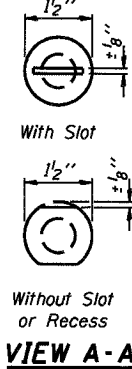
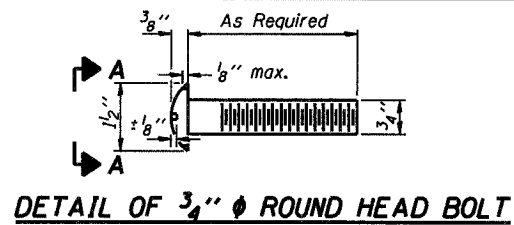
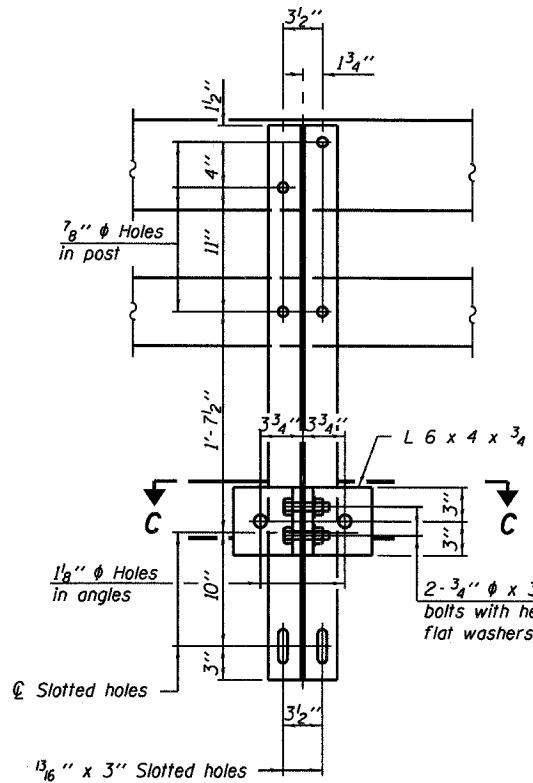


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO.
F.A.P. 869	10IBR-1	FRANKLIN	25	15	15 SHEETS
FED. ROAD DIST. NO. 7		ILL. PROJ. NO.		FED. AID PROJECT	
Contract #78024					

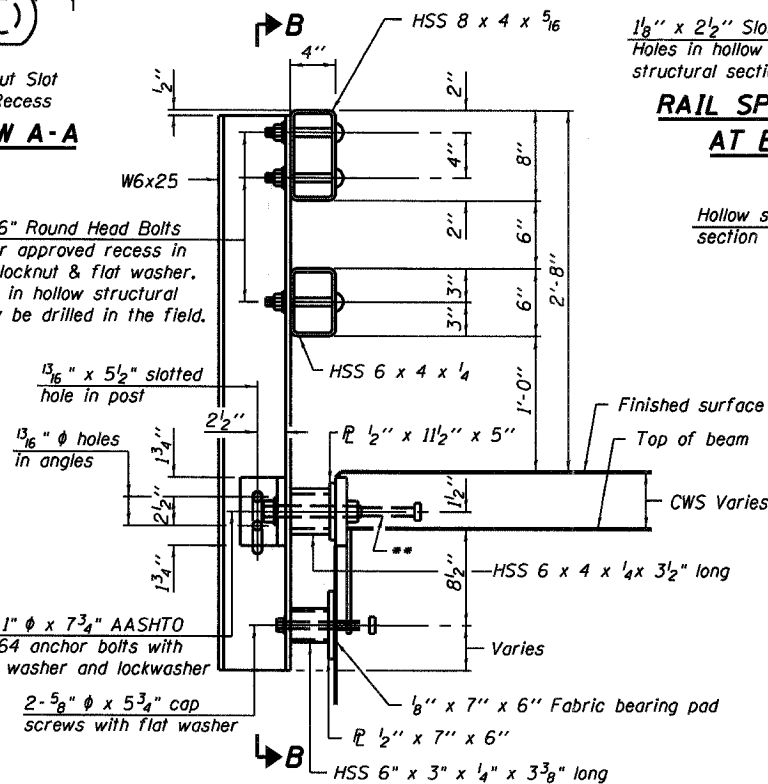


4-3/4"  $\phi$  x 6" Round Head Bolts  
(With slot or approved recess in head) with locknut & flat washer.  
7/8"  $\phi$  holes in hollow structural section may be drilled in the field.



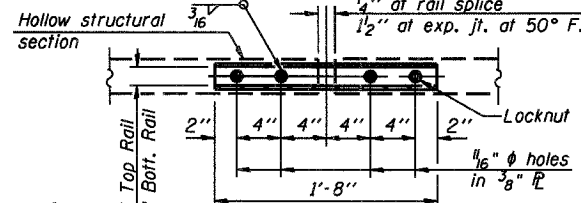
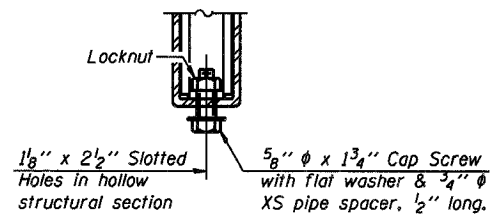
SECTION B-B

