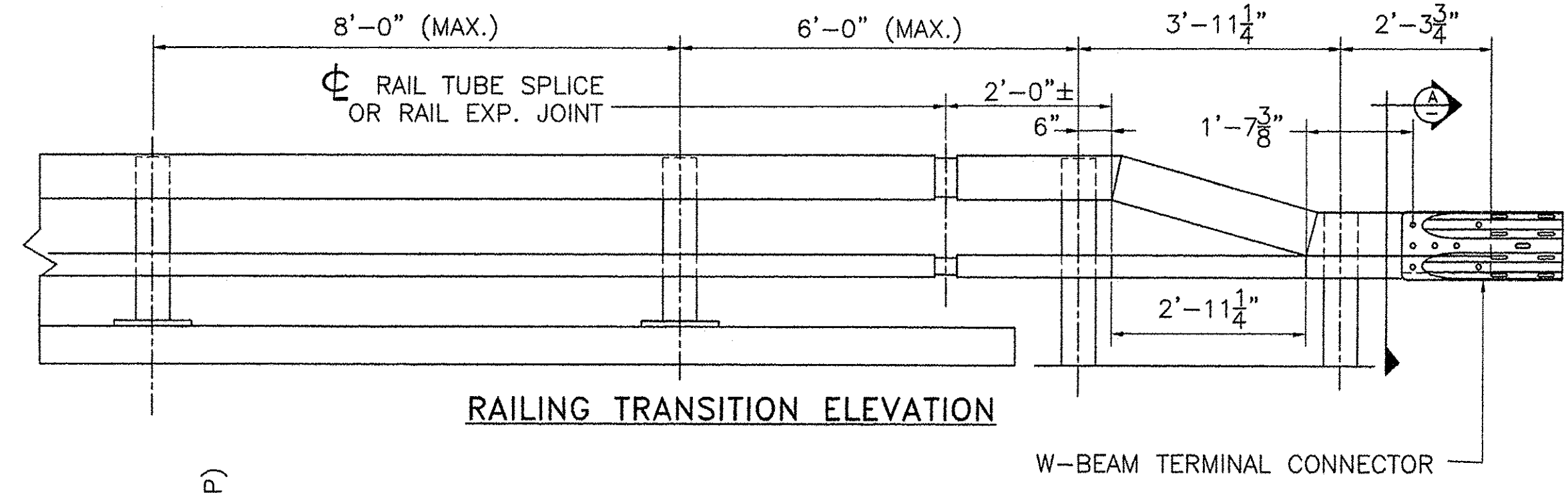


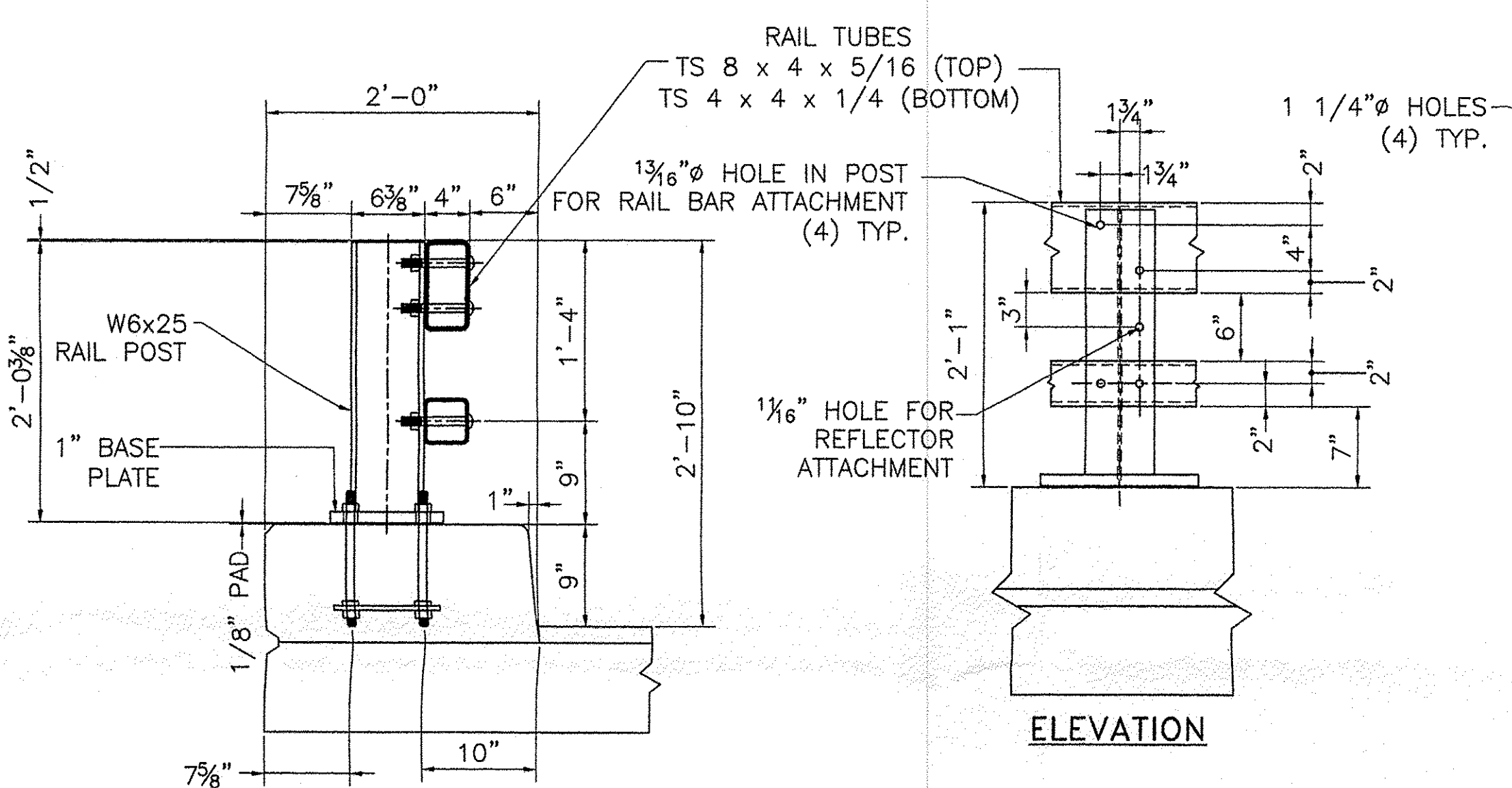
BRIDGE RAILING ELEVATION



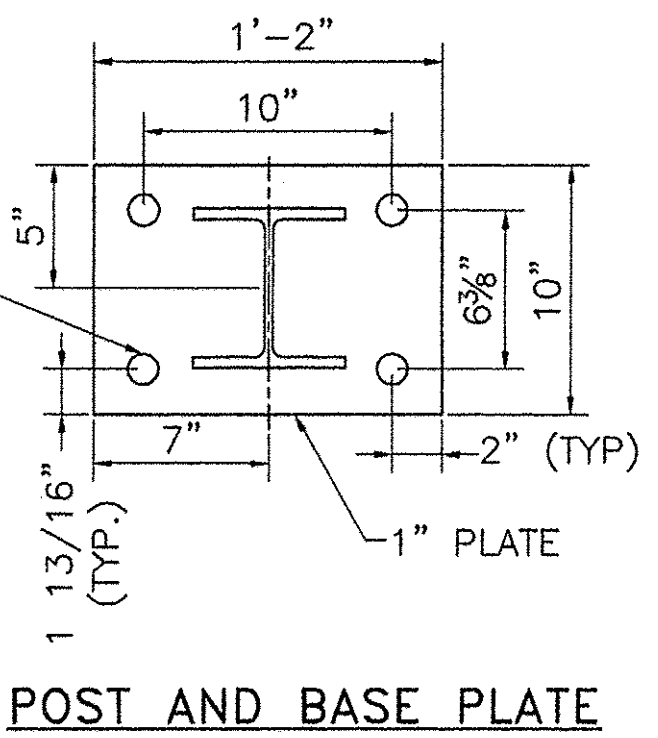
RAILING TRANSITION ELEVATION

W-BEAM TERMINAL CONNECTOR

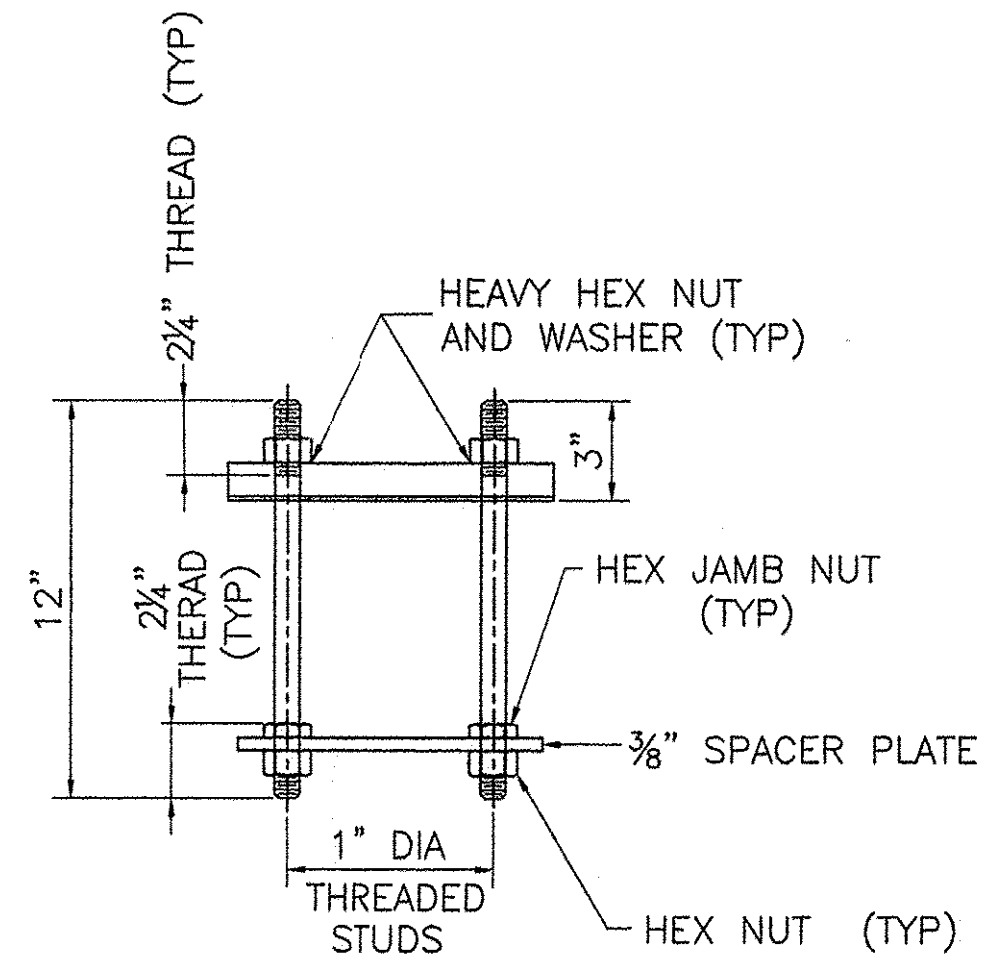
- NOTES:**
1. ALL WORK AND MATERIALS SHALL CONFORM TO THE PROVISION OF SECTION 525 - "RAILINGS" OF THE STANDARD SPECIFICATION FOR CONSTRUCTION
  2. RAILING MATERIAL SHALL MEET THE REQUIREMENTS OF SECTION 732.
  3. PRIOR TO GALVANIZING, ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS.
  4. RAIL POSTS SHALL BE SET NORMAL TO GRADE.
  5. SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO (2) RAIL POSTS AND PREFERABLY TO AT LEAST FOUR (4) POSTS.
  6. RAIL TUBE EXPANSION JOINT 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.
