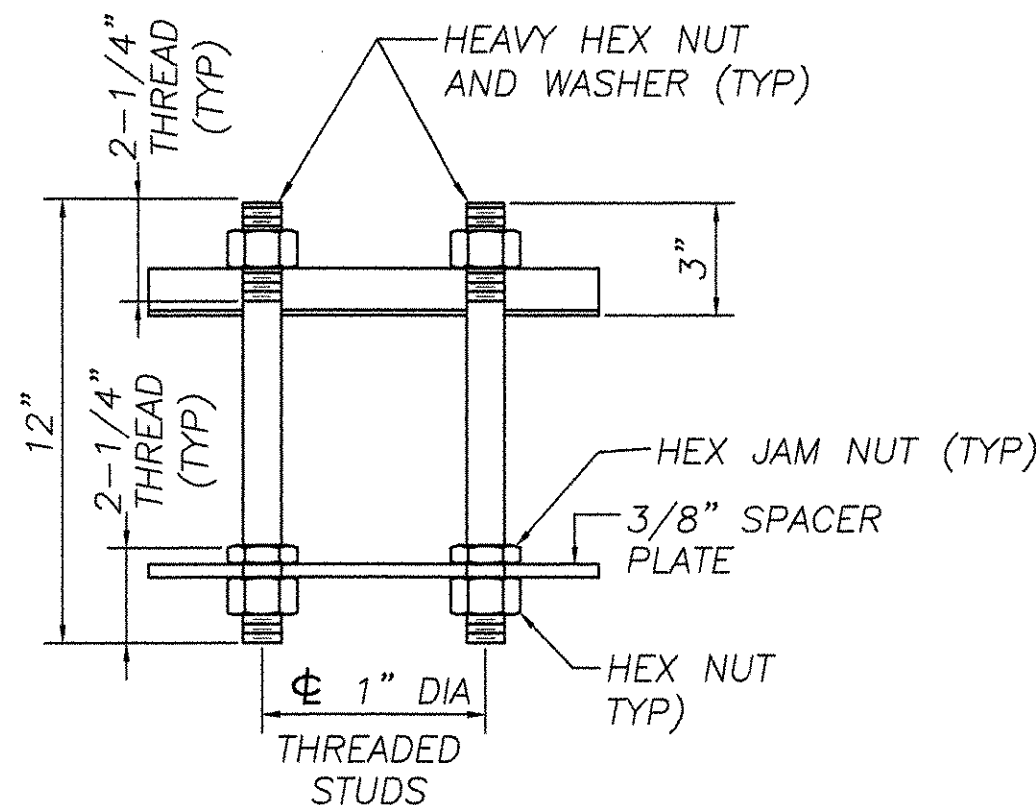
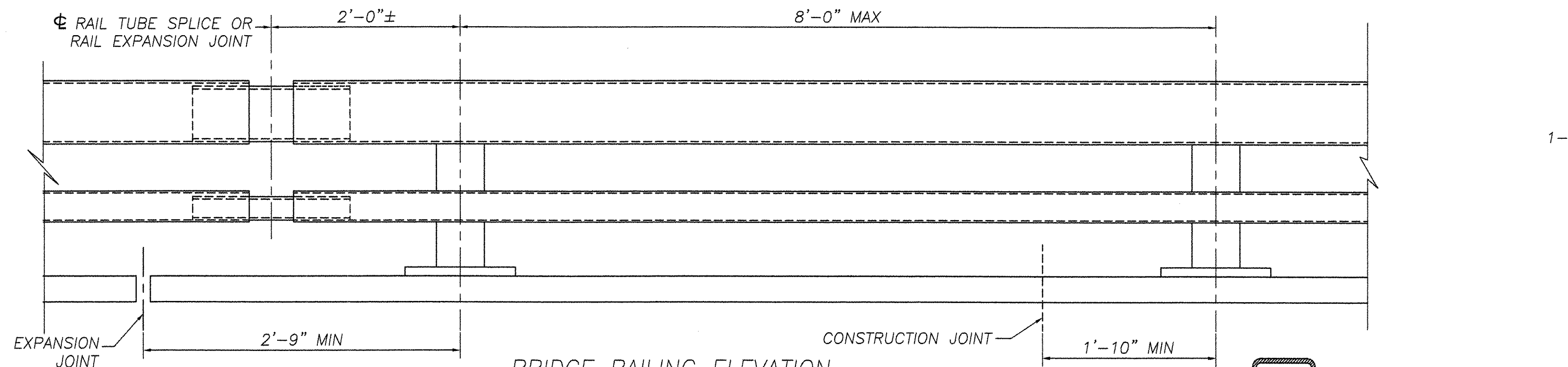
