

APPROVED: Approval of drawings and/or procedures indicates concurrence with the information presented and does not relieve the Contractor or Fabricator of compliance with all specifications and code requirements

APPROVED AS NOTED

REVISE AND RESUBMIT

NOT REVIEWED

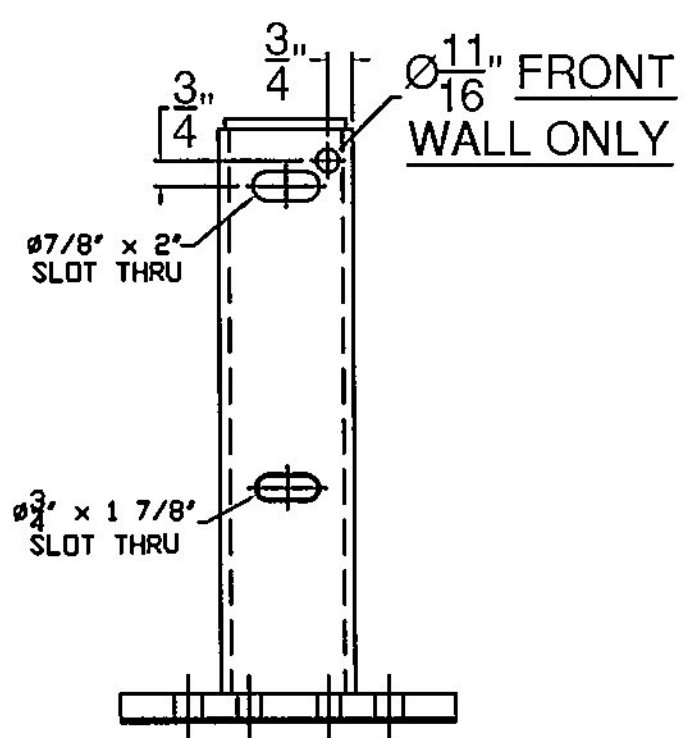
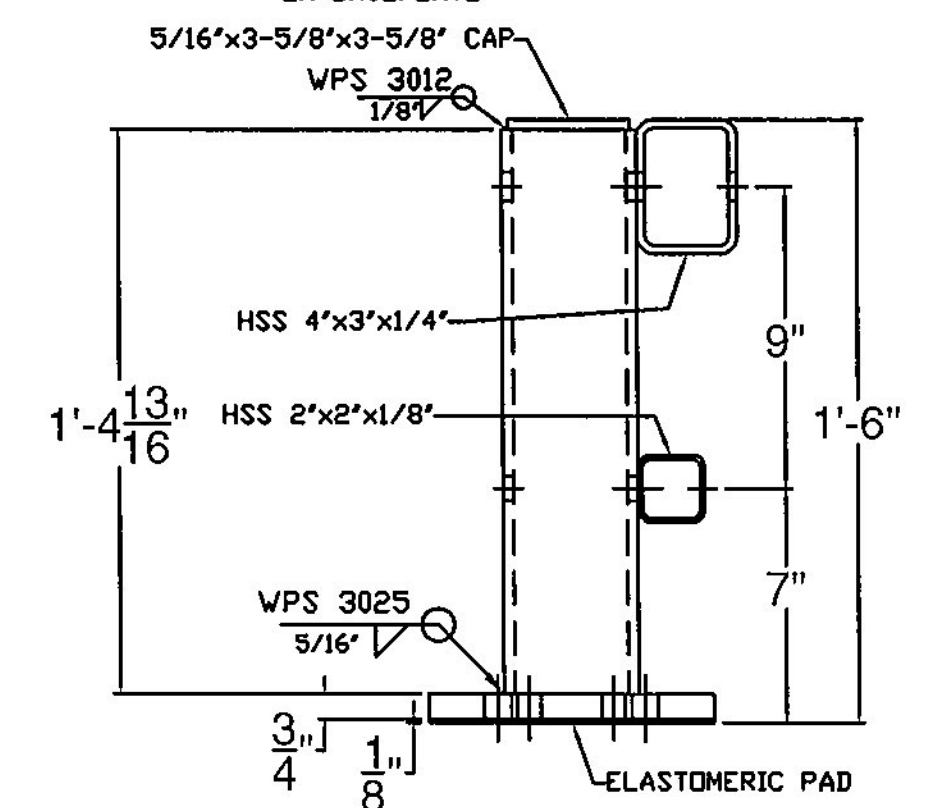
