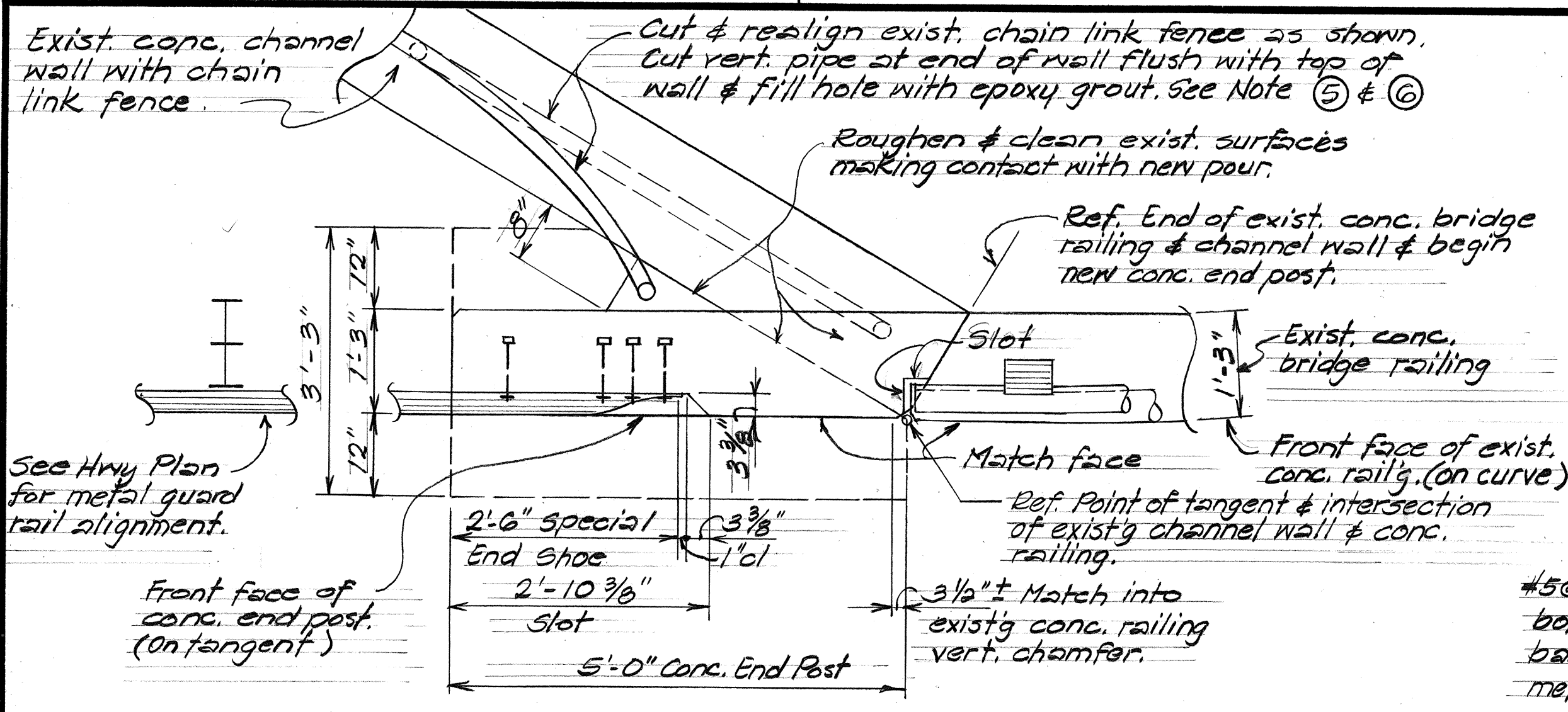
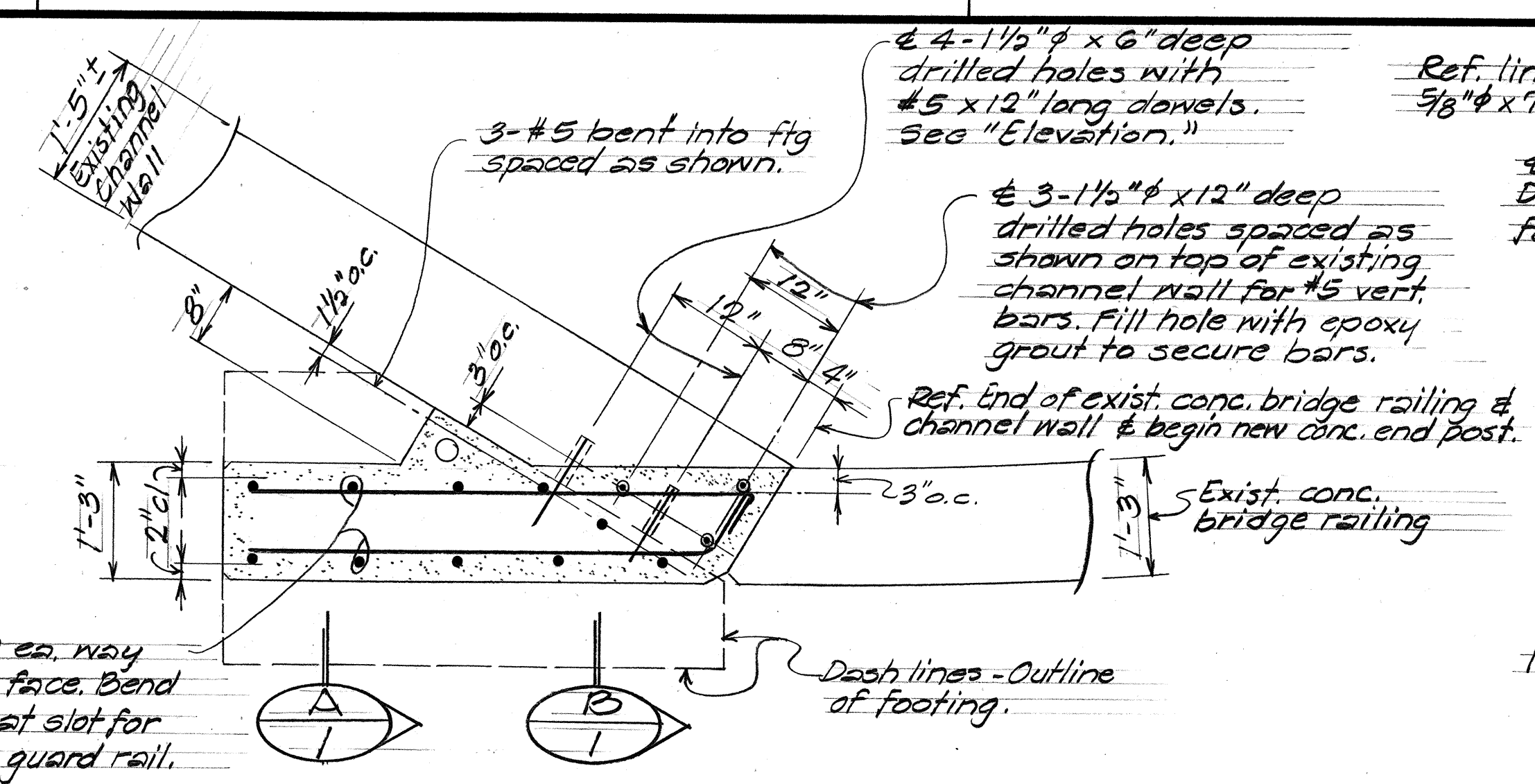
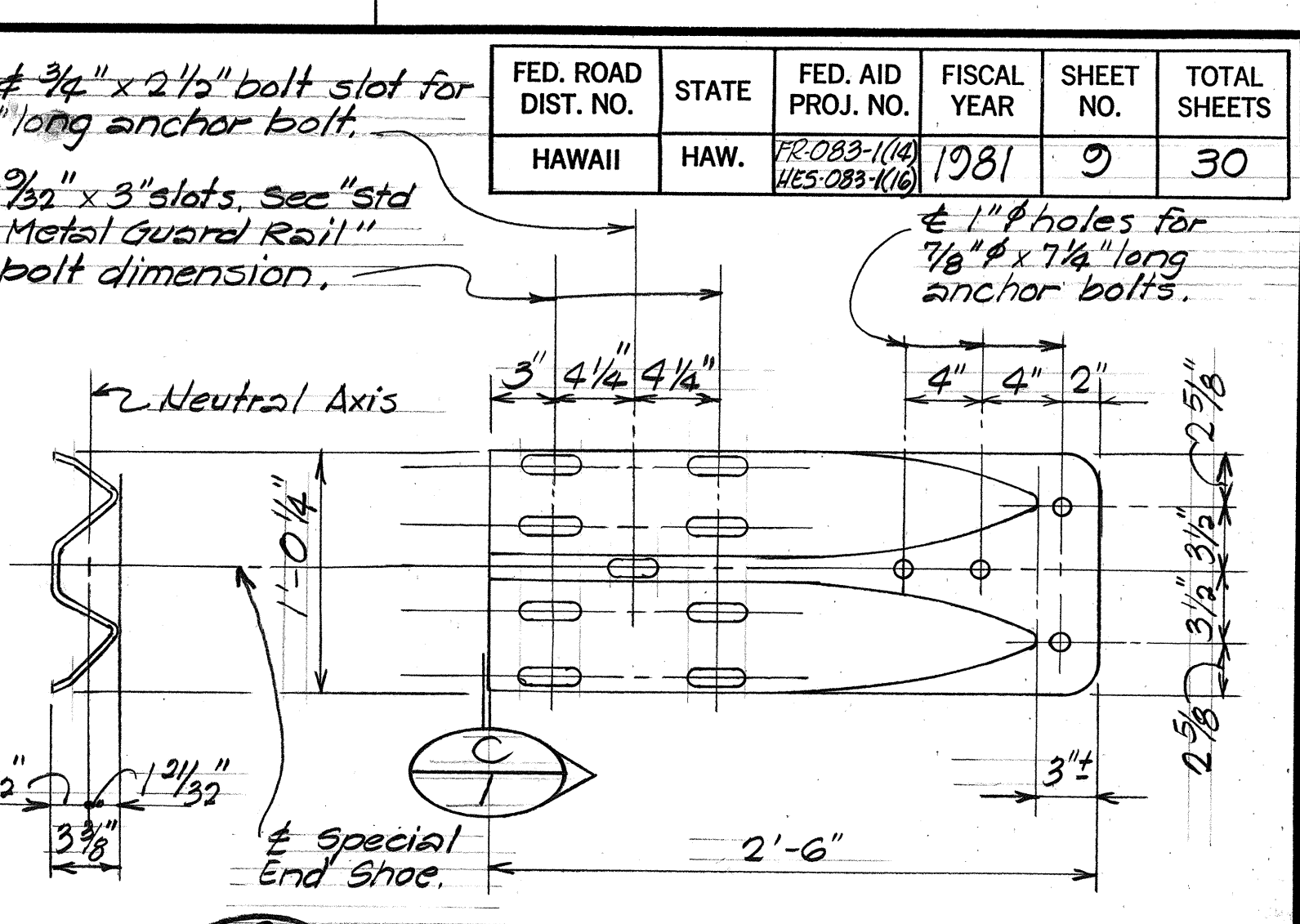




