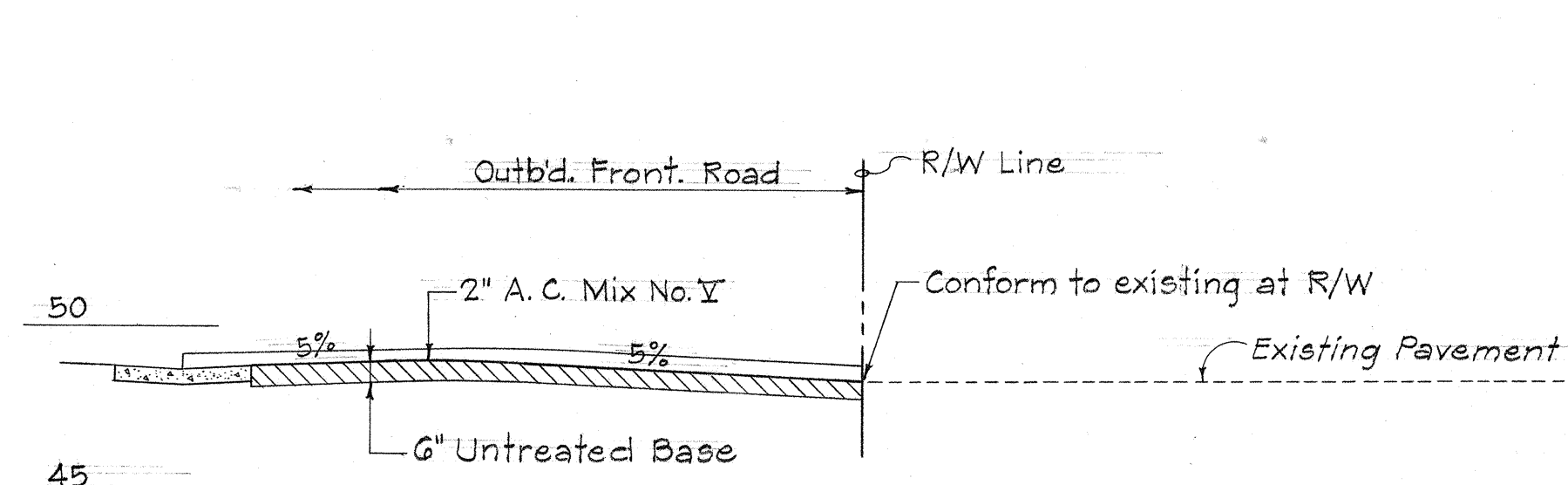
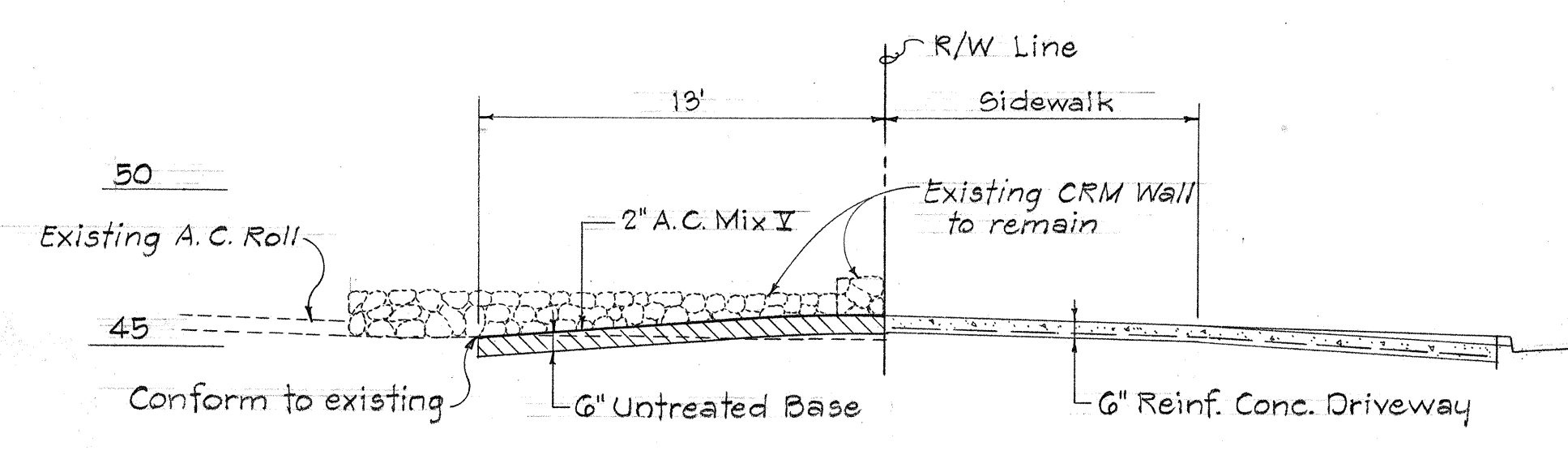


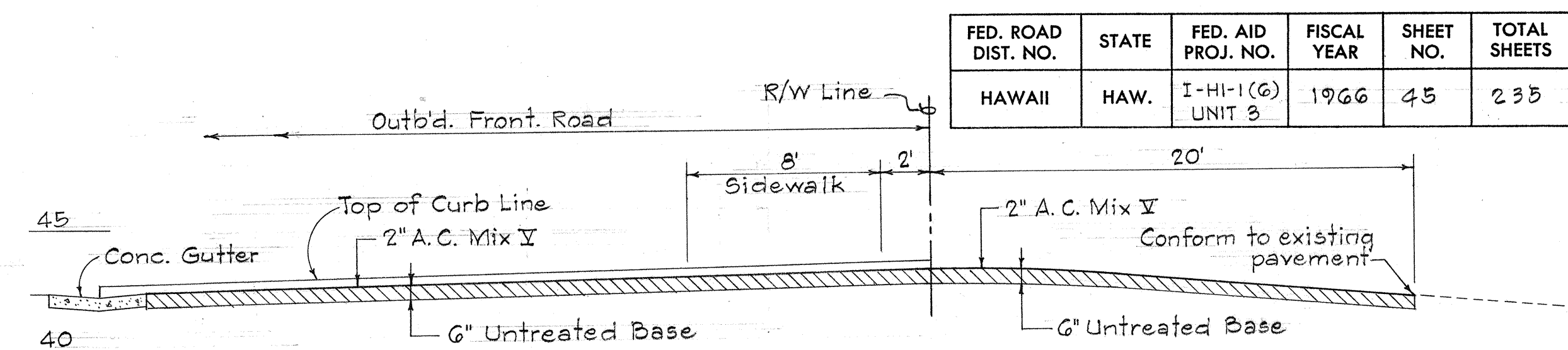
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(6) UNIT 3	1966	45	235



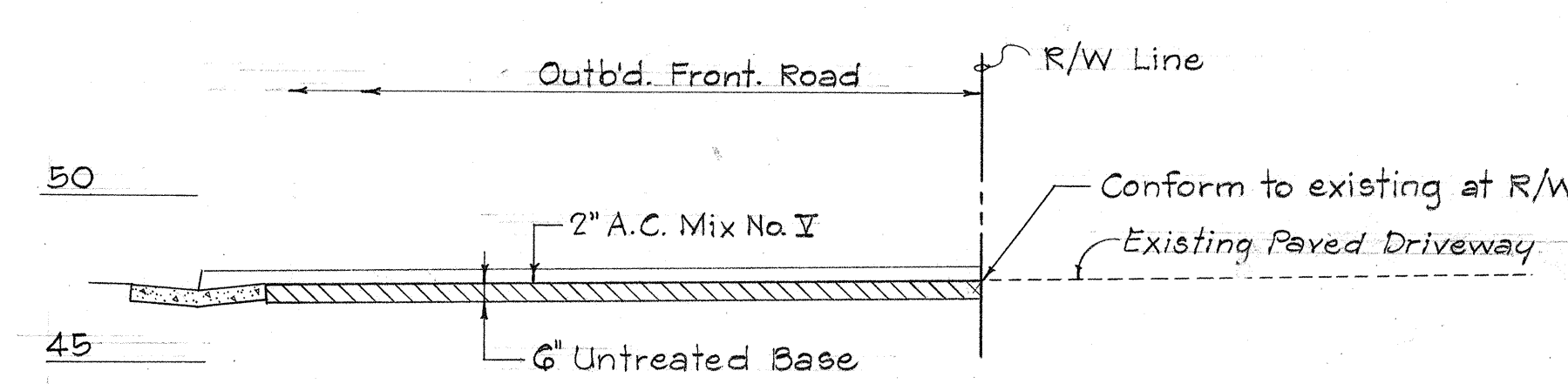
OUTBD. FRONT. RD. @ STA. 143+50 (RT.)



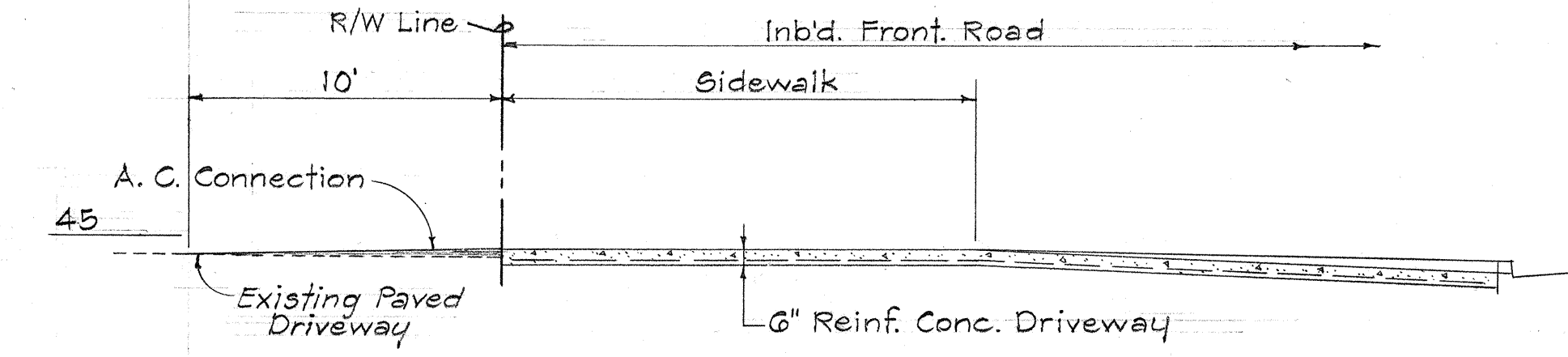
INBD. FRONT. RD. @ STA. 146+77 (LT.)



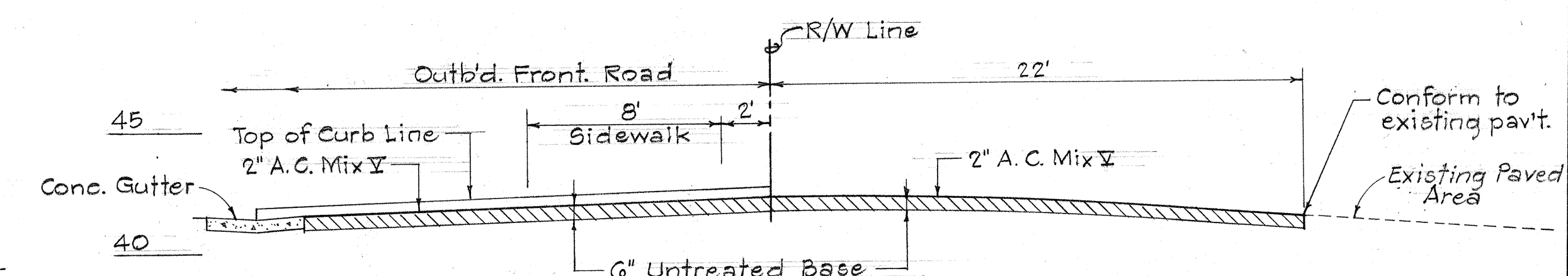
OUTBD. FRONT. RD. @ STA. 153+23 (RT.)



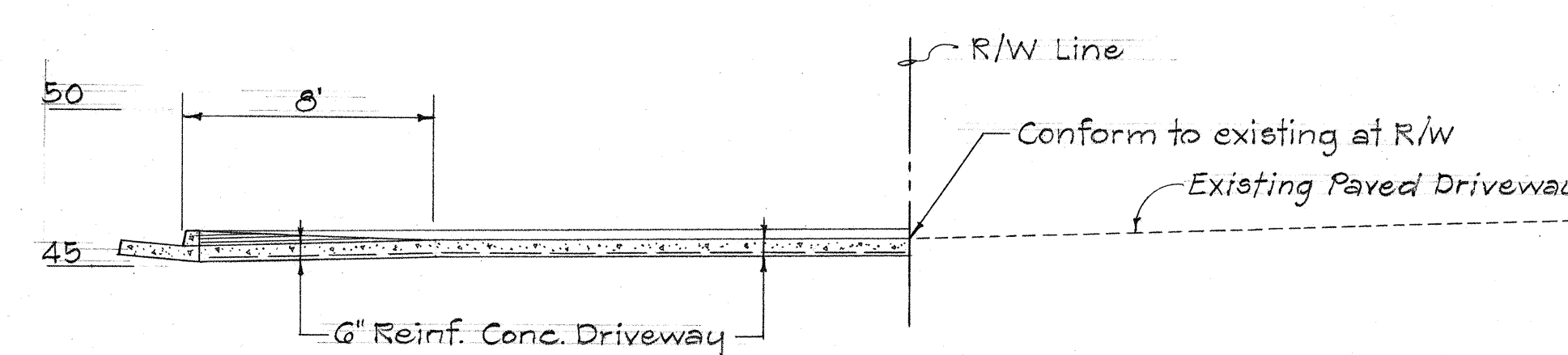
OUTBD. FRONT. RD. @ STA. 144+80 (RT.)



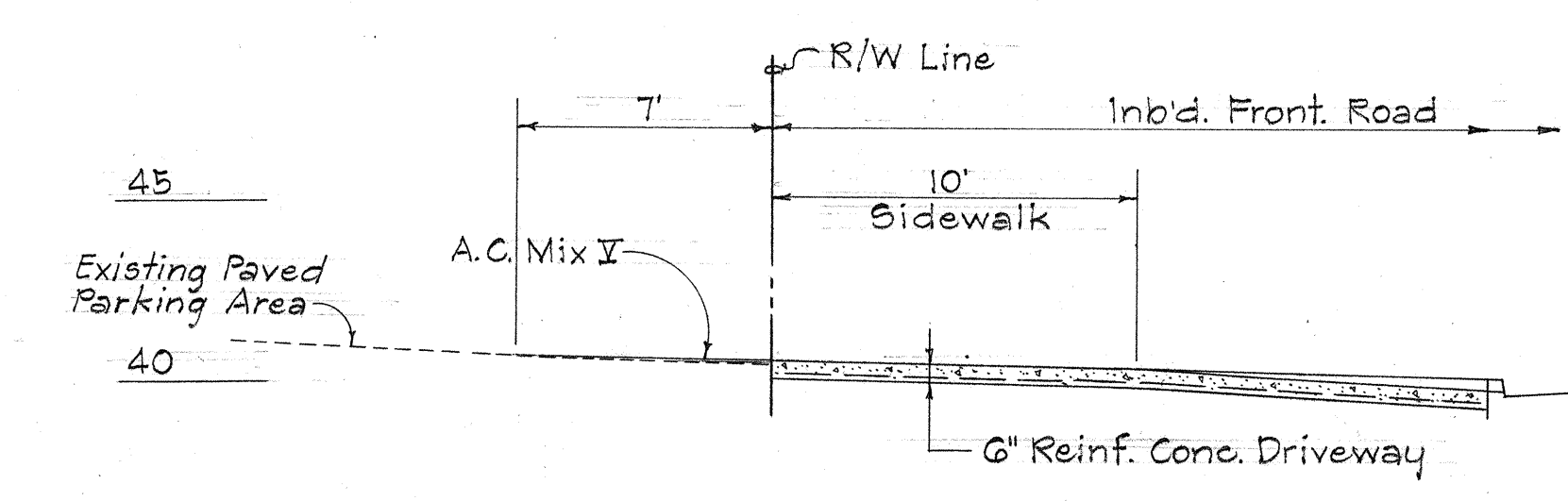
INBD. FRONT. RD. @ STA. 149+92 (LT.)



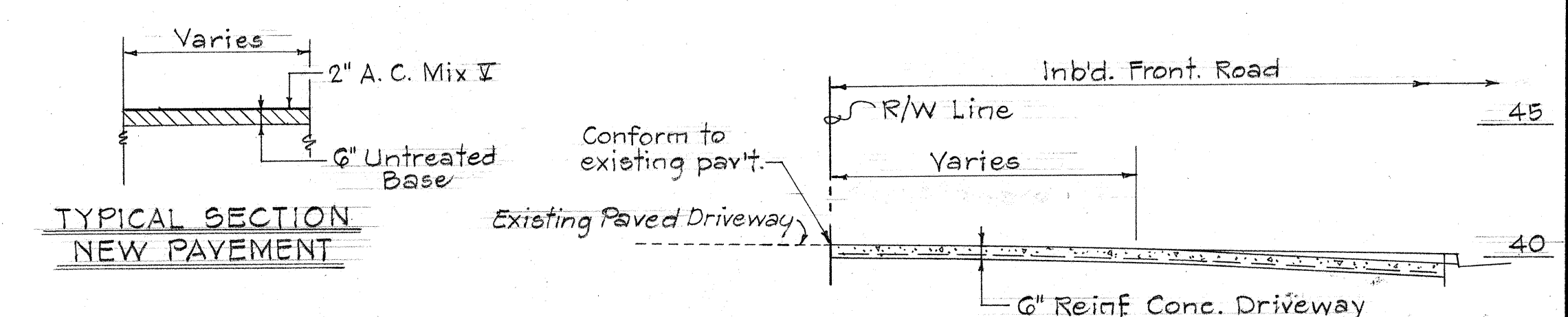
OUTBD. FRONT. RD. @ STA. 155+50 (RT.)



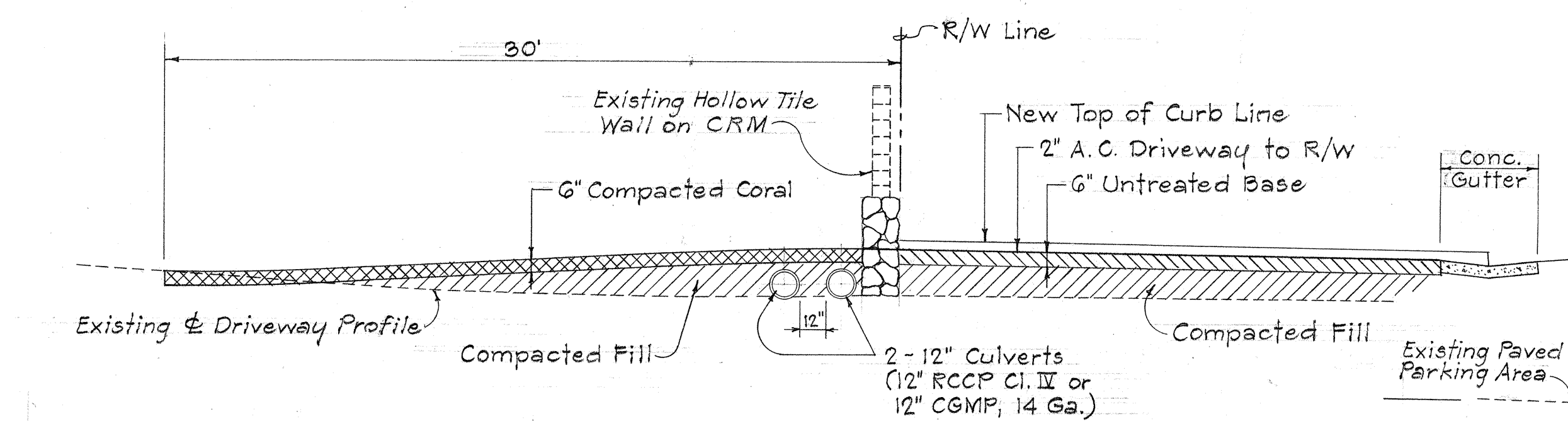
OUTBD. FRONT. RD. @ STA. 146+10 (RT.)



