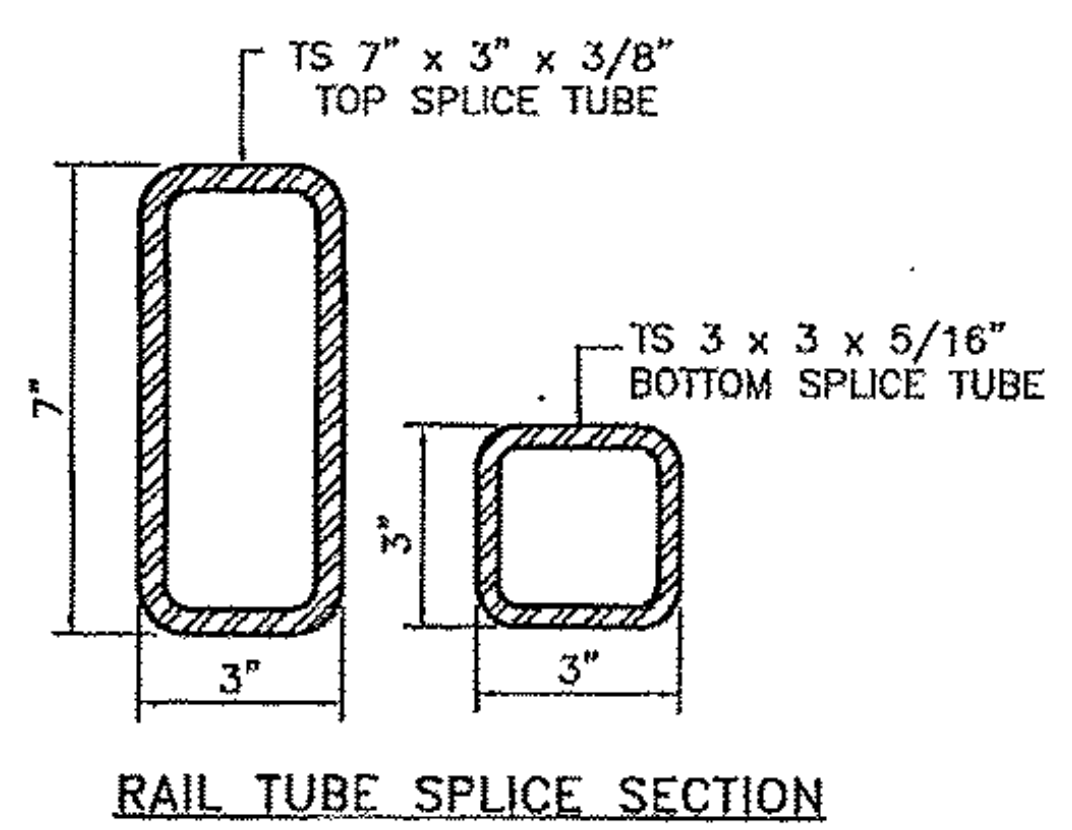
