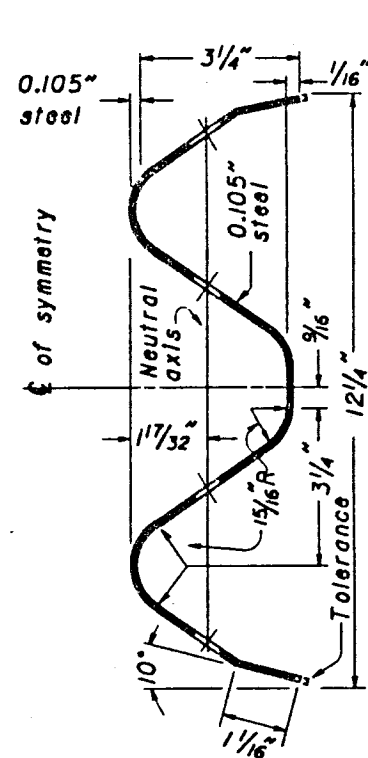
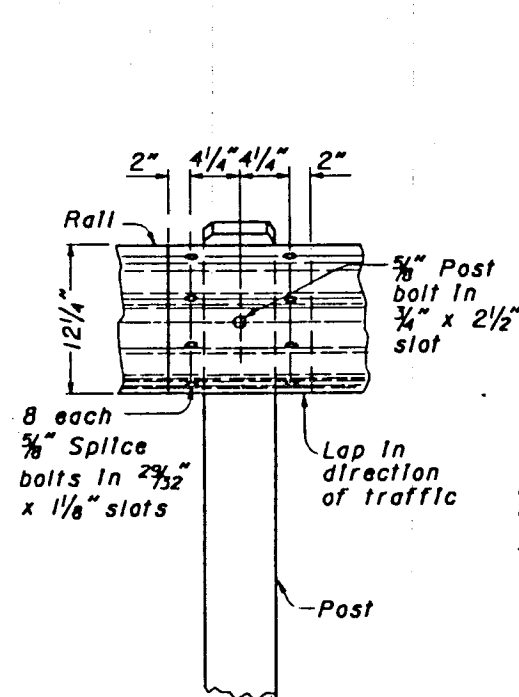
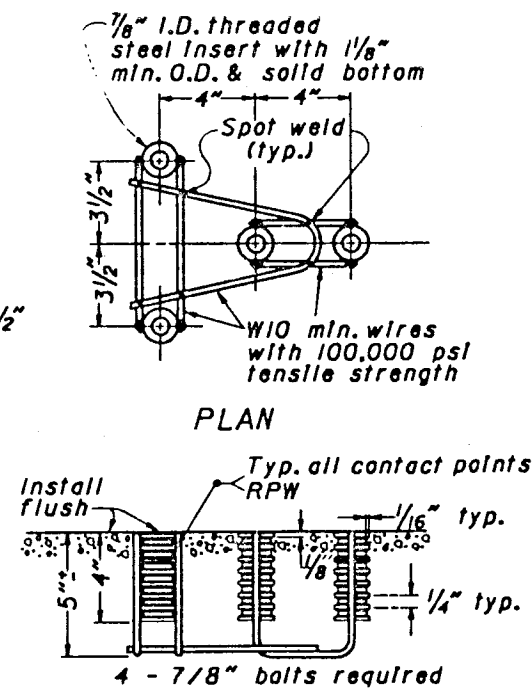




