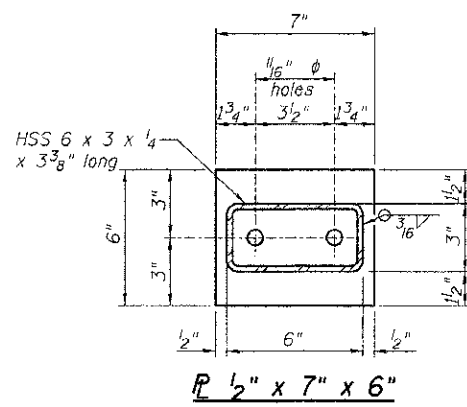
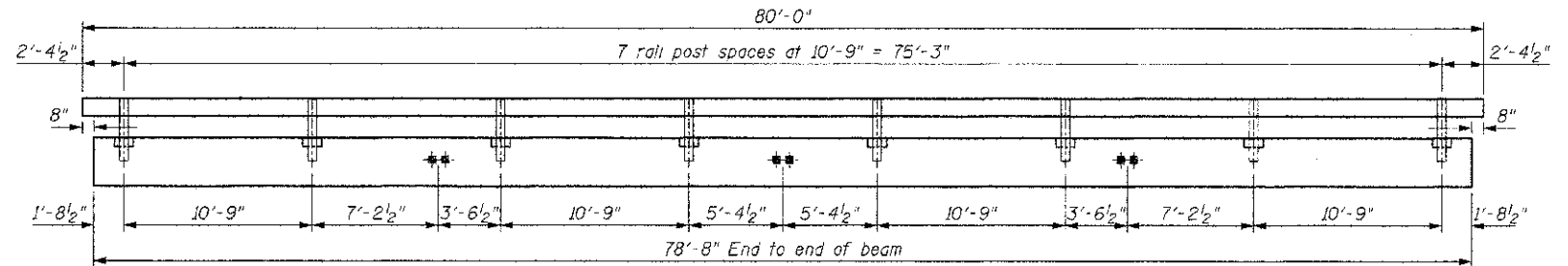


R 1/2" x 11 1/2" x 5"

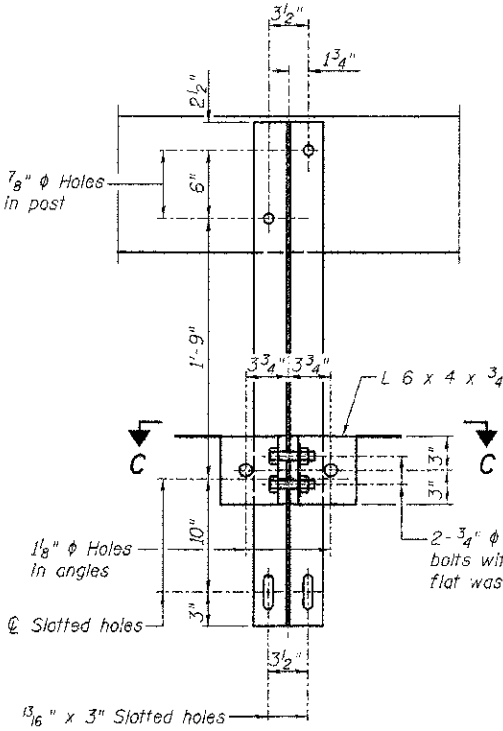


R 1/2" x 7" x 6"



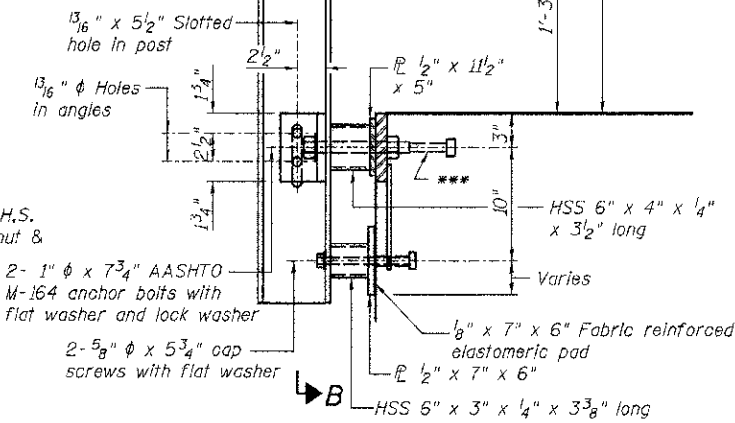
RAIL POST SPACING

Note: The cost of the Curled End Sections shall be included in the contract unit price per foot for "STEEL RAILING, TYPE S1", and no additional compensation will be allowed.



