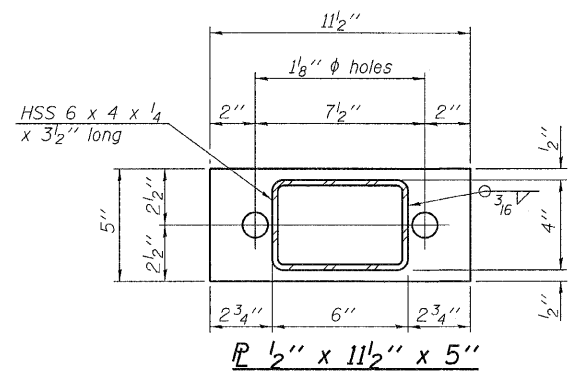
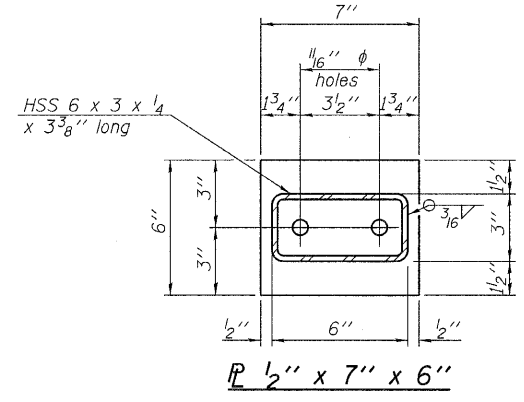


