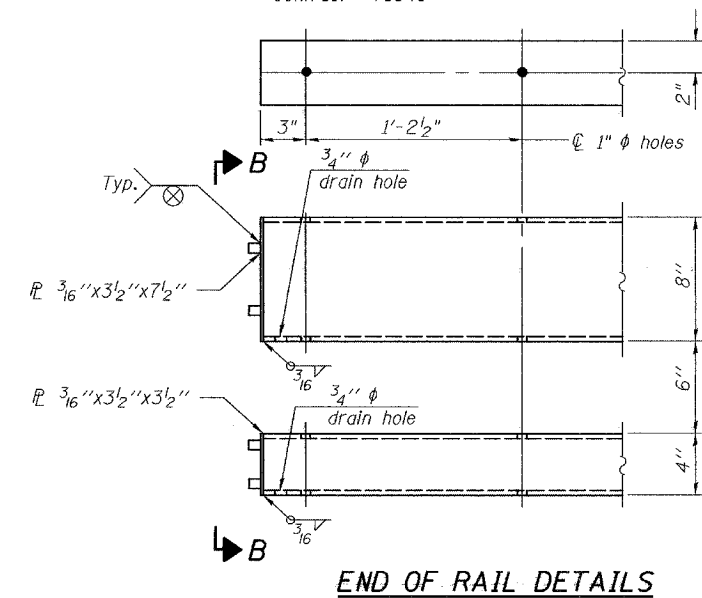
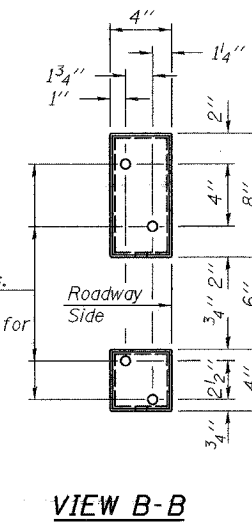