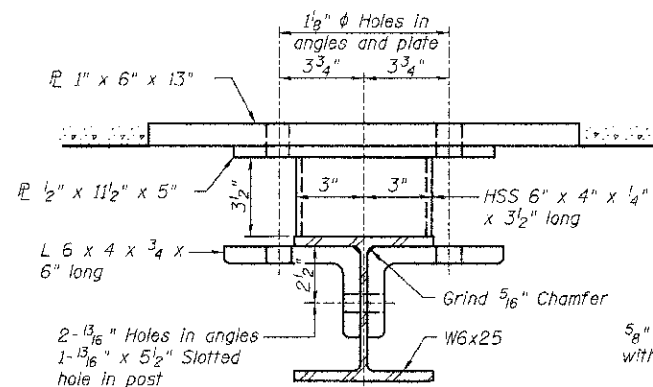
SECTION B-B

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

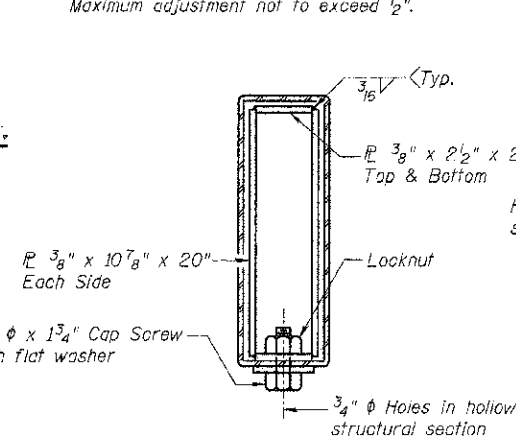


SECTION AT RAILING POST

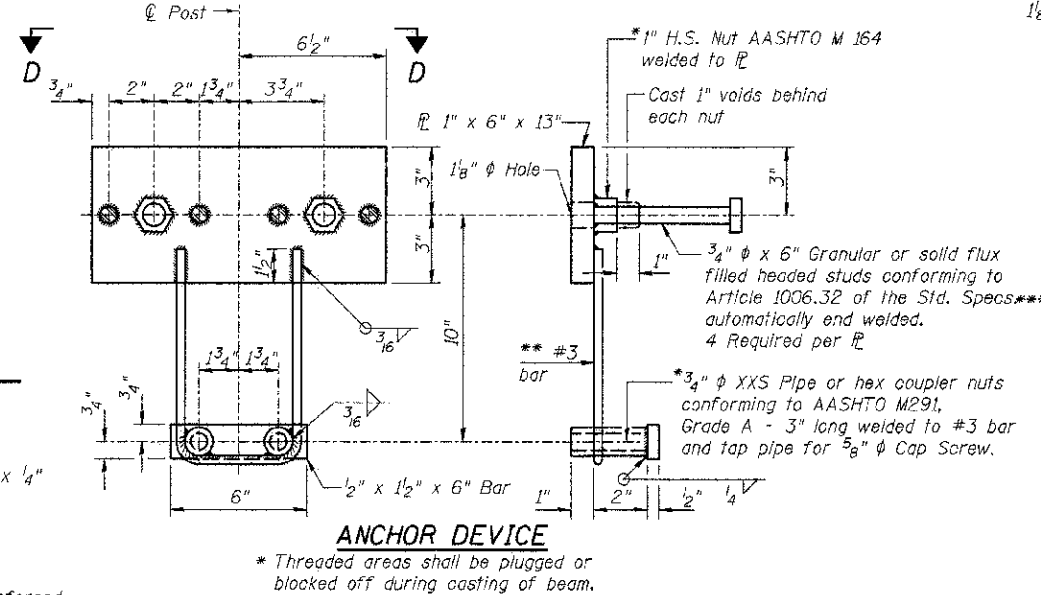
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



