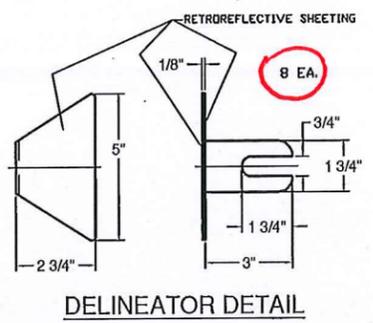
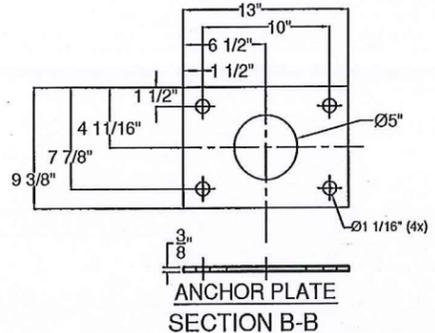
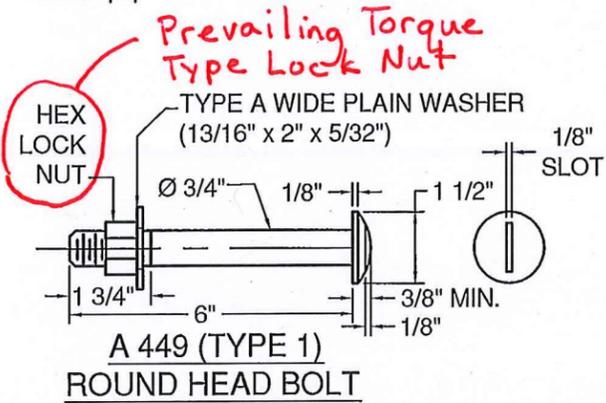


1/8" PREFORMED BEARING PAD



BILL OF MATERIAL			
QTY	PART #	DESCRIPTION	ASTM DESIGNATION
18	0033.90344	TWO RAIL POST @ 2'-2 3/8" O.A.	A572 Gr. 50
4	0033.91123	4" X 4" X 1/4" RAIL @ 19'-11 1/2"	A500 Gr. B
2	0033.91124	4" X 4" X 1/4" RAIL @ 24'-10"	A500 Gr. B
4	0033.91125	4" X 8" X 1/4" RAIL @ 19'-11 1/2" <i>Confirm</i>	A500 Gr. B
2	0033.91126	4" X 8" X 5/16" RAIL @ 24'-10"	A500 Gr. B
4	0033.90052	3" X 3" X 5/16" FIX. SPL. TUBE @ 1'-8"	A500 Gr. B
4	0033.90033	3" X 7" X 3/8" FIX. SPL. TUBE @ 1'-8"	A500 Gr. B, A36
18	0033.00299	3/8" X 9 3/8" X 13" ANCHOR PLATES	A36
18	0033.00052	1/8" FIBER PAD @ 10" X 14" (S-360A)	AASHTO M251
72	0042.21012	Ø 1" X 12" ANCHOR STUDS W/ 2 1/2" THREADED ENDS	A449 Gr. 1
144	0080.18901	Ø 1" HEAVY HEX NUTS	A563
72	0080.18905	Ø 1" HEX JAM NUTS	A325
72	0080.18911	Ø 1" FLAT WASHERS	F436
72	0080.06290	Ø 3/4" X 6" ROUND HEAD BOLT, NUT, FLAT WASHER, L.W.	A449, A563, ASME B18.21.1
32	0080.05045	Ø 5/8" X 1 3/4" HEX BOLT, & F.W.	A307
4	-	ALUMINUM DELINEATORS	SUPPLIED BY FRL

Vermont Agency of Transportation  
**RECEIVED**  
 ON: **May 9, 2014**  
 and Checked for  
**CONFORMANCE**  
 BY: Jennifer Fitch DATE: 05/27/2017A