  7. ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111, EXCEPT HARDWARE, WHICH SHALL MEET THE REQUIREMENTS OF AASHTO M232.
  8. RAIL POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
  9. RAIL TUBES SHALL BE ATTACHED USING 3/4" FULL DIAMETER BODY AASHTO M164 (TYPE 1) ROUND HEAD BOLT INSERTED THROUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE 1/16" LARGER THAN THE BOLT SIZE.
  10. HOLES IN RAILS FOR RAIL TUBE ATTACHMENT MAY BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO ERECTION.
  11. IF THERE IS A CONFLICT BETWEEN THE DETAILS SHOWN ON THIS SHEET AND THE DESIGN, THE REQUIREMENTS OF THE DESIGN DRAWINGS SHALL BE FOLLOWED.
  12. ANY BENDING OF RAIL SHALL BE BY SHOP PROCEDURE ONLY.
  13. THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS, INCLUDING WELDING PROCEDURES TO THE STRUCTURES SECTION FOR APPROVAL IN ACCORDANCE WITH SUBSECTION 506.04 OF THE STANDARD SPECIFICATIONS. ALL WELDING SHALL CONFORM WITH SUBSECTION 506.10.
  14. RAIL POSTS AND BASE PLATES SHALL BE TESTED FOR IMPACT PROPERTIES IN ACCORDANCE WITH ASTM A-370 CHARPY IMPACT TESTING USING TYPE A SPECIMEN
  15. TO FACILITATE FIELD FIT - UP OF THE TRANSITION RAILING, POSTS SHALL BE SET LOOSELY INTO FIBER FORM TUBES WHILE TRANSITION PARTS ARE BEING ASSEMBLED. POST HOLES SHALL BE BACK FILLED WITH A CONCRETE MIX APPROVED BY THE ENGINEER. PAYMENT FOR COMPONENTS, INCLUDING BACKUP PLATE AND END TERMINAL CONNECTOR FOR GUARD RAIL, AUGERING, FIBER FORM TUBES AND CONCRETE, AND INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO BRIDGE RAILING - NETC 2 RAIL.
  16. ALL APPROACH RAIL SPLICES SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW.