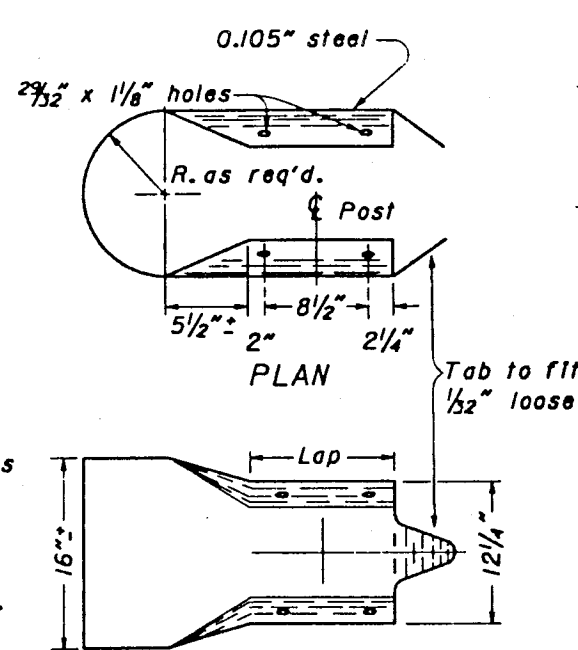
SECTION
W-BEAM RAIL



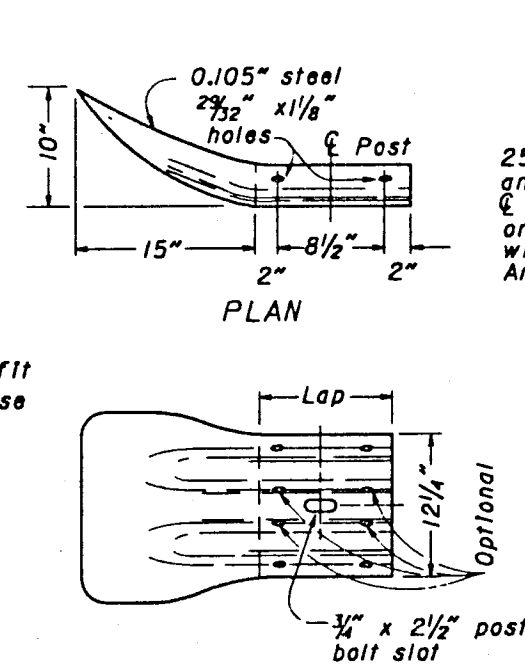
W-BEAM RAIL
SPLICE



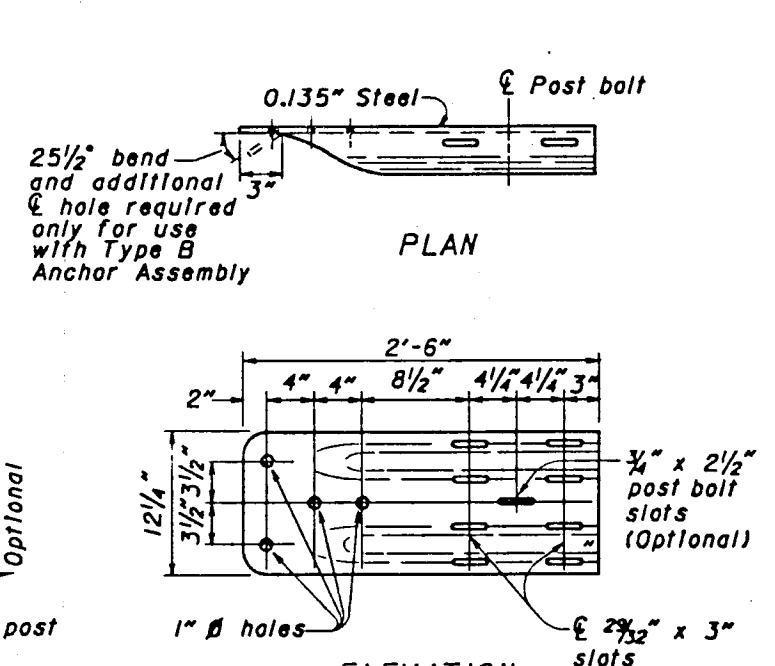
CONCRETE INSERT
ANCHOR ASSEMBLY
(W-BEAM ONLY)



