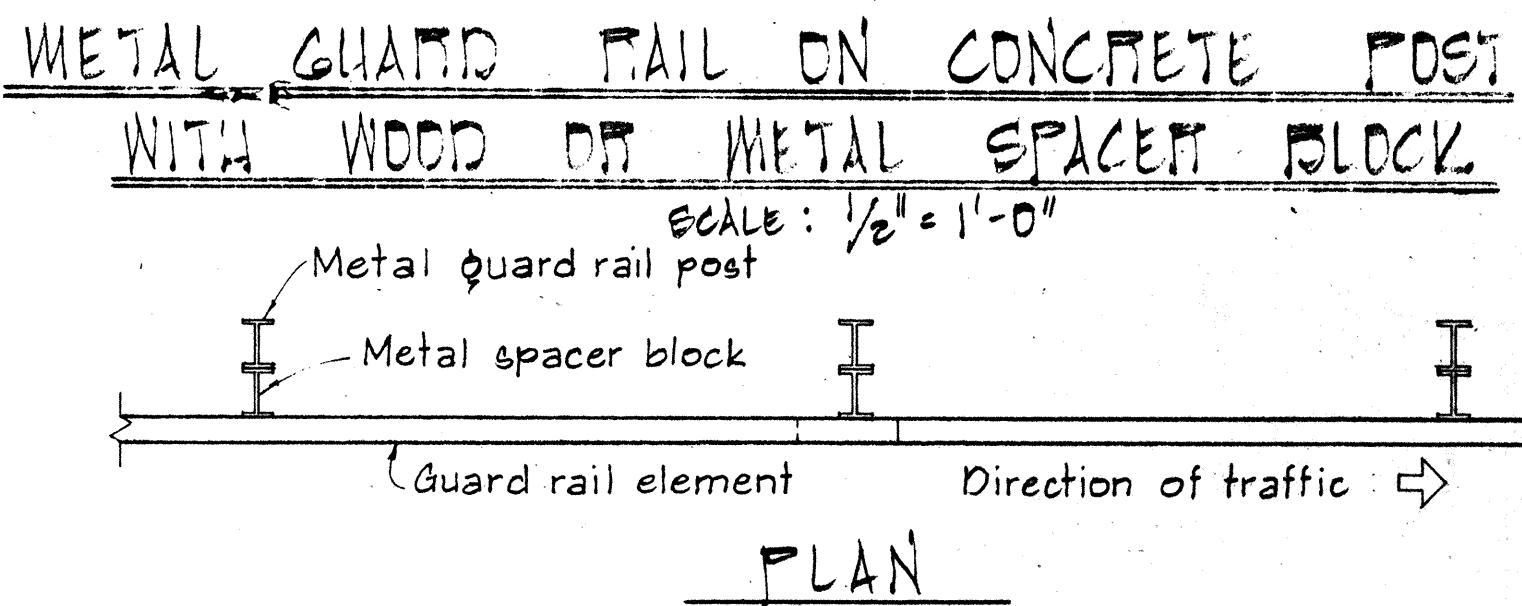
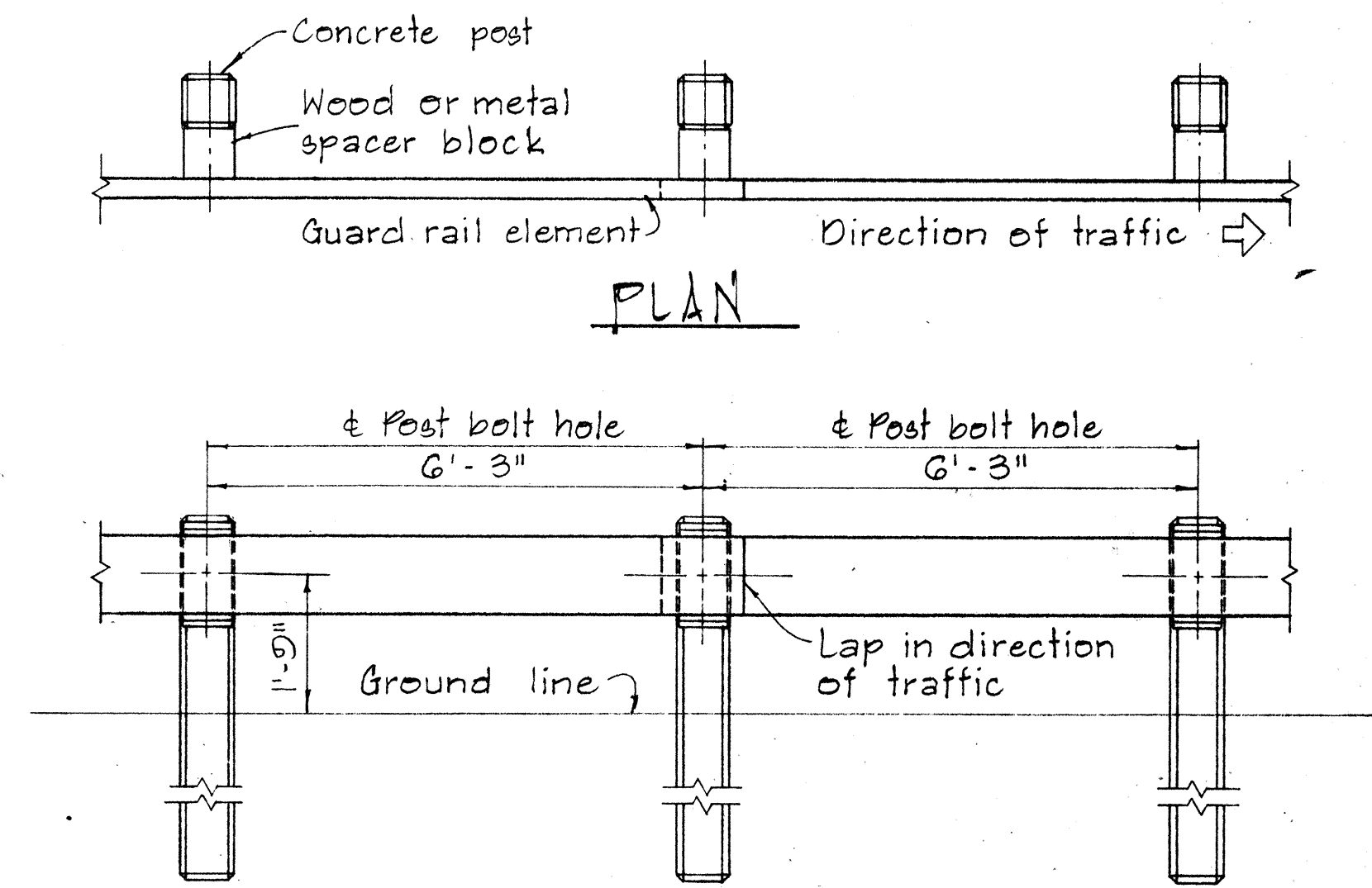
