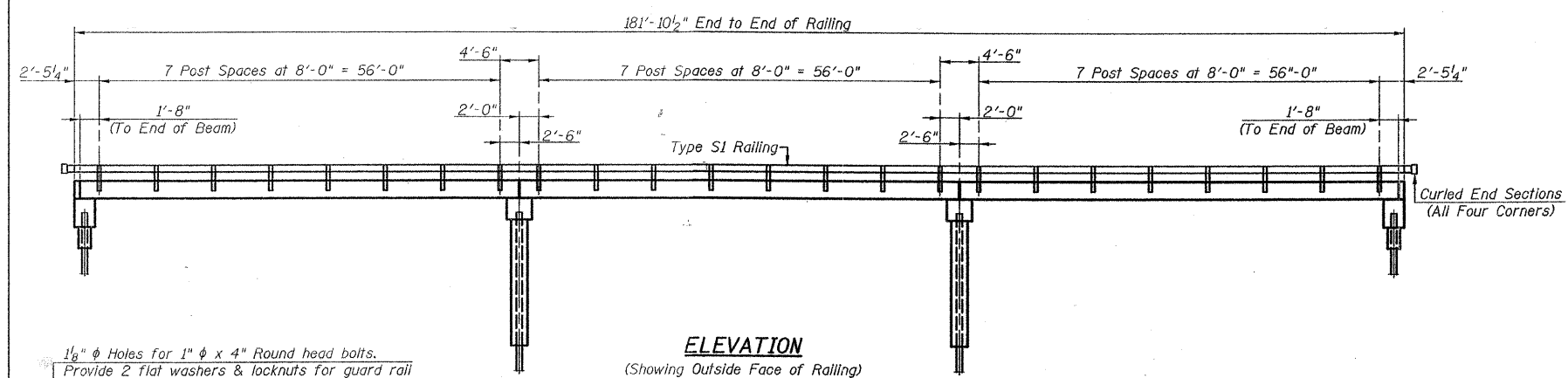
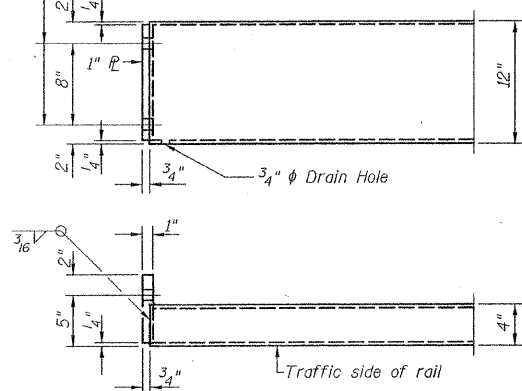


T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
437	04-07120-00-BR	SHELBY	17	14
STA. 51+10		TO STA. 63+50		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

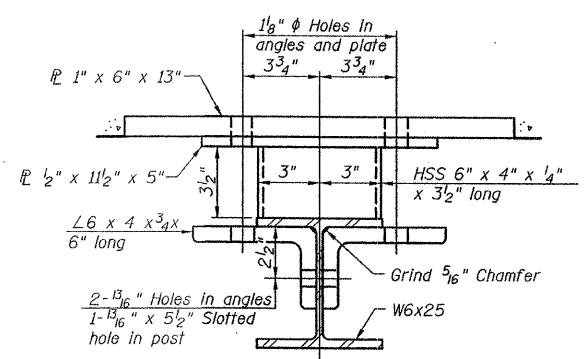


ELEVATION
(Showing Outside Face of Railing)

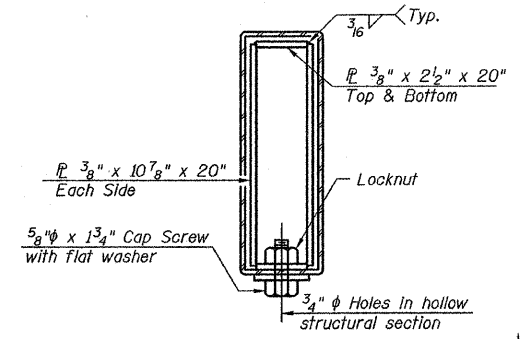
1/8" φ Holes for 1" φ x 4" Round head bolts.
Provide 2 flat washers & locknuts for guard rail connection shown on Std. 631026



