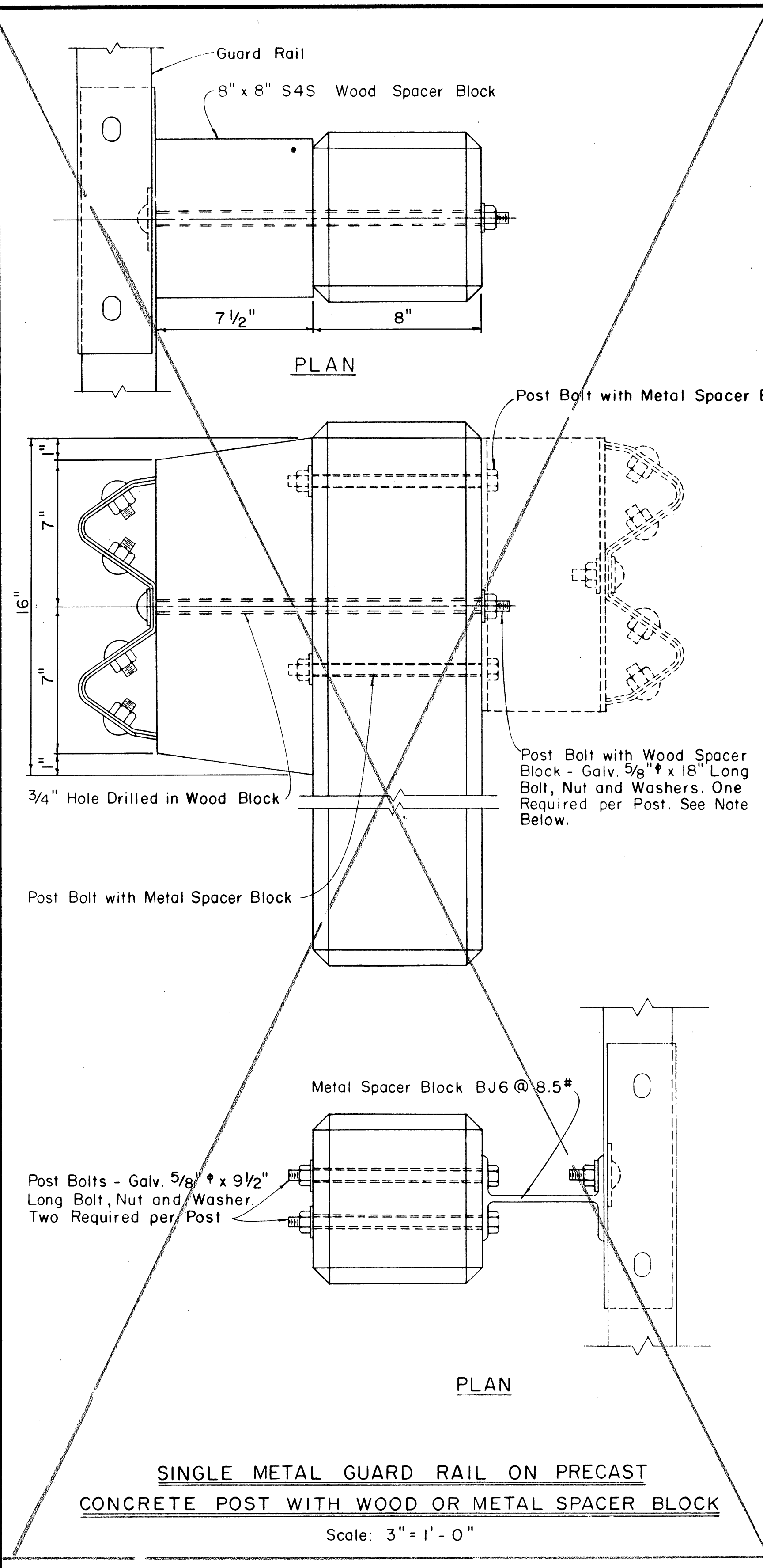
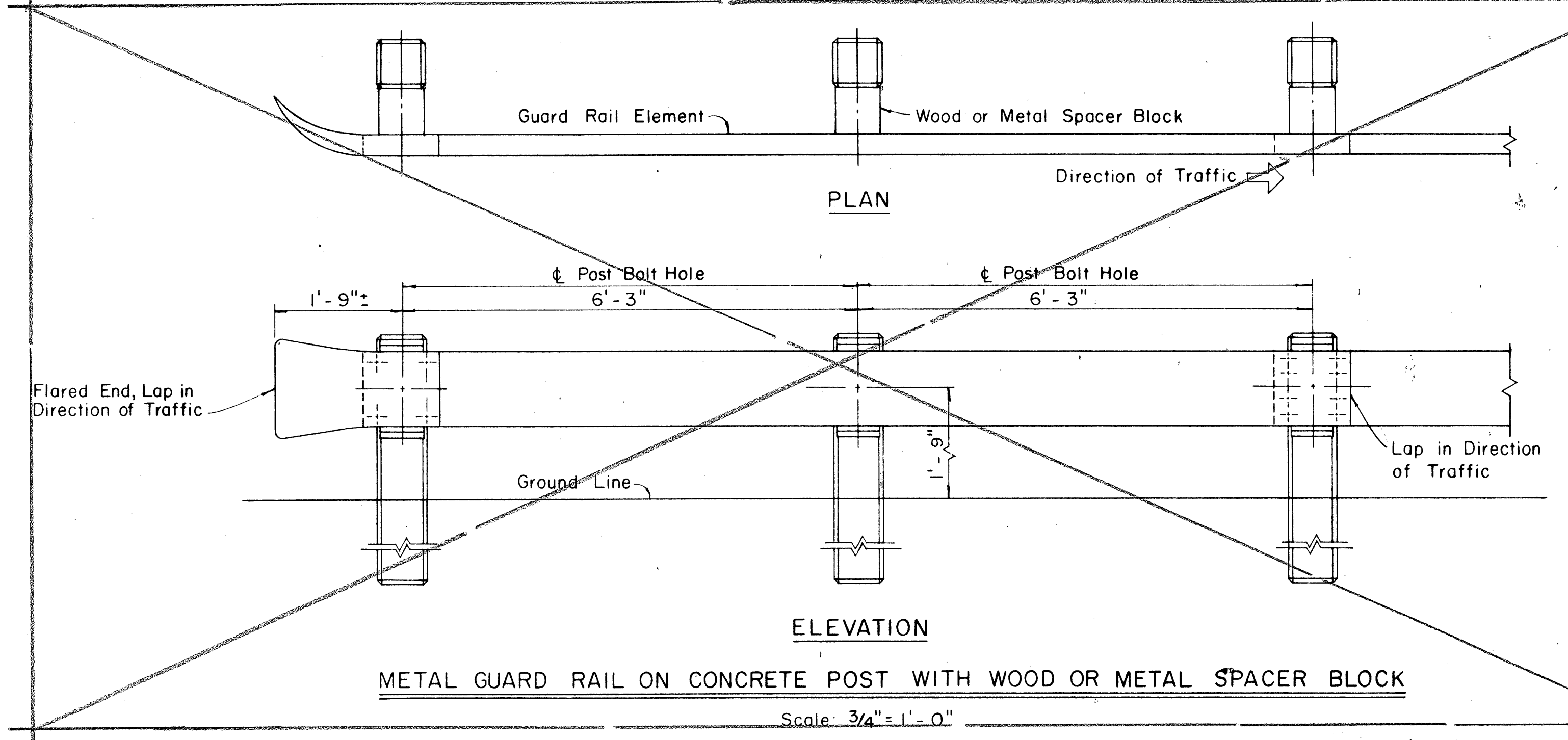
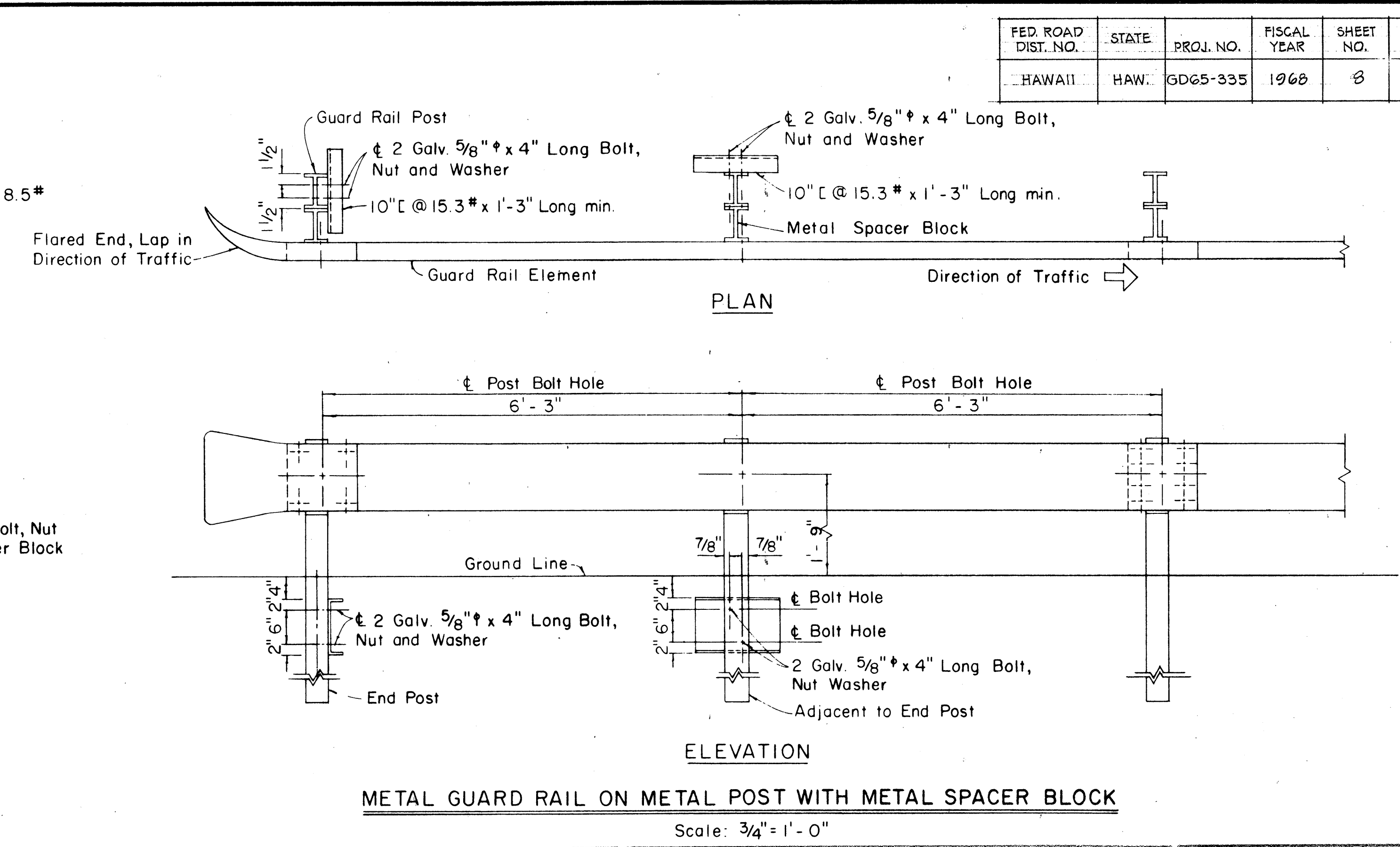