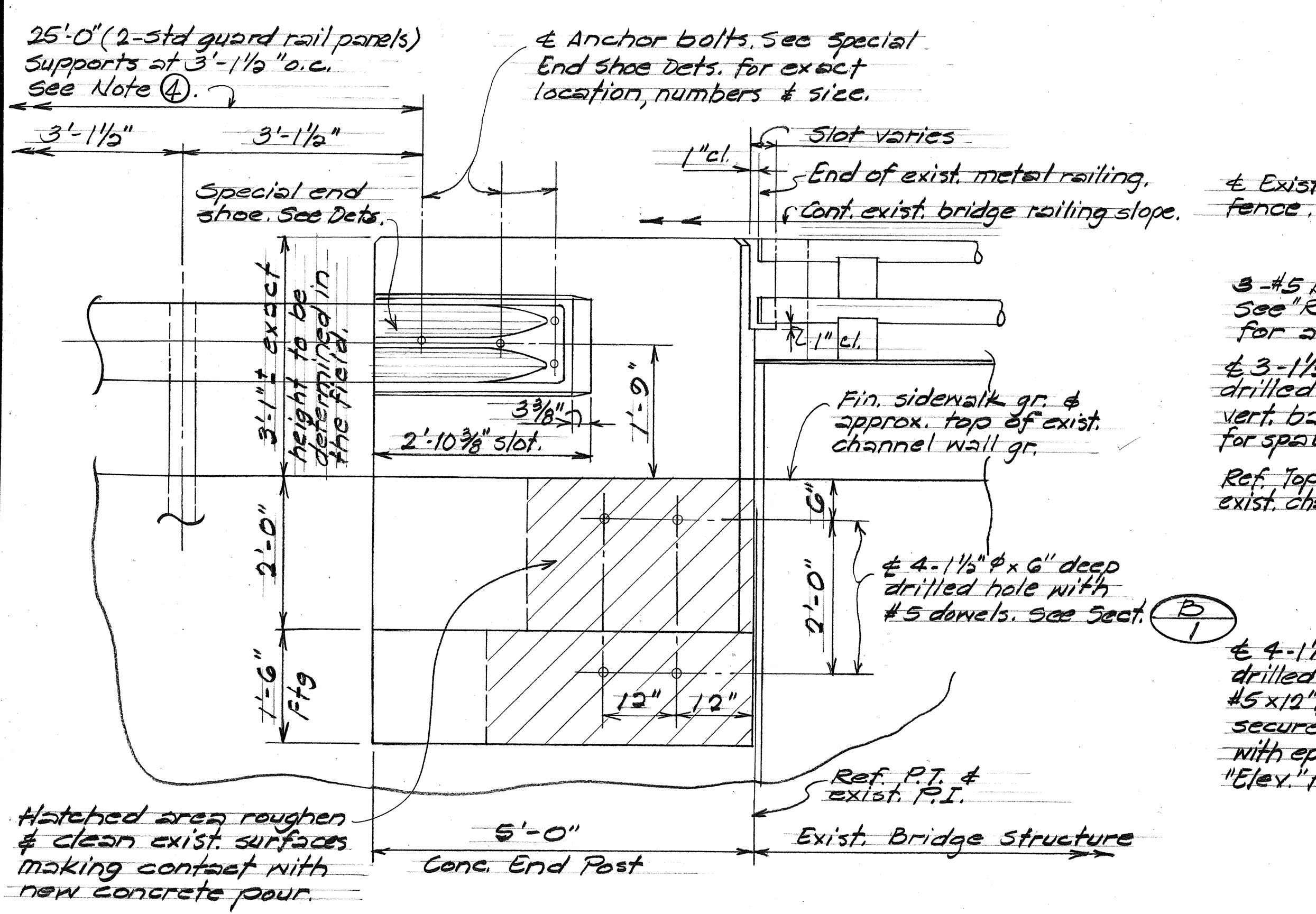
PLAN Scale: 3/4"=1'-0"



