

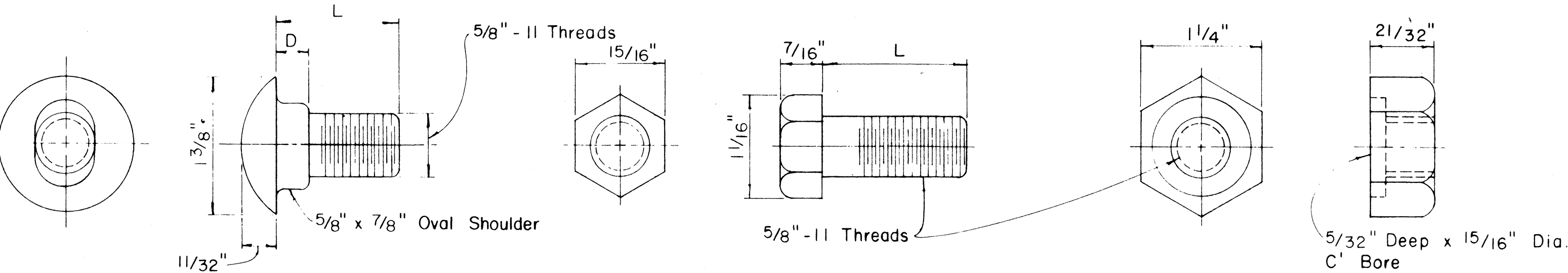
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				

BOLT DIMENSIONS

TYPE A BOLT		
Splice Bolt	D 5/16"	L 1 1/4"
Post Bolt for Conc. Post w/ Double Wood Blocks	3/32"	25"
Post Bolt for Conc. Post w/ Single Wood Block	3/32"	18"
Rail Bolt for Metal Block	3/32"	2"

BOLT DIMENSIONS

TYPE B BOLT	
Post Bolt for Conc. Post w/ Metal Blocks	L 9 1/2"
Post Bolt for Metal Post w/ Metal Block	1 3/4"



TYPE A BOLT

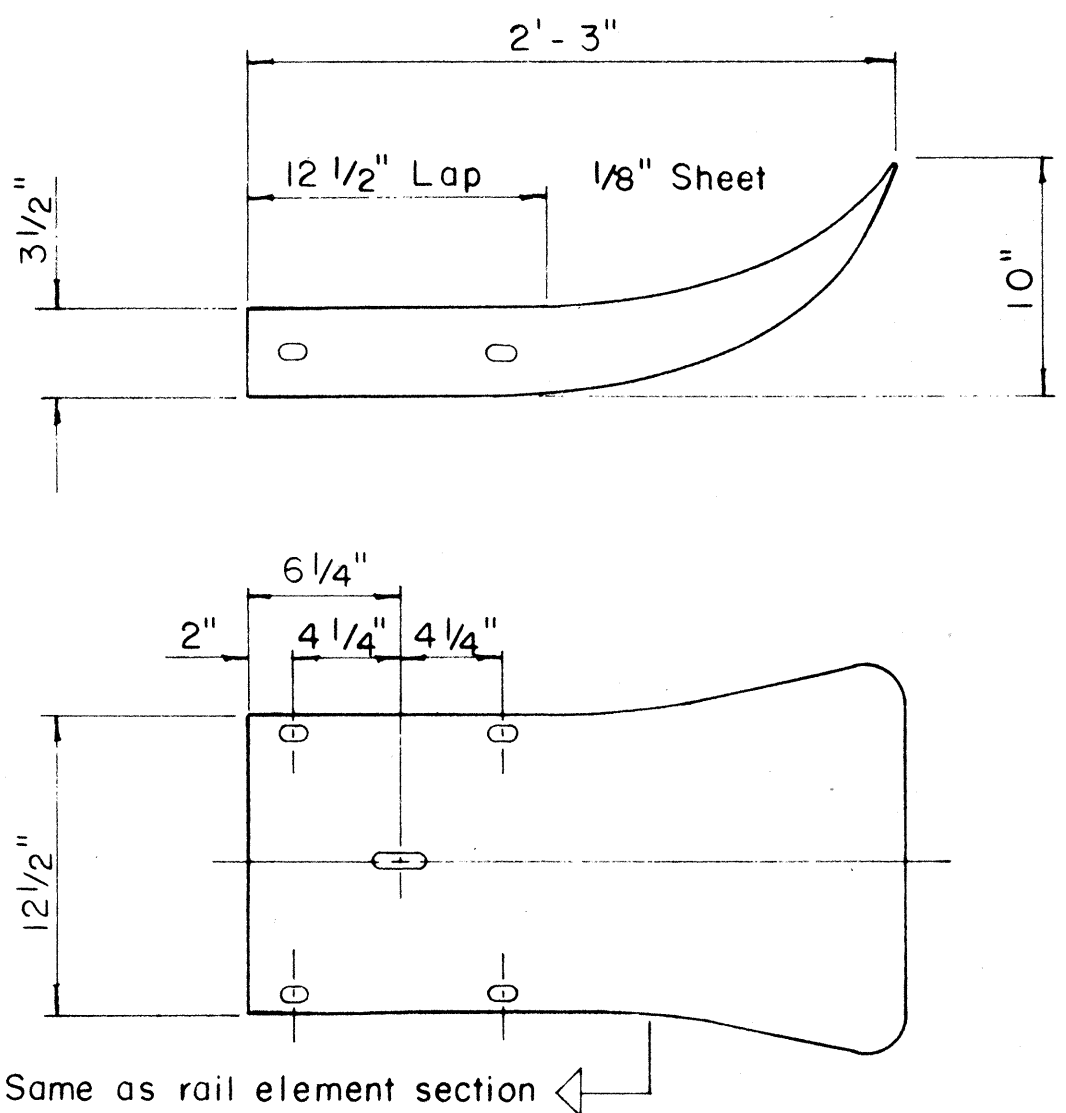
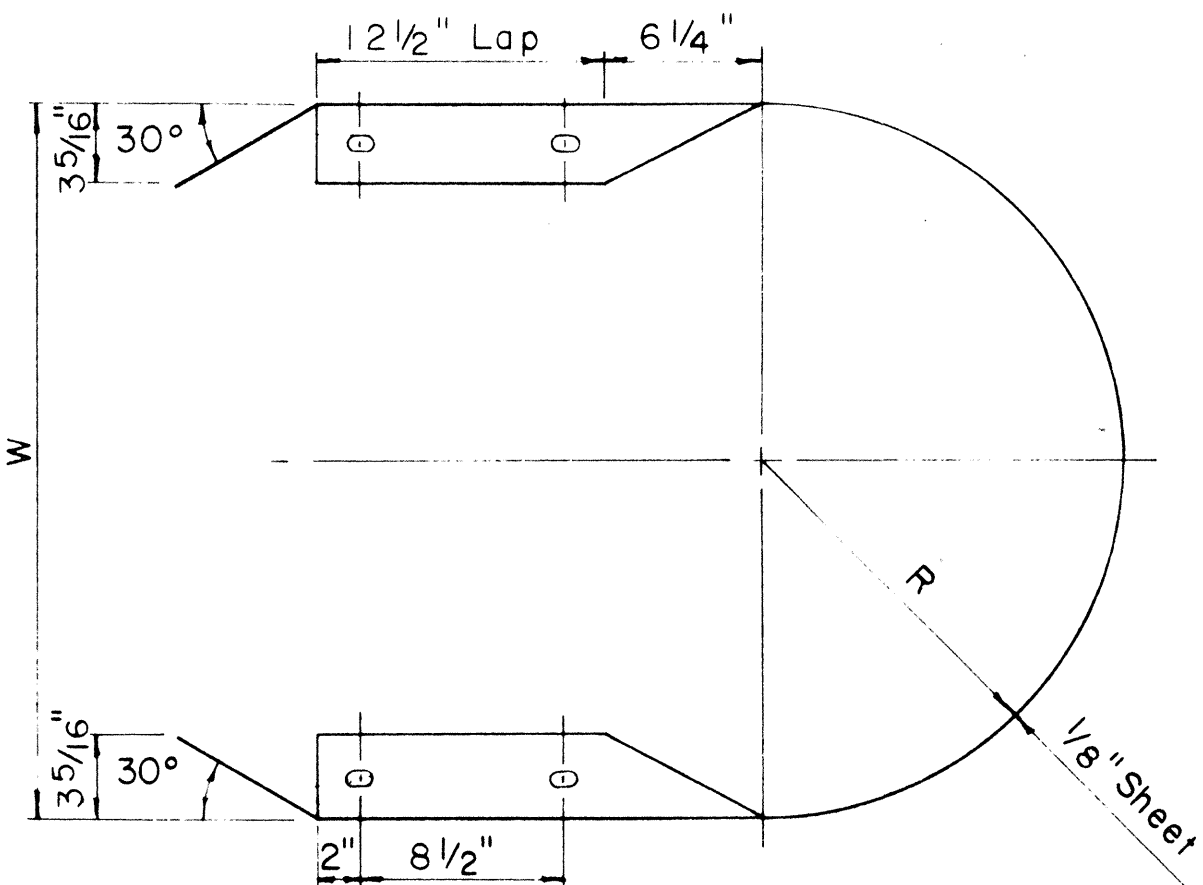
TYPE B BOLT