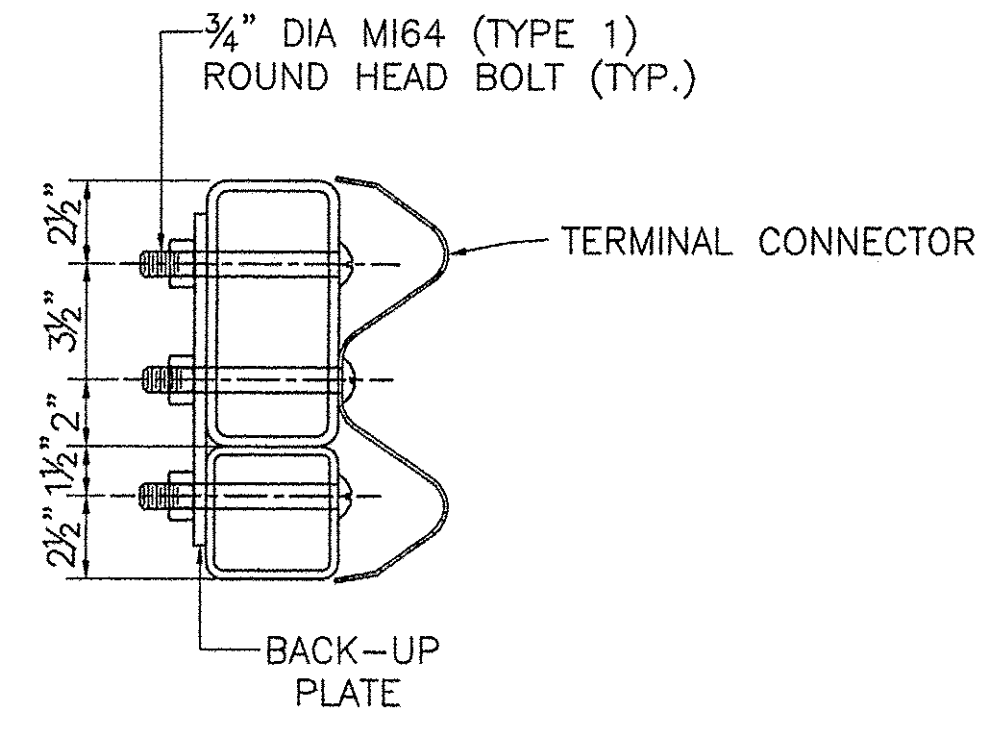
TYPICAL SECTION



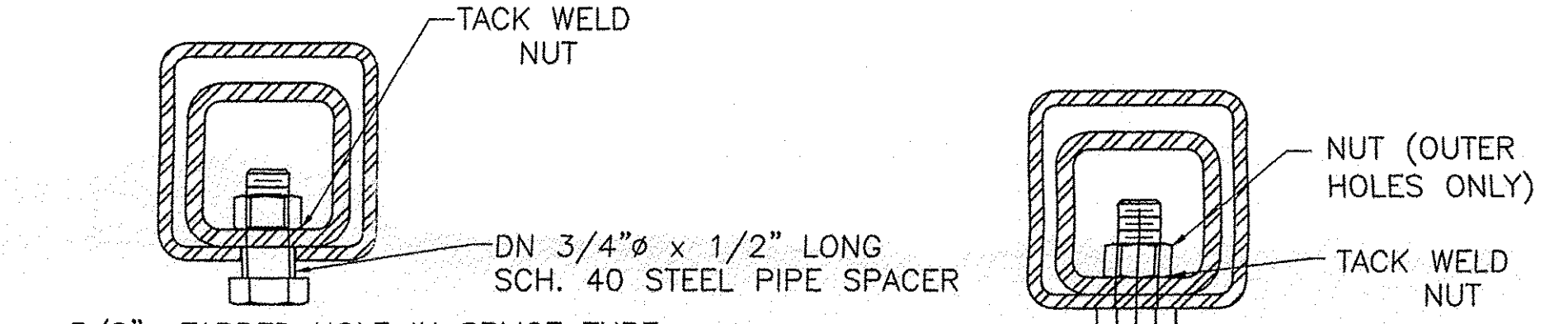
POST AND BASE PLATE



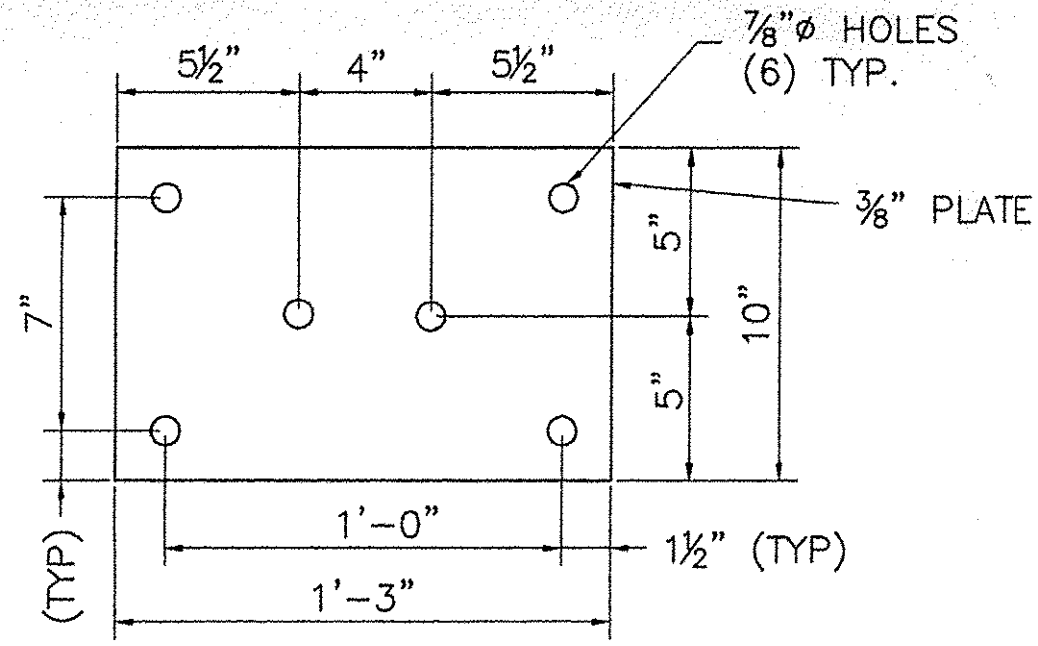