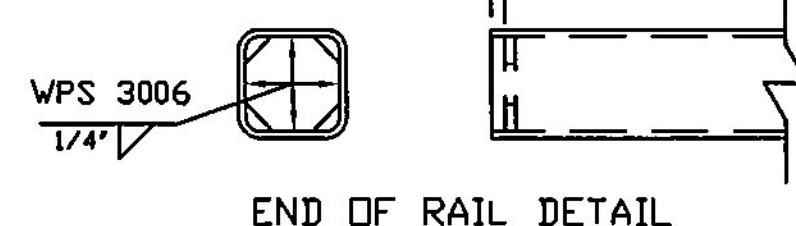
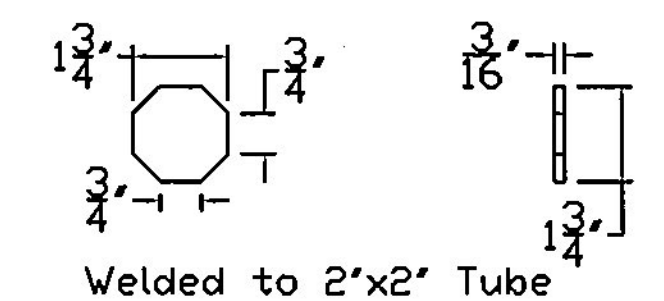
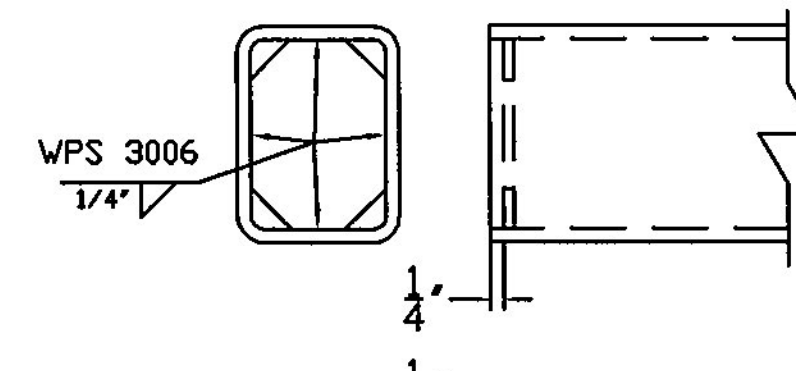
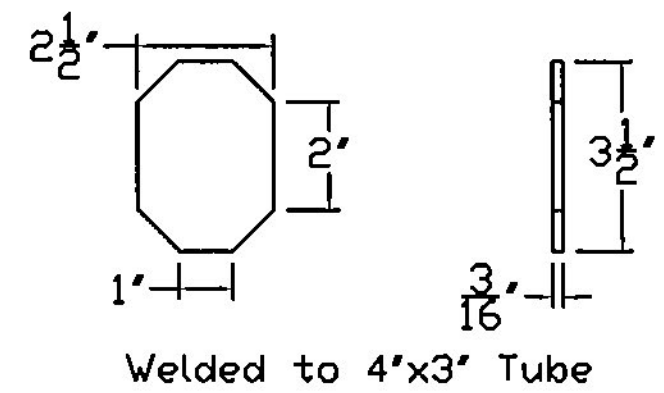
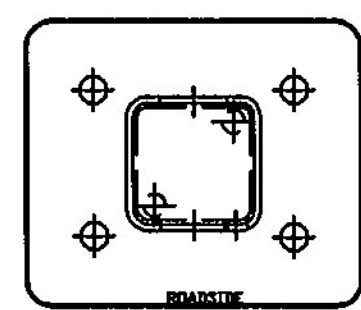