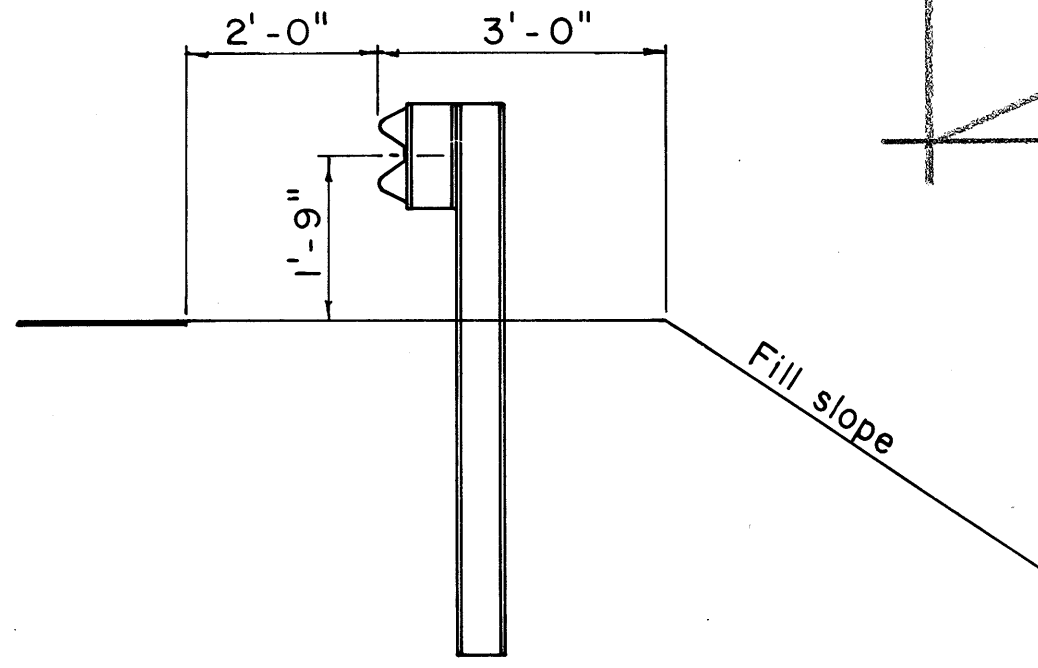
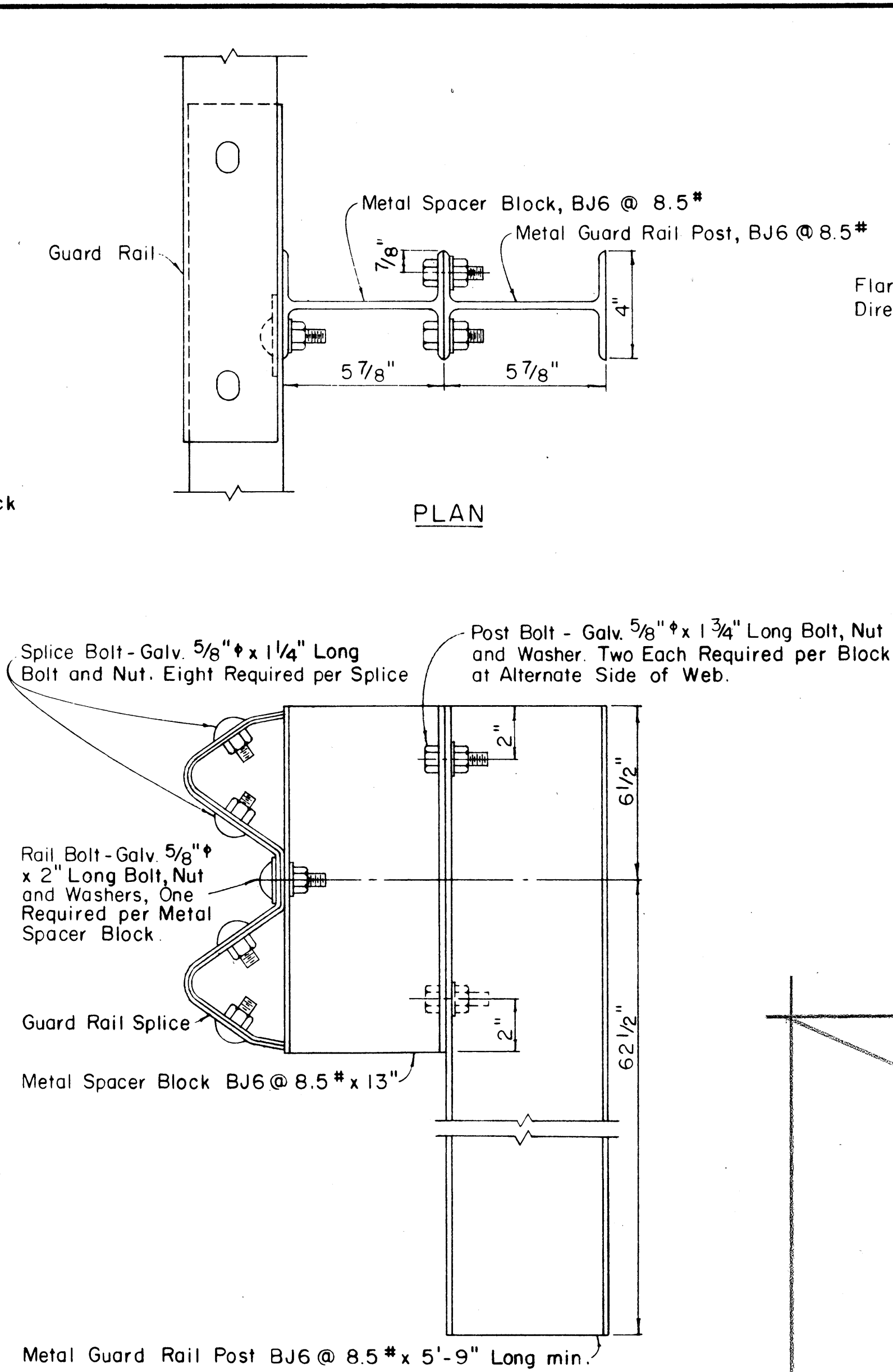


