

PENNDOT e-Notification

Bureau of Information Systems
Application Development Division



ABLRFD

No. 005
May 01, 2006

Release of Version 1.4.0.4

The Department's LRFD Abutment and Retaining Wall Analysis and Design Program (ABLRFD) has been revised as described on the attached Summary of April 2006 Revisions – Version 1.4.0.4.

The new program has been placed on PENNDOT servers for use by the Districts. Consultants and others, who have a current license for **ABLRFD Version 1.4** or **ABLRFD Version 1.4.0.3** can download version 1.4.0.4 **free** of charge from our support website at <http://penndot.engrprograms.com>. Installation instructions are provided at the website. Updates for **ABLRFD Version 1.3 or earlier** will require an **update fee** of \$500 for private organizations and \$50 for governmental agencies. Update Requests and Ordering Forms for PENNDOT's Engineering Software can also be downloaded from the website.

As noted in Item 2 of the attached Summary of April 2006 Revisions – Version 1.4.0.4, a problem has been identified in ABLRFD v1.4.0.3. The program can result in unconservative reinforcement design for the footing heel when the Coulomb method is used to compute lateral earth pressure. Users should run ABLRFD v1.4.0.4 for any structures designed with ABLRFD v1.4.0.3 to verify that the reinforcement design for the footing heel is correct.

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 APRIL 2006 REVISIONS - VERSION 1.4.0.4

Since the release of ABLRFD Version 1.4.0.3 several revision requests and user requested enhancements have been received. This release of ABLRFD Version 1.4.0.4 contains the following revisions and enhancements.

1. The program was revised to allow the top of rock layer to be equal with the top of the footing. Previously the program would halt with an error for this condition (Request 196).
2. The angle (s_r) of the partial earth pressure applied to the heel (P_{a1}), used in the internal Footing EH-V calculations from User Manual Section 3.3.2.5.2, was corrected for the Coulomb failure method. Previously, for the Coulomb method the program would calculate a lesser Internal Footing EH-V force due to the use of the incorrect angle which could lead to unconservative perpendicular heel reinforcement. The Rankine method is unaffected by this revision (Request 196).
3. The program has been modified to use the correct K_a value for the Internal Footing EH-V force calculation for the temporary stage. Previously the program would use the final K_a value for both the temporary and final stage Internal Footing EH-V calculations (Request 202).