RAIL AND POST ANCHORAGE



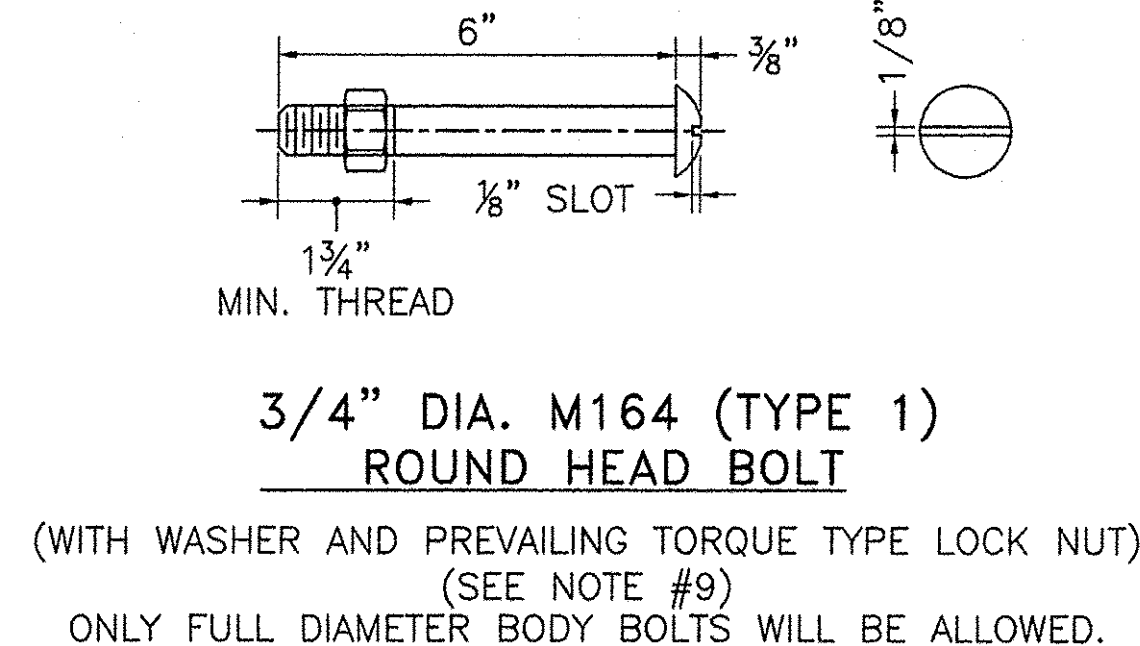
A SECTION



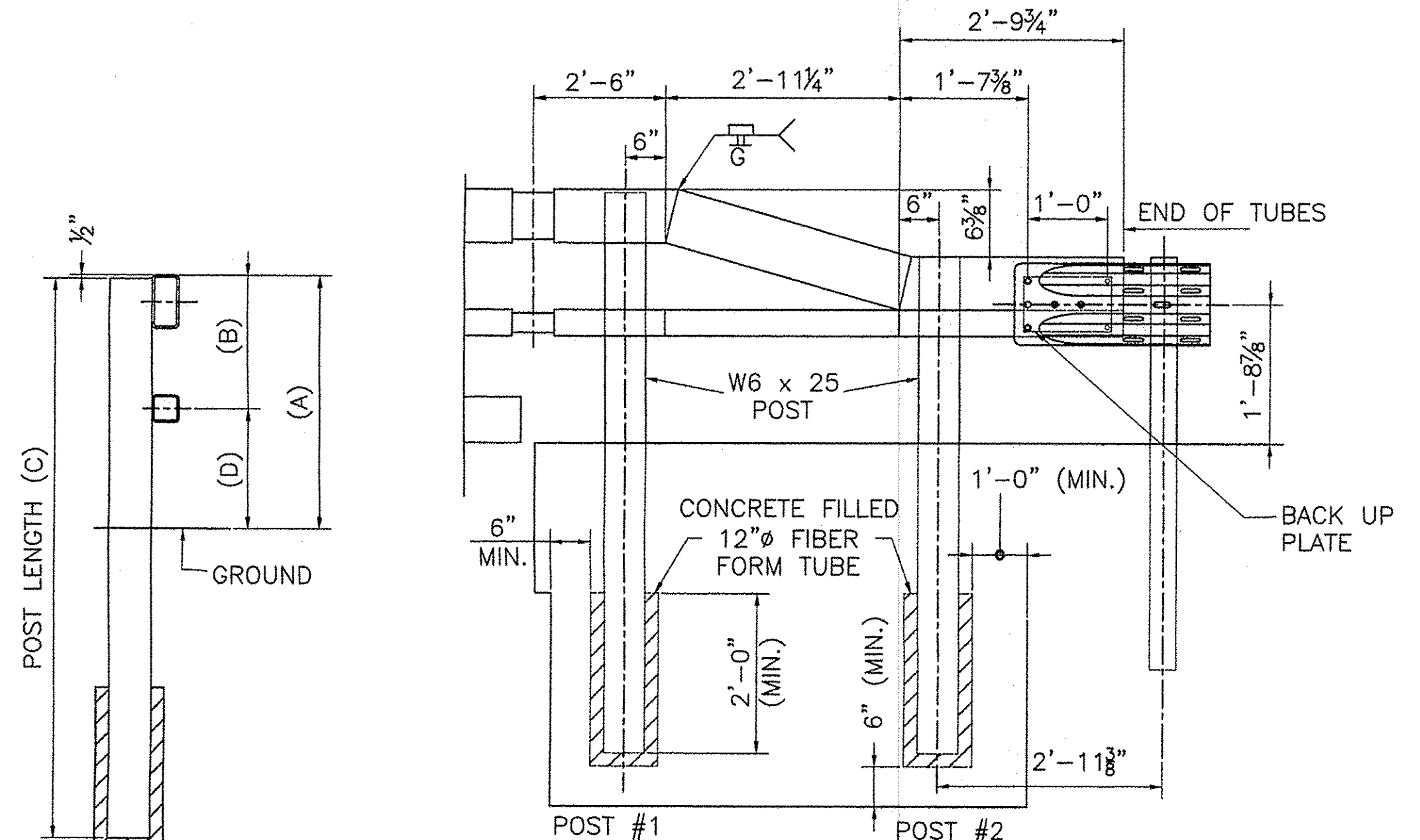