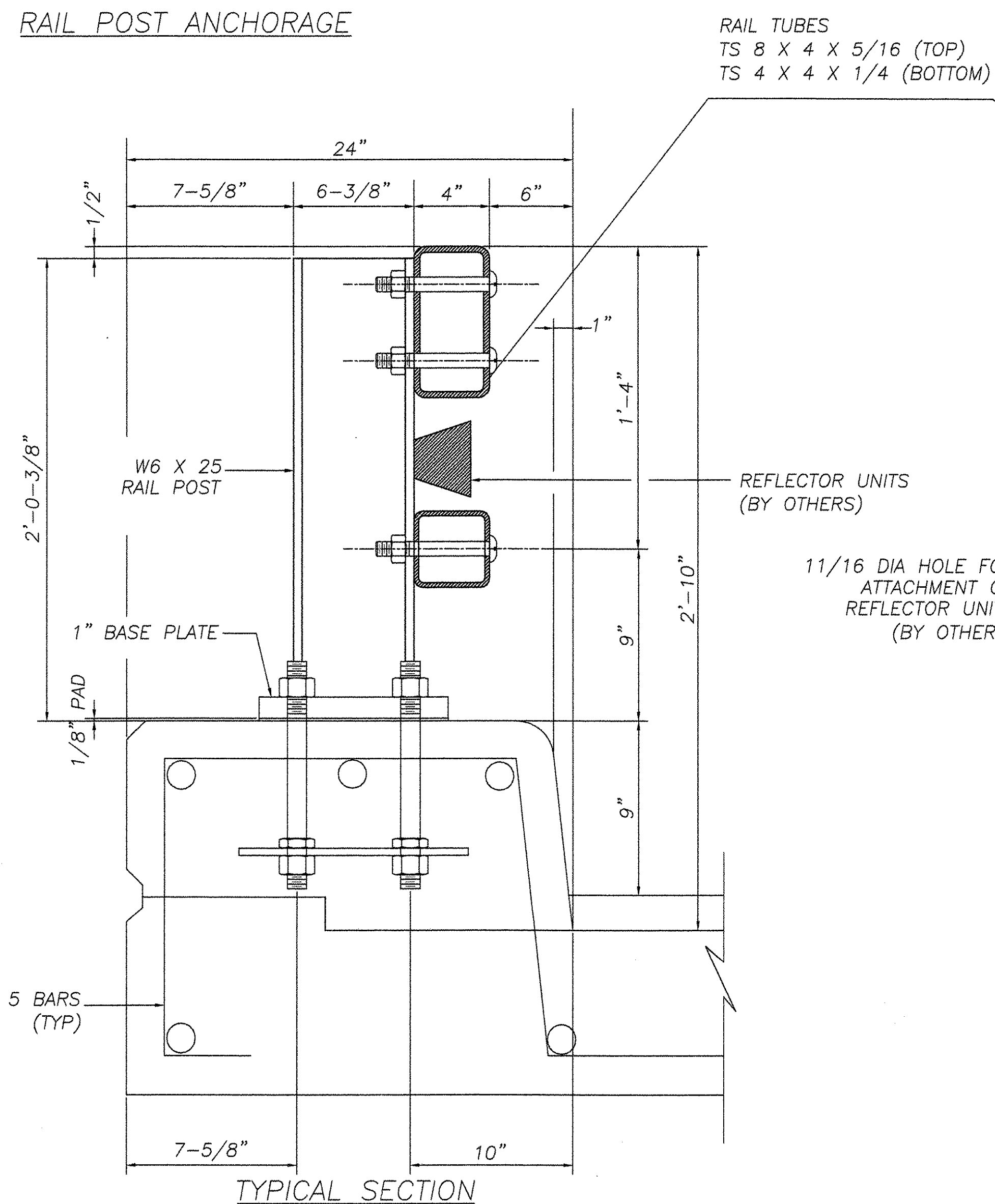
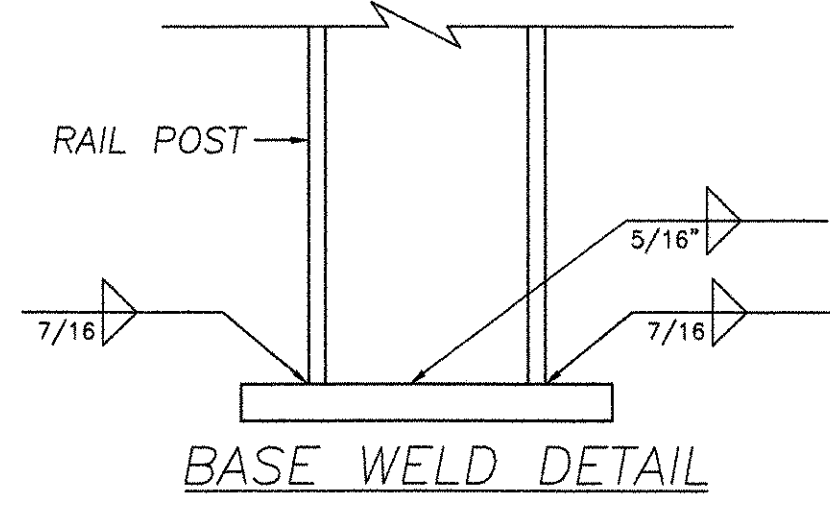