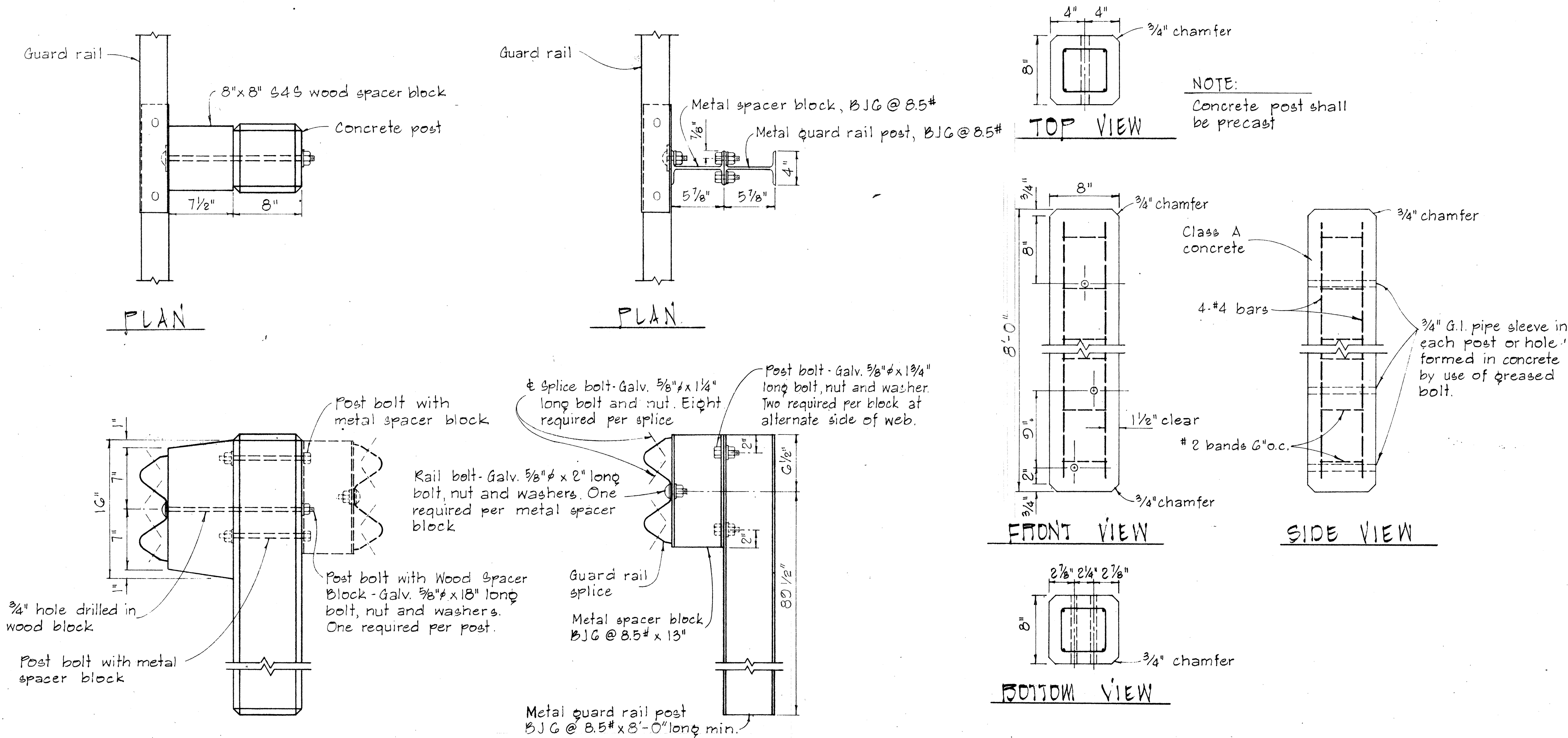
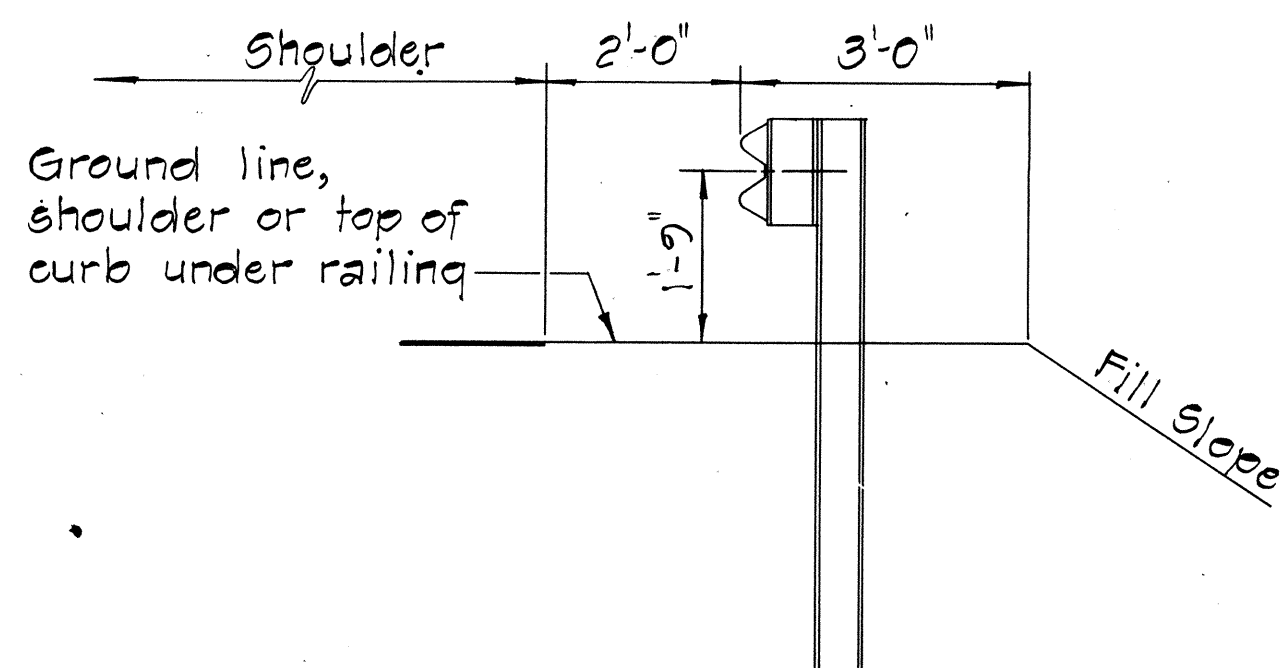


