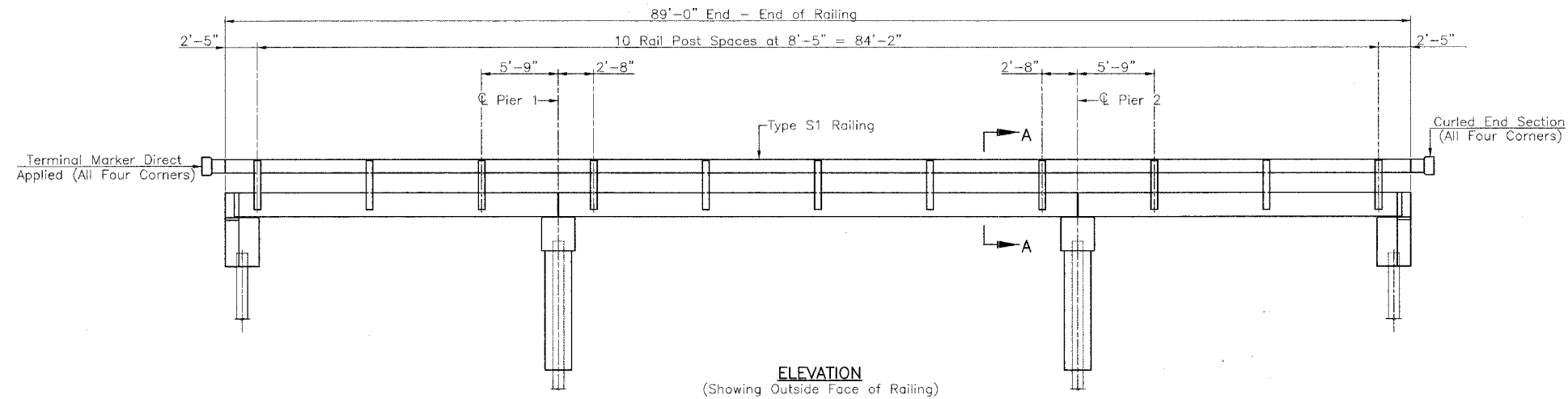


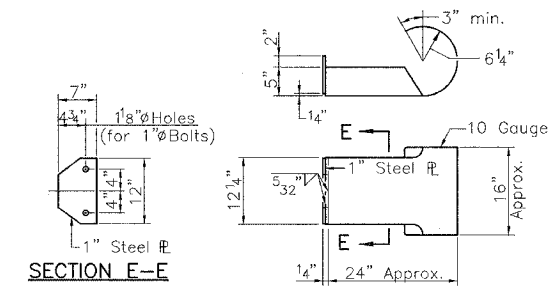
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 140	*	SHELBY	11	6

PROJECT BROS-173(134)

* 00-09118-00-BR

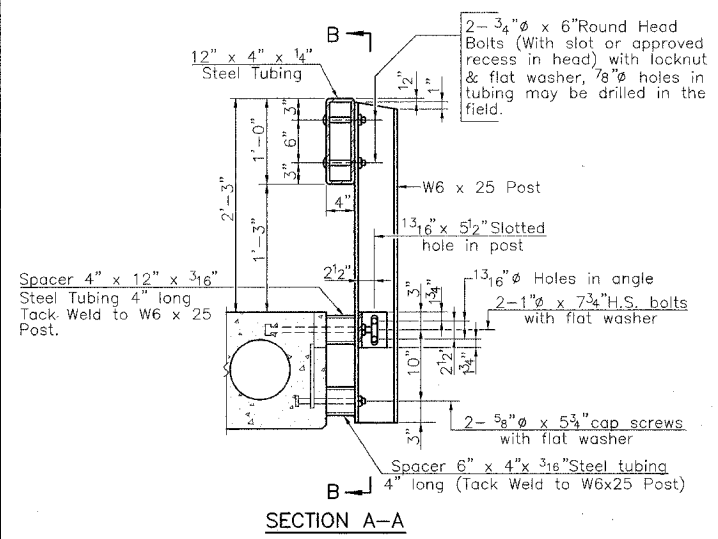


ELEVATION
(Showing Outside Face of Railing)

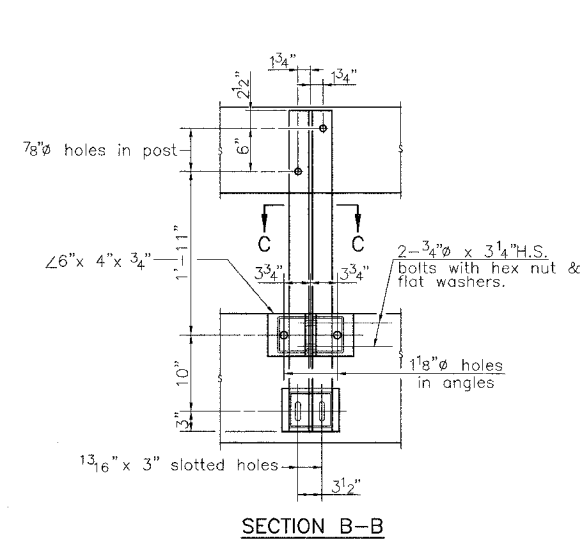


SECTION E-E

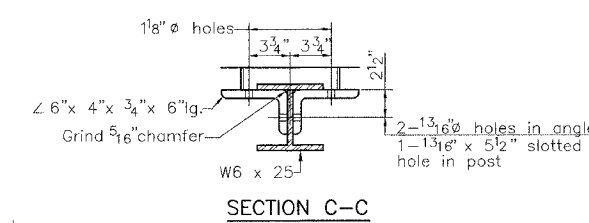
CURLED END SECTION DETAILS (4 Required)