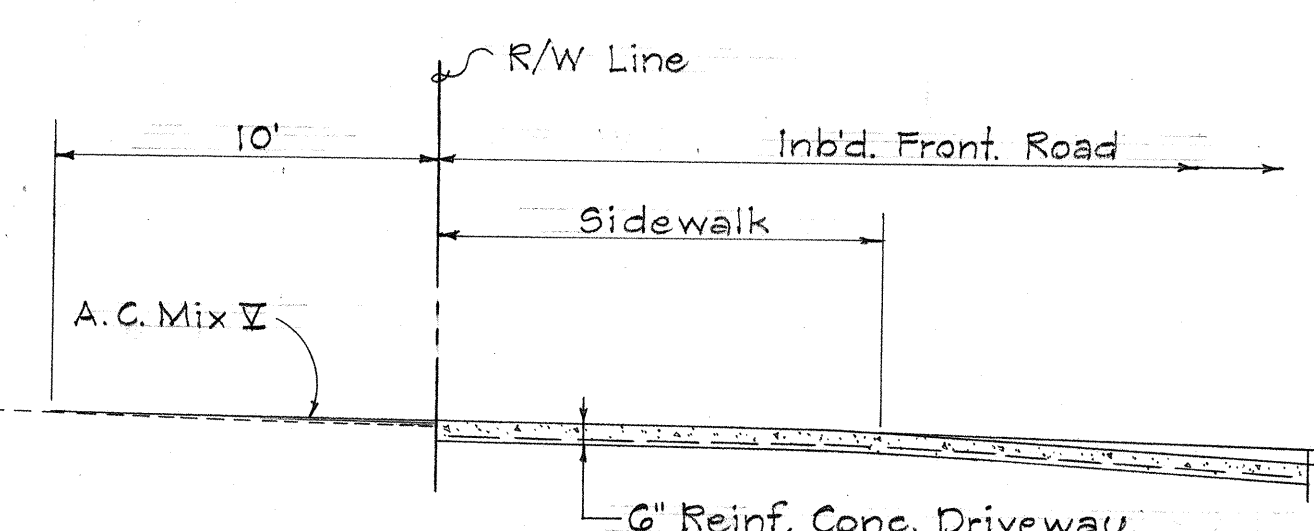
INBD. FRONT. RD. @ STA. 152+15.5 (LT.)



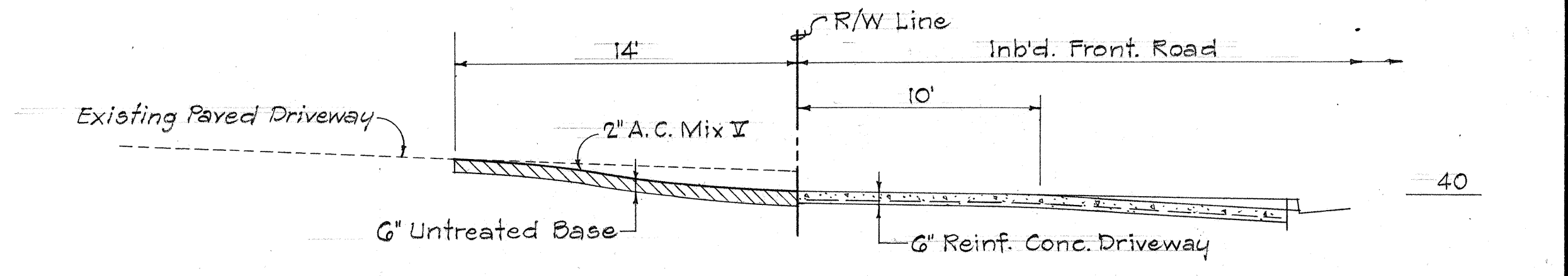
INBD. FRONT. RD. @ STA. 159+97 (LT.)



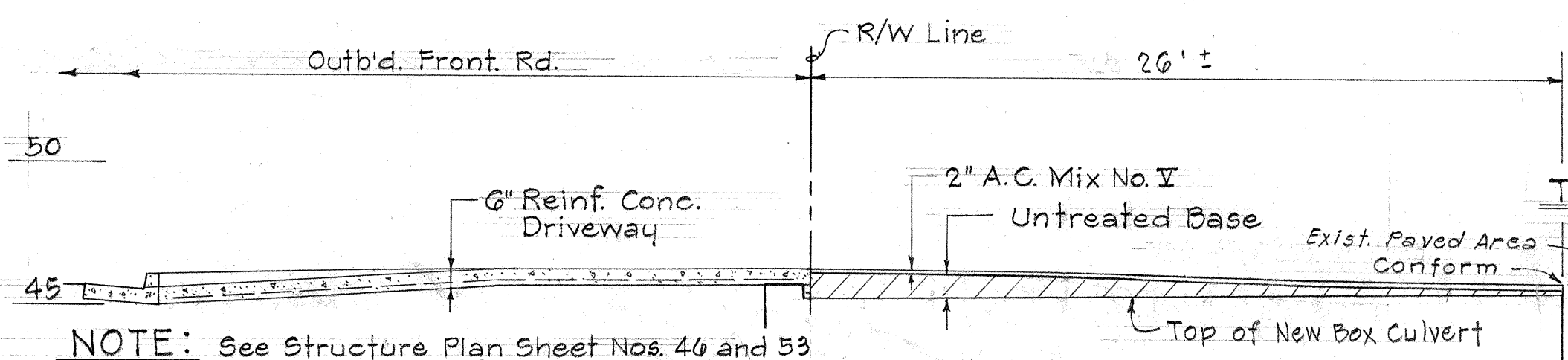
INBD. FRONT. RD. @ STA. 145+56 (LT.)



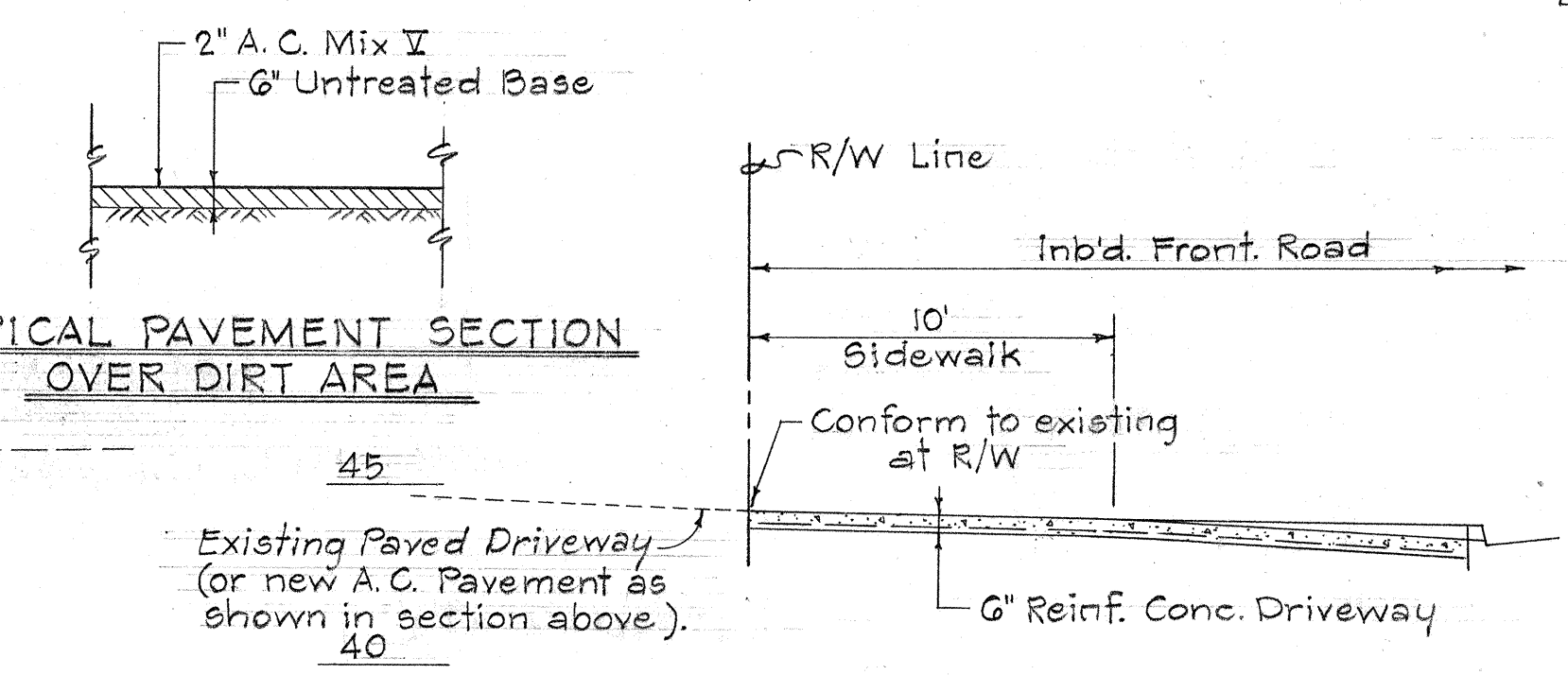
INBD. FRONT. RD. @ STA. 152+92 (LT.)



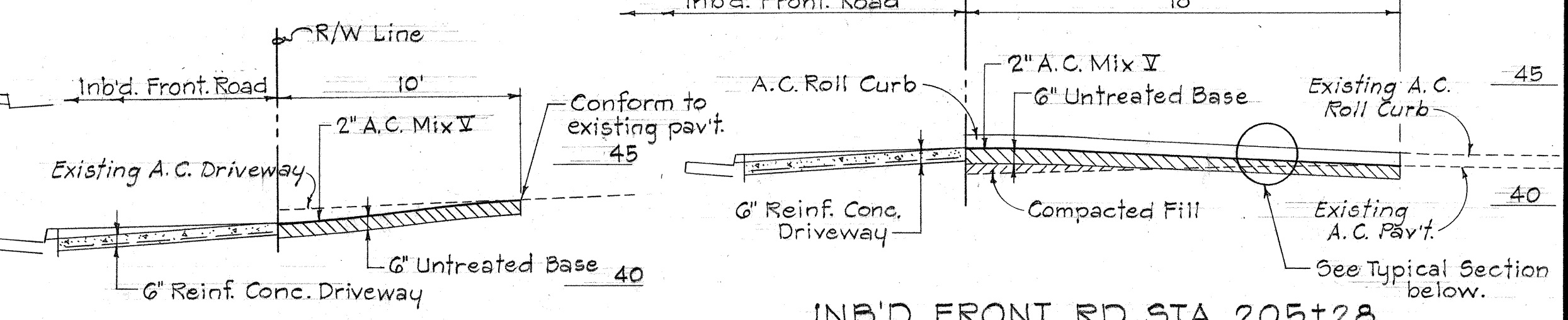
INBD. FRONT. RD. @ STA. 161+37 (LT.)



OUTBD. FRONT. RD. @ STA. 146+33.50 (RT.)

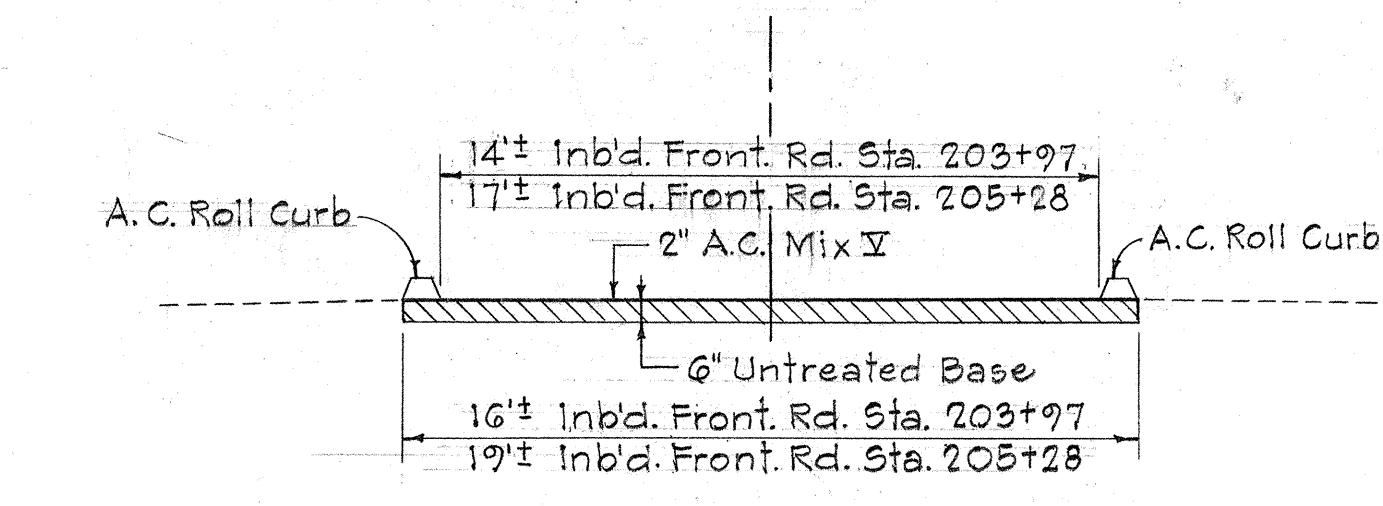


INBD. FRONT. RD. @ STA. 153+23 (LT.)



INBD. FRONT. RD. STA. 203+97

INBD. FRONT. RD. STA. 205+28



TYPICAL SECTION - DRIVEWAYS
INBD. FRONT. RD. STA. 203+97 & STA. 205+28

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRIVEWAY PROFILES

INTERSTATE HIGHWAY (LUNALILO FREEWAY)
F.A.I. PROJECT No I-HI-1(6) UNIT 3

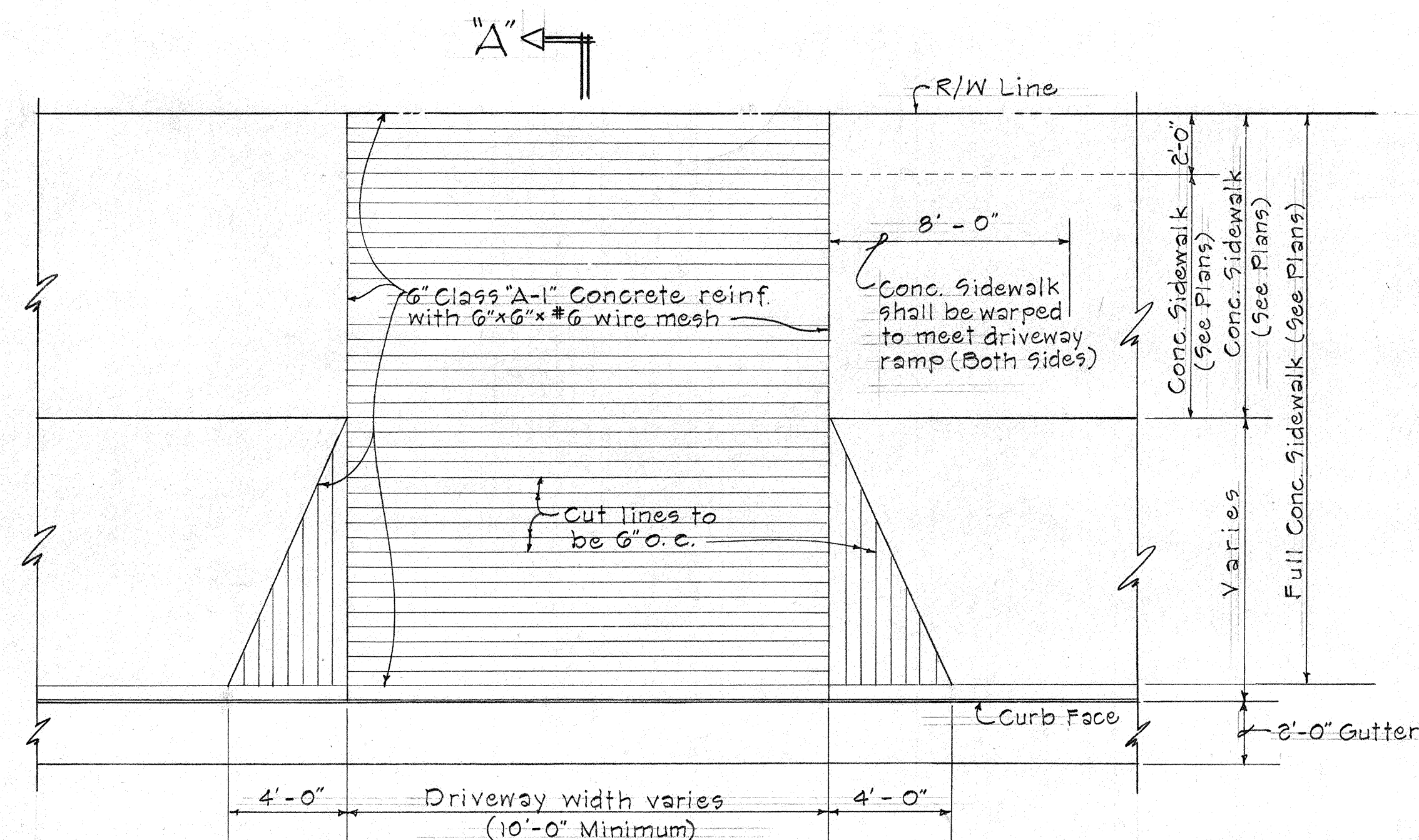
Scale: 1" = 5' Date: Aug. 1966

SHEET No. 2 OF 9 SHEETS

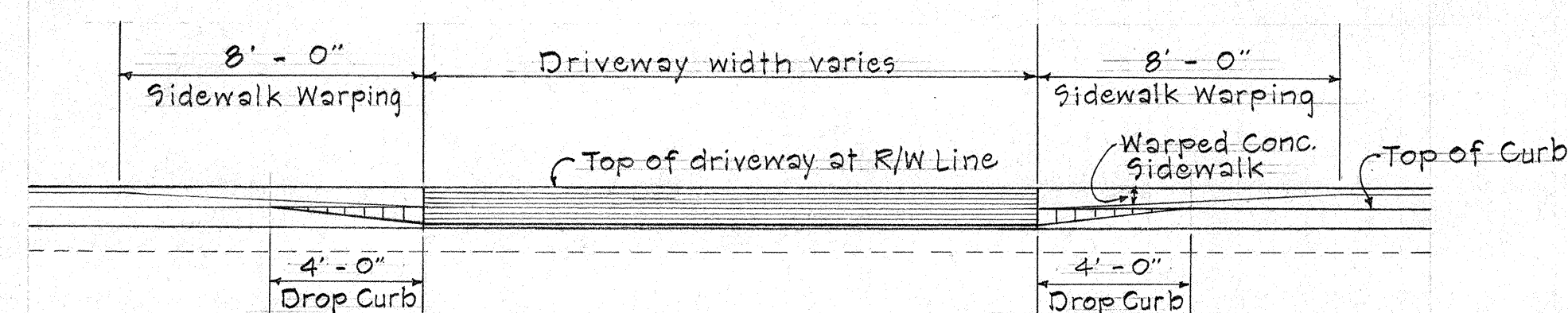
DATE	
DESIGNED BY	
TRACED BY	
NOTED BY	
CREATED BY	
NO.	

NOTE: See Structure Plan Sheet Nos. 44 and 53 for construction of new top slab over existing Waialae Major Storm Drain.

