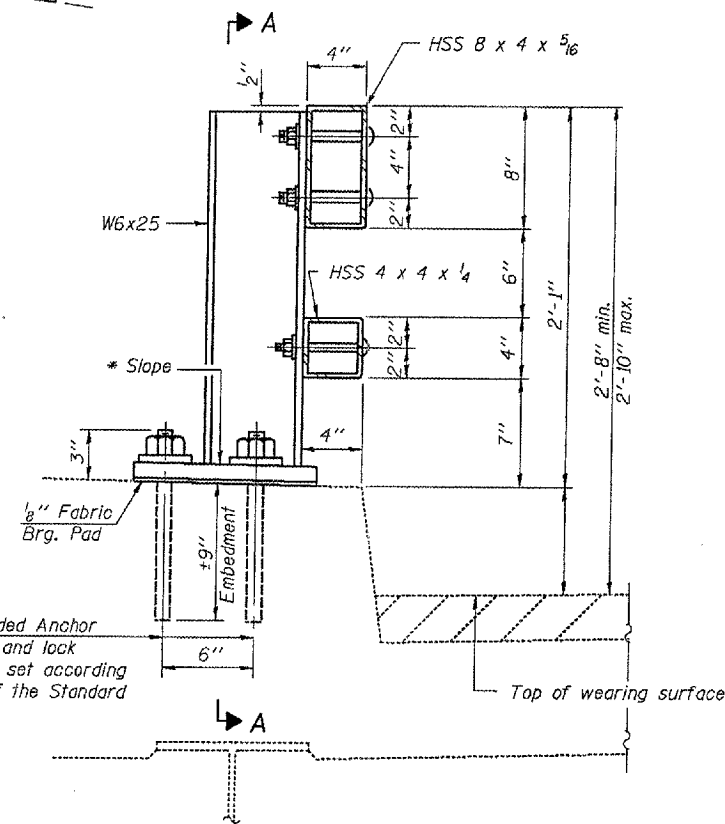


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

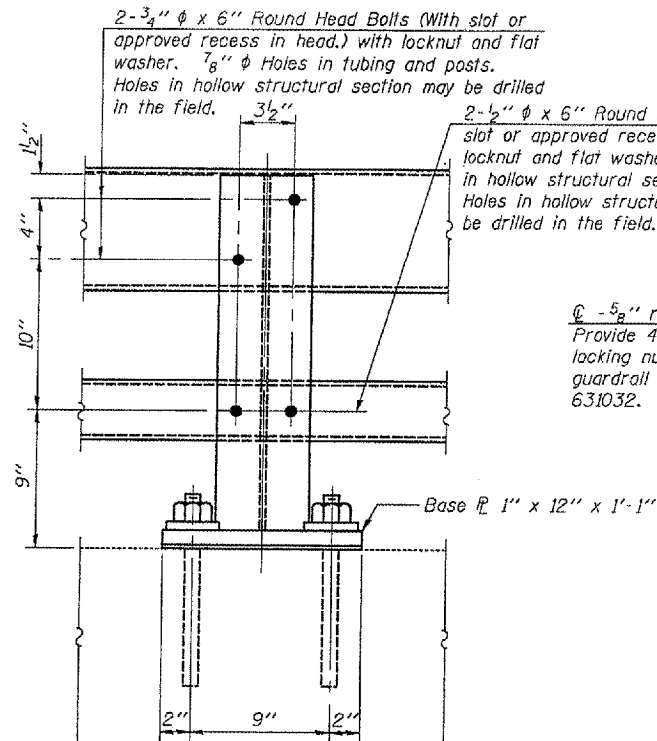
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
			5	5	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #

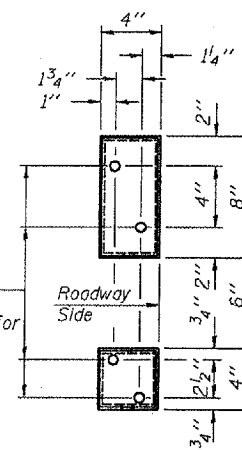
\* Cut bottom end of post to curb slope.



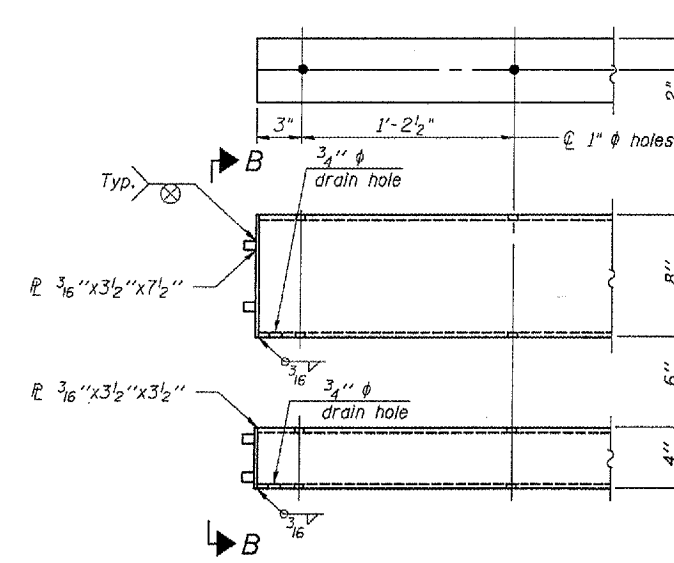
SECTION AT RAIL POST



SECTION A-A



VIEW B-B



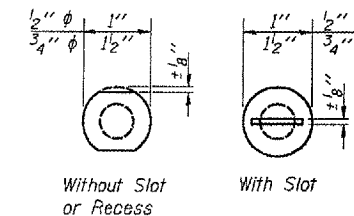
END OF RAIL DETAILS

4- 1"  $\phi$  H.S. Threaded Anchor Rods with hex nuts and lock washers, drilled and set according to Article 509.06 of the Standard Specifications.