HEXAGON NUT

SPLICE RAIL AND POST BOLTS

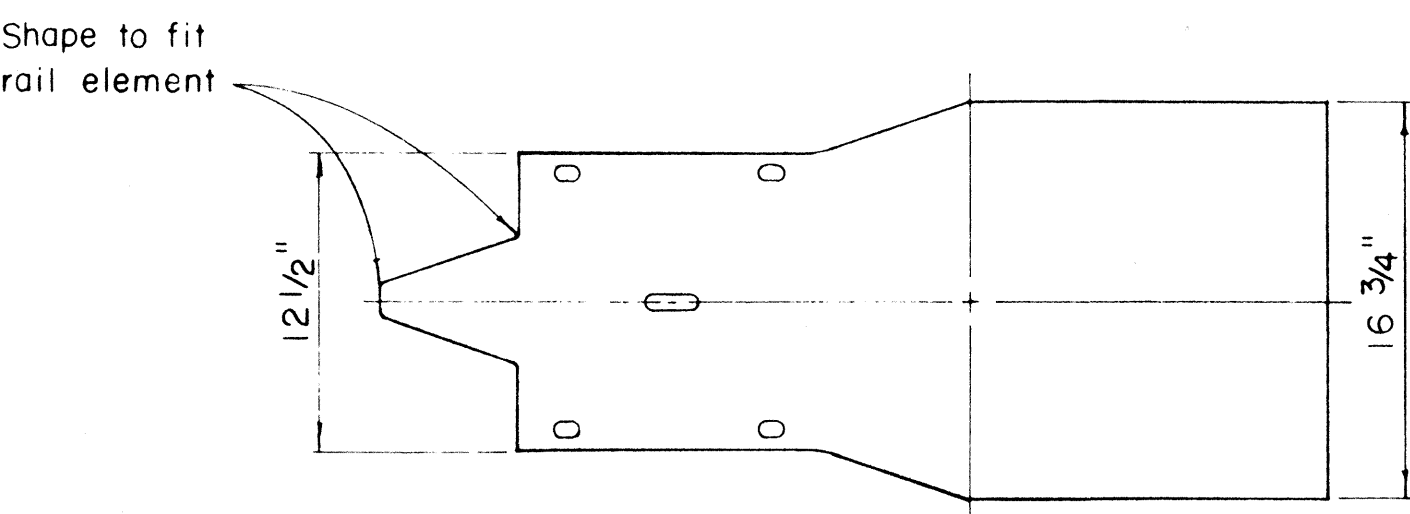
Scale: Full Size

Scale: Full Size



FLARED END

Scale: 1 1/2" = 1' - 0"

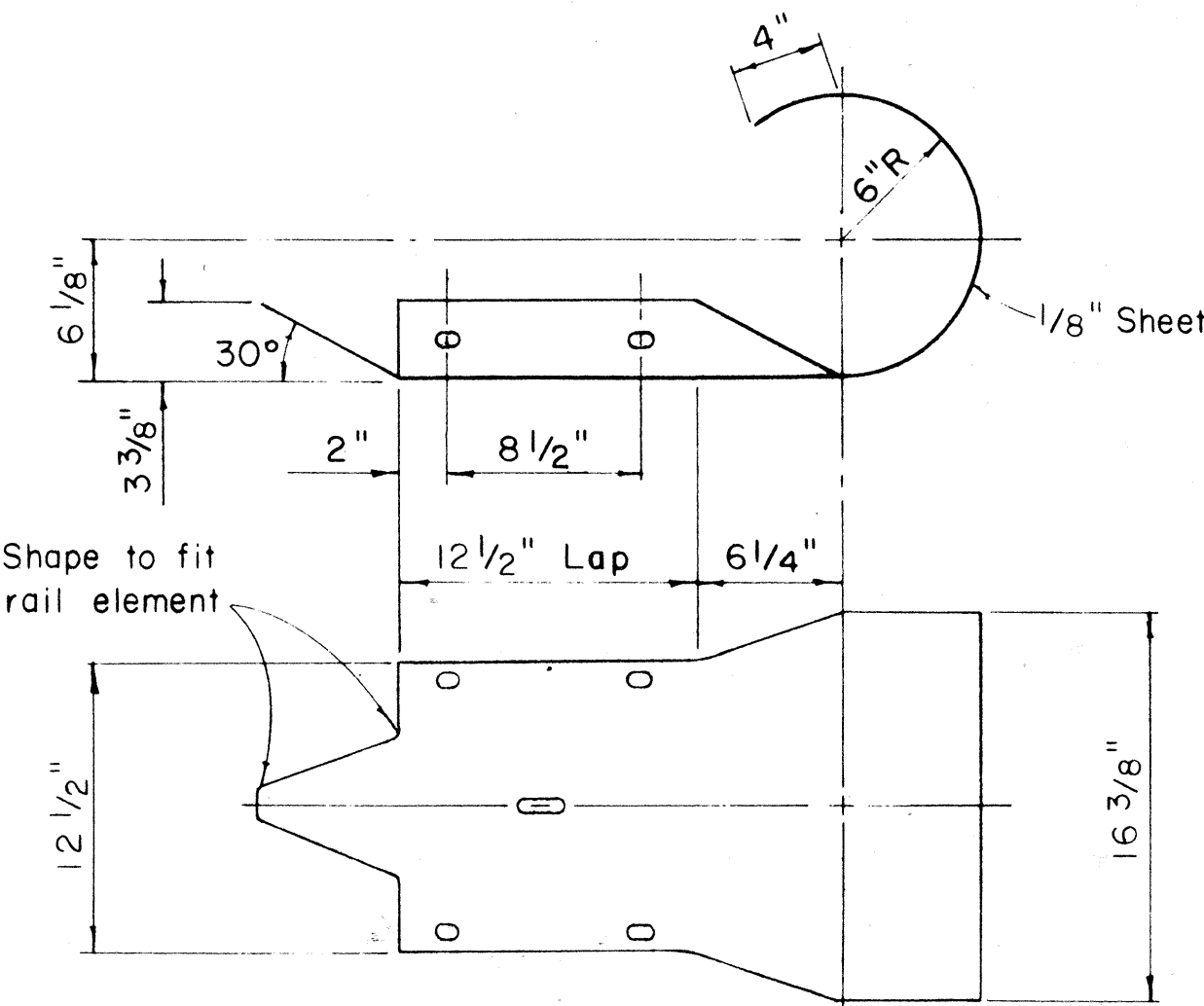


MEDIAN END

Scale: 1 1/2" = 1' - 0"