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	GD65-335	1968	8	12



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.



REVISED: October 27, 1967
REVISED: August 10, 1967

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

METAL GUARD RAIL

Scale: as noted

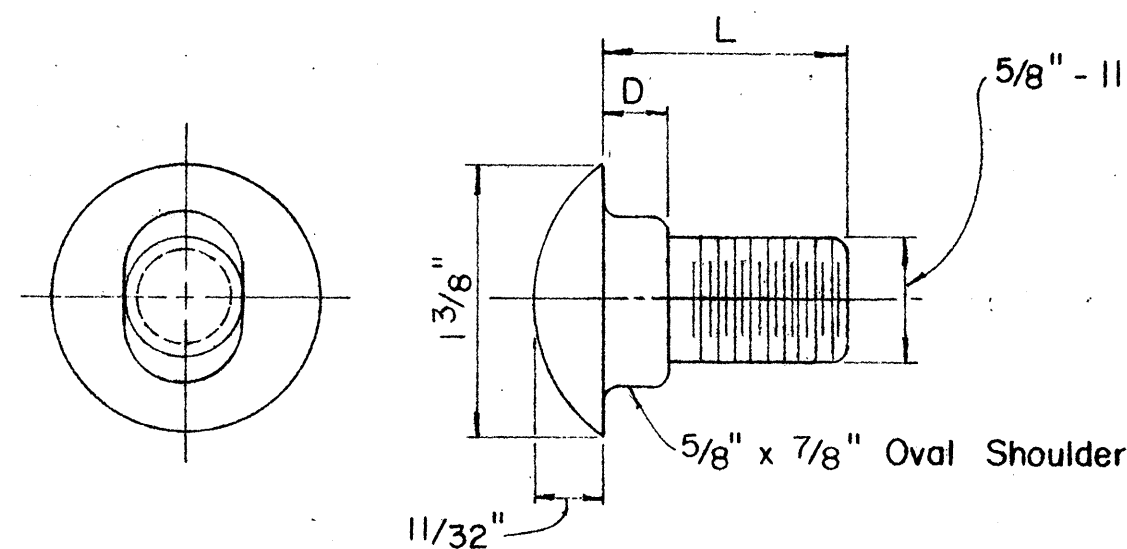
Sep 27, 1968

SHEET No. 8 OF 12 SHEETS

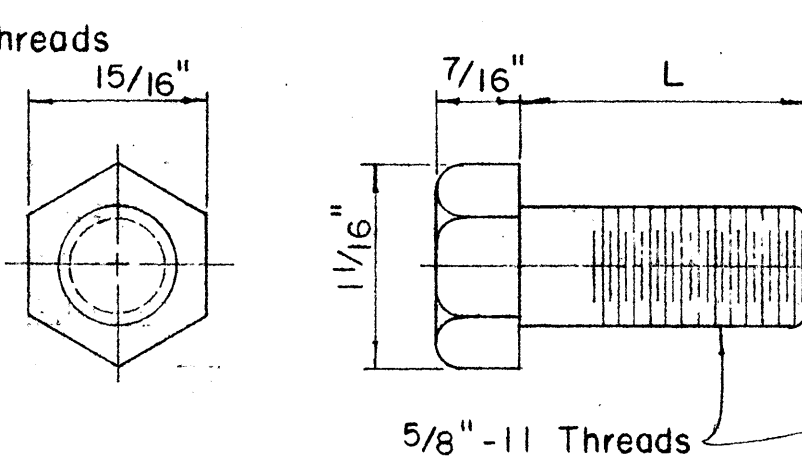
SURVEY PLANNED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

