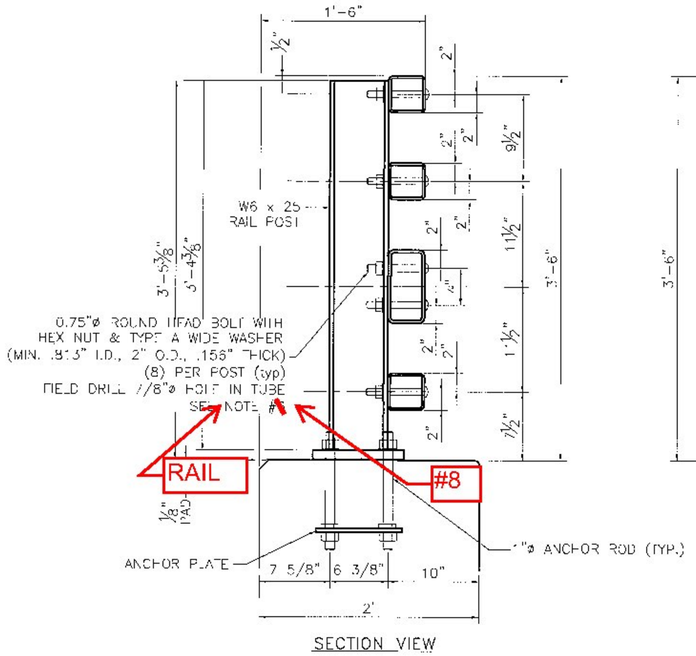
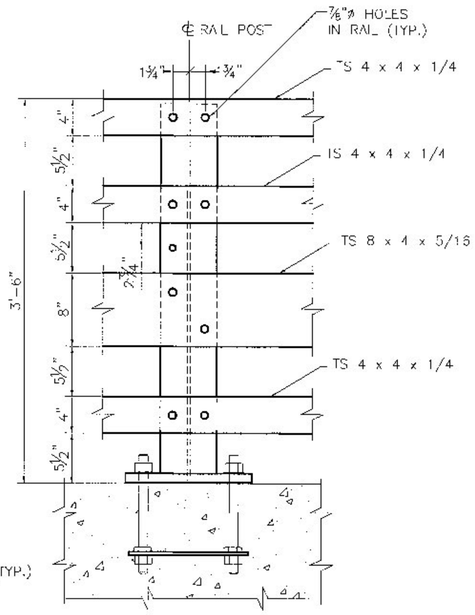
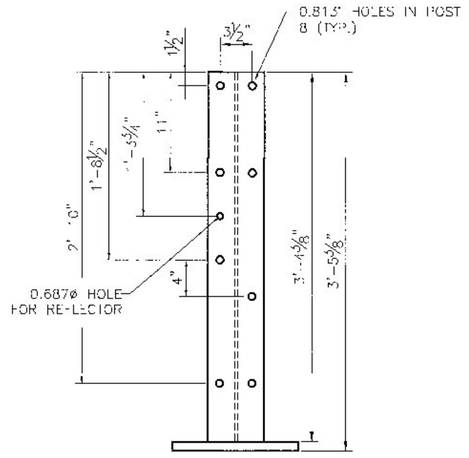


