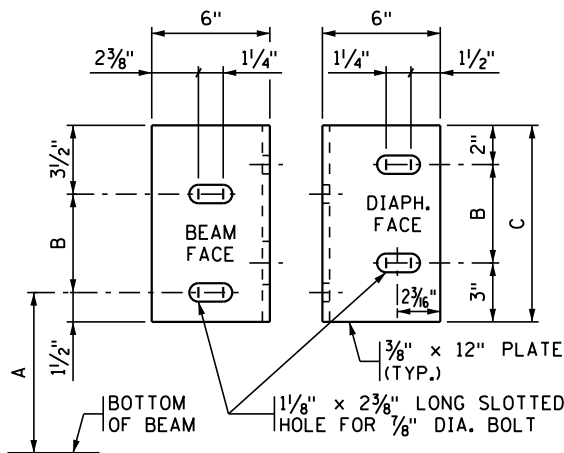
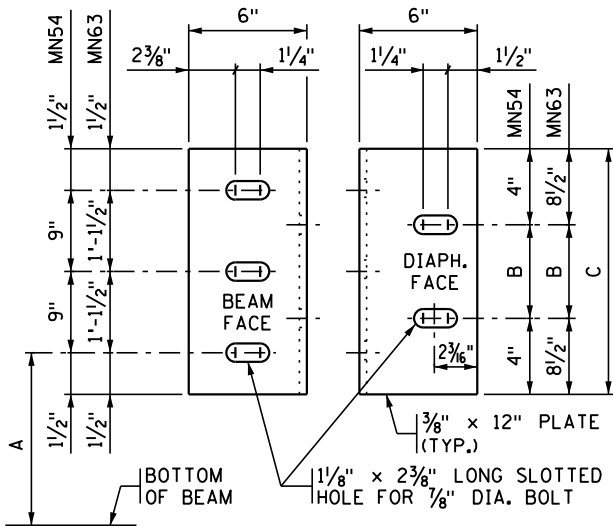


