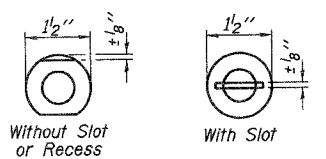
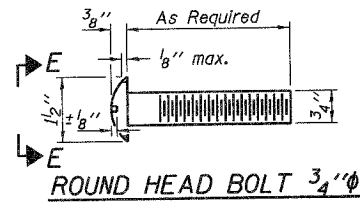
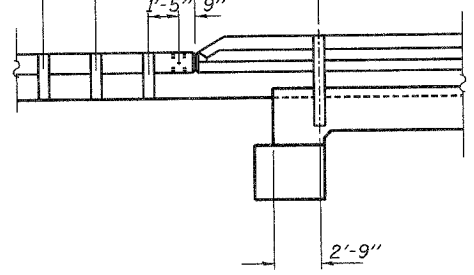


CO HWY	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
21	04-00044-08-WR	McLEAN	9	9

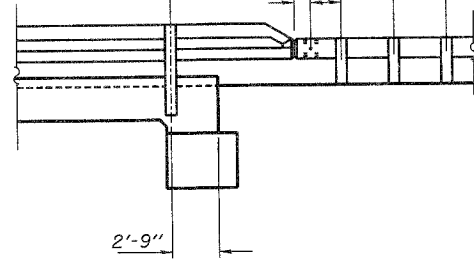
Traffic Barrier Terminal, Type 5A  
See Standard 631026 (Typ.)  
46'-8" end to end of rail  
7 Spaces @ 5'-6" = 38'-6"