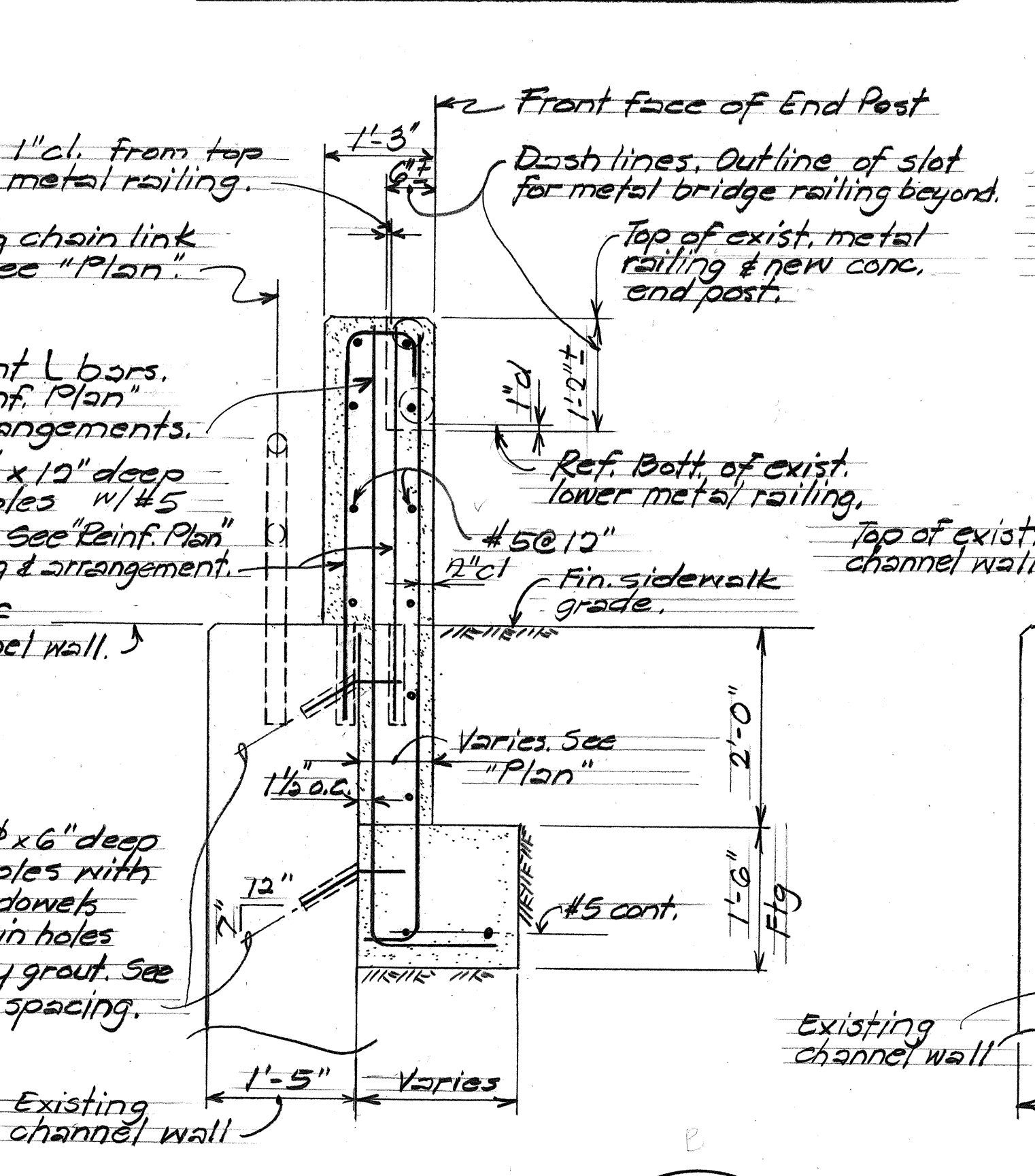
REINFORCEMENT PLAN Scale: 3/4"=1'-0"



