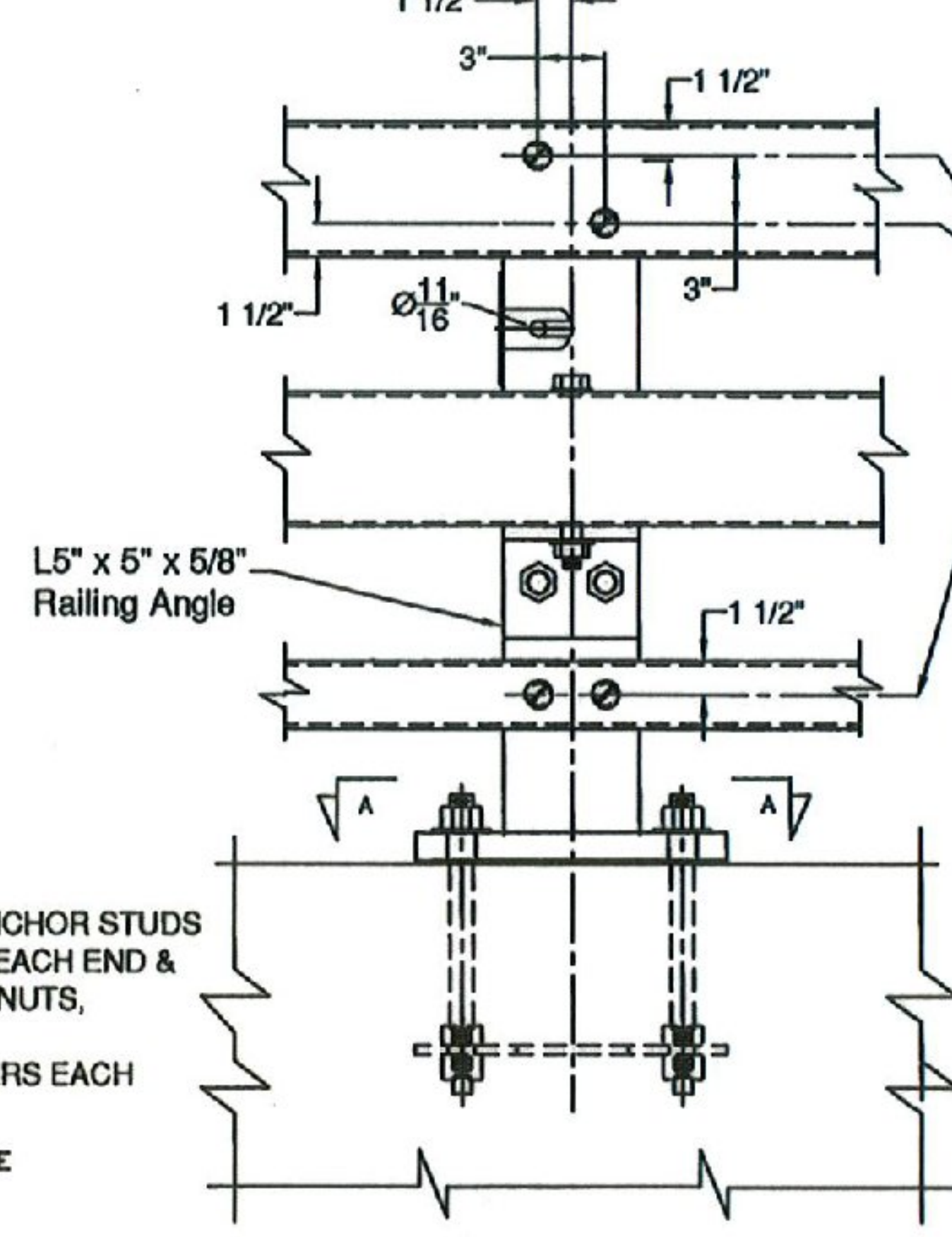
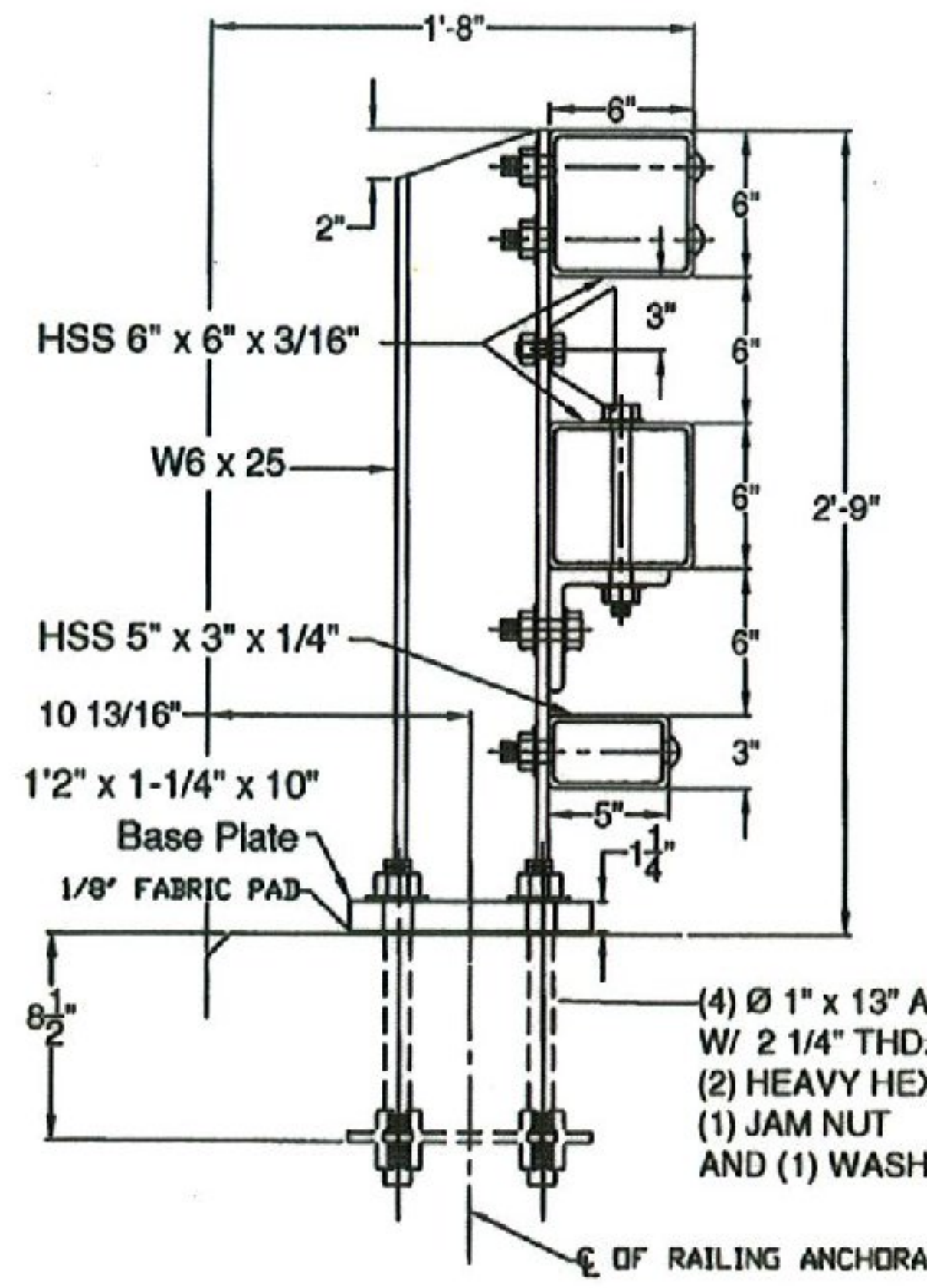
