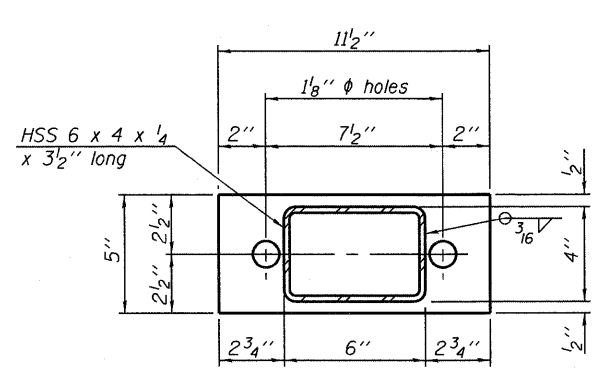
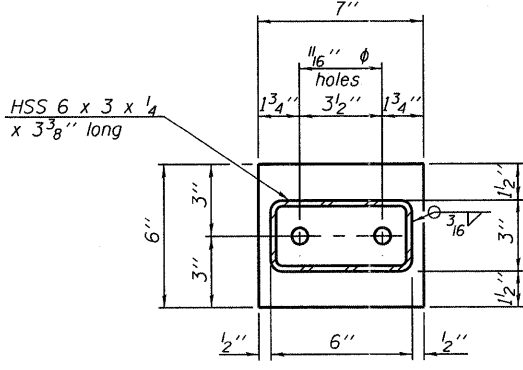