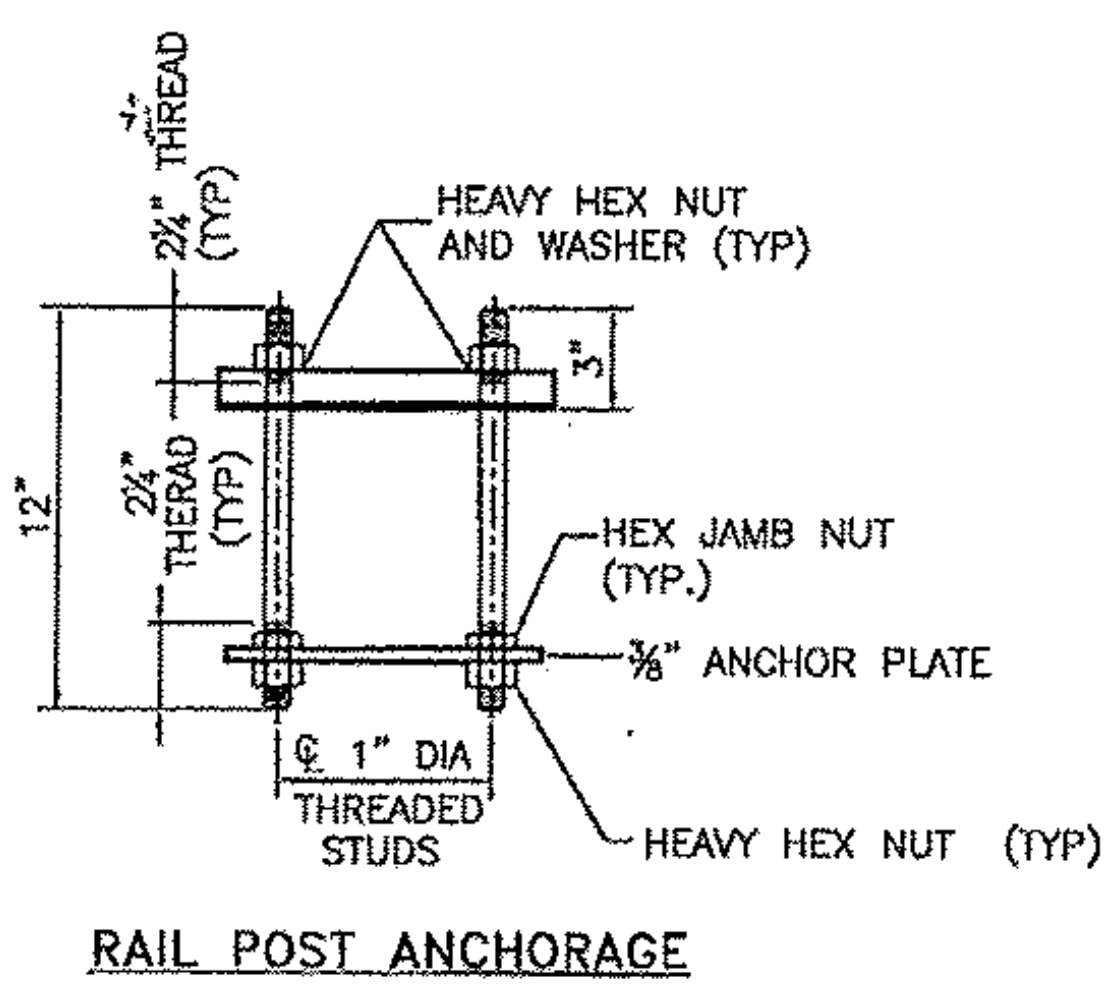
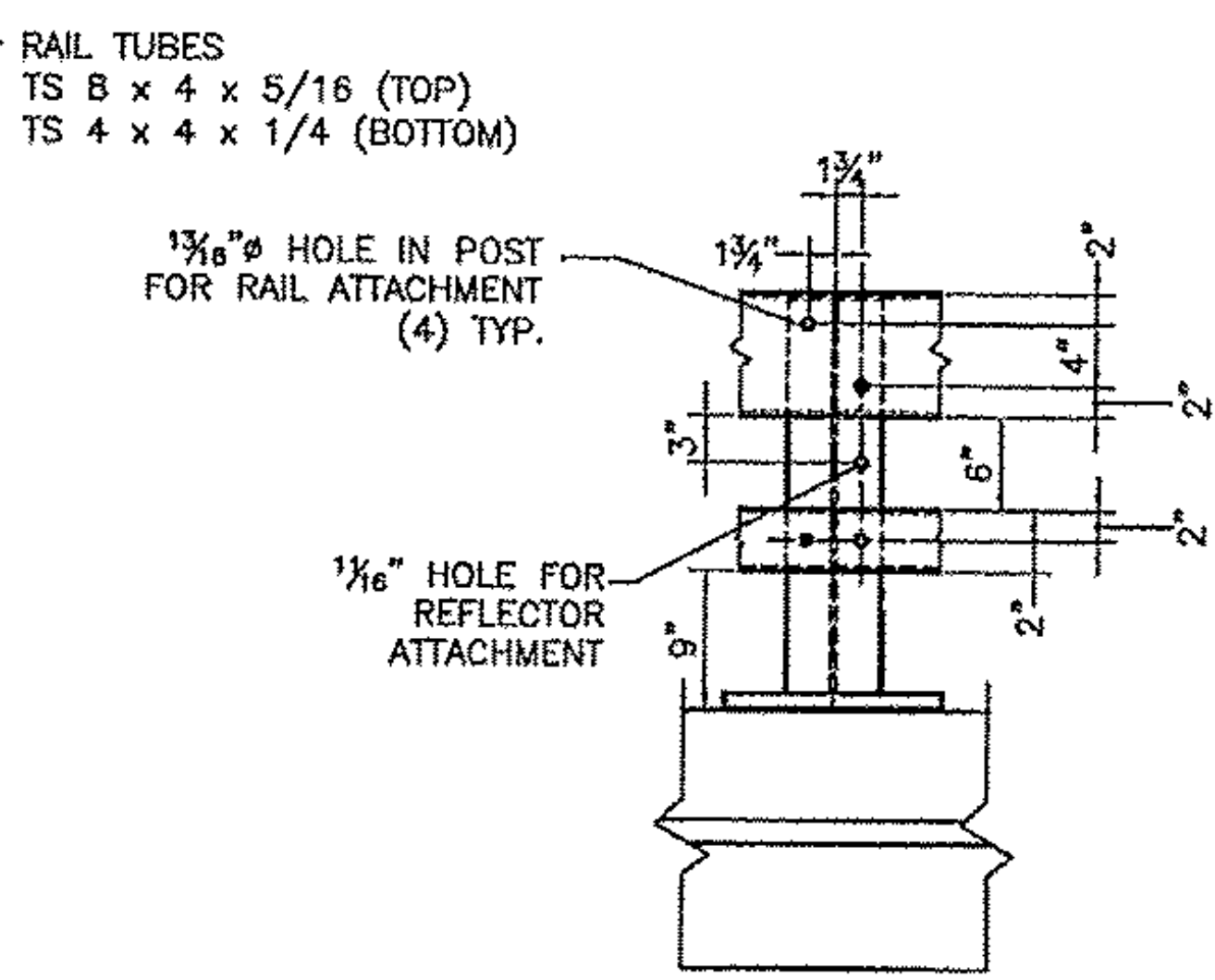
