B403
Steel Intermediate Diaphragm (For 36M, MN45 - MN63 Prestressed Concrete Beams)

Approved, and signed, November 3, 2015. Last date revised: January 5, 2017

Revised 01-05-2017

At SECTION A-A:

- Changed note pointing to the ℄ of the bolt anchorage to read: "℄ Bolt Anchorage and ℄ Diaphragm".

At SECTION A-A and B-B:

- Lengthened the ℄ of the beam the full length of the section for better clarity.

Re-Approved 11-03-2015

At PART TRANSVERSE SECTION at DIAPHRAGM:

- Moved the section arrows to better clarify the section A-A location

At SECTION A-A:

- Removed from the Cast-In-Place bolt anchorage note "Torque anchor bolts to 80 ft.-lbs."

At DETAIL A:

- Moved the channel, diaphragm connection plates, and Section B-B to better represent the actual location in relationship to the beam. Also raised the channel by ½" by adjusting the channel hole dimensions.

At the DIAPHRAGM CONNECTION details, The B-DETAIL sub-title and in the TABLE:

- Removed all references to the 45M and 54M beam types.
- At the Diaphragm Connection for the MN54 – MN63 beams: Aligned the "tic marks" for the hole locations on the beam face and the diaphragm faces

Under NOTES:

- Changed all notes to "Active Voice" if needed.
- Added 3rd note: Torque all bolts, including anchor bolts to 80 ft.-lbs."

Revised 09-11-2014

REMOVED: the term "Mn/DOT" from all locations referencing MnDOT Spec. throughout the detail.

At DETAIL A:

- Added "PER SPEC. 3391.2.B" to the bolt description in the note pointing to the diaphragm bolts.
- Changed the spec number *From:* 3391.2A *To:* 3391.2.A within the note pointing to the bolts going through the beam web.

At Section A-A:

- Added "PER SPEC. 3391.2.B" to the H.S. Bolt description within the note pointing to the anchorage.

Under NOTES:

- Changed the spec. number in the 2nd note: *From:* 2405.3M *To:* 2405.3.K.
- Changed the 3rd note to read: Shop bend the leg of the 12" plate to conform to the diaphragm. A 3/8" x 6" x 6" angle may be used for diaphragms perpendicular to beams.
- Changed the 4th note to read: Include all structural steel shown on this detail, including bolts and washers, in unit price bid for diaphragms for prestressed beams.
- Changed the 6th note to read: Galvanize steel plates and shapes in accordance with spec. 3394.

Revised 10-22-2009

Under NOTES:

- Added note: STEEL PLATES AND SHAPES SHALL BE GALVANIZED IN ACCORDANCE WITH Mn/DOT SPEC. 3394.
- Added note: GALVANIZE BOLTS, NUTS AND WASHERS PER Mn/DOT SPEC. 3392.

Revised 06-14-2006

Changed B-Detail subtitle (For 36M – 54M, MN45 AND MN54 Prestressed Concrete Beams) *to* (For 36M – 54M, MN45 - MN63 Prestressed Concrete Beams)

At DIAPHRAGM CONNECTION and TABLE: added MN63
Under NOTES:

- changed SEE Mn/DOT SPEC. 2405.3M FOR INSTALLATION. *to* INSTALLATION SHALL CONFORM TO Mn/DOT SPEC. 2405.3M.
- changed ALL STRUCTURAL STEEL SHOWN ON THIS DETAIL, INCLUDING BOLTS AND WASHERS, SHALL BE INCLUDED IN THE PAYMENT FOR DIAPHRAGMS FOR PRESTRESSED BEAMS. *to* ALL STRUCTURAL STEEL SHOWN ON THIS DETAIL, INCLUDING BOLTS AND WASHERS, SHALL BE INCLUDED IN UNIT PRICE BID FOR DIAPHRAGMS FOR PRESTRESSED BEAMS.

Re-Approved 10-26-2005
Changed B-Detail subtitle (For 36M – 54M Prestressed Concrete Beams) *to* (For 36M – 54M, MN45 AND MN54 Prestressed Concrete Beams)

At DIAPHRAGM CONNECTION FOR BEAMS: Changed subtitle 36M AND 45M BEAMS *to* FOR 36M, 45M AND MN45 BEAMS

At DIAPHRAGM CONNECTION FOR BEAMS:

- Changed subtitle 54M BEAMS *to* FOR 54M AND MN54 BEAMS
- Specified dimensions for 54M beams and added MN54 dimensions

At TABLE: Added MN45 and MN54 information

Revised 09-11-2004
At SECTION B-B: changed subtitle TYPICAL SECTION AT CONTINUOUS OR STAGGERED INTERIOR DIAPHRAGMS *to* TYPICAL SECTION AT INTERIOR BEAM WITH CONTINUOUS OR STAGGERED INTERMEDIATE DIAPHRAGMS

Revised 09-09-03
At DIAPHRAGM CONNECTION FOR BEAMS (36M AND 45M BEAMS): Changed 1" x $2^1/_4$" LONG SLOTTED HOLE … *to* $1^1/_8$" x $2^3/_8$" LONG SLOTTED HOLE …

At DIAPHRAGM CONNECTION FOR BEAMS (54MBEAMS): Changed 1" x $2^1/_4$" LONG SLOTTED HOLE … *to* $1^1/_8$" x $2^3/_8$" LONG SLOTTED HOLE …

Approved, and signed, November 22, 2002.