BOLT DIMENSIONS TYPE A BOLT		
	D	L
Splice Bolt	5/16"	1 1/4"
Post Bolt for Conc. Post w/ Double Wood Blocks	3/32"	2 1/2"
Post Bolt for Conc. Post w/ Single Wood Block	3/32"	1 8"
Rail Bolt for Metal Block	3/32"	2"

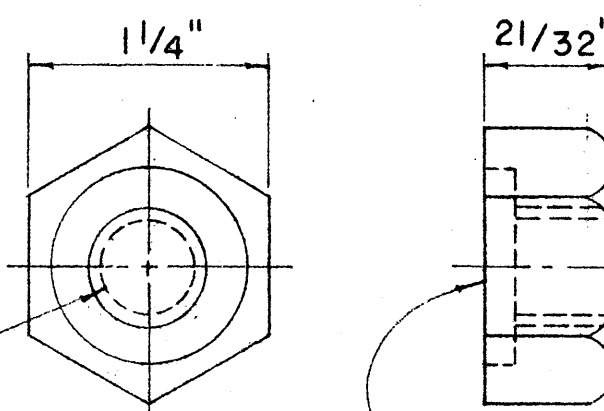
BOLT DIMENSIONS TYPE B BOLT	
	L
Post Bolt for Conc. Post w/ Metal Blocks	9 1/2"
Post Bolt for Metal Post w/ Metal Block	1 3/4"



TYPE A BOLT



TYPE B BOLT



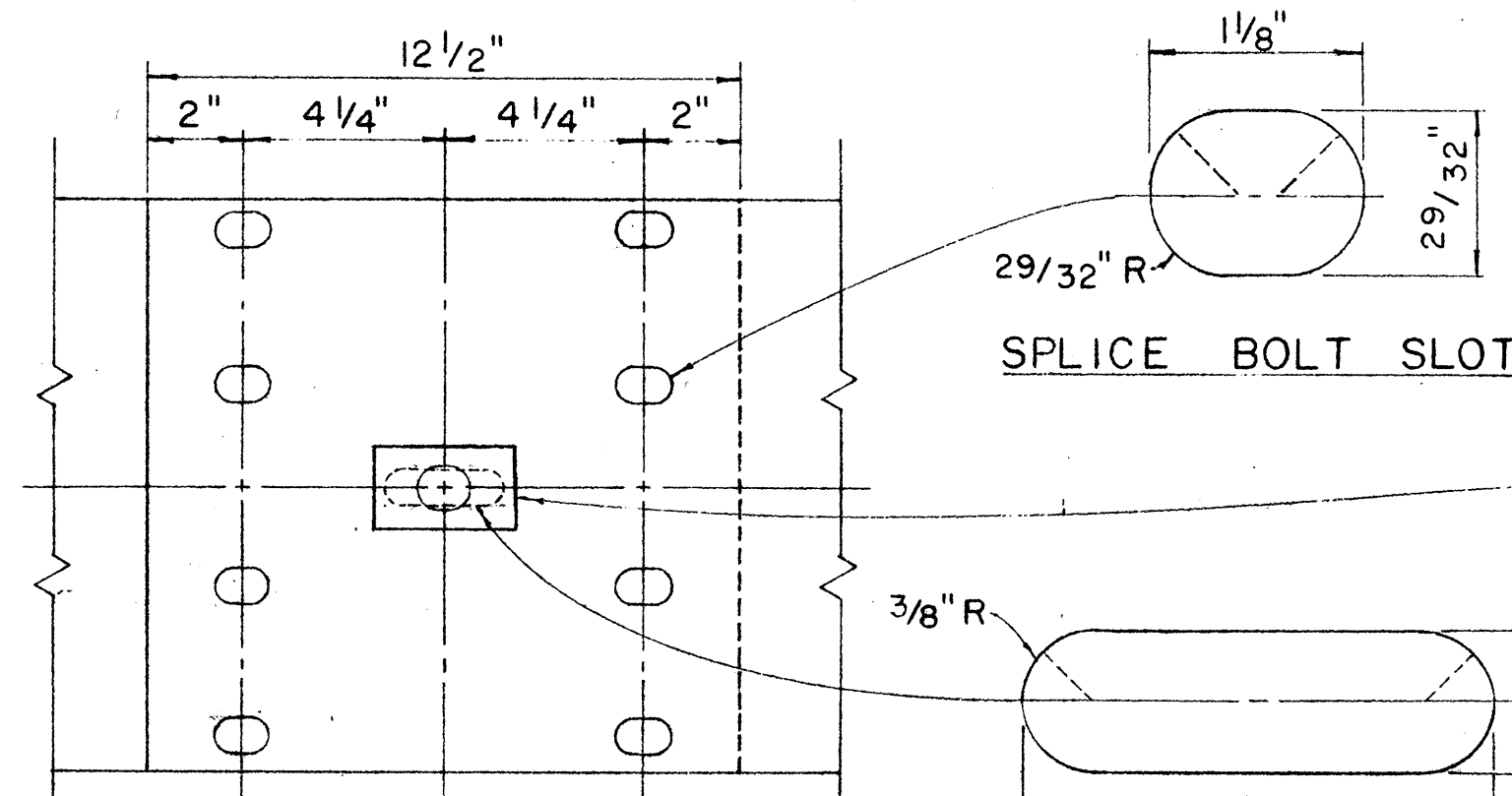
HEXAGON NUT

5/32" Deep x 15/16" Dia.
C' Bore for Type A Bolt only.
Plain nut for Type B Bolt.