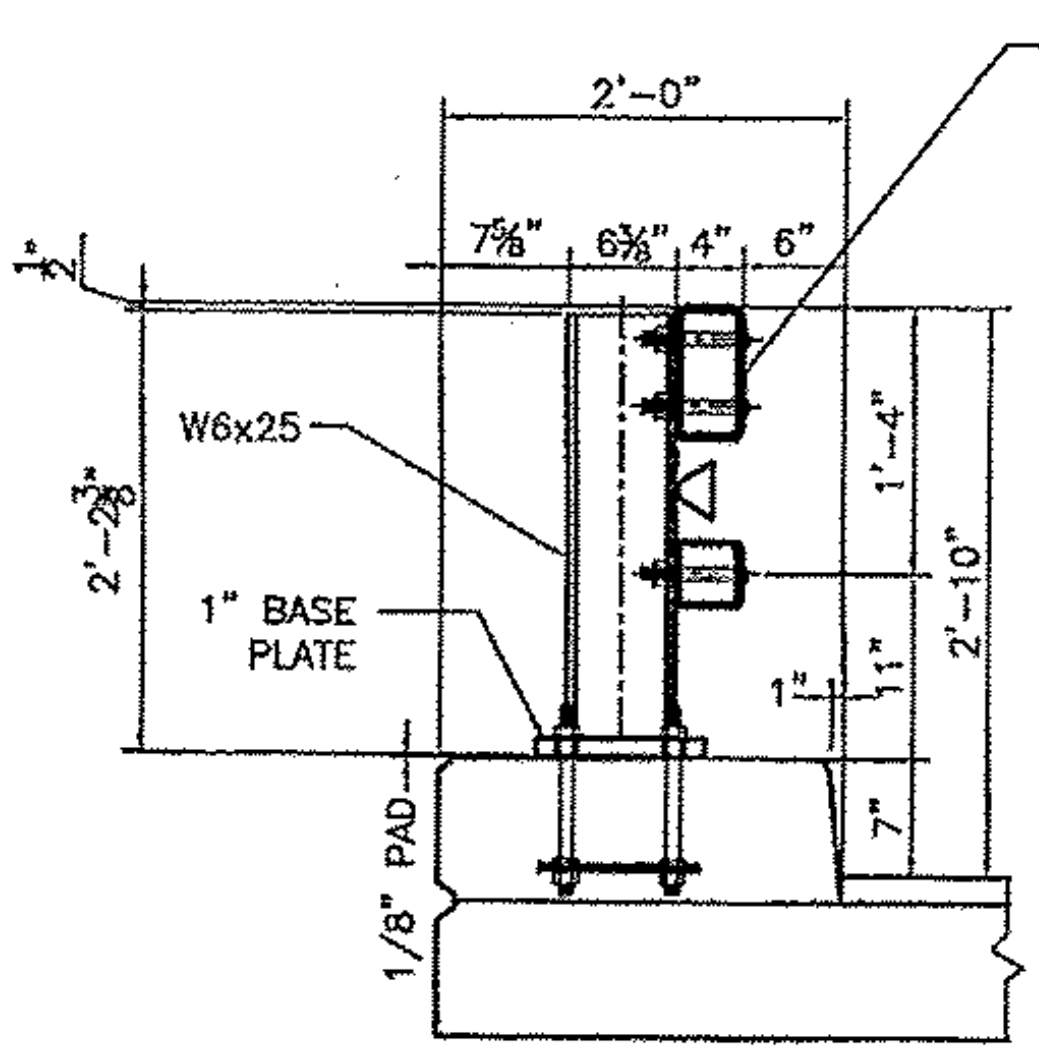