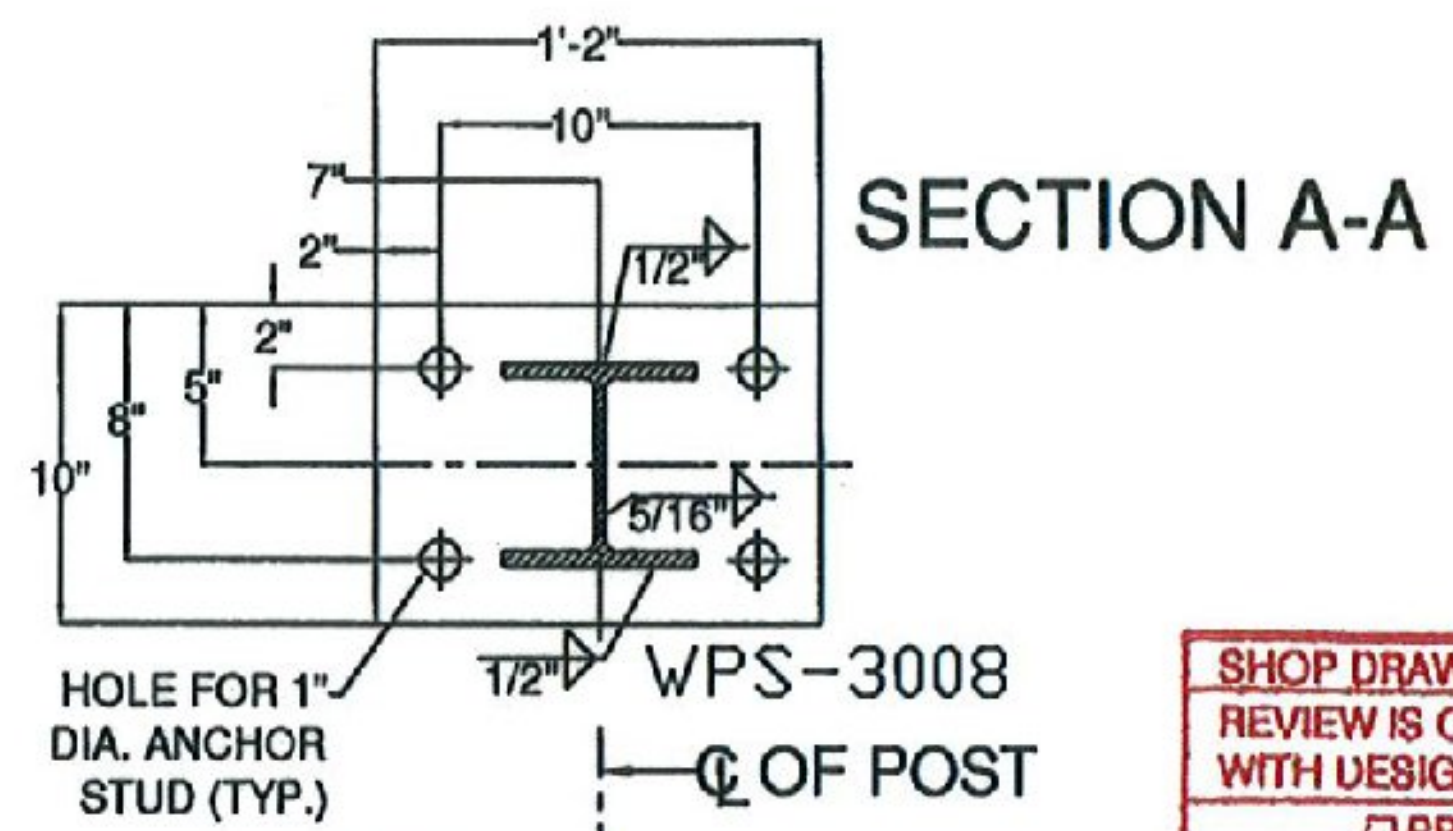