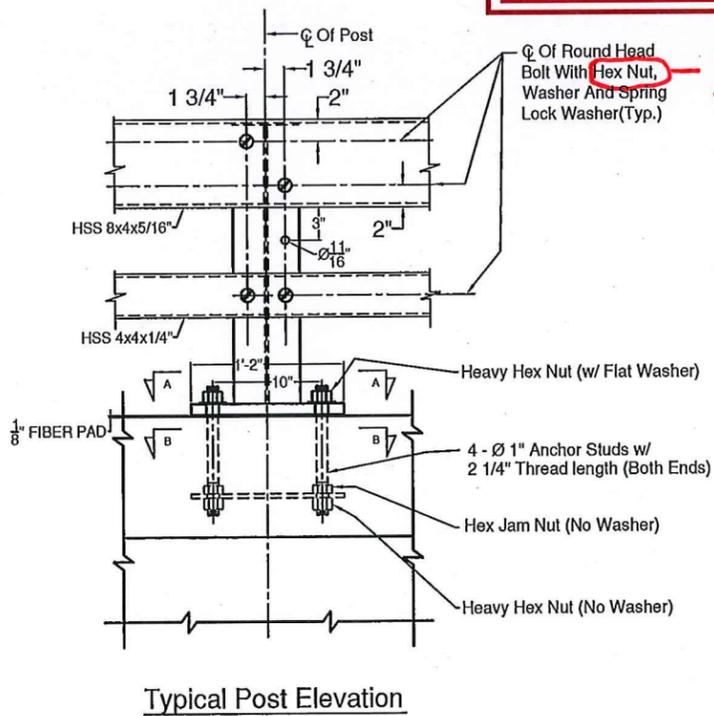
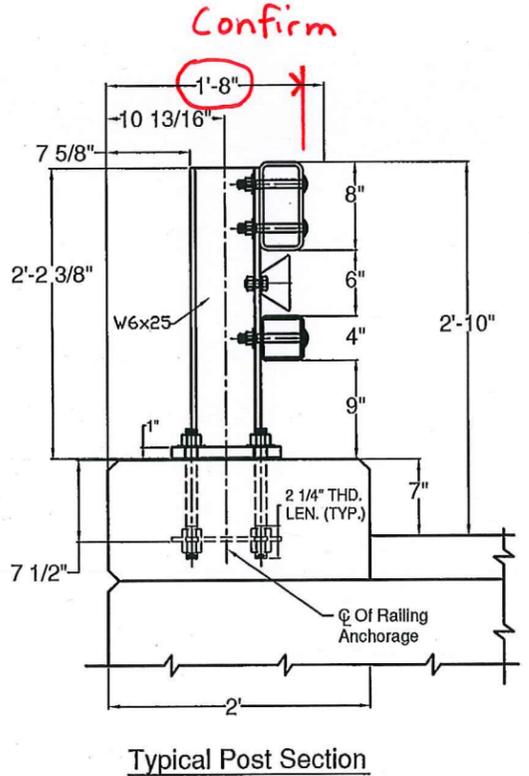
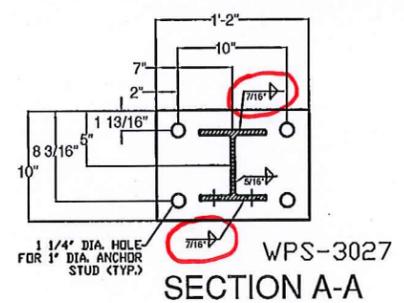
SHOP DRAWING REVIEW

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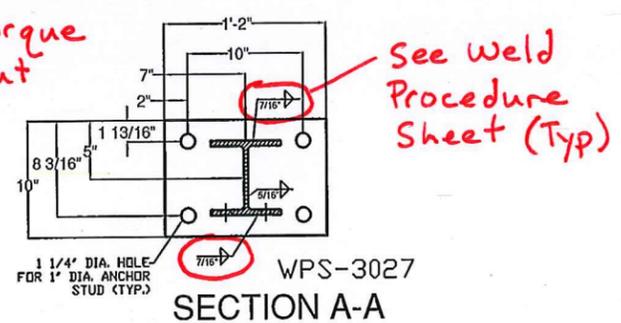
REJECTED  REVISE AND RESUBMIT  FURNISH AS CORRECTED

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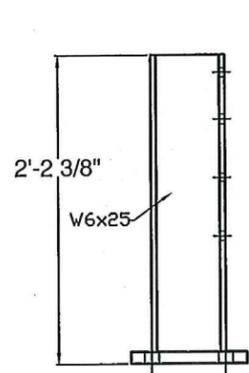
**VHB** Job Number: 57527.00  
 Reviewed By: B. Mason  
 Date: 5-23-14



