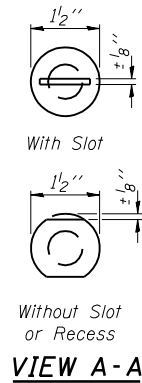
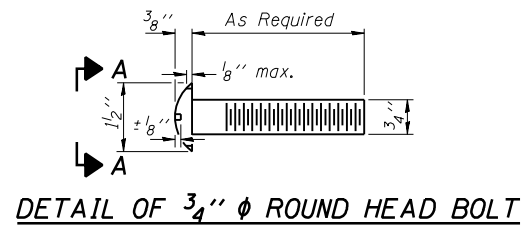
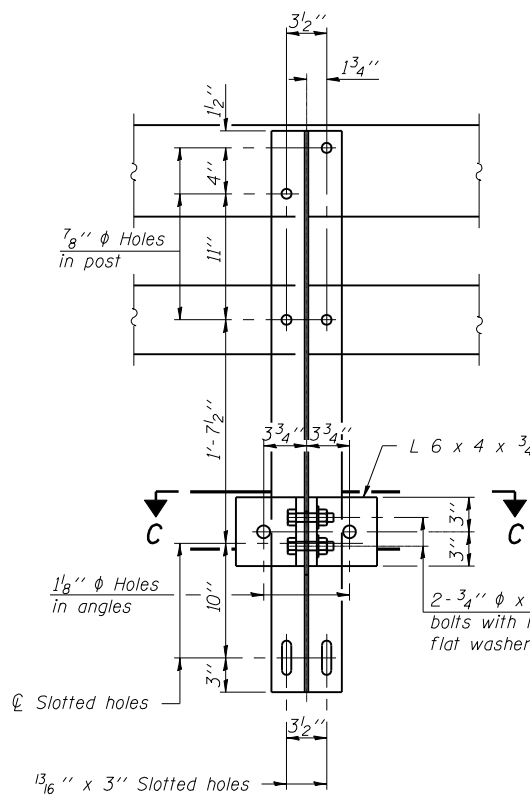


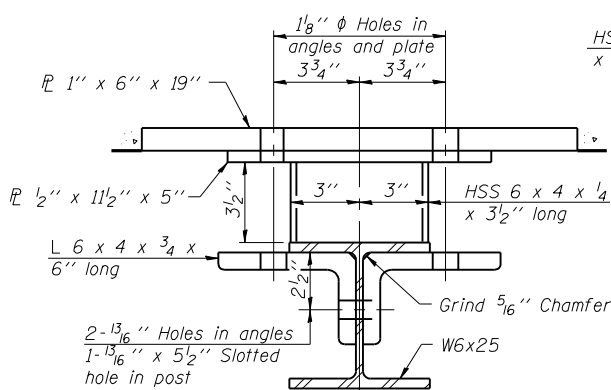
ROUTE NO.	SECTION	COUNTY	LENG.	SHEET	SHEET NO. 7 11 SHEETS
F.A.P. 753	142 BR-4	SANGAMON	24	20	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



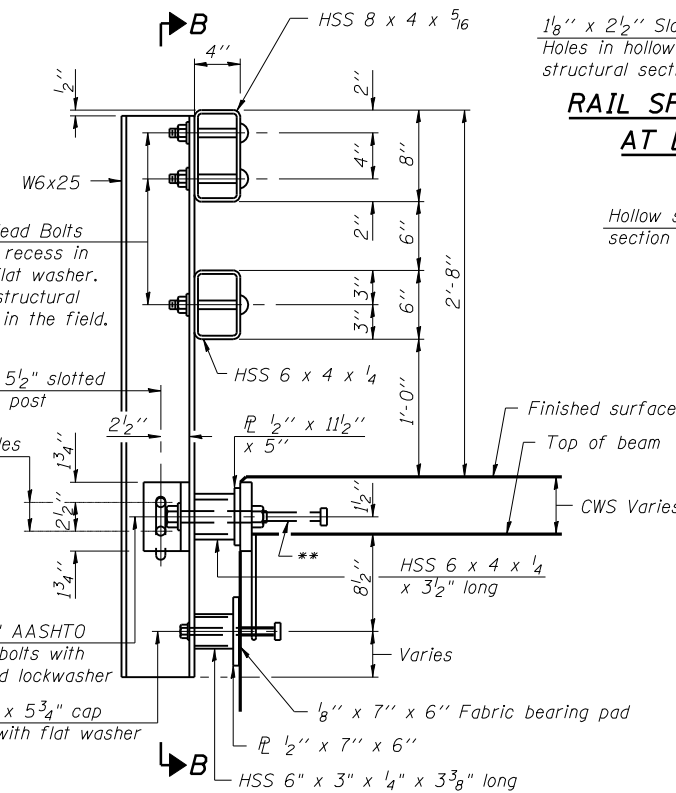
4- 3/4" ϕ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" ϕ holes in hollow structural section may be drilled in the field.



