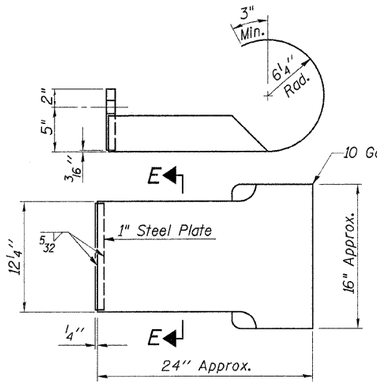
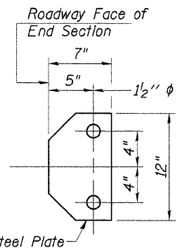
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 150	06-03122-00-BR	IROQUOIS	20	8
ASHKUM ROAD DIST.	ILLINOIS	BROS-075(133)		

CONTRACT NO. 87362

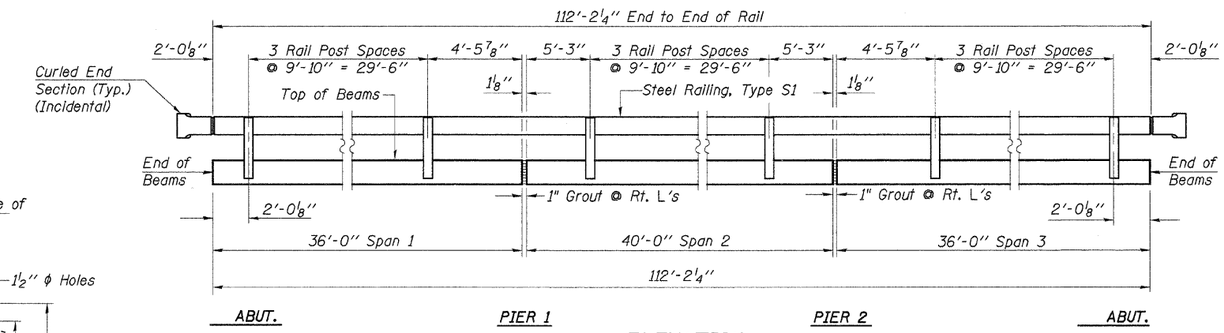


CURLED END SECTION DETAILS

(4 Required)



SECTION E-E



ELEVATION

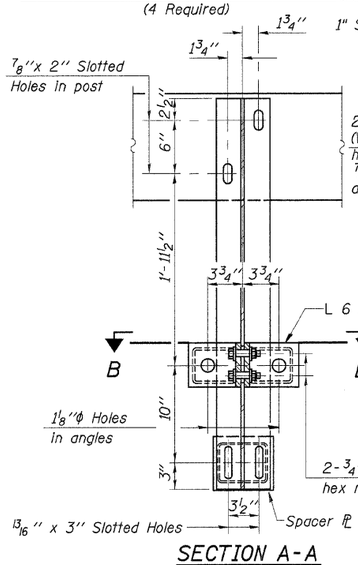
NOTES

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

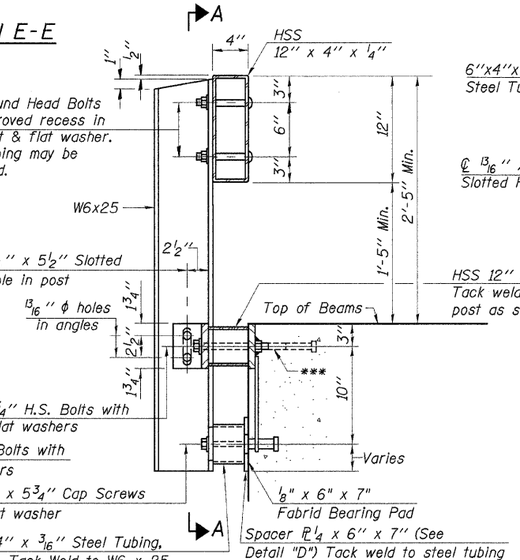
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications. In addition to the elements specified in Article 509.05, all angles and spacers are to be galvanized in accordance with AASHTO M-111, and all cap screws, washers, and lock washers are to be galvanized in accordance with AASHTO M-232.

The ¾" (M20) diameter high strength bolts used to connect the 6x4x¾" angles to the post shall be tightened in accordance with Article 504.04(f)(2) of the Standard Specifications. The 1" (M24) diameter high strength bolts connecting steel to concrete shall be brought to a snug tight condition and given an additional ⅛ turn. The ⅝" (M16) cap screws in the bottom of the posts shall be brought to a snug tight condition only.

