

## Bureau of Project Delivery Bridge Design and Technology Division

### BRADD

No. 043  
November 24, 2015

### BRADD v3.2.2.0: Unable to Design Shallow Adjacent Box Beams – Patch Available

#### Problem Statement:

BRADD version 3.2.2.0 is unable to design shallow Adjacent Box Beams. When running a Design for Adjacent Box Beams, the shallow depth beams (17", 21" and 24") will not design. Instead, for exterior Adjacent Box Beams, an erroneous overhang warning message appears in the PSLRFD output file incorrectly stating that the beam overhang exceeds the beam depth and PSLRFD aborts.

The PSLRFD Warning and Abort messages appear in the PSLRFD output files for the exterior Adjacent Box Beam.

#### %WARNING - <DESIGN INITIALIZATION>:

The overhang length exceeds the minimum girder depth.  
This violates DM-4 Article 9 7.1.5.1P  
GEO, Deck Overhang: 24.522 (in)  
DES, Min. Beam Depth: 17. (in)  
The minimum beam depth will be set equal to the deck overhang.

#### %ABORT - <DESIGN INITIALIZATION>:

No valid beams were selected from the beam table  
to match the following user input criteria:

Beam Shape	= "AR"
Slew:1st support	= 90.
Skew Override	= "N"
Maximum Depth	= 24.
Minimum Depth	= 24.522
Beam width	= 48.
Composite	= "Y"
Analysis/Design	= "D"

ERROR

Error reading beam table in PM002

Archived copies of all previously distributed e-Notifications can be obtained from the PENNDOT BRADD website at <http://bradd.engrprograms.com/home> and clicking on "e-Notification" and then "Mailing List Archives."

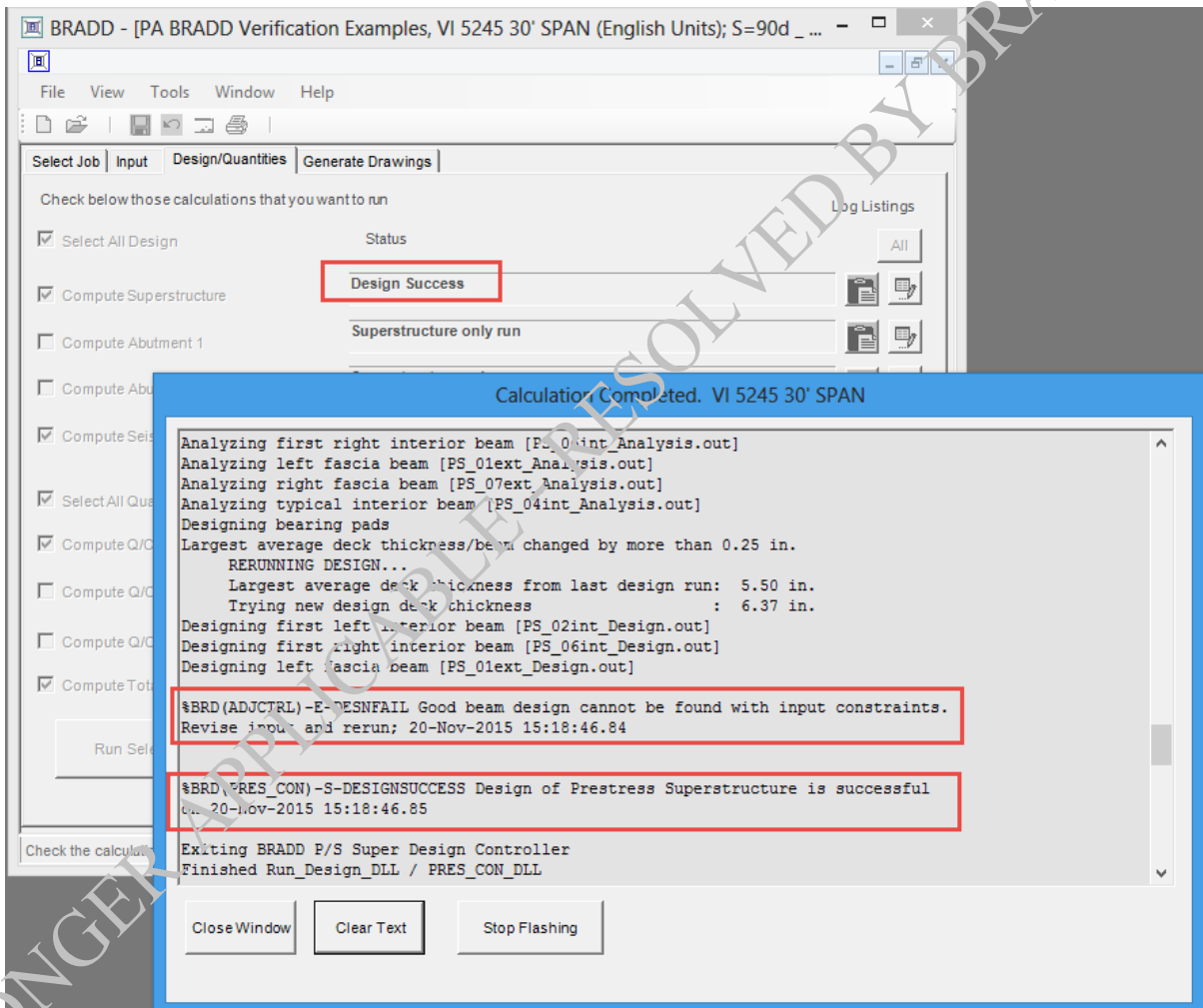
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In addition the Design Status shown on the BRADD Design/Quantities Tab incorrectly indicates that a Successful Design was found.



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#### Problem Workaround:

There is no workaround available because the actual problem is with PSLRFD. Although the PSLRFD v2.9.0.0 User Manual states that the Overhang to Beam Depth Override input on the CTL Command “is used only for exterior spread beams”, that is not the case.

#### Problem Resolution:

A fix for this problem is available in BRADD patch version 3.2.2.1 which can be downloaded as a patch from the BRADD website. This patch employs a workaround of always setting the PSLRFD CTL Command / Overhang to Beam Depth Override to 'Y' for Adjacent Box Beams. This allows PSLRFD to design the shallow adjacent box beams, however the erroneous warning message will still appear and should be ignored because it is incorrect.

#### Installing BRADD Version 3.2.2.1 Patch for Licensees:

1. To download the patch, go to the Downloads page on the BRADD web-site at <http://bradd.engrprograms.com> and select to download the BRADD version 3.2.2.1 Patch (BRADD\_3221\_Patch.zip).
2. Extract the files on the computer that has BRADD installed.
3. Go to the folder "C:\Program Files (x86)\BRADD v3.2.2.0\Bin" or "C:\Program Files\BRADD v3.2.2.0\Bin" (whichever folder exists) and create a sub-folder called "Backup".
4. Move the existing version of the Bin\PRES\_CON\_DLL.DLL to the "Backup" folder.
5. Copy the new PRES\_CON\_DLL.DLL file that was downloaded to the Bin folder.

#### Installing BRADD Version 3.2.2.1 Patch for PENNDOT:

PENNDOT's CADD workstations will be updated by CADD Support.

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# PENNDOT e-Notification



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Please direct any questions to:

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NO LONGER APPLICABLE - RESOLVED BY BRADD v3.2.3.0

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