

FOR RAIL POST SPACING SEE SH.#6 OF 14

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 19	*	MORGAN	76	26
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT RS-BRS-611(106)		

SHEET NO. 5  
14 SHEETS

93388

**NOTES**

Hollow structural steel sections shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.

All other steel shapes and plates shall conform to the requirements of AASHTO M-270 Grade 36 except posts and angles shall conform to AASHTO M-270, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.

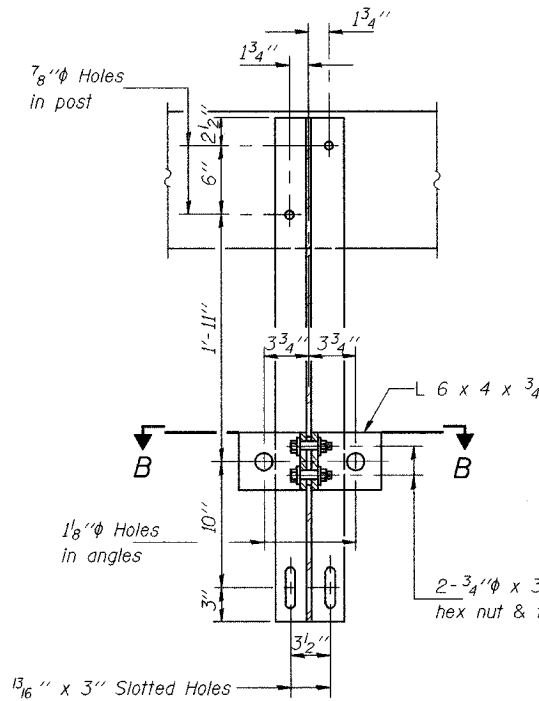
Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for STEEL RAILING, TYPE S-1.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

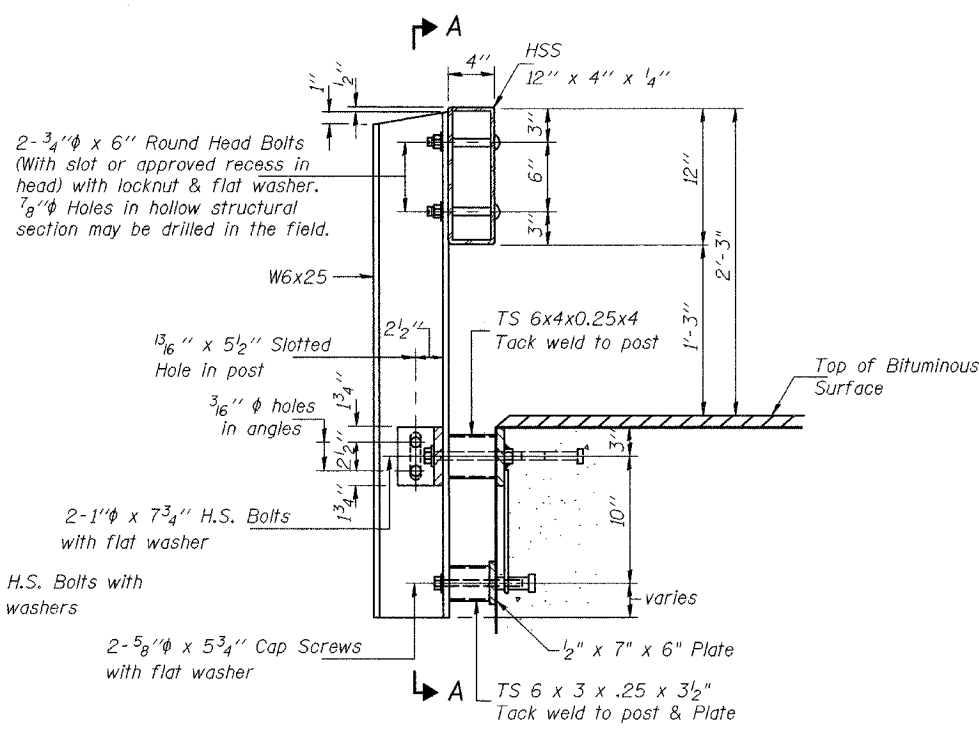
The 1/2" x 7" x 6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/8" fabric bearing pads between the plates and concrete.

The 3/4" high strength bolts used to connect the 6 x 4 x 3/4" angles to the post shall be tightened in accordance with Article 505.04 (f) (2) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

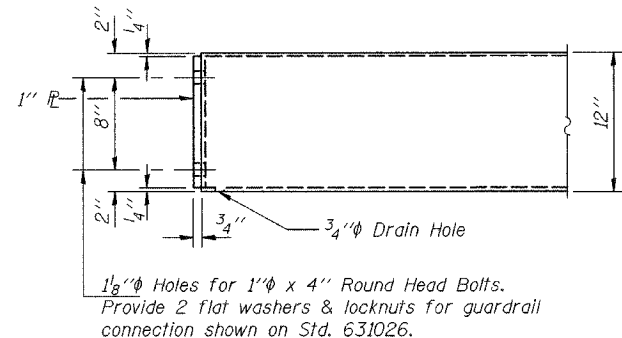
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with STEEL RAILING, TYPE S-1.