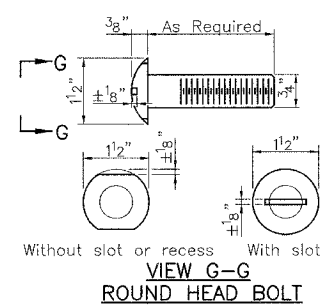
SECTION A-A



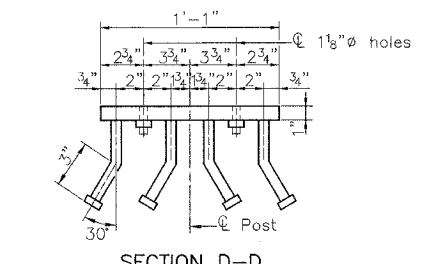
SECTION B-B



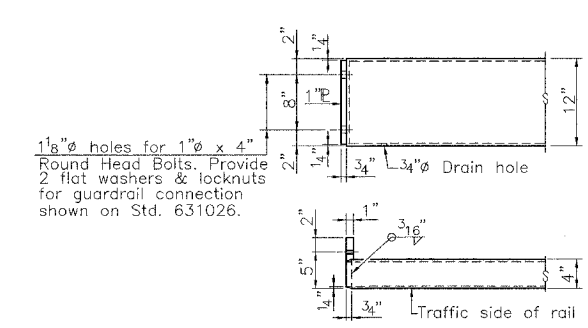
SECTION C-C



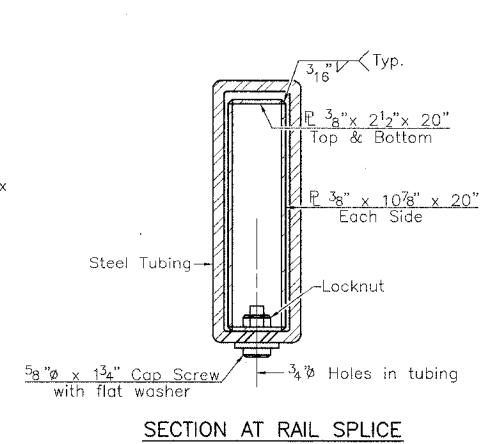
**VIEW G-G
ROUND HEAD BOLT**



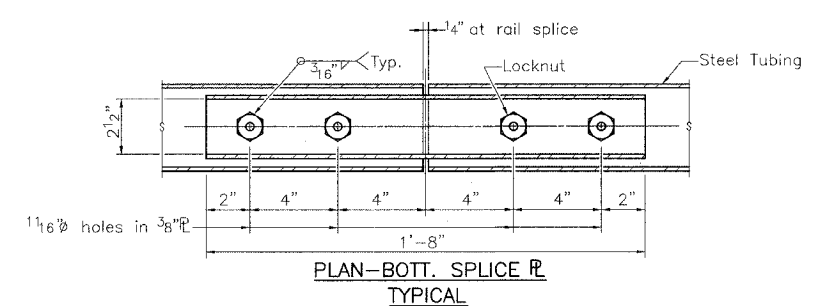
SECTION D-D



END OF RAIL DETAILS

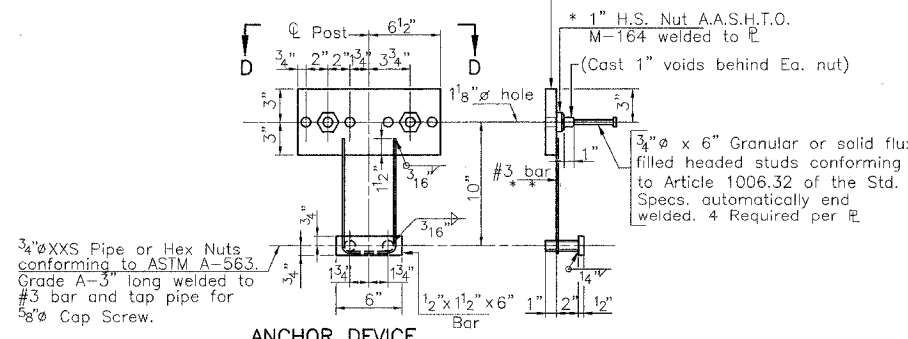


SECTION AT RAIL SPLICE



**PLAN-BOTT. SPLICE R
TYPICAL**

** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.

NOTES

Hollow structural steel tubing shall conform to the requirements of A.S.T.M. A-500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-ibs at 0° F.

All other steel shapes and plates shall conform to the requirements of A.A.S.H.T.O. M-270 Grade 36 except posts and angles shall conform to A.A.S.H.T.O. M-270, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of A.S.T.M. designation A-307 except for high strength bolts, nuts, and washers noted which shall conform to A.A.S.H.T.O. M-164.

All posts, railing, rail splices, anchor devices, angles and tube spacers shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 and A.S.T.M. A-385. Galvanized rail shall not be painted.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with A.A.S.H.T.O. M-232.

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Railing, Type S1.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place a 1/2" fabric bearing pad between the plate and concrete.

The 3/4" high strength bolts used to connect the 6 x 4 x angles to the post shall be tightened in accordance with Article 505.04(f)(2) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

The cost of curled end sections shall be incidental to the contract unit price per foot for Steel Railing, Type S1.

Sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S1.

BILL OF MATERIAL

Item	Total
Steel Railing, Type S1	Foot 178

RAILING
T.R. 140 OVER MITCHELL CREEK
SECTION 00-09118-00-BR
SHELBY COUNTY