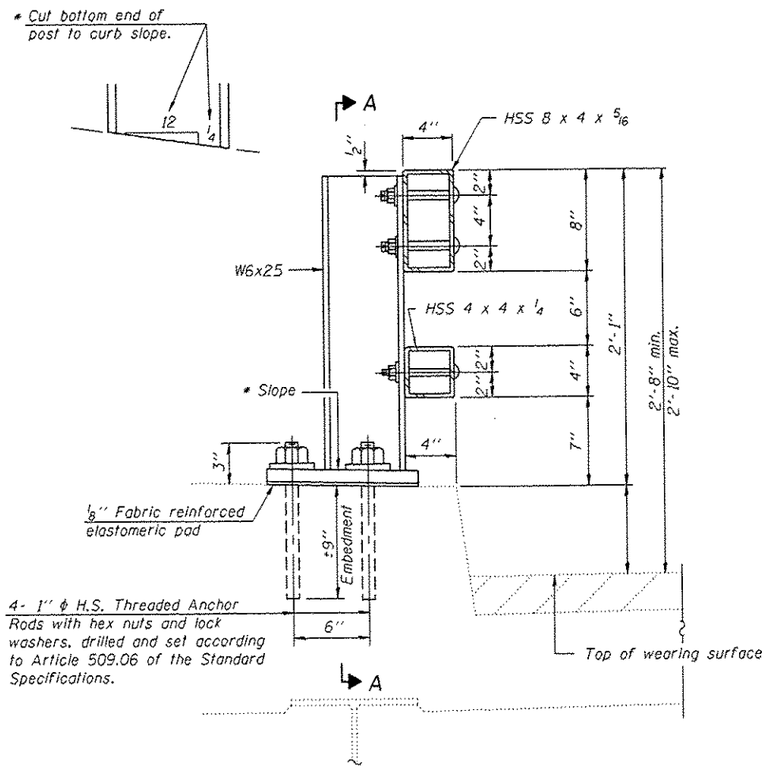
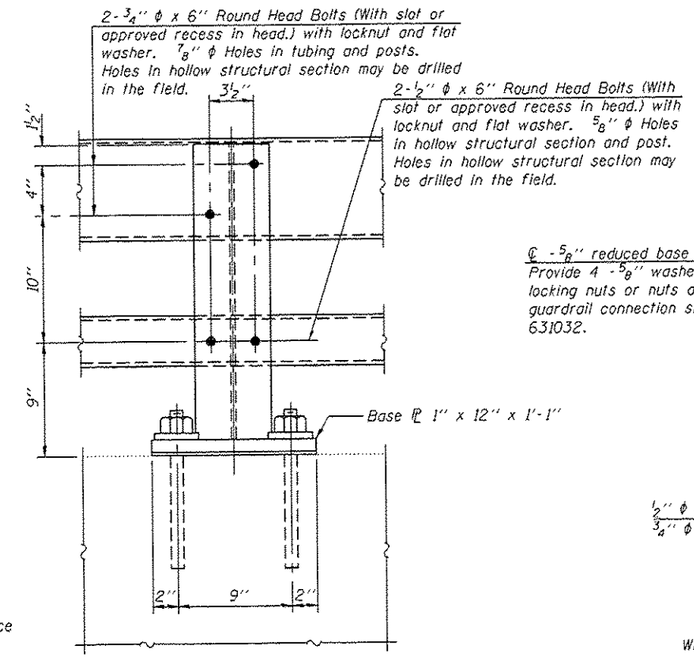
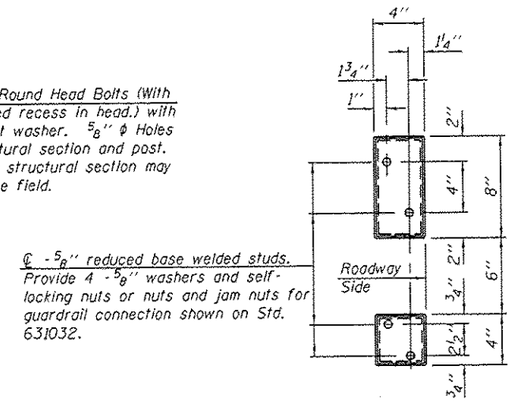