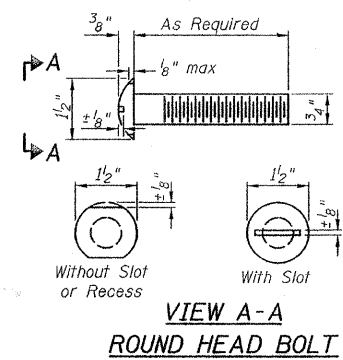
END OF RAIL DETAILS



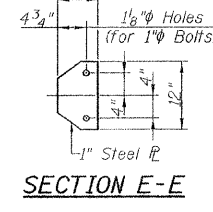
SECTION C-C



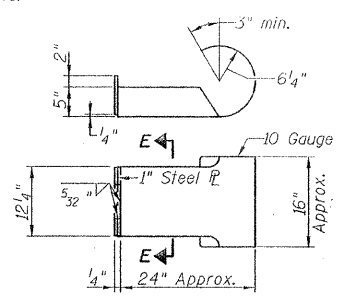
SECTIONS AT RAIL SPLICE



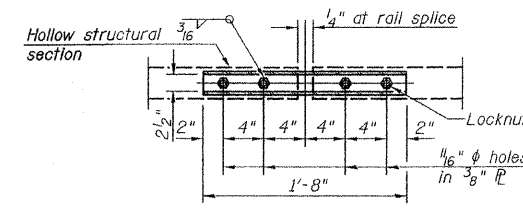
VIEW A-A
ROUND HEAD BOLT



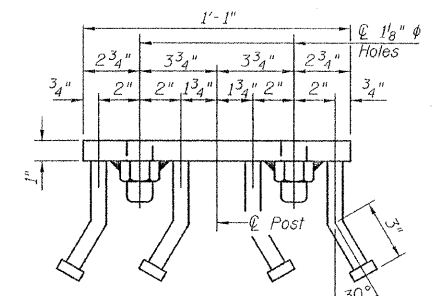
SECTION E-E



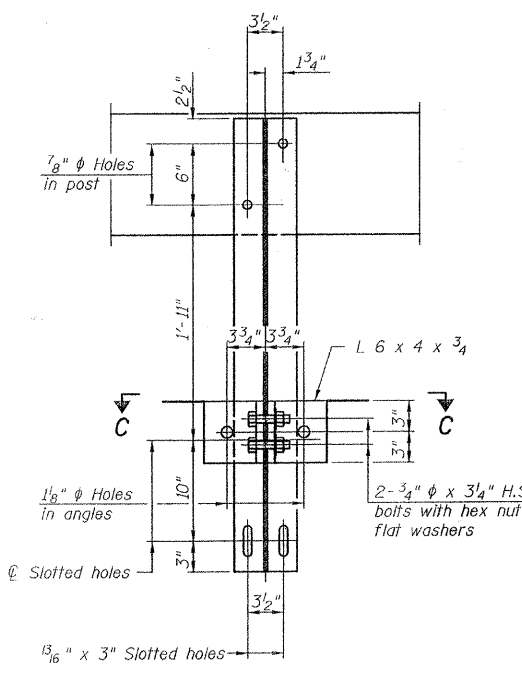
CURLIED END SECTION
DETAILS (4 REQUIRED)



