B403
Steel Intermediate Diaphragm (For 36M, 40MH, MN45 - MN63 Prestressed Concrete Beams)

Approved, and signed, November 3, 2015. Last date revised: December 20, 2018

Revised 12-20-2018
At sheet Title Block:
  • Changed sheet title from “Steel Intermediate Diaphragm (For 36M, MN45 - MN63 Prestressed Concrete Beams)” to “Steel Intermediate Diaphragm (For 36M, 40MH, MN45 - MN63 Prestressed Concrete Beams)”

At DIAPHRAGM CONNECTION FOR 36M AND MN45 BEAMS:
  • Changed title of the detail to “DIAPHRAGM CONNECTION FOR 36M, 40MH AND MN45

At TABLE (in bottom left corner):
  • Added row (2nd row) with diaphragm information for 40MH beam.

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 2⅛” LONG SLOTTED HOLE … to 1½” x 2⅜” LONG SLOTTED HOLE …

At DIAPHRAGM CONNECTION FOR BEAMS (54M BEAMS): Changed 1” x 2⅛” LONG SLOTTED HOLE … to 1½” x 2⅜” LONG SLOTTED HOLE …

Approved, and signed, November 22, 2002.