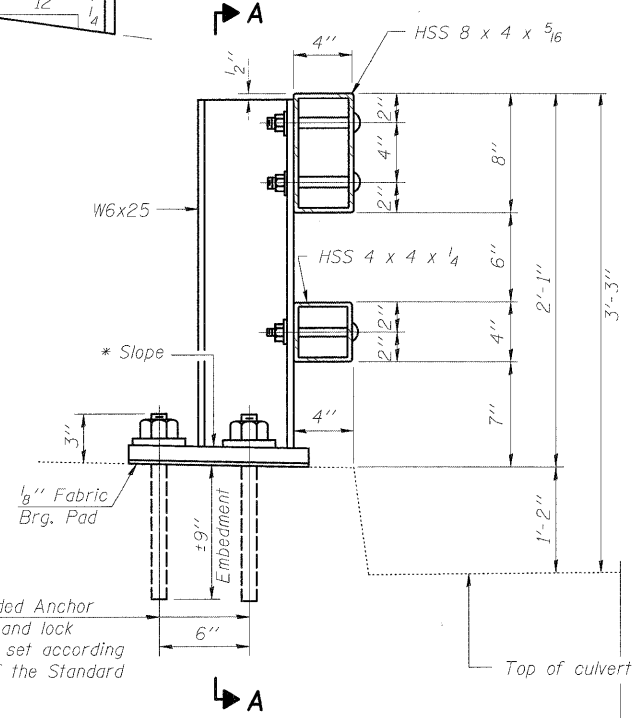


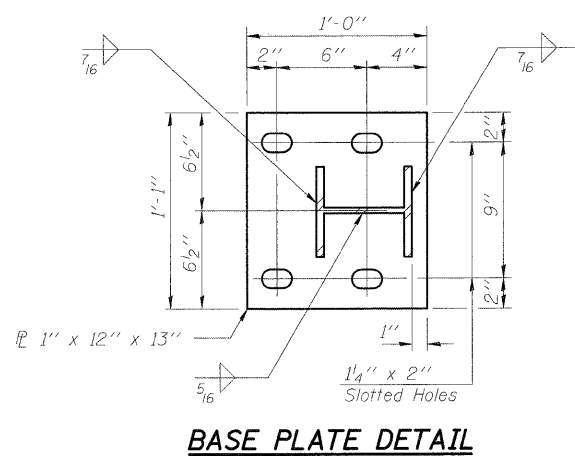
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\* Cut bottom end of post to curb slope.

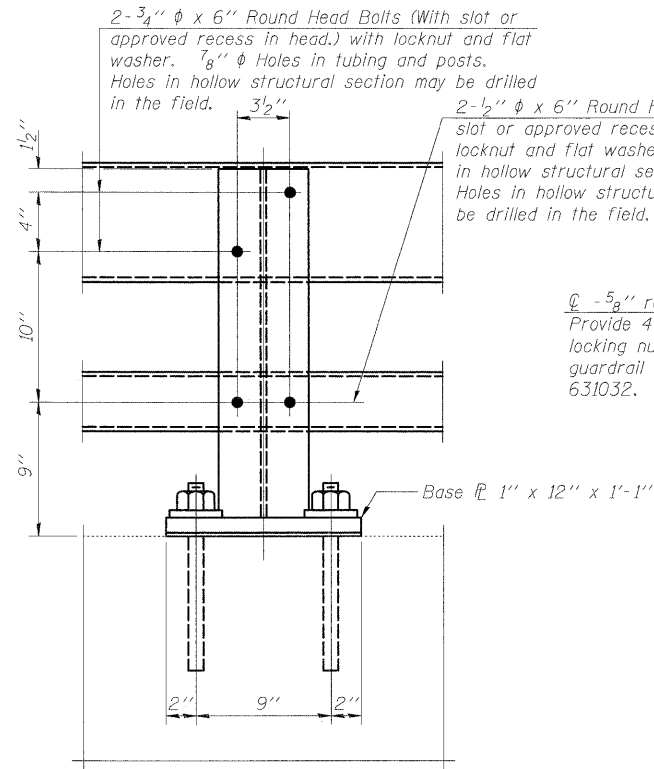


4- 1"  $\phi$  H.S. Threaded Anchor Rods with hex nuts and lock washers, drilled and set according to Article 509.06 of the Standard Specifications.