RAIL POST ANCHORAGE



BRIDGE RAILING ELEVATION



5/8" DIA TAPERED HOLE IN SPLICE TUBE AND 1 1/8" X 'C' SLOT IN RAIL TUBE FOR 5/8" DIA BOLT AND PLAIN HARDENED WASHER

EXPANSION JOINT SECTION

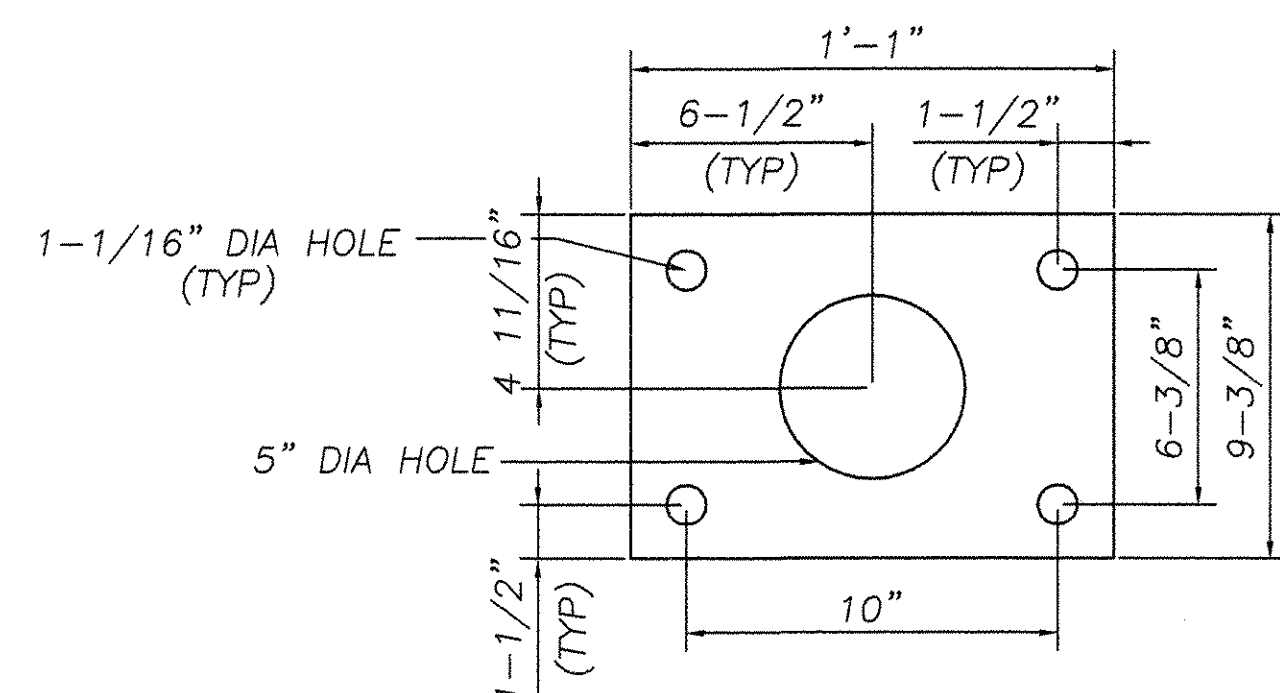
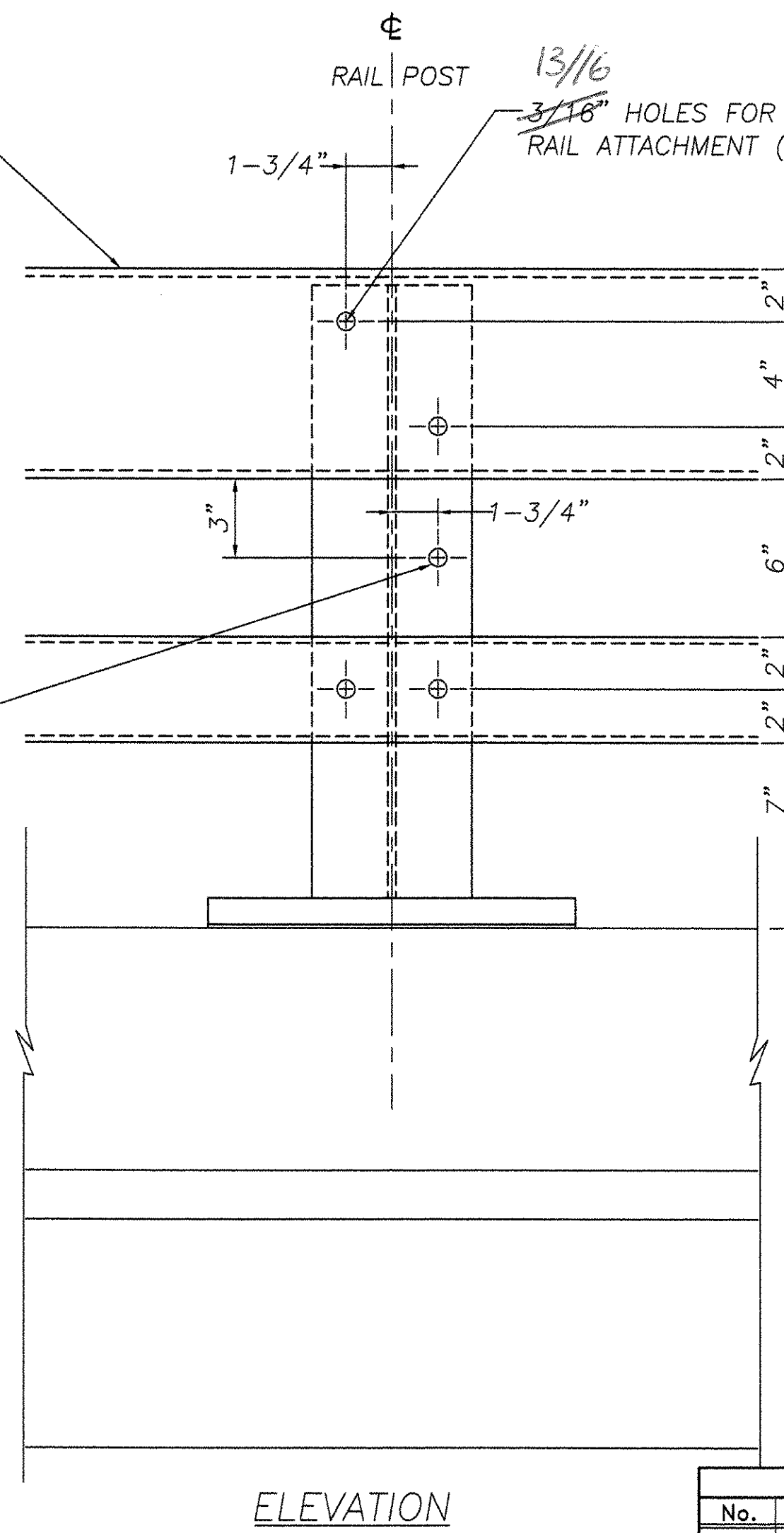
FOR DETAILS NOT SHOWN, SEE "RAIL TUBE SPLICE SECTION"

