



- NOTES:**
- PROVIDE STEEL IN ACCORDANCE WITH SPEC. 3306.
 - INCLUDE ALL STRUCTURAL STEEL SHOWN ON THIS DETAIL, INCLUDING BOLTS AND WASHERS, IN THE PAYMENT FOR DIAPHRAGMS FOR PRESTRESSED BEAMS.
 - INSTALLATION IN ACCORDANCE WITH SPEC. 2405.3K
 - TORQUE ALL BOLTS, INCLUDING ANCHOR BOLTS TO 80 FT. LBS.
 - 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°.
 - ② SPACE BOLT HOLES SO AS TO MISS PRESTRESSED STRANDS IN CONCRETE BEAMS. SEE PRESTRESSED CONCRETE BEAM SHEETS FOR MORE INFORMATION.
 - ③ DIAPHRAGM SHOWN DESIGNED FOR BEAM SPACING UP TO 13'-0".

APPROVED: APRIL 21, 2021 STATE BRIDGE ENGINEER	STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION STEEL INTERMEDIATE BOLTED DIAPHRAGM (ALL MW PRESTRESSED CONCRETE BEAMS)	REVISION 12-21-2022	DETAIL NO. B412
---	---	------------------------	-------------------------------