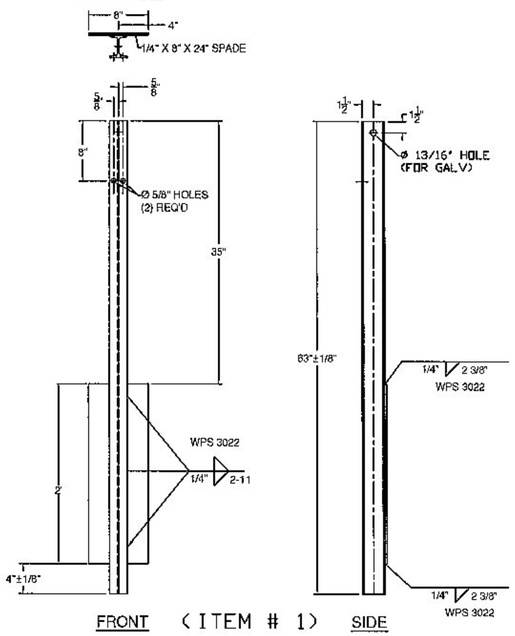
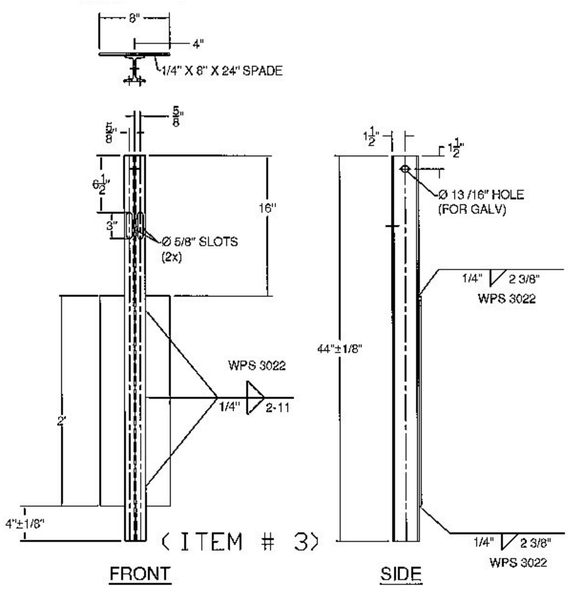
PLAN VIEW



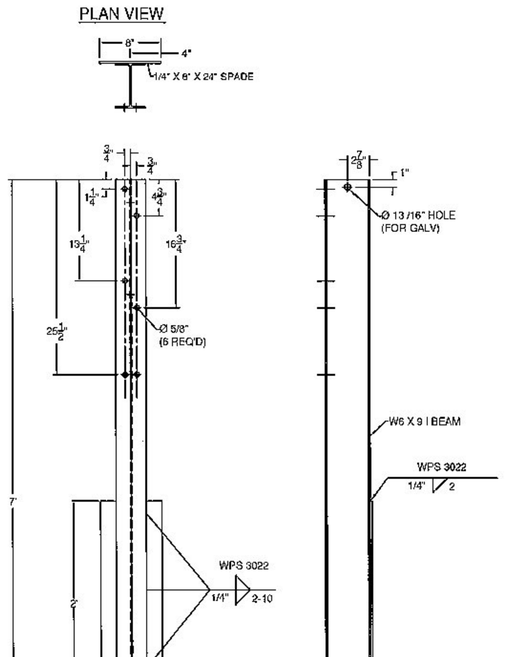
FRONT (ITEM # 1) SIDE

PLAN VIEW



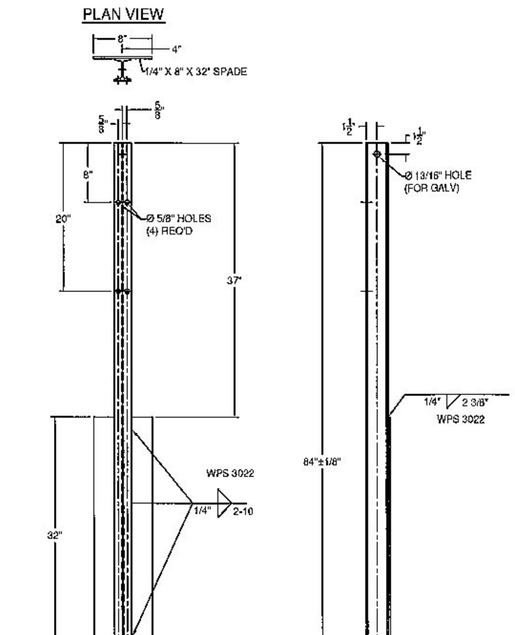
FRONT (ITEM # 3) SIDE

PLAN VIEW



FRONT (ITEM # 4) SIDE

PLAN VIEW

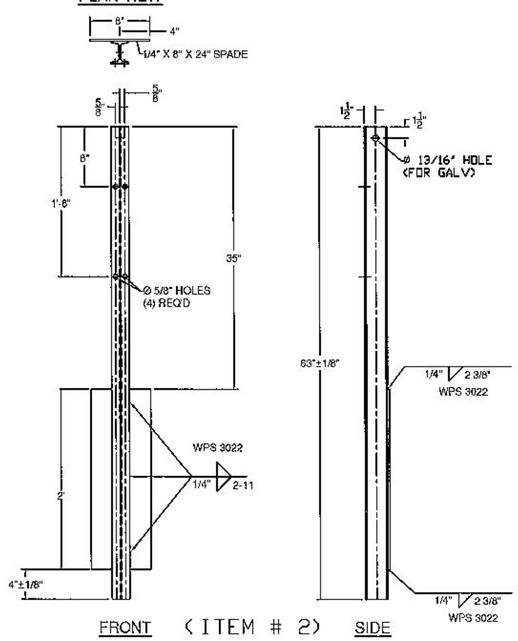


FRONT (ITEM # 5) SIDE

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. RADII GREATER THAN 16' TO BE CURVED ON A TUBE BENDING MACHINE, RADII LESS THAN 16' 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.