RAIL POST

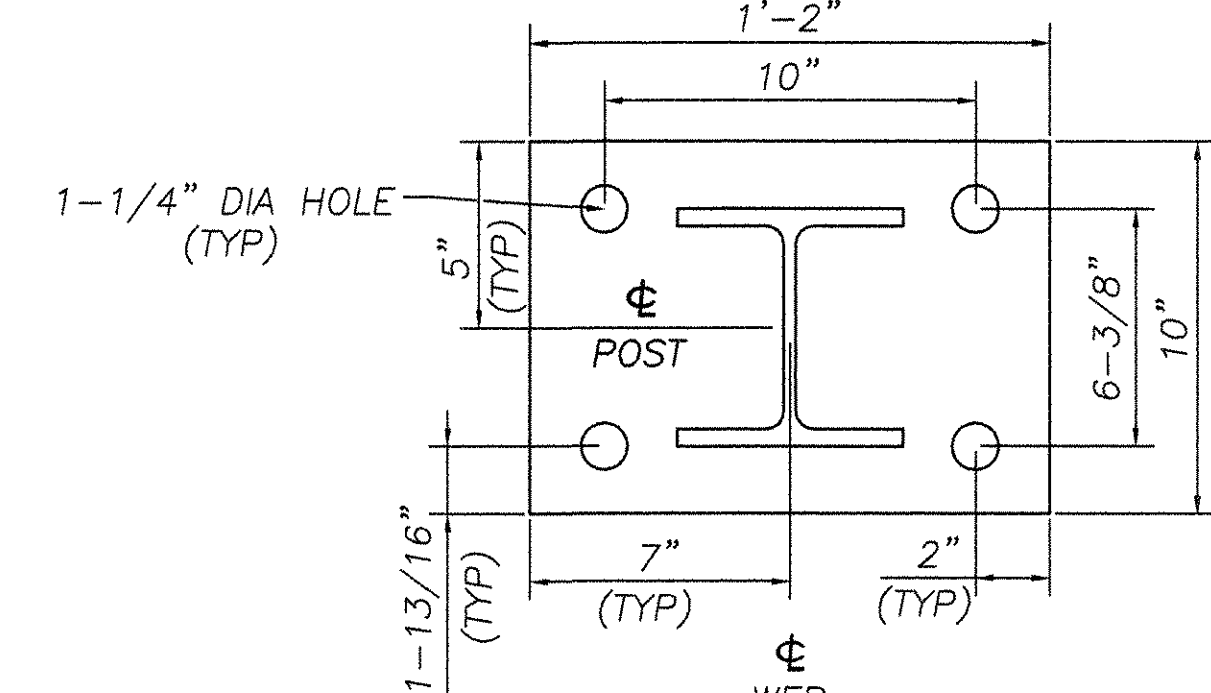
13/16"