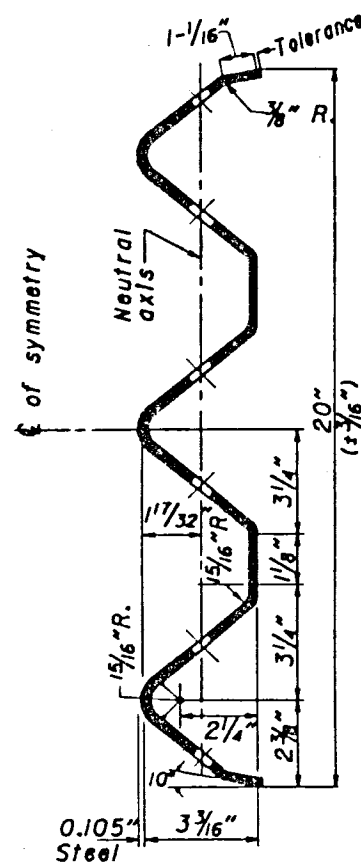
ELEVATION
W-BEAM
BUFFER END SECTION



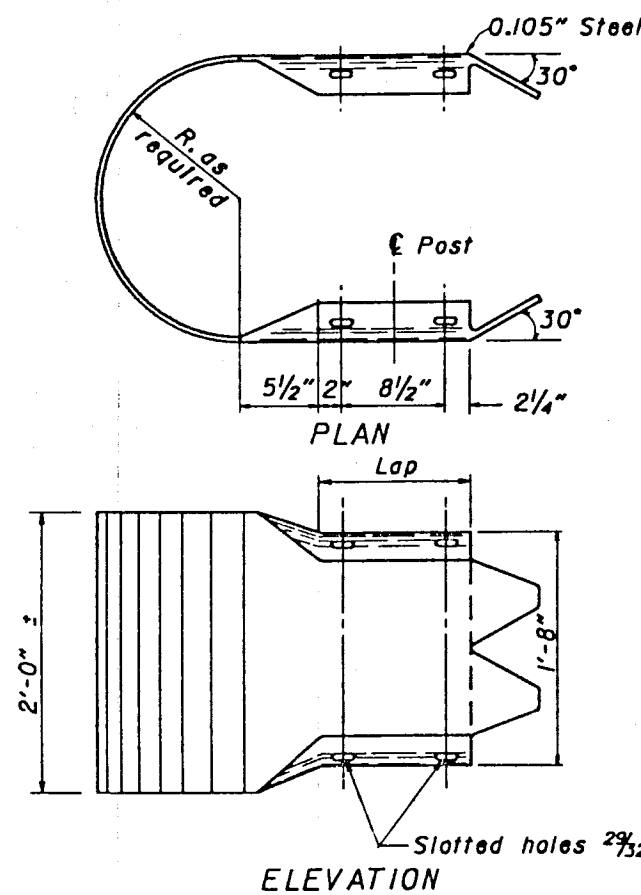
ELEVATION
W-BEAM
FLARED END SECTION



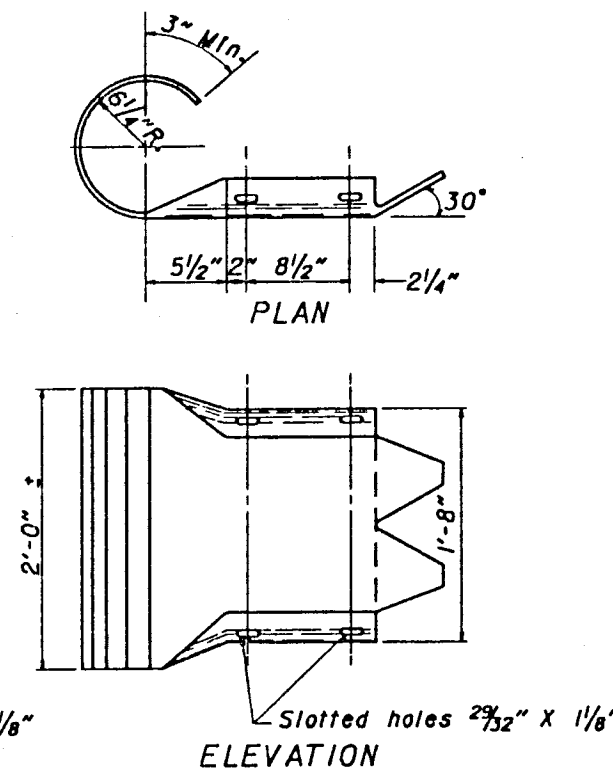
ELEVATION
W-BEAM
TERMINAL CONNECTOR



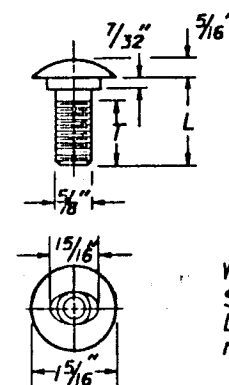
THRIE BEAM RAIL



ELEVATION
THRIE BEAM
BUFFER END SECTION



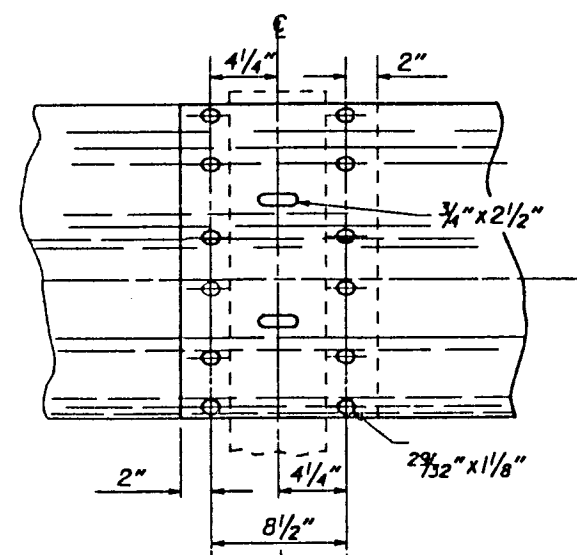
ELEVATION
THRIE BEAM
ROUNDED END SECTION



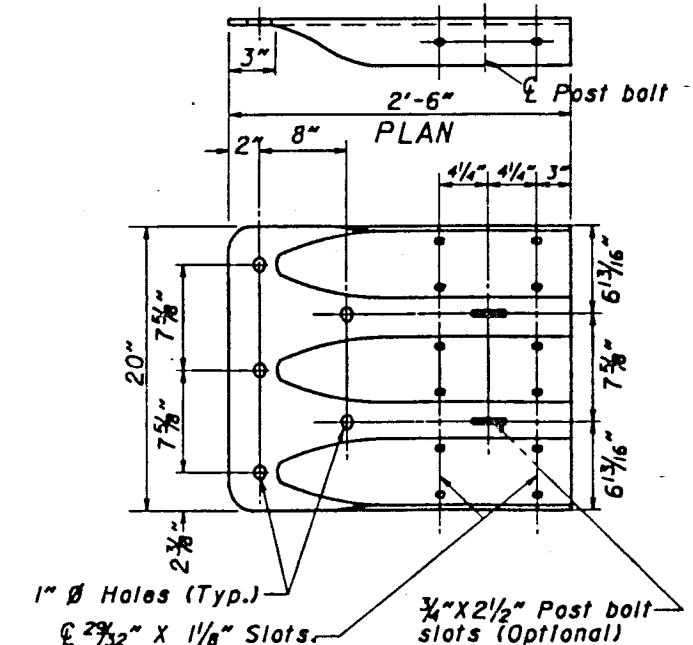
BUTTON HEAD BOLT
(For post and splice bolts)

L (In.)	T (In.)	Bolt Use
18	26	3 1/2 Type 5: WP/WB
10	2 1/2	Type 4: WP
2	1 1/2	Type 5: SP/WB
1 1/4	Full	Type 4: SP
		Type 5: SP/SB

WP= wood post WB= wood block
SP= steel post SB= steel block
Longer bolt may be needed for
round WP larger than 8" dia.



THRIE BEAM RAIL SPLICE



ELEVATION
THRIE BEAM
TERMINAL CONNECTOR

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF TRANSPORTATION

GUARDRAIL
DETAILS

STANDARD
CONSTRUCTION
DRAWING

GR-1.1

APPROVED R.K. Hulman ENGR., L. & D.

DATE
5-6-91