BRIDGE AUTOMATED DESIGN AND DRAFTING SOFTWARE

SUMMARY OF OCTOBER 2014 REVISIONS - VERSION 3.2.1.0

Since the release of BRADD Version 3.2.0.0, a major enhancement has been made to the software and many reported operational issues have been addressed. This release of BRADD Version 3.2.1.0 contains the following revisions:

1. The PA Type 10M Bridge Barriers have been incorporated into BRADD for superstructure only jobs. (VI 4273)

2. Version 2.7.0.0 of PennDOT PSLRFD has been incorporated into BRADD. (VI 4310)

3. Publication 408 / 2011 Change 6, has been incorporated into BRADD. (VI 4756)

4. The PSLRFD version in BRADD cannot handle vertical tendon locations near the mid-depth of Adjacent Box Beams. Because of this, a note was added in the Designer Checklist, superstructure controller output file and on the BEAM PLAN detail indicating the possibility of the need for the user to re-design the adjacent box beam outside of BRADD to account for the loss of strand locations due to the revised vertical location of the tendons per BC-775M, Sheet 2. (VI 4645)

5. For spread box superstructures, a problem has been fixed in which haunch depths were not being optimized. The minimum haunch depth in BRADD will now be set equal to the BD-601M, Sheet 8, Table 1 MINIMUM HAUNCH THICKNESS value. (VI 4680)

6. An issue which resulted in BRADD displaying inventory rating factors less than 1.0 for the PHL-93 loading for a few prestressed I-beam and box beam superstructures has been corrected. (VI 4687)

7. A problem has been fixed where the Debonding Detail table shown on the BRADD STRAND TABLES drawing was listing inconsistent debonding results that did not match the information shown on the PSLRFD analysis output file DEBONDED STRAND table. (VI 4747)

8. For superstructure only jobs with traditional abutments, additional abutment input menu items have been added to describe the joint in the deck, the installation joint opening, and the abutment corbel geometry, enabling the user to control the installation joint opening and which joint details are placed on the drawings. (VI 4797, VI 4798)

9. Additional notes and a new curb plan detail named DETAIL A, from BD-628M, Sheet 35, have been added to the BRADD approach slab drawings showing the end of the integral abutment wingwall when a curb exists and specifying the joint material between the approach slab and the barrier. (VI 3978)

10. The cheekwall dimension perpendicular to the station line on the BRADD Stake-Out Plan detail was sometimes being calculated incorrectly. The cheekwall dimension has been corrected to match the dimension shown on the abutment corner details. (VI 4109)

11. The working point locations have been corrected at abutment corners on the ABUTMENT PLAN detail and the Abutment Corner details, because for some superstructures with adjacent box beams, U-wing abutments, and cheekwalls they were shown incorrectly. (VI 4231)

12. The INTERMEDIATE DIAPHRAGM detail has been revised for prestress spread beam superstructures so that the distance from the bottom of the diaphragm to the centerline of the bottom reinforcing bar is drawn and labeled at 3" as specified by BD-656M, Sheet 1. (VI 4248)

13. Minor wording changes have been made in the substructure controller output file to emphasize that no analysis runs of the abutments and wingwalls are performed by BRADD. (VI 4275)

14. For certain BRADD superstructure geometry, the design process can produce a superstructure framing plan geometry error which will cause BRADD to terminate because the beam spacing is less than the flange width. When this occurs BRADD was producing a very cryptic error message that would not explain what the problem was. This problem has been address by now providing a meaningful error message. (VI 4297)

15. Two threaded insert notes from BD-655M, Sheet 1, have been added to the BRADD prestress I-beam END DIAPHRAGM details. (VI 4338)

16. A crash has been fixed for certain BRADD superstructures when PSLRFD cannot produce an acceptable design due to dead load being too large for the span length and beam size. An error indicating that a design cannot be found is now displayed. (VI 4373)

17. BRADD has been updated so that the same job group cannot be accidently opened multiple times. (VI 4383)

18. A problem causing BRADD to hang when running a design or quantities calculation immediately after importing a BRADD job has been fixed. (VI 4453)

19. An issue where the Generate Tab drawing list vertical scroll bar would sometimes disappear has been corrected. (VI 4488)

20. In the integral abutments wingwall section details, callouts have been added to the vertical reinforcement bars in the barriers. (VI 4553)

21. Some undefined figure hyperlinks in the BRADD help window panes have been fixed. (VI 4620)

22. A crash that occurred when comparing two BRADD jobs using the BRADD Input Review & Compare tool has been fixed. (VI 4621)

23. As per the SOL 483-13-16, the "MOMENTS, SHEARS & BEAM PROPERTIES" drawing has been removed from the list of BRADD's generated drawings. (VI 4657)

24. The BRADD help for the Skew Angle menu item has been modified to emphasize that the valid range of Skew Angle input is always shown positive, but that the actual range of what is entered is both positive and negative. (VI 4660)

25. BRADD has been modified so that the same staged construction joint location warning text is written to both the geometry output file and the superstructure controller output file. (VI 4662)

26. For Prestress Beams with Integral Abutments, the horizontal distance between the edge of the diaphragm and the center of the holes for the threaded insert bars, has been added to the SECTION THRU END DIAPHRAGM AT BEAMS detail. (VI 4665)

27. A failure that occurred when importing a BRADD job when a member file already existed has been fixed. (VI 4688)

28. For bridges with integral abutments, BRADD has been revised so if any abutment input is changed, a re-design of the superstructure must be performed by the user. This was done to prevent problems with BRADD using outdated superstructure design information to generate the drawings. (VI 4689)

29. For adjacent box beam superstructures with a user-defined barrier, BRADD was incorrectly setting the maximum allowable overhang distance to 0". This has been corrected. (VI 4800)

30. The BRADD User Manual Section 3.5.2.6.5 Beam Projection for Integral Abutments has been updated to document how BRADD sets the beam projection. Note: BRADD is currently calculating the beam projection incorrectly for Prestress I-Beams and Steel Beams. This problem will be fixed in a future release. (VI 4669)

31. The BRADD help for "Method of Abutment Location" and "Normal Distance from Abutment Station to Centerline-of-Bearing of Abutment" has been revised to include a figure that shows the distances that should be entered. (VI 4668)