3/16" HOLES FOR RAIL ATTACHMENT (4) TYP

1-3/4"

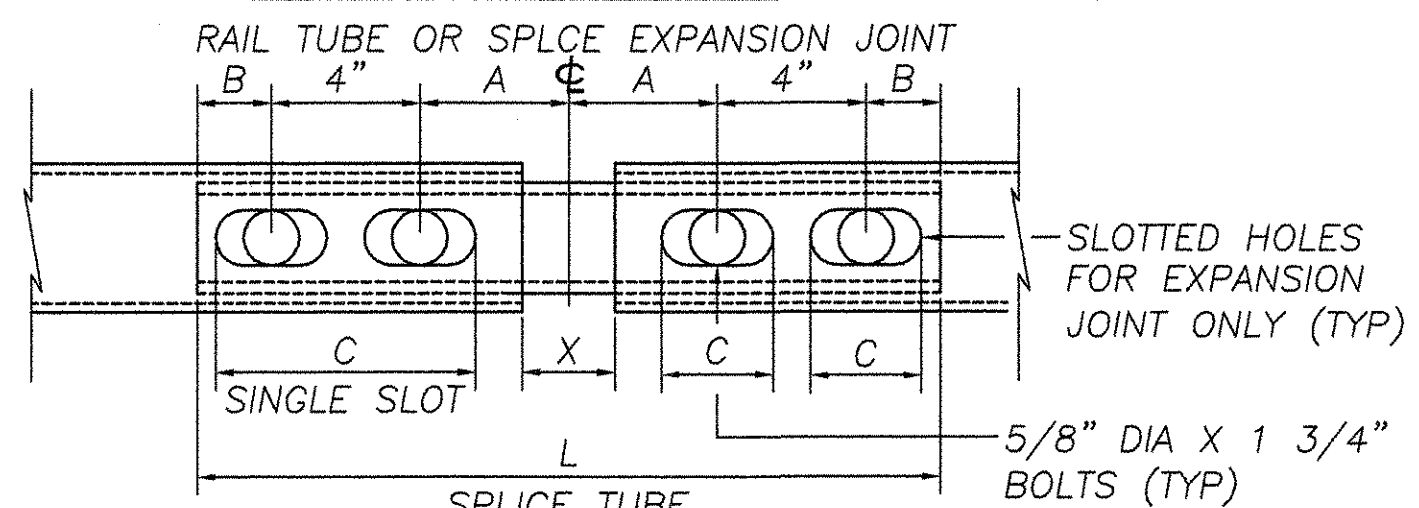


SPACER PLATE

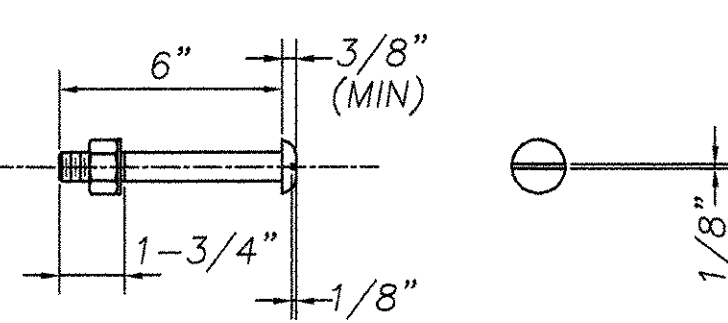


POST AND BASE PLATE

SPLICE TABLE					
T	A	B	C	L	X
NA	4"	2"	--	20"	3/4"
EXPANSION JOINT TABLE					
<4"	4"	2"	2 1/2"	20"	2 1/2"
>4" <6 1/2"	5 1/2"	2 3/8"	3 1/2"	23 3/4"	4"
>6 1/2" <9"	6 1/2"	3 3/8"	9"	27 3/4"	5"
>9" <13"	8 1/2"	4 3/8"	11"	33 3/4"	7"