- NOTES:**
1. ALL RAILINGS AND MATERIALS SHALL CONFORM TO THE STANDARD SPECIFICATION FOR CONSTRUCTION SECTION 525, METAL RAILING.
  2. PRIOR TO GALVANIZING, ALL EXPOSED CUT OR SHEARED EDGES SHALL BE ROUNDED TO A 1/16" RADIUS AND BE FREE OF BURRS.
  3. RAIL POSTS SHALL BE SET NORMAL TO GRADE.
  4. SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO (2) RAIL POSTS AND PREFERABLY TO AT LEAST FOUR (4) POSTS.
  5. RAIL TUBE EXPANSION JOINT SHALL BE PROVIDED IN ANY RAIL BAY SPANNING A SUPERSTRUCTURE EXPANSION JOINT. EXPANSION JOINT WIDTH SHALL BE "X" AT 45° AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
  6. ALL PARTS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH AASHTO M111, EXCEPT HARDWARE, WHICH SHALL MEET THE REQUIREMENTS OF AASHTO M232.
  7. RAIL POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
  8. 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.
  9. HOLES IN RAILS FOR RAIL TUBE ATTACHMENT SHALL BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO ERECTION.
  10. IF THERE IS A CONFLICT BETWEEN THE DETAILS SHOWN ON THIS SHEET AND THE DESIGN, THE REQUIREMENTS OF THE DESIGN DRAWINGS SHALL BE FOLLOWED.
  11. ANY BENDING OF RAIL SHALL BE BY SHOP PROCEDURE ONLY, AND SHALL BE DONE AT THE FABRICATION PLANT.
  12. 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.
  13. RAIL POSTS AND BASE PLATES SHALL BE TESTED FOR IMPACT PROPERTIES IN ACCORDANCE WITH ASTM A-370 CHARPY IMPACT TESTING USING TYPE A SPECIMEN
  14. EXPANSION JOINT HARDWARE, REFLECTORS AND REFLECTOR HARDWARE PROVIDED BY OTHERS.