PART TRANSVERSE SECTION AT DIAPHRAGM



DIAPHRAGM CONNECTION

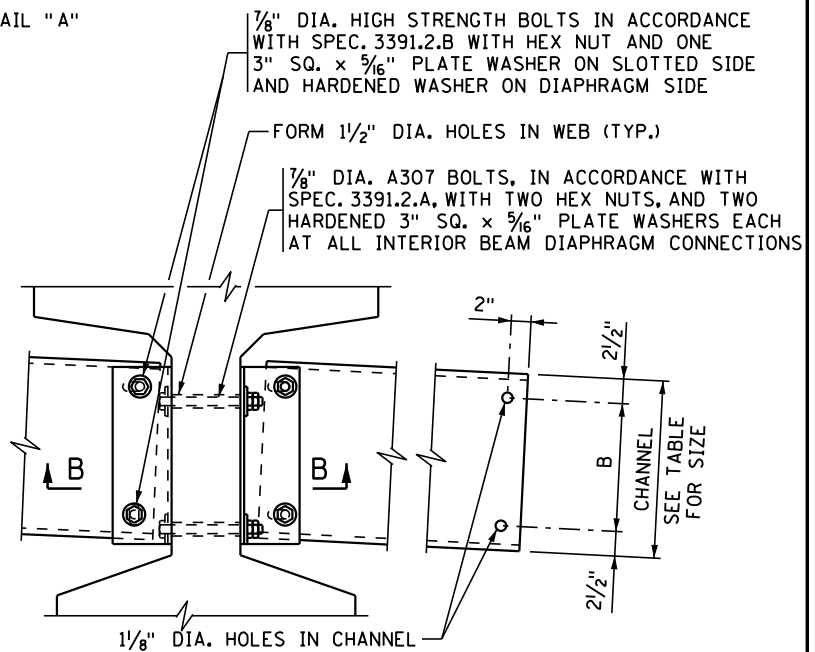
FOR 36M, 40MH AND MN45 BEAMS



DIAPHRAGM CONNECTION

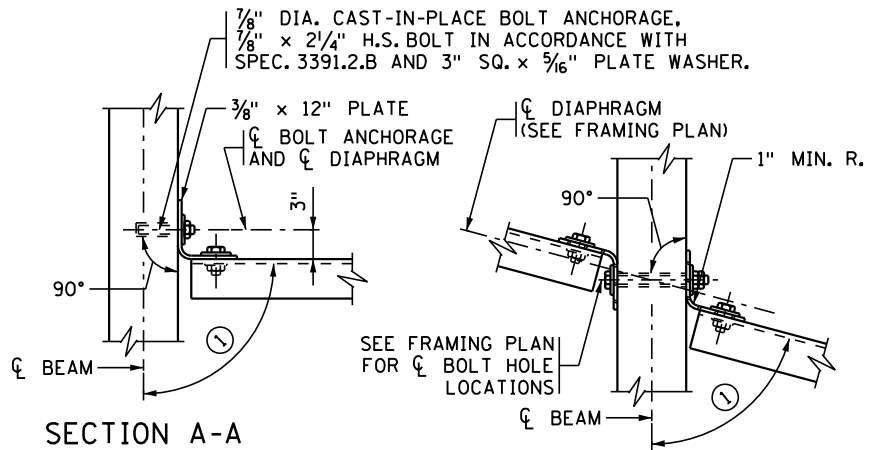
FOR MN54 AND MN63 BEAMS

TABLE				
BEAM HEIGHT	DISTANCE			CHANNEL SIZE
	A	B	C	
36M	1'-3"	7"	1'-0"	C12x20.7
40MH	1'-5"	7"	1'-0"	C12x20.7
MN45	1'-7 3/4"	7"	1'-0"	C12x20.7
MN54	1'-7 3/4"	1'-1"	1'-9"	MC18x42.7
MN63	1'-7 3/4"	1'-1"	2'-6"	MC18x42.7



DETAIL "A"

INTERIOR BEAM WITH CONTINUOUS LINE OF DIAPHRAGMS



SECTION A-A

TYPICAL SECTION AT ALL FASCIA BEAMS

SECTION B-B

TYPICAL SECTION AT INTERIOR BEAM WITH CONTINUOUS OR STAGGERED INTERMEDIATE DIAPHRAGMS

NOTES:

PROVIDE STEEL IN ACCORDANCE WITH SPEC. 3306.

INSTALL IN ACCORDANCE WITH SPEC. 2405.3.K.

TORQUE ALL BOLTS, INCLUDING ANCHOR BOLTS TO 80 FT.-LBS.

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.

INCLUDE ALL STRUCTURAL STEEL SHOWN ON THIS DETAIL, INCLUDING BOLTS AND WASHERS, IN UNIT PRICE BID FOR DIAPHRAGMS FOR PRESTRESSED BEAMS.

BENT PLATES MAY BE USED IN PLACE OF CHANNELS IF THE BENT PLATES HAVE THE SAME HEIGHT AS THE CHANNELS THEY REPLACE, ARE 3/16" IN THICKNESS, AND HAVE LEGS 5" LONG.

GALVANIZE STEEL PLATES AND SHAPES IN ACCORDANCE WITH SPEC. 3394.

GALVANIZE BOLTS, NUTS AND WASHERS IN ACCORDANCE WITH SPEC. 3392.

① FOR SKEW ANGLES UNDER 20°, USE 90° LESS THE SKEW ANGLE. FOR SKEW ANGLES OVER 20°, USE 90°.

APPROVED: APRIL 21, 2021

Kevin Westrom
STATE BRIDGE ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

STEEL INTERMEDIATE DIAPHRAGM
(FOR 36M, 40MH, MN45 - MN63 PRESTRESSED CONCRETE BEAMS)

REVISION

DETAIL NO.

B403