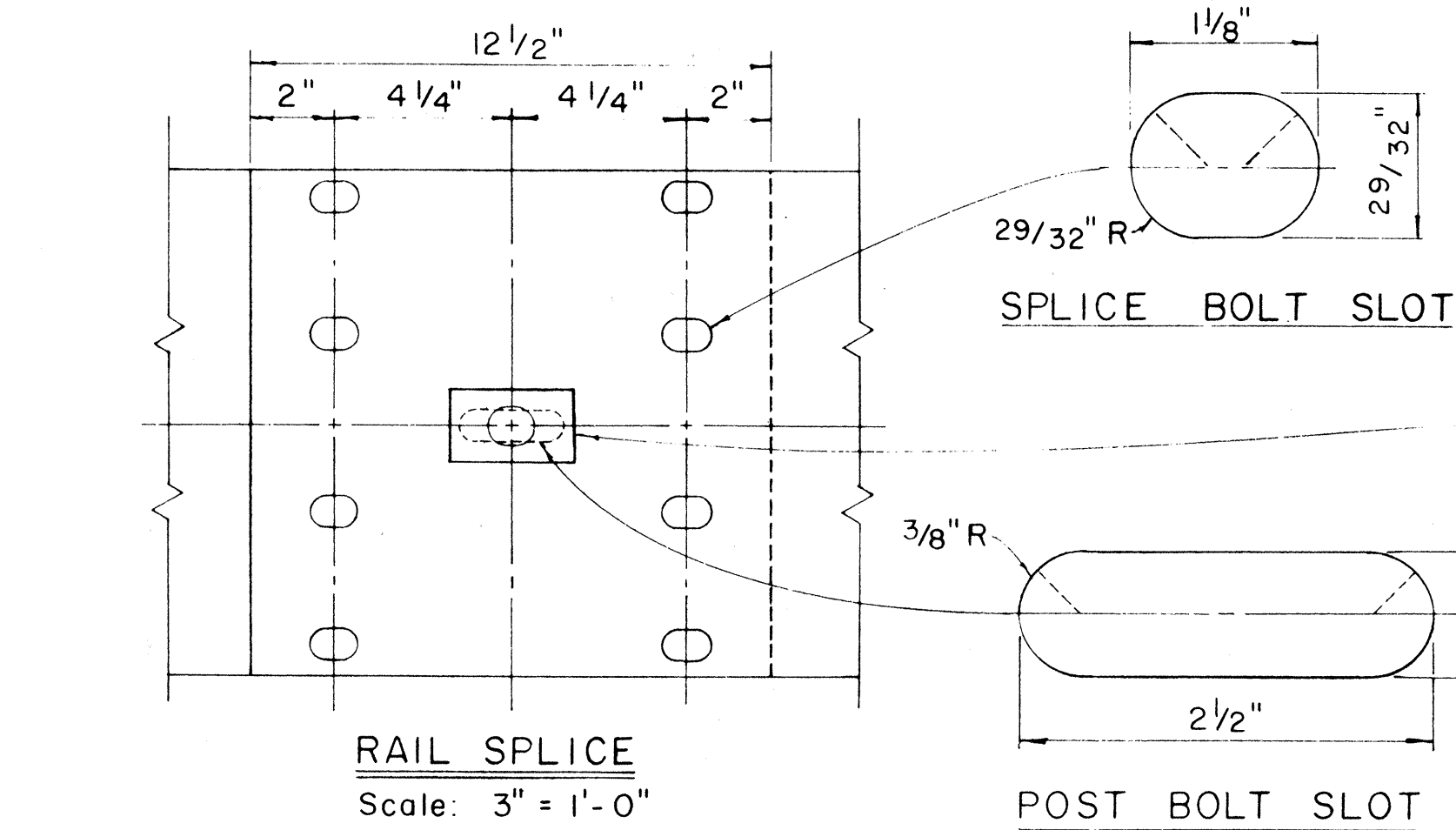
MEDIAN END DIMENSIONS

TYPE OF POST AND BLOCK	W	R
Double Metal Guard Rail on Concrete Post with Wood Blocks	29 3/4"	14 7/8"
Double Metal Guard Rail on Concrete Post with Metal Blocks (BJ6)	26 1/2"	13 1/4"
Double Metal Guard Rail on Metal Post with Metal Blocks (BJ6)	24 3/8"	12 3/16"



CURVED END

Scale: 1 1/2" = 1' - 0"

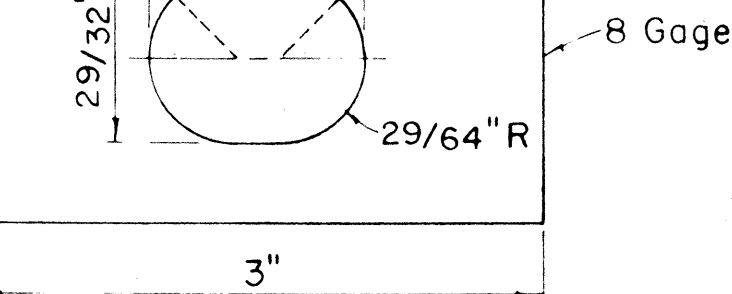


RAIL SPLICE

Scale: 3" = 1' - 0"

