

RELEASE NOTES

for

BRASS-CULVERT™ Version 3.3

June 2018

General

The BRASS™ incident tracking system can be found at www.wydot-brass.com. Users without an account on the incident tracking system can request an account by clicking on the "Open a Technical Support Account" link/button and e-mailing the address or calling the phone number listed. A username and password will be created and sent to the user. All BRASS™ technical support questions should be logged in this system.

Program Maintenance

The following issues were addressed for this release. The incident number is listed in parentheses after each issue if applicable.

Maintenance

- Updated the analysis engine to Intel Parallel Studio XE Composer Edition for Fortran 2018. (1328)
- Added an HKLM registry entry (ProgramData) for storing the path to the non-static files used by the GUI. The registry key is stored in:

HKEY_LOCAL_MACHINE\SOFTWARE\BRASS\Program\Version.

This defaults to the directory where the program is installed, but can be set by the user during the installation. (1341)

- Modified the UI to enable use of the preferred Windows data directories. (1342)
- Added a textbox to the Preferences form to display the Preferences path. (1361)
- Revised the GUI behavior when interacting with a read-only Preferences file to disable any input in the corresponding Preferences form. Additionally, the Preferences are not saved to a read-only Preferences. (1410)

Bug Fixes

- Corrected errors with the output of crack control results for LRFD analyses. (1295)

- Corrected errors with combined actions for LFD shear and added arrays to keep better track of shears in the corners of culverts. Accounted for equation 8-50 for LFD shear resistance. (1307)
- Corrected the program output to properly reflect changes to the default load factors in LRFD. (1309)
- Updated the program and its installation to run out of the Windows “Program Files” directories. Updated the program preferences and temporary data storage. (1336)
- Corrected the heading for the load factors summary for LRFD analyses. (1337)
- Corrected the application of Live Load Factor Overrides. This applies to the overrides at the vehicle level. (1346)
- Adjusted LRFR routines to always report shear rating factors. The program was not reporting rating factors or calculations for very high rating factors. (1348)
- Removed rating factor calculations for flexure at the bottom of walls that were released for moments. (1349)
- Added missing live load headings to the intermediate live load actions output file. (1394)
- Corrected an error transferring wall rebar input from the UI to the analysis engine. (1396)
- Revised the GUI to save a temporary data file from which to generate the HTML-based Input Report using the current stylesheet. When opening an existing data file, the file may be from an older version and the current stylesheet may not be fully compatible with the data file. (1398)
- Corrected the application of the EH load case (use of a 50% reduction) for LRFR analyses. (1399)
- Corrected the UI to allow entry of reinforcement and the bottom of fixed walls when there is no bottom slab. (1403)
- Corrected the application of lane loads for LFD analyses. (1404)
- Corrected the units on various input fields in the UI. (1405)

Program Verification

Regression testing was performed on BRASS-CULVERT™ using its feature that allows automatically-varying geometry and load parameters. The results of the new version were compared to the previous version and examined for any unexpected results.

Service Pack 1 – September 2018

- Corrected unfactored and factored actions output for the bottom slab. (1426)
- Corrected application of the vertical earth pressure load for LFR. (1430 and 1432)
- Corrected transfer of the rebar for the right end of interior cell bottom slabs. (1434)