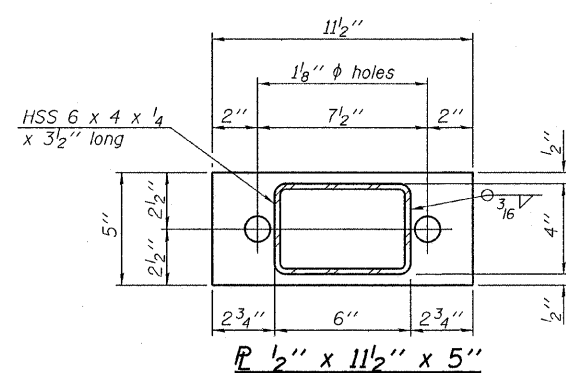
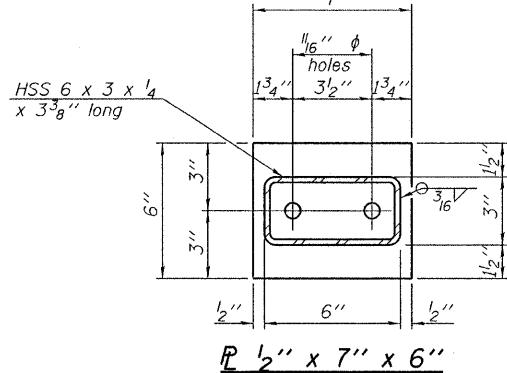


**VIEW A-A  
ROUND HEAD BOLT**

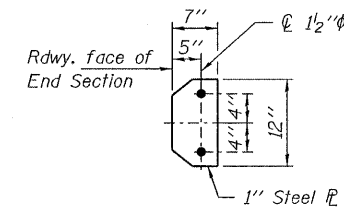


2- 3/4"  $\phi$  x 6" Round Head Bolts  
(With slot or approved recess in head) with locknut & flat washer.  
7/8"  $\phi$  holes in hollow structural section may be drilled in the field.

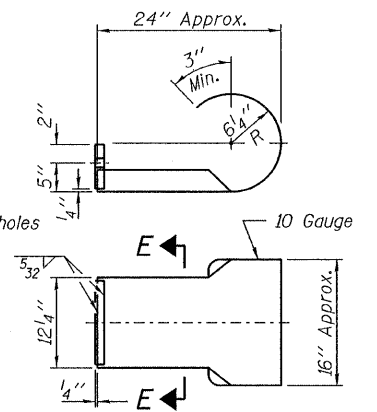


**SECTION AT RAILING POST**

Note: Cost of curled end sections shall be included with the Steel Railing.  
(4 Required)