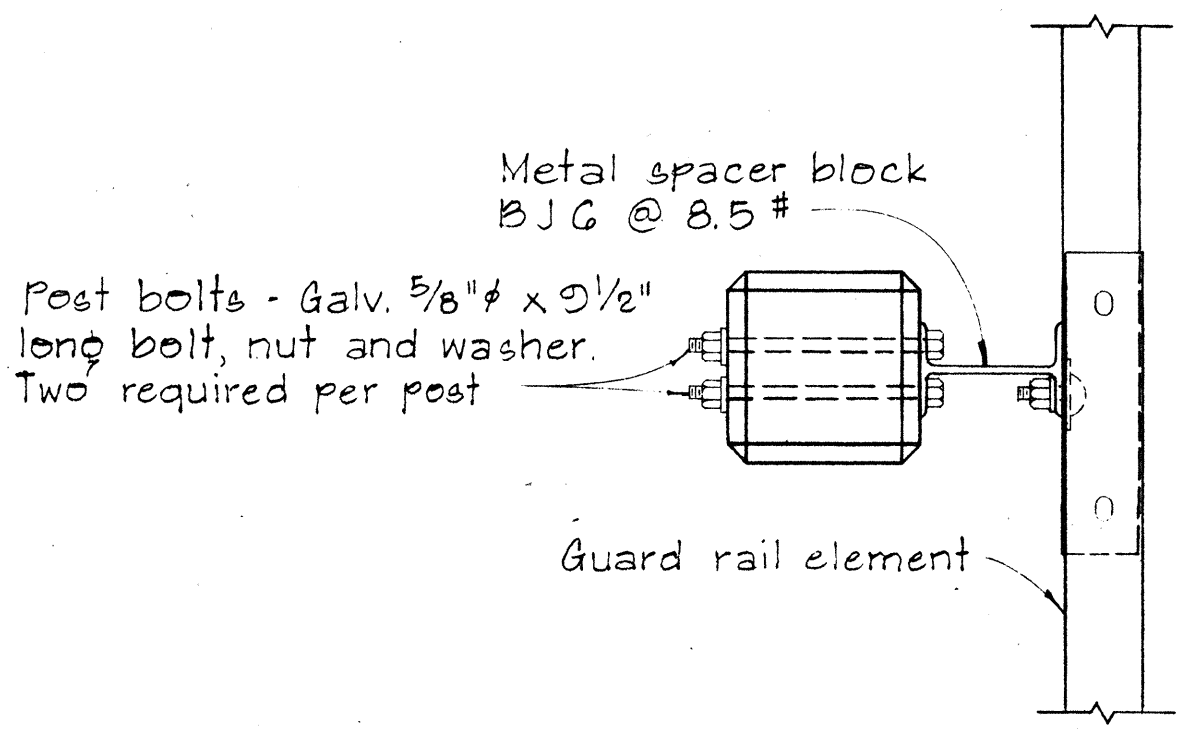
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				