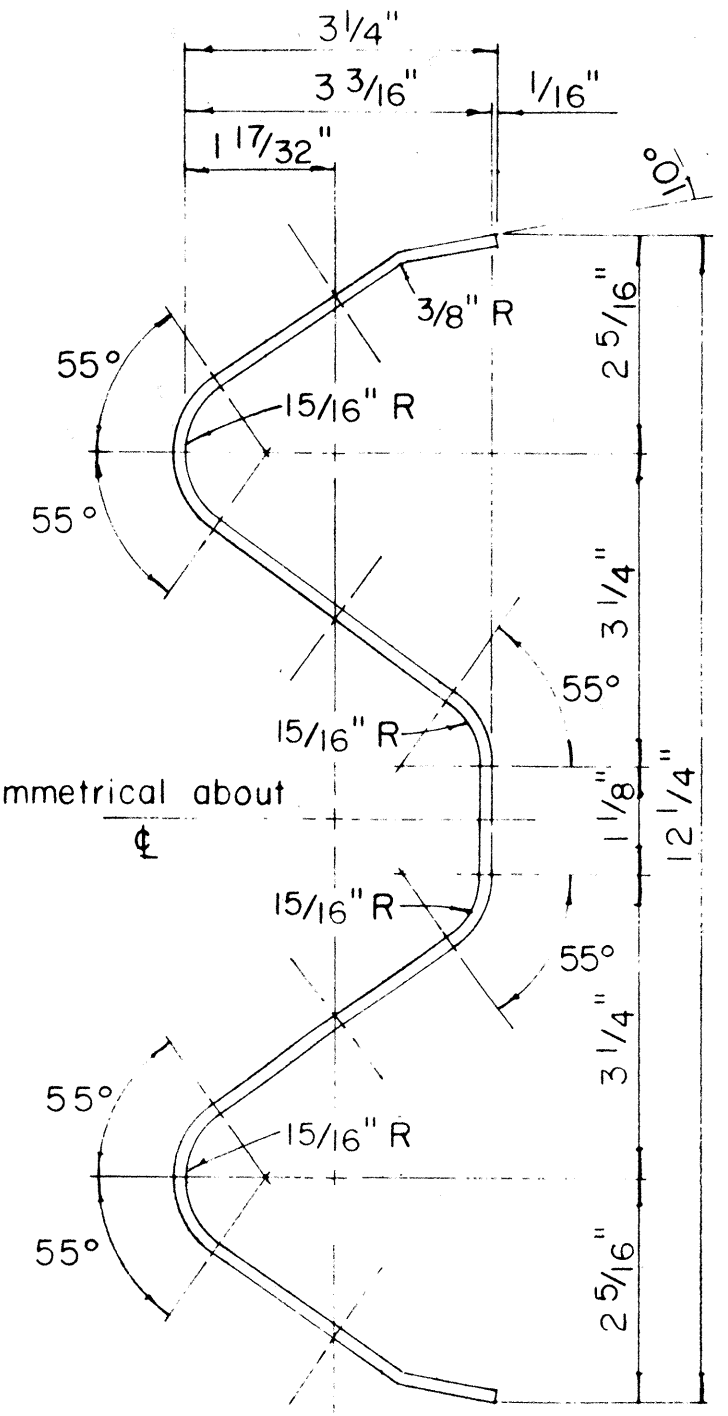
POST BOLT SLOT

RAIL WASHER



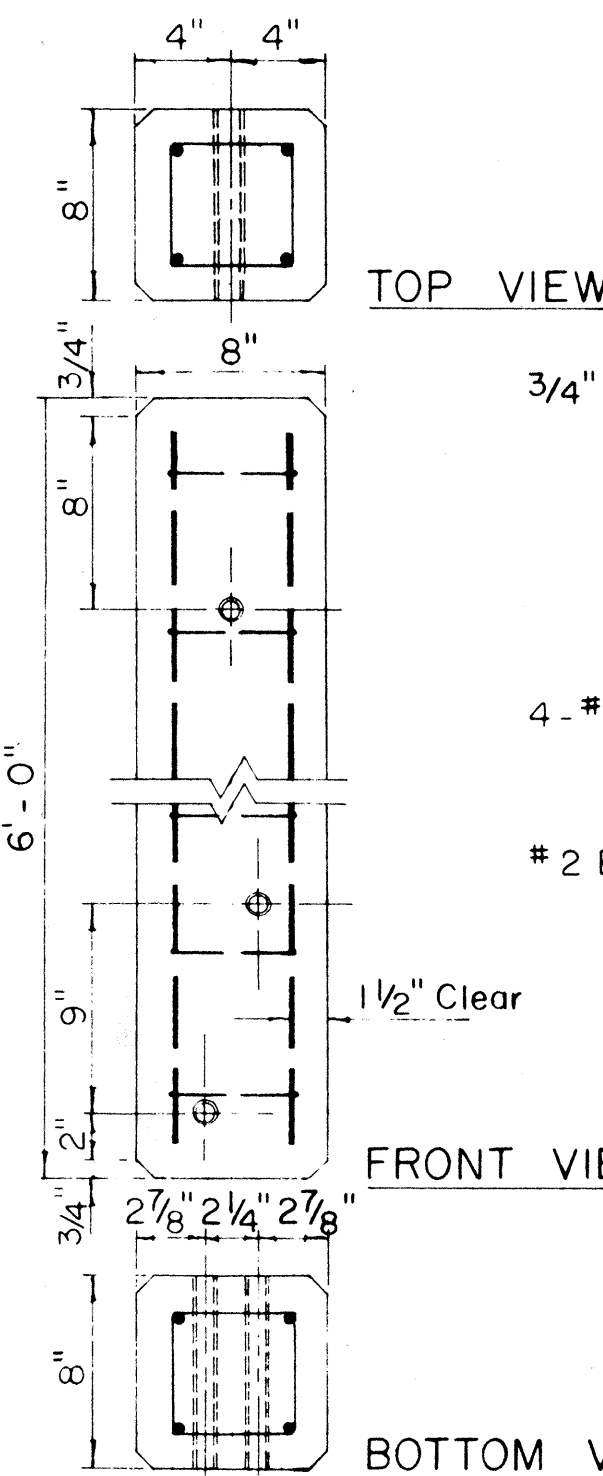
SPLICE BOLT SLOT FOR ALL ENDS

Scale: Full Size

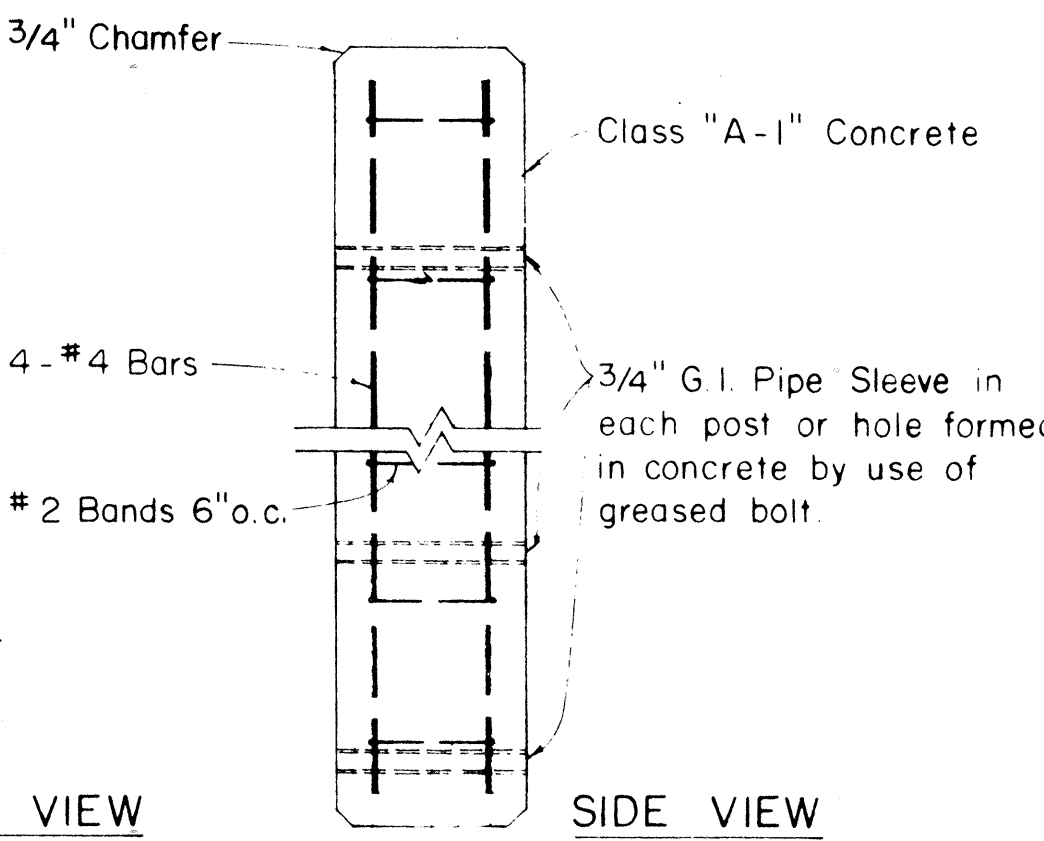


RAIL ELEMENT SECTION

Scale: 6" = 1' - 0"

