

IOWA DEPARTMENT OF TRANSPORTATION

To Office Bridges and Structures Date March 1, 2008
Attention All Employees Ref No. 521.1
From Gary Novey
Office Bridges and Structures
Subject The release of the new abutment and pier bearing detail standards (4541, 4541A, 4541B, 4541C, 4541D, 4541E, 4541F, 4541G & 4541H) for use with the A, B, C, D, BTB, BTC, BTD and BTE prestressed beams.
(CADD M0057)

Bearing standards 4541 and 4541A were voided and reissued as new standards as described below.

New standard bearing sheets have been developed that use laminated neoprene bearings for expansion at stub abutments (4541C, 4541D, and 4541E). These standards should be considered for use where loads and movements allow rather than the bronze lubricated bearings sheets.

Electronic copies are available in the following Office of Bridges and Structures standard directory **W:\Highway\BridgeStandards\Bridges** and on the Internet:

<http://www.dot.state.ia.us/bridge/standard.htm>

The following Standards have been released for use:

1. 4541 is to be used with the A and B beam standards and steel beam bridges at stub abutments with bronze lubricated bearings. Shear studs are provided for anchorage and design notes are shown for bearing load and movement limits.
2. 4541A is to be used with the C and D beam standards at stub abutments with bronze lubricated bearings. Shear studs are provided for anchorage and design notes are shown for bearing load and movement limits.
3. 4541B is to be used with the bulb tee beam BTB, BTC, BTD, & BTE standards at stub abutments with bronze lubricated bearings. Shear studs are provided for anchorage and design notes are shown for bearing load and movement limits.
4. 4541C is to be used with the A and B beam standards at stub abutments where laminated neoprene bearing pads can be used if loads and movements allow.
5. 4541D is to be used with the D and C beam standards at stub abutments where laminated neoprene bearing pads can be used if loads and movements allow.

CADD M0057 (Release of new abutment & pier bearing detail standards)

6. 4541E is to be used with bulb tee beam BTB, BTC, BTD, & BTE standards at stub abutments where laminated neoprene bearing pads can be used if loads and movements allow.
7. 4541F is to be used with the A and B Beam standards for both fixed and expansion piers. This new standard is issued with shear studs provided for anchorage and an "Allowable Pintle Plate Thickness" table to show maximum plate thickness with bearing load limits.
8. 4541G is to be used with the C and D Beam standards for both fixed and expansion piers. This new standard is issued with shear studs provided for anchorage and an "Allowable Pintle Plate Thickness" table to show maximum plate thickness with bearing load limits.
9. 4541H is to be used with the bulb tee beam BTB, BTC, BTD, & BTE standards for both fixed and expansion piers. This new standard is issued with shear studs provided for anchorage and an "Allowable Pintle Plate Thickness" table to show maximum plate thickness with bearing load limits.

These standards should be used on any new bridge project that is using these beam types. If you have any questions on the new standard sheets, please check with Thayne Sorenson or Dean Bierwagen.

GAN/dgb/bj