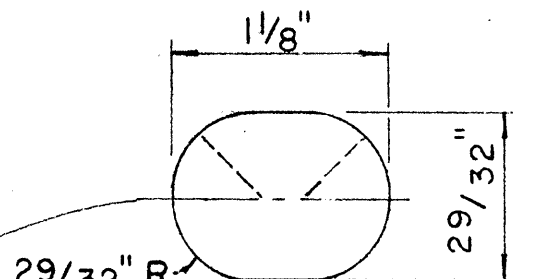
Scale: Full Size

SPLICE RAIL AND POST BOLTS

Scale: Full Size

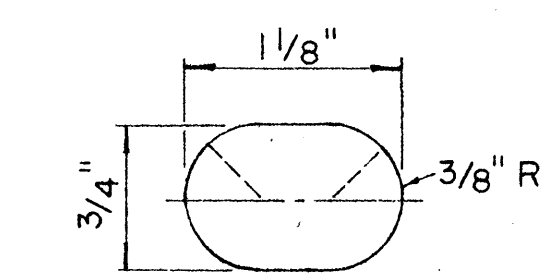


RAIL SPLICE
Scale: 3" = 1'-0"

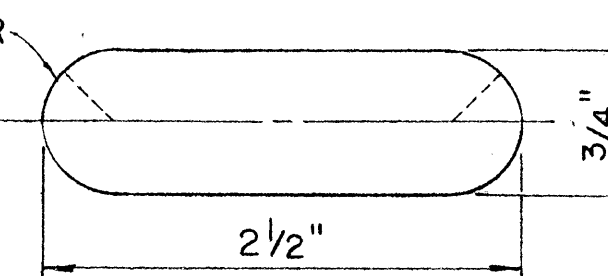


SPLICE BOLT SLOT

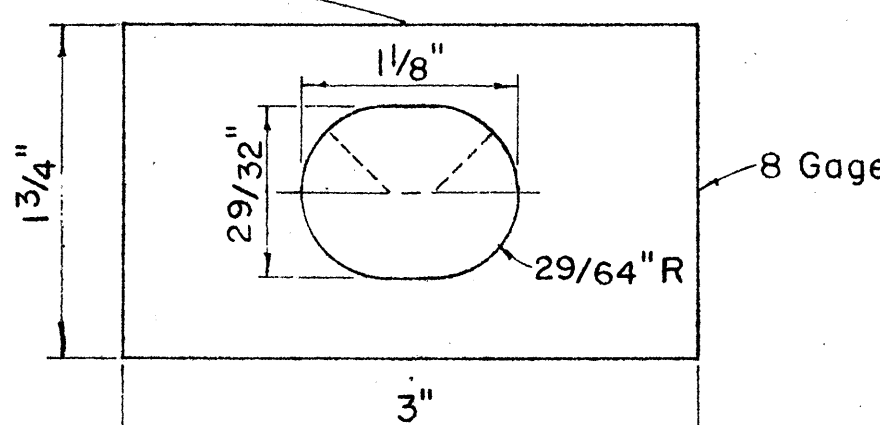