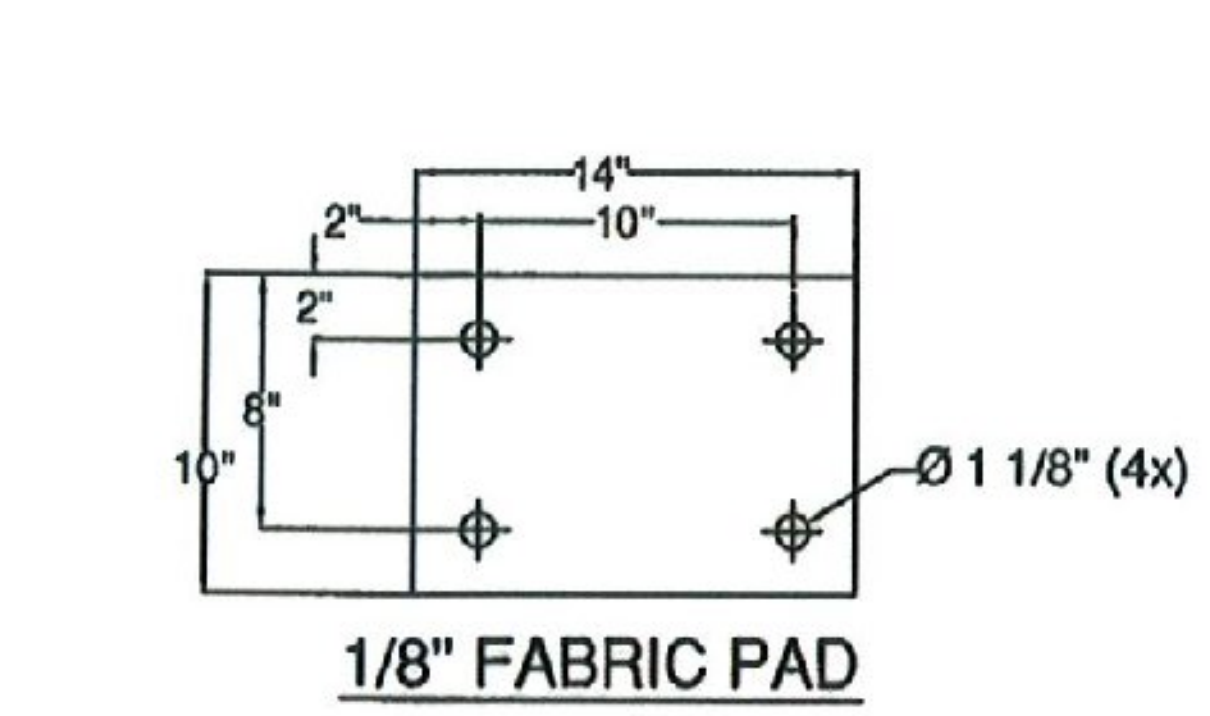
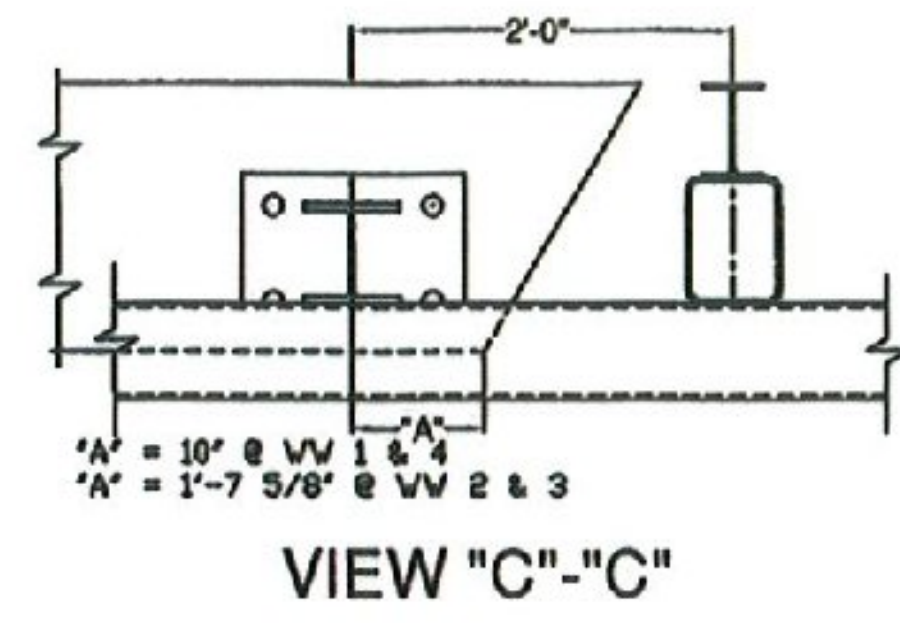