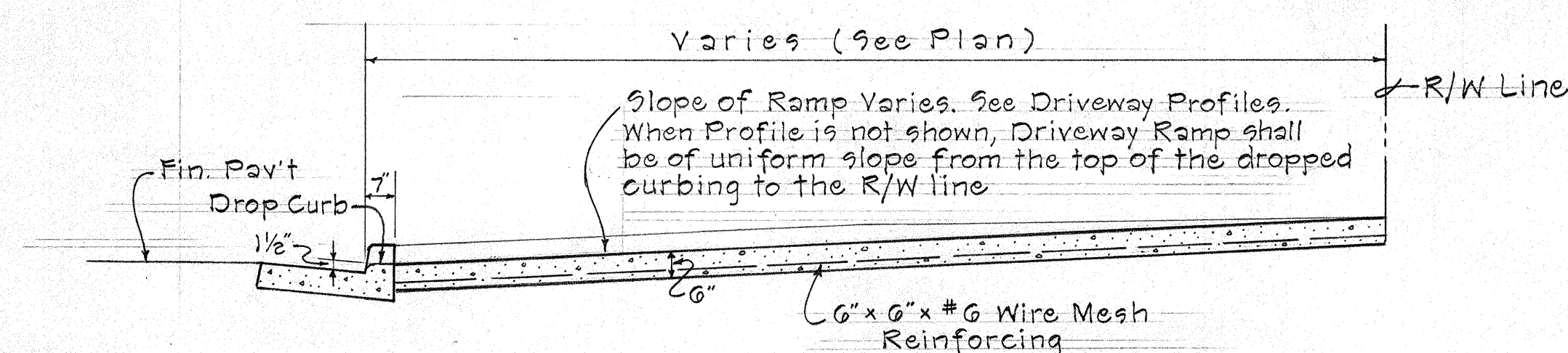
TYPICAL PAVEMENT SECTION
OVER DIRT AREA



PLAN
Scale: 1/4" = 1'-0"

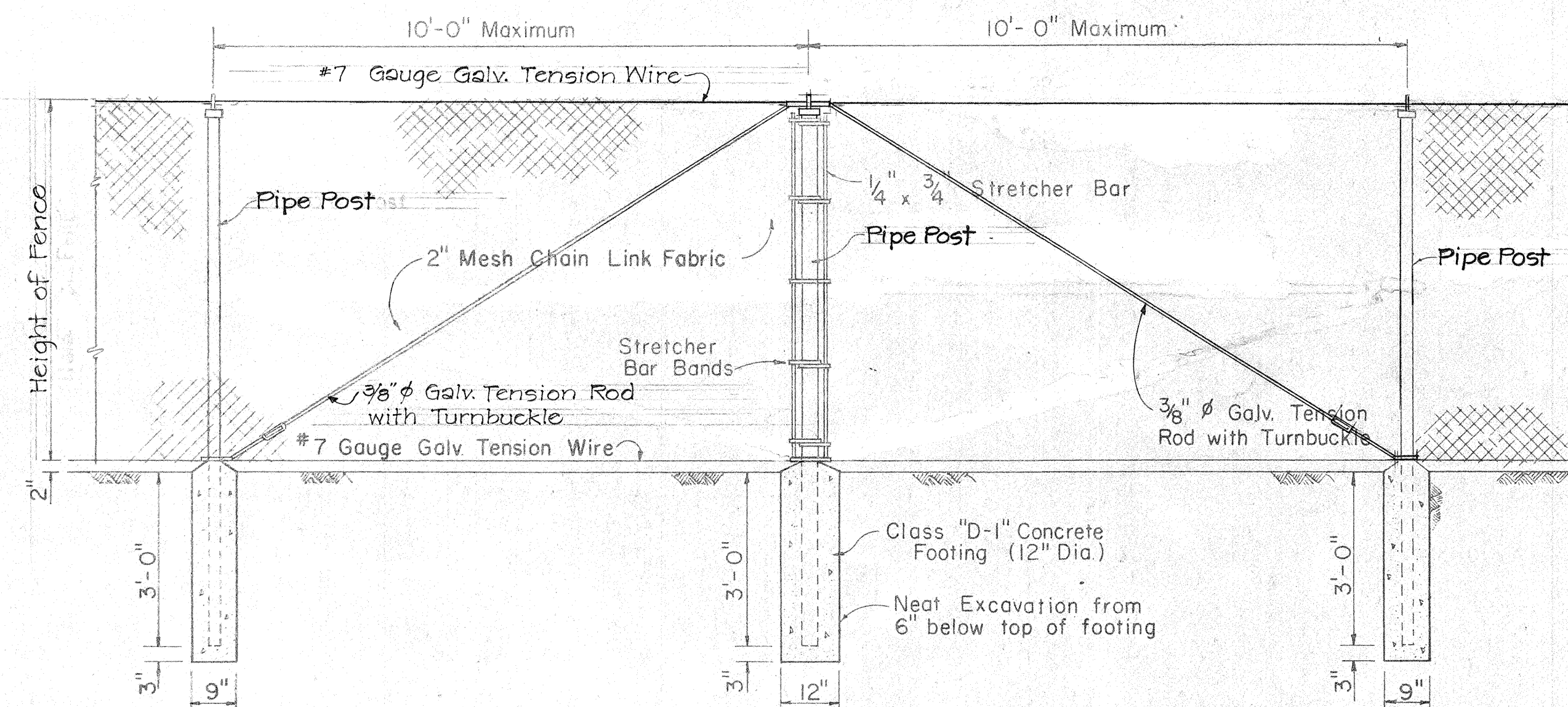


FRONT ELEVATION
Scale: 1/4" = 1'-0"



SECTION "A-A"
Scale: 3/8" = 1'-0"

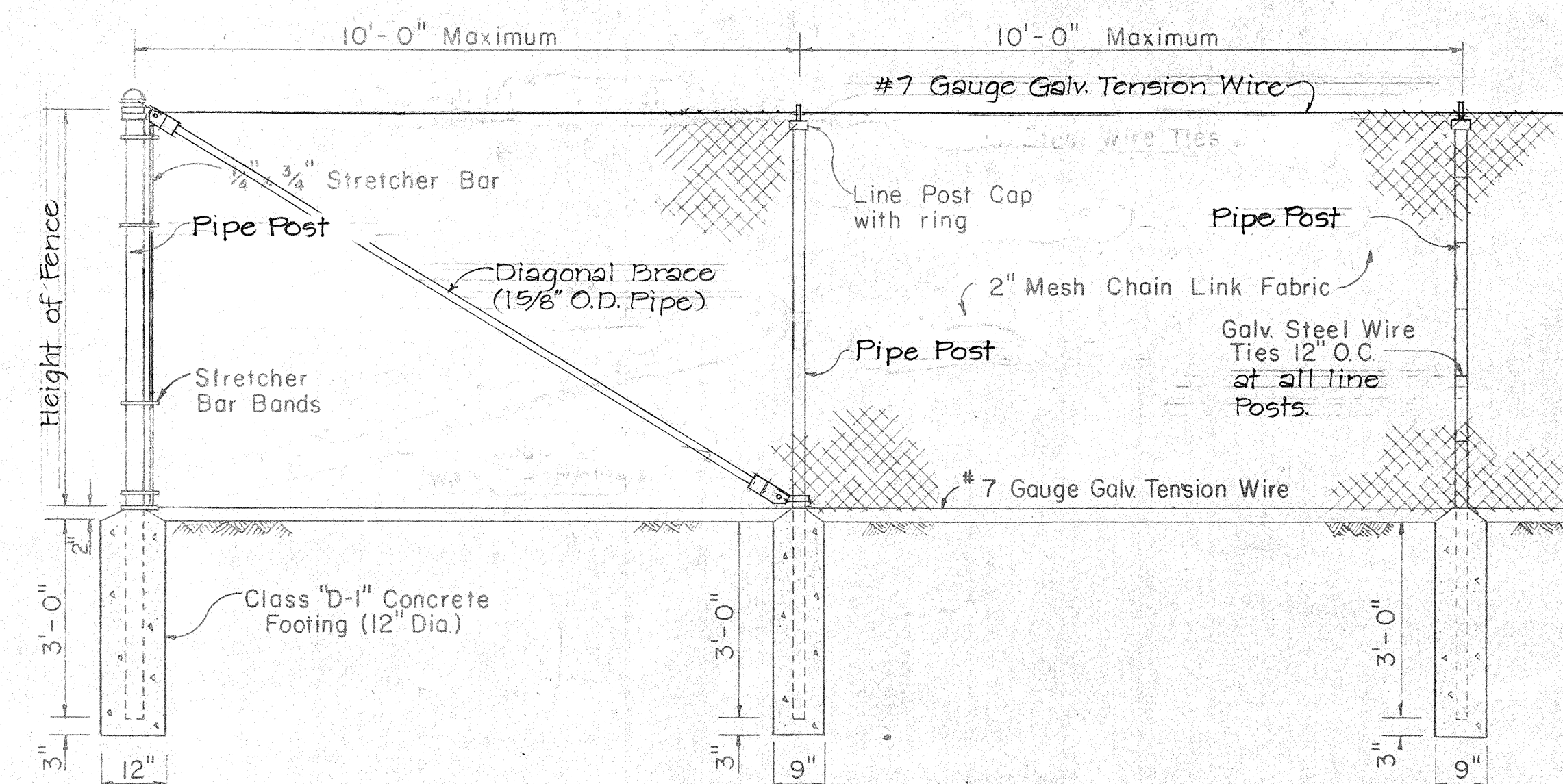
TYPICAL DETAIL OF REINFORCED CONCRETE DRIVEWAY



LINE POST

PULL POST

LINE POST



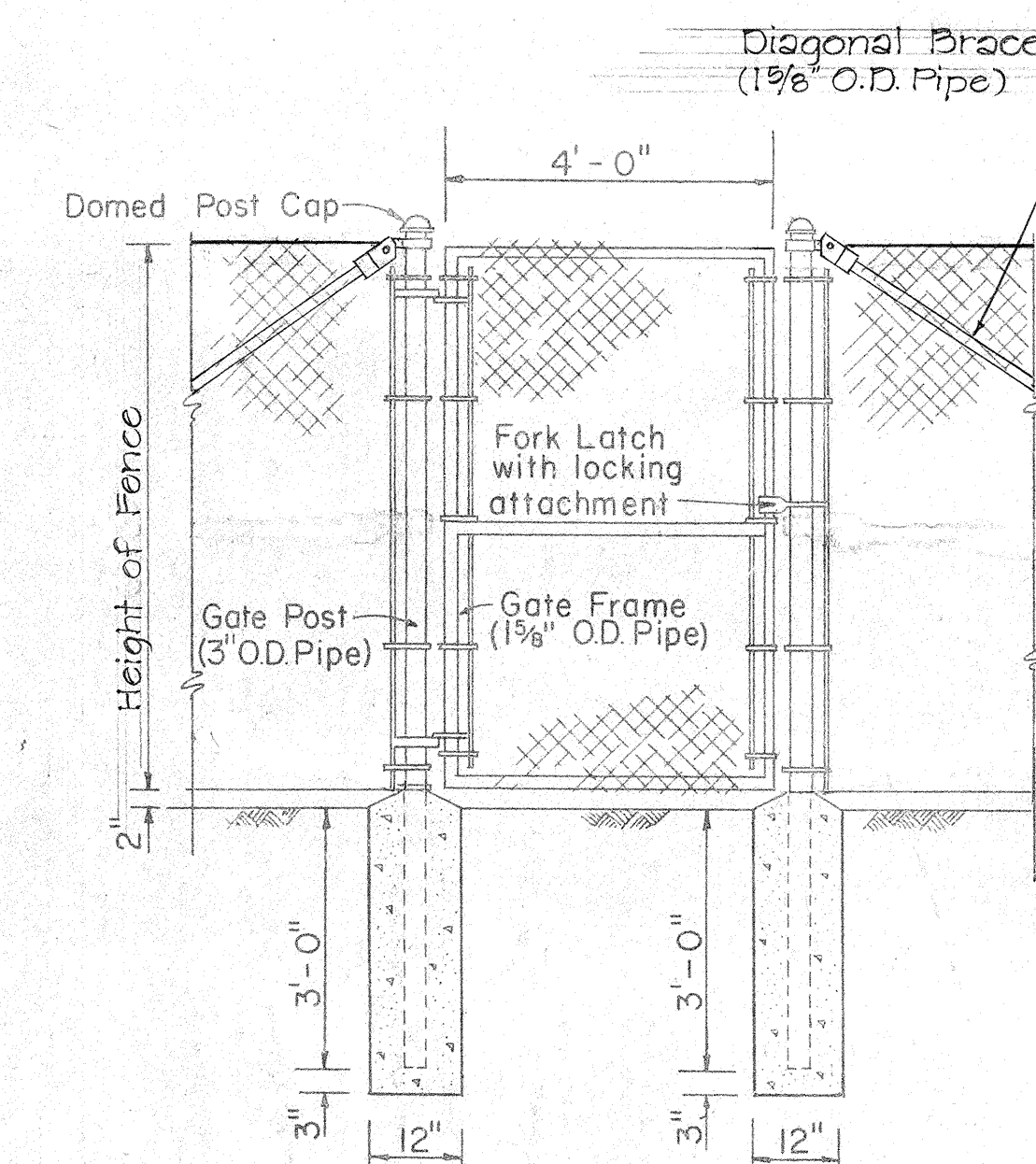
END POST

LINE POST

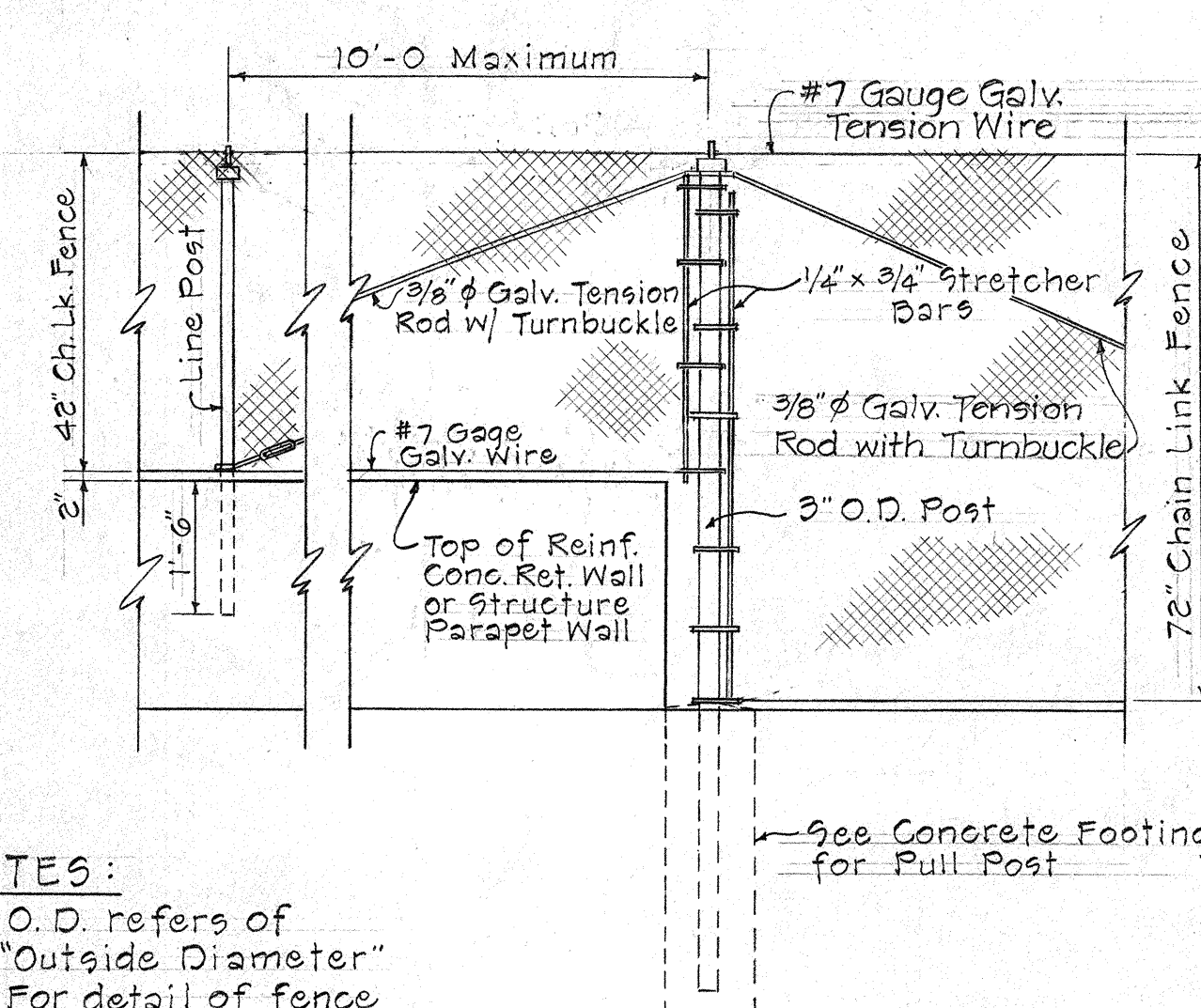
LINE POST

CHAIN LINK FENCE DETAILS

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



DETAIL OF 4 FT. CH. LK. GATE

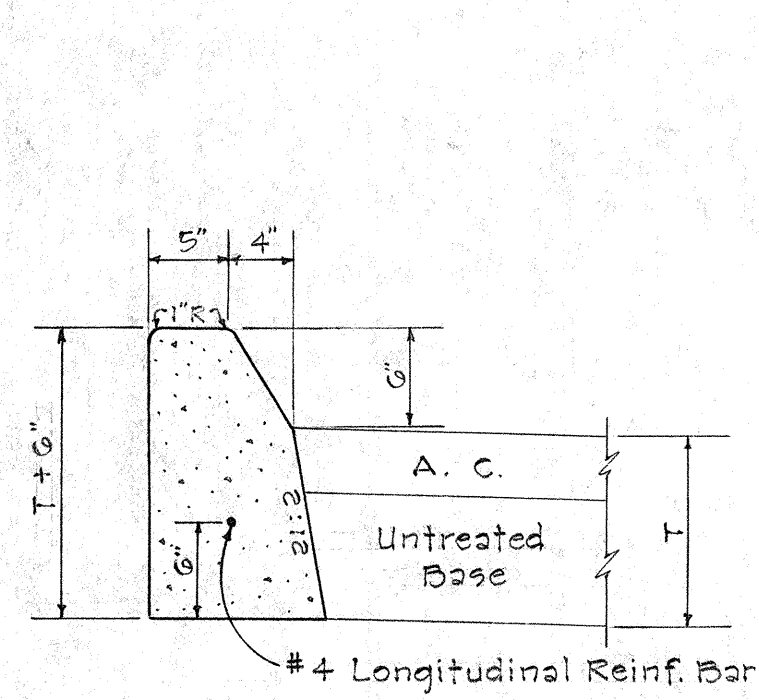


TYPICAL 72" TO 42" CHAIN LINK FENCE
TRANSITION DETAIL AT WALLS
Scale: 1/2" = 1'-0"

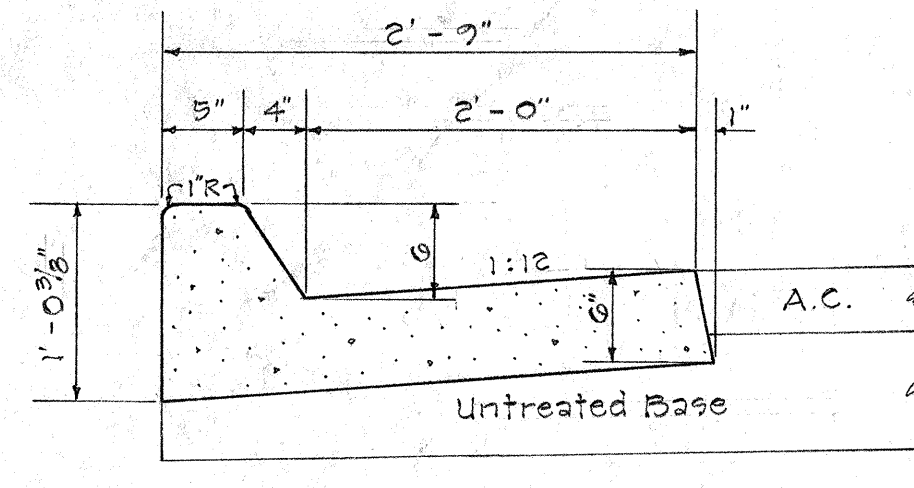
NOTES:

1. O.D. refers to "Outside Diameter"
2. For detail of fence posts in walls see Sheet No. 41
3. See Standard Specifications for Pipe Post sizes for the various heights of fence.

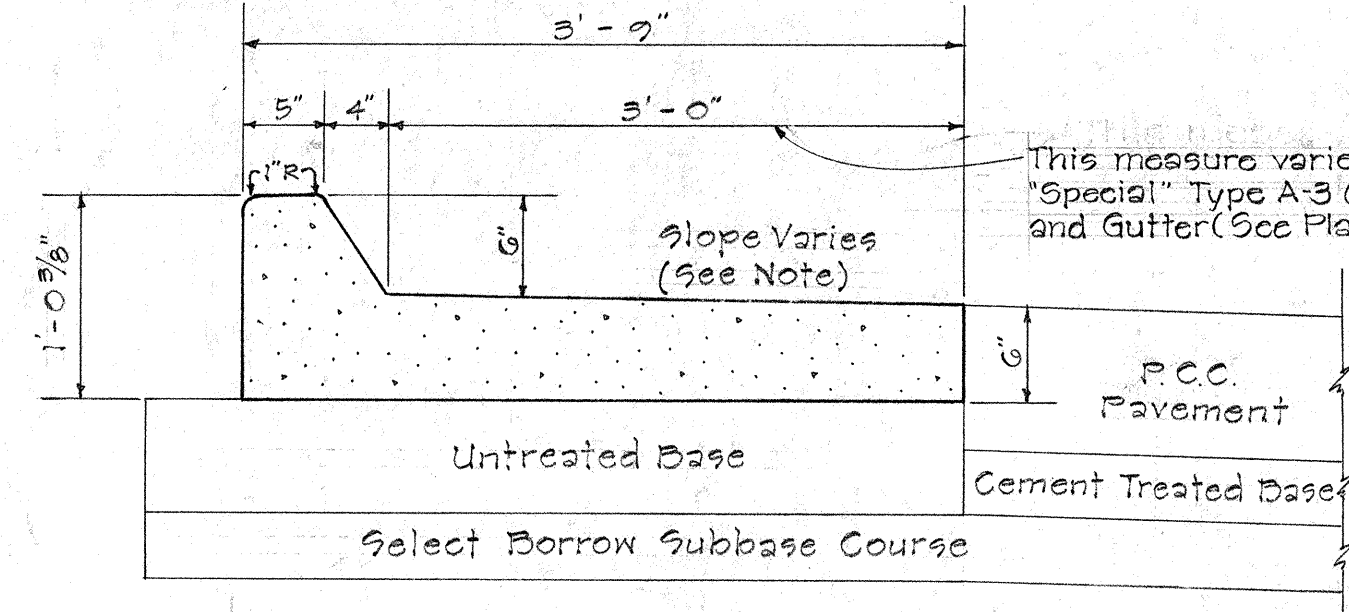
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1966	1966	48	235