Scale: Full Size



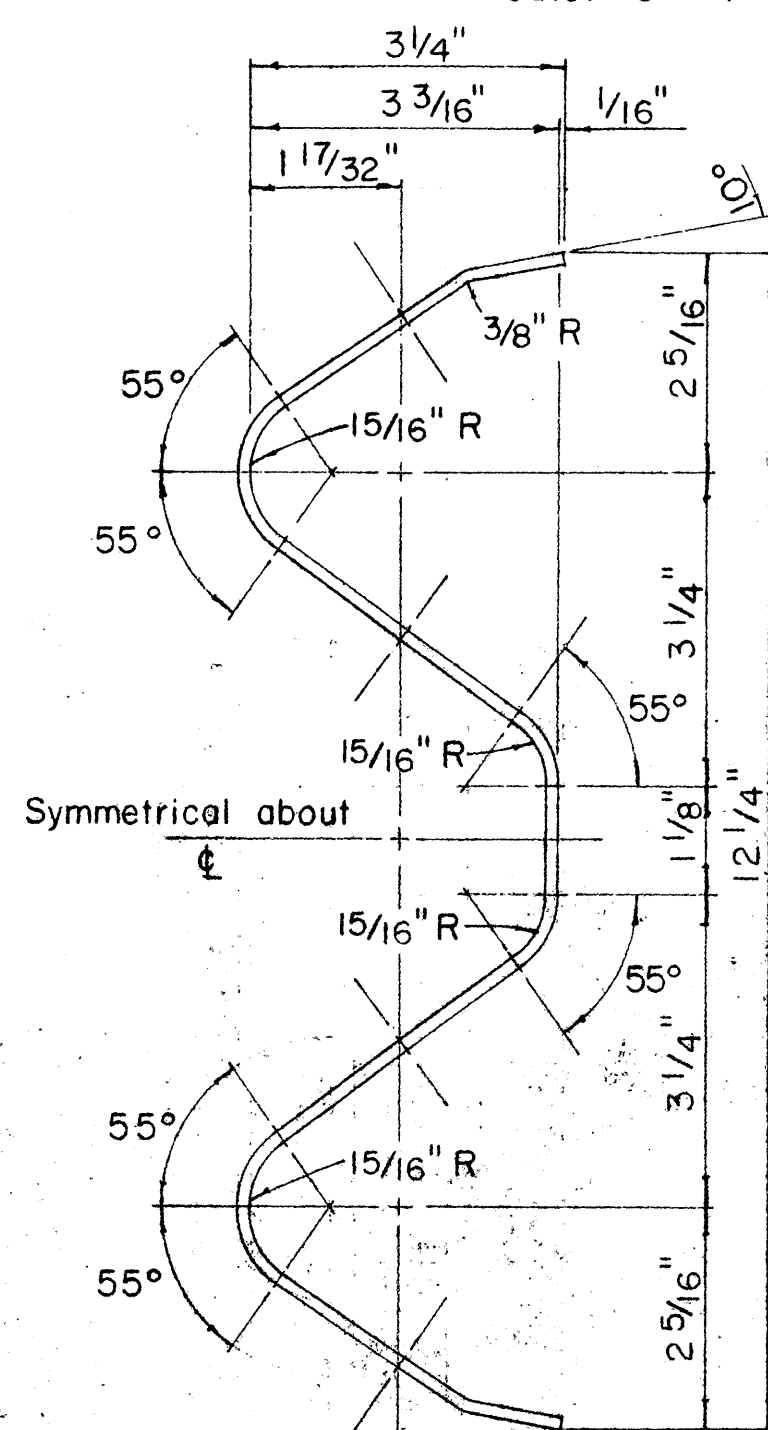
SPLICE BOLT SLOT
FOR ALL ENDS



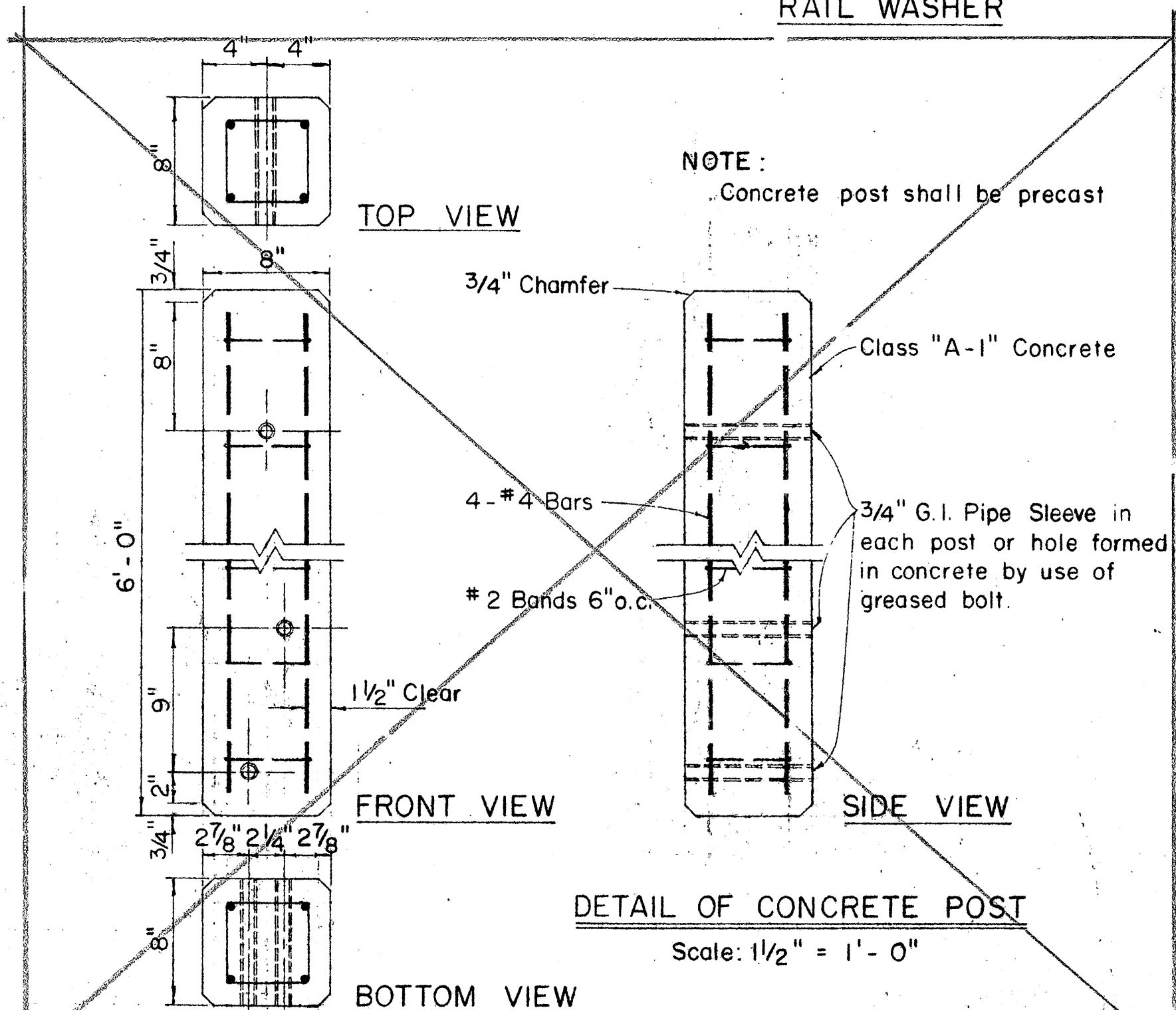
POST BOLT SLOT



RAIL WASHER

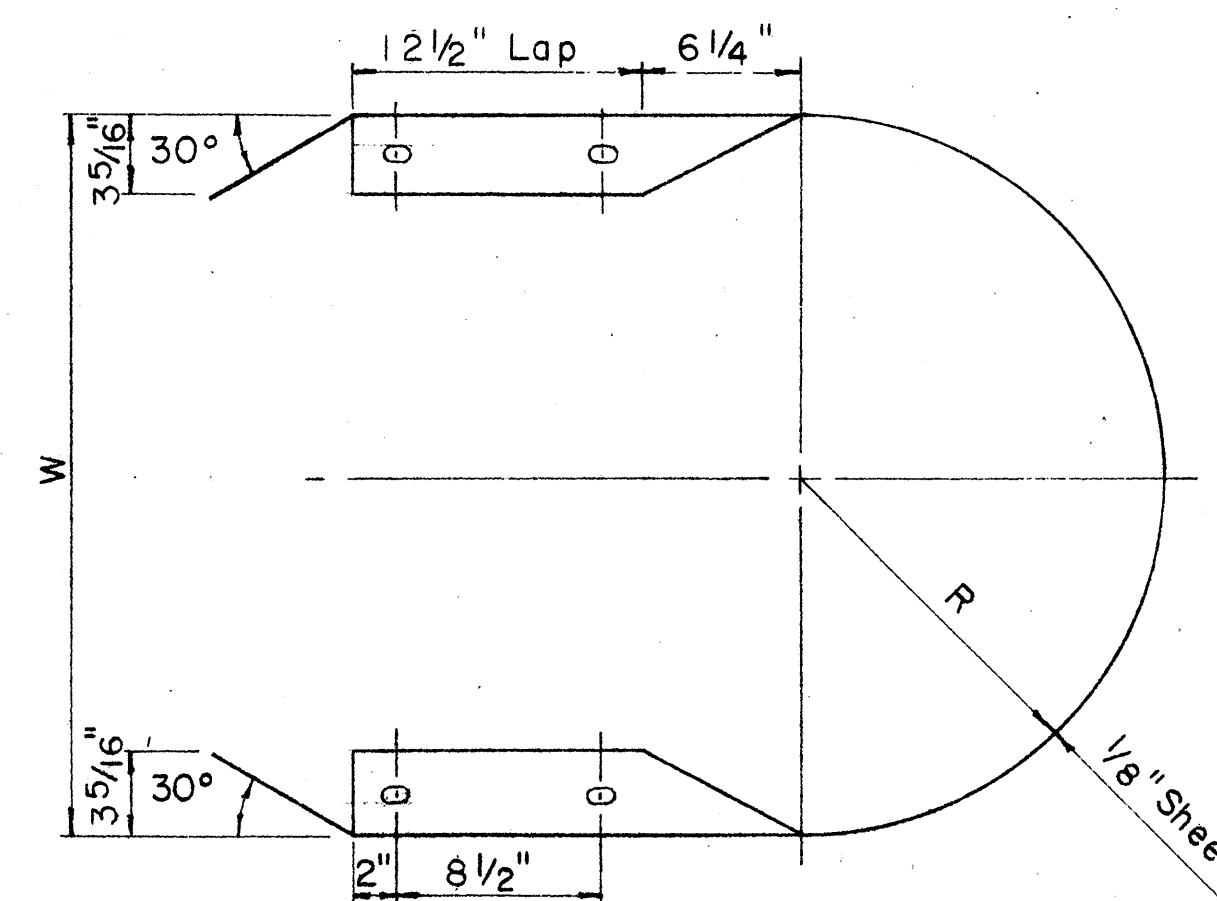


RAIL ELEMENT SECTION
Scale: 6" = 1'-0"