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

2- 1/2"  $\phi$  x 6" Round Head Bolts (With slot or approved recess in head.) with locknut and flat washer. 5/8"  $\phi$  Holes in hollow structural section and post. Holes in hollow structural section may be drilled in the field.

4- 5/8" reduced base welded studs. Provide 4- 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.



VIEW C-C

Notes:

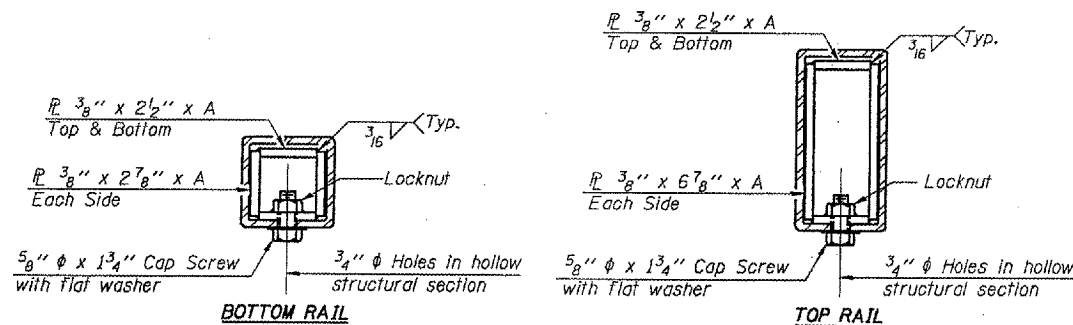
All field drilled holes shall be coated with an approved zinc rich paint before erection.

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

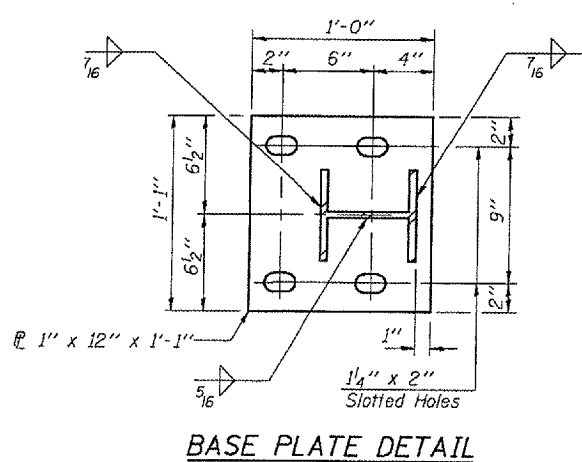
Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

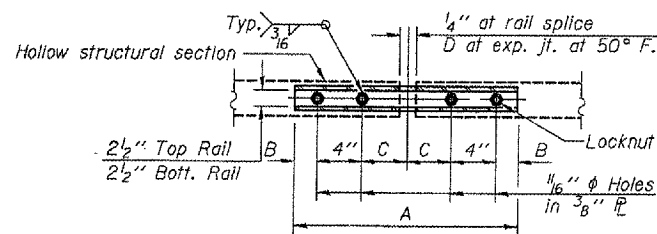
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.



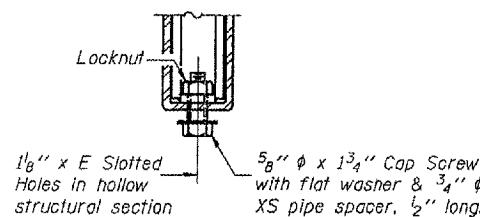
SECTIONS AT RAIL SPLICE



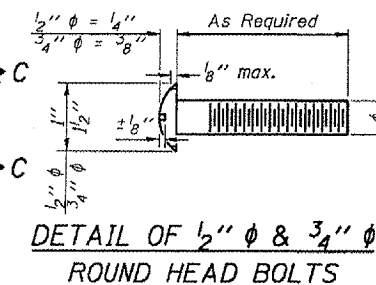
BASE PLATE DETAIL



PLAN-BOTT. SPLICE TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.



DETAIL OF 1/2"  $\phi$  & 3/4"  $\phi$  ROUND HEAD BOLTS

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	

SPLICE DIMENSIONS

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

STEEL RAILING, TYPE 2399

DESIGNED -	ZDD
CHECKED -	EXAMINED
DRAWN -	PASSED
CHECKED -	ENGINEER OF BRIDGE DESIGN
	ENGINEER OF BRIDGES AND STRUCTURES