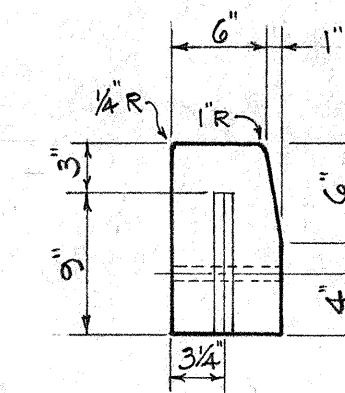
TYPE "A" CURB



TYPE "AG" CURB & GUTTER

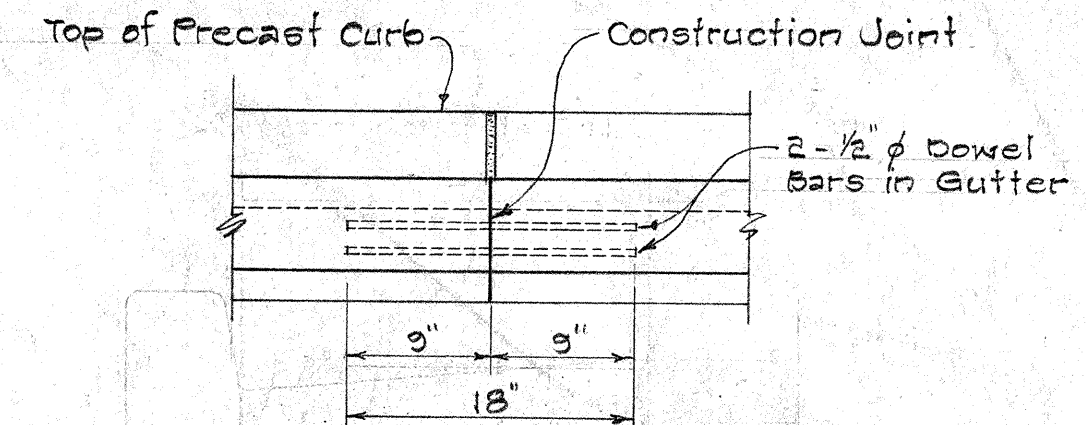


TYPE "A-3" CURB & GUTTER



PRECAST CONCRETE CURB

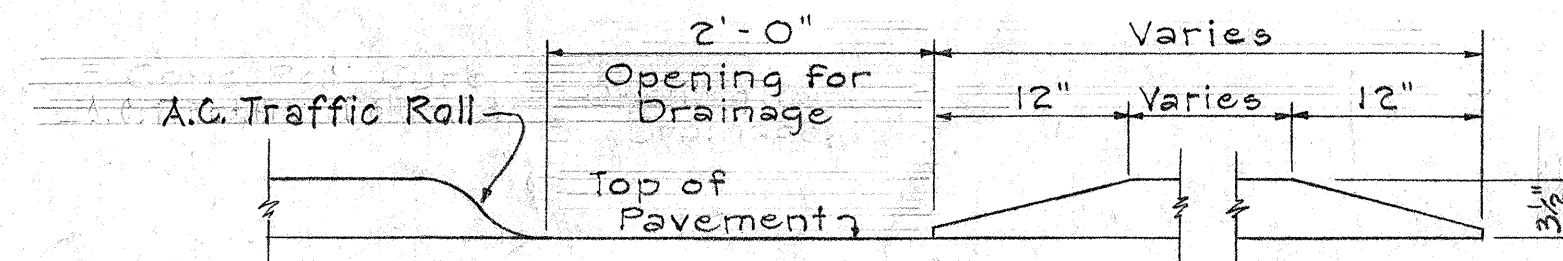
Scale: 1" = 1'-0"



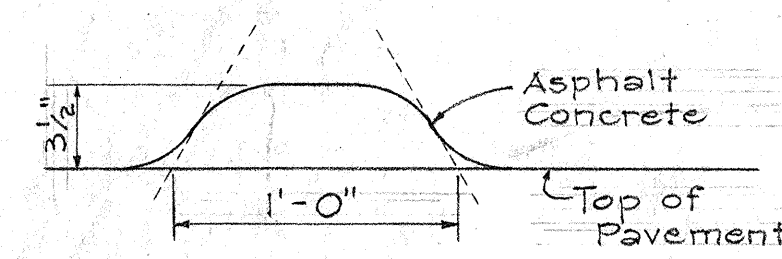
ELEVATION "A-A"

NOTE: All dowel bars shall be painted and oiled to prevent bond with concrete.

- NOTES:
1. -1.5% at tangent sections.
 2. Follows roadway super at super-elevated sections.



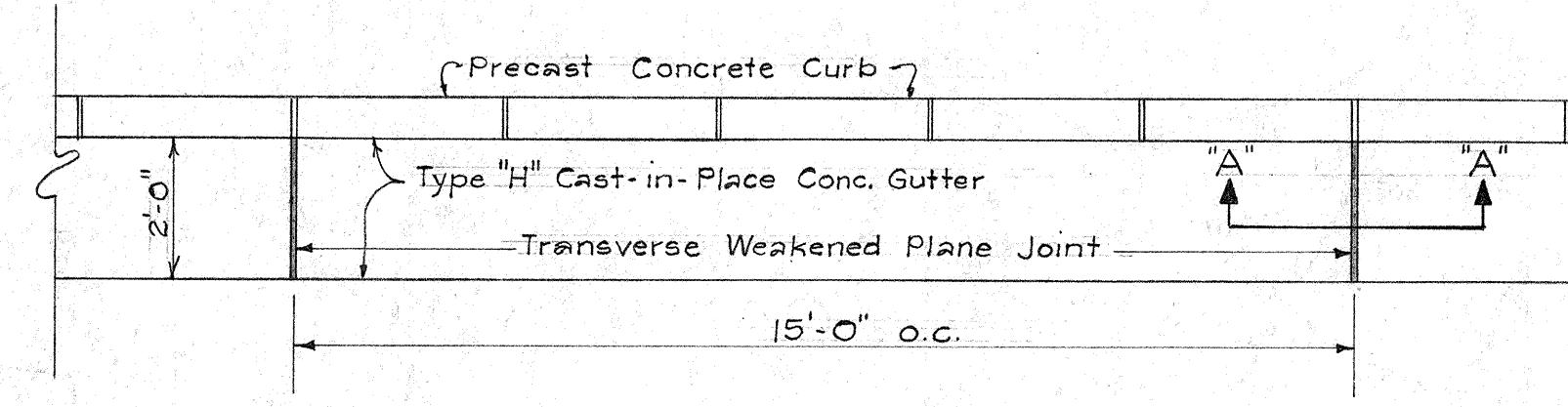
ELEVATION



SECTION

A.C. TRAFFIC ROLL

NOT TO SCALE

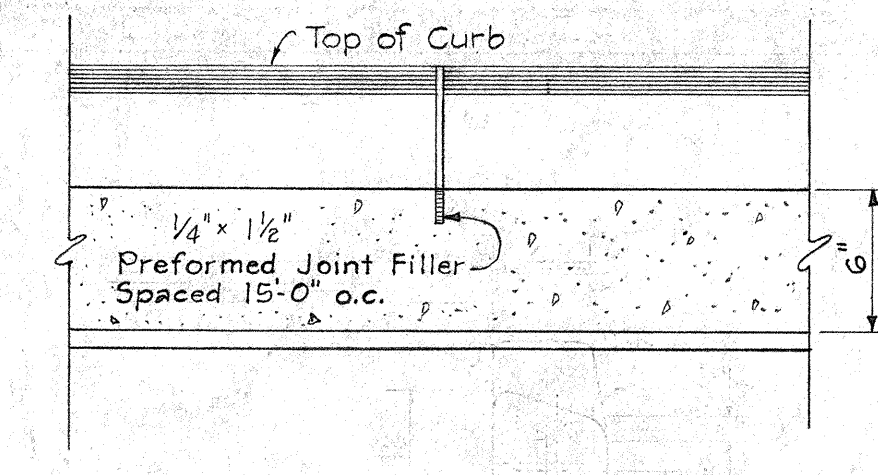


PLAN

Scale: 3/8" = 1'-0"

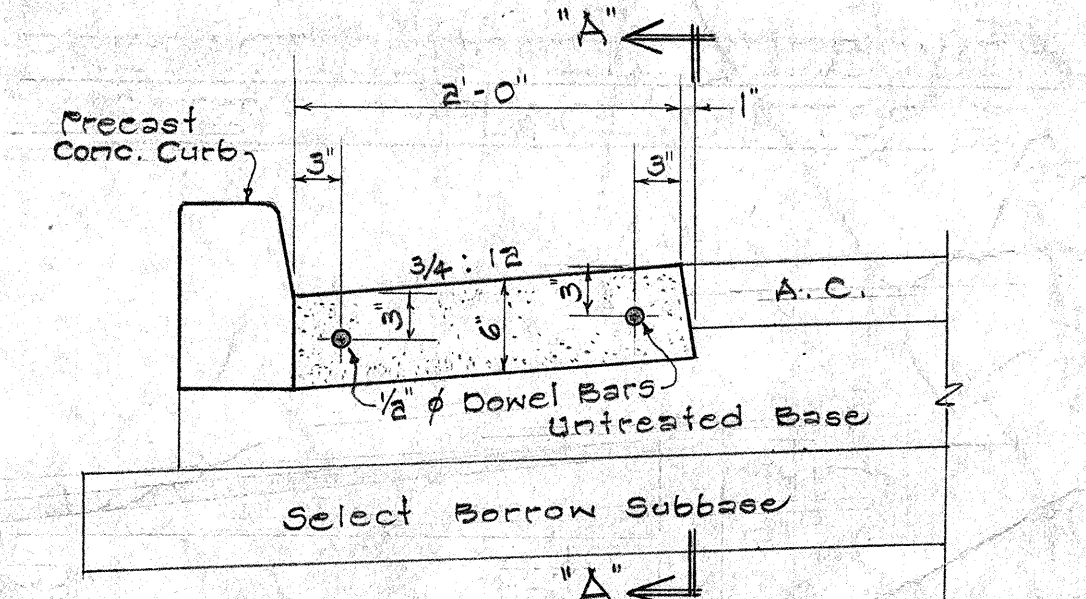
TRANSVERSE WEAKENED PLANE JOINT DETAIL FOR TYPE "H" OR "K" CAST-IN-PLACE CONC. GUTTERS

Scale: As Shown



SECTION "A-A"

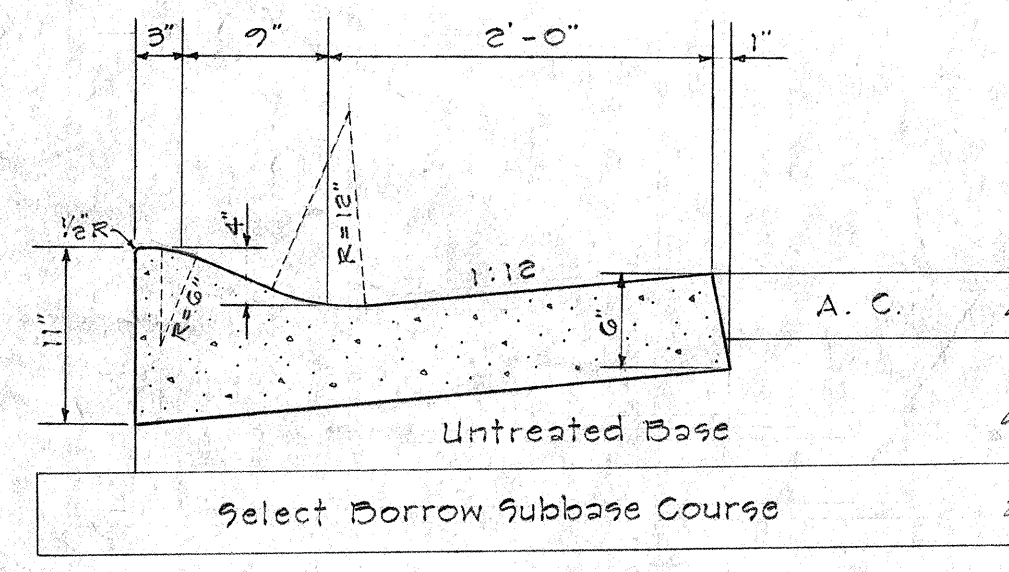
Scale: 1/2" = 1'-0"



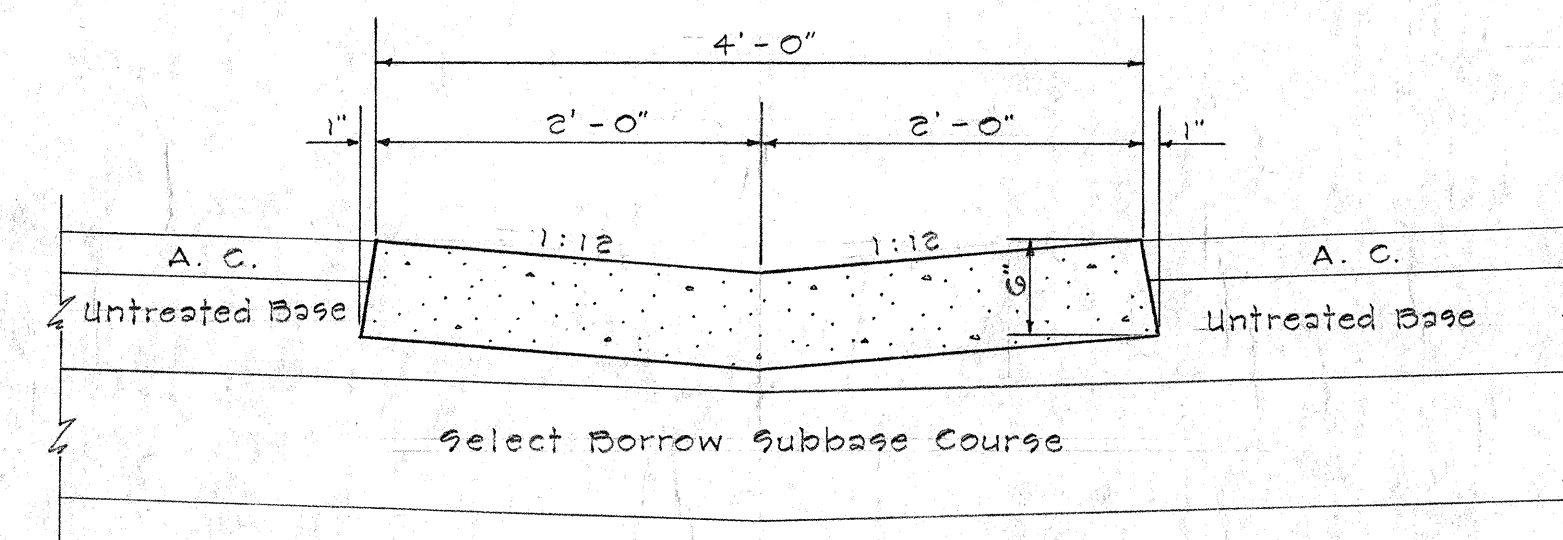
CONSTRUCTION JOINT DETAILS FOR TYPE "H" OR "K" CAST-IN-PLACE GUTTER

Scale: 1" = 1'-0"

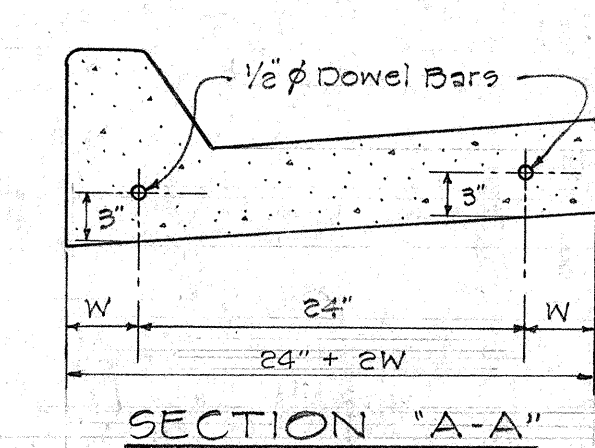
TYPE "DG" CURB & GUTTER



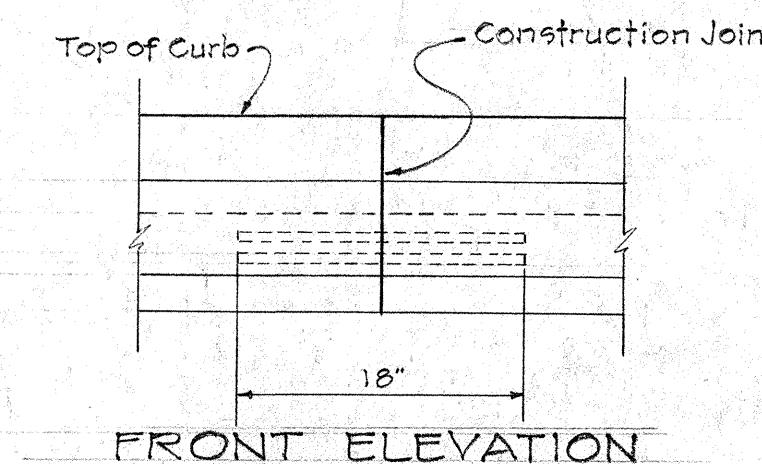
TYPE "EG" CURB & GUTTER



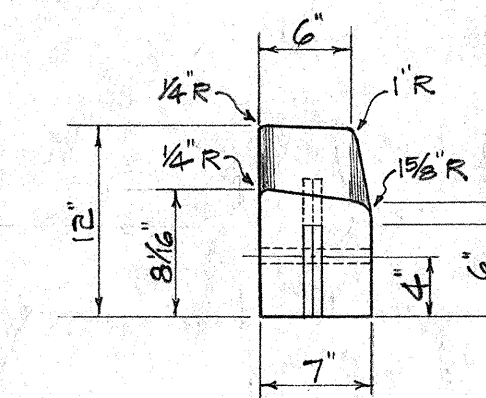
TYPE "G" GUTTER



SECTION "A-A"

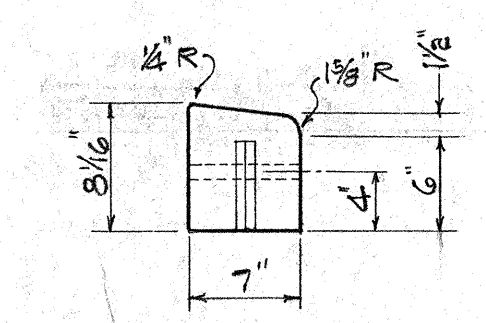


FRONT ELEVATION



PRECAST CONC. DROP CURB

Scale: 1" = 1'-0"

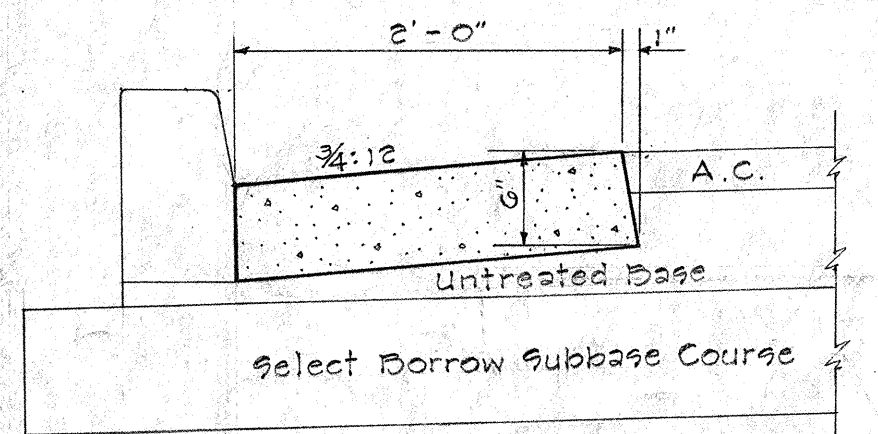


PRECAST CONC. DRIVEWAY CURB

Scale: 1" = 1'-0"

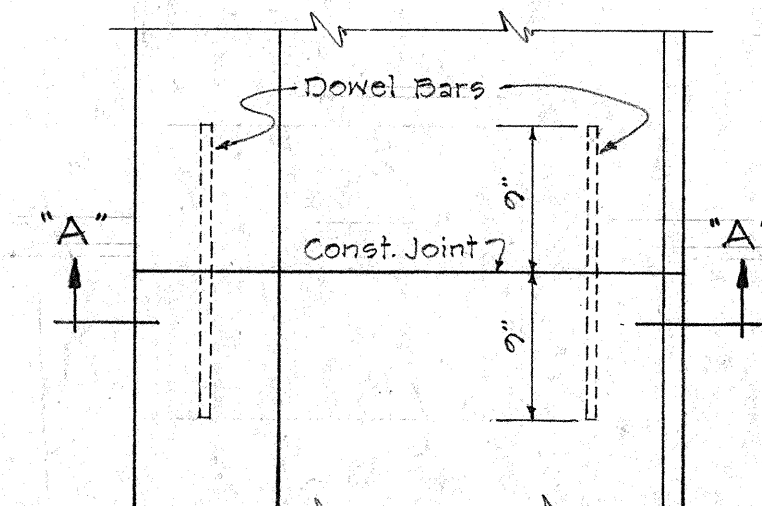
GENERAL NOTES

1. "Special Type AG, DG, or EG Curb and Gutters" shall be similar in all respects to Type AG, DG, and EG Curb and Gutters except that the gutter slopes shall follow roadway super at super-elevated sections.
2. "Special Type" Curbs & Gutters shall be paid for under respective Type AG, DG, A3 or EG Curb and Gutter as applicable.
3. Type "K" Cast-in-Place Conc. Gutter shall be similar in all respects to Type "H" Cast-in-Place Conc. Gutter except that the gutter slope shall be 1:12.
4. Concrete for all Curb and/or Gutters shall be Class A-1.
5. Except for Precast Concrete Curbs, all Curbs and Gutters shall be Cast-in-Place.