VIEW E-E

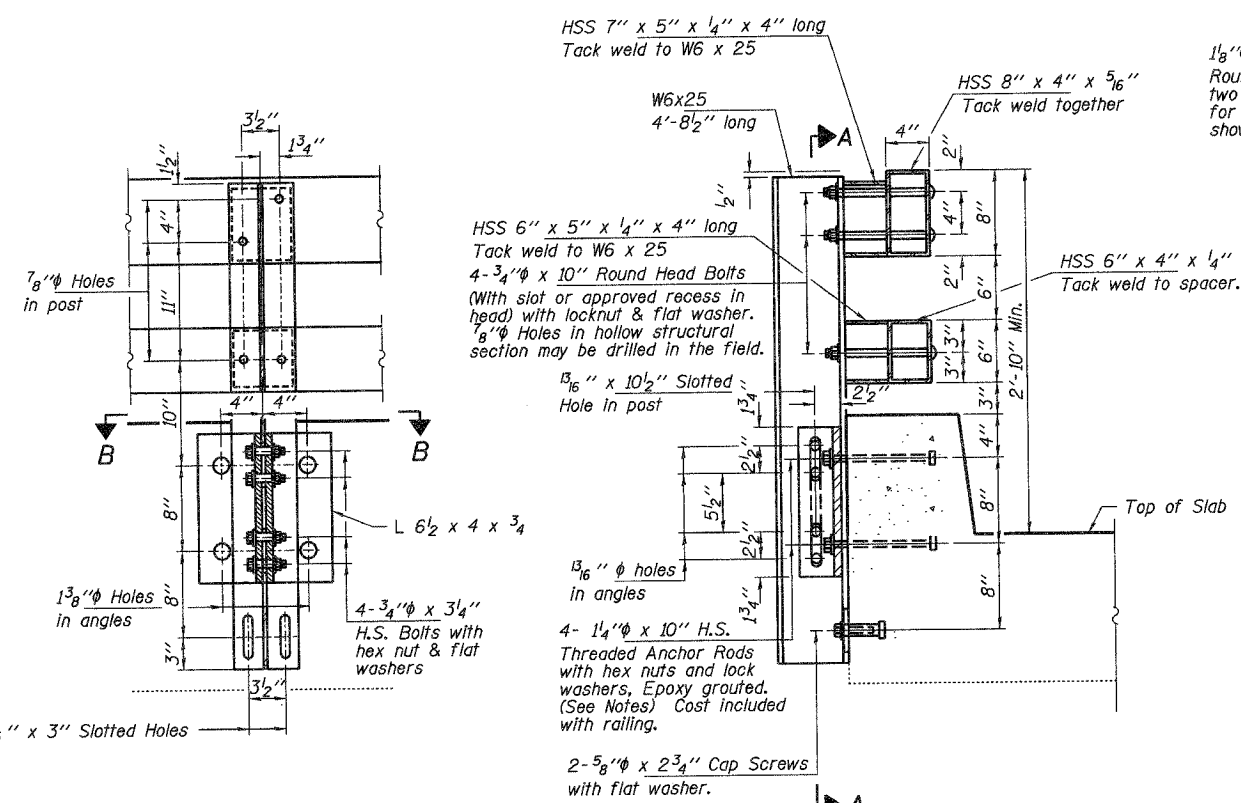


ELEVATION



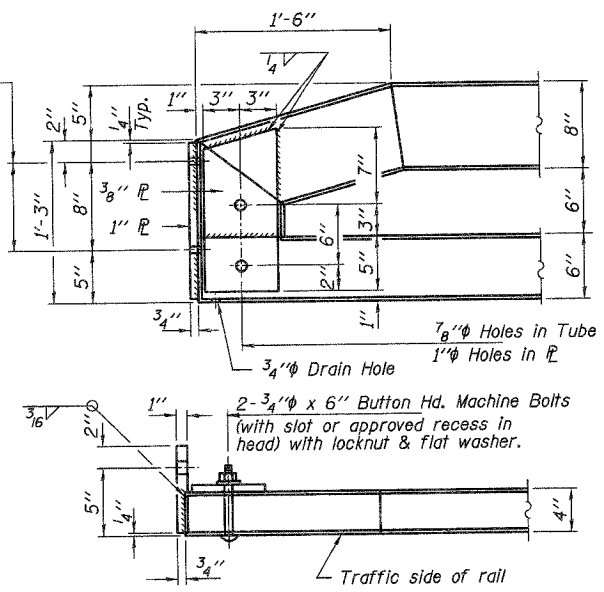
NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing.  
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 lockwashers 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 (SPECIAL).  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
The lower portion of the post flange that comes in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/2" fabric bearing pads between the plates and concrete.  
The 3/4" high strength bolts used to connect the HSS Sections to the post shall be tightened according to Art. 505.04(F)(2) of the Standard Specifications. The 1/4" 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 Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.

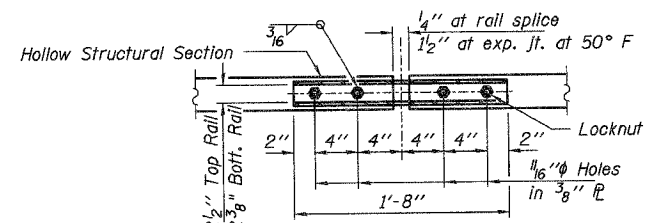


SECTION A-A

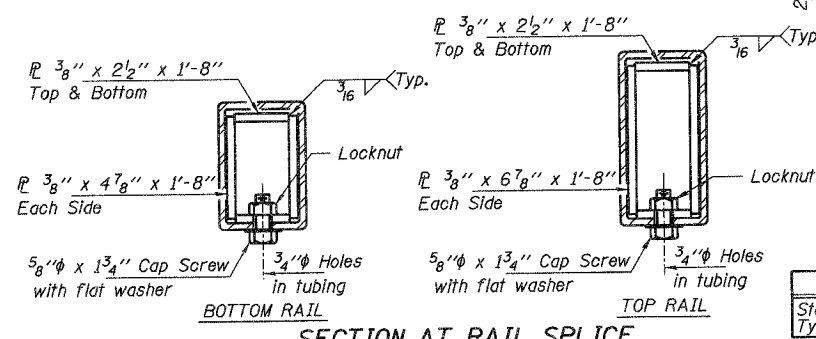
SECTION AT RAIL POST



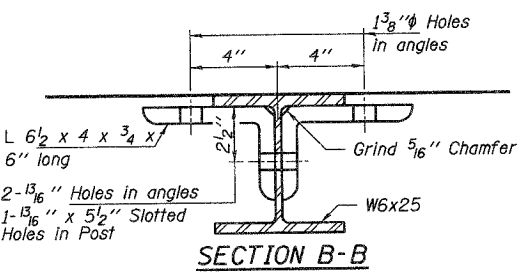
END OF RAIL DETAILS



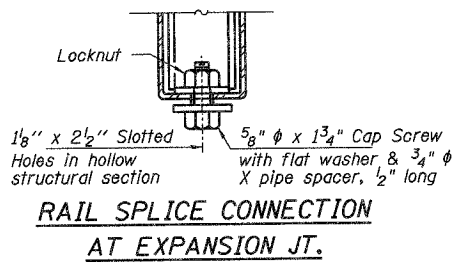
PLAN-BOTT. SPLICE R TYPICAL



SECTION AT RAIL SPLICE



SECTION B-B



RAIL SPLICE CONNECTION AT EXPANSION JT.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM (Special)	Foot	94

**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS

3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-59-0065-1 DATE: 05/24/06  
DESIGNED: S.W.M. CHECKED: M.G.B. DRAWN: D.B.

**STEEL RAILING RETROFIT**

SECTION  
C.H. 21 / F.A.S. 489  
McLEAN COUNTY  
STRUCTURE NO. 057-4402