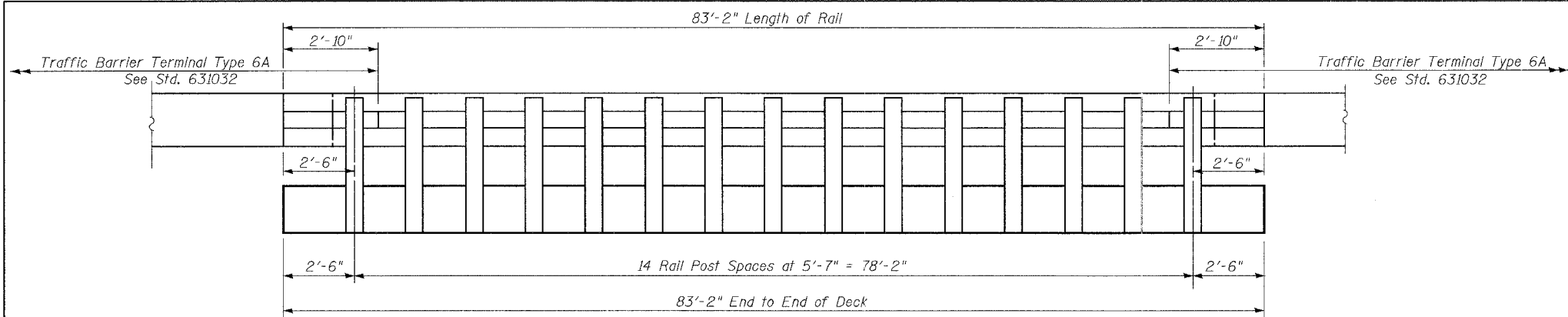
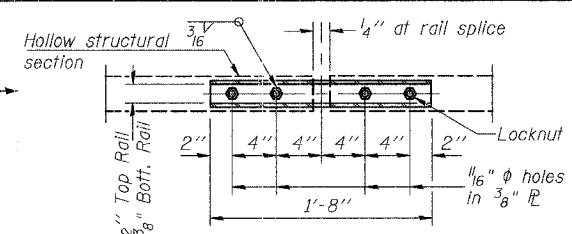


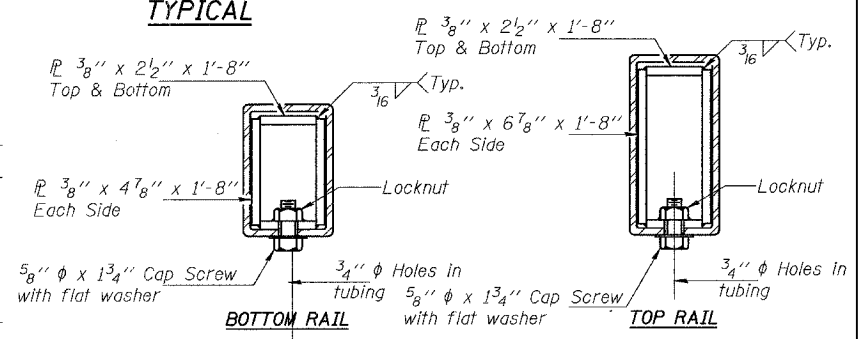
FAS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732		MACOUPIN	15	9
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
•02-00083-00-BR				