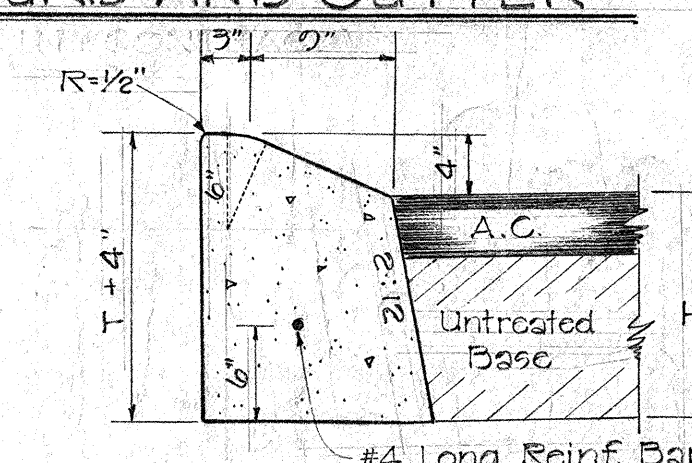
TYPE "H" GUTTER

(ALSO TYPE "K" GUTTER - SEE GENERAL NOTE)

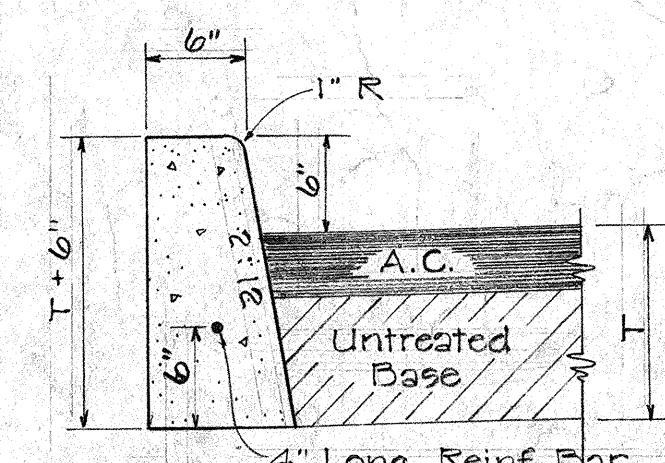


PLAN

TYPICAL CONSTRUCTION JOINT DETAIL FOR CAST-IN-PLACE CONCRETE CURB AND GUTTER



TYPE "E" CURB



TYPE "D" CURB

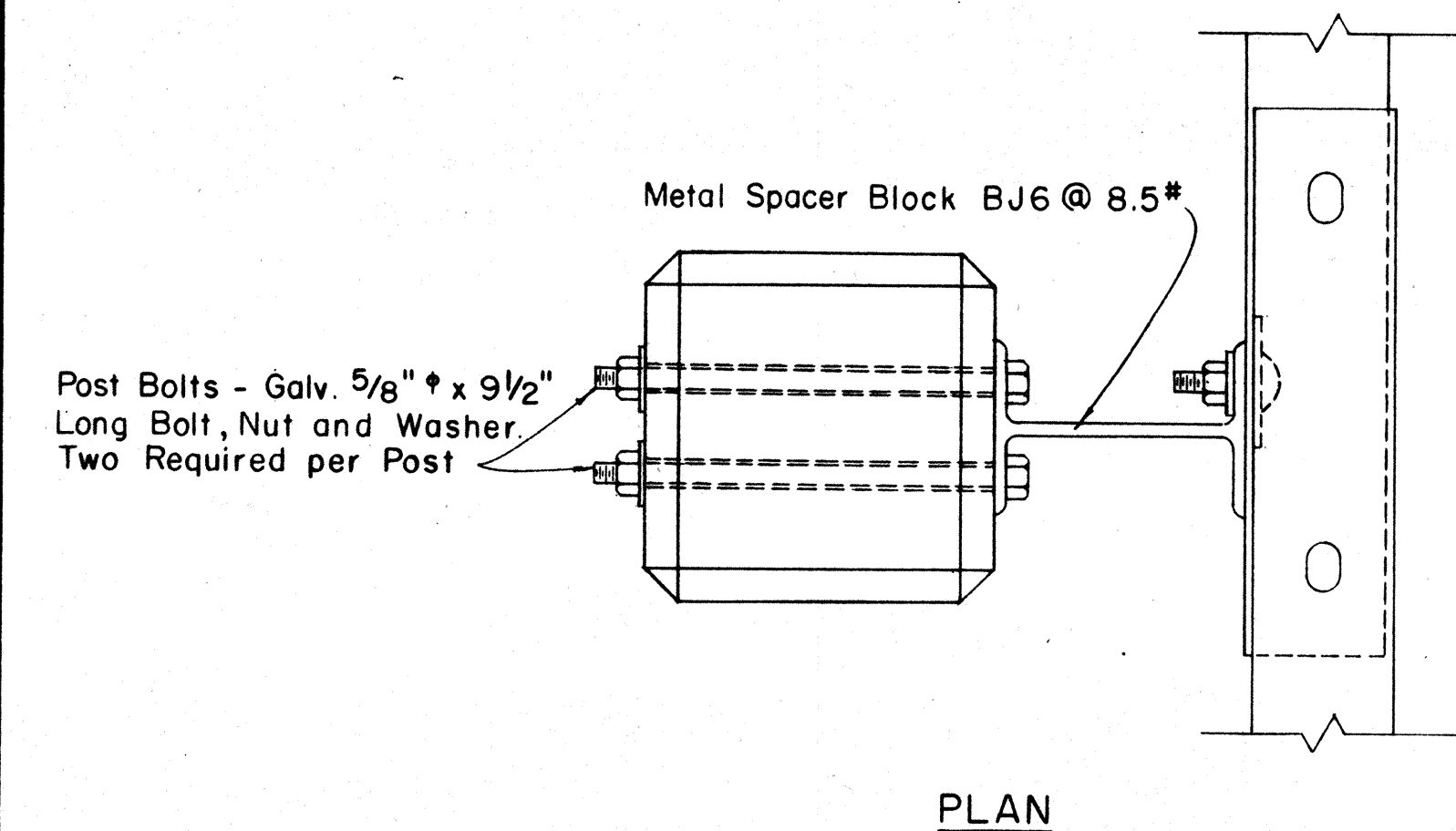
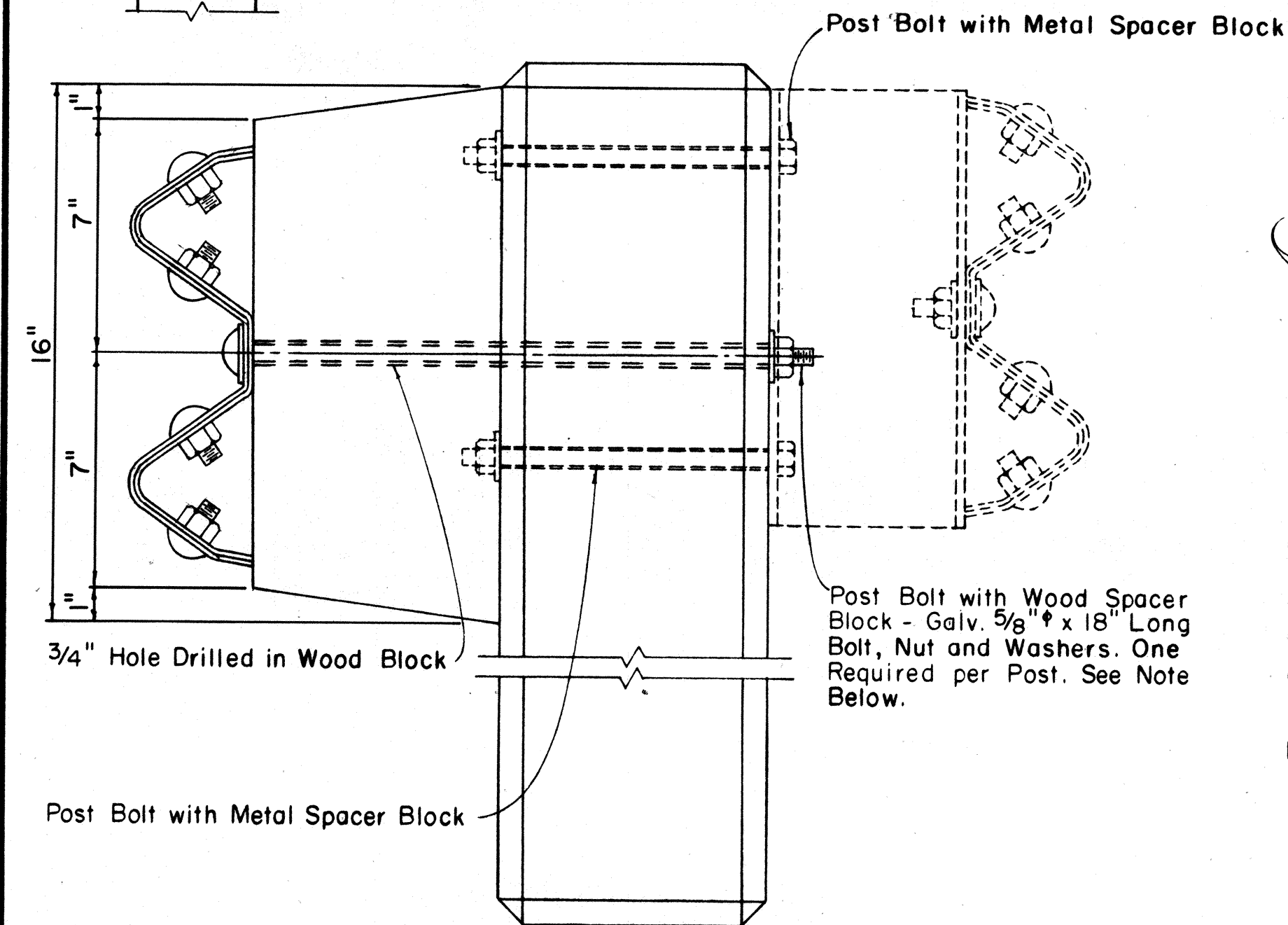
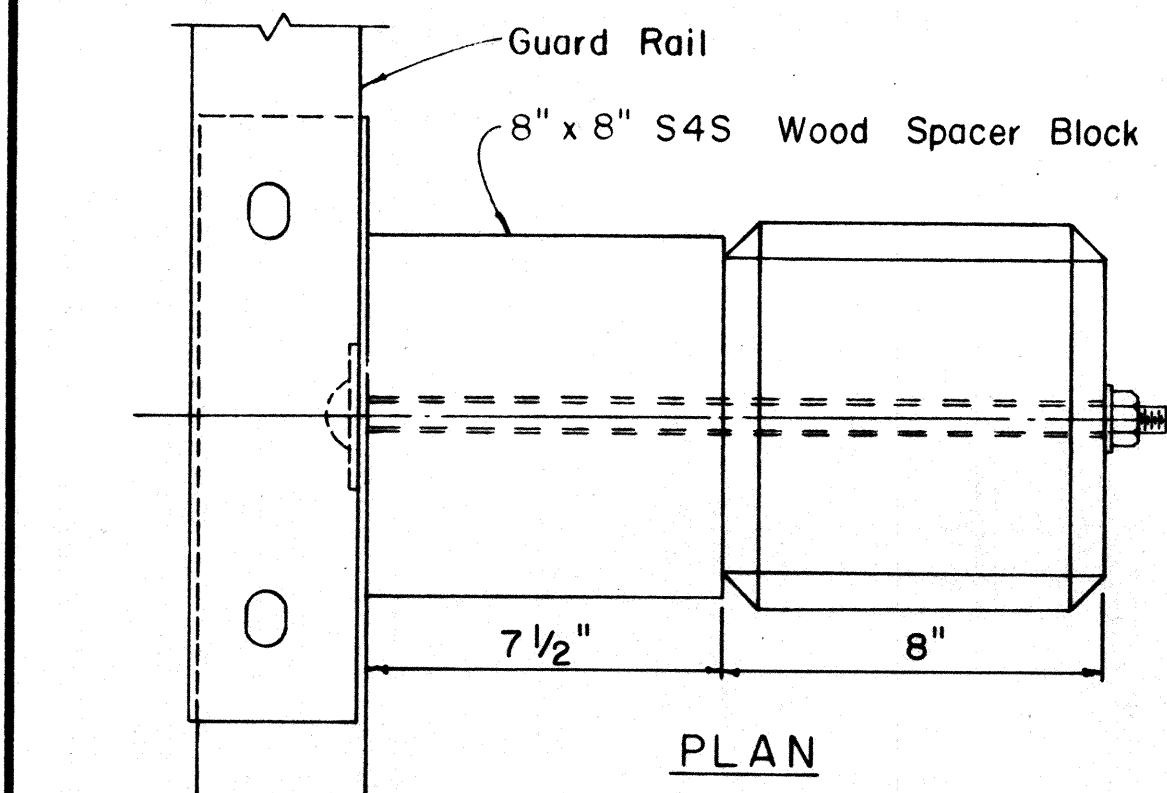
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

CURB AND GUTTER DETAILS

INTERSTATE HIGHWAY (LUNALILO FWY)
F.A.I. PROJ. NO. I-HI-1(6)UNIT 3
SCALE: AS NOTED
AUG. 1966

SHEET No. 5 OF 9 SHEETS

DATE	_____
ORIGINAL PLAN	_____
DRAWN BY	_____
TRACED BY	_____
NOTED BY	_____
CHECKED BY	_____
NO.	_____

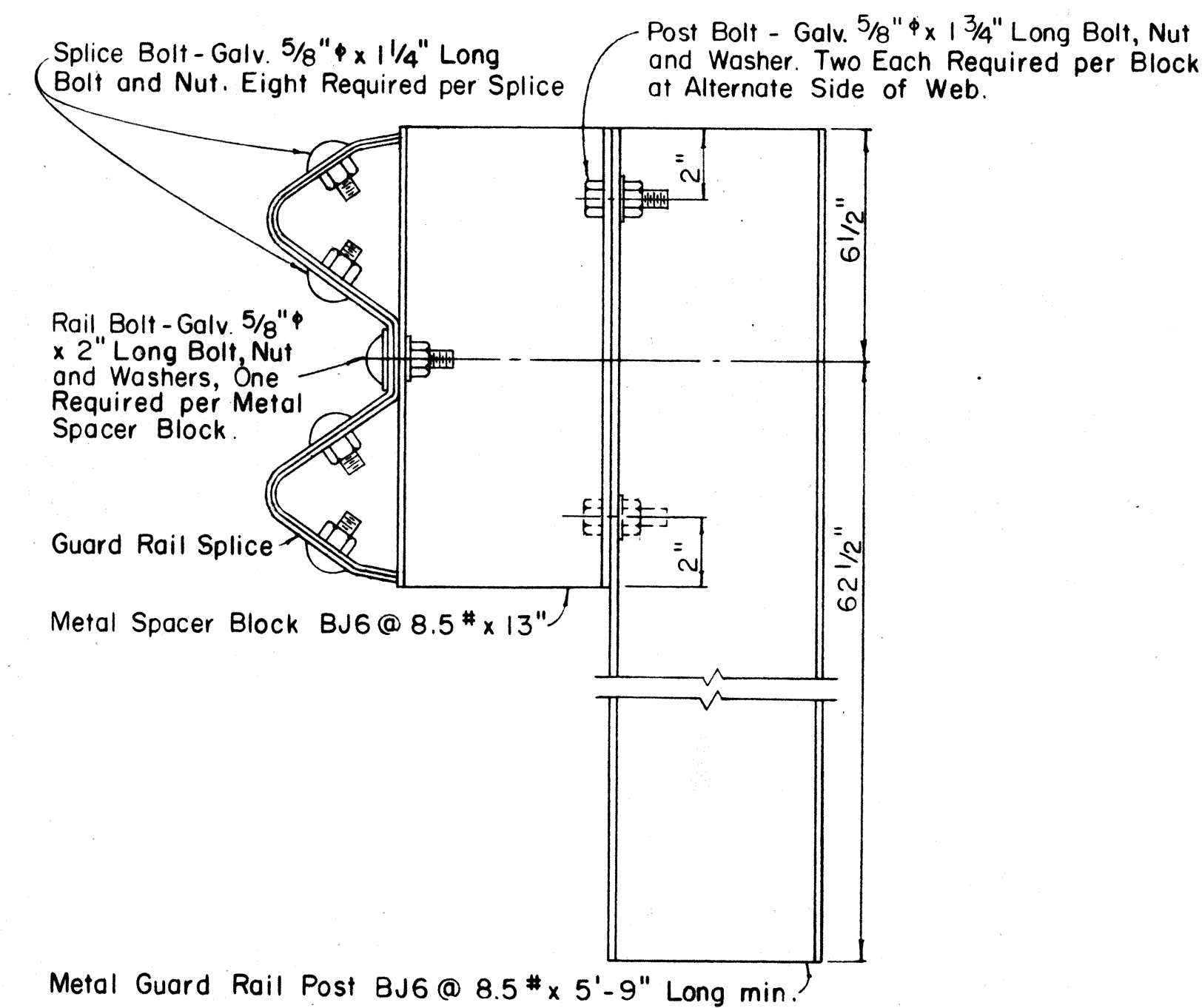
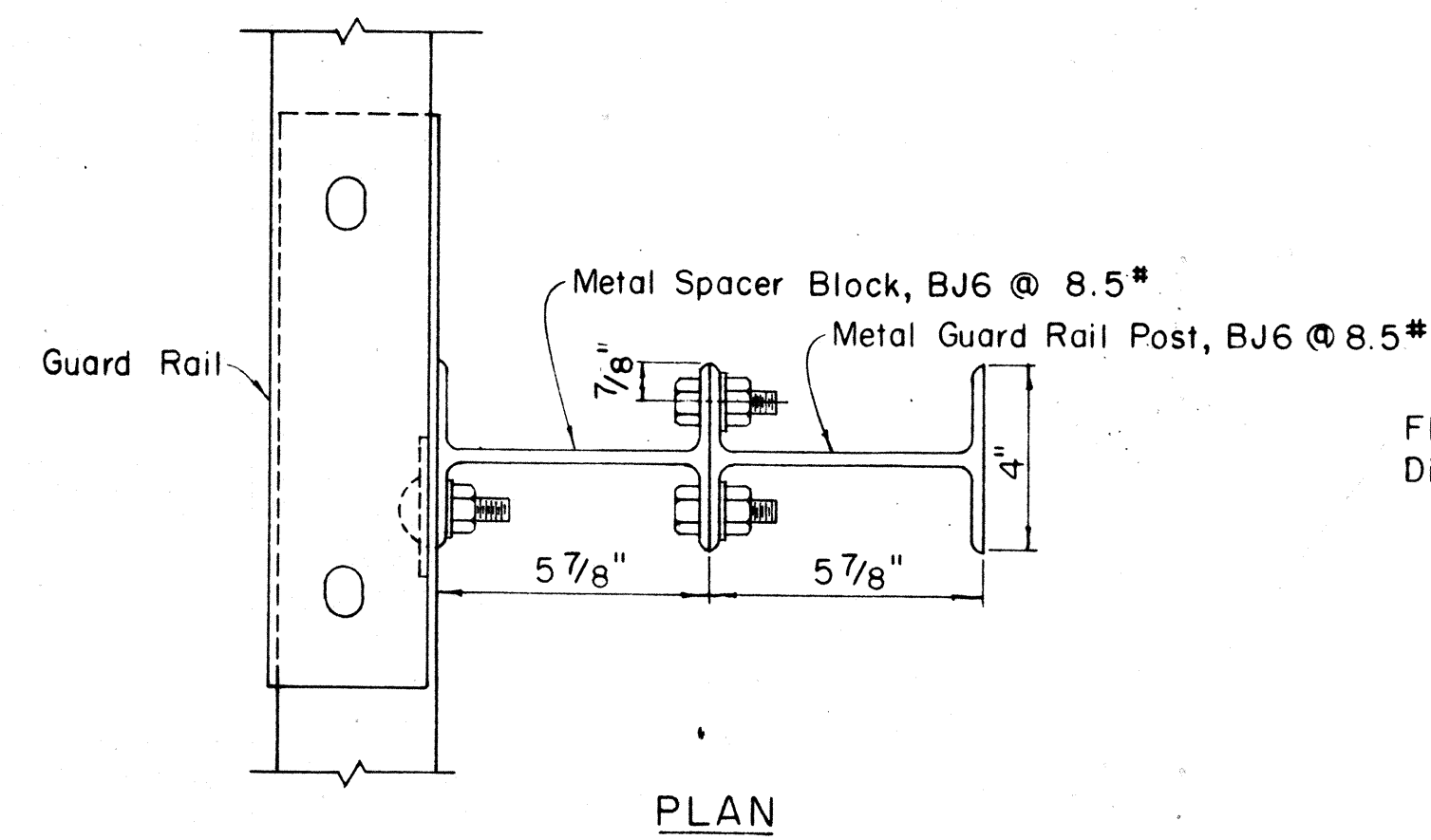


SINGLE METAL GUARD RAIL ON PRECAST CONCRETE POST WITH WOOD OR METAL SPACER BLOCK

Scale: 3" = 1' - 0"