SECTION C-C

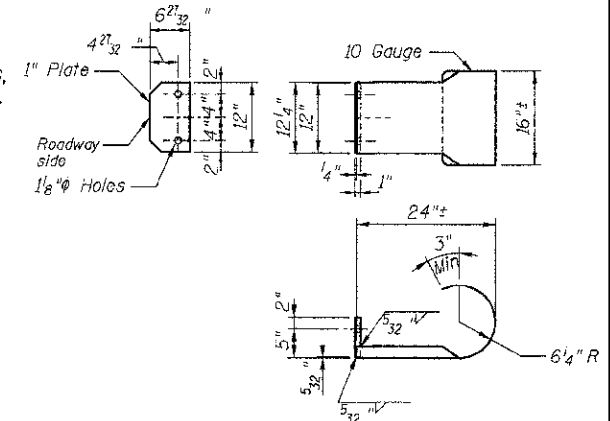


SECTIONS AT RAIL SPLICE

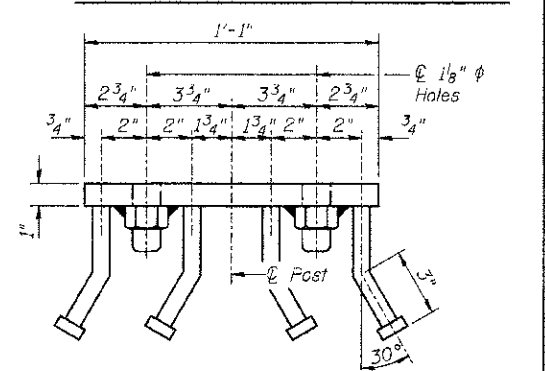


ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.

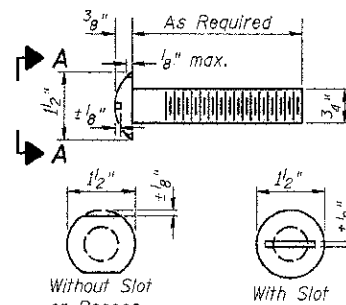


CURLED END SECTION DETAILS

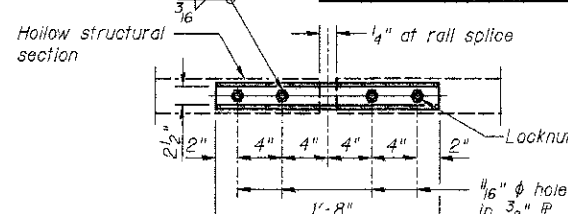


VIEW D-D

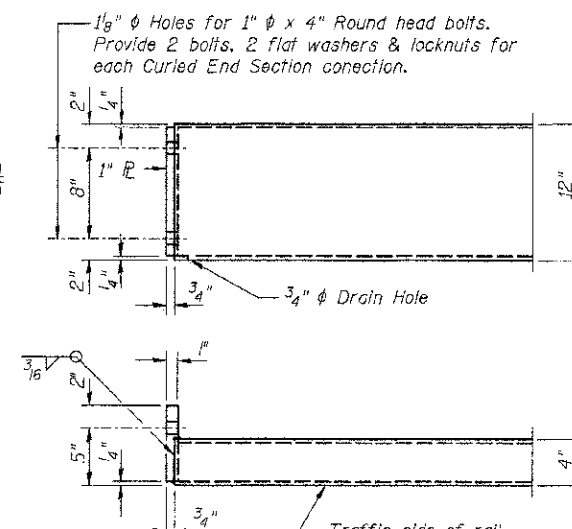
Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S1.
 All steel rail elements shall 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 A-A ROUND HEAD BOLT



PLAN-BOTT. SPLICE TYPICAL



END OF RAIL DETAILS

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	160

RHUTASEL and ASSOCIATES, INC.
 CONSULTING ENGINEERS & LAND SURVEYORS
 CENTRALIA, ILLINOIS
 FREEBURG, ILLINOIS
 ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

DESIGNED - BLT
 DRAWN - JN
 CHECKED - WDL
 DATE - 12/20/2012

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**STEEL RAILING, TYPE S1 DETAILS
 STRUCTURE NO. 026-3457**

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 221	11-13133-00-BR	FAYETTE	11	7
CONTRACT NO. 95698				
RAAT JOB NO. 50912 ILLINOIS FED. AID PROJECT				