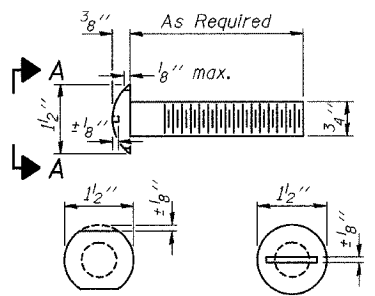
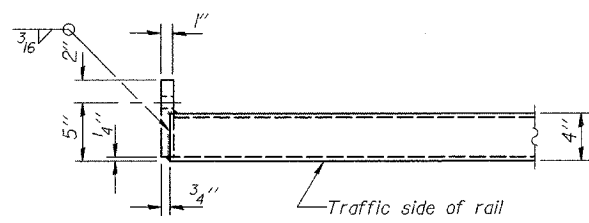
**SECTION A-A**



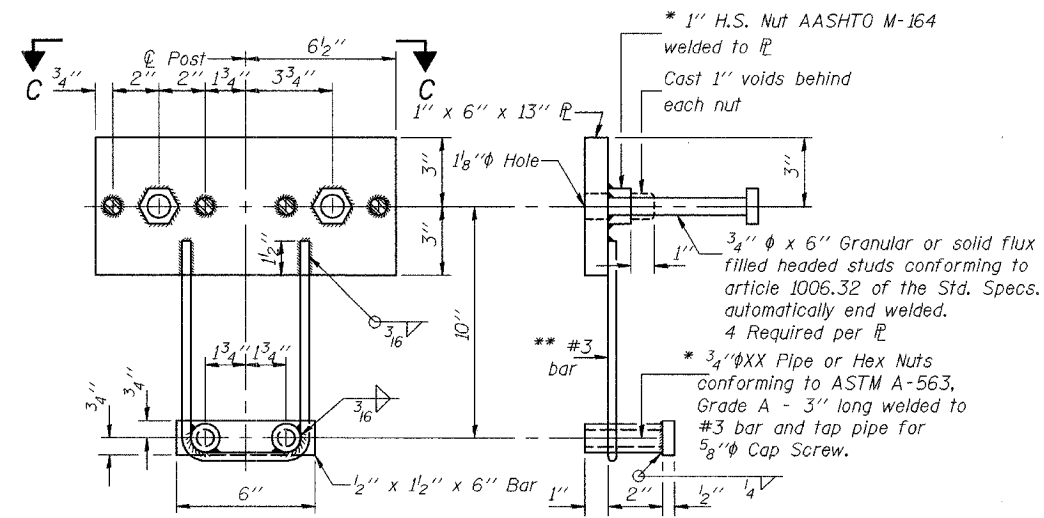
**SECTION AT RAIL POST**



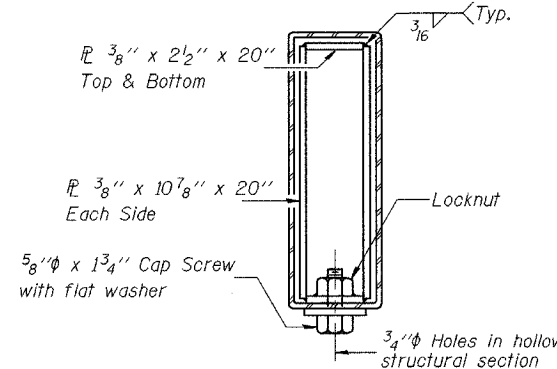
**END OF RAIL DETAILS**



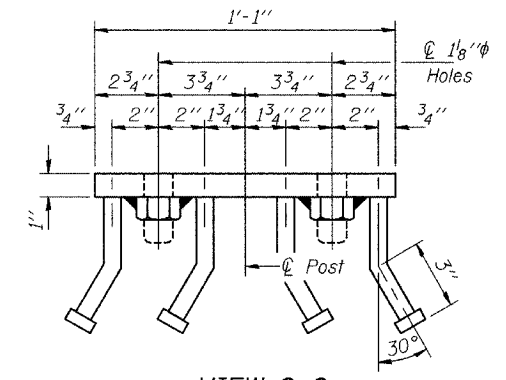
**VIEW A-A ROUND HEAD BOLT**



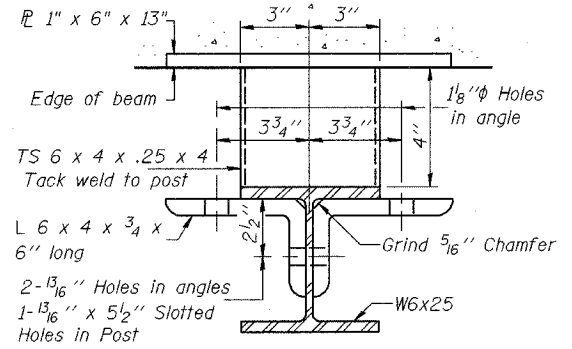
**ANCHOR DEVICE**



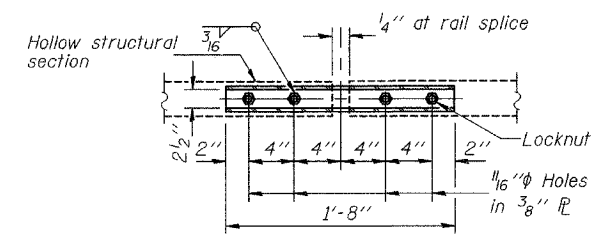
**SECTIONS AT RAIL SPLICE**



**VIEW C-C**



**SECTION B-B**



**PLAN-BOTT. SPLICE P TYPICAL**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	FOOT	487

**TYPE S-1 STEEL RAILING**  
**C.H. 19 OVER CONOVER BRANCH**  
**SECTION 02-00088-00-BR**  
**MORGAN COUNTY**  
**STATION 160+96.19**

\*\* 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".