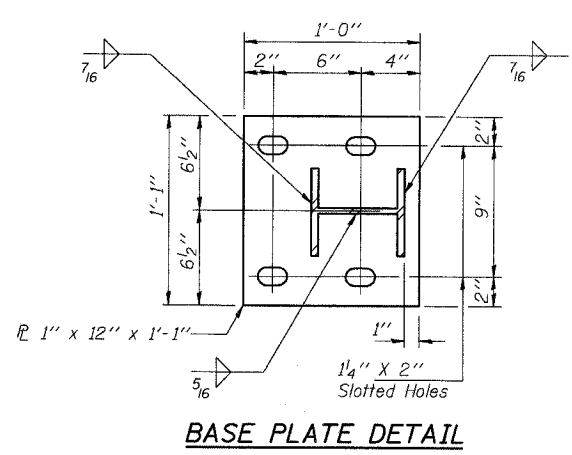
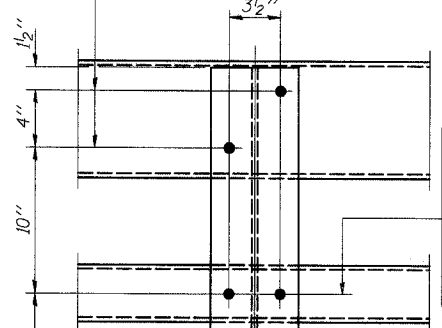


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

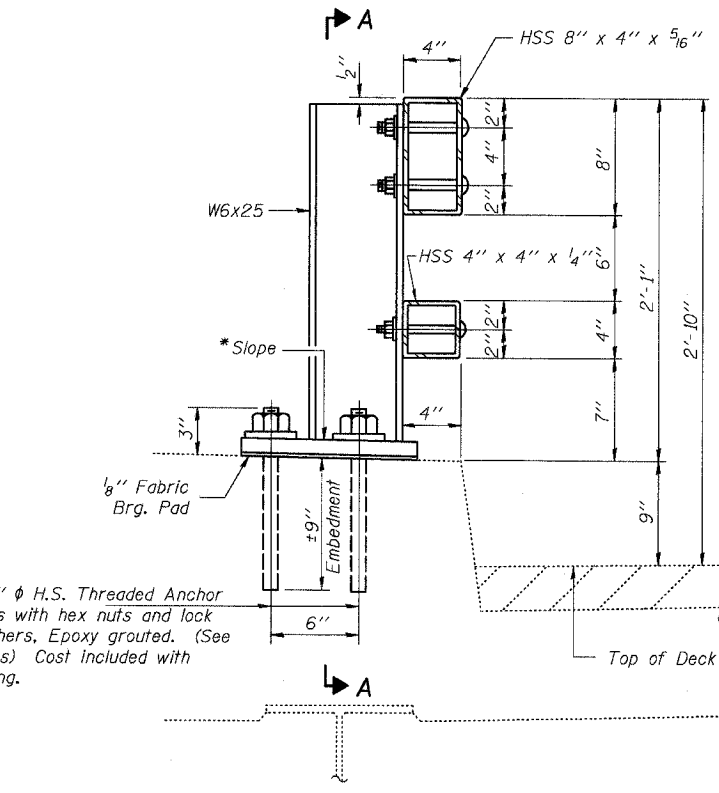
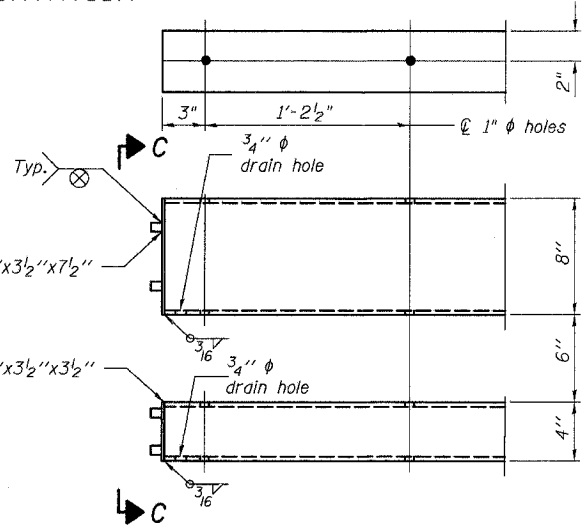
ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO.
FAS 197	105-T	Whiteside	59	30	5 SHEETS
FED. ROAD DIST. NO. 7	ILL. MORE	FED. AID PROJECT			64421