SECTION C-C

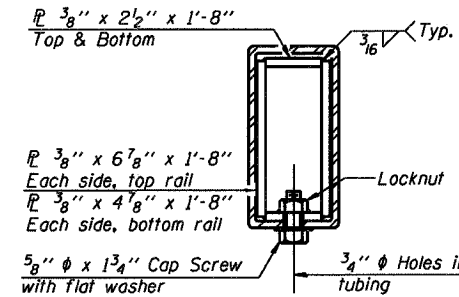


SECTION AT RAIL POST

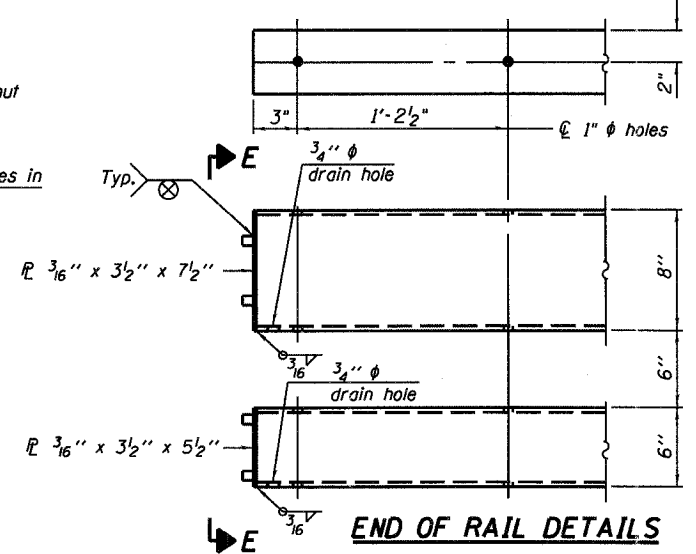
RAIL SPLICE CONNECTION  
AT EXPANSION JT.



PLAN-BOTT. SPLICE R  
TYPICAL

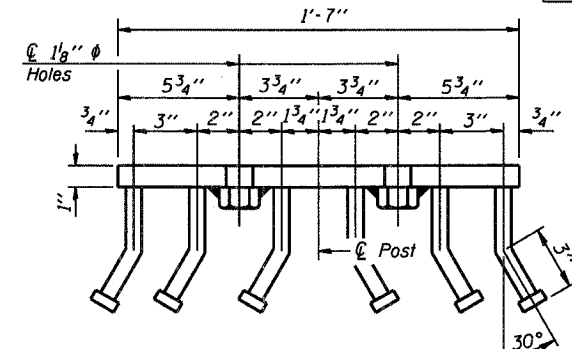


SECTION AT  
RAIL SPLICE

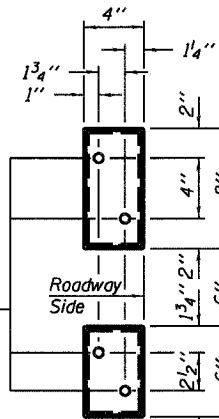


END OF RAIL DETAILS

Hollow structural section  
1/8" x 2 1/2" Slotted Holes in hollow structural section  
5/8"  $\phi$  x 1 3/4" Cap Screw with flat washer & 3/4"  $\phi$  XS pipe spacer, 1/2" long.  
Locknut  
5/8"  $\phi$  x 1 3/4" Cap Screw with flat washer  
3/4"  $\phi$  Holes in tubing



VIEW D-D



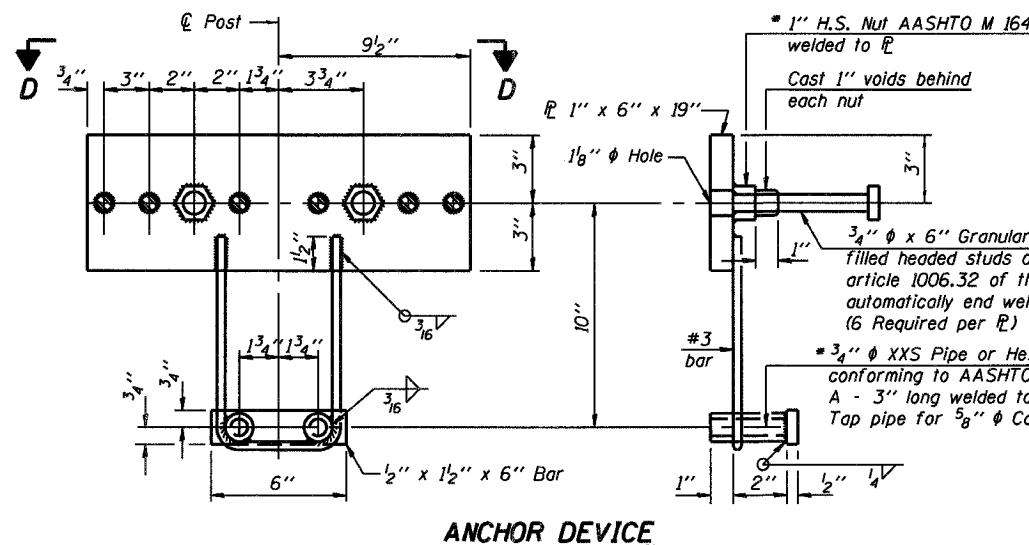
VIEW E-E

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 Railing, 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 Railing, Type SM.  
The 3/4"  $\phi$  high strength bolts used to connect the 6" x 4" x 3/4" angles to the post shall be tightened according to the Article 505.04(FX2) of the Standard Specifications. The 1"  $\phi$  high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8"  $\phi$  cap screws in bottom of the post shall be tightened to snug fit only.  
See Sheet No. 11 of 15 for rail post spacing.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	252

STEEL RAILING, TYPE SM  
WITH CONCRETE WEARING SURFACE  
ILL. ROUTE 34 OVER EWING CREEK  
F.A.P. ROUTE 869 SECTION 10IBR-1  
FRANKLIN COUNTY  
STATION 362+35.00  
STRUCTURE NO. 028-0047



ANCHOR DEVICE

\* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.



DESIGNED	RLM
CHECKED	MEL
DRAWN	AEC
CHECKED	RLM

R-34CWS

11-1-06

(6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)