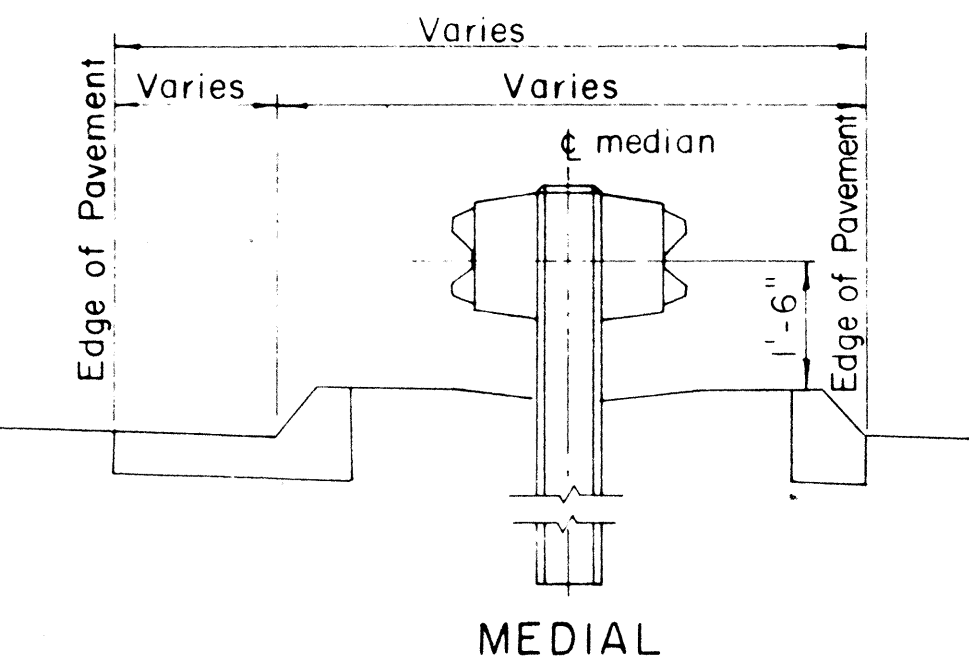


NOTE:
Concrete post shall be precast



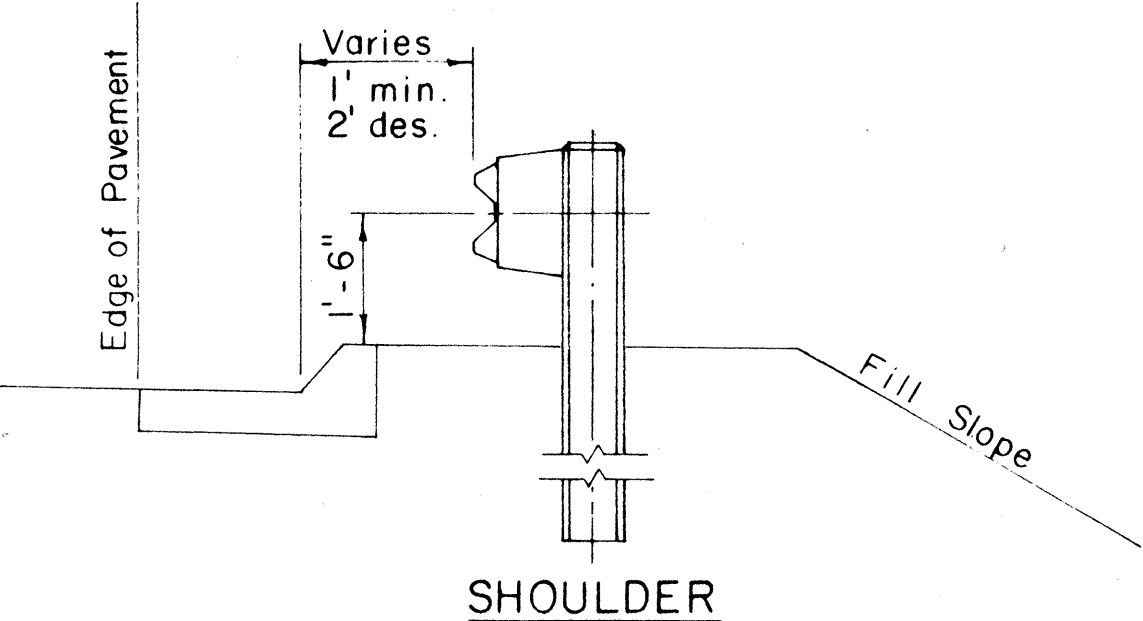
DETAIL OF CONCRETE POST

Scale: 1 1/2" = 1' - 0"



TYPICAL GUARD RAIL DETAIL

Scale: 1/2" = 1' - 0"



