

PENNDOT e-Notification
Bureau of Business Solutions and Services
Highway/Engineering Application Division



FBLRFD

No. 004
July 15, 2013

Release of Version 1.4.0.0

The Department's Floorbeam Analysis and Rating Program (FBLRFD) has been revised as described on the attached Summary of May 2013 Revisions – Version 1.4.0.0.

The new program has been placed on PENNDOT servers for use by the Districts. Consultants, governmental agencies and others, who have a current license agreement for FBLRFD, can obtain Version 1.4.0.0 by submitting a Software Update Request form with the appropriate update fee. Updates for FBLRFD Version 1.3.0.0 require an update fee of \$500 for consultants and \$50 for governmental agencies and educational institutions. Updates for FBLRFD Version 1.2.0.0 or earlier require an additional fee documented on the FBLRFD update fee details page (<http://penndot.engrprograms.com/home/Ordering/FBLRFD.htm>). No update fee is required for Federal and State Transportation Agencies.

The forms for Software Update Request and Request for PennDOT's Engineering Software License can be downloaded from the web site at <http://penndot.engrprograms.com>.

Please note that the software will no longer be provided on a CD. Once payment is received, an e-mail will be sent with download instructions. The new installation will require a License Key that will be provided in the e-mail. A valid e-mail address must be provided on the Update Form in order to receive the download instructions.

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 MAY 2013 REVISIONS - VERSION 1.4.0.0

Since the release of FBLRFD Version 1.3.0.0 several revision requests and user requested enhancements have been received. This release of FBLRFD Version 1.4.0.0 contains the following revisions and enhancements.

Specification Related Revisions

1. The program has been revised to use the LRFD Specifications 5th Edition and 2012 DM-4 (Requests 270, 302, 303, 305, 313, 314, 315).
2. The rolled beams used by the program have been revised according to the AISC Steel Construction Manual, 14th Edition, 1st printing (Request 290).

The following rolled beams were deleted from those used by the program:

W40x321 W40x174 W40x466
W36x848 W36x798 W36x650 W36x527 W36x439 W36x393
W36x359
W36x328 W36x300 W36x280 W36x260 W36x245 W36x230
W30x477
W27x448
W24x492 W24x408
W14x808

The following rolled beams were added:

W40x397 W40x362 W40x324 W40x327 W40x294
W36x652 W36x529 W36x487 W36x441 W36x395 W36x361
W36x330
W36x302 W36x282 W36x262 W36x247 W36x231
W33x387
W30x357
W27x336 W27x281
W24x370 W24x306
W21x55 W21x48

SUMMARY OF MAY 2013 REVISIONS - VERSION 1.4.0.0

W6x8.5

3. When computing the rating tonnage for special live load vehicles, the program will no longer remove the scale allowance. The user enters the axle weights without the scale allowance, so it will not be removed from the total weight of the vehicle (Request 297).
4. A program crash that was occurring when the floorbeam starts at a support with partial fixity has been resolved (Request 308).
5. If the deck is supported directly by floorbeams and the floorbeam spacing is less than or equal to 6 feet, the live load reaction on the floorbeam will be determined using the heaviest axle of the live load vehicle, rather than always using 32 kips (Request 310).
6. For composite sections in negative bending, M_{yt} , the yield moment with respect to the tension flange, is now set to the minimum of M_y with respect to the top flange or M_y with respect to the deck reinforcing, as per LRFD Specifications Article D6.2.3 (Request 317).
7. The value of f_n for hybrid factor calculations (LRFD Specifications Article 6.10.1.10.1) is now set properly for the case where D_n is on the opposite side of the yielding flange (Request 318).

Output Related Revisions

8. A typographical error has been corrected in an error message produced when defining shear connectors for a noncomposite floorbeam (Request 307).
9. On the RATING FACTORS - SHEAR CAPACITY output report, the proper failure code for the web handling requirement (D/150 or D/300) will now print. Previously, a failure code would print, but reference the incorrect ratio (Request 319).

Documentation Revisions

10. The email domain for PennDOT has been revised to @pa.gov (Request 301).
11. A reference to AASHTO Article 6.10.7.2 has been added to the User's Manual, as has a complete listing of rolled beam available to the program (Request 316).