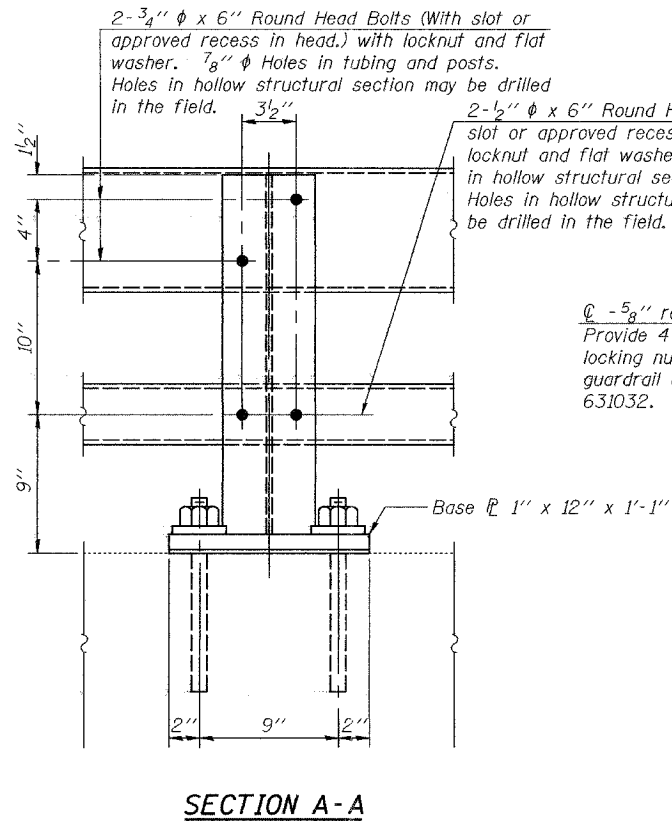
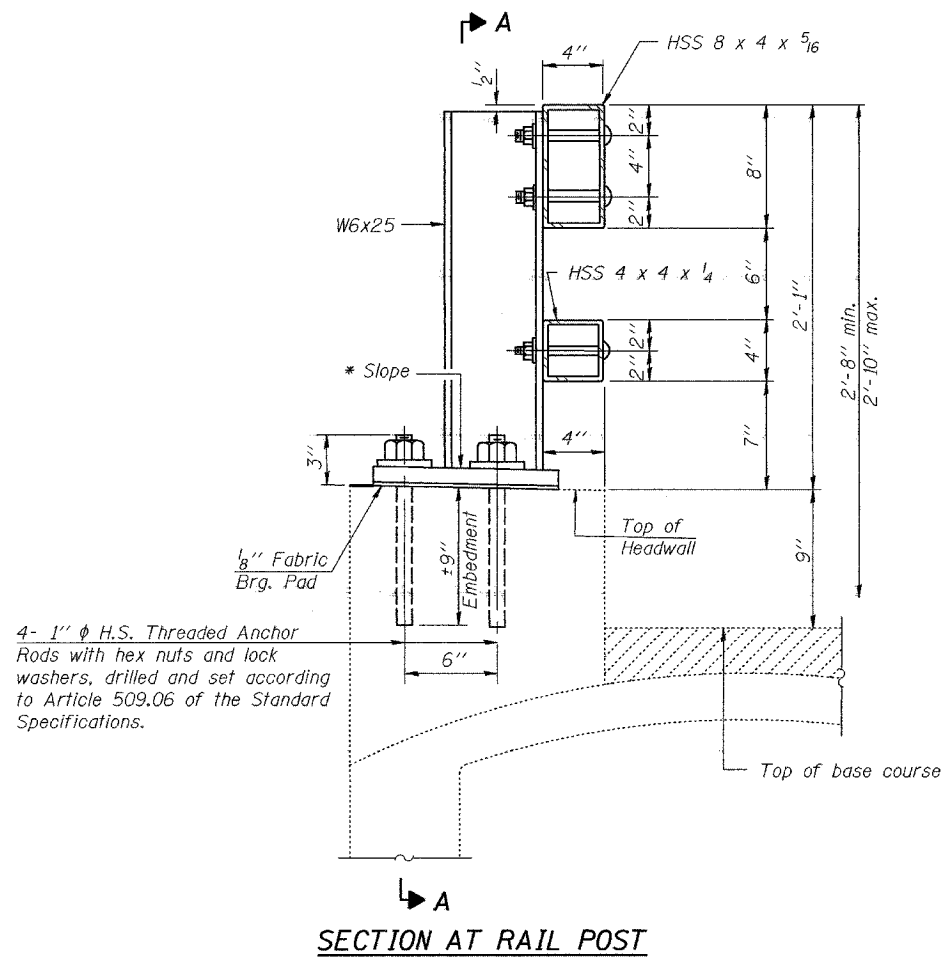