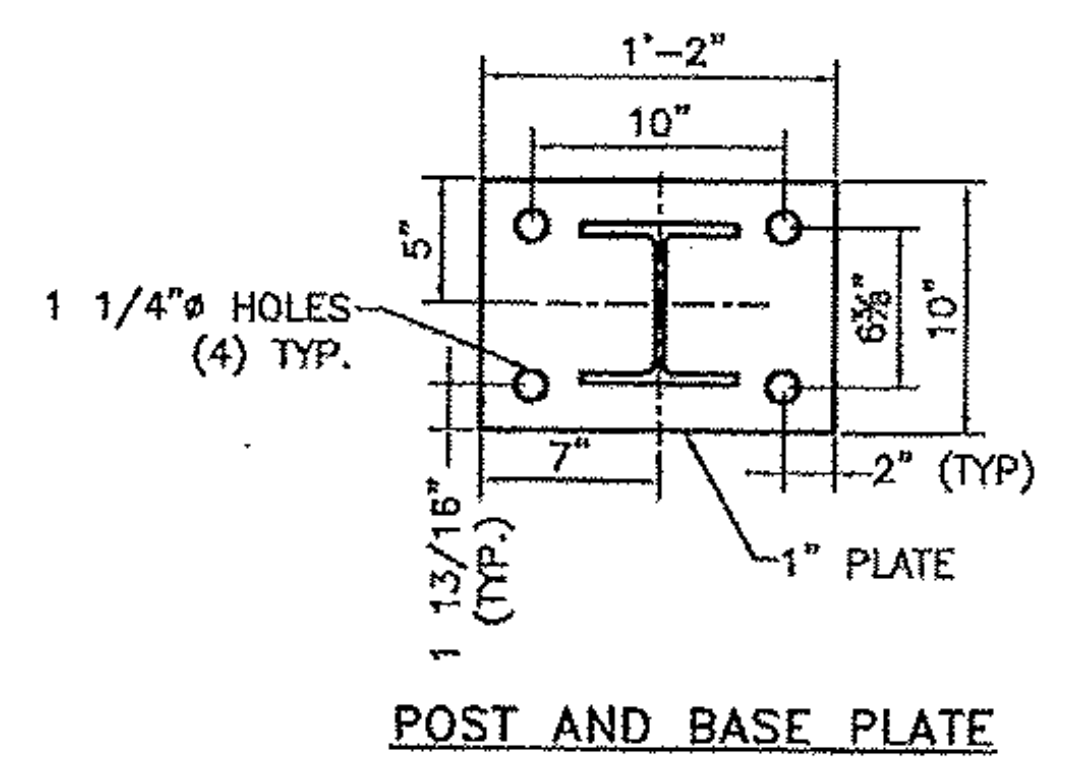
TYPICAL SECTION

ELEVATION

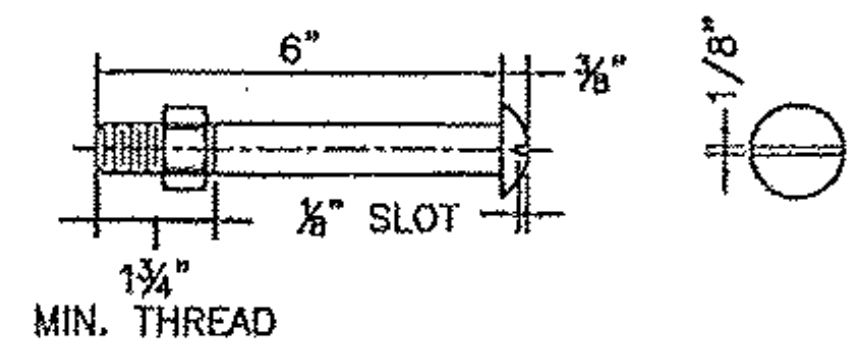
RAIL POST ANCHORAGE

RAIL TUBE SPLICE SECTION

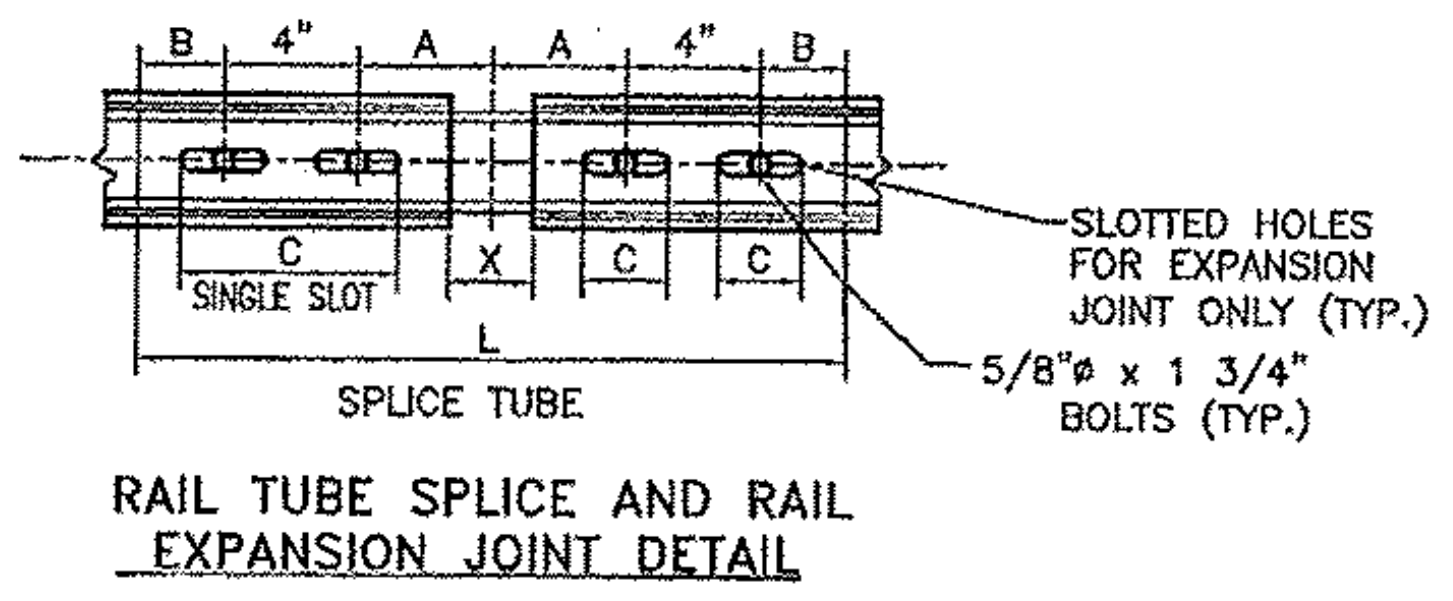
**MATERIALS**  
 RAIL TUBES.....ASTM A500, GRADE B OR ASTM A501  
 RAIL POSTS AND BASE PLATES.....ASTM A709/A709M, GRADE 50  
 ALL OTHER SHAPES AND PLATES.....ASTM A709/A709M, GRADE 36  
 ANCHOR STUDS.....ASTM A449  
 ALL OTHER BOLTS (UNLESS NOTED).....AASHTO M164, TYPE 1  
 NUTS FOR AASHTO M164 BOLTS 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.