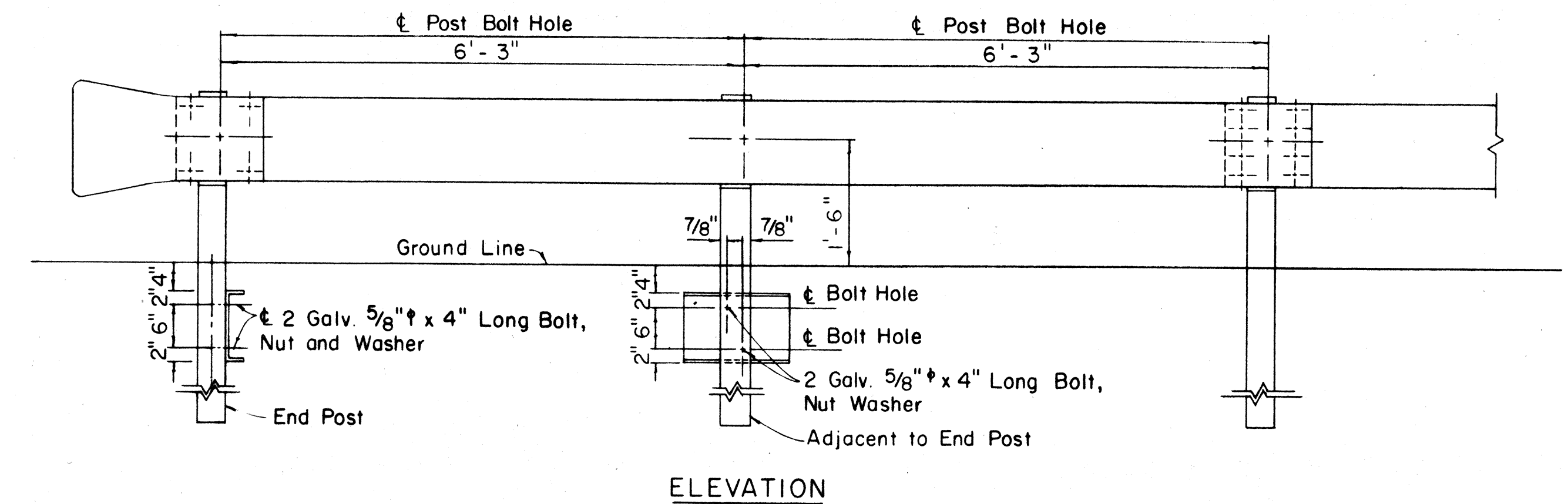
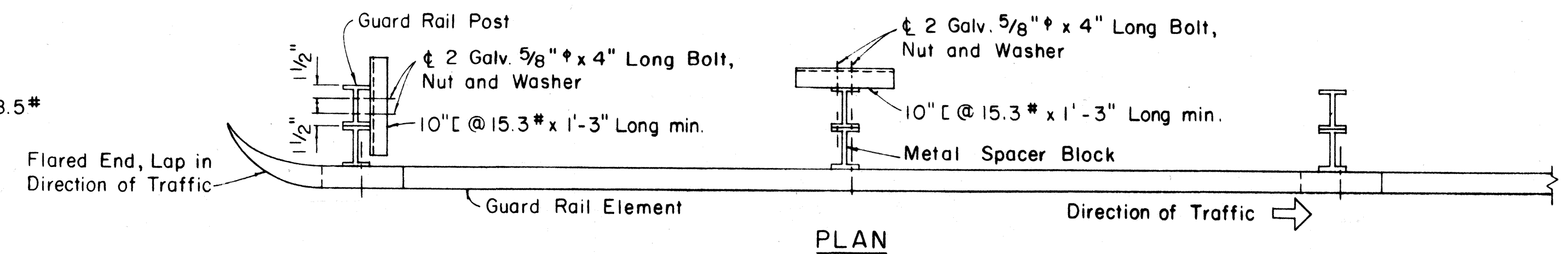
NOTE:

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.



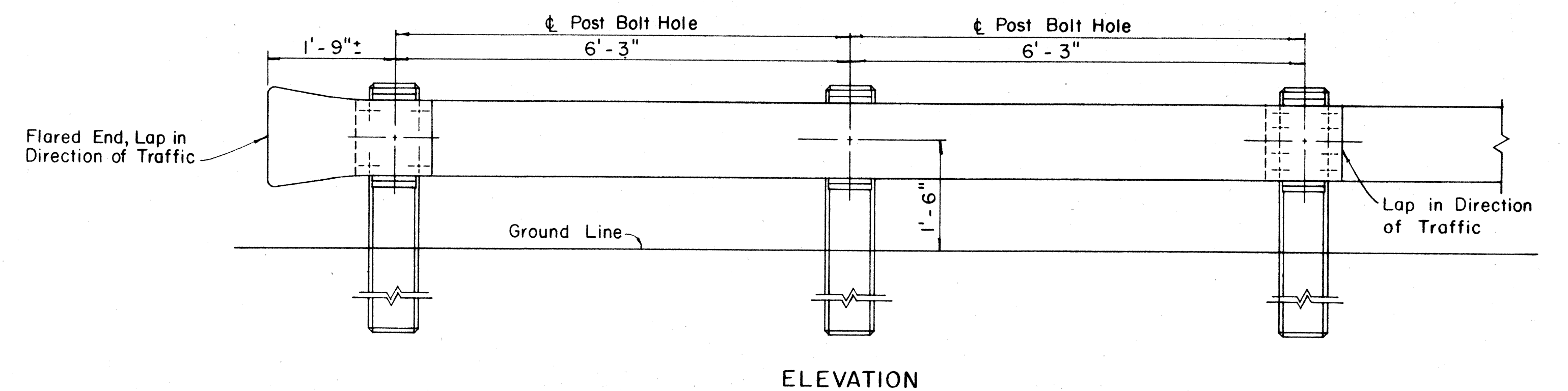
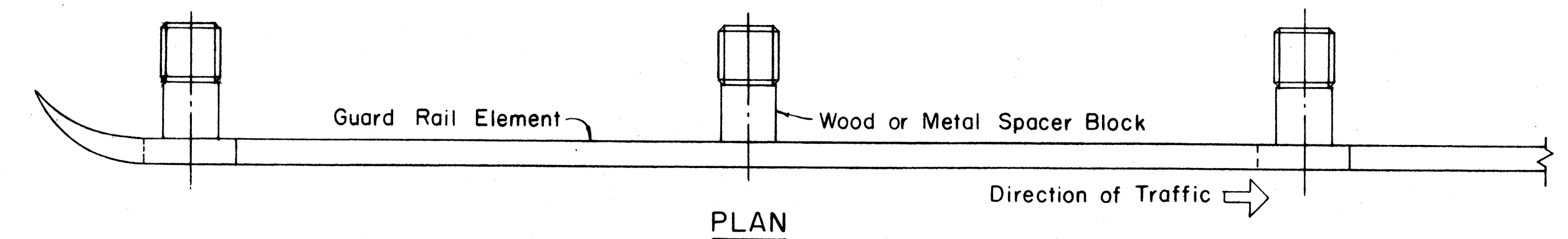
SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK

Scale: 3" = 1' - 0"



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"

DETAILS FOR SINGLE GUARD RAIL

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

METAL GUARD RAIL

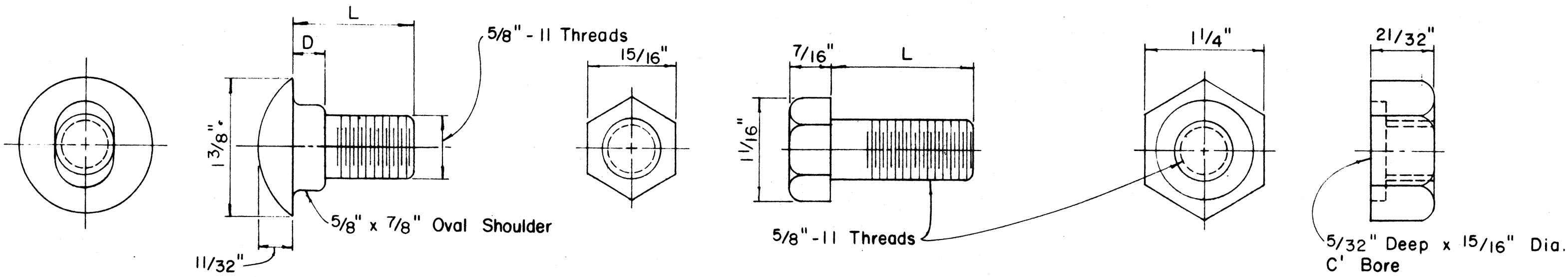
Scale: as noted

SHEET No. 6 OF 9 SHEETS

DATE	
DESIGNED BY	
CHECKED BY	
NOTED BY	
ORIGINAL	

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

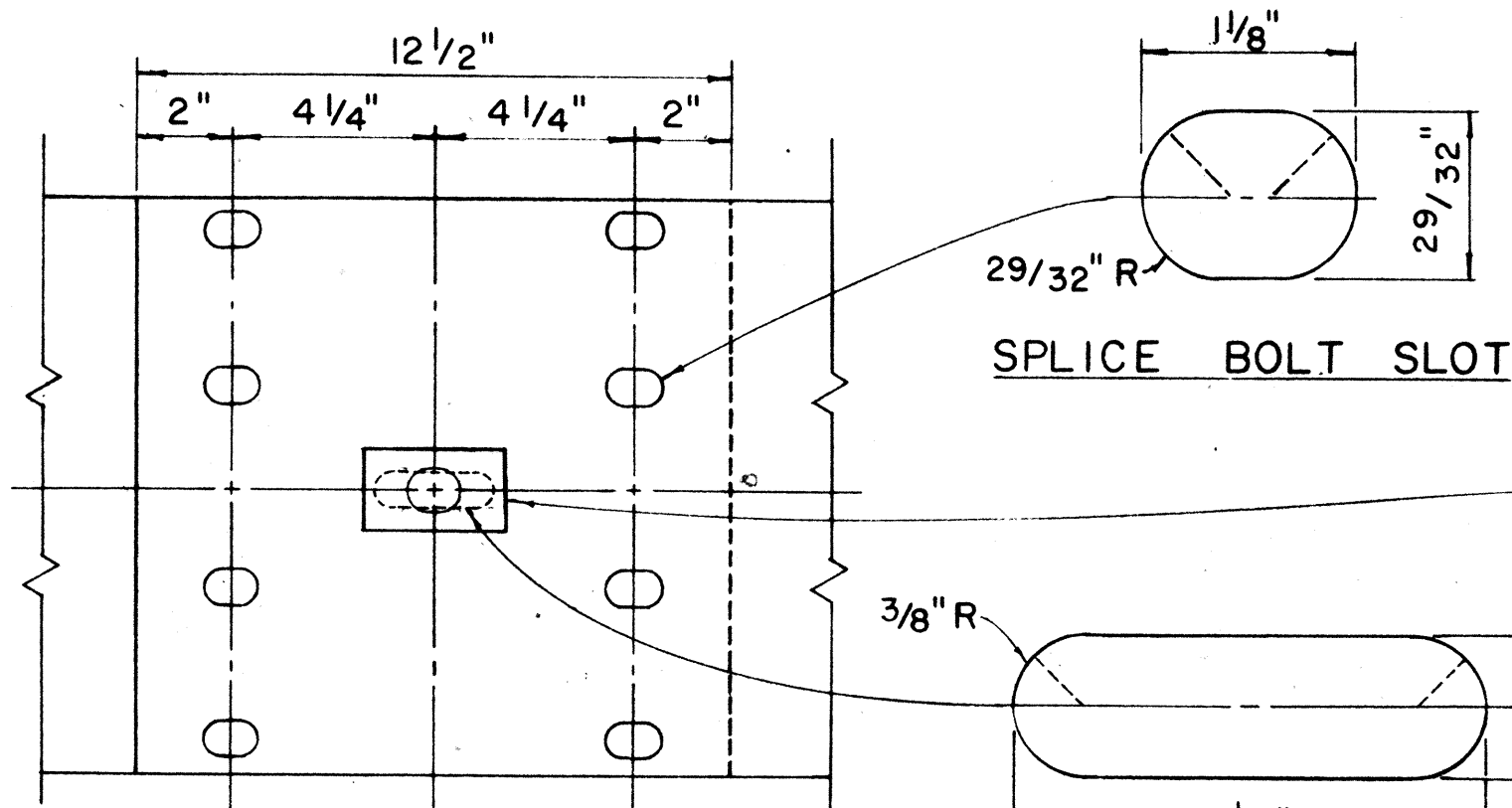
TYPE B BOLT

HEXAGON NUT

Scale: Full Size

SPLICE RAIL AND POST BOLTS

Scale: Full Size



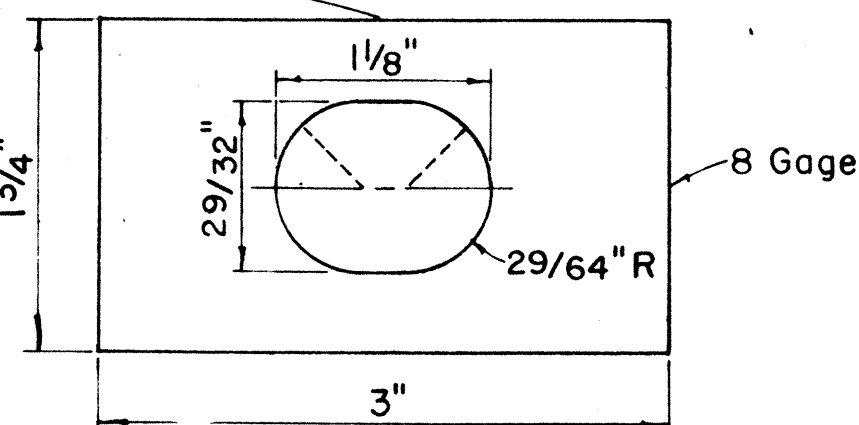
RAIL SPLICE

Scale: 3" = 1'-0"

POST BOLT SLOT

SPLICE BOLT SLOT FOR ALL ENDS

Scale: Full Size



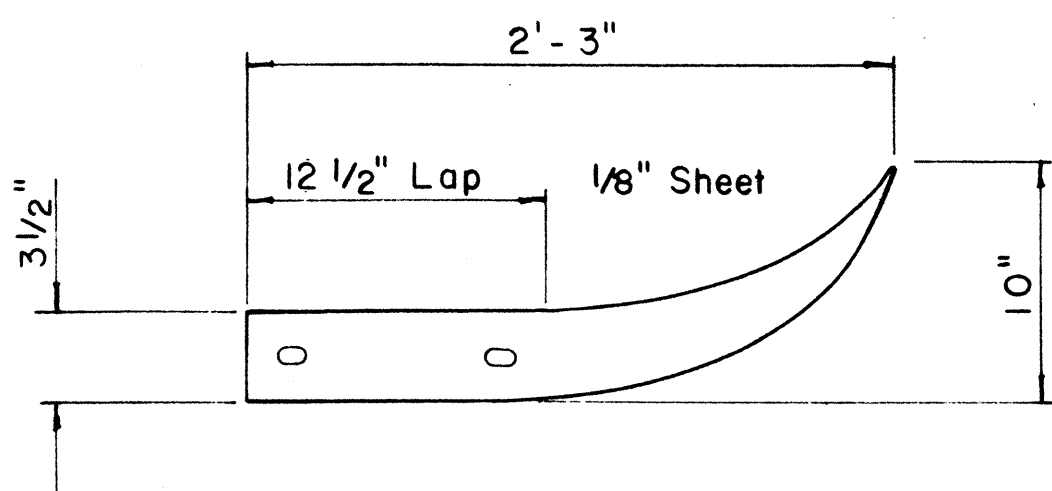
RAIL WASHER

MEDIAN END

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

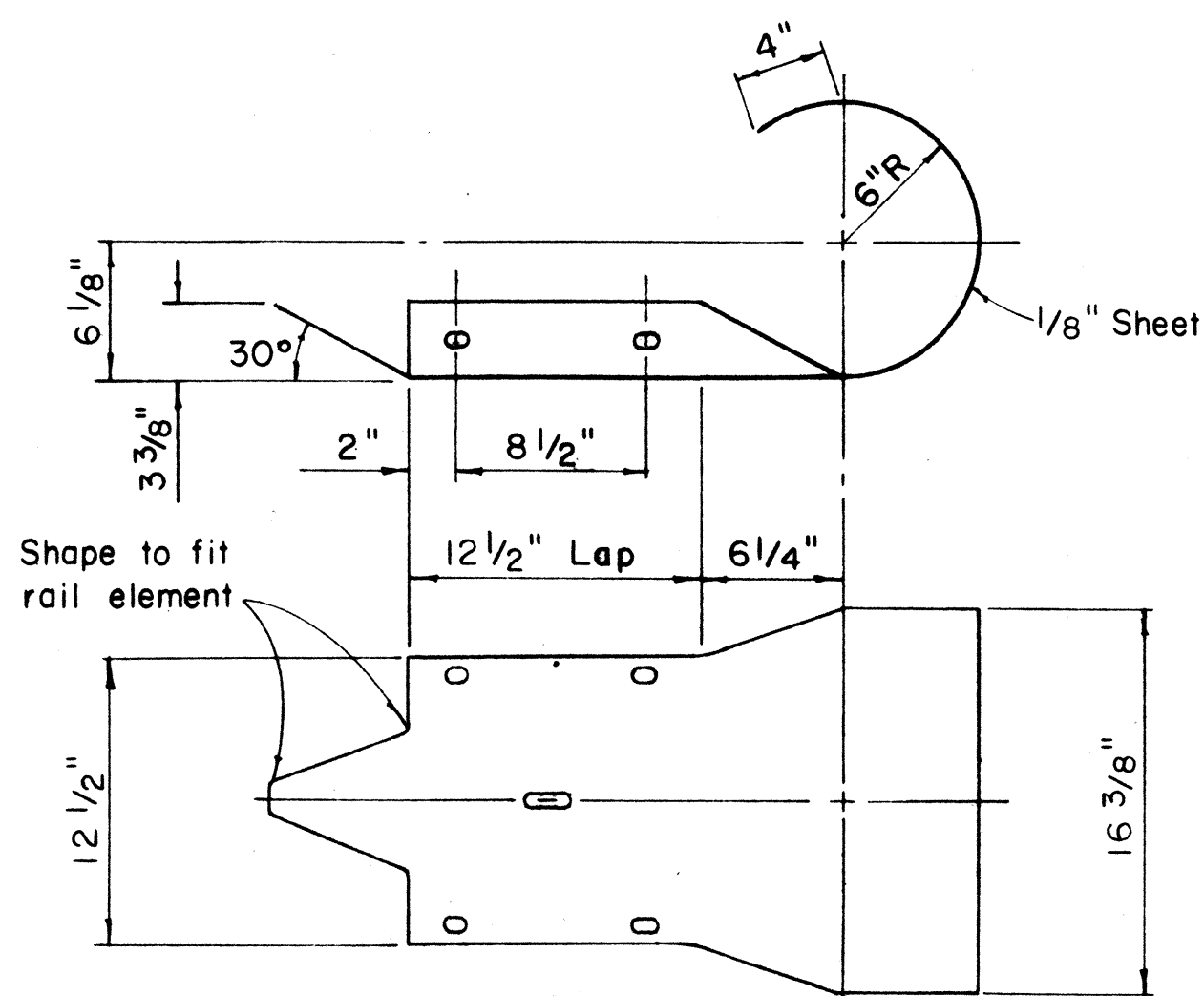
TYPE OF POST AND BLOCK	W	R
Double Metal Guard Rail on Concrete Post with Wood Blocks	29 3/4"	14 7/8"
Double Metal Guard Rail on Concrete Post with Metal Blocks (BJ 6)	26 1/2"	13 1/4"
Double Metal Guard Rail on Metal Post with Metal Blocks (BJ 6)	24 3/8"	12 3/16"

MEDIAN END DIMENSIONS



FLARED END

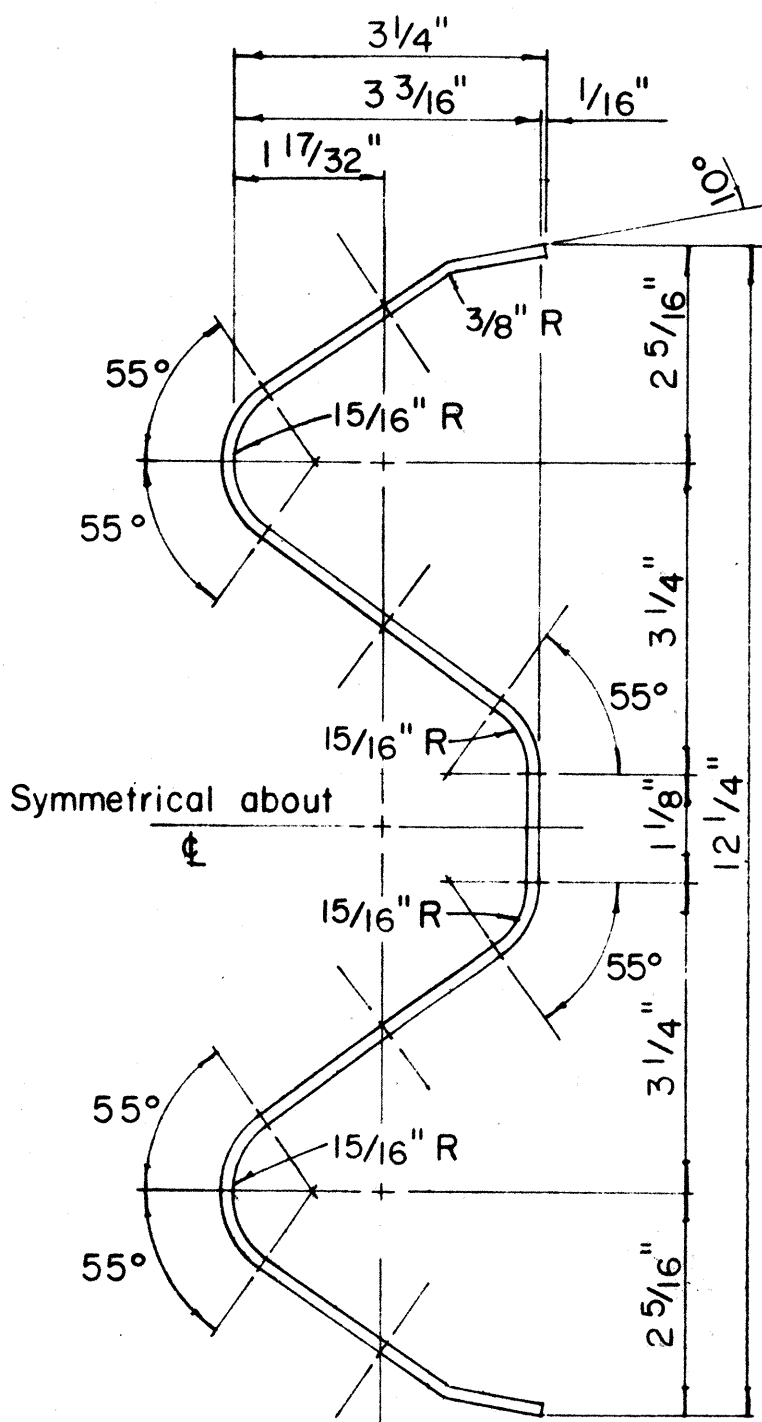
Scale: 1 1/2" = 1'-0"