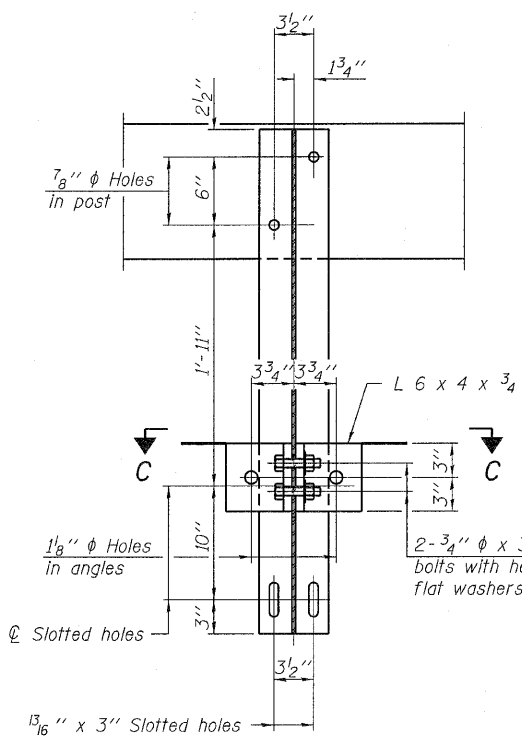
**VIEW A-A
ROUND HEAD BOLT**



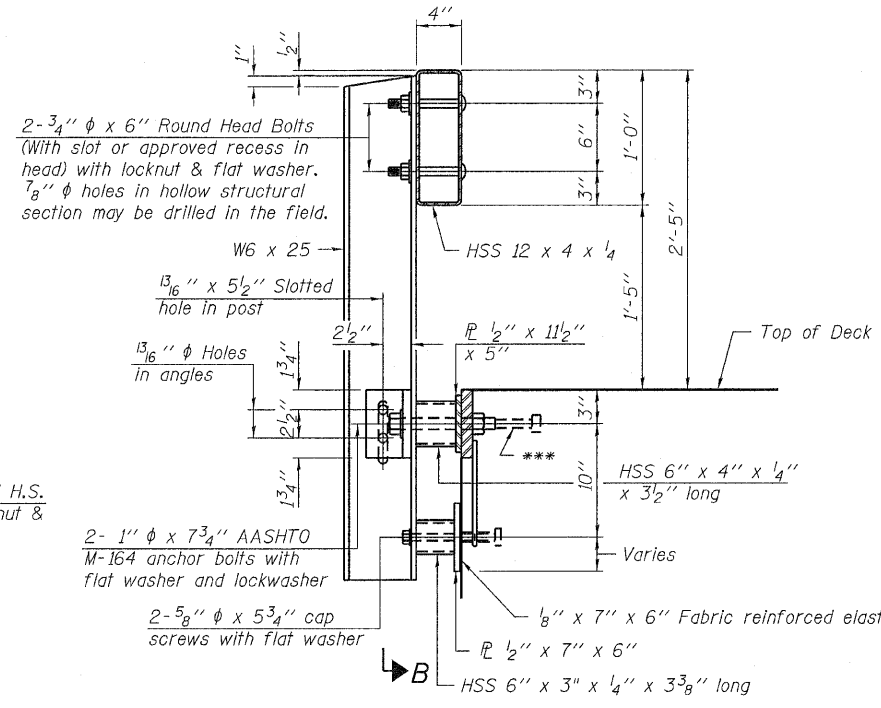
SECTION B-B



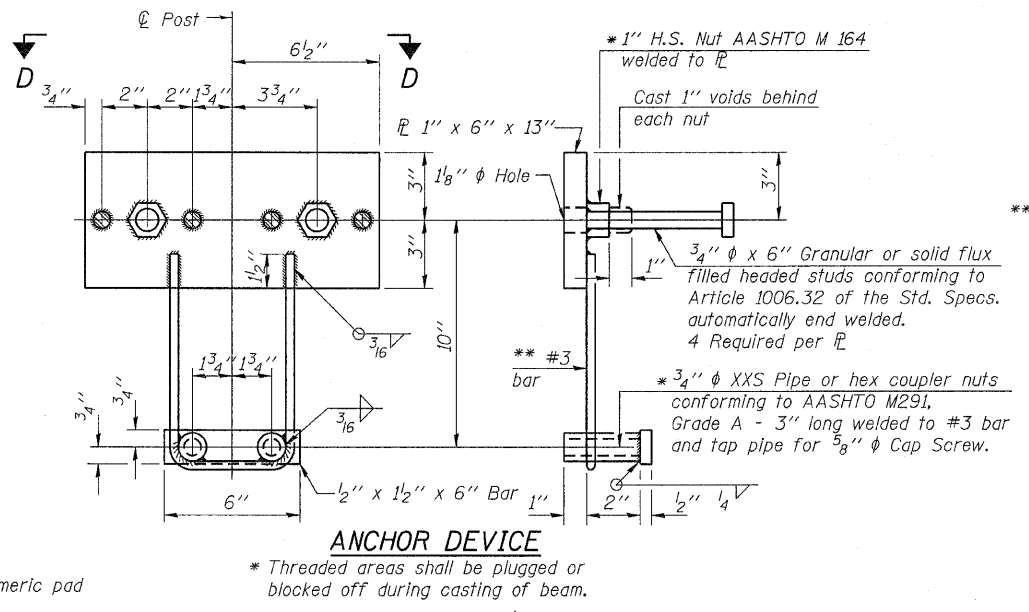
SECTION AT RAILING POST



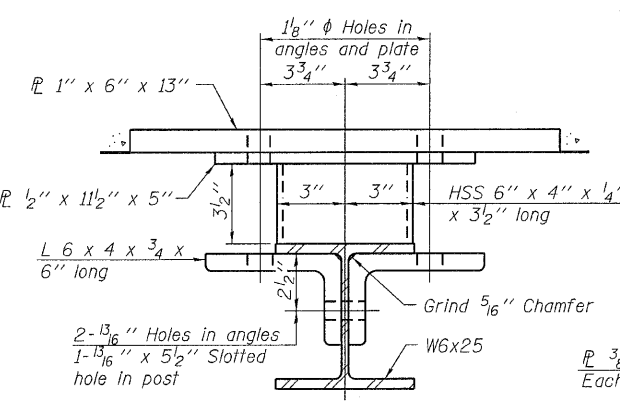
SECTION C-C



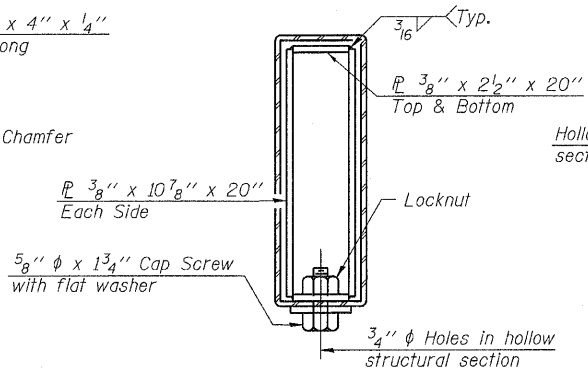
SECTION AT RAILING POST



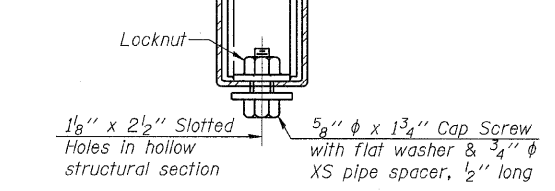
ANCHOR DEVICE



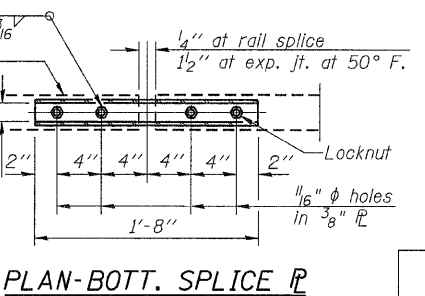
SECTION C-C



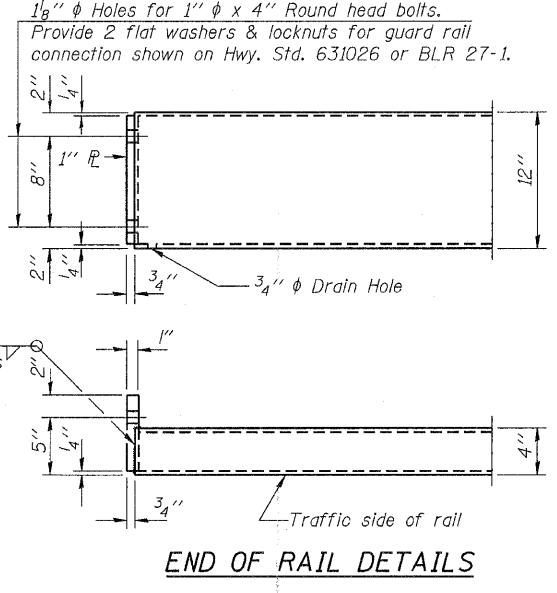
SECTIONS AT RAIL SPLICE



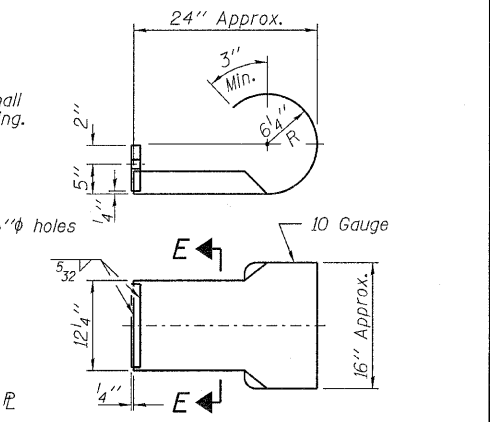
**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE
TYPICAL**

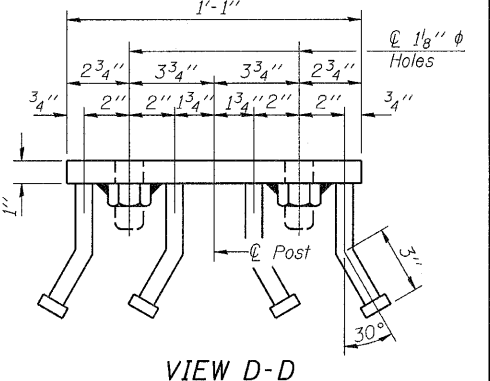


END OF RAIL DETAILS



**SECTION E-E
CURLED END SECTION DETAILS**

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.



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	85

**RAILING DETAILS
STRUCTURE NO. 030-3128**

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.T.M.
CHECKED - S.W.M.

R-23A

11-1-09 (10'-9" Maximum Post Spacing)

HAMPTON, LENZINI & RENWICK, INC.
CIVIL & STRUCTURAL ENGINEERS
LAND SURVEYORS
HLR
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
(217) 548-3400

SHEET NO. 5	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
8 SHEETS	1897	08-00073-00-BR	GALLATIN	14	11
PROJECT NUMBER: 09.0121.130			DATE: 08/27/10		
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 99422					