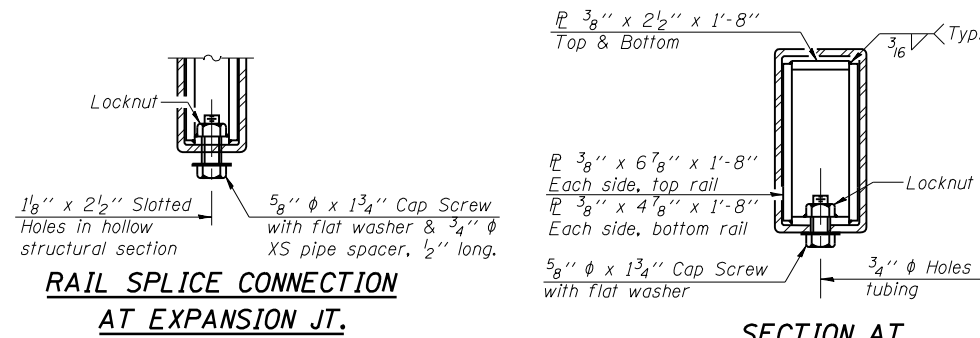
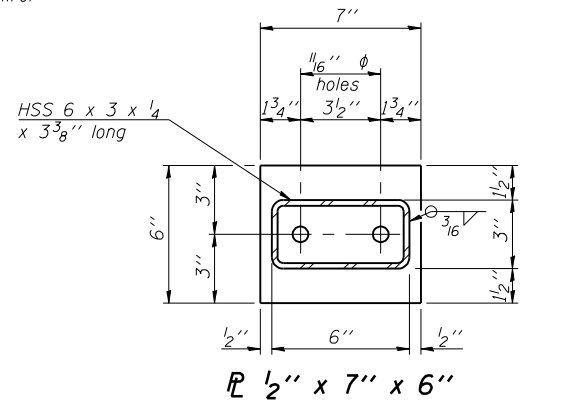
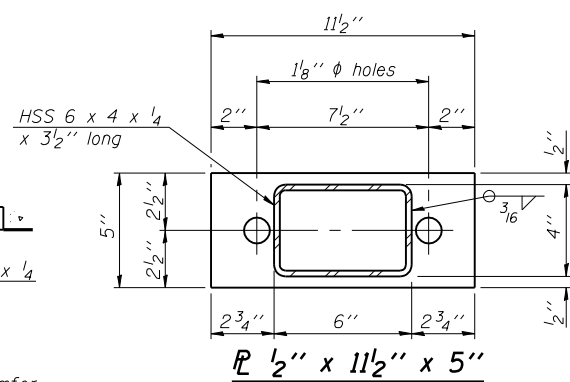
SECTION B-B