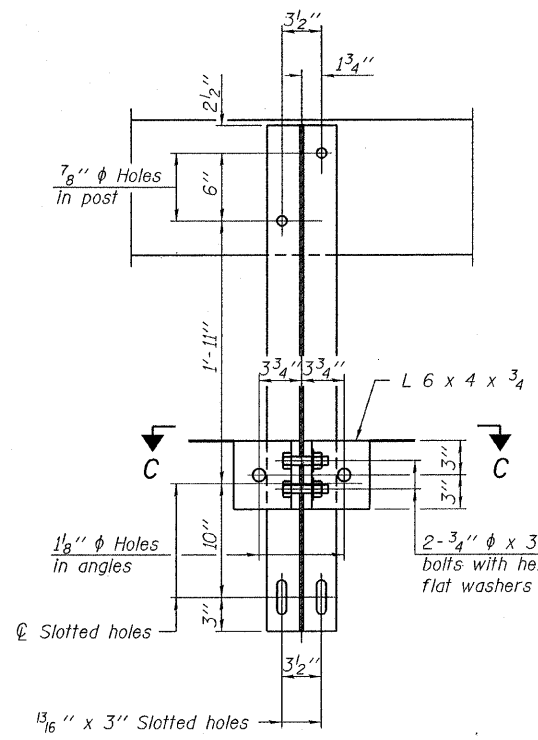
**SECTION E-E**



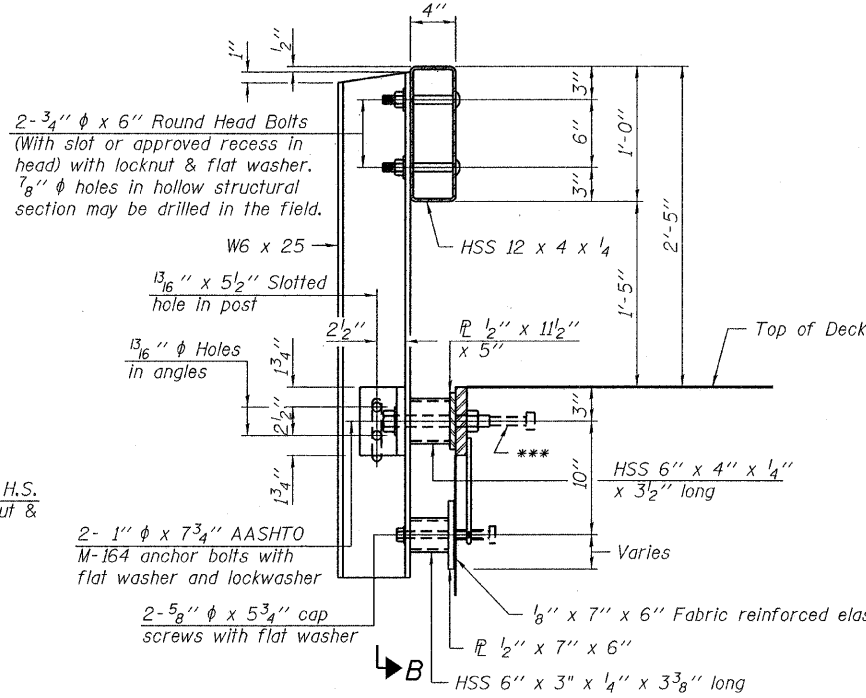
**CURLLED END SECTION DETAILS**

Notes:  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" 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.

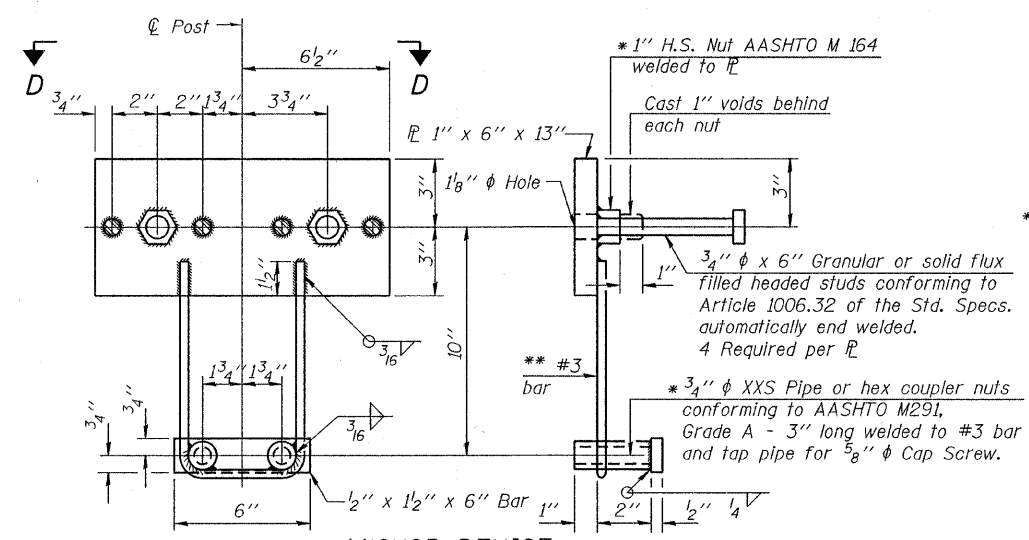
\*\*\* The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