CURVED END

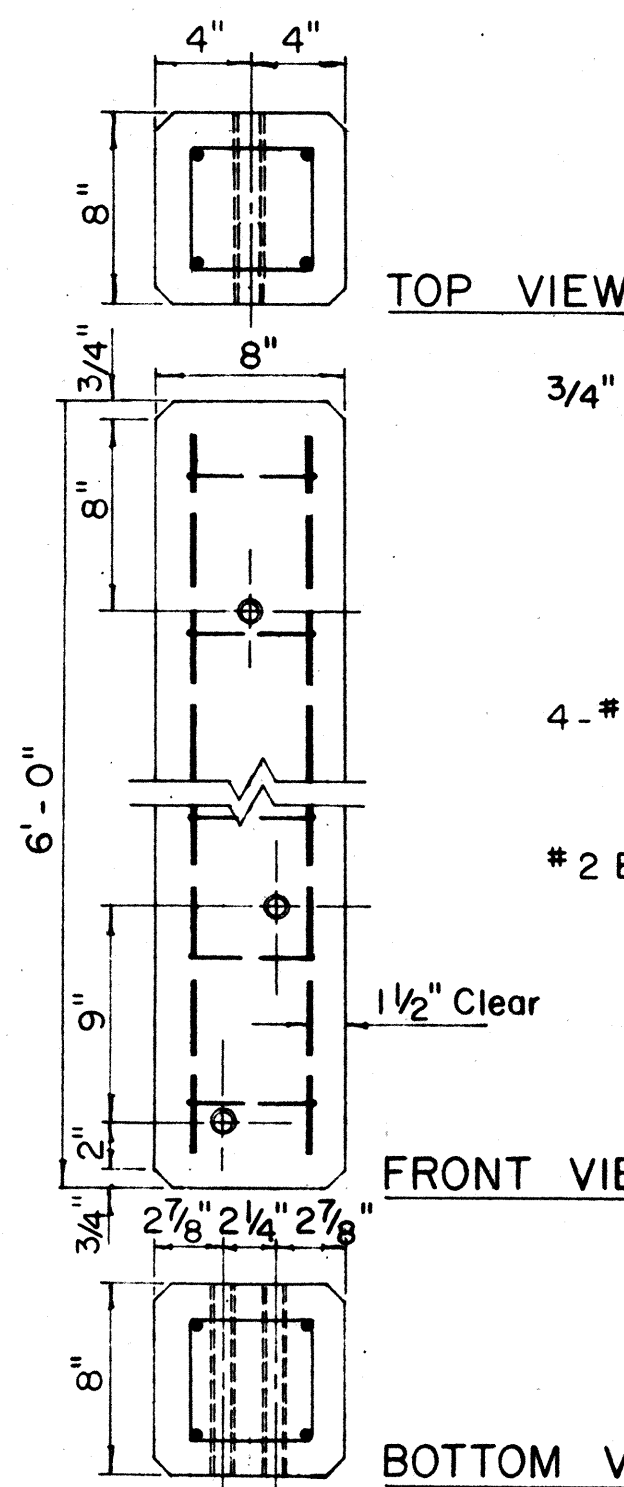
Scale: 1 1/2" = 1'-0"

DATE	
SURVEY PLOTTED BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	



RAIL ELEMENT SECTION

Scale: 8" = 1'-0"

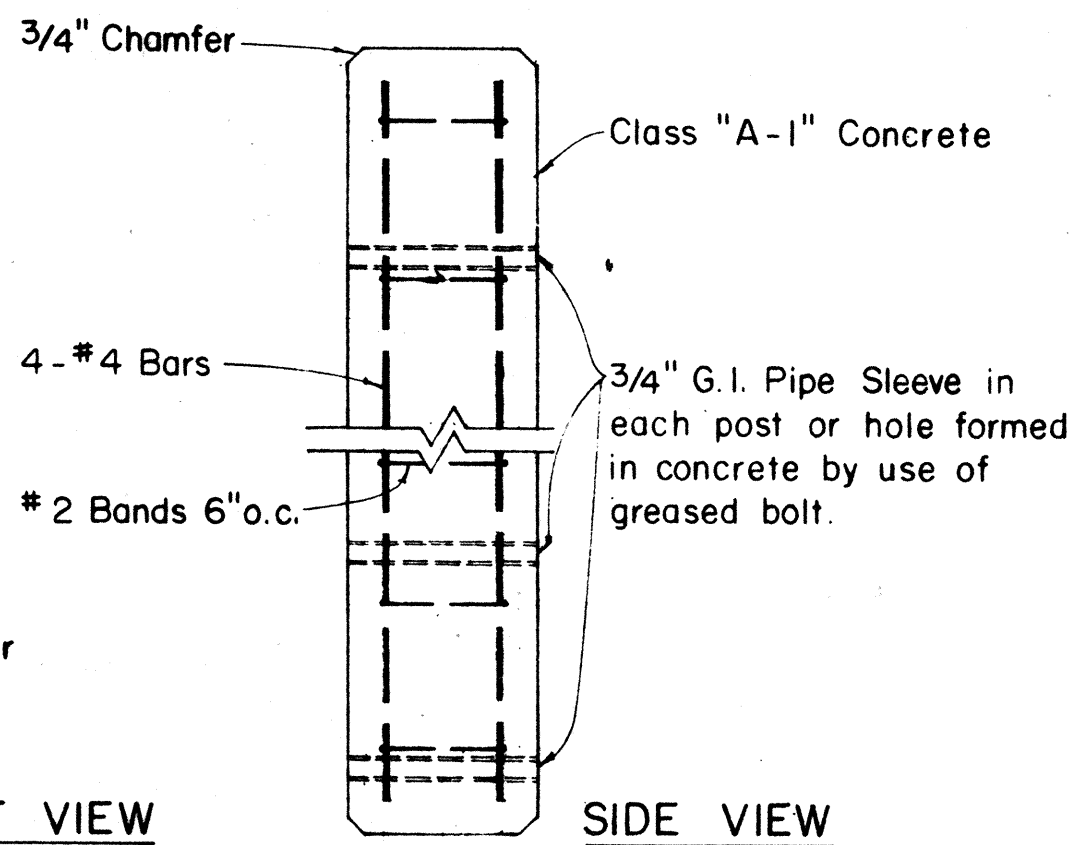


TOP VIEW

FRONT VIEW

BOTTOM VIEW

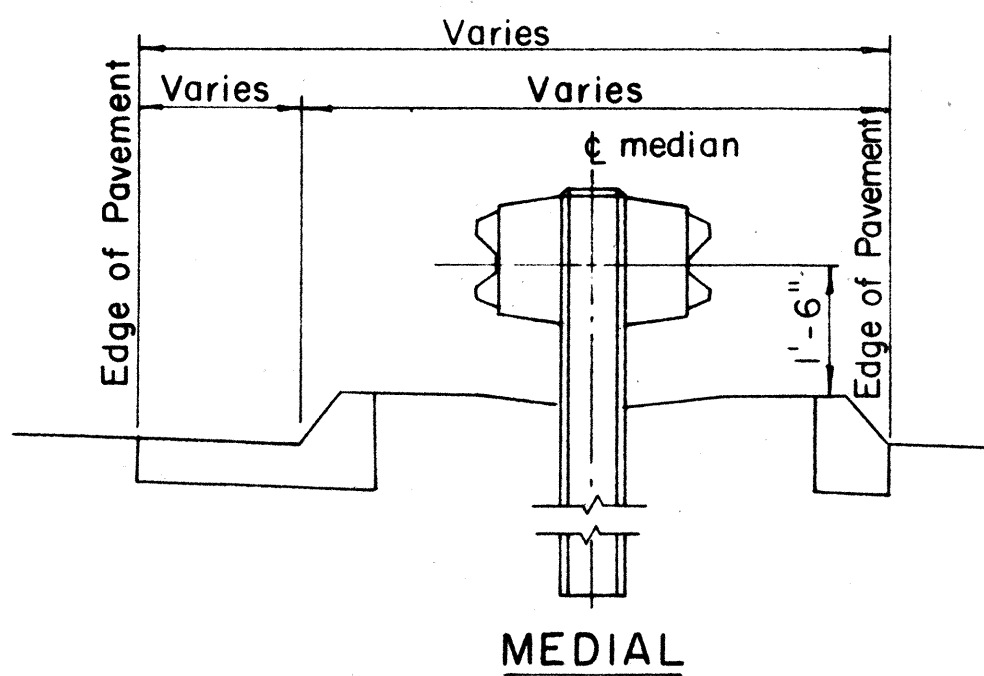
NOTE:
Concrete post shall be precast



SIDE VIEW

DETAIL OF CONCRETE POST

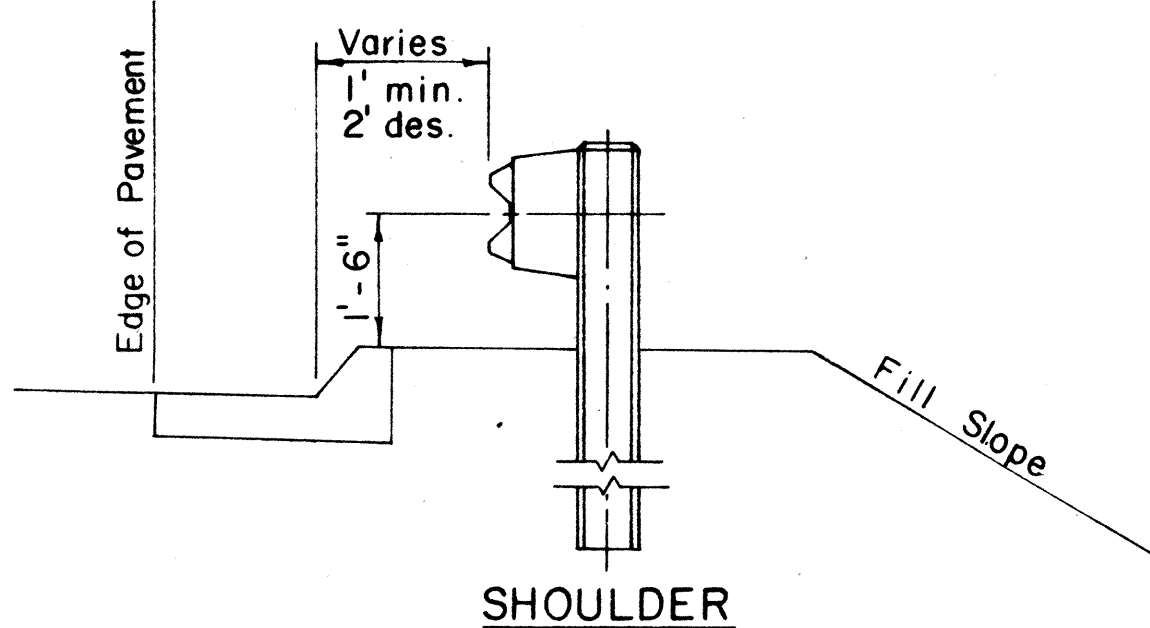
Scale: 1 1/2" = 1'-0"



MEDIAL

TYPICAL GUARD RAIL DETAIL

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



SHOULDER

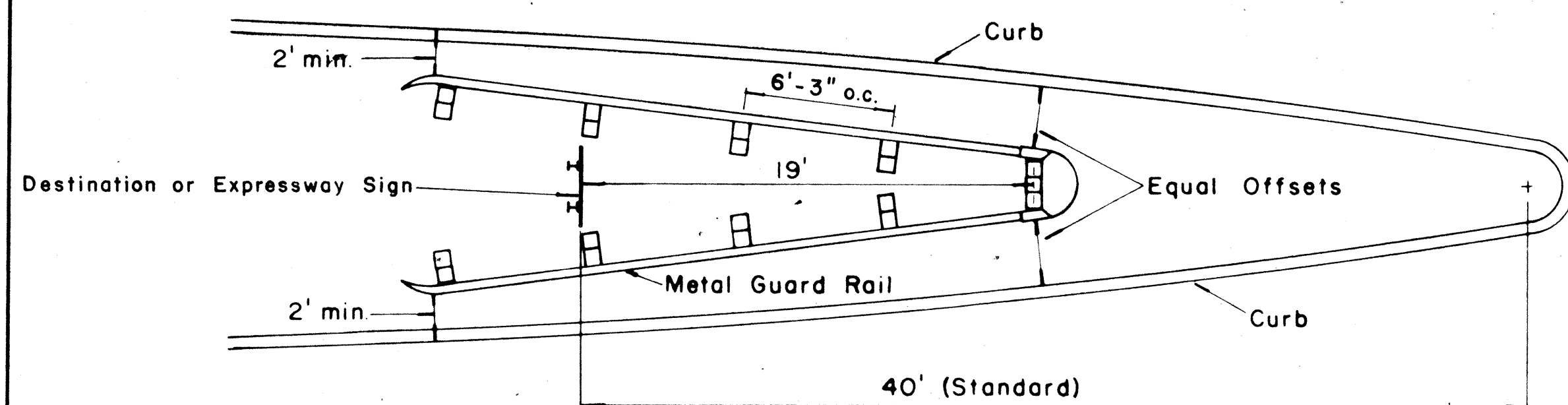
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