EXPANSION JOINT SECTION



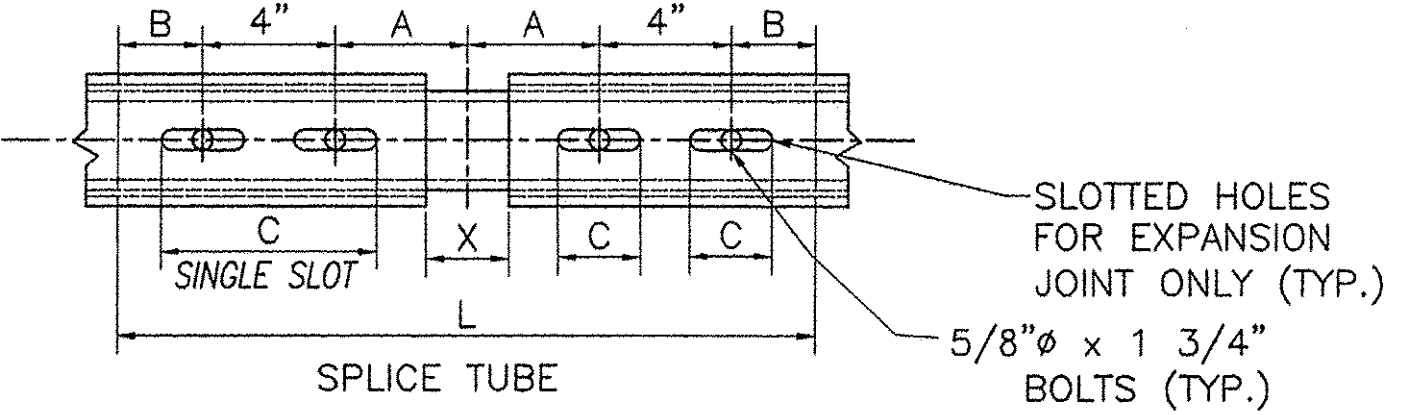
BACK-UP PLATE



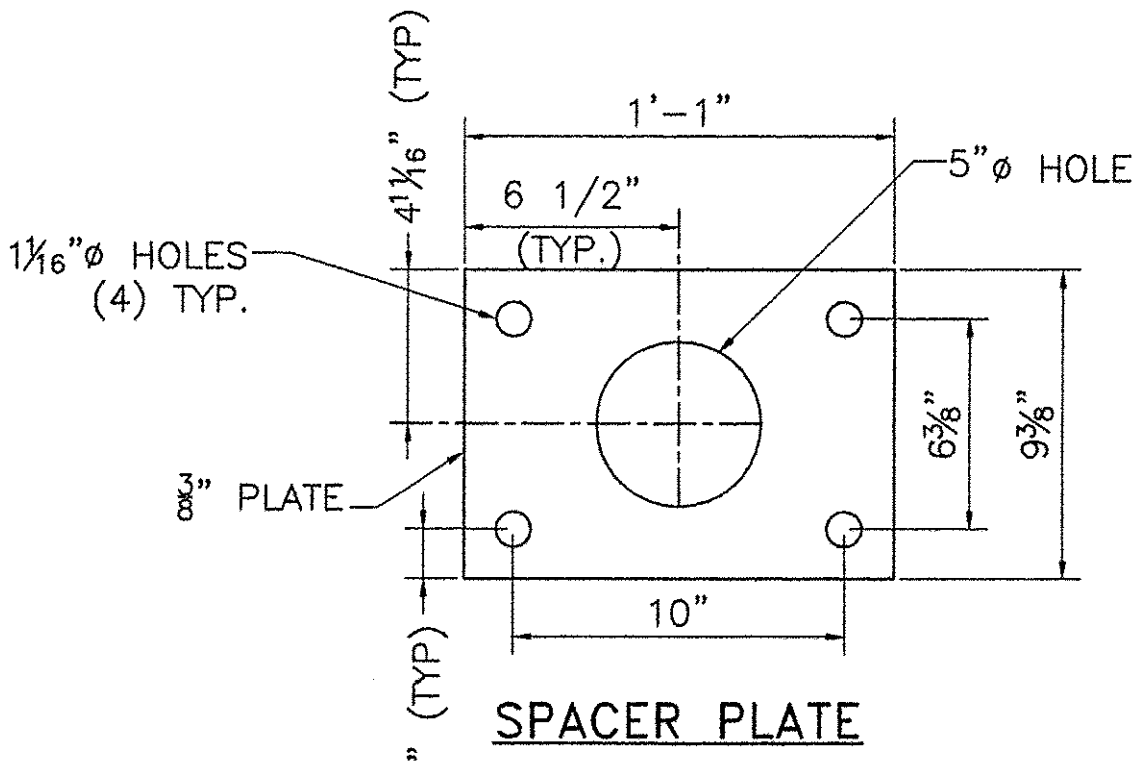
3/4" DIA. M164 (TYPE 1) ROUND HEAD BOLT  
(WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT)  
(SEE NOTE #9)  
ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.