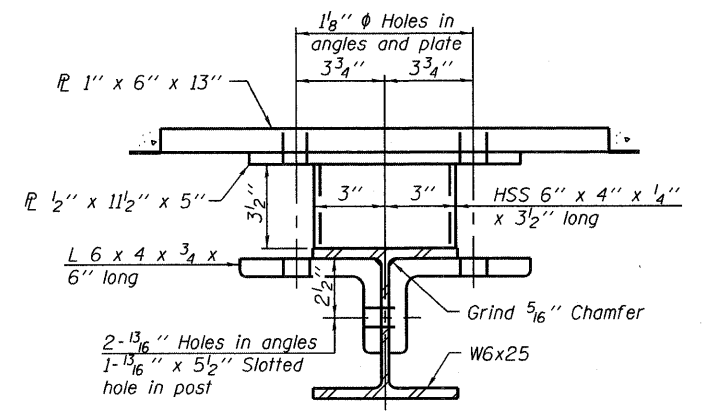
**VIEW A-A
ROUND HEAD BOLT**



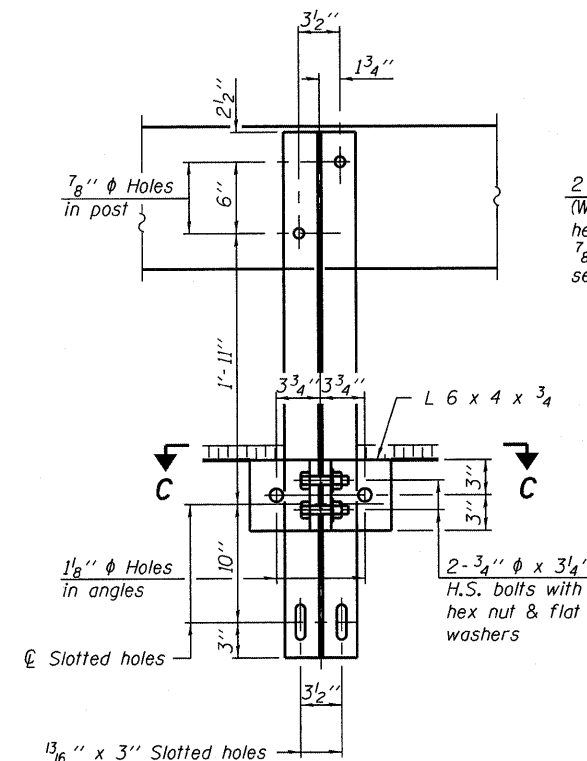
**SECTION B-B
P 1/2" x 11 1/2" x 5"**



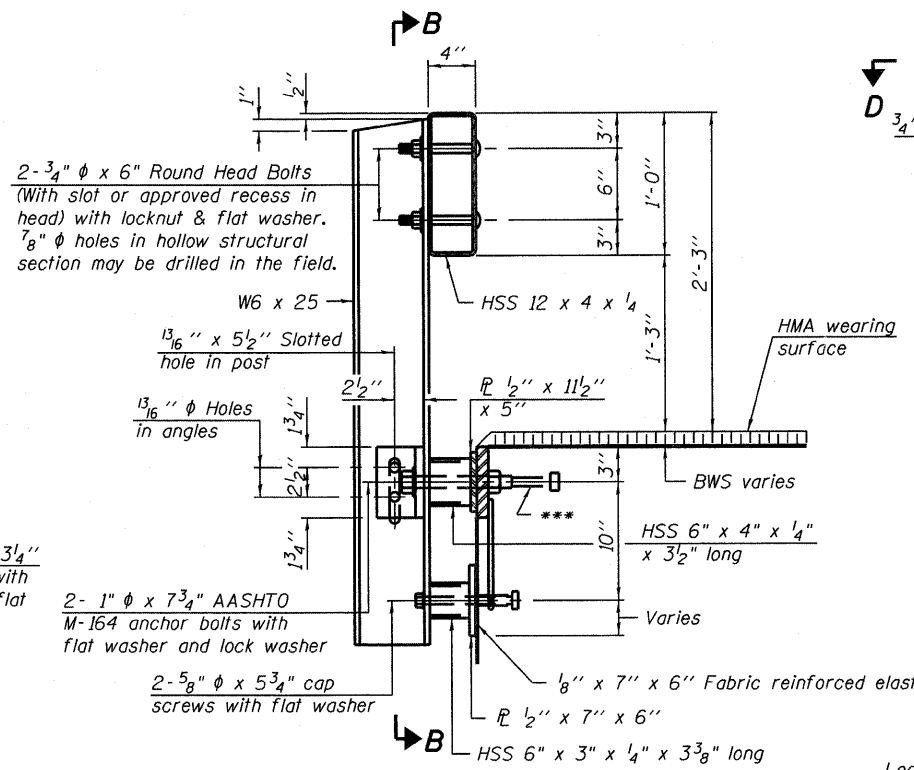
**SECTION C-C
P 1/2" x 7" x 6"**



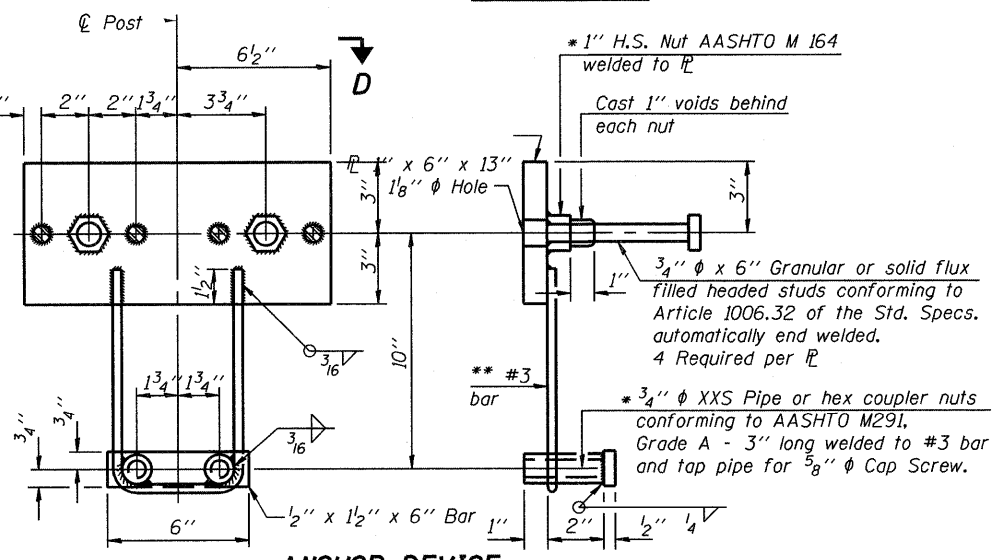
SECTION C-C



SECTION B-B



SECTION AT RAILING POST



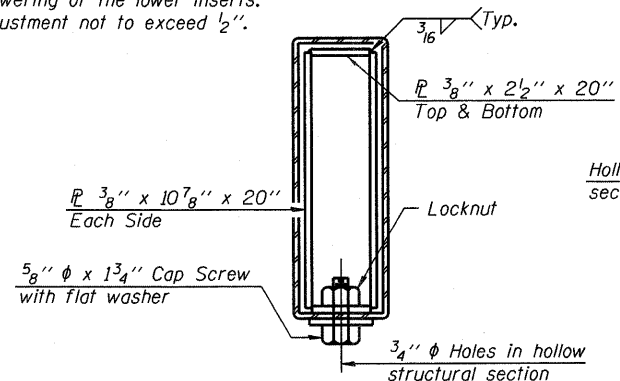
ANCHOR DEVICE

Notes:

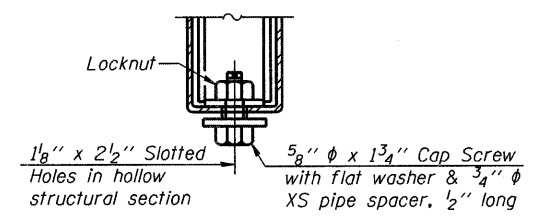
All field drilled holes shall be coated with an approved zinc rich paint before erection. For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1. All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

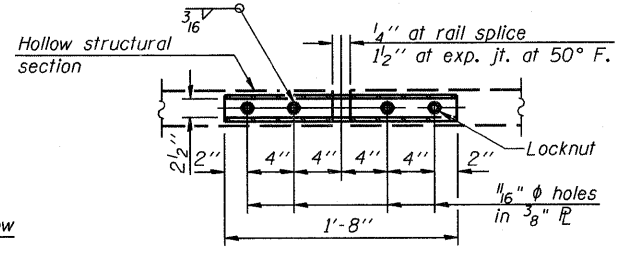
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2 inch.



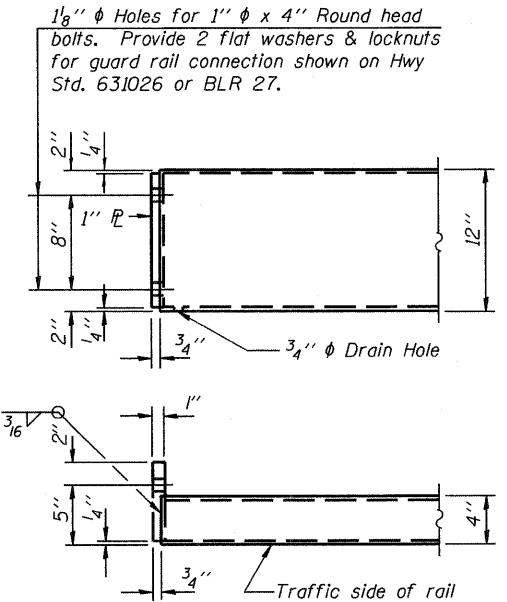
SECTIONS AT RAIL SPLICE



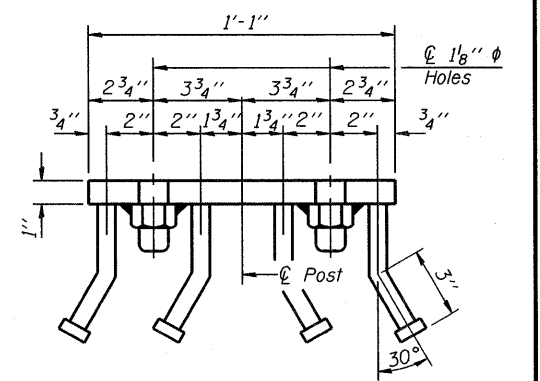
**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE P
TYPICAL**



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	210



R-23A

7-1-10 (10'-9" Maximum Post Spacing)

FILE NAME = J:\09029\CADD\CADSheets\SN 011-3417\0804118-09029-Sht-S1 Railing.dgn	USER NAME = amandah	DESIGNED - NIEWINSKI	REVISED - AH 4/20/11
PLOT SCALE = @2 1/4" = 1"	PLOT DATE = 5/3/2011	CHECKED - TRELLO	REVISED -
		DRAWN - VERENSKI	REVISED -
		CHECKED - TRELLO	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE S-1
STRUCTURE NO. 011-3417

SHEET NO. 5 OF 10 SHEETS

T-R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
307A	08-04118-00-BR	CHRISTIAN	26	13
				CONTRACT NO. 93567
ILLINOIS FED. AID PROJECT: BR05-0021 (178)				