

# PennDOT e-Notification

Bureau of Business Solutions and Services  
Highway/Engineering Applications Division



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## BAR7

No. 012  
November 24, 2014

## Release of Version 7.14.0.0

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The Department's Bridge Analysis and Rating (BAR7) program has been revised as described in the attached "SUMMARY OF OCTOBER 2014 REVISIONS – VERSION 7.14.0.0".

The new program has been placed on PennDOT servers for use by the Districts. Consultants and others, who have a current license agreement for **BAR7 Version 7.13.0.0 or 7.13.0.1**, can obtain the updated version for a license **update fee of \$100 for private organizations and \$50 for local governmental agencies and educational institutions.**

Updates for **BAR7 Version 7.12.x.x or earlier** will require an **additional fee**. Please refer to the following link for BAR7 update fee details: <http://penndot.engrprograms.com/home/Ordering/BAR7.htm>. The fee must be sent along with a Software Update Request form in order to receive the update. The Software Update Request form can be obtained on the PENNDOT Engineering Software Support website at <http://penndot.engrprograms.com> by clicking on "Ordering/Updating" and, then on "Update Form". The update fee is waived for federal and state transportation agencies.

**NOTE: BAR7 v7.14.0.0 is not compatible with Windows XP.**

**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

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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 OCTOBER 2014 REVISIONS - VERSION 7.14.0.0

Since the release of BAR7 Version 7.13.0.1, several error reports and user requested enhancements have been received. This release of BAR7 Version 7.14.0.0 contains the following revisions.

### Programming Revisions

- 1. The method of calling the engineering program DLL from the Engineering Assistant has been changed for compatibility with EngAsst v2.5.0.0 which uses Microsoft's .NET Framework, version 4.5. Because of this, BAR7 will no longer work with EngAsst v2.4.0.6 or v2.4.0.9 unless the EngAsst "Edit / Run EXE - Command Window" option is selected. BAR7 will no longer work with EngAsst v2.4.0.0 and earlier.**
2. The program has been compiled with Intel Visual Fortran compiler XE 12.1.3.300 [IA-32] using Microsoft Visual Studio 2010 version 10.0.40219.1. (BAR7REV201)

### Input Revisions

3. Various new input items were added.  
PONY TRUSS field at the PROJECT IDENTIFICATION card  
PDF field at the PROJECT IDENTIFICATION card  
PATCH Field at the BRIDGE CROSS SECTION AND LOADING card  
Various fields at the ADDITIONAL TRUSS MEMBER PROPERTIES card  
Various fields at the CONCENTRATED PATCH LOADS card  
Various fields at the DISTRIBUTED PATCH LOADS card
4. Added an edit check to prevent users from entering 0 for span no in STEEL MEMBER PROPERTIES CARD. (BAR7REV189)
5. Added edit checks to prevent BAR7 from crashing unexpectedly if "L" is entered for LANES and the bridge type is "FSS", "GFF", "GFS", "GGF", "TFF", "TFS", or "TTT". For one loaded traffic lane if the traffic lane width (WIDTH) is greater than zero, then the percentage of the live load to be applied to the traffic lane, %LL, shall not be zero. Otherwise, the program crashes due to division by zero. For multiple loaded traffic lanes, the WIDTH and %LL of at least one loaded lane shall not be zero. It is possible that some lanes can have %LL = 0%. (BAR7REV190)

### Load Rating Revisions

6. For the Load Factor method, the program now assumes the contribution of the bent up bars to the shear capacity (entered as shear area, Av, for R.C. slabs (Bridge Type = CSL)) applies only up to a distance based on d distance and ALPHA. (BAR7REV183)

7. Load Factor ratings are now provided for truss members with or without eccentricity. (BAR7REV191)

#### Load Revisions

8. Provided options to place uniform and/or concentrated loading on a bridge. The effects of these patch loads are considered as dead loads and are added into dead load effects for load rating analyses. (BAR7REV192)
9. Corrected an error that caused the program to abort when 6 Special Live Loads were entered. The number of special live loads was increased to 8. (BAR7REV185)
10. For the LIVE LOAD field of PROJECT IDENTIFICATION card, a new loading code, K, was added to automatically evaluate the HS, ML-80, TK527, PA58, and AASHTO Type 3 loadings. (BAR7REV199)

#### Output Revisions

11. For concrete bridges, the output format of the live load analysis results was revised. (BAR7REV184)
12. Corrected the member length calculation for the end post of Panel 0. The member length was reported in feet instead of inches. (BARREV187)
13. The PDF output file creation is now optional. (BAR7REV196)

#### Specification Revisions

14. Incorporated a top chord stability check for top chords and vertical chords at up to three floorbeam locations for pony trusses. (BAR7REV194)