PENNDOT e-Notification

Bureau of Information Systems
Application Development Division

ABLRFD No. 008 May 29, 2007	**Release of Version 1.6.0.0**

The Department's LRFD Abutment and Retaining Wall Analysis and Design (ABLRFD) program has been revised as described in the attached "Summary of April 2007 Revisions – Version 1.6.0.0".

The new program has been placed on PENNDOT servers for use by the Districts. Consultants and others, who have a current license agreement for ABLRFD **Version 1.5.x.x**, can obtain the updated version by submitting an Update Request form along with an **update fee of $500 for private organizations and $50 for governmental agencies**. Updates for ABLRFD **Version 1.4.x.x or earlier** will require an **additional fee**. Update fee details can be found on our software support website, http://penndot.engrprograms.com. The Software Update Request form can also be downloaded from the website.

Please direct any questions concerning the above to:

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Attachment

SUMMARY OF APRIL 2007 REVISIONS - VERSION 1.6.0.0

Since the release of ABLRFD Version 1.5.0.1 several revision requests and user requested enhancements have been received. This release of ABLRFD Version 1.6.0.0 contains the following revisions and enhancements.

Input Revisions

1. An input check has been added to the program for pile/caisson foundation analysis runs which ensures that the parallel reinforcement cover entered on the CVR command will not cause interference with the adjacent perpendicular reinforcement. (Request 238)

2. An input check has been added to the program for pile/caisson foundations which checks the distance between the face of the pile and the footing edge to ensure the minimum distance from DM-4 is not violated. The program will continue with a warning message for analysis runs and halt with an error message for design runs. (Request 242)

Output Revisions

3. The program has been modified to correct an erroneously displayed status code in the crack control tables. The “spacing less than minimum allowed” status code was being displayed at all times. (Request 225)

4. The program has been modified to indicate which stem locations have cracked in the “Crack Control – Analysis/Design” output table. When this occurs the message provides instructions on how the user should proceed. (Request 237)

5. The “Footing Stability On Pedestal” table has been revised to show all Service load cases and stages for the pedestal sliding check. Previously only the maximum case final stage was checked. (Request 243)

Reinforcement Revisions

6. The crack control equations have been modified in the program to conform to DM-4. The exposure input parameters on the MRD card have been changed from Normal to Class 1 and from Severe to Class 2 to comply with DM-4. Input files created before v1.5.1.0 will require modification. (Request 199)

7. The program has been modified to calculate a spacing for use with serviceability checks when the reinforcement is entered as an area per width. (Request 197)

Footing Revisions

8. The moment assumption criteria has been replaced with a moment direction criteria in the "Internal Footing Forces" table. Previously, the moment assumption defined a positive moment as causing the bottom steel in the toe and the top steel in the heel to be in tension and was indicated by an "OK" or "NG" in the output. The "NG" could be confused with a design or analysis failure. Now, the moment direction criteria defines moment direction as a number which indicates whether the top or bottom of the toe or heel is in tension. Also the program has been revised to determine if a negative moment will control for the perpendicular reinforcement check in a footing. (Request 172,173)

9. The program has been modified to perform an analysis of a footing without a toe or heel projection. Previously the program would crash if the toe or heel projection had a zero dimension. Also the program can now perform a design of a footing without a heel. (Request 193)

10. The program has been revised to use a tolerance when checking minimum pile edge distances. This prevents a warning message from appearing under certain conditions when the measurements are close. (Request 198)

Load Factor Revisions

11. The program has been modified so the correct load factors for LLDD, LLDU, LLBW, LLBH for the Extreme-I limit state are now being used by the program in accordance with DM-4. (Request 066)

User Manual Revisions

12. The Users Manual has been revised to indicate that the program assumes the connection between a pedestal and the footing is integral through the use of transverse shear keys and dowels. (Request 188)

13. The Users Manual has been revised to remove the reference to keyed footings in Section 6.19.4. (Request 189)