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

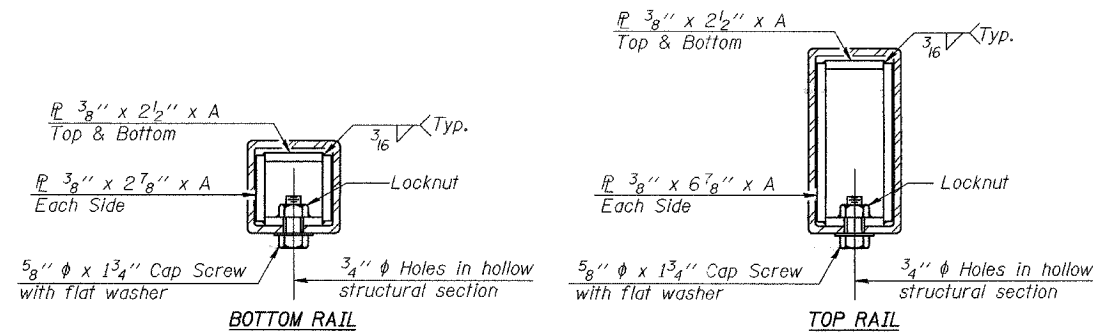
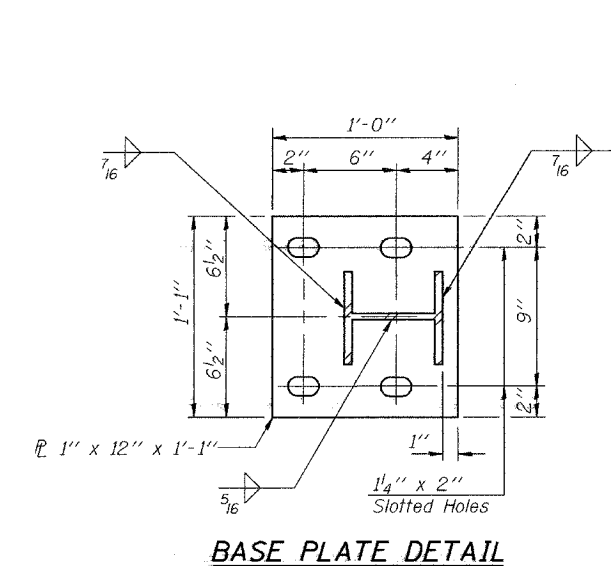
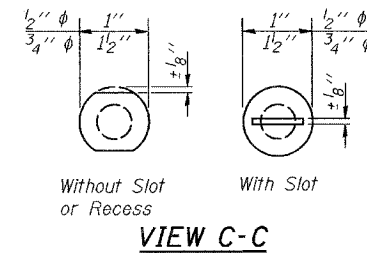
ROUTE NO. F.A.S. 1832	SECTION 5BR-2	COUNTY WASHINGTON	SHEET NO. 97	SHEET NO. 81	SHEET NO. 11 12 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT-	

Contract #76949

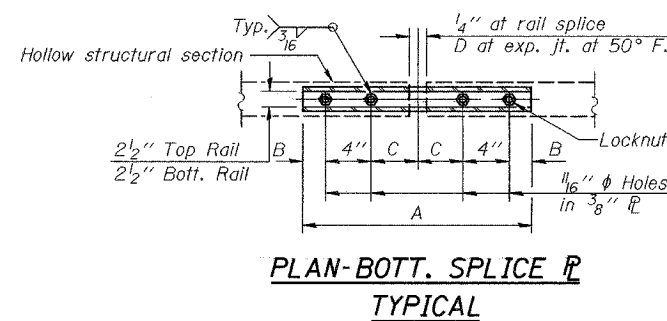


Notes:

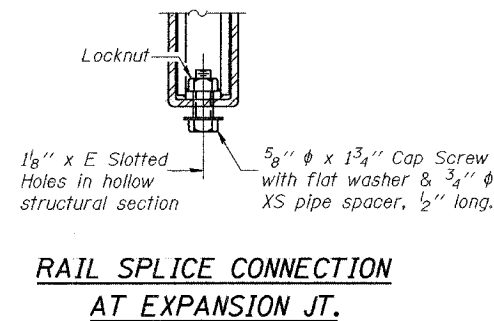
- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
- Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion 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.



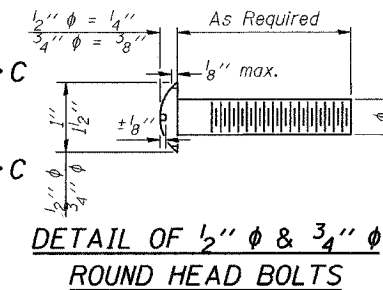
SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.



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

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	64'-0"

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.

DESIGNED	Nicholas R. Barnett
CHECKED	Ray Ahanchi
DRAWN	Gregory D. Farmer
CHECKED	NRB/GRA

EXAMINED	Thomas J. Demagalaki	January 28 2008
PASSED	Ralph E. Anderson	

11-1-06

(6'-3" Maximum Post Spacing)

STEEL RAILING, TYPE 2399  
F.A.S. RTE 1832 - SEC. 5BR-2  
WASHINGTON COUNTY  
STATION 1511+01.00  
STRUCTURE NO. 095-0078