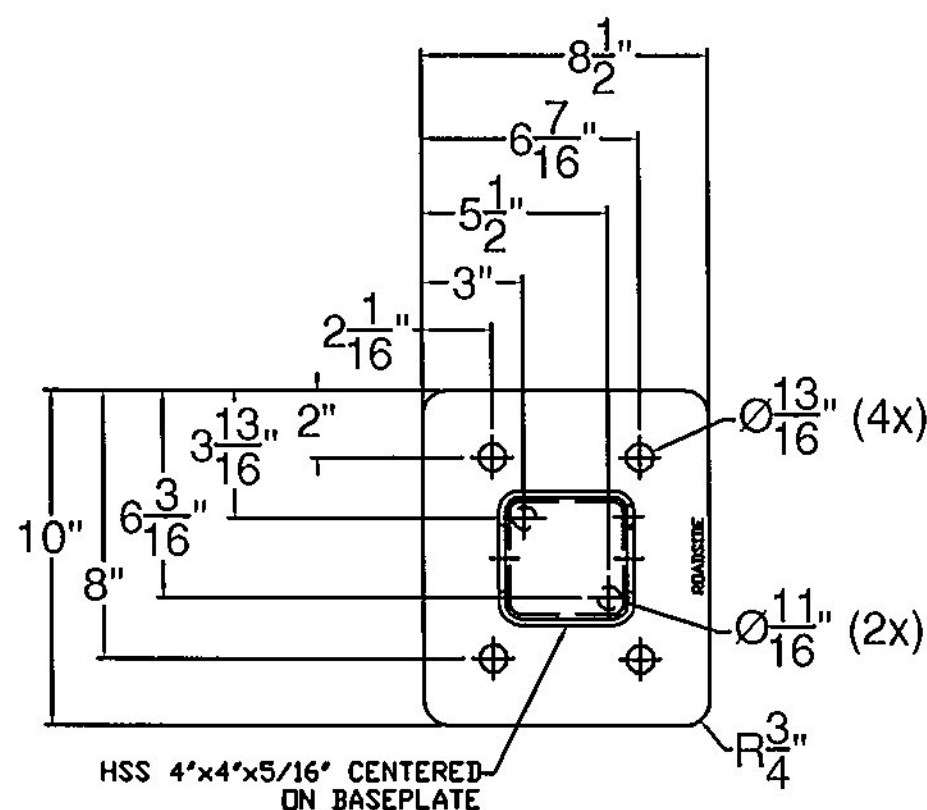
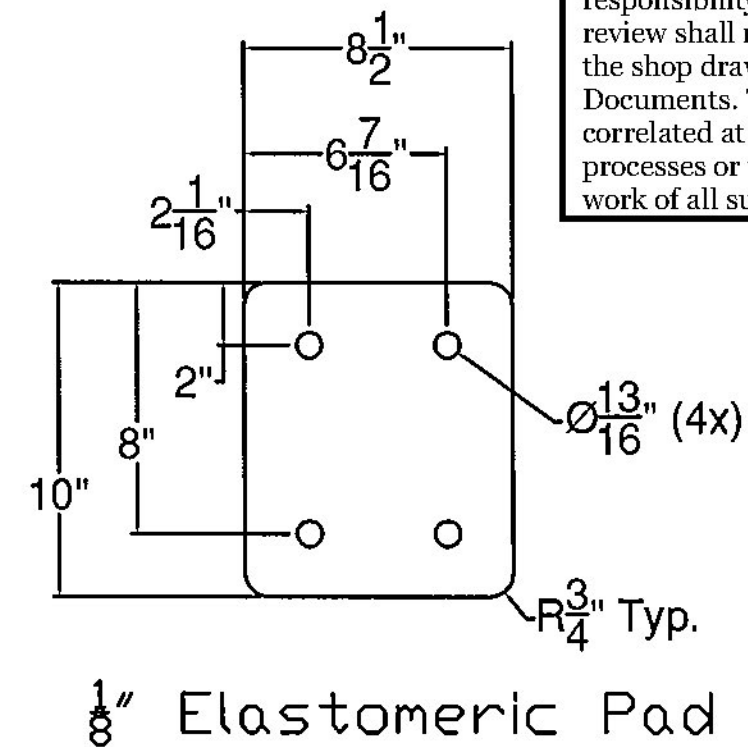
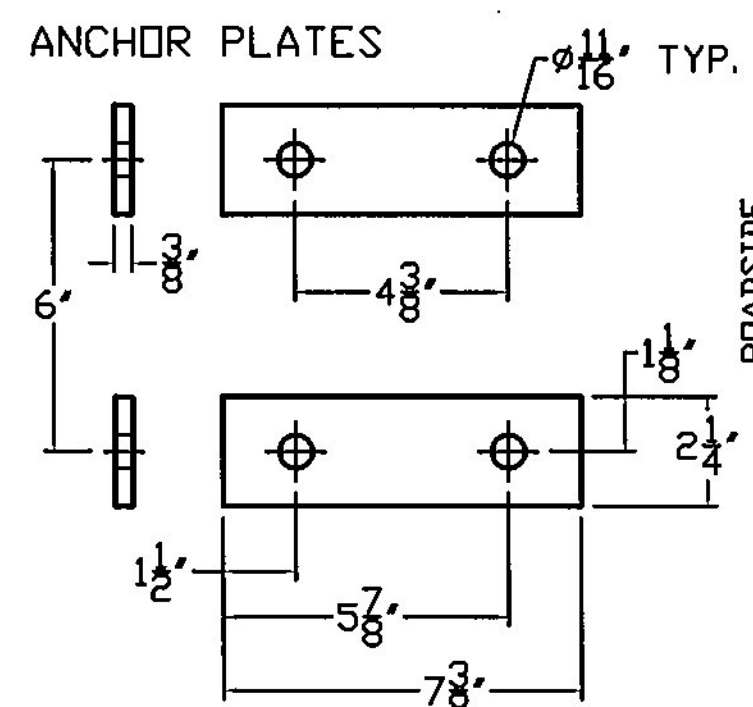
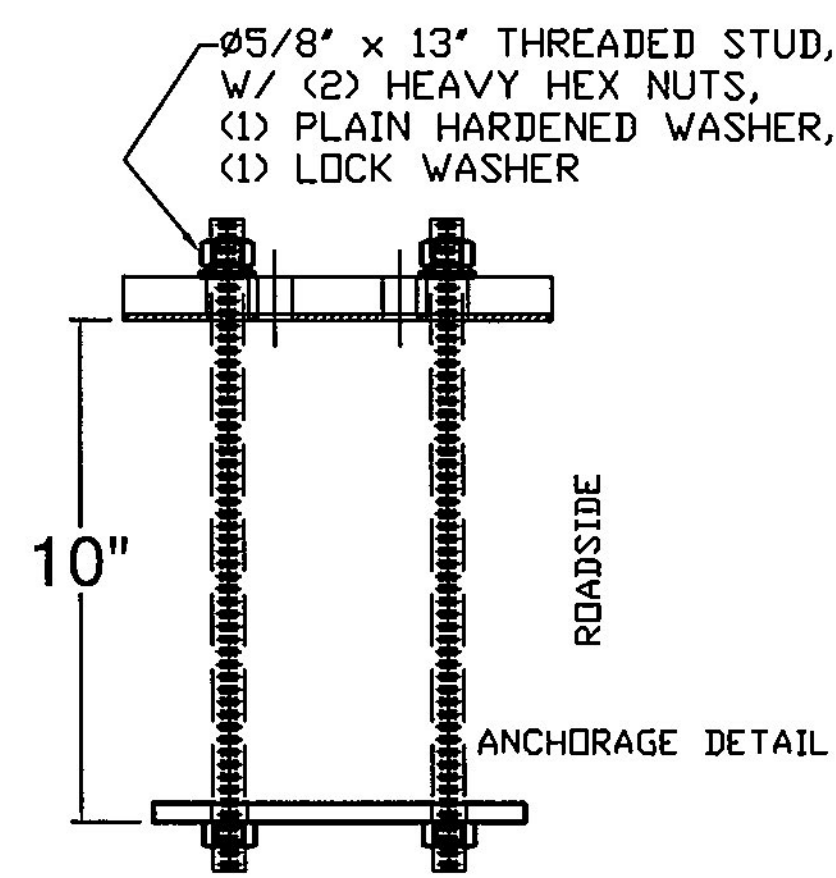
Date: 2/13/15

