PENNDOT e-Notification

Bureau of Information Systems
Application Development Division

ABUT5 No. 001 June 27, 2005	**Release of ABUT5 Version 5.4.0.0**

PENNDOT's LFD Abutment and Retaining Wall Analysis and Design Program (ABUT5) has been revised as described on the attached Summary of May 2005 Revisions – Version 5.4.0.0.

The new version has been placed on PENNDOT servers for use by the Districts. Consultants and others, who have a current license agreement for ABUT5, can obtain Version 5.4.0.0 by submitting a Software Update Request form with the appropriate update fee. Updates for **ABUT5 Version 5.2 or 5.3** require an **update fee of $50**. Updates for **ABUT5 Version 5.1 or 5.0** require an **update fee of $100**.

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".

Please direct any questions concerning the above to:

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SUMMARY OF MAY 2005 REVISIONS – VERSION 5.4.0.0

The program has been revised as follows:

1. The program source code was converted to current PENNDOT programming standards compatible with Windows XP. (Revision 002)

2. The pedestal design procedure was corrected to select the controlling bearing pressure under the pedestal considering the correct overstress factor. Previously, the program selected the maximum bearing pressure for all load cases, but sometimes applied an incorrect overstress factor when determining whether it exceeds the allowable pressure. This could result in a pedestal footing design with excessive bearing pressure for certain load cases. (Revision 003)

3. The allowable bearing pressure, including the overstress factor, was added to the Stability Analysis output table for all footing types. Actual pressures, which exceed the allowable, are now indicated by an asterisk. (Revision 004)

4. Program output messages were reformatted and categorized as Notes, Warnings and Specification Failures to make them easier to identify and read. In addition, output section headings were added to better identify where the messages apply. (Revision 005)

5. The program has been converted to a Windows DLL. (Revision 006)

6. A note ("THE LATERAL RESISTANCE IS GREATER THAN 150% OF THE DRIVING FORCE (SUM H) A REDUCED BENDING CAPACITY MAY BE USED.") printed after the pile pattern when the lateral resistance of a pile pattern is greater than 150% of the horizontal force was removed. It is no longer applicable. (Revision 007)

7. A Formatted Output Tables section was added to Chapter 6 of the User's Manual to provide a sample of the output format. (Revision 008)

8. The DM-4 reference for the horizontal and vertical components of earth pressures calculation for sloped backfill was corrected from Table 5.8.1.3P(A) to Figure 5.5.2E in the "Constants, Assumption and Limitations" section (Section 3.12, Item 4) of the User's Manual. (Revision 009)

9. A clarification for the use of a 2% allowance when checking soil pressures for spread footing and pedestal footing designs was added to the “Constants, Assumption and Limitations” section (Section 3.12, Item 18) of the User’s Manual. (Revision 010)

10. Several typographical errors were corrected from the initial release of the electronic (Adobe PDF) ABUT5 User’s Manual.