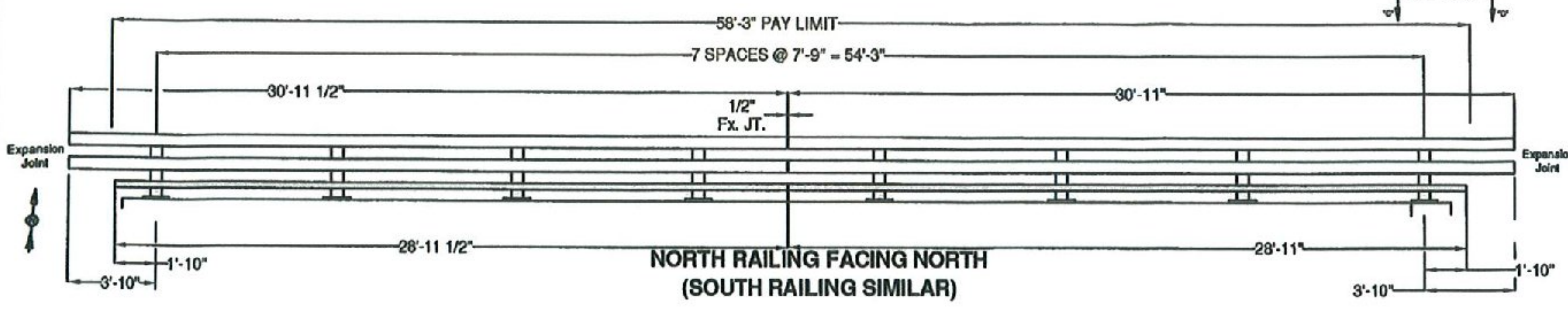