DETAIL OF CONCRETE POST
Scale: 1 1/2" = 1'-0"

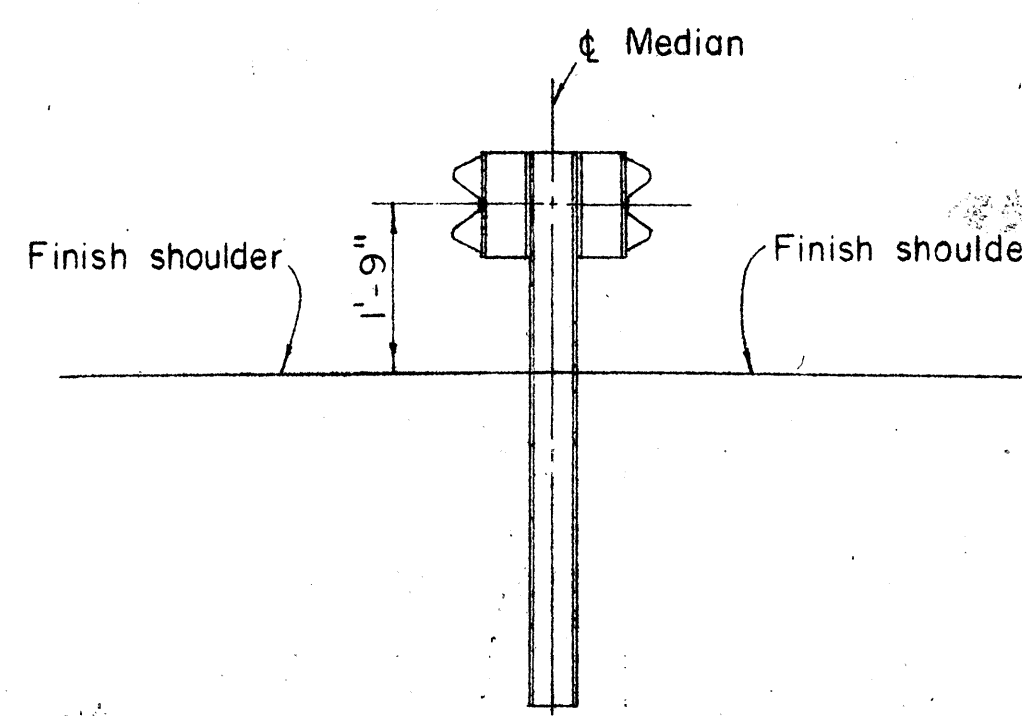
NOTE:
Concrete post shall be precast
Class "A-1" Concrete



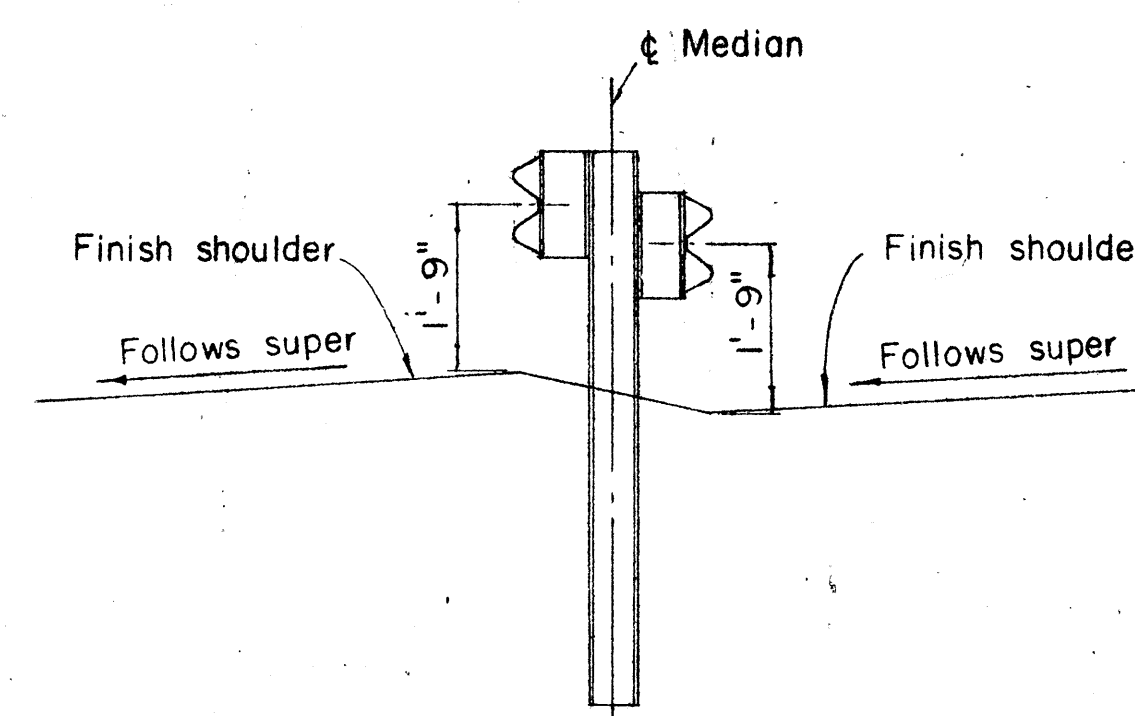
MEDIAN END
Scale: 1 1/2" = 1'-0"

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 (BJ 6)	26 1/2"	13 1/4"
Double Metal Guard Rail on Metal Post with Metal Blocks (BJ 6)	24 3/8"	12 3/16"