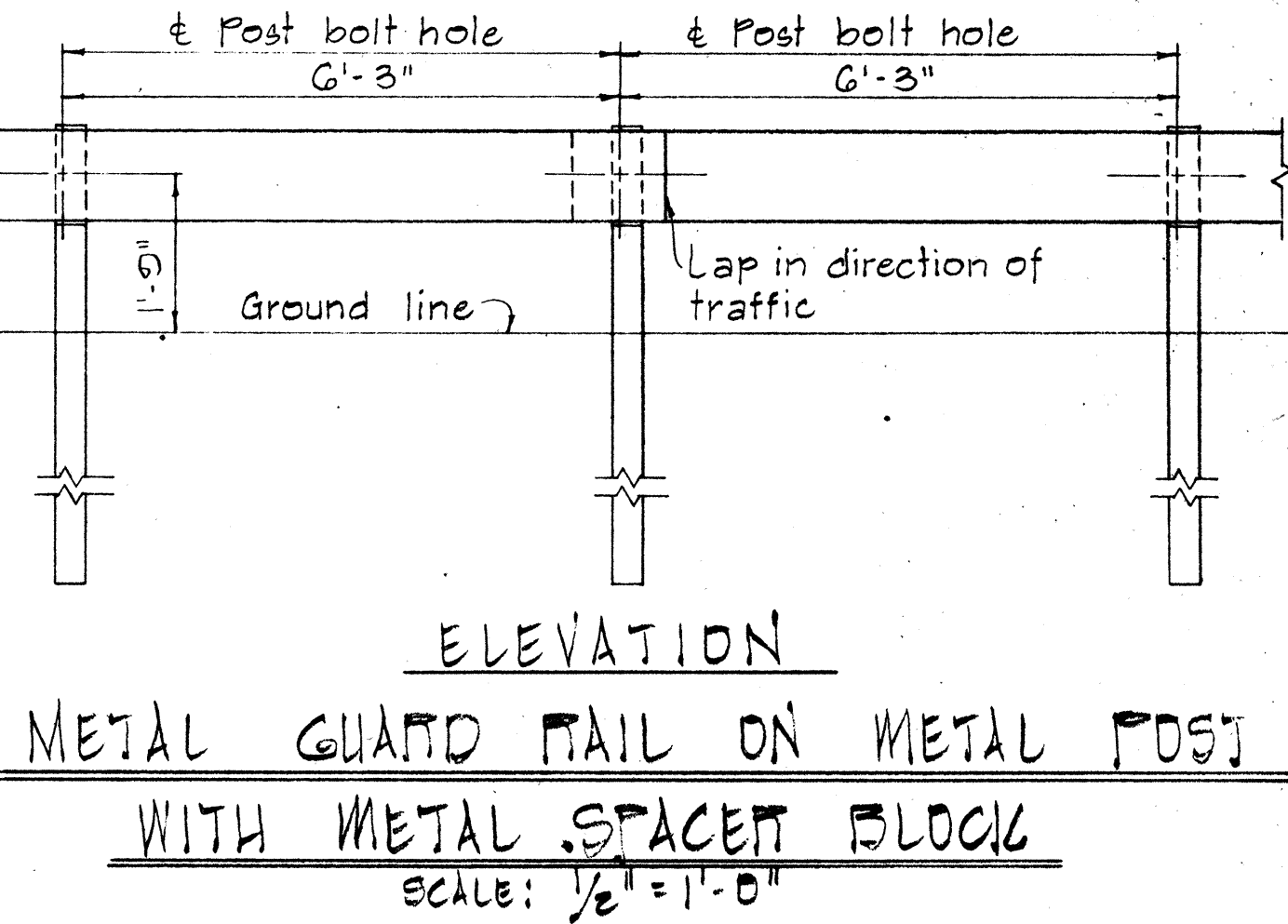
SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"



