PennDOT e-Notification

Bureau of Solutions Management
Highway Applications Division

pennsylvania
DEPARTMENT OF TRANSPORTATION

TRLRFD

No. 001
December 4, 2017

Initial Release of Version 1.0.0.0

This notification announces the initial release of Department's **LRFD Truss Analysis and Rating** (TRLRFD) program. The truss module from the Department's Bridge Analysis and Rating (BAR7) program has been updated to the current AASHTO and DM-4 LRFD specifications as described in the attached program abstract. TRLRFD is not approved for final design, but can be used for preliminary member sizing.

The new program has been placed on PennDOT servers for use by the Districts. Consultants and others can obtain **TRLRFD v1.0.0.0** by submitting an Order Form along with the **initial license fee of $1000 for private organizations and $100 for governmental agencies**. The license 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 Order Form to receive the download instructions.

Please direct any questions concerning the above to:

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Attachment

Program Title:	LRFD Truss Analysis and Rating
Program Name:	TRLRFD
Version:	1.0.0.0
Subsystem:	Superstructure
Authors:	Pennsylvania Department of Transportation
	and Michael Baker International

ABSTRACT:

TRLRFD is the LRFD version of the truss analysis and rating routines found in the PennDOT computer program BAR7 (Bridge Analysis and Rating). This program has been developed by the Pennsylvania Department of Transportation to aid bridge engineers in analyzing highway truss bridges to determine load carrying capacity and to estimate fatigue life following the LRFD (Load and Resistance Factor Design) Specifications using Customary US units (ft and kips). The results of the structural analysis performed by TRLRFD can be utilized for load rating, rehabilitation, or design of a highway truss bridge. The program can analyze simple, continuous or cantilever trusses with up to 6 spans. Computed values include reactions, member axial loads, member axial resistances, stresses, deflections, rating factors, influence line ordinates and an estimated fatigue life. All truss members are analyzed and then rated for a set of standard live loadings or an inputted truck configuration using the AASHTO LRFD Bridge Design Specifications. The fatigue life analysis is performed in accordance with the Pennsylvania Department of Transportation Design Manual Part 4. TRLRFD can also analyze and rate gusset plates using the LRFD procedures described in the FHWA Publication "Load Rating Guidance and Examples for Bolted and Riveted Gusset Plates in Truss Bridges" and the LRFD Specifications 7th Edition.