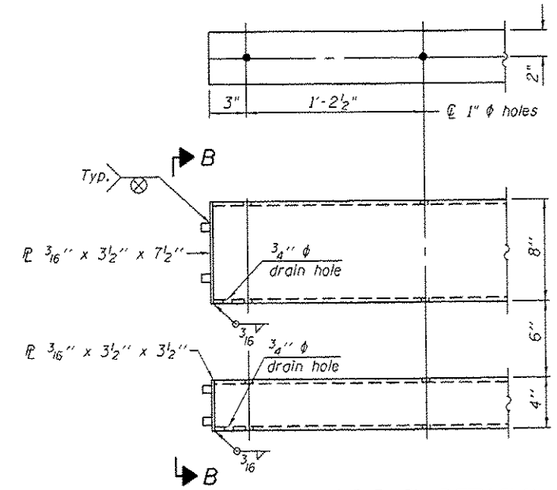
SECTION AT RAIL POST



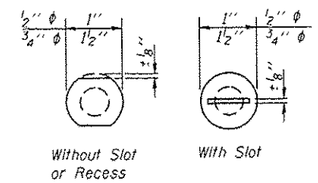
SECTION A-A



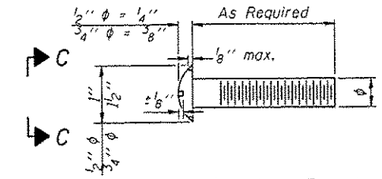
VIEW B-B



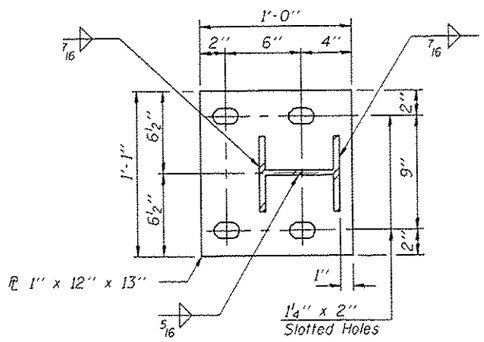
END OF RAIL DETAILS



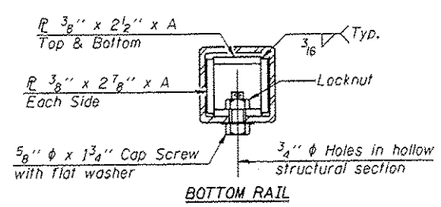
VIEW C-C



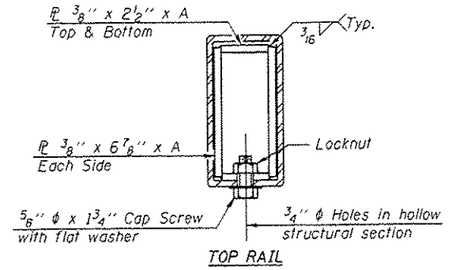
DETAIL OF 1/2" ϕ & 3/4" ϕ ROUND HEAD BOLTS



BASE PLATE DETAIL

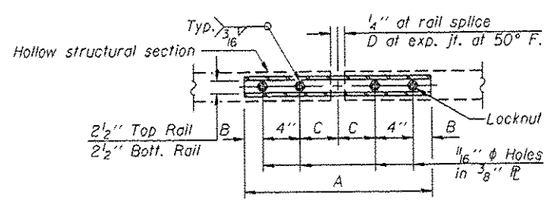


BOTTOM RAIL

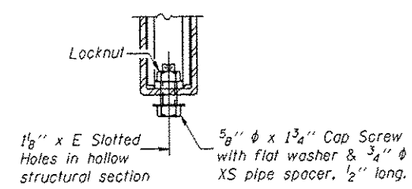


TOP RAIL

SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE PL TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

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.

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	462

(6'-3" Maximum Post Spacing)

R-31 7-1-10

DESIGNED GGE	EXAMINED	Timothy A. Ahlvin ACTING ENGINEER OF STRUCTURAL SERVICES	DATE AUGUST 18, 2014
CHECKED SMR	PASSED	A. Carl Tropp ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED
DRAWN baliva			REVISED
CHECKED GGE SMR			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE 2399
SN 060-0027 (EB) & 0028 (WB)
SHEET NO. 3 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TO	60-(11,12)R5-3	MADISON	242	187

CONTRACT NO. 76F13

ILLINOIS FED. AID PROJECT