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

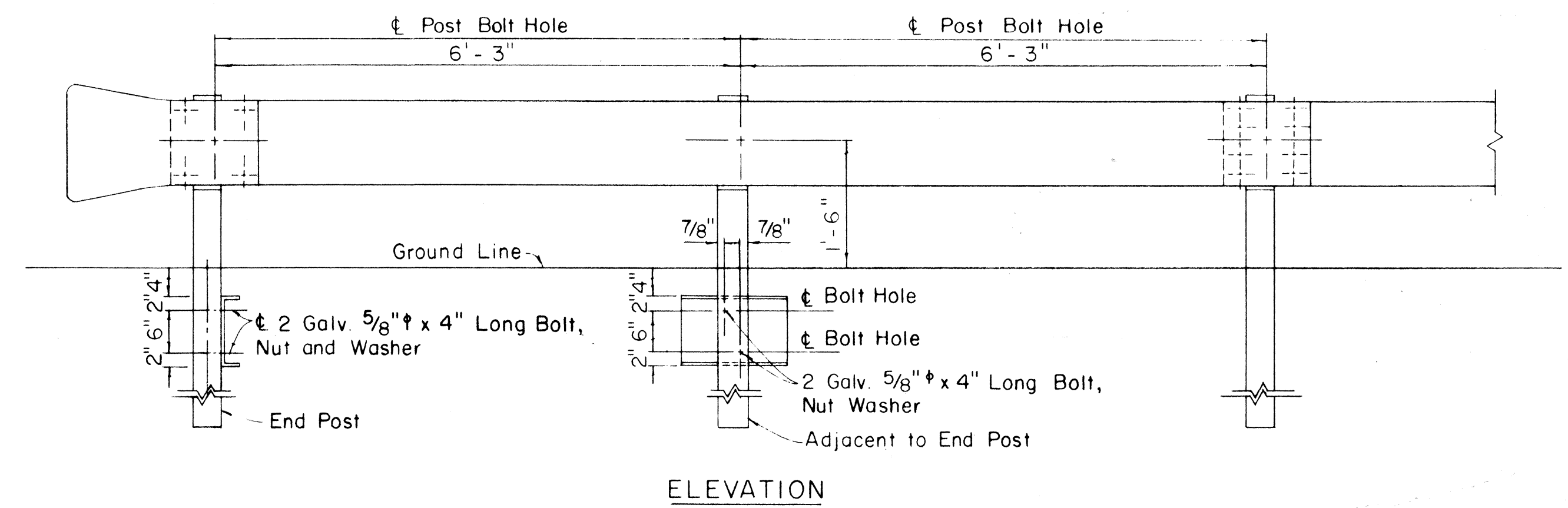
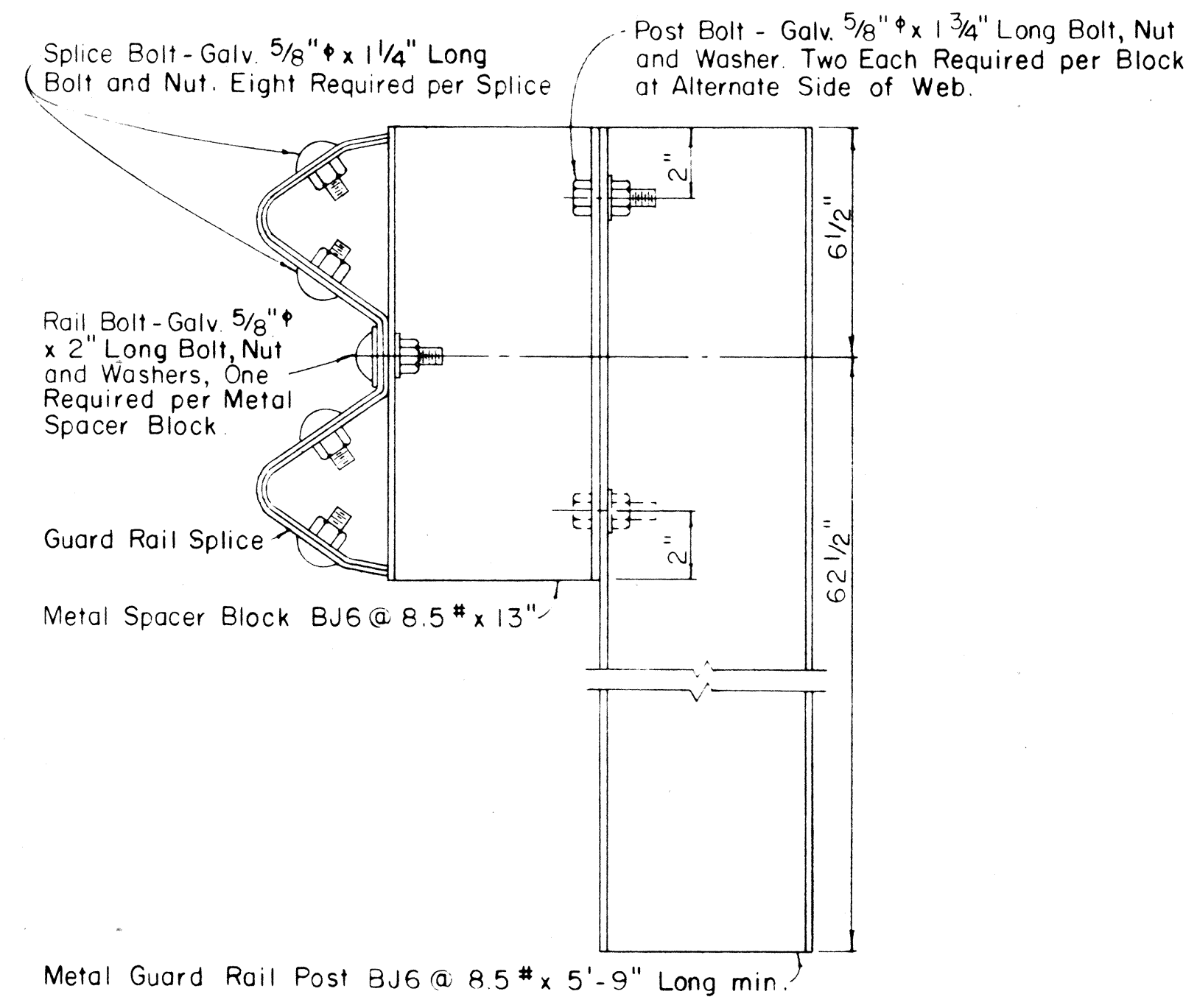
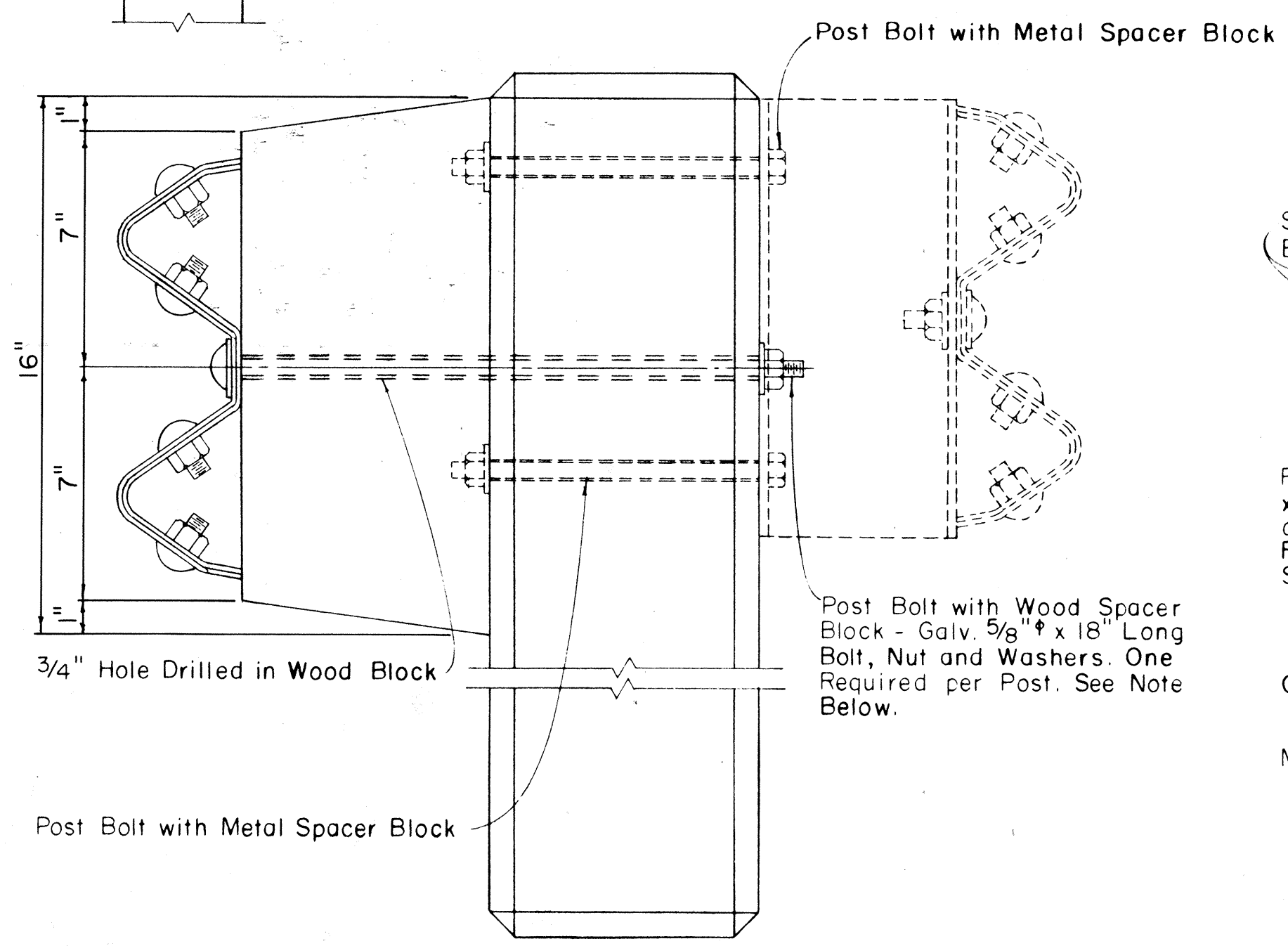