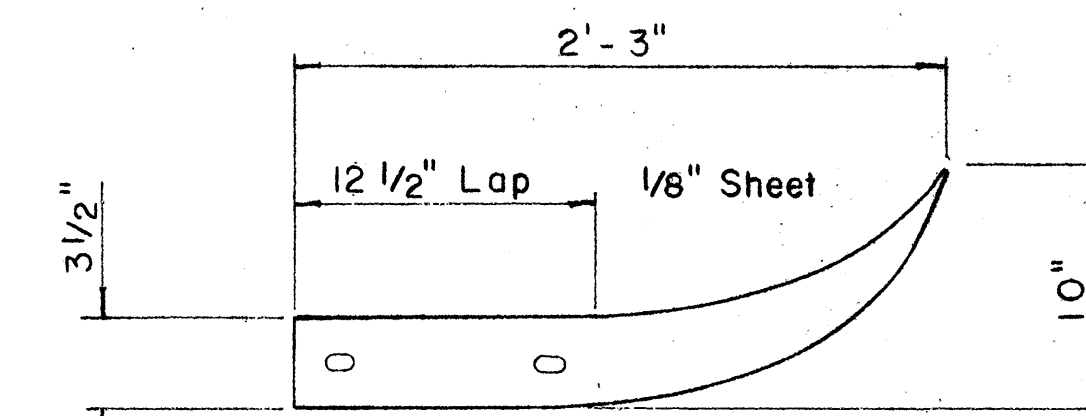


AT TANGENT SECTION

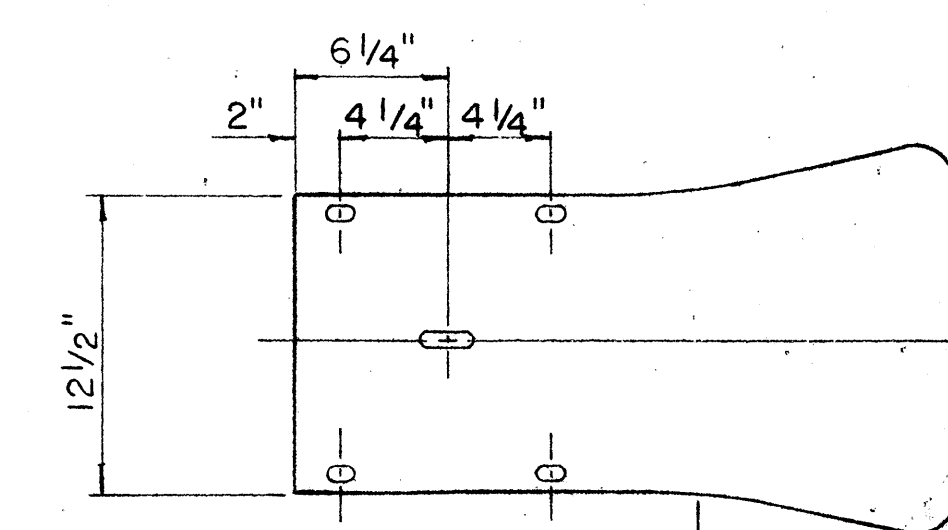


AT SUPER SECTION

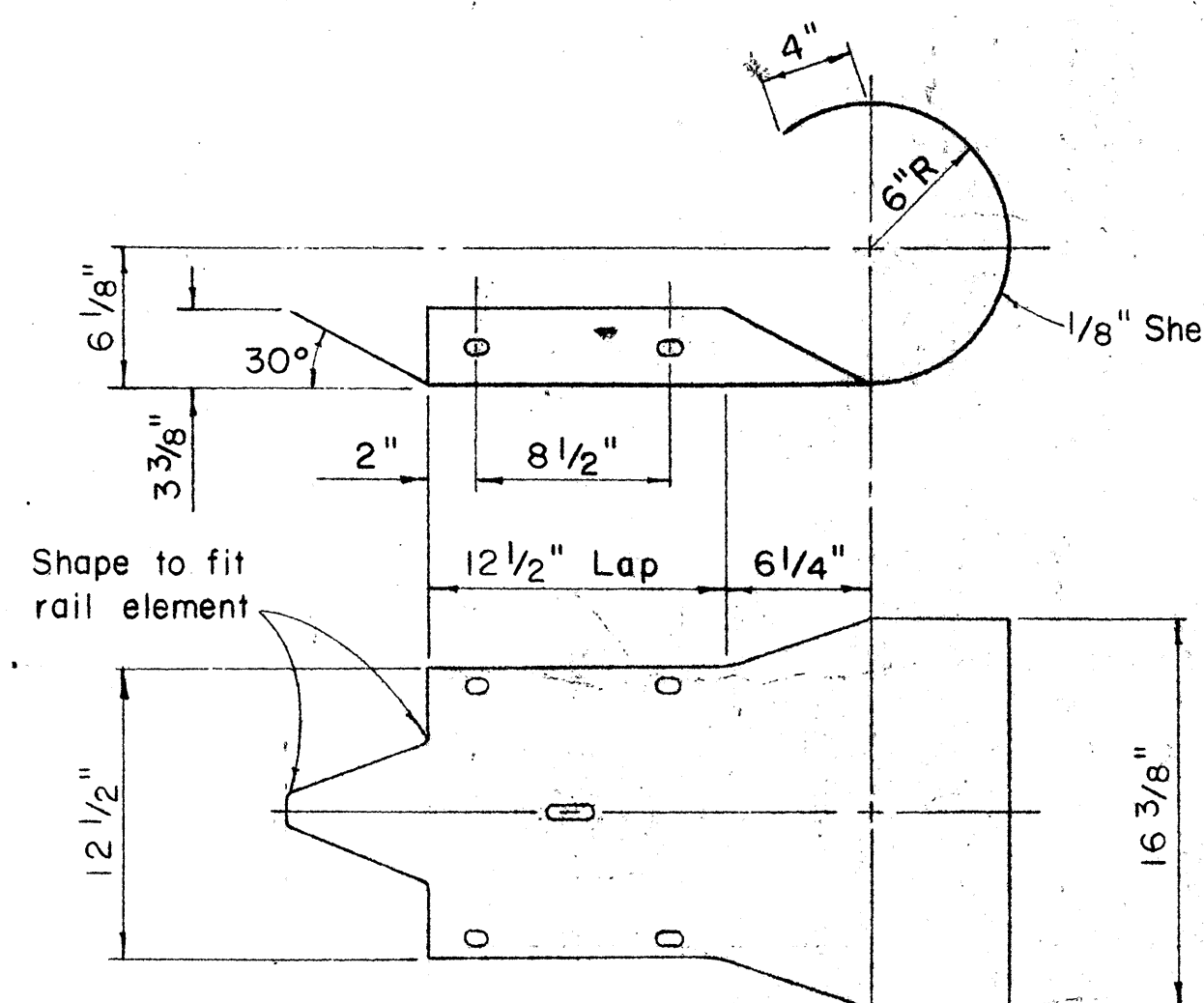
TYPICAL MEDIAN GUARD RAIL DETAIL
Scale: 1/2" = 1'-0"



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



Same as rail element section



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

REVISED: Oct. 27, 1967
REVISED: Sept. 1, 1967
REVISED: June 2, 1967

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

METAL GUARD RAIL

Scale: as noted

Sept. 27, 1968

SHEET No. 10 OF 12 SHEETS

DATE	
SURVEY PLOTTED BY	
ORIGINAL PLAN	
DRAWN BY	
DESIGNED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	