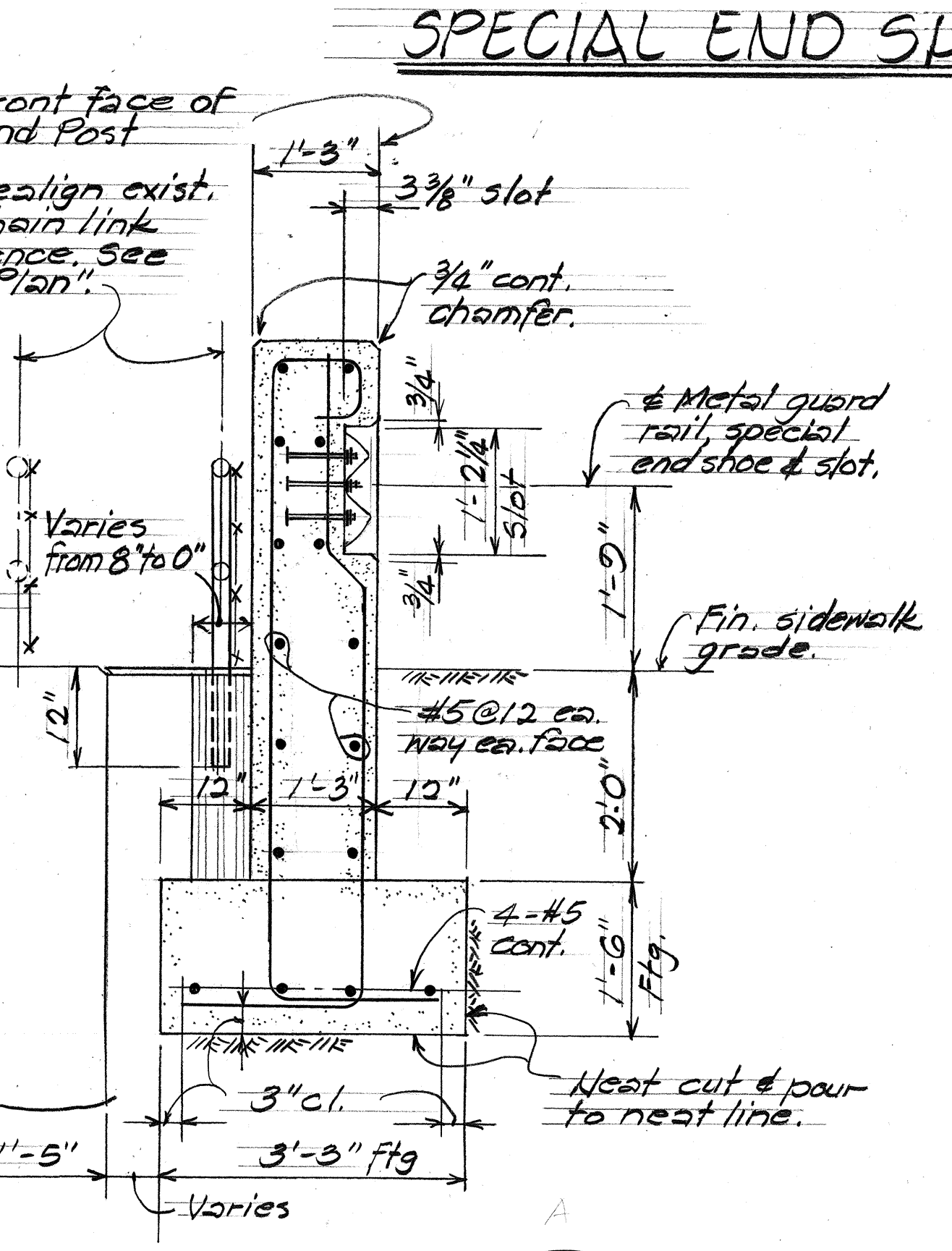
SECTION C ELEVATION Scale: 1 1/2"=1'-0"