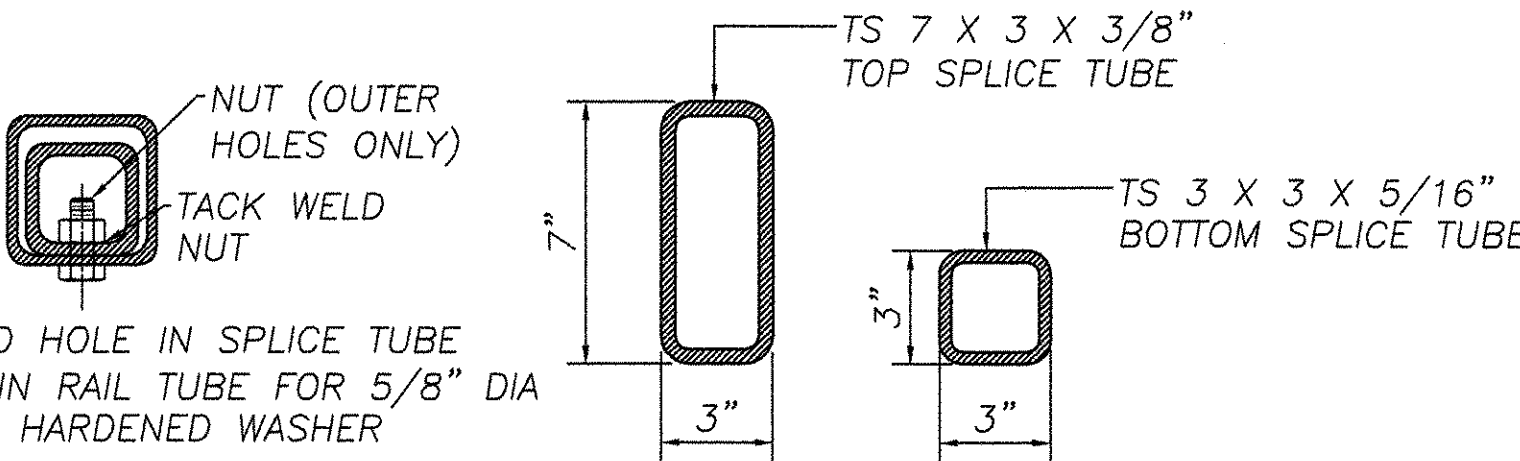


RAIL TUBE SPLICE AND RAIL EXPANSION JOINT DETAIL



RAIL TUBE SPLICE SECTION

- NOTES**
- ALL WORK AND MATERIALS SHALL CONFORM TO THE PROVISIONS OF SECTION 525 "RAILINGS OF THE STANDARD SPECIFICATION FOR CONSTRUCTION".
 - TUBING AND POSTS SHALL MEET THE REQUIREMENTS OF SECTION 732, "RAILING MATERIALS OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION" EXCEPT THE DROP WEIGHT TEAR TEST IN SECTION 732 SHALL NOT APPLY TO THE STRUCTURAL TUBING IN THIS STANDARD.
 - ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS.
 - RAIL POSTS SHALL BE SET TO NORMAL GRADE.
 - SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO (2) RAIL POSTS AND PREFERABLY TO AT LEAST FOUR (4) POSTS.
 - RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING A SUPERSTRUCTURE EXPANSION JOINT. EXPANSION JOINT WIDTH SHALL BE "X" AT 45°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
 - ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111, EXCEPT THAT HARDWARE SHALL MEET THE REQUIREMENTS OF AASHTO M232.
 - RAIL POSTS ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
 - RAIL TUBES SHALL BE ATTACHED USING 3/4" FULL DIAMETER BODY AASHTO M164 (TYPE 1) ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE 1/16" LARGER THAN THE BOLT SIZE.
 - HOLES IN RAILS FOR RAIL TUBE ATTACHMENT MAY BE FIELD DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC RICH PAINT PRIOR TO ERECTION.
 - IF THERE IS A CONFLICT BETWEEN THESE STANDARD DETAILS AND THE DESIGN, THE REQUIREMENTS OF THE DESIGN DRAWING SHALL BE FOLLOWED.
 - ANY BENDING OF RAIL SHALL BE DONE BY SHOP PROCEDURE ONLY.
 - THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS INCLUDING WELDING PROCEDURES TO THE STRUCTURES SECTION FOR APPROVAL IN ACCORDANCE WITH THE PROVISION OF 506.04, SHOP DRAWINGS. ALL WELDING SHALL CONFORM WITH SECTION 506.10.