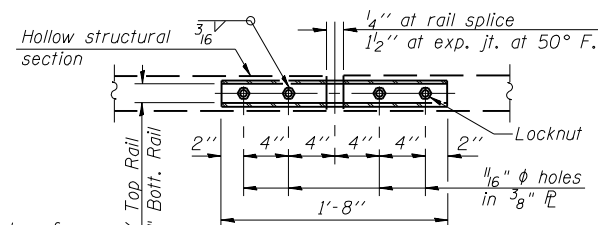
SECTION C-C



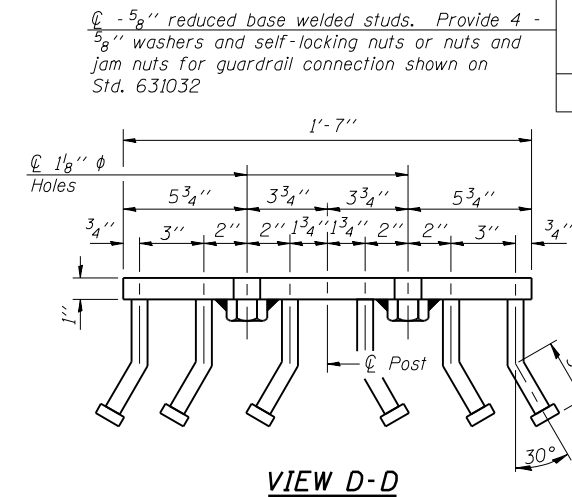
SECTION AT RAIL POST



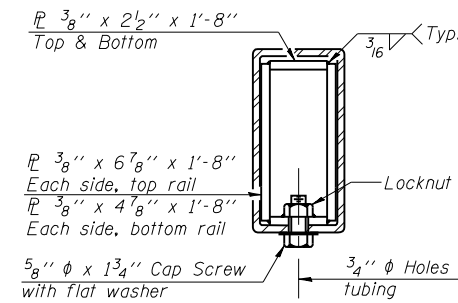
RAIL SPLICE CONNECTION AT EXPANSION JT.



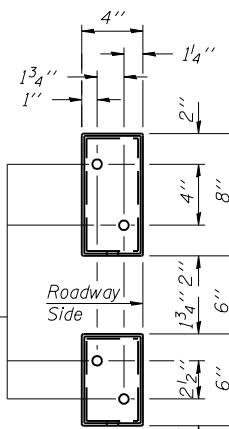
PLAN-BOTT. SPLICE P TYPICAL



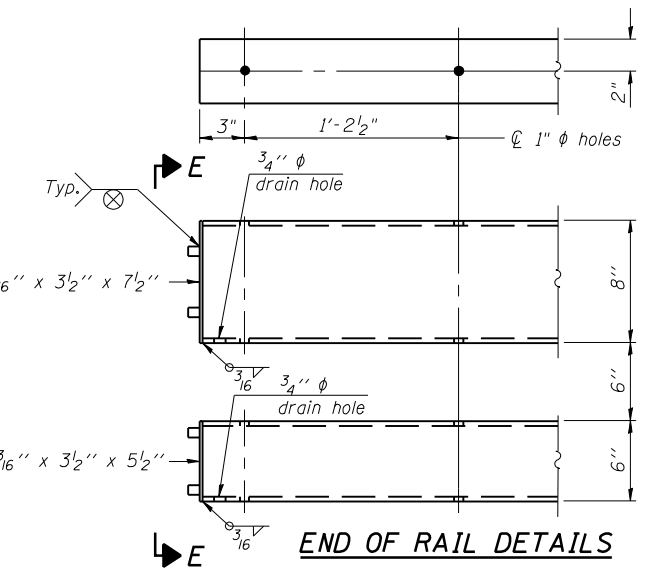
VIEW D-D



SECTION AT RAIL SPLICE



VIEW E-E



END OF RAIL DETAILS

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 Bridge Rail, Type SM.
 Steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 ** 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.
 See sheet 4 of 11 for rail post spacing.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	462

K+ K-Plus Engineering, Ltd.
 753 WINDSOR ROAD
 CHARLESTON, IL 61920
 (217) 348-1900
 WWW.K-PLUSENGINEERING.LTD.COM
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REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE	
		IL RTE. 104 OVER HORSE CREEK FAP 753 - SECTION 142BR-4 SANGAMON COUNTY STA 989+90.00 SN 084-0176	
		DATE: 08-01-07	DRAWN BY: ADG CHECKED BY: DF

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