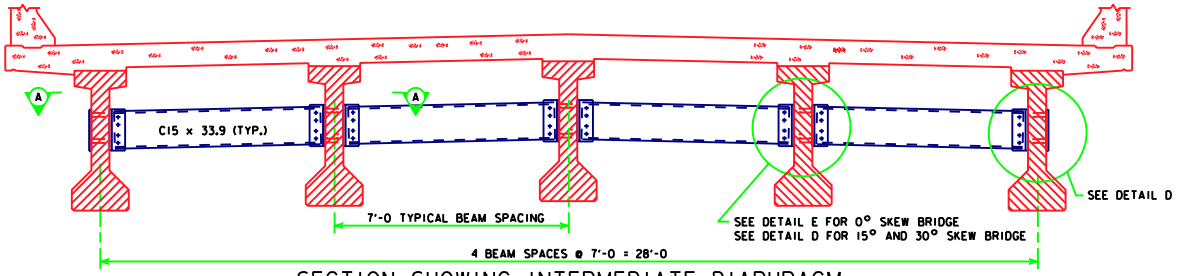


SECTION SHOWING INTERMEDIATE DIAPHRAGM

NOTES:

ALL DIAPHRAGM MATERIALS, INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.

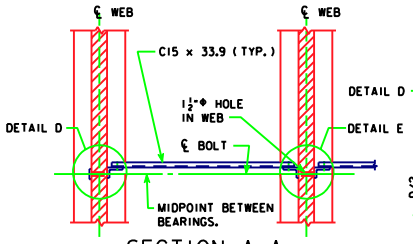
SHOP DRAWINGS OF THE STEEL DIAPHRAGMS SHOWING LAYOUT AND DETAILS OF THE DIAPHRAGMS SHALL BE SUBMITTED FOR APPROVAL.

ALL COSTS FOR FURNISHING AND INSTALLING STEEL INTERMEDIATE DIAPHRAGMS SHALL BE INCLUDED IN THE PRICE BID FOR STRUCTURAL STEEL.

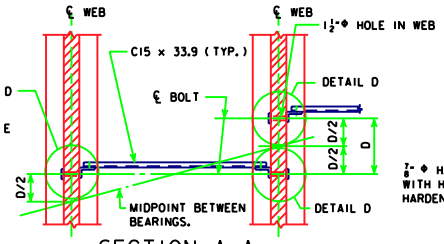
THE $1\frac{1}{2}$"-Φ HOLES FOR THE $\frac{7}{8}$"-Φ H.T.S. BOLTS SHALL BE CAST INTO THE WEB. DRILLING IS NOT ALLOWED.

THE $\frac{7}{8}$"-Φ H.T.S. BOLTS THROUGH THE WEB SHALL HAVE A THREAD LENGTH OF 3" MIN. AND 4" MAX. AND SHALL MEET THE REQUIREMENTS OF ASTM A449.