By: George Bogue

This review by Stantec Consulting Services Inc. is for the sole purpose of ascertaining conformance with the general design concept. This review shall not mean that Stantec Consulting Services Inc. approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor. Submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawing or of his responsibility for meeting all requirements of the Contract Documents. The contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to the fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.

**Stantec**

COATED BLACK - ASTM D7803



- 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 POSTS AND PREFERABLY TO AT LEAST 4 POSTS.
  - HOLES IN RAILS FOR TUBE ATTACHMENT, WILL BE SHOP-DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
  - BOLTS SHALL BE TORQUED SNUG TIGHT (APPROXIMATELY 100 FT-LB).
  - RAIL TUBES SHALL BE ATTACHED USING FULL DIAMETER BODY ASTM A449 (TYPE I) ROUND HEAD BOLTS INSERTED THROUGH THE FACE OF THE TUBE.
  - SEE STANDARD DRAWING G-1 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 FOR DELINEATORS SHALL BE INCIDENTAL TO OTHER ITEMS.
  - AESTHETIC TREATMENT TYPE SHALL BE APPLIED AS SPECIFIED IN THE CONTRACT PLANS. IF NONE IS SPECIFIED IT SHALL NOT BE USED. AESTHETIC TREATMENT DETAILED ON THIS SHEET MAY ALSO BE APPLIED ON THE FASCIA SIDE OF THE RAIL, IF SPECIFIED IN THE CONTRACT PLANS.
  - BRIDGE RAILING SHALL HAVE A RUBBED FINISH IN ACCORDANCE WITH SECTION 501.
  - THIS RAILING MEETS THE REQUIREMENTS FOR A NCHRP REPORT 350 TL-4 SERVICE LEVEL.
  - HOLES FOR MOUNTING DELINEATORS TO BE FIELD DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
  - ALL STEEL COMPONENTS SHALL BE COATED BLACK IN ACCORDANCE WITH ASTM D7803 FOLLOWING GALVANIZING.

ITEM #	QTY	PART #	DESCRIPTION	ASTM DESIGNATION
1	18	0033.90017	TWO RAIL POST & BASE PLATE ASSEMBLY	A572 Gr. 50, A500 Gr. B
2	2	0033.91287	4' X 3' X 1/4' RAIL @ 29'-11 1/2' W/ END PLATES	A500 Gr. B
3	2	0033.91288	4' X 3' X 1/4' RAIL @ 23'-10 1/8' W/ END PLATES	A500 Gr. B
4	2	0033.91289	2' X 2' X 1/8' RAIL @ 29'-11 1/2' W/ END PLATES	A500 Gr. B
5	2	0033.91290	2' X 2' X 1/8' RAIL @ 23'-10 1/8' W/ END PLATES	A500 Gr. B
6	2	0033.90069	1-1/2' X 1-1/2' FIX. SPL. BAR @ 2' 4"	A572 Gr. 50
7	2	0033.90071	2-1/4' X 3-1/4' FIX. SPL. BAR @ 2' 4"	A572 Gr. 50
8	36	0033.00295	3/8" X 2 1/4" X 7 3/8" ANCHOR PLATES	A36
9	74*	0042.05813	Ø 5/8" X 13" ANCHOR STUDS	A449
10	146*	0080.15901	Ø 5/8" HEAVY HEX NUTS	A563
11	72	0080.15911	Ø 5/8" FLAT WASHERS	F436
12	72	0080.15920	Ø 5/8" LOCK WASHERS	ASME D18.2
13	18	0080.05565	Ø 5/8" X 7 1/2" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	A449, A563, F436, & ASME D18.2
14	18	0080.06410	Ø 3/4" X 8 1/2" SLOTTED, ROUND HEAD BOLT, NUT, F.W., & L.W.	A449, A563, F436, & ASME D18.2
15	8	0080.05275	Ø 5/8" X 3" HEX BOLT, NUT, F.W., & L.W.	A325, A563, F436, & ASME D18.2
16	8	0080.07330	Ø 7/8" X 5 1/2" HEX BOLT, NUT, F.W., & L.W.	A325, A563, F436, & ASME D18.2
17	18	0033.90068	1/8" ELASTOMERIC PAD	D2240
18	2	0033.40375	APPROACH, END WALL CONNECTORS	PER BOM
19	2	0033.40376	TRAILING, END WALL CONNECTORS	PER BOM
20	6		DELINEATORS (SUPPLIED BY F.R. LOFAYETTE)	ALUMINUM

\*-2 EXTRA FOR VOLT TESTING

ITEM #	FUNCTION
13	BOLT BOTTOM RAIL TO POST (ITEM #1)
14	BOLT TOP RAIL TO POST (ITEM #1)
15	BOLT BOTTOM SPLICE BARS (ITEM #6) TO BOTTOM RAIL
16	BOLT TOP SPLICE BARS (ITEM #7) TO TOP RAIL

ITEM #: 525.45

STRUCTURAL STEEL TO COMPLY W/ ASTM A6

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

**BRIDGE RAIL DETAILS SHEET**  
 CHICKEN FARM ROAD (T.H. 16) CLASS 3 LOCAL ROAD, BRIDGE # 36  
 TOWN OF CORINTH, ORANGE COUNTY

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

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APPROVED

SCALE: SCHEMATIC  
 DRAWING NO. FRL-CORINTH

SHEET 1 OF 3