July 2024 Revisions – Version 2.9.0.0".

The new version has been placed on PennDOT servers for use by the Districts. Consultants and others, who have a current license agreement for **STLRFD Version 2.8.0.0**, can obtain the updated version by submitting an [Update Request Form](#) along with the **update fee of \$500 for private organizations or \$50 for governmental agencies**. Updates for **STLRFD Version 2.7.0.0 or earlier** will require an **additional fee**. For update fee details, refer to the [STLRFD Fee Schedule](#). The update fee is waived for federal and state transportation agencies.

Once payment is received, an e-mail will be sent with download instructions. A valid e-mail address must be provided on the Update Request Form to receive the download instructions. If Invoice has been sent and we have not received payment within 25 days we will automatically cancel the invoice and you will have to re-submit the request again.

Please direct any questions concerning the above to:

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Attachment

Archived copies of all previously distributed e-Notifications can be obtained from the PennDOT LRFD and Engineering Programs website at <http://penndot.engrprograms.com/home> and clicking on "e-Notification" and then "Mailing List Archives."

SUMMARY OF JULY 2024 REVISIONS - VERSION 2.9.0.0

Since the release of STLRFD Version 2.8.0.0 several revision requests and user requested enhancements have been received. This release of STLRFD Version 2.9.0.0 contains the following revisions and enhancements.

Specification Related Revisions

1. The Global Displacement Amplification Check now determines inflection points by interpolating between the nearest analysis points. Previously, a symmetrical girder could have non-symmetrical results for the Global Displacement Amplification Check. Also, the analysis points are ordered by span number and distance along the span. (Request 889)
2. The Global Displacement Amplification Check defaults to use a maximum of either three beams or the number of beams in the cross section. When the cross section has a minimum of four beams, the user may request that the check is made for four beams. When the total factored girder moments across the width of the unit within the span under consideration exceeds 70 percent of the elastic global lateral-torsional buckling resistance of the span a specification check failure is given. (Requests 890, 924)

Program Input Revisions

3. A Chief Bridge Engineer warning has been added to the input validation for floorbeam deeper than 14 ft, as per DM-4 Section 6.10.1 (Request 887).
4. The new Deck Overhang Loads (DOL) command allows definition of construction loads that cause flange lateral bending stresses in the exterior girder for the Uncured Slab specification checks and the deck pour construction stages specification checks. These flange lateral bending stresses are considered for Construction / Uncured Slab I and Construction / Uncured Slab II Load Combinations as defined in DM-4 Table 3.4.1.1P-1 – Load Factors and Live Load Vehicles for Steel Girders. (Request 892)
5. Input parameters for the Connector Height on the SCS command and the Channel Height on the SCC command are no longer used and should be entered as blank. Previously, these inputs were comparing the shear connector height to the slab thickness, but the program does not know the true haunch along the girder. (Request 893)

Program Output Revisions

6. The output table headings in the Specification Check Warnings list and in the Specification Check Failures list now include the page number for the warning or failure. For tables with multiple warnings or failures on multiple pages the table heading is listed twice; once for the first page with a warning or failure and once for the last page with a warning or failure. (Request 866).
7. A Chief Bridge Engineer warning has been added when fatigue details entered as category D, E, E', or EP for a design run (Request 888).

Program Documentation Revisions

8. Windows 8.1 operating system has been removed from the User's Manual as a supported operating system. (Request 916)

Programming Revisions

9. A previously reported program crash has been resolved by Request STREV867. (Request 412) **NOTE: THIS WILL NOT APPEAR IN THE USER'S MANUAL.**
10. Debug level 17 for routine ANSHEL can be used to create CBA Input files to be run in the CBA standalone program. (Request 733) **NOTE: THIS WILL NOT APPEAR IN THE USER'S MANUAL.**
11. The program has been modified to use the depth between rivets/bolts for the web proportion check for built-up sections (Request 818).
12. It is suggested to keep the SHO command (Request 891). **NOTE: THIS WILL NOT APPEAR IN THE USER MANUAL.**
13. Recommend revising the Plate Girder Design to allow continuous spans to be designed using an incremental approach by starting with a basic design and then adding additional features. This new option would be hidden from the typical user until enough features have been added to make the continuous designs useful. (Request 862) **NOTE: THIS WILL NOT APPEAR IN THE USER MANUAL.**
14. The Readme_First.txt file in the root of the delivery area now uses the CHDIR command in the instructions for program testing setup. (Request 922) **NOTE: THIS WILL NOT APPEAR IN THE USER'S MANUAL.**