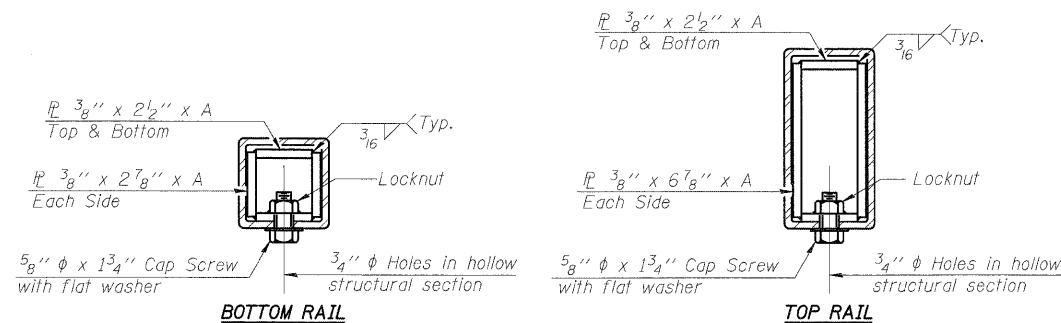
SECTION AT RAIL POST



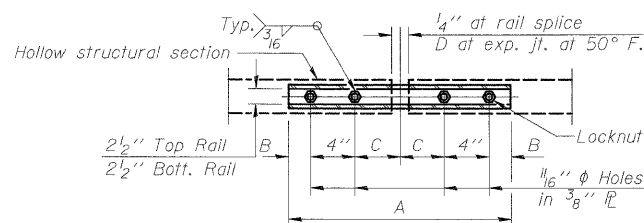
BASE PLATE DETAIL



SECTION A-A

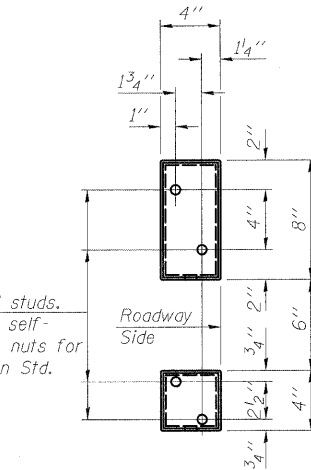
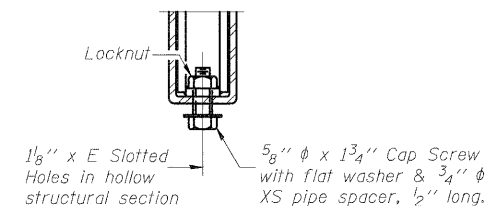


SECTIONS AT RAIL SPLICE

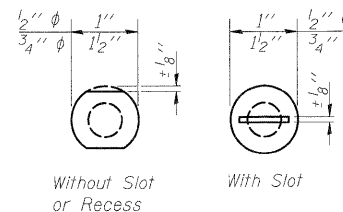


PLAN-BOTT. SPLICE TYPICAL

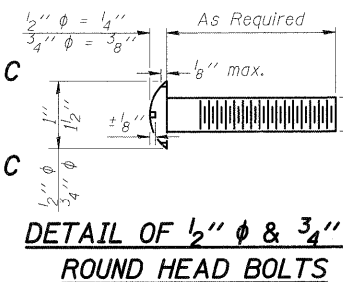
RAIL SPLICE CONNECTION AT EXPANSION JT.



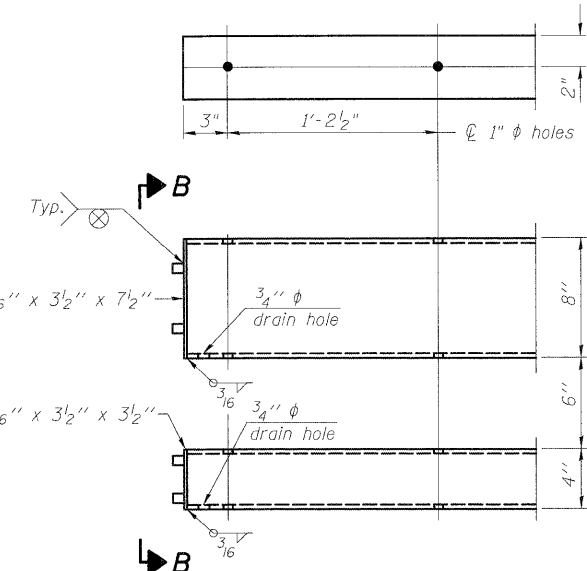
VIEW B-B



VIEW C-C



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



END OF RAIL DETAILS

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 ralling 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.

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.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	20

STEEL RAILING, TYPE 2399  
STRUCTURE NO. 099-3034

DESIGNED	VP
CHECKED	CL
DRAWN	VP
CHECKED	SP

R-31

10-1-08

(6'-3" Maximum Post Spacing)

**SINGH**  
SINGH & ASSOCIATES, INC.  
CONSULTING ENGINEERS

300 W. ADAMS ST.  
CHICAGO, IL 60606  
TEL: (312) 629-0240  
FAX: (312) 629-8449

SHEET NO.  
SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	(99-1&2)AC-3	WILL	524	326
Sta. 8007+25 (E. Frontage Rd.)		CONTRACT NO. 60C31		
FED. RD. DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SB-03A