RECEIVED
 ON: January 22, 2015
 and Checked for
CONFORMANCE
 BY: T. A. Sumner DATE: 01/28/15



ITEM #	QTY	PART #	DESCRIPTION	ASTM DESIGNATION
1	16	0033.03610	W6x25, THREE RAIL POST @ 2'-9" ON 1 1/4"x10x1'-2" B.P.	A572 Gr. 50
2	2	0033.91321	HSS 3" X 5" X 1/4" RAIL @ 28'-11 1/2"	A500 Gr. B
3	2	0033.91322	HSS 3" X 5" X 1/4" RAIL @ 28'-11"	A500 Gr. B
5	4	0033.91323	HSS 6" X 6" X 3/16" RAIL @ 30'-11 1/2"	A500 Gr. B
6	4	0033.91324	HSS 6" X 6" X 3/16" RAIL @ 30'-11"	A500 Gr. B
8	2	0033.00840	2-1/8" X 4-1/4" FIX. SPLICE BAR @ 2'-3"	A572 Gr. 50
9	4	0033.00640	HSS 5" X 5" X 5/16" FIX. SPLICE TUBE @ 2'-3"	A500 Gr. B, A572 Gr. 50
10	16	0033.00220	3/8" X 10" X 14" ANCHOR PLATES	A572 Gr. 50
11	16	0033.90050	1/8" X 10" X 14" FABRIC PAD	AASHTO M251
12	66	0042.21013	1" X 13" ANCHOR STUDS, W/ 2 1/4" THD. EACH END	A449
13	130	0080.89901	1" HEAVY HEX NUTS	A563
14	64	0080.89911	1" FLAT WASHERS	F436
15	64	0080.89905	1" HEX JAM NUTS	A563
16	64	0080.7500	7/8" X 8" ROUND HEAD BOLT, NUT, SQ. WASHER, L.W.	A449, A563, F436, ASME D18.2
17	16	0080.6400	3/4" X 8" HEX BOLT, NUT, (2) F.W., & L.W.	A325, A563, F436, & ASME D18.2
18	32	0080.6140	3/4" X 2-3/4" HEX BOLT, NUT, (2) F.W., & L.W.	A325, A563, F436, & ASME D18.2
19	16	0080.6340	3/4" X 7-1/2" HEX BOLT, NUT, & (2) F.W.	A325, A563, & F436
20	8	0080.6255	3/4" X 4-1/2" HEX BOLT, NUT, & (2) F.W.	A325, A563, & F436
21	16	0033.90500	L5" X 5" X 5/8" RAILING ANGLE @ 6°	A572 Gr. 50
22	6		DELINEATORS - NOT SHOWN	(SUPPLIED BY CUSTOMER)