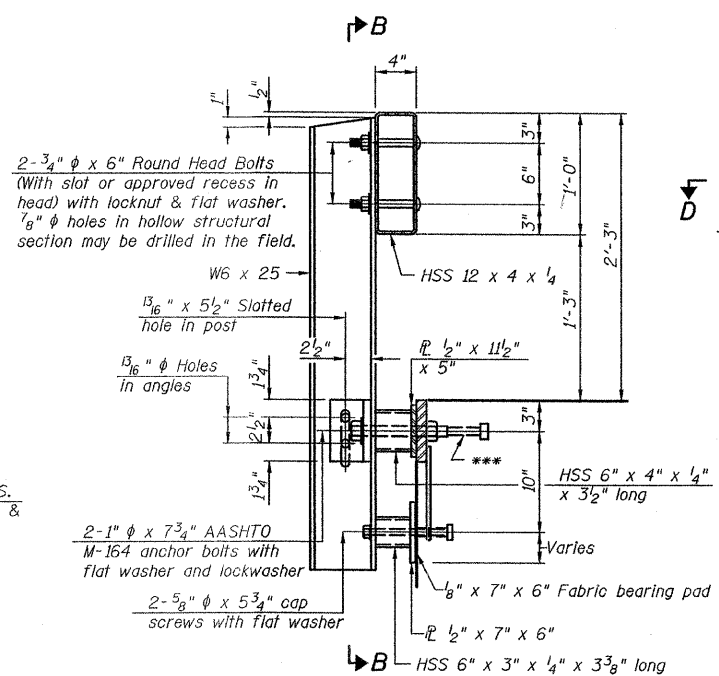
PLAN-BOTT. SPLICE R
TYPICAL



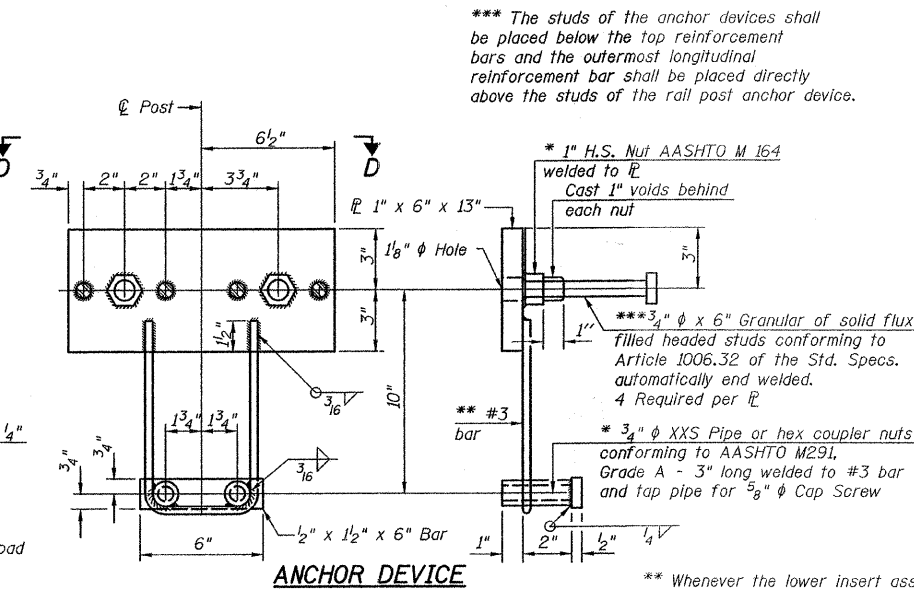
SECTION D-D



SECTION B-B



SECTION AT RAILING POST



ANCHOR DEVICE

*** The studs of 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.

* 1" H.S. Nut AASHTO M 164 welded to 1" Cast 1" voids behind each nut
*** 3/4" φ x 6" Granular of solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs. automatically end welded.
4 Required per 1"
* 3/4" φ XXS Pipe or hex coupler nuts conforming to AASHTO M291, Grade A - 3" long welded to #3 bar and tap pipe for 5/8" φ Cap Screw

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

Notes:
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 S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
The cost of curled end sections shall be included in the cost of Steel Railing, Type S-1.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	364

STEEL RAILING, TYPE S-1
T.R. 437 OVER BECKS CREEK
SECTION 04-07120-00-BR
SHELBY COUNTY

** 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".

PLT DATE = 04/25/04
FILE NAME = 04R14.DWG