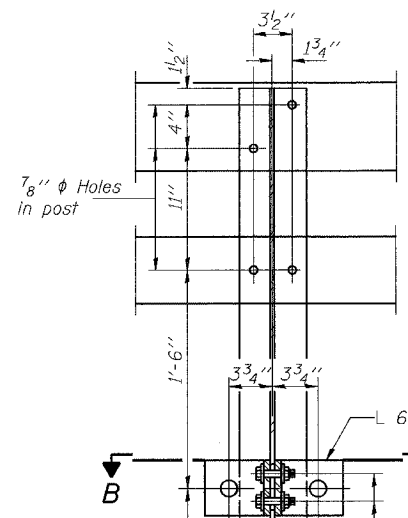
ELEVATION



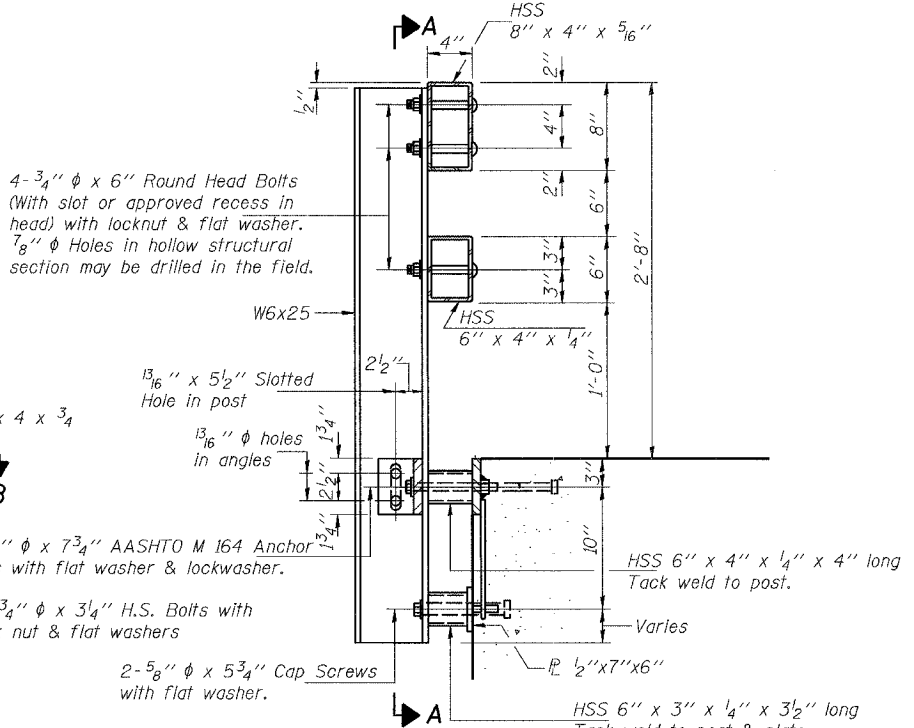
PLAN-BOTT. SPLICE R TYPICAL



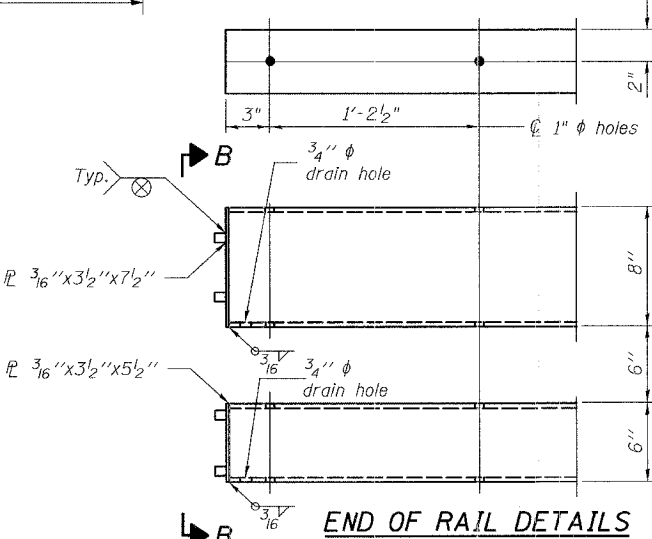
SECTIONS AT RAIL SPLICE



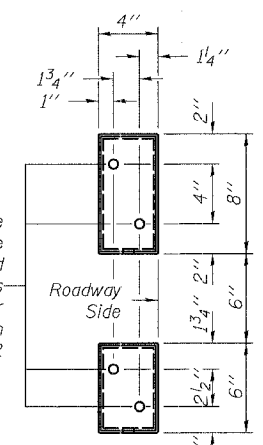
SECTION A-A



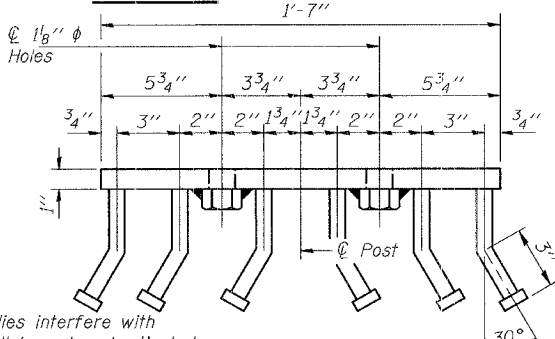
SECTION AT RAIL POST



END OF RAIL DETAILS



VIEW B-B



VIEW C-C

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation 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 AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.