ELEVATION Scale: 3/4"=1'-0"



SECTION B Scale: 3/4"=1'-0"



SECTION A Scale: 3/4"=1'-0"

GENERAL NOTES

- All Anchor Bolts shall be high strength bolts conforming to the requirements of ASTM A325.
- All shoe assembly, including anchor bolts, nuts and washers, shall be galvanized.
- Special End Shoe shall be fabricated from 10 gage steel conforming to the requirements of AASHTO 180.
- First 25'-0" of guard rail adjoining "Special End Shoe" shall be galvanized steel.
- Cut and shape pipe for neat fit and full weld. All welding shall conform to the latest specifications for Welded Highway and Railway Bridge Design Construction and Repair of the American Welding Society.
- See Standard Specifications for Road and Bridge Construction, 1976 Edition. For galvanizing of chain link fence see Sec. 501.03 G(2).
- It shall be the responsibility of the Contractor to verify the locations of all existing utility lines before commencing work of excavation for end post footing.
- Pneumatic type of equipment will not be permitted for drilling.
- Any damage to the existing structures due to the Contractor's operation shall be repaired at his expense, to the satisfaction of the Engineer.
- The work of realigning the chain link fence and placing of all anchor bolts shall be incidental to concrete end post.
- The work necessary to construct the concrete end post, and to connect guard rail to concrete end post, including special end shoe, shall include all labor, materials, tools, equipment and incidentals necessary to complete the work. This work will be measured and paid for under "Concrete End Post" shown in the Proposal Schedule.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

CONCRETE END POST DETAILS

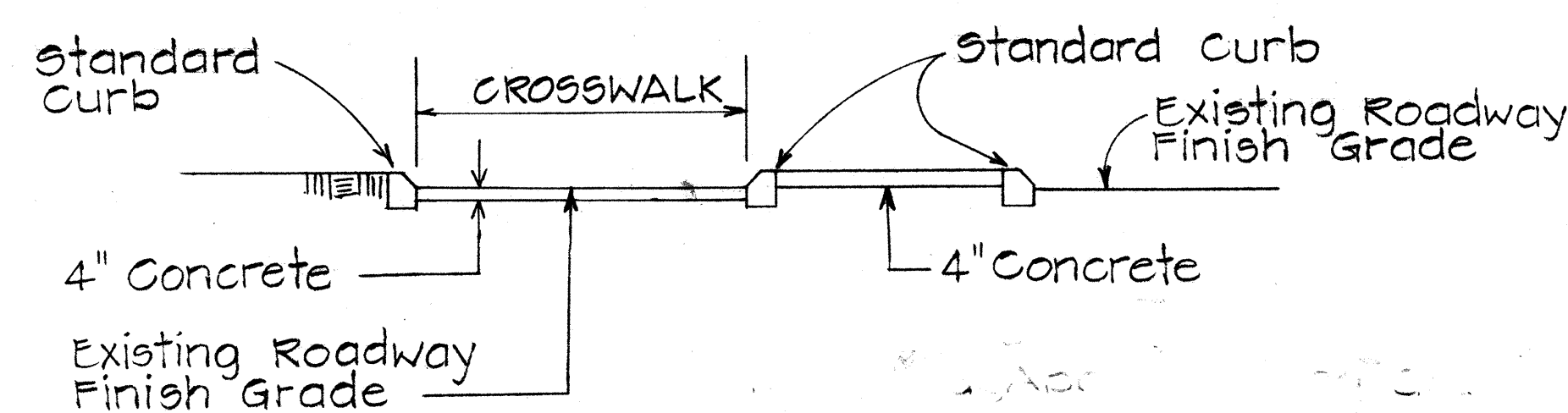
KAUEKILI HIGHWAY

F.A. Proj. No. FR-083-1(14)
F.A. Proj. No. HES-083-1(16)