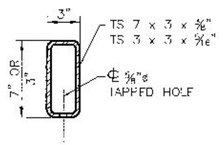
SECTION VIEW



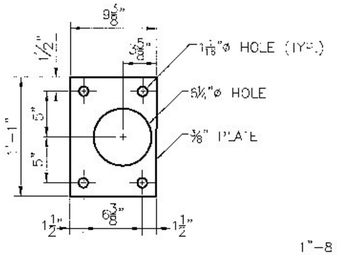
PARTIAL RAIL ELEVATION



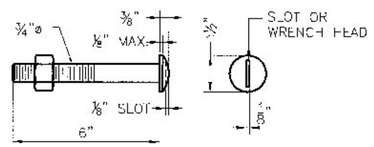
FRONT POST ELEVATION



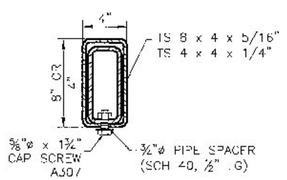
SPLICE TUBE
SECTION



ANCHOR PLATE



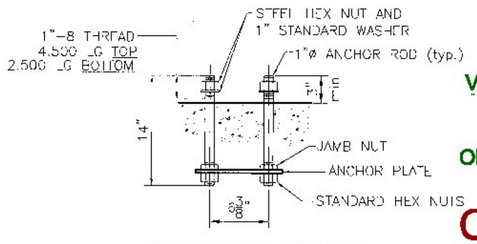
ROUND HEAD BOLT



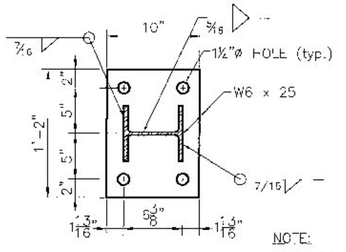
TYPICAL SPLICE
ASSEMBLY

SEE NOTE #6

RAIL

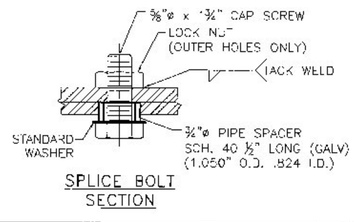


POST ANCHOR ASSEMBLY

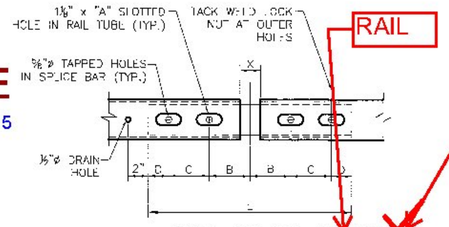


POST BASE PLATE
1" x 10" x 14" BASE PLATE

NOTE:
BEARING PAD TO HAVE SAME
SHAPE AND DIMENSIONS AS BASE
PLATE EXCEPT THICKNESS = 1/8"



SPLICE BOLT
SECTION



RAIL SPLICE SEE NOTE X

#6

SPLICE & EXPANSION JOINT TABLE						
"T"	"A"	"B"	"C"	"D"	"X"	"L"
INTERIOR	2 1/2"	4"	4"	2"	3/4"	1'-8"
≤3 1/4"	2 1/2"	4"	4"	2"	7"	1'-8"
3 1/4"<T≤5 1/4"	3 1/2"	5"	5"	2 1/2"	9"	2'-0"

"T" = TOTAL REQUIRED MOVEMENT
* = END SPLICE BAR

Vermont Agency of Transportation
RECEIVED
ON: May 19, 2015
and Checked for
CONFORMANCE
BY: Todd A. Sumner DATE: 05/27/2015

RAIL NOTES:

1. ITEM 525.34, BRIDGE RAILING GALVANIZED 4 RAIL BOX BEAM SHALL INCLUDE POSTS, BASE PLATES, ANCHOR PLATES, ANCHOR RODS, PREFORMED PADS, RAIL ASSEMBLY BOLTS, NUTS, WASHERS, STUDS, STRUCTURAL TUBING, SPLICE BARS, PIPE SPACERS, ALL APPURTENANCES, AND GALVANIZING.

2. BRIDGE RAIL POSTS SHALL BE SET NORMAL (90 DEGREES) TO THE PROFILE GRADE, EXCEPT ON GRADES OVER 5% WHERE POSTS SHALL BE SET VERTICAL.

3. ENDS OF RAIL TUBE SECTIONS SHALL BE SAWED OR MILLED AND SHALL BE TRUE AND SMOOTH. ALL CUT EDGES OF ALL MATERIAL SHALL BE GROUND SMOOTH.

4. EACH PIECE OF RAIL TUBING SHALL BE ATTACHED TO A MINIMUM OF THREE (3) POSTS.

. All rails in a splice

5. BOLT HOLES SHALL BE DRILLED OR PUNCHED. FLAME CUTTING MAY BE USED TO FINISH SLOTTED HOLES IF MECHANICALLY GUIDED.

6. AT INTERIOR SPLICES, PIPE SPACERS SHALL BE USED ON ONLY ONE SIDE OF THE SPLICE TO ALLOW MOVEMENT ON THAT SIDE, THE TOP AND BOTTOM RAIL SHALL RECEIVE THE SAME TREATMENT, AT END SPLICES PIPE SPACERS SHALL BE USED ON BOTH SIDES OF THE SPLICE TO ALLOW MOVEMENT ON EACH SIDE.

7. MILL OR SHOP TRANSVERSE WELDS SHALL NOT BE PERMITTED ON ANY RAIL ELEMENT. RAIL ELEMENTS USED ON ~~CURVES~~ SHALL USE 3/8" WALL TUBES AND SHALL BE SHOP FORMED TO THE REQUIRED CURVATURE.

curves

8. NO PUNCHING, DRILLING, CUTTING OR WELDING SHALL BE PERMITTED AFTER GALVANIZING. EXCEPT AS ALLOWED IN DETAILS A & B. DAMAGED AREAS OF GALVANIZING SHALL BE THOROUGHLY CLEANED, PRETREATED, AND PAINTED WITH TWO COATS OF ORGANIC ZINC-RICH GALVANIZING REPAIR PAINT, HAVING MIN. 94% ZINC BY WEIGHT, TO A THICKNESS EQUAL TO THE ORIGINAL COATING ACCORDING TO THE STANDARD SPECIFICATIONS AND ASTM A780.

