



**GENERAL NOTES:**

- 1) ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 525 OF THE STANDARD SPECIFICATIONS.
- 2) BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
- 3) PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.
- 4) BOX BEAM TUBE AND STEEL POST MATERIALS, DIMENSION SIZES AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED.
- 5) ANY BENDING OF RAIL SHALL BE DONE AT THE FABRICATION PLANT. RADI GREATER THAN 21' TO BE CURVED ON A TUBE BENDING MACHINE, RADI EQUAL OR LESS THAN 21' TO BE "PIE CUT" AND WELDED. CURVED RAILING WILL HAVE AN 18" LENGTH ON EACH END STRAIGHT TO ACCOMADATE SPLICES. "PIE CUTS ARE LOCATED SO AS TO NOT CONFLICT WITH POST FASTENING HOLES. "PIE CUTS WILL BE WELDED ACCORDING TO PROCEDURE WPS-3026.

ITEM #	QTY	COMPONENT #	DESCRIPTION	MATERIAL (ASTM)
1-4	1	0013.57021	S3 X 5.7 POST, PUNCH #7 W/SPD @ 63" LG	ASTM A572 Gr. 50
1-4	2	0013.57025	S3 X 5.7 POST, PUNCH #7, & 20" W/SPD @ 63" LG	ASTM A572 Gr. 50
1-4	3	0013.57060	S3 X 5.7 END POST W/SPD @ 3'-8" LG	ASTM A572 Gr. 50
1-4	4	0013.09201	S3 X 5.7 POST, PUNCH #7 W/SPD @ 5/8" HOLES	ASTM A572 Gr. 50
1-4	5	0013.57019	S3 X 5.7 POST, PUNCH #7 & 20" W/SPD SPADE #7	ASTM A572 Gr. 50
1	6	0033.80403	3 X 5" BTM TRANS RAIL W/5"-0" KB, EXP END @ 15"	A500 Gr. B
2	6-2	1	3 X 5" BTM TRANS RAIL W/5"-0" KB, EXP END @ 20"	A500 Gr. B
3 & 4	6-3	1	3 X 5" BTM TRANS RAIL W/5"-0" KB, FIX END @ 15"	A500 Gr. B
1 & 4	7	0033.00640	HSS 5X5 TUBE SPLICE @ 27" LG W/ 1/4" SHIMS	A500 Gr. B / A572 Gr. 50
2 & 3	7-2	0033.00644	HSS 5X5 TUBE SPLICE @ 27" LG W/ 1/4" SHIMS W/ 4" BEND	A500 Gr. B / A572 Gr. 50
1	8	0033.00734	HSS 5X5 EXP TUBE SPLICE @ 36" LG W/ 1/4" SHIMS	A500 Gr. B / A572 Gr. 50
2	8-2	0033.00734	HSS 5X5 EXP TUBE SPLICE @ 36" LG W/ 1/4" SHIMS W/ 4" BEND	A500 Gr. B / A572 Gr. 50
3 & 4	8-3	0033.00640	HSS 5X5 FIX. TUBE SPLICE @ 27" LG	A500 Gr. B / A572 Gr. 50
1	9	0033.00930	BR EXP BAR SPLICE @ 2'-1/8" X 4'-1/4" @ 36" LG	ASTM A36
2	9-2	0033.00934	BR EXP BAR SPLICE @ 2'-1/8" X 4'-1/4" @ 36" LG W/ 4" BEND	ASTM A36
3 & 4	9-3	0033.00840	BR FIX. BAR SPLICE @ 2'-1/8" X 4'-1/4" @ 27" LG	ASTM A36
1-4	10	0054.00050	REG BB SHELF ANGLES @ 4'-1/2"	ASTM A36
1 & 4	12	0054.00074	HSS 5 X 5 X 5/16" DBL BEND TUBE SPL @ 27" LG, 'A'=26"	A500 Gr. B / A572 Gr. 50
2 & 3	12-2	1	HSS 5 X 5 X 5/16" DBL BEND TUBE SPL @ 27" LG, 'A'=42"	A500 Gr. B / A572 Gr. 50
1-4	13	0054.00563	6 X 6 X 1/4" TRANS. TUBE B/D @ 6" LG	A500 Gr. B
1-4	14	0054.00565	6 X 6 X 1/4" TRANS. TUBE B/D @ 3" LG	A500 Gr. B
1 & 4	15	0054.09000	6 X 6 X 3/16" BB @ 9'-0" KICKBACK, W/ CAP. & 13" MITER	A500 Gr. B / A36
2 & 3	15-2	1	6 X 6 X 3/16" BB @ 9'-0" KICKBACK, W/ CAP. & 20" MITER	A500 Gr. B / A36
1 & 4	16	0054.18000	6 X 6 X 3/16" BB @ 18'-0" THIS PAY ITEM, DRILL 3" CC	A500 Gr. B
2	16-2	1	6 X 6 X 3/16" BB @ 18'-0" THIS PAY ITEM, 20" RAD.	A500 Gr. B
3	16-3	1	6 X 6 X 3/16" BB @ 18'-0" THIS PAY ITEM, 18" RAD.	A500 Gr. B
1	17	0054.90092	6 X 6 X 3/16" BB TOP TRANS @ 20'-9 5/8" LG W/EXP END	A500 Gr. B
2	17-2	1	6 X 6 X 3/16" BB TOP TRANS @ 20'-9 5/8" LG W/EXP END, 20" RAD.	A500 Gr. B
3	17-3	1	6 X 6 X 3/16" BB TOP TRANS @ 20'-9 5/8", FIX. END, PART. 18" RAD.	A500 Gr. B
4	17-4	1	6 X 6 X 3/16" BB TOP TRANS @ 20'-9 5/8" LG W/FIX. END	A500 Gr. B
1	18	0054.90093	6 X 6 X 3/16" BB BTM TRANS @ 21'-4 5/8" LG W/EXP END	A500 Gr. B
2	18-2	1	6 X 6 X 3/16" BB BTM TRANS @ 21'-4 5/8" LG W/EXP END, 20" RAD.	A500 Gr. B
3	18-3	1	6 X 6 X 3/16" BB BTM TRANS @ 21'-4 5/8", FIX. END, PART. 18" RAD.	A500 Gr. B
4	18-4	1	6 X 6 X 3/16" BB BTM TRANS @ 21'-4 5/8" LG W/FIX. END	A500 Gr. B
1-4	19	0080.03355	3/8" X 7 1/2" BOLT, NUT, & 2 FW	A307, A563 DH, F436
1-4	20	0080.04100	1/2" X 1-1/2" BOLT, NUT, & FW	A307, A563 DH, F436
1-4	21	0080.04120	1/2" X 1-1/2" BOLT, NUT, 2 FW & LW	A307, A563 DH, F436
1-4	22	0080.06255	3/4" X 4-1/2" BOLT, NUT, 2 FW	A325, A563 DH, F436
1-4	23	0080.06340	3/4" X 7-1/2" BOLT, NUT, 2 FW	A325, A563 DH, F436
1-4	24	0080.06370	3/4" X 8" CORR BOLT, NUT, FW & LW	A307, A563 DH, F436
1-4	25	0080.06400	3/4" X 8" BOLT, NUT, 2 FW, & LW	A325, A563 DH, F436