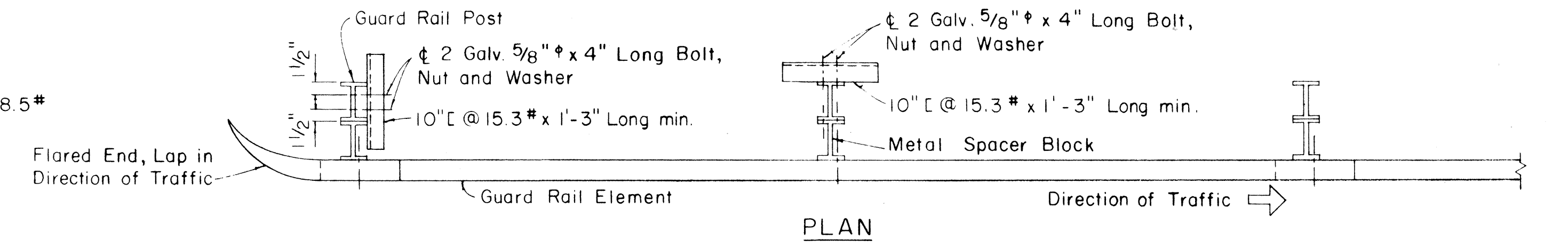
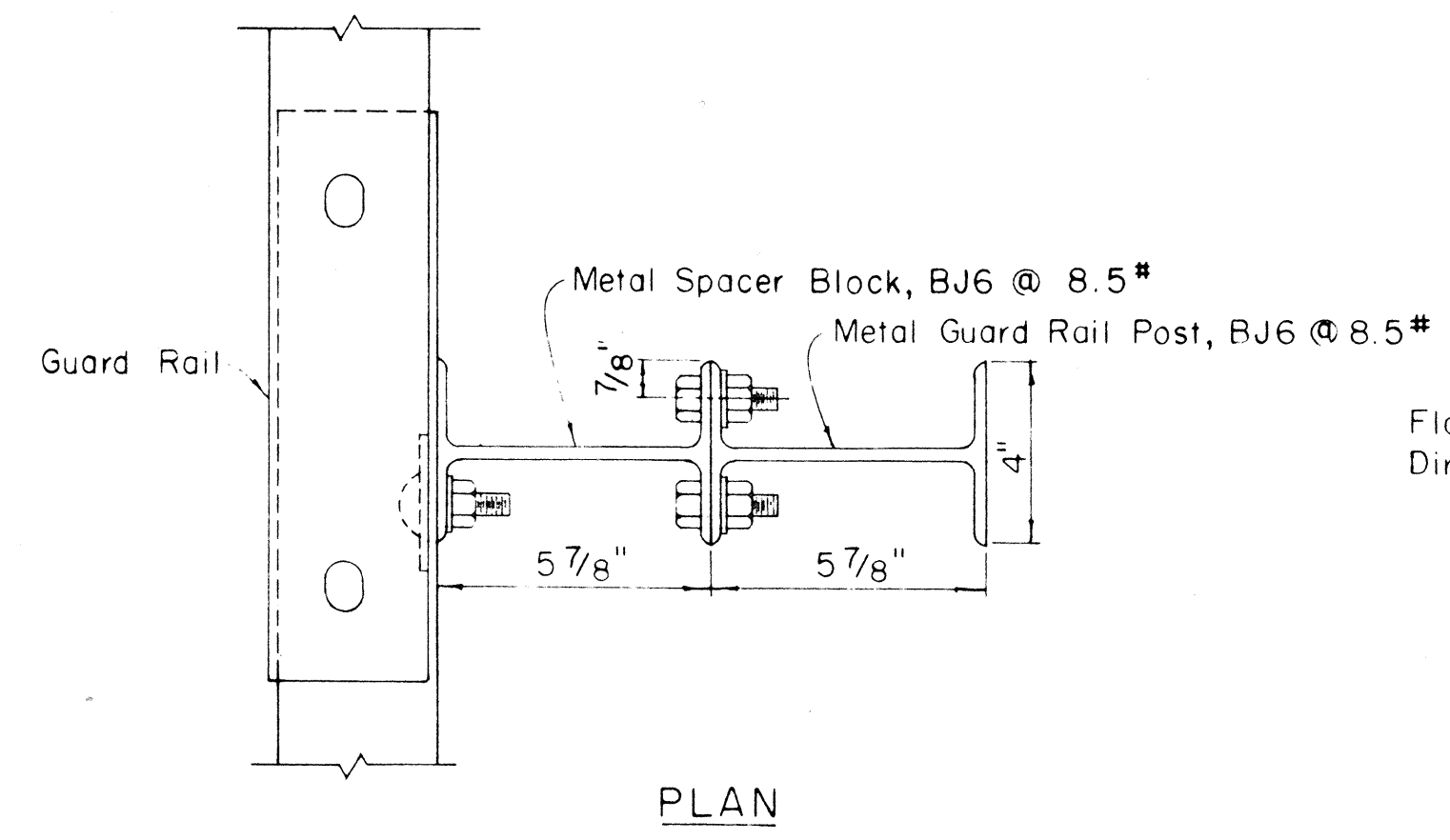
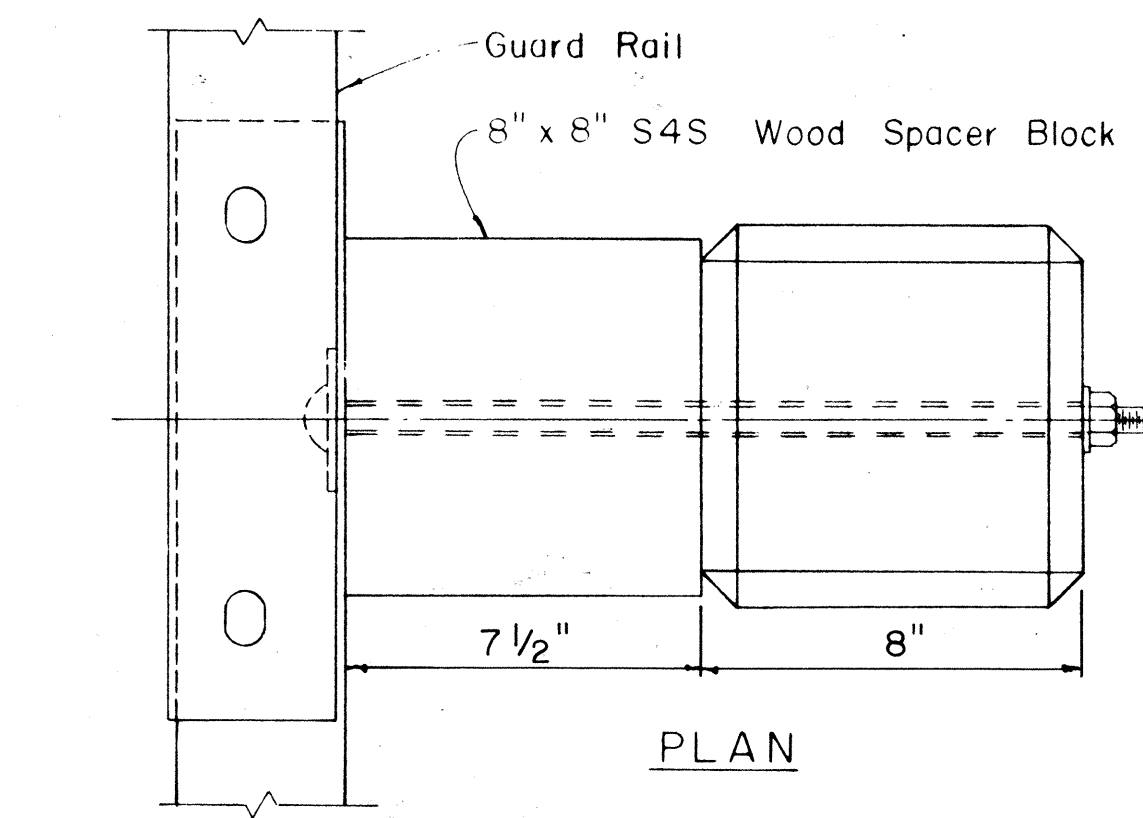
METAL GUARD RAIL