TYPICAL METAL GUARD RAIL DETAIL
SCALE: 1/2" = 1'-0"



SINGLE METAL GUARD RAIL ON PRECAST CONCRETE POST WITH WOOD OR METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"



METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK
SCALE: 1/2" = 1'-0"

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

STANDARD DETAILS

METAL GUARD RAIL

KAUAI RECREATIONAL FACILITIES

SCALE: AS SHOWN

NOV. 1968

SHEET No. 2 OF 3 SHEETS

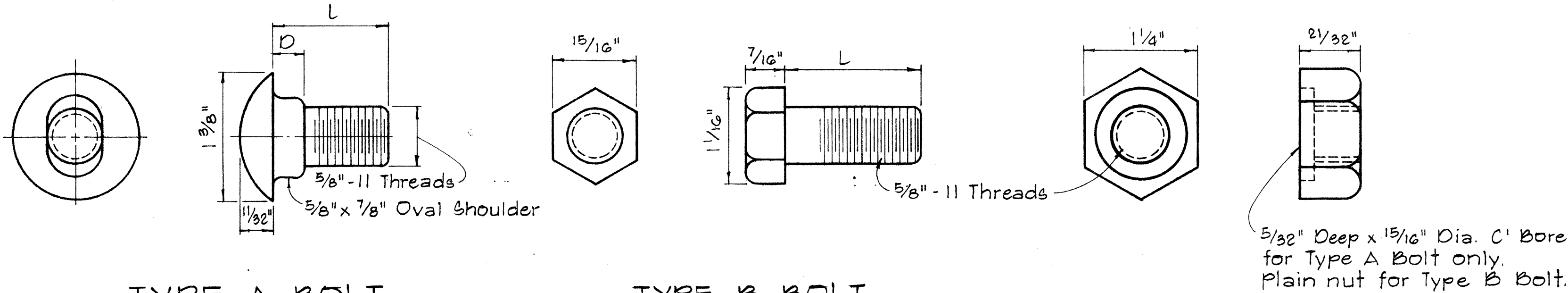
Proj. No. BD 67-713 (IC)

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
CHECKED BY	
DESIGNED BY	
QUANTITIES BY	
NOTE BOOK	
CHECKED BY	

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

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"	24"
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	
	L
Post Bolt for Conc. Post w/ Metal Blocks	2 1/2"
Post Bolt for Metal Post w/ Metal Block	1 3/4"