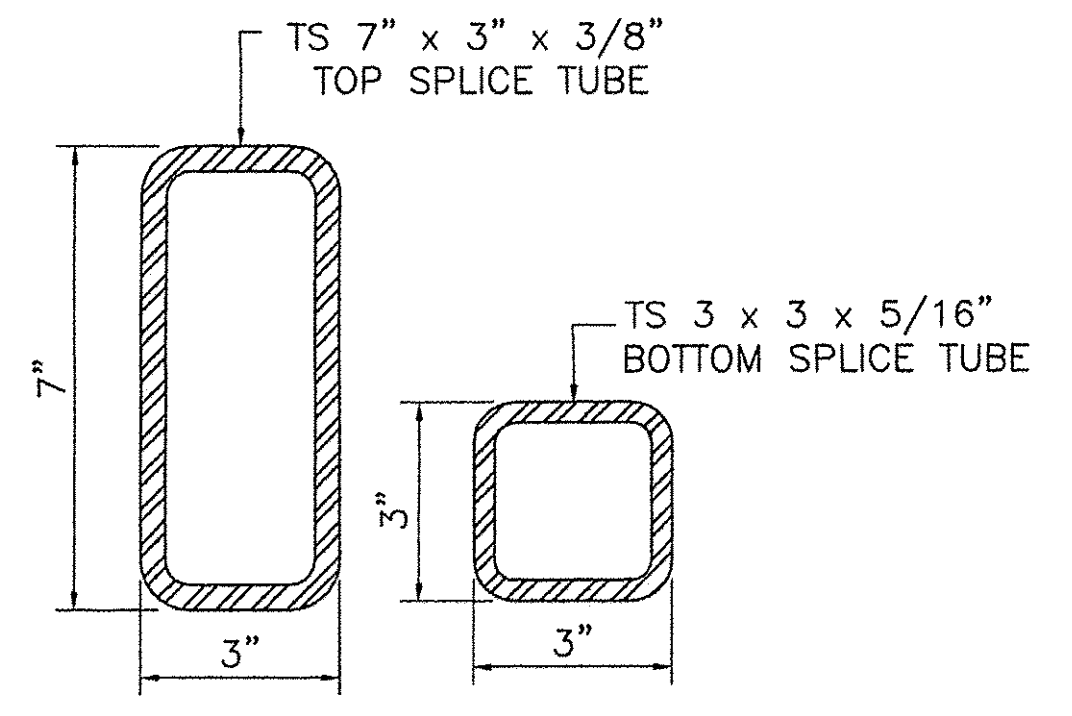
ELEVATION



RAIL TUBE SPLICE AND RAIL EXPANSION JOINT DETAIL



SPACER PLATE



RAIL TUBE SPLICE SECTION

- MATERIALS**
- RAIL TUBES.....ASTM A500, GRADE B OR ASTM A501
  - RAIL POSTS AND BASE PLATES.....ASTM A709A709M, GRADE 50
  - AALL OTHER SHAPRE AND PLATES.....ASTM A709/A709M, GARDE 36
  - ANCHOR STUDS.....ASTM A449
  - AALL OTHER BOLTS (UNLESS NOTED).....AASHTO M164, TYPE1
- NUTS FOR AASHTO M164 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.

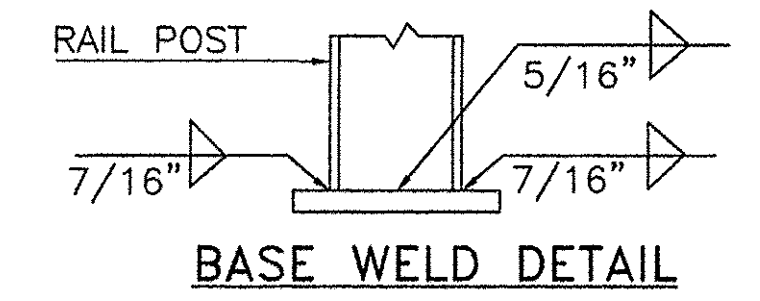
POST NUMBER	RAIL HEIGHT (A)	RAIL SPACING (B)	POST LENGTH (C)	RAIL HEIGHT (D)
1	2'-10"	1'-4"	7'-0"	1'-6"
2	2'-3 5/8"	10"	6'-5"	1'-5 5/8"

SPLICE TABLE					
T	A	B	C	L	X
N/A	4"	2"	--	20"	3/4"

EXPANSION JOINT TABLE					
T	A	B	C	L	X
<4"	4"	2"	2 1/2"	20"	2 1/2"

T = TOTAL MOVEMENT BETWEEN BRIDGE EXPANSION JOINTS. SEE NOTE 6

\* = SINGLE SLOT



BASE WELD DETAIL

REVISIONS		
No.	Remarks	Date
0	Initial submittal	

**RECEIVED**

CR. BY: JAC. OCTOBER 14, 2010

RESUBMIT: APPROVED [initials]

BY: DATE 6/29/10

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**HIGHWAY SAFETY CORP**

GLASTONBURY, CT  
860-633-9445

ITEM 525.33 BRIDGE RAILING - NETC 2 RAIL  
VT RT 14 OVER SODOM POND BROOK  
TOWN OF EAST MONTEPELIER COUNTY OF WASHINGTON  
BRIDGE NO. 69, PROJECT NO. STP 037-2(9)

GENERAL CONTRACTOR	1757
SUB CONTRACTOR	2 of 3
DRAWN: MHM	CHECKED: PAR
DATE: 6/8/2010	SCALE: NONE
SIZE: D	