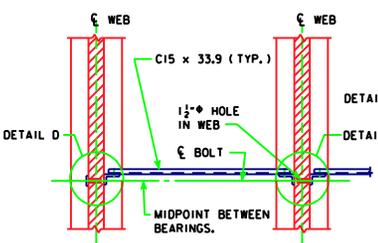
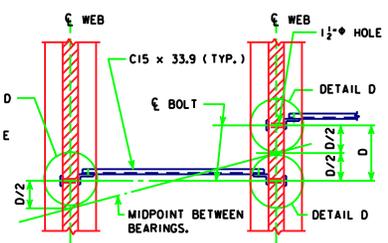


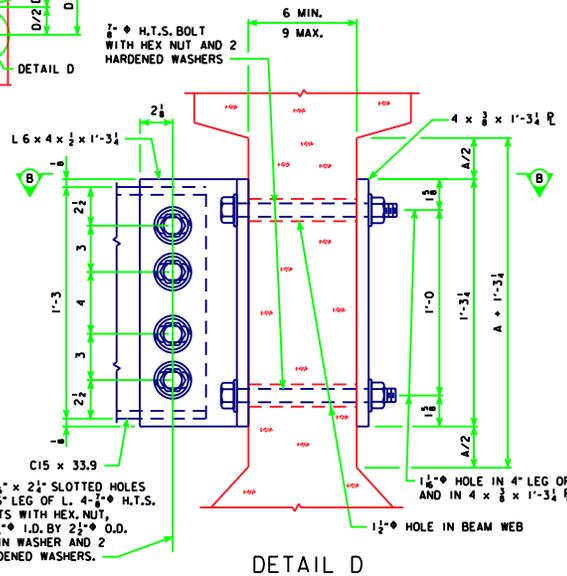
SECTION SHOWING INTERMEDIATE DIAPHRAGM



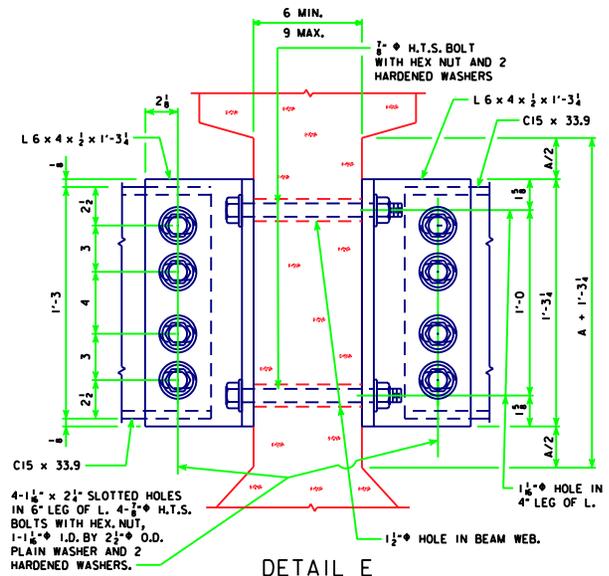
SECTION A-A FOR 0° SKEW BRIDGES



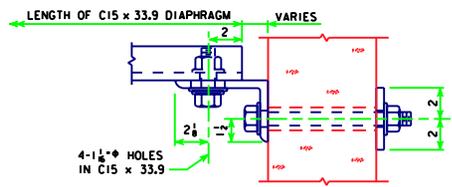
SECTION A-A FOR 15° AND 30° SKEW BRIDGES



DETAIL D



DETAIL E



SECTION B-B

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 1/2" HOLES FOR THE 1 1/2" H.T.S. BOLTS SHALL BE CAST INTO THE WEB. DRILLING IS NOT ALLOWED.
- THE 1 1/2" 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

INTERMEDIATE DIAPHRAGM STRUCTURAL STEEL		
ONE CONNECTION DETAIL "E"		
2 - 1/2" x 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 1/2 x 1'-3 1/4 = 41.2 LBS.		
ONE CONNECTION DETAIL "D"		
2 - 1/2" x 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 PLATE 4 x 1/2 x 1'-3 1/4 = 6.5 LBS.		
1 - L 6 x 4 x 1/2 x 1'-3 1/4 = 20.6 LBS.		
ONE C15 x 33.9 DIAPHRAGM		
WEB THICKNESS	BEAM SPACING	UNIT WEIGHT (LBS.)
6"	7'-0"	210.8
7"	7'-0"	208.0
9"	7'-0"	202.4
DIAPHRAGM CONNECTION BOLTS		
8 - 1/2" x 0'-2 1/2" 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 1/4" TO 2 1/4" BETWEEN THE FACE OF BEAM WEB AND END OF C15 x 33.9.

BEAM SERIES	DIMENSIONS	
	A + 1'-3 1/4	A/2
LXA	1'-4	2 1/4
LXB	1'-8	2 1/4
LXC	2'-1	4 1/4
LXD	2'-7 1/2	8 1/4

LATEST REVISION DATE:
 APPROVED BY: *[Signature]*

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 H30SI-33-05