TYPE A BOLT

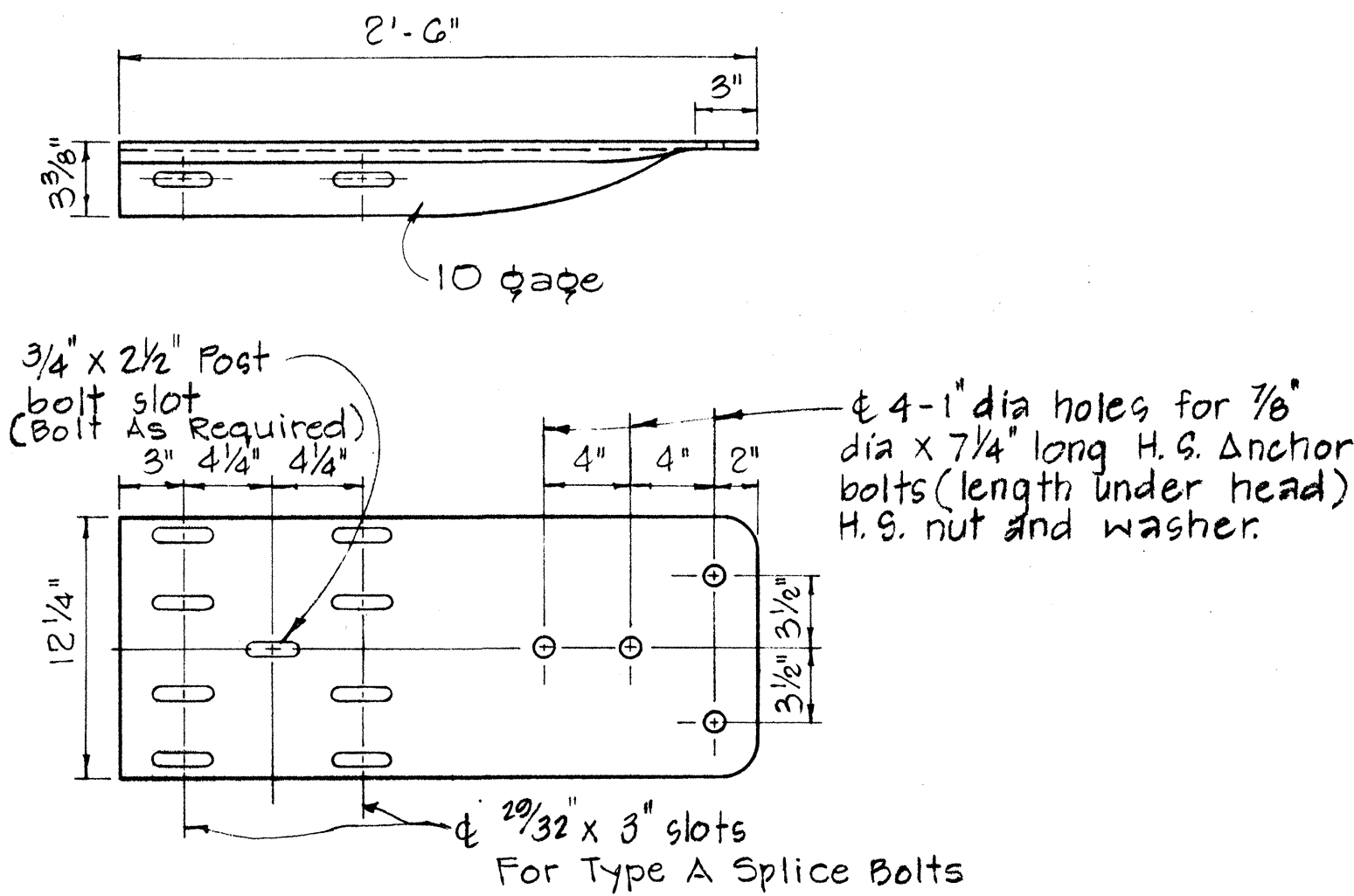
TYPE B BOLT

SPlice RAIL AND POST BOLTS.