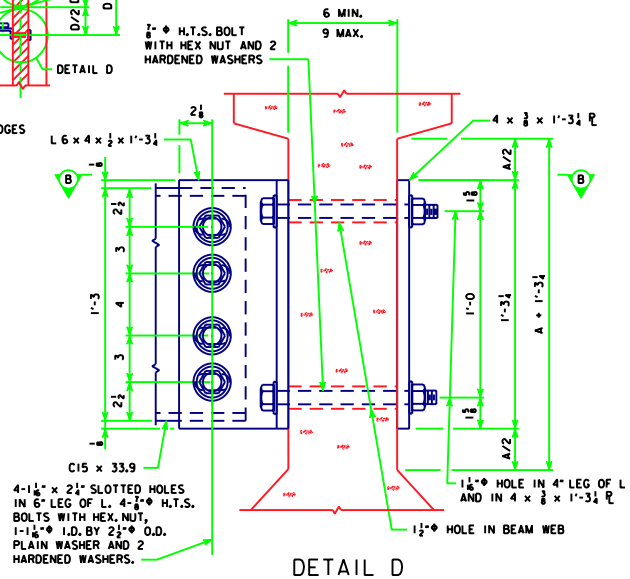
ALL BOLTS ARE TO BE TIGHTENED PRIOR TO PLACING BRIDGE FLOOR



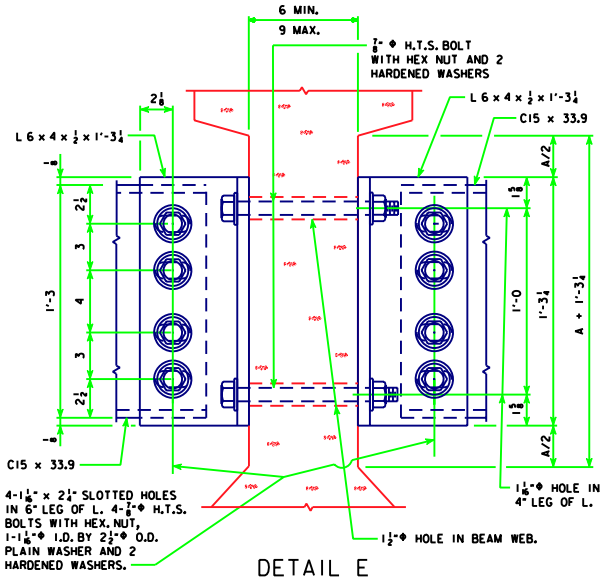
SECTION A-A
FOR 0° SKEW BRIDGES



SECTION A-A
FOR 15° AND 30° SKEW BRIDGES



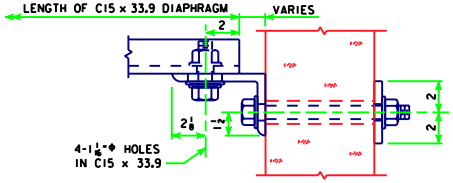
DETAIL D



DETAIL E

INTERMEDIATE DIAPHRAGM STRUCTURAL STEEL		
ONE CONNECTION DETAIL "E"		
2 - ⅞"-Φx LENGTH H.T.S. BOLTS WITH NUTS AND WASHERS		
WEB THICKNESS	LENGTH OF H.T.S. BOLTS	WEIGHT PER DETAIL "E"
6"	9"	4.30 LBS.
7"	10"	4.66 LBS.
9"	12"	5.34 LBS.
2 - L 6 x 4 x ½ x 1'-3¼ = 41.2 LBS.		
ONE CONNECTION DETAIL "D"		
2 - ⅞"-Φx LENGTH H.T.S. BOLTS WITH NUTS AND WASHERS		
WEB THICKNESS	LENGTH OF H.T.S. BOLTS	WEIGHT PER DETAIL "D"
6"	9"	4.30 LBS.
7"	10"	4.66 LBS.
9"	12"	5.34 LBS.
1 - BACKING PL 4 x ⅜ x 1'-3¼ = 6.5 LBS.		
1 - L 6 x 4 x ½ x 1'-3¼ = 20.6 LBS.		
ONE C15 x 33.9 DIAPHRAGM		
WEB THICKNESS \ BEAM SPACING	7'-0	
	* LENGTH	UNIT WEIGHT (LBS.)
6"	6'-2⅜	210.8
7"	6'-1⅜	208.0
9"	5'-11⅜	202.4
DIAPHRAGM CONNECTION BOLTS		
8-⅞"-Φ x 0'-2¾ H.T.S. BOLTS WITH NUTS AND WASHERS, PER UNIT DIAPHRAGM		
10.3 LBS.		

* THE LENGTH OF THE C15 x 33.9 SHOWN IN THE TABLE IS BASED ON A VARIABLE CLEARANCE OF 1 1/16 TO 2 1/16 BETWEEN THE FACE OF BEAM WEB AND END OF C15 x 33.9.



SECTION B-B

BEAM SERIES	DIMENSIONS	
	A + 1'-3¼	A/2
LXA	1'-4	⅜
LXB	1'-8	2⅜
LXC	2'-1	4⅜
LXD	2'-7½	8⅜

LATEST REVISION DATE :

APPROVED BY

STANDARD DESIGN - 30' ROADWAY, SINGLE SPAN BRIDGE

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

JANUARY, 2005 — HS20-44 LOADING

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

INTERMEDIATE STEEL DIAPHRAGMS — H30S1-33-05