9. NUTS FOR 1"ø THREADED ANCHOR RODS CONNECTING THE BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.

10. THREADS FOR ANCHOR RODS MAY BE ROLLED OR CUT. IF CUT THREADS ARE USED, BOLT DIA. SHALL NOT BE LESS THAN NOMINAL DIA., IF ROLLED THREADS ARE USED, ROD DIA. SHALL NOT BE LESS THAN ROOT DIA. OF THREADS.

MATERIAL NOTES:

IN ACCORDANCE WITH SECTION 525 AND THE FOLLOWING:

1. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 714.11 (ASTM A500, GRADE B, STRUCTURAL STEEL TUBING) RAIL TUBING SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH REQUIREMENTS OF 15 FT/LBS AT 0° F. FOR ASTM A500, GRADE B, THE TEST SAMPLES SHALL BE TAKEN AFTER FORMING THE TUBES. CHARPY V-NOTCH IS NOT REQUIRED FOR SPLICE TUBES.

2. RAIL POSTS AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572 GR 50, EXCEPT ANCHOR PLATES ~~GR 50~~ A36. SEE SUBSECTION 732.03

3. 5/4"ø ROUND HEAD BOLTS SHALL BE ASTM A325 OR A449. ALL OTHER BOLTS AND NUTS SHALL CONFORM TO ASTM A307 AND ASTM 563 GRADE A RESPECTIVELY OR BETTER. ANCHOR RODS SHALL CONFORM TO ASTM A449 EXCEPT THAT ASTM A307 NUTS MAY BE USED ON THE BOTTOM OF ANCHOR ASSEMBLY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN WIDE WASHERS AND SHALL MEET THE DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.22.

and nuts

4. IN ACCORDANCE WITH SUBSECTION 726.08, ALL STEEL COMPONENTS SHALL BE GALVANIZED AFTER FABRICATION IN CONFORMANCE TO AASHTO M232 (ASTM A153) AND AASHTO M111 (ASTM A123). THE GALVANIZING KETTLE SHALL HAVE 0.05 TO 0.09 PERCENT NICKEL. GALVANIZED SURFACES SHALL HAVE A UNIFORM APPEARANCE AND GALVANIZED MATERIAL SHALL BE PROPERLY STORED.

5. PREFORMED BEARING PADS (1/8" THICK) SHALL CONFORM TO AASHTO M251.

6. A DELINEATOR (SEE VAOT STANDARD DRAWING G-1 FOR DETAILS) SHALL BE INSTALLED AT NEAREST POST TO 30 FT SPACING. WHITE IS TO BE INSTALLED ON THE DRIVER'S RIGHT. ~~FOR ONE WAY BRIDGES, YELLOW IS TO BE INSTALLED ON THE DRIVER'S LEFT.~~ PAYMENT SHALL BE INCIDENTAL TO OTHER ITEMS.

SUBMITTAL REVIEW

Review is only for general conformity to the contract drawings and specifications and shall not relieve the contractor of his entire responsibility under the contract, including, among other things, dimensions to be confirmed and correlated at the job site, and information that pertains to the fabrication processes or to techniques of construction.

☐ NO EXCEPTIONS TAKEN
☒ MAKE CORRECTIONS NOTED
RESUBMITTAL NOT REQUIRED
☐ AMEND AND RESUBMIT
☐ REJECTED - SEE REMARKS

PB AMERICAS, INC.
BY:
DATE: 5/26/15

HIGHWAY SAFETY CORP
GLASTONBURY, CT
860-633-9445

ITEM 525.34 BRIDGE RAILING, GALVANIZED 4 RAIL BOX BEAM
ITEM 621.73 GUARDRAIL APPROACH SECTION, GALVANIZED 4 RAIL BOX BEAM
TH1 EAST RIVER ROAD BRIDGE #19
TOWN OF LINCOLN, VT ADDISON COUNTY
BRF 0188 (8)

CERTIFIED FABRICATOR

GENERAL CONTRACTOR
SUB CONTRACTOR LAFAYETTE
PROJ. NO. 2041
SHEET NO. 2 of 4
DRAWN PAR CHECKED DATE 03-27-15 SCALE NONE SIZE D