Scale: Full Size

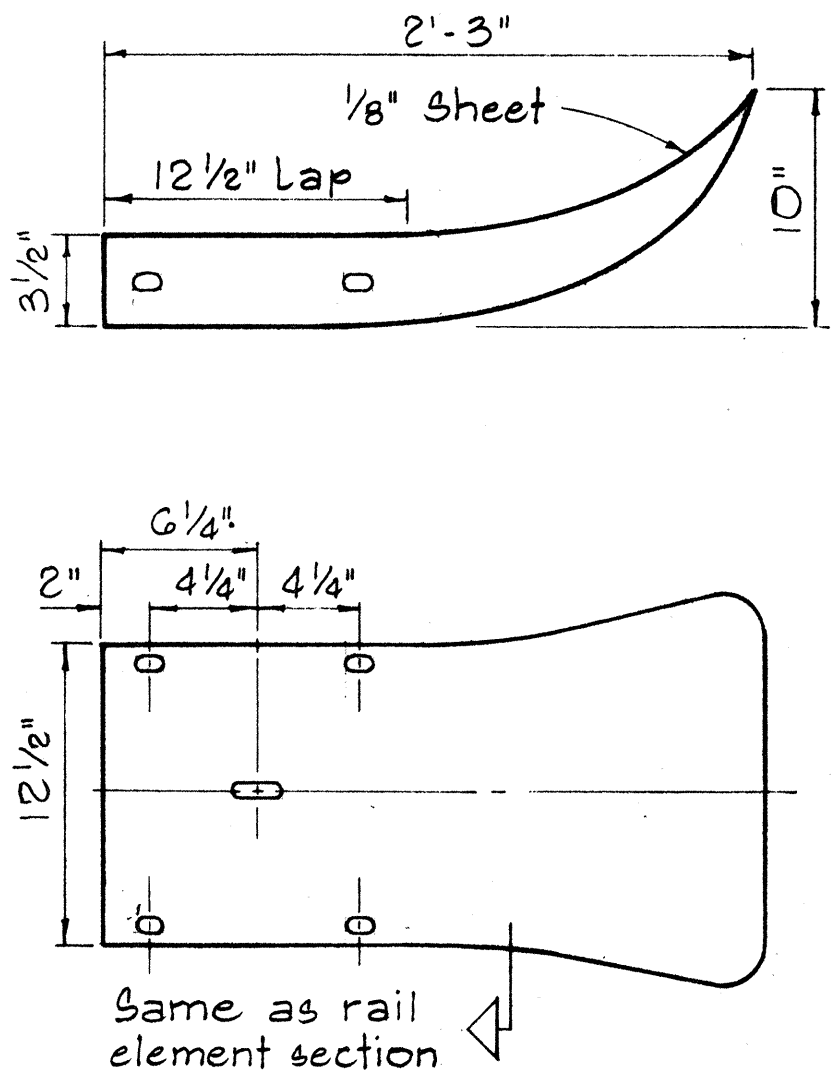
HEXAGON NUT

Scale: Full Size



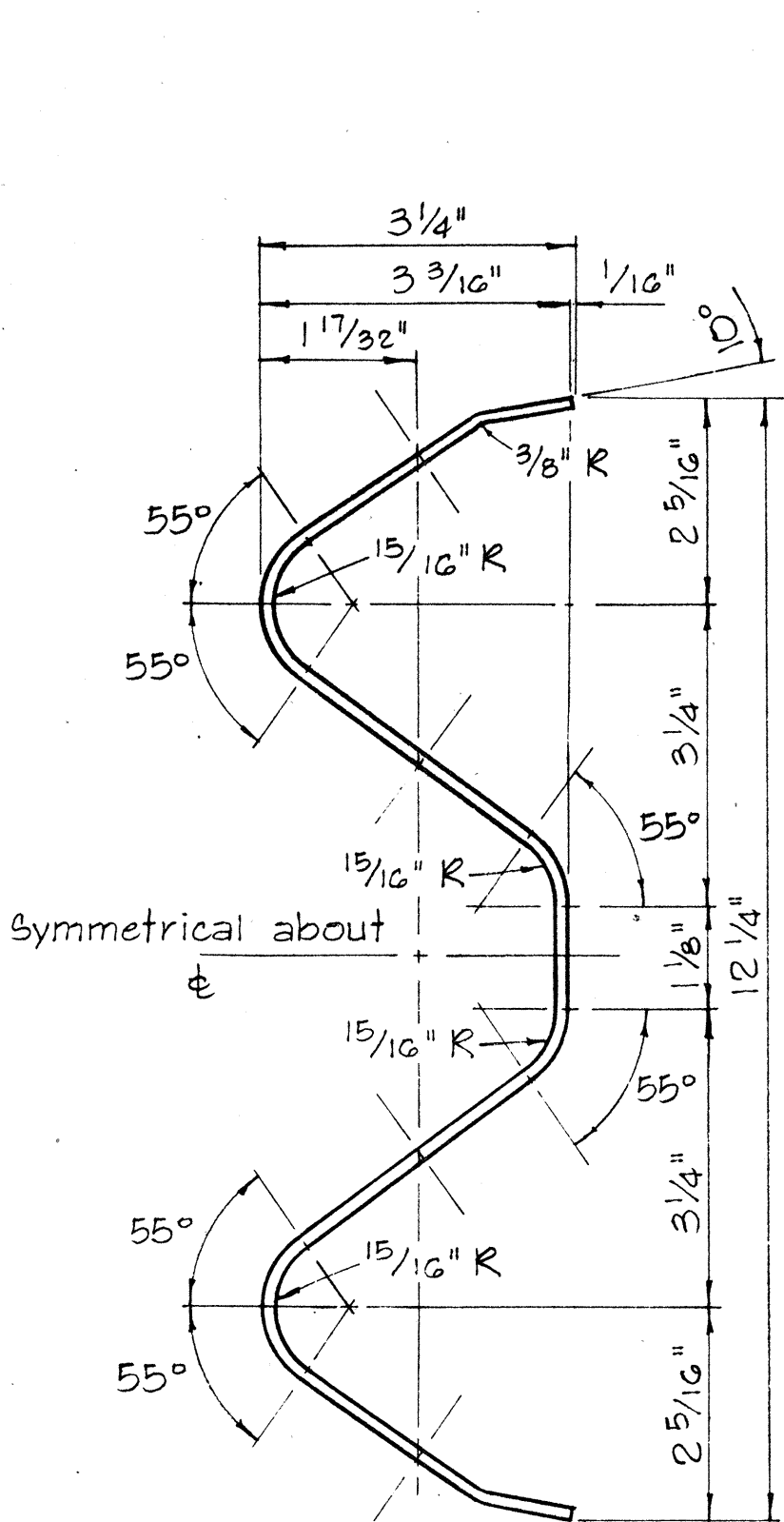
SPECIAL END SHOE

Scale: 1 1/2\"/>



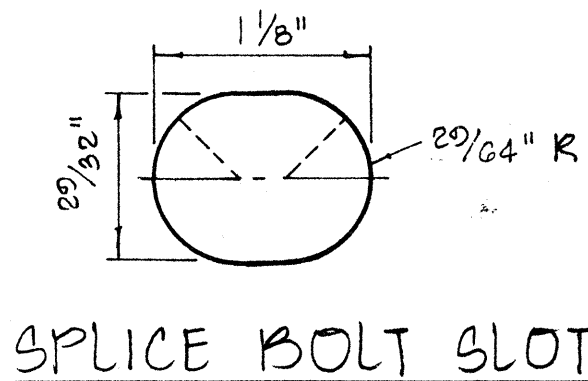
FLARED END

Scale: 1 1/2\"/>

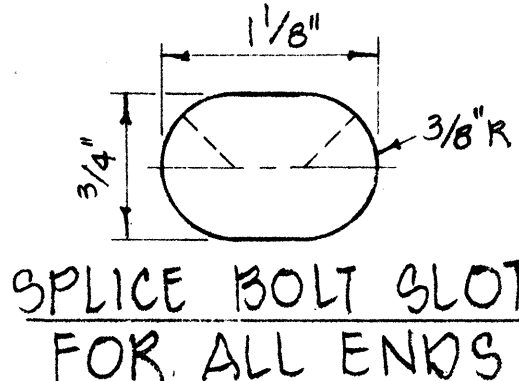


RAIL ELEMENT SECTION

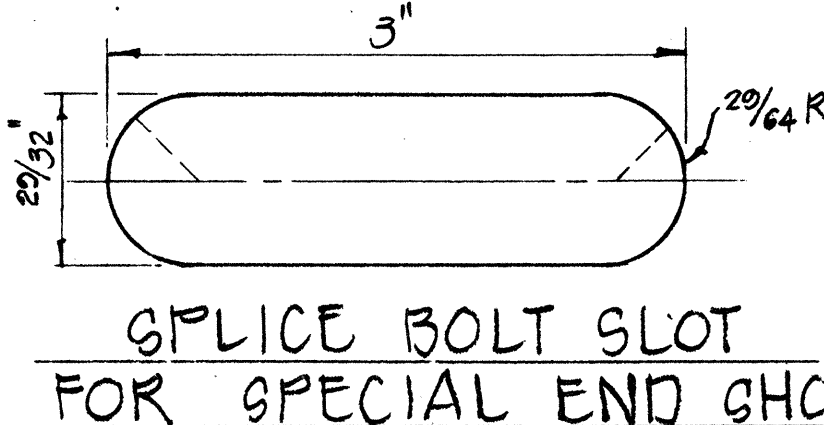
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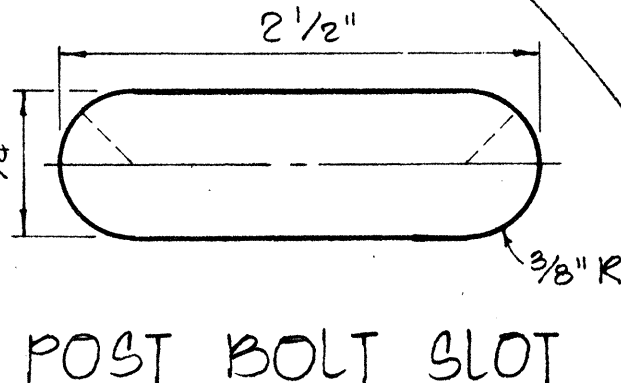
SPlice BOLT SLOT