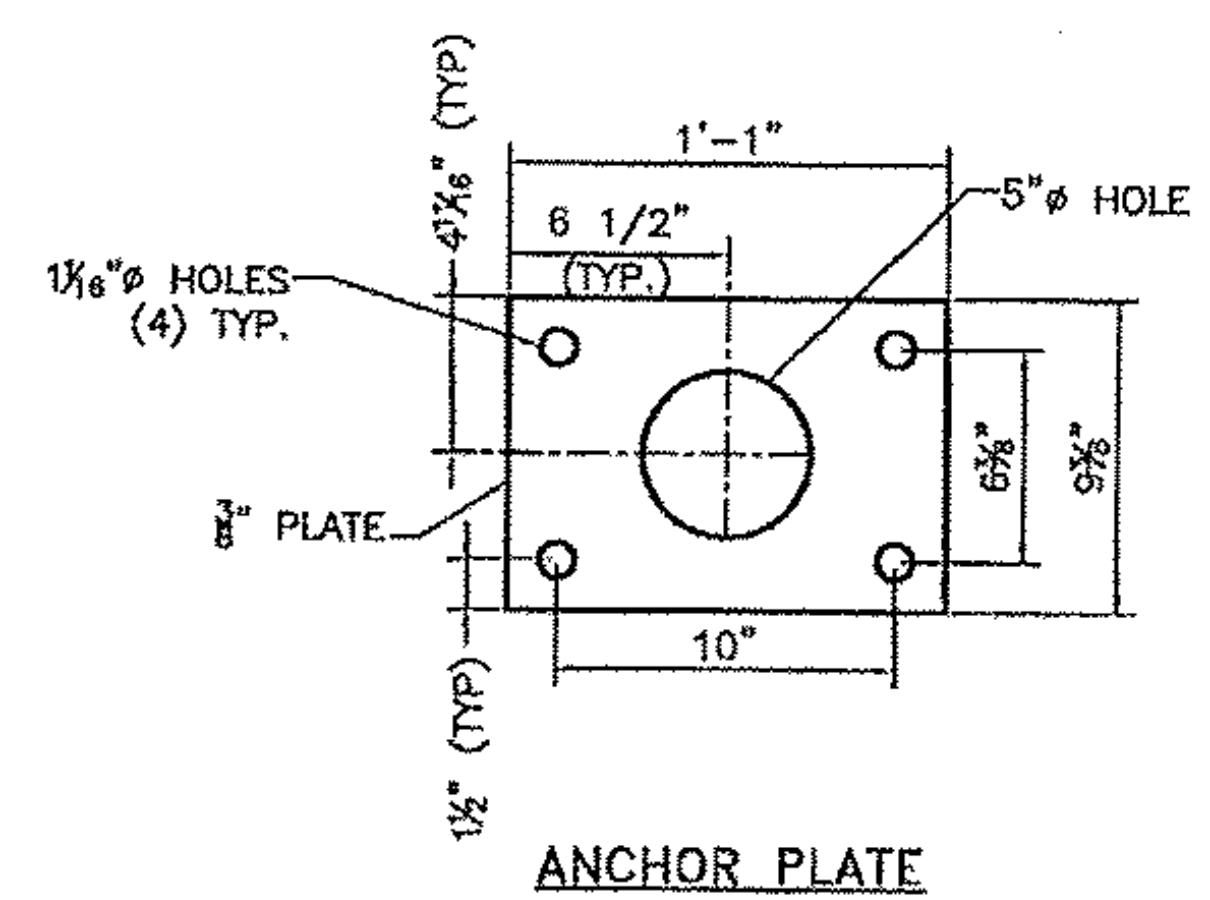
POST AND BASE PLATE



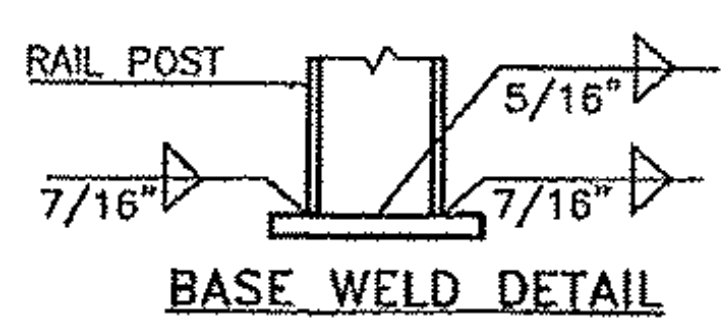
3/4" DIA. M164 (TYPE 1) ROUND HEAD BOLT  
 (WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT)  
 (SEE NOTE #8)  
 ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.



RAIL TUBE SPLICE AND RAIL EXPANSION JOINT DETAIL



ANCHOR PLATE



BASE WELD DETAIL

SPLICE TABLE					
T	A	B	C	L	X
N/A	4"	2"	---	20"	3/4"
EXPANSION JOINT TABLE					
<4"	4"	2"	2 1/2"	20"	2 1/2"

T = TOTAL MOVEMENT BETWEEN BRIDGE EXPANSION JOINTS. SEE NOTE 5

REVISIONS		
No.	Remarks	Date

Vermont Agency of Transportation  
**RECEIVED**  
 CK'D BY UBS OK'D BY CWC  
 16 November 2011  
 RESUBMIT APPROVED ✓  
 BY C.W.CARLSON DATE 11-16-2011

**HIGHWAY SAFETY CORP**  
 GLASTONBURY, CT  
 860-633-9445

ITEM 525.33 NETC 2 RAIL BRIDGE RAIL  
 VT ROUTE 12  
 BETHEL, VERMONT  
 PROJECT NO. BHF 0241(30)

CERTIFIED FABRICATOR  
 1856  
 2 of 3

DESIGNED BY: F.R. LAFAYETTE  
 DRAWN: MHM CHECKED: PAR DATE: 10-27-11 SCALE: NONE