SHOP DRAWING REVIEW
 REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT

PROVIDE AS SUBMITTED
 PROVIDE AS CORRECTED
 REVISE AND RESUBMIT
 REJECTED - SEE REMARKS
 SUBMITTAL NOT REQUIRED - RETURNED WITHOUT REVIEW

THIS REVIEW IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE CONTRACT DOCUMENTS. ANY ACTION, CORRECTIONS OR COMMENTS SHOWN AND/OR NOTED ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ACCURACY AND COMPLETENESS OF DETAILS, SUCH AS DIMENSIONS AND QUANTITIES; SUBSTANTIATING INSTRUCTIONS FOR INSTALLATION OR PERFORMANCE OF EQUIPMENT OR SYSTEMS; THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION, INCLUDING SAFETY PRECAUTIONS AND PROCEDURES; AND THE SELECTION OF FABRICATION PROCESSES. ENGINEER'S APPROVAL OF A SPECIFIC ITEM SHALL NOT INDICATE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. FURTHER, ENGINEER'S REVIEW OF CONTRACTOR'S SUBMITTALS SHALL NOT RELIEVE THE CONTRACTOR OF ITS OBLIGATIONS UNDER THE CONTRACT DOCUMENTS WITH RESPECT TO THE PREPARATION AND/OR APPROVAL OF SUCH SUBMITTALS

CLD CONSULTING ENGINEERS, INC.
 540 COMMERCIAL ST.
 MANCHESTER, NEW HAMPSHIRE 03101

DATE: 1/23/15

GENERAL NOTES:

- 1) ALL RAILING IS TO BE FABRICATED AND ERECTED ACCORDING TO SECTION 525 OF THE STANDARD SPECIFICATIONS.
- 2) PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
- 3) ALL POST SHALL BE SET NORMAL TO GRADE. THE MAXIMUM CENTER TO CENTER SPACING OF BRIDGE RAIL POST IS 8' 3".
- 4) SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO BRIDGE POSTS AND PREFERABLY TO AT LEAST 4 POSTS.
- 5) RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING THE END OF AN INTEGRAL ABUTMENT BRIDGE AND AT ALL SUPER STRUCTURE EXPANSION JOINTS. EXPANSION JOINT WIDTH SHALL BE 4" @ 68°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
- 6) STD. SPLICE HOLES ONLY IN BRIDGE RAIL TUBES. REST TO BE DRILLED BY CUSTOMER. FIELD DRILLED HOLES TO BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
- 7) BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
- 8) SEE STANDARD DRAWING G-1 FOR DETAILS OF DELINEATORS. A DELINEATOR SHALL BE INSTALLED AT 90 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 FOR DELINEATORS SHALL BE INCIDENTAL TO OTHER ITEMS.
- 9) ANY BENDING OF RAIL SHALL BE DONE AT THE FABRICATION PLANT ACCORDING TO A PROCEDURE PROVIDED BY THE FABRICATOR.
- 10) 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 THE EXPANSION JOINT RECESS POUR, IF ONE IS USED.
- 11) PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE BOX BEAM RAILS, SPLICE TUBES AND FILL PLATES.
- 12) THIS RAILING MEETS THE REQUIREMENTS FOR A TL-4 SERVICE LEVEL.

ITEM #: 525.335
 STRUCTURAL STEEL TO COMPLY W/ ASTM A6

BRIDGE RAIL DETAILS SHEET

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

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

R. NO.	DATE	DESCRIPTION	BY	R. NO.	DATE	DESCRIPTION	BY
E 1	1/14/15	REVISED PER 1/13/15 MARK-UP	E.P.				

ELDERLEE, INC.
 OAKS CORNERS, NEW YORK 14618
 E-Mail: dlong@elderlee.com, epeak@elderlee.com
 Tel: 315-789-8670 Fax: 315-789-8616

DRAWN: E.P. 12/10/14
 CHECKED: D.L. 12/11/14
 APPROVED: [Signature]
 SCALE: SCHEMATIC
 DRAWING NO. F.R. LAFAYETTE-RANDOLPH

SECTION
 ELEVATION
 STEEL BRIDGE RAILING