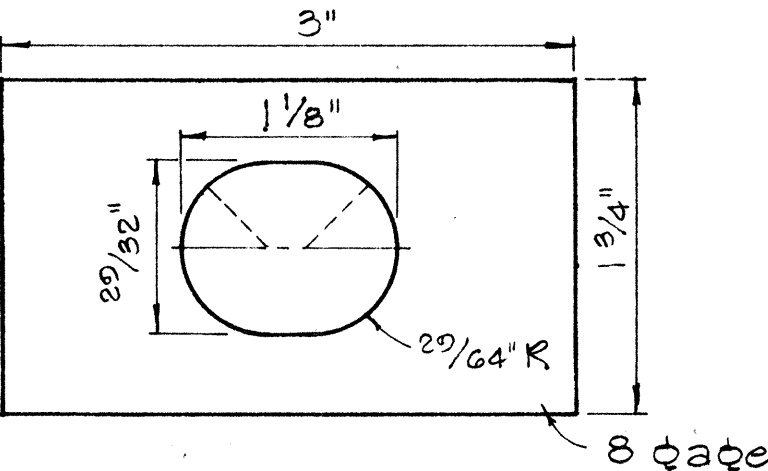
SPlice BOLT SLOT FOR ALL ENDS



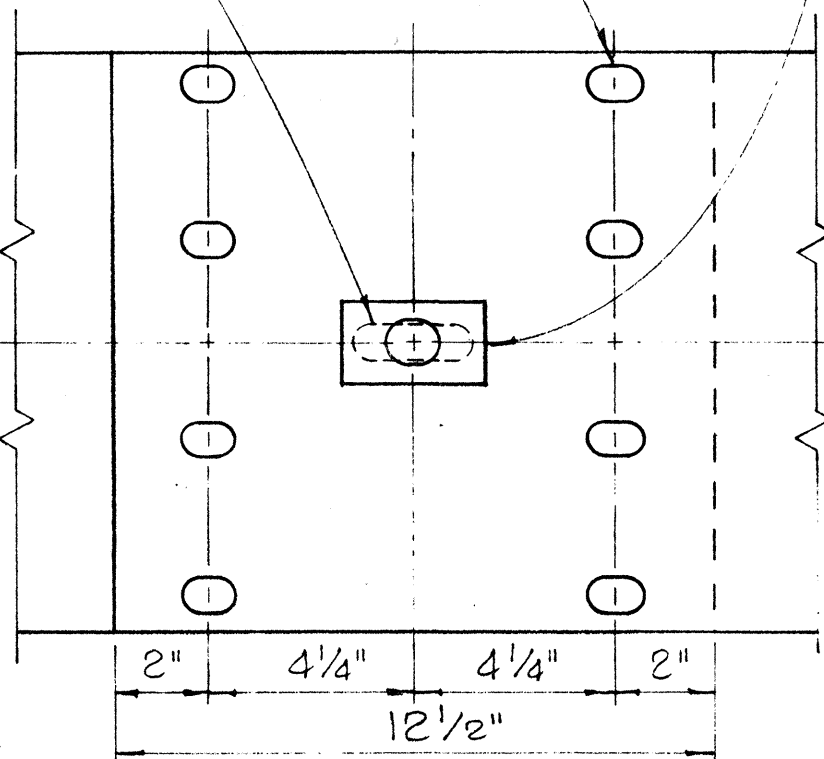
SPlice BOLT SLOT FOR SPECIAL END SHOE



POST BOLT SLOT



RAIL WASHER

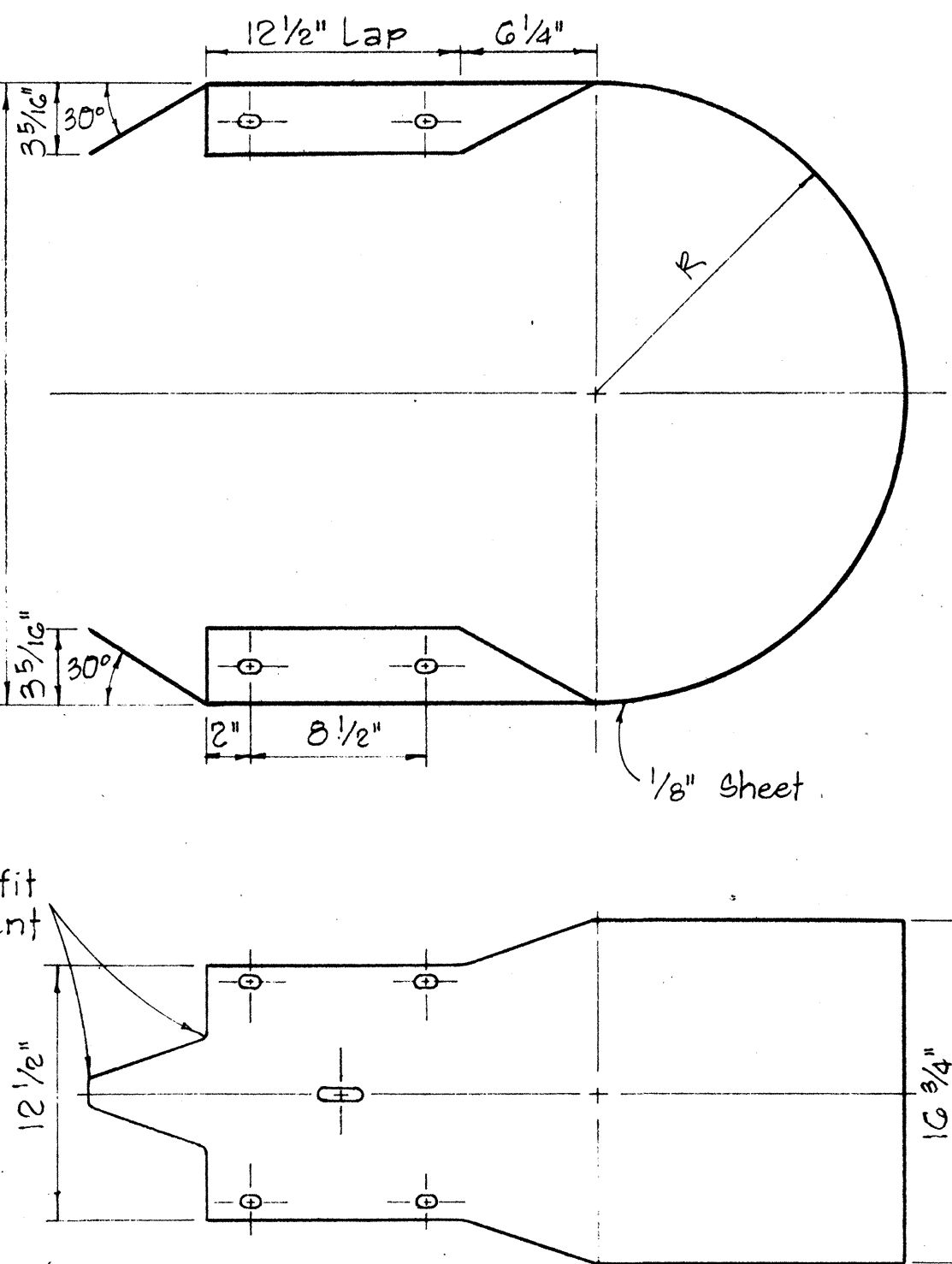


RAIL SPlice

Scale: 3\"/>

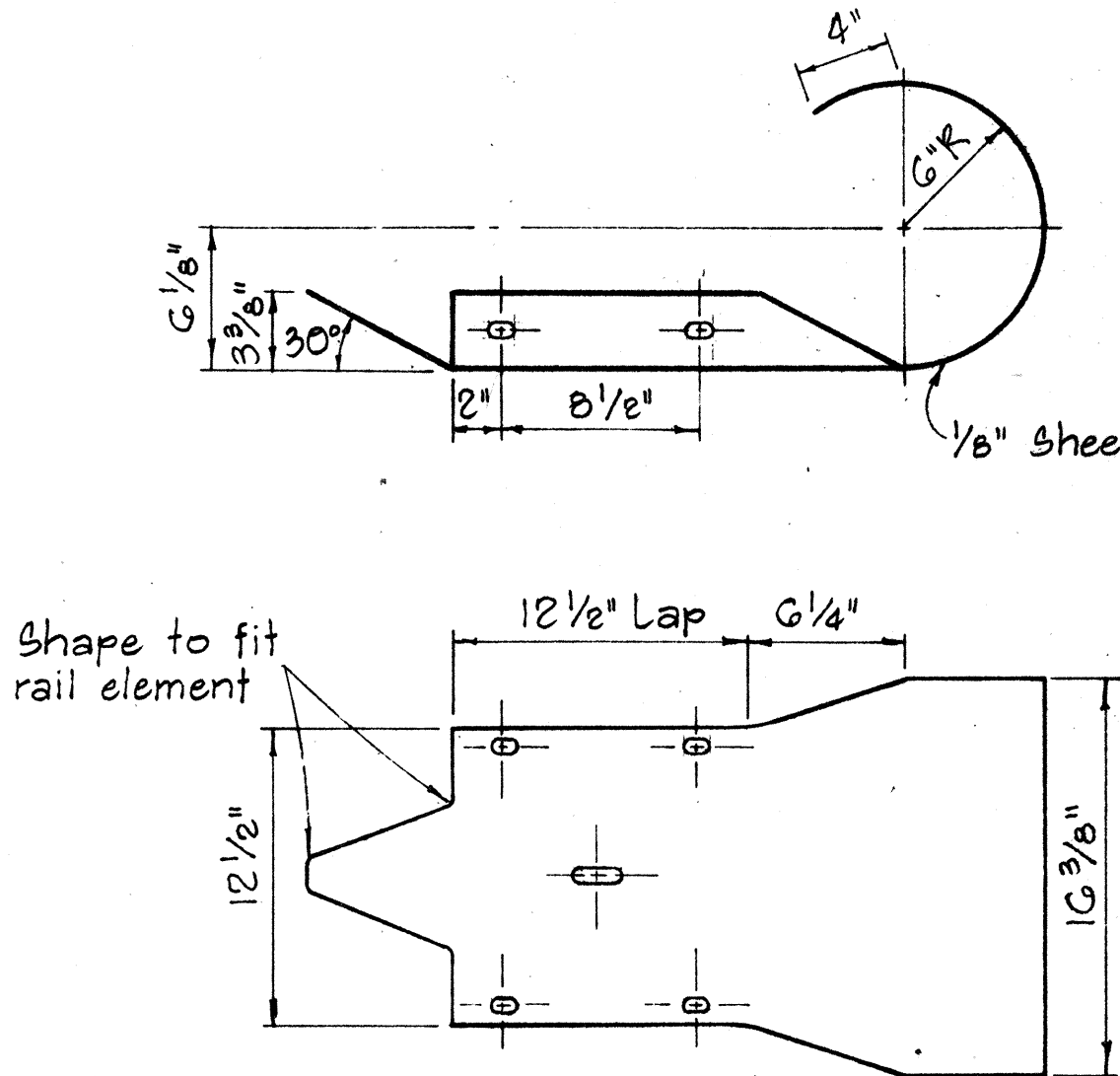
- NOTES:
1. H.S. Bolts shall conform to the requirements of ASTM A 325.
 2. Special End Shoe shall be fabricated from 10 Gage steel conforming to the requirements of AASHTO 180.

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



MEDIAN END

Scale: 1 1/2\"/>



CURVED END

Scale: 1 1/2\"/>

APPROVAL RECOMMENDED:
E. Tanaka 12/29/69
 TRAFFIC ENGINEER DATE
 APPROVED:
[Signature] 12-29-69
 ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
 STANDARD DETAILS
 METAL GUARD RAIL
 Scale: As Noted August, 1968
 SHEET No. 3 OF 3 SHEETS DT 501

PROJ. NO. BD 67-713(1C)

DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
NO.	