

ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS

## 93438

		00100		
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S.1746	*	MONTGOMERY	11	7
PROJECT				

\* 03-00122-00-BR



## CURLED END SECTION DETAILS (2 Required)

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-lbs 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.  $\rm M{-}232.$ 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 a  $^{1}8^{\prime\prime}$  fabric bearing pad between the plate and concrete.

The  $\frac{3}{4}$   $\alpha$  high strength bolts used to connect the 6 x 4 x  $\frac{3}{4}$  angles to the post shall be tightened in accordance with Article 505.04(f)(2) of the Standard Specifications. The 1"ø high strength bolts connecting the angles to the concrete shall be tightened to a snug it and given an additional  $^{18}$  turn. The  $^{58}$  is ap 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.

For multi-span bridges, sufficient <sup>1</sup>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 M	ATERIAL			
ltem		Total		
Steel Railing, Type S1	Foot	316		
<u>RAILING</u> F.A.S. 1746 (COFFEEN ROAD) OVER EAST FORK SHOAL CREEK SECTION 03-00122-00-BR MONTGOMERY COUNTY				

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