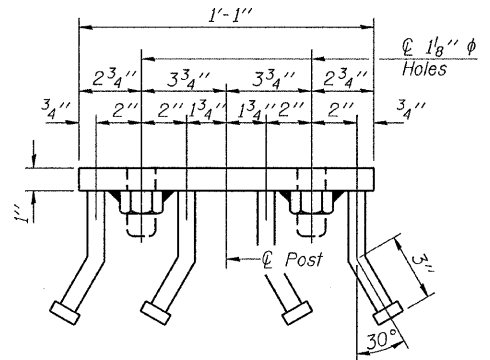
**SECTION B-B**



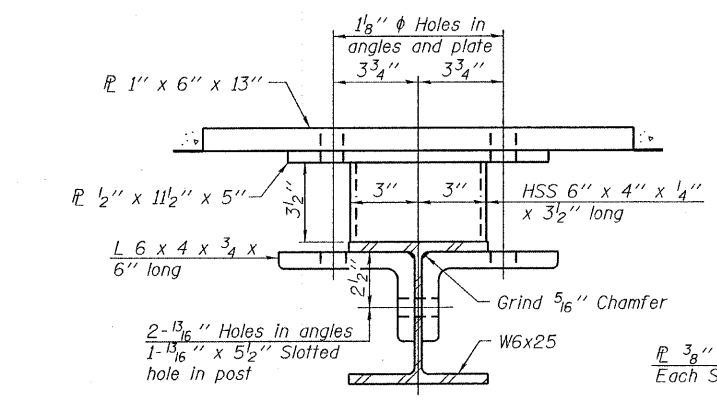
**SECTION AT RAILING POST**



**ANCHOR DEVICE**

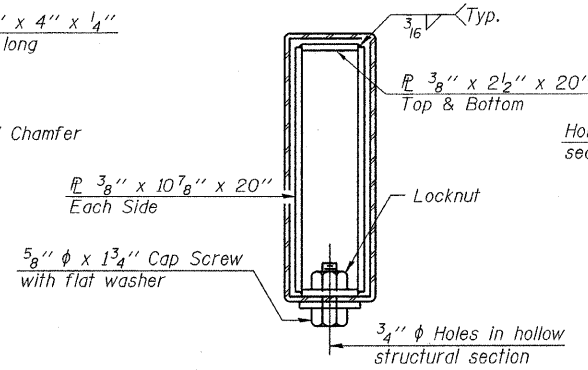


**VIEW D-D**

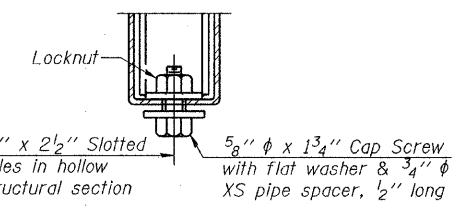


**SECTION C-C**

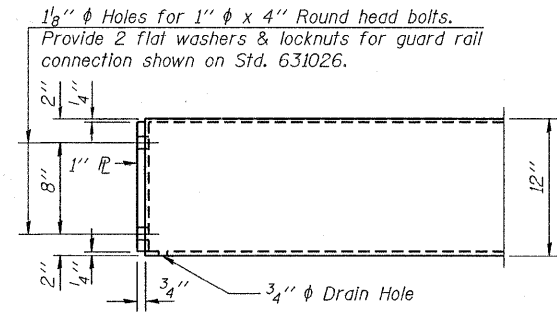
\*\* Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2 inch.



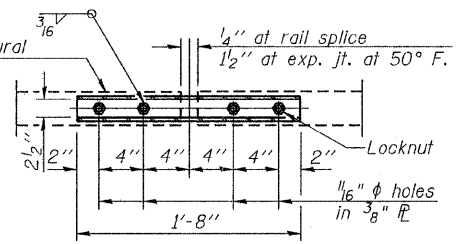
**SECTIONS AT RAIL SPLICE**



**RAIL SPLICE CONNECTION  
AT EXPANSION JT.**



**END OF RAIL DETAILS**



**PLAN-BOTT. SPLICE  
TYPICAL**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	97

**STEEL RAILING, TYPE S-1  
STRUCTURE NO. 024-3137**

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

R-23A 10-1-08 (10'-9" Maximum Post Spacing)

<b>HAMPTON, LENZINI &amp; RENWICK, INC.</b> CIVIL & STRUCTURAL ENGINEERS LAND SURVEYORS <b>HLR</b> 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 (217) 546-3400 PROJECT NUMBER: 09.0047.130 DATE: 10/15/09	SHEET NO. 5	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	9 SHEETS	4	07-00064-00-BR	EDWARDS	13	9
		CONTRACT NO. 95606		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		