ITEM #	FUNCTION
19	BOLT RAIL TO SHELF ANGLE (ITEM #10)
20	BOLT SHELF ANGLE (ITEM #'S 10 & 11) TO POST
21	BOLT BLOCK-OUTS (ITEM #'S 13 & 14) TO HEAVY POST
22	(4) PER SPLICE BAR (ITEM #9)
23	(4) PER SPLICE TUBING (ITEM #'S 7 & 8)
24	BOLT RAIL (ITEMS #'S 6,17, & 18 TO BLOCK-OUTS (ITEM #'S 13 & 14) [WHERE FASTENED]
25	BOLT DOUBLE BEND SPLICE TUBE (ITEM #12) TO RAIL (ITEM #18) & KICKBACK (ITEM #15)

Vermont Agency of Transportation  
**RECEIVED**  
 CK'D BY FDB OK'D BY CB  
 July 9, 2015  
 RESUBMIT No Approved  
 BY Carolyn Carlson DATE 07/13/15

ITEM #: 621.725  
 STRUCTURAL STEEL TO COMPLY W/ ASTM A6  
 TOLERANCE UNLESS OTHERWISE NOTED:  
 FRACTIONS = ± 1/16"  
 ANGLES = ± 1/2"  
 DIAMETERS = ± 1/32"

**GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET**  
 ROUTE VT 15 (MINOR ARTERIAL), BRIDGE # 83  
 TOWN OF WALDEN, COUNTY OF CALEDONIA, VT.

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

ELDERLEE, INC.  
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DRAWN E.P. 2/20/15  
 CHECKED D.L.  
 APPROVED  
 SCALE SCHEMATIC  
 DRAWING NO. P.R. LAFAYETTE-WALDEN