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

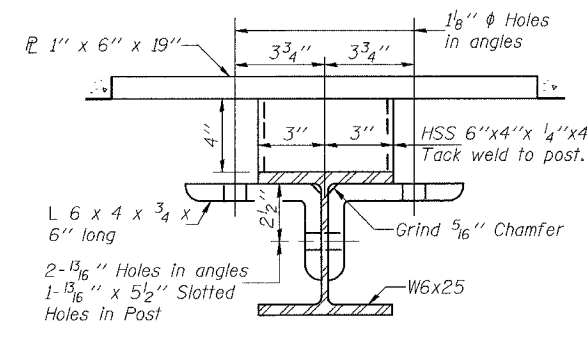
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Bridge Rail, Type SM.

The 1/2" x 7" x 6" plates that come in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/8" fabric bearing pads between the plates and concrete.

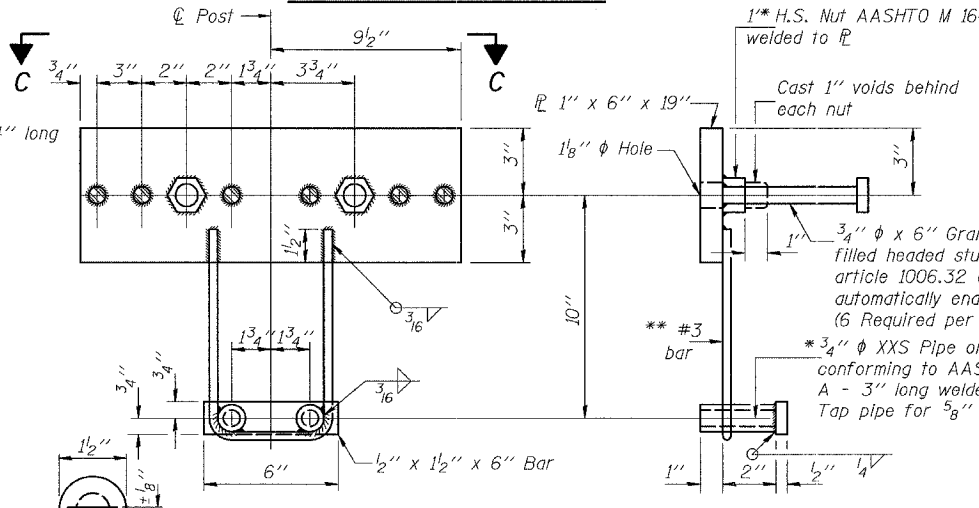
The 3/4" diameter high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" diameter high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional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

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	167



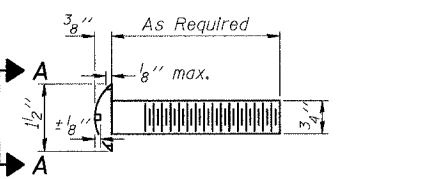
SECTION B-B



ANCHOR DEVICE

** 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".

* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication. (6'-3" Maximum Post Spacing)



DETAIL OF 3/4" φ ROUND HEAD BOLT

VIEW A-A

R-34 9-01-03

SHEET TITLE

STEEL BRIDGE RAIL, TYPE SM

PROJECT: C.H. 12 OVER SOLOMON CREEK
 FAS ROUTE 732 SEC. 02-00083-00-BR
 MACOUPIN COUNTY
 STATION 9+90.00
 STRUCTURE NUMBER 059-3465

PROJECT NO. 03016
 SCALE: 2/16/04
 DRAWN BY: TFG
 CHECKED BY: MRL/REG/MCB
 DRAWING NO.

COOMBE-BLOXDORF P.C.
 Engineers / Land Surveyors
 Springfield, Illinois
 Design Firm License No. 184-002703

9 OF 15 SHTS