Scale: As Shown Date: Apr. 1981

SHEET No. 1 OF 6 SHEETS

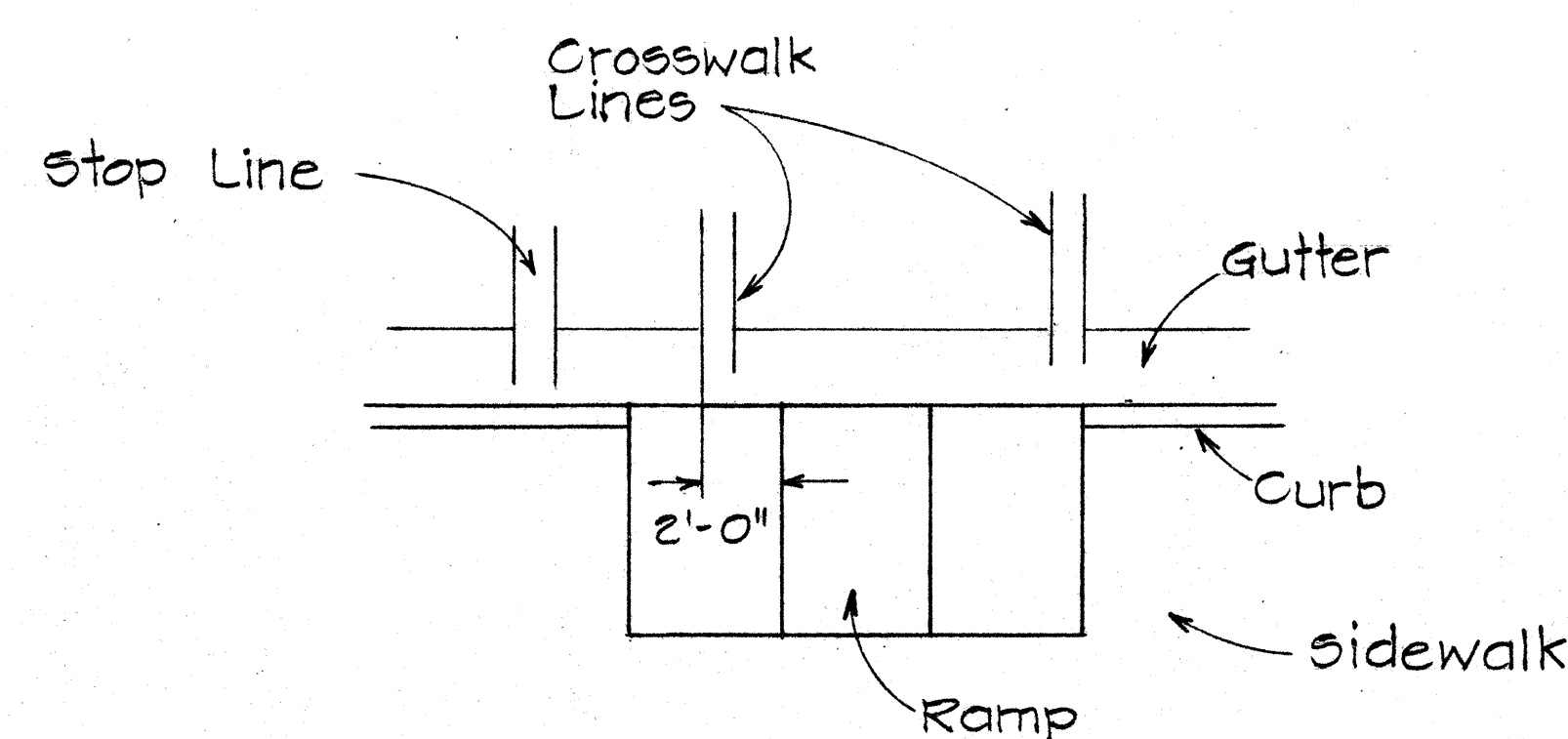
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	PR-083-100 HES-083-100	1981	10	30



SECTION "A-A"

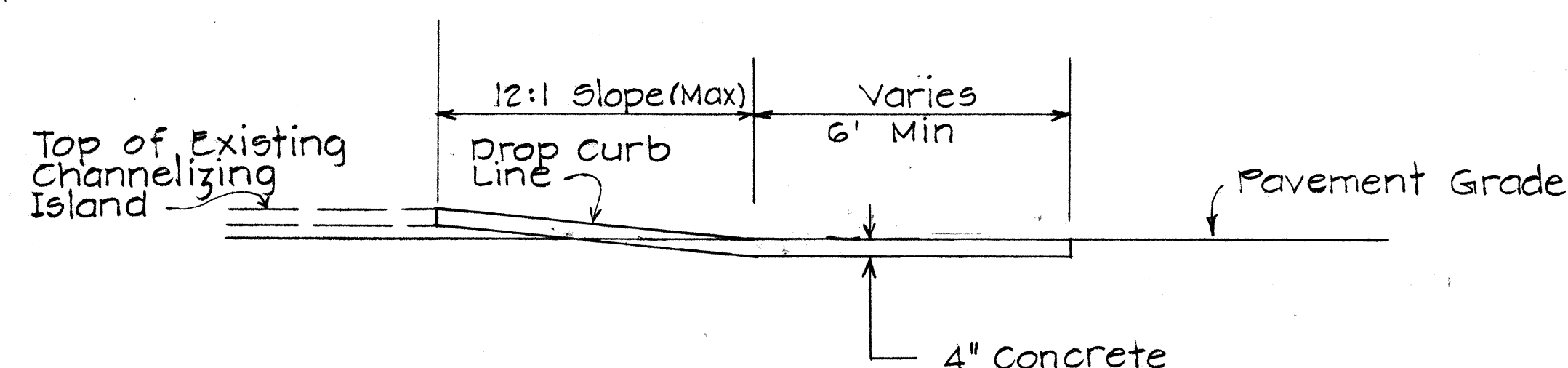
Use at Median Nose Crossings
Scale: 1" = 5'