*Prevailing Torque Type Lock Nut*



*See Weld Procedure Sheet (Typ)*



- NOTES
- ALL WORK AND MATERIALS SHALL CONFORM TO SECTION 525.
  - PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
  - ALL POSTS SHALL BE SET NORMAL TO GRADE.
  - SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO BRIDGE RAIL POSTS AND PREFERABLY TO AT LEAST FOUR POSTS.
  - RAIL TUBE EXPANSION JOINTS SHALL PROVIDED IN ANY RAIL BAY SPANNING THE END OF AN INTEGRAL ABUTMENT BRIDGE AND AT ALL SUPERSTRUCTURE EXPANSION JOINTS. EXPANSION JOINT WIDTH SHALL BE 4" AT 45°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
  - HOLES IN RAILS FOR RAIL TUBE ATTACHMENT WILL BE FIELD-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
  - RAIL POST 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 ASTM A 449 (TYPE I) ROUND HEAD BOLTS INSERTED THROUGH THE RACE OF THE TUBE. HOLES IN POSTS SHALL BE 1/16" LARGER THAN THE BOLT SIZE.
  - ANY BENDING OF RAIL SHALL BE DONE AT A FABRICATION PLANT ACCORDING TO A PROCEDURE PROVIDED BY THE FABRICATOR.
  - THE MINIMUM DISTANCE FROM THE POST TO AN EXPANSION JOINT SHALL BE DETERMINED BY THE MINIMUM EDGE DISTANCE OF 5" FROM ANY ANCHOR STUD TO THE END OF THE SLAB, OR TO THE EXPANSION JOINT RECESS POUR, IF ONE IS USED.
  - SEE STANDARD DRAWING G-I FOR DETAILS OF DELINEATORS. A DELINEATOR SHALL BE INSTALLED AT 30 FOOT SPACING OR THE NEAREST POST. 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.
  - THIS RAILING MEETS THE REQUIREMENTS FOR A TL-4 SERVICE LEVEL.

ITEM #: 525.33

APPROVED BY:

SHEET 1 OF 2

**BRIDGE RAIL DETAILS SHEET**

ROCHESTER, BR# 0162 (17) VT RTE 73 (MAJOR COLLECTOR), BRIDGE NO: 16, OVER CORPORATION BROOK TOWN OF ROCHESTER, COUNTY OF WINDSOR, VT

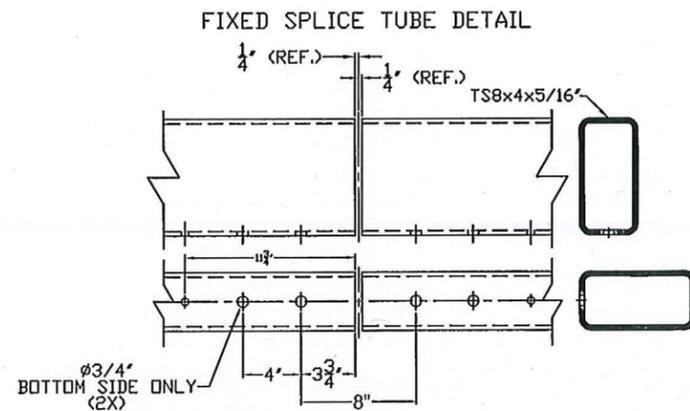
R NO.	DATE	DESCRIPTION	BY	R NO.	DATE	DESCRIPTION	BY

**ELDERLEE, INC.**  
 OAKS CORNERS, NEW YORK 14518  
 E-Mail: [dlong@elderlee.com](mailto:dlong@elderlee.com) / [epcek@elderlee.com](mailto:epcek@elderlee.com)  
 Tel: 315-789-6670 Fax: 315-789-6616

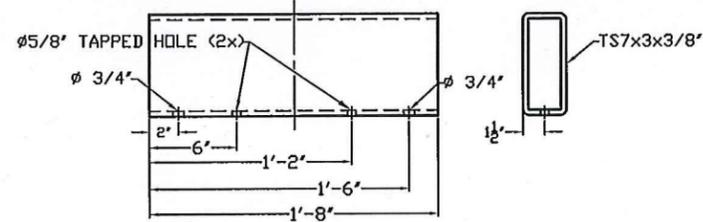
DRAWN  
 CHECKED  
 APPROVED  
 SCALE  
 SCHEMATIC

E.P. 5/6/14  
 D.L. 5/6/14

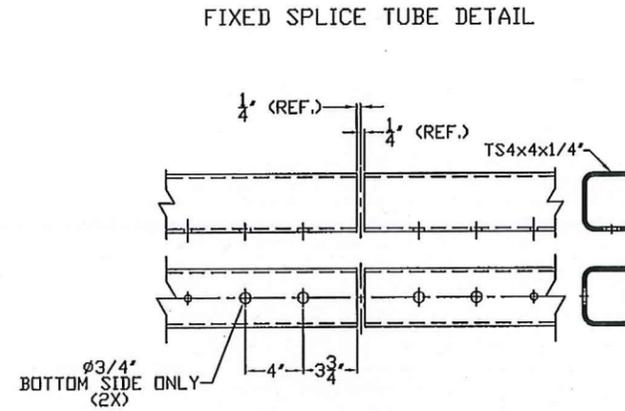
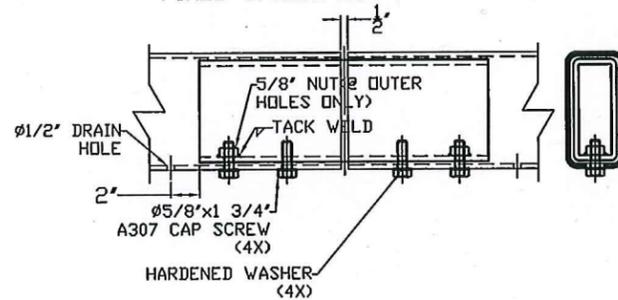
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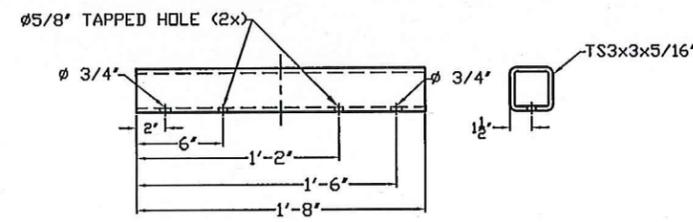
SPLICE FOR: TS8x4x5/16'