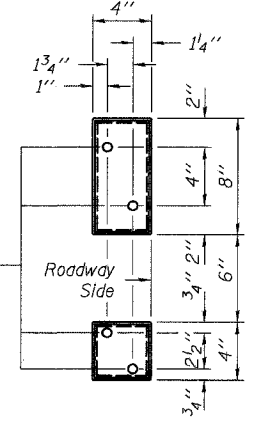
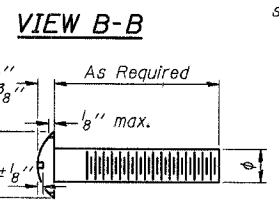
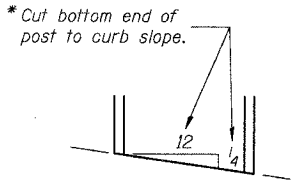
2-3/4" ϕ x 6" Round Head Bolts (With slot or approved recess in head.) with locknut and flat washer.
7/8" ϕ Holes in tubing and posts. Holes in hollow structural section may be drilled in the field.



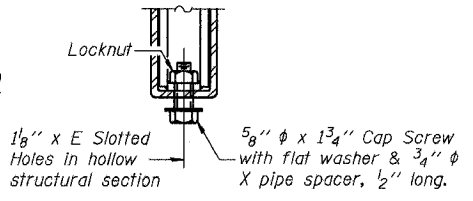
2-1/2" ϕ x 6" Round Head Bolts (With slot or approved recess in head.) with locknut and flat washer.
5/8" ϕ Holes in hollow structural section and post. Holes in hollow structural section may be drilled in the field.



4-1" ϕ H.S. Threaded Anchor Rods with hex nuts and lock washers. Epoxy grouted. (See Notes) Cost Included with railing.



1/2" ϕ & 3/4" ϕ reduced base welded studs. Provide 4-5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032



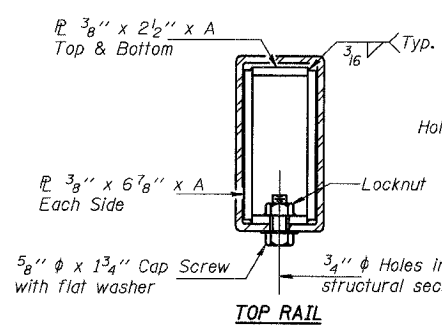
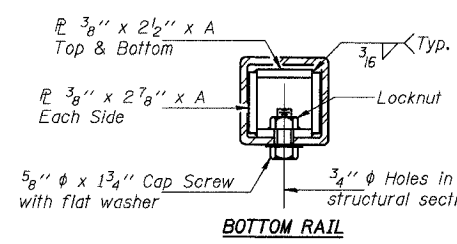
BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail	Foot	32

SPLICE DIMENSIONS

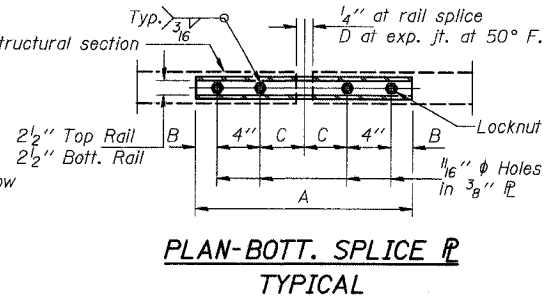
T	D	A	B	C	E
$\leq 4"$	2 1/2"	1'-8"	2"	4"	2 1/2"
$> 4" \leq 6 1/2"$	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
$> 6 1/2" \leq 9"$	5"	2'-4"	3 1/2"	6 1/2"	9"
$> 9" \leq 13"$	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1 1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.



SECTIONS AT RAIL SPLICE

(6'-3" Maximum Post Spacing)



**STEEL BRIDGE RAIL
CURB MOUNTED (2399)
FAS ROUTE 197 - SECTION 105-T
WHITESIDE COUNTY
STATION 428+13.00
STRUCTURE NO. 098-1013**

MID-AMERICA ENGINEERING SERVICES
975 South Durkin Dr, Springfield IL 62704

DESIGNED	-	K.R.G.
CHECKED	-	J.L.K.
DRAWN	-	M.D.
CHECKED	-	J.L.K.

R-31 10-31-02