PLAN VIEW



FRONT (ITEM # 2) SIDE

BILL OF MATERIALS (EACH CORNER)

ITEM #	QTY.	COMPONENT #	DESCRIPTION	MATERIAL (ASTM)
1	3	0013.57021	3' I-POST, PUNCH 8' W/SPD @ 63' LG	ASTM A572 Gr. 50
2	3	0013.57025	3' I-POST, PUNCH 8', & 20' W/SPD @ 63' LG	ASTM A572 Gr. 50
3	2	0013.57060	3' I-END POST W/SPD @ 3'-8' LG	ASTM A572 Gr. 50
4	4	0013.09001	W6X9 POST @ 7' W/SPD & 5/8' HOLES	ASTM A572 Gr. 50
5	4	0013.57010	3' I-POST, PUNCH 8' & 20', W/8X32' SPADE @7'	ASTM A572 Gr. 50
6	1	0033.80403	3X5' BTM TRANS RAIL W/5'-0" KB, EXP END	A500 Gr. B
7	1	0033.00640	HSS 5X5 TUBE SPLICE @27' LG W/ 1/4' SHIMS	A500 Gr. B / A572 Gr 50
8	2	0033.00730	HSS 5x5 EXP TUBE SPLICE @ 36' LG W/ 1/4' SHIMS	A500 Gr. B / A572 Gr 50
9	1	0033.00930	BR EXP BAR SPLICE 2-1/8' X 4-1/4' @ 36' LG	ASTM A572 Gr. 50
10	19	0054.00050	REG BB SHELF ANGLES @ 4-1/2'	ASTM A36
12	1	0054.00074	HSS 5X5 DBL BEND TUBE SPL @ 27' LG,	A500 Gr. B / A572 Gr 50
13	8	0054.00563	6X8' TRANS. TUBE B/O @ 6' LG	A500 Gr. B
14	3	0054.00565	6X8' TRANS. TUBE B/O @ 3' LG	A500 Gr. B
15	1	0054.09000	6X6' BB @ 9'-0' KICKBACK, W/ CAP, & 13° MITER	A500 Gr. B / A36
*16	0.5	0054.18000	6X6' BB @ 14'-11 1/2', DRILL 3' CC	A500 Gr. B
*17	1	0054.90092	6X6' BB TOP TRANS @ 20'-9 5/8' LG W/EXP END	A500 Gr. B
*18	1	0054.90093	6X6' BB BTM TRANS @ 21'-4 5/8' LG W/EXP END	A500 Gr. B
19	18	0080.03355	3/8' X 7 1/2' BOLT, NUT, & 2 FW	A307, A563, F436
20	19	0080.04100	1/2' x 1-1/2' BOLT, NUT, & FW	A307, A563, F436
21	22	0080.04120	1/2' x 1-1/2' BOLT, NUT, 2 FW & LW	A307, A563, F436
22	4	0080.06255	3/4' X 4-1/2' BOLT, NUT, 2 FW	A325, A563, F436
23	12	0080.06340	3/4' X 7-1/2' BOLT, NUT, 2 FW	A325, A563, F436
24	6	0080.06370	3/4' X 8' CARR BOLT, NUT, FW & LW	A307, A563, F436
25	2	0080.06400	3/4' X 8' BOLT, NUT, 2 FW, & LW	A325, A563, F436

* WW3 - ITEMS 16, 17, & 18 - FACE OF RAIL TO HAVE 110° CONCAVE RADIUS
* WW4 - ITEMS 16, 17, & 18 - FACE OF RAIL TO HAVE 50° CONVEX RADIUS

HARDWARE NOTES

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
ON: January 22, 2015
and Checked for
CONFORMANCE
BY: T. A. Sumner DATE: 01/28/15

ITEM #: 621.725

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

TOLERANCE UNLESS OTHERWISE NOTED:
FRACTIONS = ± 1/16"
ANGLES = ± 1/2°
DIAMETERS = ± 1/32"

SHEET 2 OF 5

GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHEET

TOWN HIGHWAY 65 (PALMER ROAD), CLASS 3 LOCAL ROAD - BRIDGE # 35
PROJECT: BRO 1444(57), TOWN OF RANDOLPH, COUNTY OF ORANGE, VT.

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

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

CERTIFIED FABRICATOR

DRAWN	E.P.	12/12/14
CHECKED	D.L.	12/15/14
APPROVED		
SCALE	SCHEMATIC	
DRAWING NO.	F.R.L.-RANDOLPH-T	