Scale: as noted

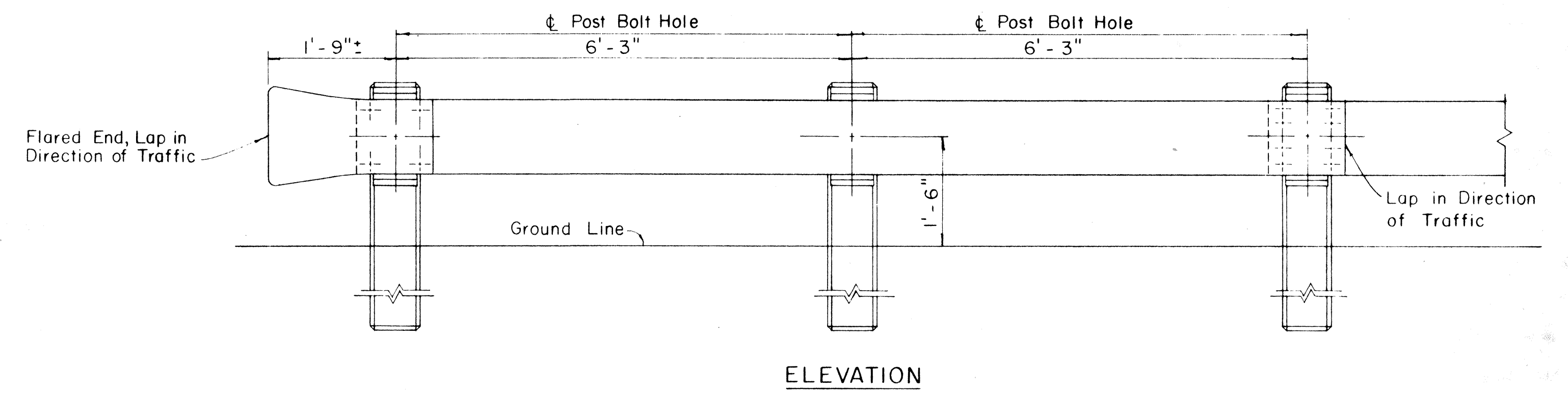
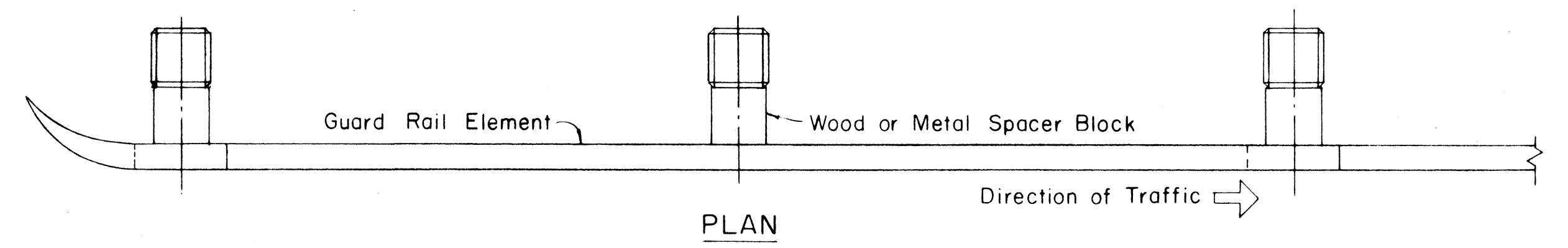
SHEET No. 7 OF 10 SHEETS

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
CHECKED BY	
NOTE BOOK	
NO.	

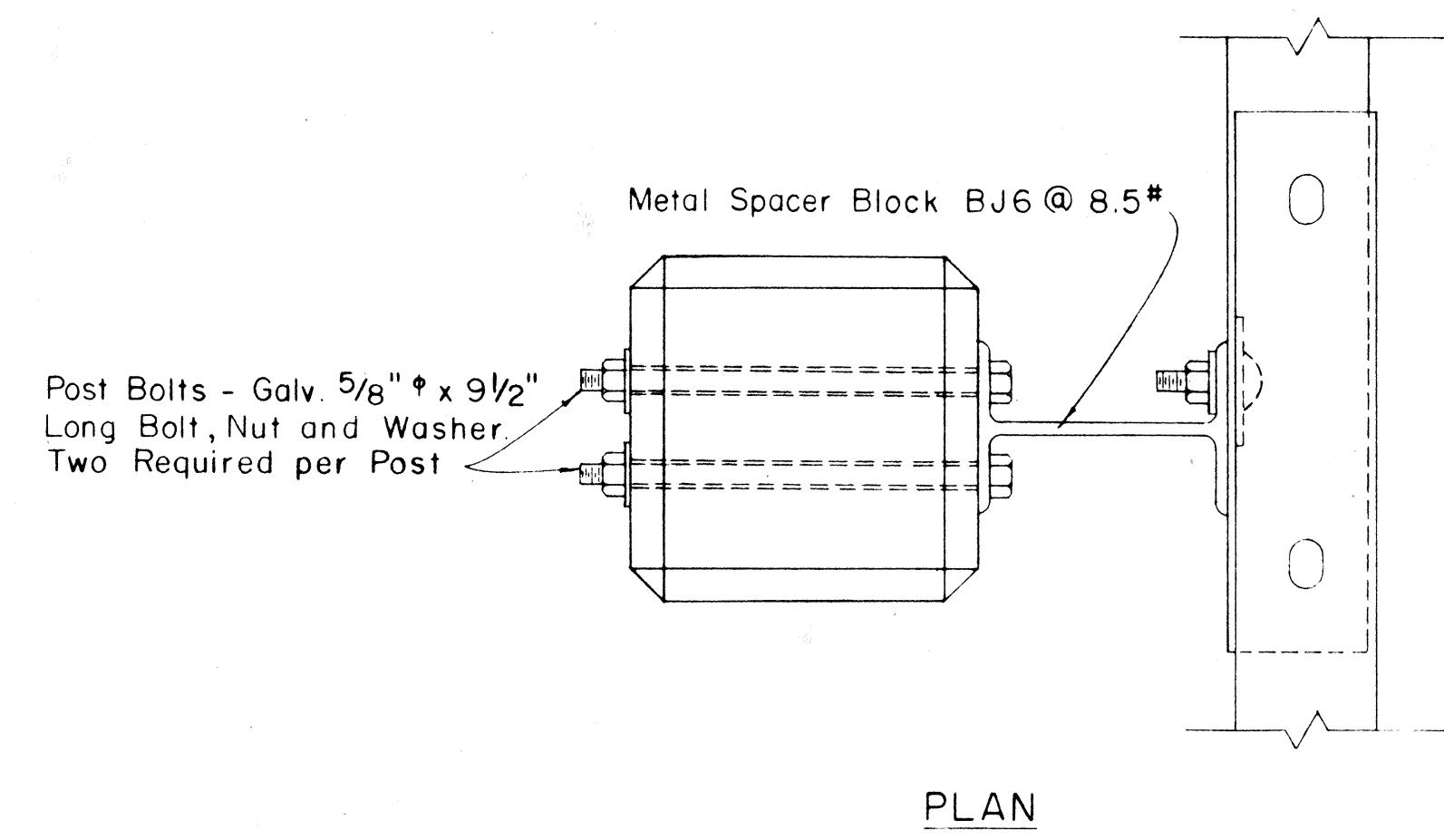
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				



METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK
Scale: 3/4" = 1' - 0"



METAL GUARD RAIL ON CONCRETE POST WITH WOOD OR METAL SPACER BLOCK
Scale: 3/4" = 1' - 0"



SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK
Scale: 3" = 1' - 0"

SINGLE METAL GUARD RAIL ON PRECAST CONCRETE POST WITH WOOD OR METAL SPACER BLOCK
Scale: 3" = 1' - 0"

NOTE:
Single Guard Rails Shown. For Double Guard Rails Additional Spacer Blocks and Rail Elements Required on Opposite Side of Posts. See Bolt Schedule for Required Bolt Lengths.

DETAILS FOR SINGLE GUARD RAIL

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

METAL GUARD RAIL

Scale: as noted

SHEET No. 10 OF 10 SHEETS

DATE	
DESIGNED BY	
CHECKED BY	
NOTED BY	
NO.	