For Additional Details, See Type "C" Wheel Chair Ramp



TYPICAL INSTALLATION AT CROSSWALKS

Scale: 1" = 5'



SECTION "B-B"

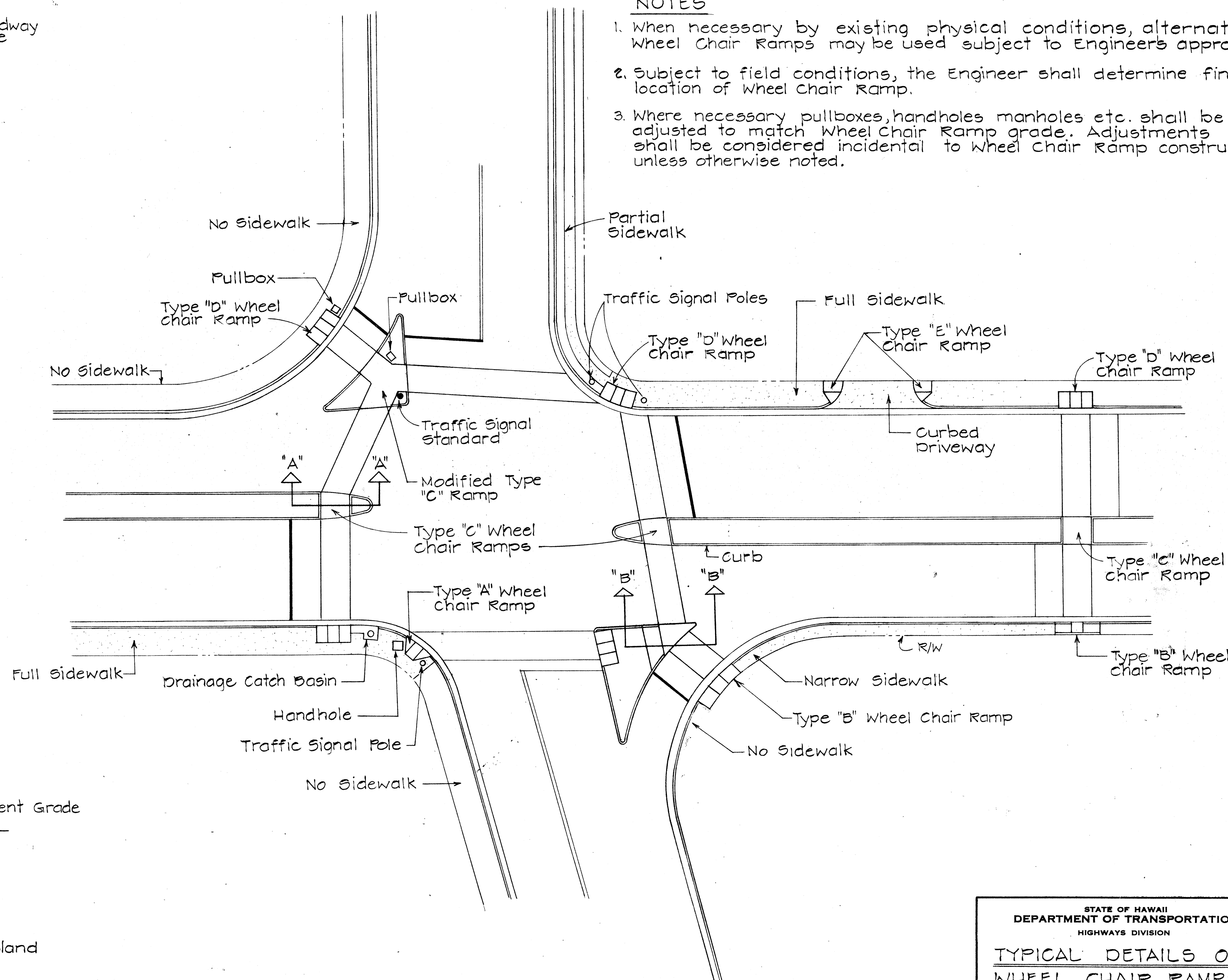
TYPE "B" MODIFIED WHEEL CHAIR RAMP

Use at Intersection of 2 Crosswalks On Channelizing Island
Scale: 3/8" = 1'

For Additional Details See Type "B" Wheelchair Ramp

NOTES

1. When necessary by existing physical conditions, alternate Wheel Chair Ramps may be used subject to Engineer's approval.
2. Subject to field conditions, the Engineer shall determine final location of Wheel Chair Ramp.
3. Where necessary pullboxes, handholes manholes etc. shall be adjusted to match Wheel Chair Ramp grade. Adjustments shall be considered incidental to Wheel Chair Ramp construction, unless otherwise noted.