 - RAIL POSTS AND BASE PLATES SHALL BE TESTED FOR IMPACT PROPERTIES IN ACCORDANCE WITH ASTM A-370 CHARPY IMPACT TESTING USING A SPECIMEN.
- MATERIALS**
- RAIL TUBES.....ASTM A500, GRADE B OR ASTM A501
- RAIL POSTS AND BASE PLATES.....ASTM A709A709M, GRADE 50
- ALL OTHER SHAPES AND PLATES.....ASTM 1709/A709M, GRADE 36
- ANCHOR STUDS.....ASTM A449
- ALL OTHER BOLTS (UNLESS NOTED).....AASHTO M164, TYPE 1
- NUTS FOR AASHTO M164 (ASTM A325) BOLTS AND FOR ANCHOR STUDS SHALL COMPLY WITH AASHTO M291 (ASTM A563)
- WASHERS SHALL COMPLY WITH AASHTO M293 (ASTM F436) SPECIFICATIONS
- 1/8" PAD SHALL COMPLY WITH STANDARD SPECIFICATION SUBSECTION 731.01 OR 731.02



RAIL TUBE SPLICE SECTION

TVGA CONSULTANTS

☐ NO EXCEPTIONS TAKEN ☐ REJECTED

☒ FURNISH AS CORRECTED ☐ REVISE AND RESUBMIT

ENGINEER has reviewed Shop Drawings and Samples and other data which Contractor is required to submit, only for conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated in the Contract Documents. Such reviews do not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions and programs incident thereto. Contractor is responsible for dimensions to be performed and coordinated at the job site, for information that pertains solely to the fabrication processes or to techniques of construction; and for coordination of the work of all trades.

BY: *[Signature]*

DATE: 5/11/03

REVISIONS		
No.	Remarks	Date
0	Initial submittal	28-JAN-05
0	Re-submittal	09-MAR-05
0	Re-submittal	02-MAY-05

HIGHWAY SAFETY CORP.		GLASTONBURY, CT	
ITEM 525.33 BRIDGE RAILING - NETC 2 RAIL			
TOWN OF BOLTON			
COUNTY OF CHITTENDEN			
PROJECT AC IM 089-2(29)			
BR. 51N&S OVER U.S. ROUTE 2			
GENERAL CONTRACTOR	F.R. LAFAYETTE, INC.		SHEET NO. 5 of 5
SUB CONTRACTOR			
DRAWN	CJC	CHECKED	<i>[Signature]</i>
DATE	11/30/04	SCALE	3/16=12
HSC REFERENCE NO.	1479	SIZE	D
REVISION	0		