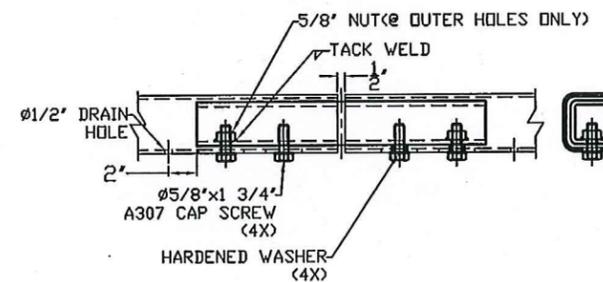
FIXED SPLICE ASS'Y



SPLICE FOR: TS4x4x1/4'



FIXED SPLICE ASS'Y



Vermont Agency of Transportation

**RECEIVED**

ON: **May 9, 2014**

and Checked for

**CONFORMANCE**

BY: Jennifer Fitch DATE: 05/27/20174

**SHOP DRAWING REVIEW**

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**VHB**

Job Number: 57527.00  
 Reviewed By: B. Moore  
 Date: 5-23-14

ITEM #: 525.33

SHEET 2 OF 2

APPROVED BY:

**BRIDGE RAIL DETAILS SHEET**

ROCHESTER, BR# 0162 (17) VT RTE 73 (MAJOR COLLECTOR), BRIDGE NO: 16, OVER CORPORATION BROOK TOWN OF ROCHESTER, COUNTY OF WINDSOR, VT

R NO.	DATE	DESCRIPTION	BY	R NO.	DATE	DESCRIPTION	BY

<input checked="" type="checkbox"/> DRAWN	E.P.	5/6/14
<input checked="" type="checkbox"/> CHECKED	D.L.	5/6/14
<input type="checkbox"/> APPROVED		
SCALE	SCHEMATIC	
DRAWING NO. FRL-ROCH-BR16		



**ELDERLEE, INC.**  
 OAKS CORNERS, NEW YORK 14518  
 E-Mail: [dlong@elderlee.com](mailto:dlong@elderlee.com) / [epeek@elderlee.com](mailto:epeek@elderlee.com)  
 Tel: 315-789-6670 Fax: 315-789-6615



**WELDING PROCEDURE SPECIFICATION**

PQR ELDERLEE#1

Material Specification	A572 GRD. 50 /A992-06a		
Welding Process	FCAW		
Manual or Machine	SEMAUTOMATIC		
Position of Welding	FLAT/HORIZONTAL		
Filler Metal Specification	A5.20		
Filler Metal Classification	E70 LINCOLN OUTERSHEILD		
Flux	N/A		
Shielding Gas	CO 2	Dew Point	-40DEG F Flow Rate 50 CFM
Single or Multiple Pass	SINGLE		(45 TO 63 CFM)
Single or Multiple Arc	N/A		
Welding Current	DC		
Polarity	DCEP		
Welding Progression	STRINGER		
Root Treatment	PER D1.5		
Preheat and Interpass Temperature	PER D1.5		
Postheat Temperature	NONE		
Heat Input	Min		Max

**WELDING PROCEDURE.**

Pass no.	Electrode size	Welding Current		Travel speed	Joint detail
		Amperes	Volts		
1	3/32	390	27	12	
Variable	LIMITS	351 TO 429	25 TO 29	11 TO 13	

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in Section 5.

Procedure No. 3027 Contractor Elderlee, Inc.  
 Revision No. \_\_\_\_\_ Authorized By RANDY SCOTT  
 Date 4/4/2014

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**VHB** Job Number: 57527.00  
 Reviewed By: B. Massey  
 Date: 5-23-14

Vermont Agency of Transportation  
**RECEIVED**  
 ON: **May 9, 2014**  
 and Checked for  
**CONFORMANCE**  
 BY: Jennifer Fitch DATE: 05/27/2014