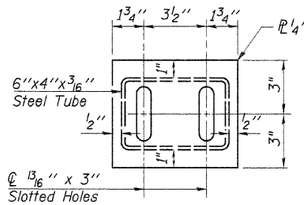
*** The studs for the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



SECTION A-A

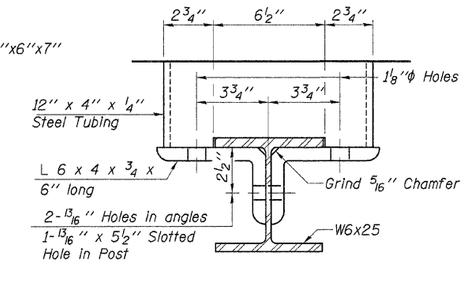


SECTION AT RAIL POST

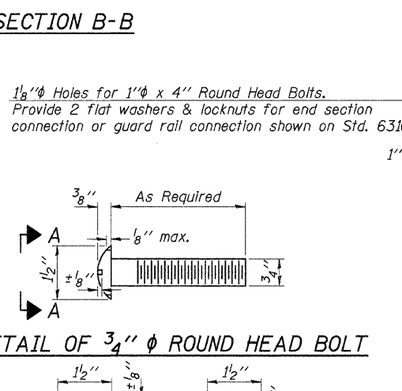


DETAIL "D"

HSS 12" x 4" x ¼" Steel Tubing, 4⅞" long Tack weld to W6 x 25 (Notch tubing to fit rail post as shown in Section B-B)



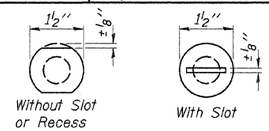
SECTION B-B



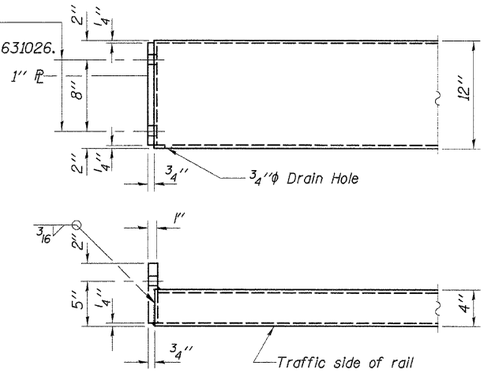
VIEW C-C

1⅛"ϕ Holes for 1"ϕ x 4" Round Head Bolts. Provide 2 flat washers & locknuts for end section connection or guard rail connection shown on Std. 631026.

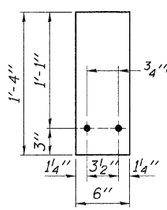
DETAIL OF ¾" ϕ ROUND HEAD BOLT



VIEW A-A

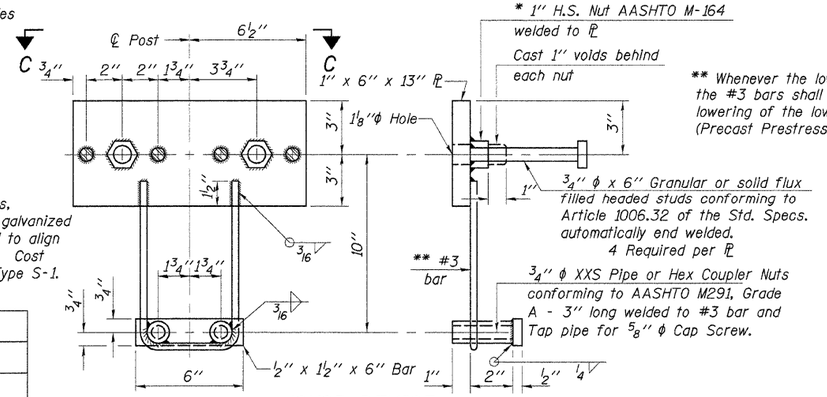


END OF RAIL DETAILS



¼" SHIM PLATE

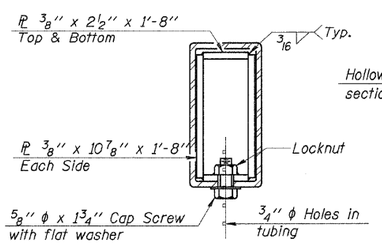
Note: For multi-span bridges, sufficient ¼" x 6" x 1'-4" galvanized steel shims shall be provided to align rail between adjacent spans. Cost Incuded with Steel Railing, Type S-1.



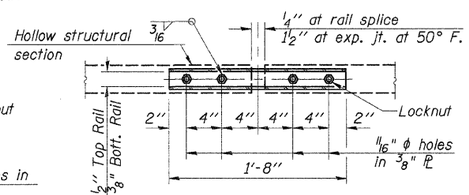
ANCHOR DEVICE

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

** 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 ½". (Precast Prestressed Concrete Deck Beam Bridges Only)



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE PL TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	225

DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.

STEEL RAILING, TYPE S1

SECTION 06-03122-00-BR
ASHKUM ROAD DISTRICT
IROQUOIS COUNTY
STATION 15+00

4440 ASH GROVE
SPRINGFIELD, IL. 62711
(217) 793-8600
www.fehr-graham.com

FEHR-GRAHAM & ASSOCIATES, LLC
ENGINEERING AND SCIENCE CONSULTANTS
FREEPORT, IL ROCKFORD, IL ROCKDALE, IL MORRIS, NY SPRINGFIELD, IL

JOB NO.: 46864
FILE: 46864RAIL.DGN
DATE: 11/08/07

RAIL_S1-3.DGN UPDATES 4-20-04