METAL GUARD RAIL

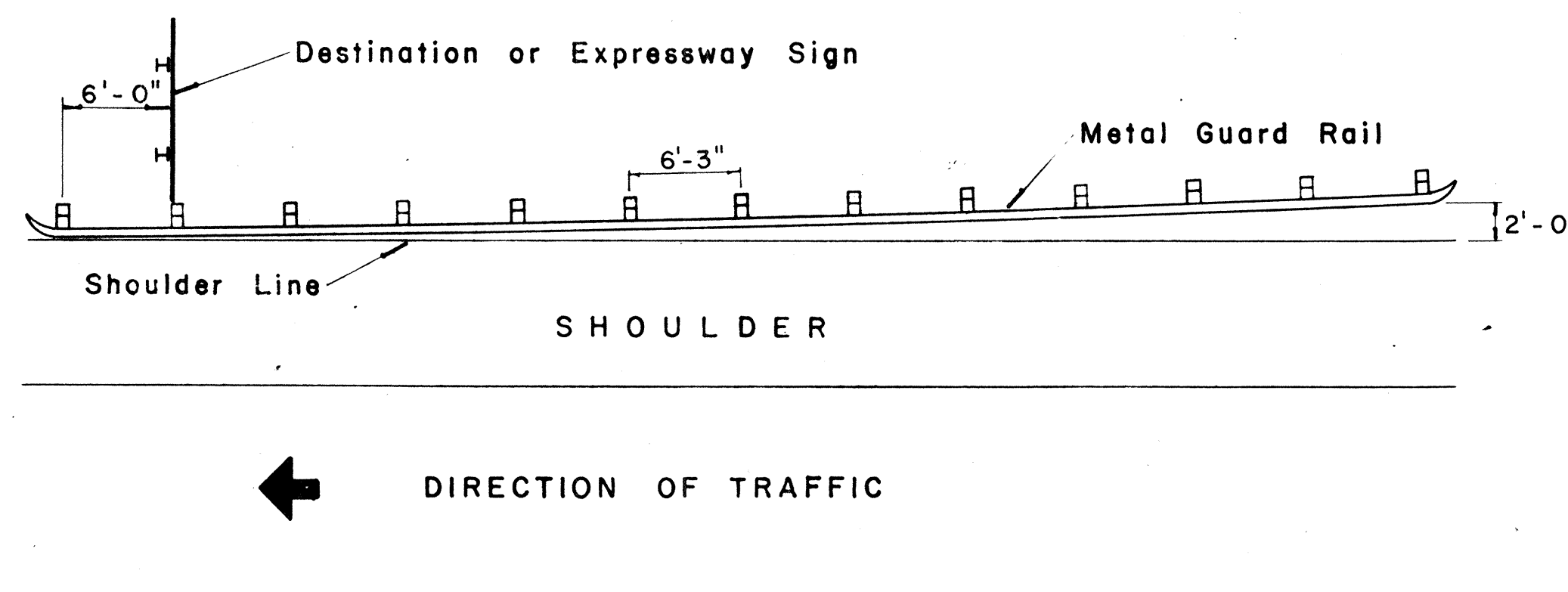
Scale: as noted

SHEET No. 7 OF 9 SHEETS



GORE MOUNTED SIGN

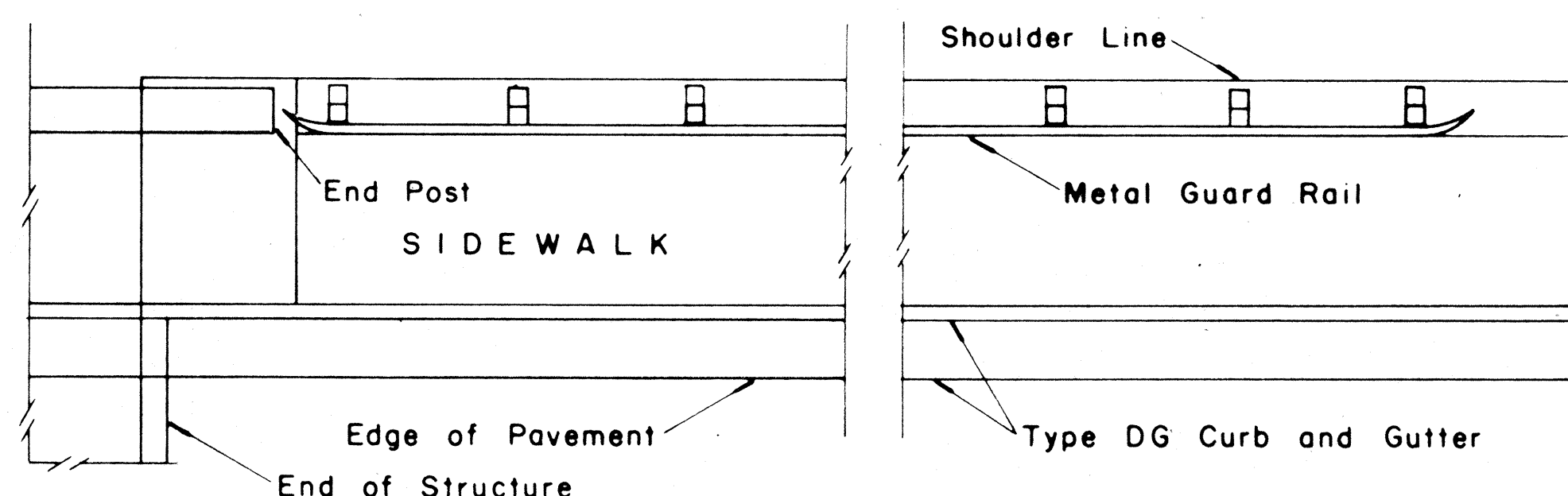
Scale: $\frac{3}{16}'' = 1' - 0''$



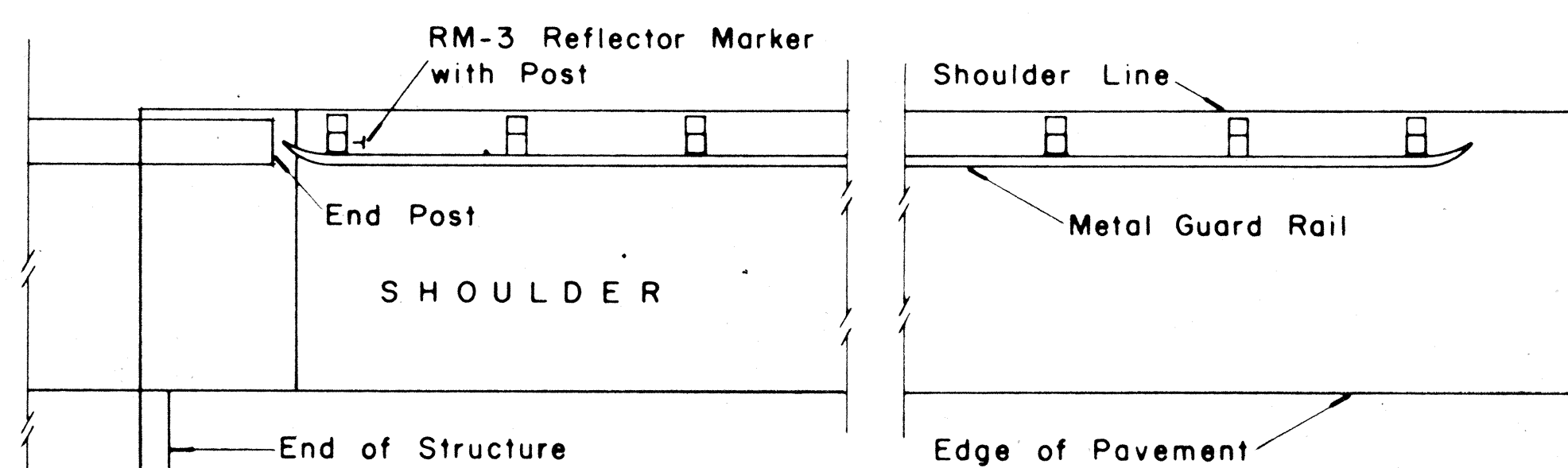
SHOULDER MOUNTED SIGN

Scale: $\frac{1}{8}'' = 1' - 0''$

INSTALLATION OF METAL GUARD RAIL FOR DESTINATION AND EXPRESSWAY SIGNS

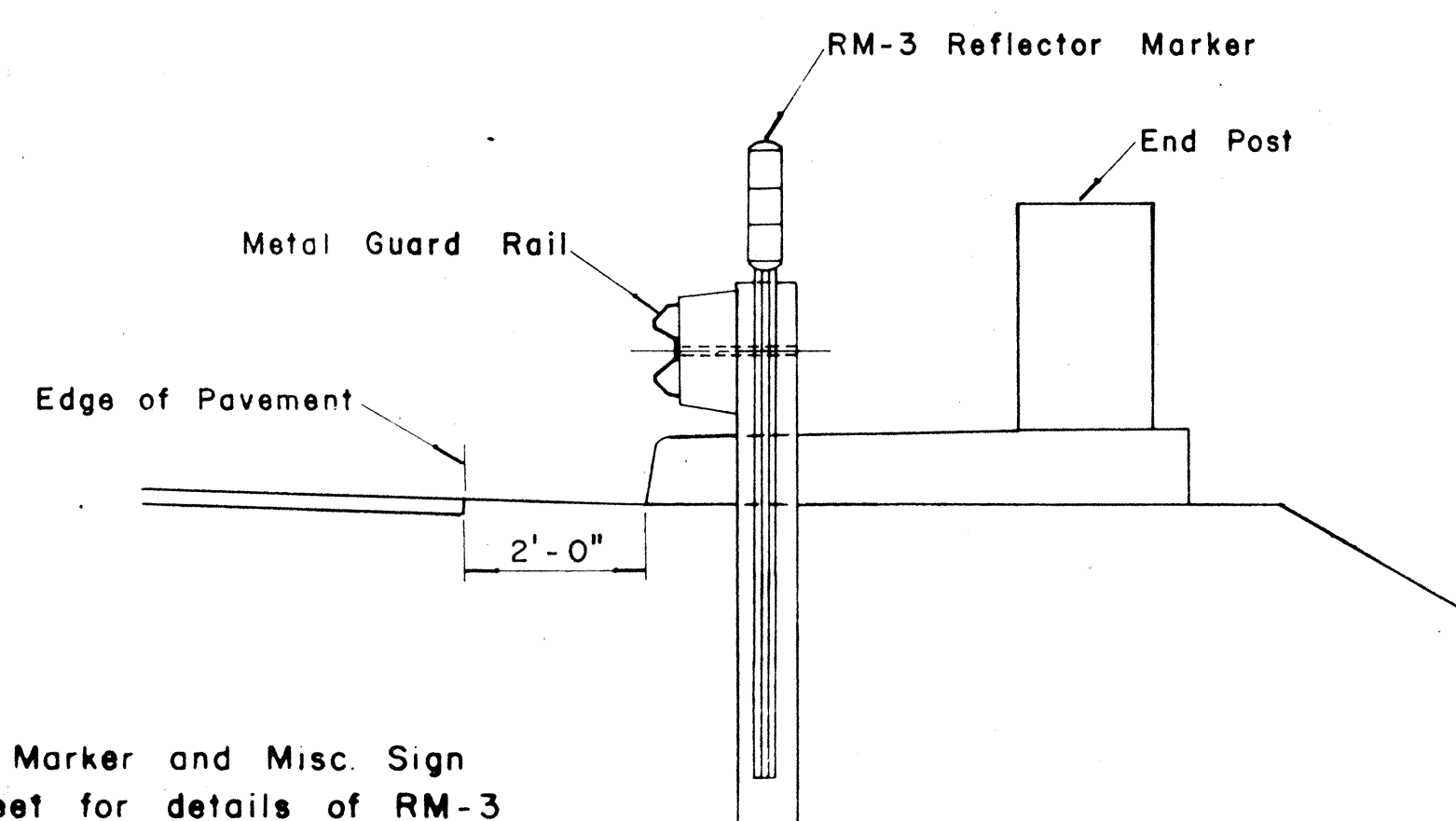


SIDEWALK CARRIED THROUGH STRUCTURE



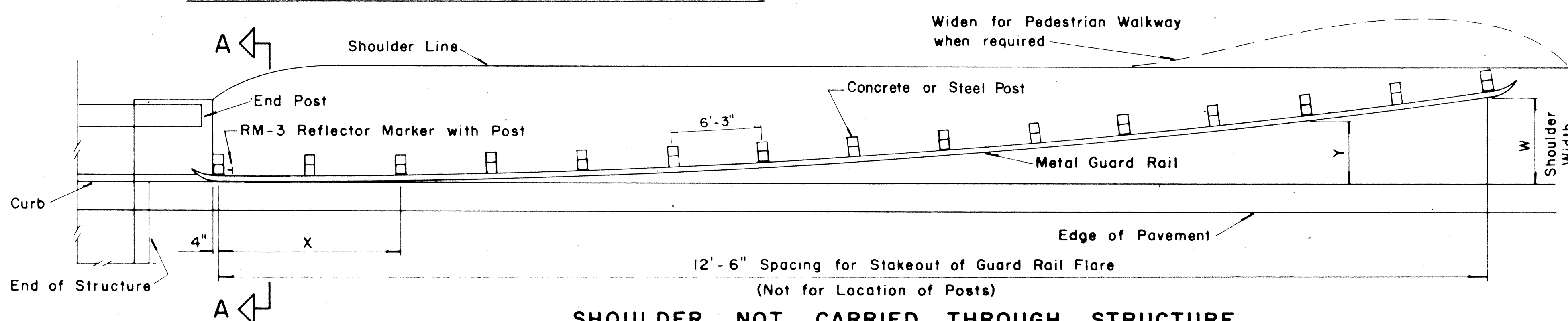
SHOULDER CARRIED THROUGH STRUCTURE

NOTE:
See F A Marker and Misc. Sign
Detail sheet for details of RM-3
Reflector Marker with Post.



SECTION "A-A"

Scale: $\frac{1}{2}'' = 1' - 0''$



SHOULDER NOT CARRIED THROUGH STRUCTURE

INSTALLATION OF METAL GUARD RAIL FLARE AT STRUCTURES

Scale: $\frac{3}{16}'' = 1' - 0''$

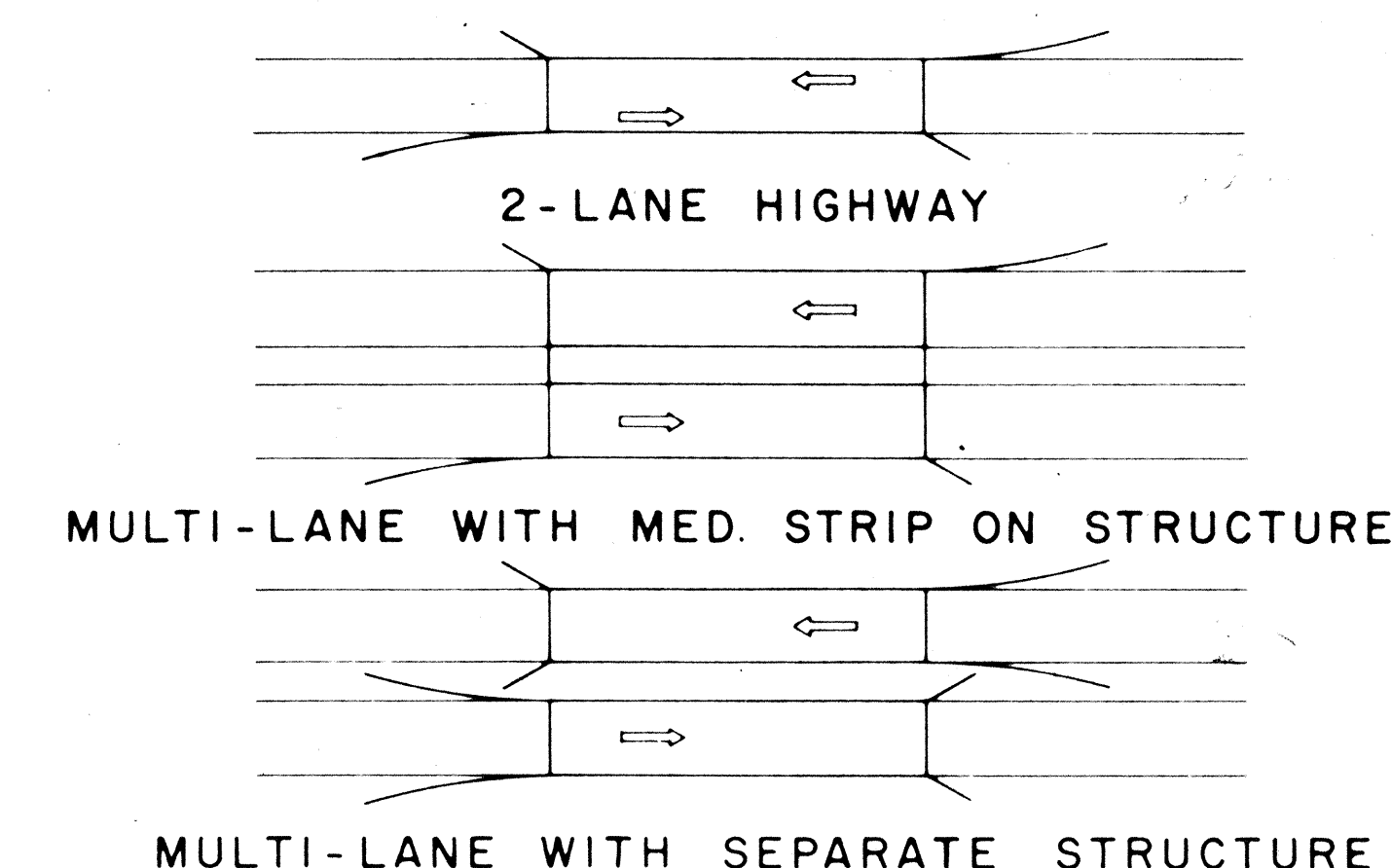
X	Y					
	W=3'	W=4'	W=5'	W=6'	W=7'	W=8'
12.5	0.19	0.16	0.14	0.12	0.09	0.08
25.0	0.75	0.64	0.55	0.49	0.35	0.32
37.5	1.69	1.44	1.25	1.10	0.78	0.72
50.0	3.00	2.56	2.22	1.96	1.38	1.28
62.5		4.00	3.47	3.06	2.16	2.00
75.0			5.00	4.41	3.11	2.85
87.5				6.00	4.23	3.92
100.0					5.53	5.12
112.5					7.00	6.48
125.0						8.00

W = GUARD RAIL FLARE

X = DISTANCE FROM POST AT
BRIDGE TO OFFSET POINTS

Y = GUARD RAIL FLARE OFFSET

GUARD RAIL OFFSET



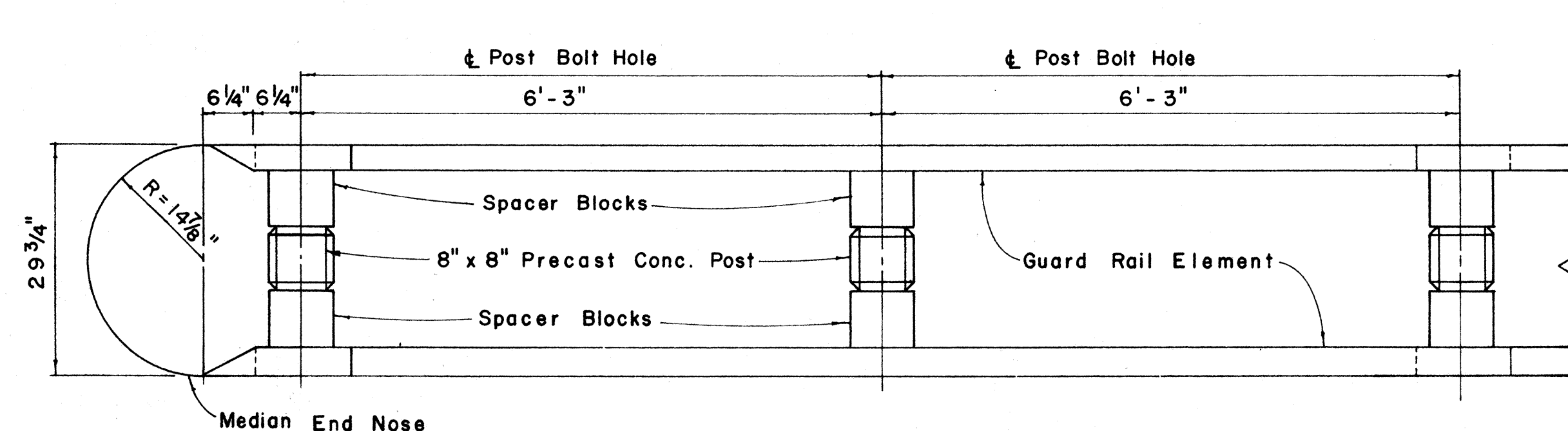
TYPICAL GUARD RAIL FLARES AT STRUCTURE APPROACHES

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
METAL GUARD RAILS
AT
STRUCTURES & GUIDE SIGNS

Scale: As Noted

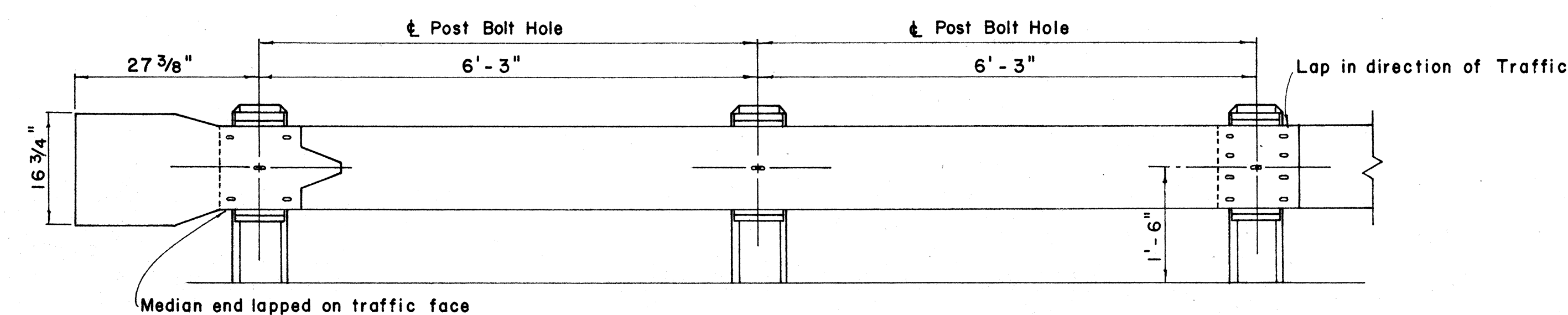
SHEET No. 8 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1966	1966	52	295



PLAN

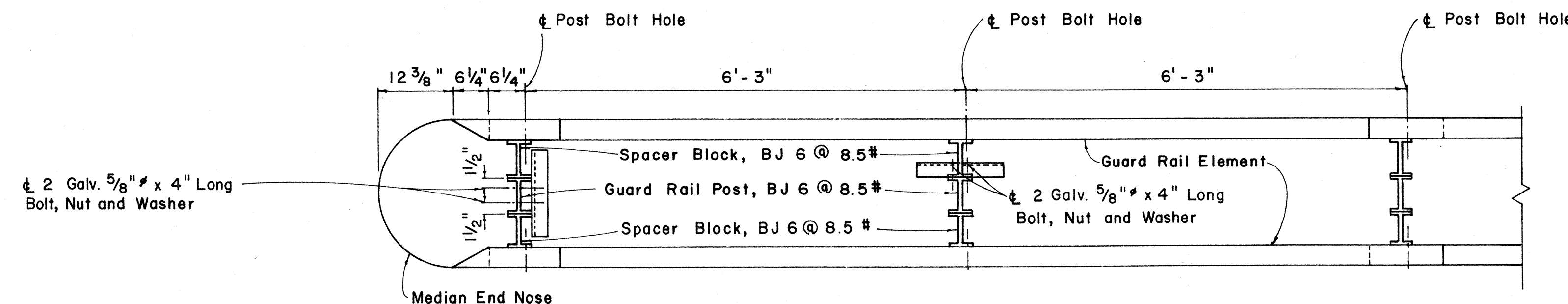
Scale: $\frac{3}{4}$ " = 1' - 0"



ELEVATION

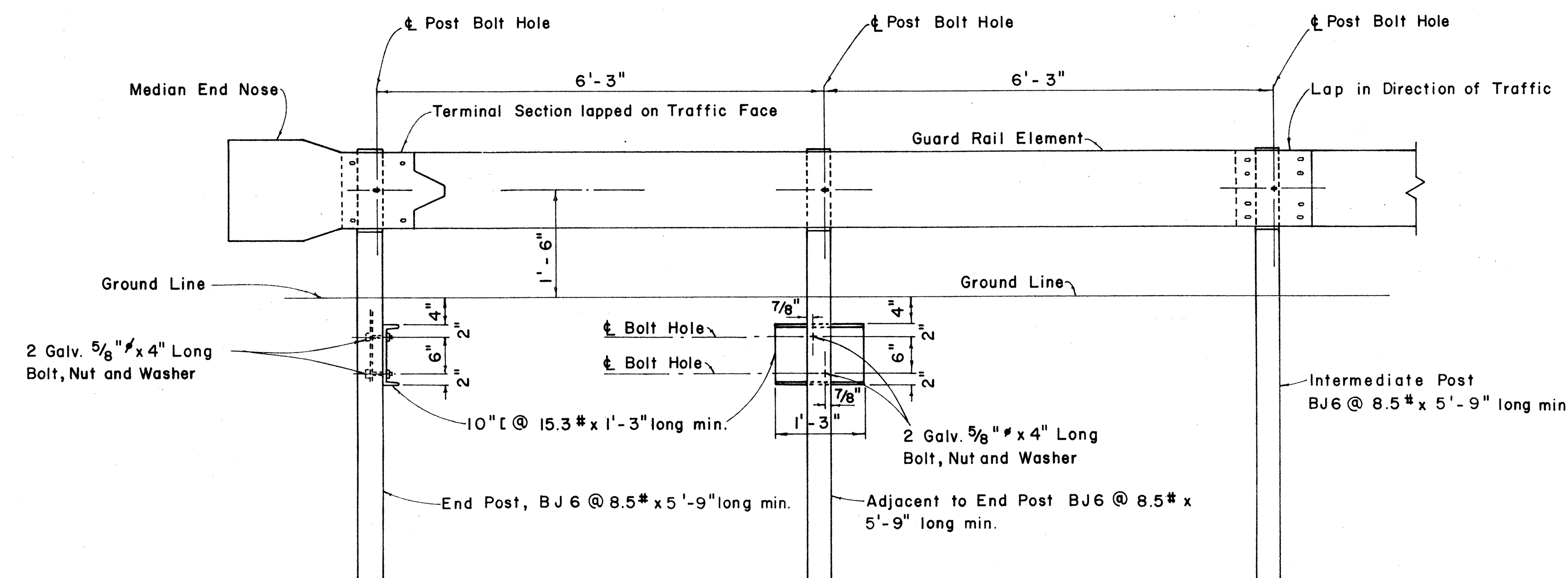
METAL GUARD RAIL ON CONCRETE POSTS AND WOOD SPACER BLOCKS

Scale: $\frac{3}{4}$ " = 1' - 0"



PLAN

Scale: $\frac{3}{4}$ " = 1' - 0"



ELEVATION

METAL GUARD RAIL ON METAL POSTS AND METAL SPACER BLOCKS

Scale: $\frac{3}{4}$ " = 1' - 0"

DETAIL FOR DOUBLE METAL GUARD RAIL IN MEDIAN

Scale: As Shown

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

METAL GUARD RAIL

SHEET No. 9 OF 9 SHEETS

52