TYPICAL WHEEL CHAIR RAMPS

Scale: 1" = 20'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

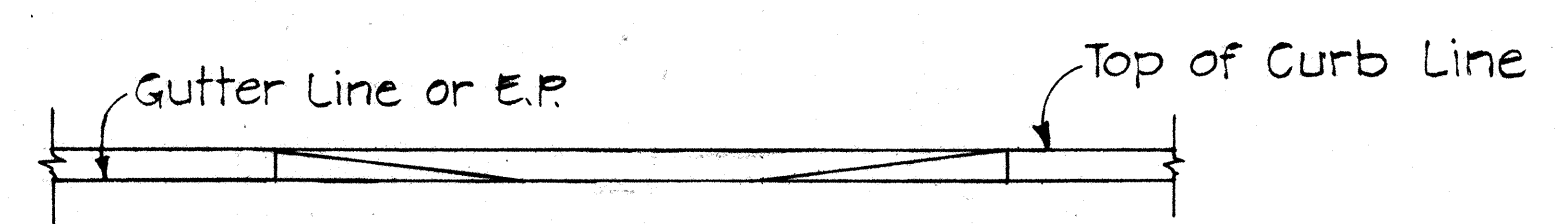
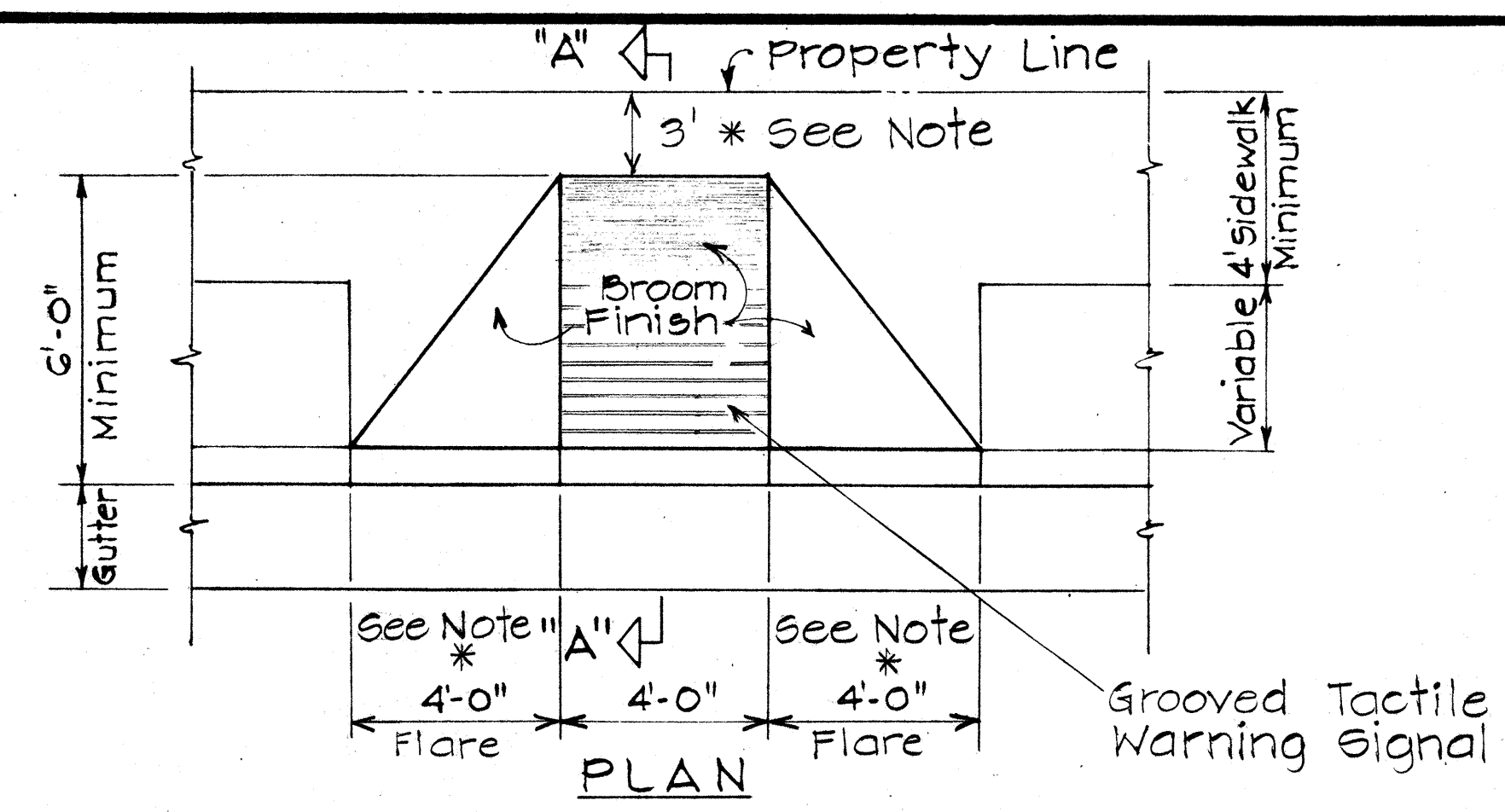
TYPICAL DETAILS OF WHEEL CHAIR RAMPS

Scale: As Shown May, 1978

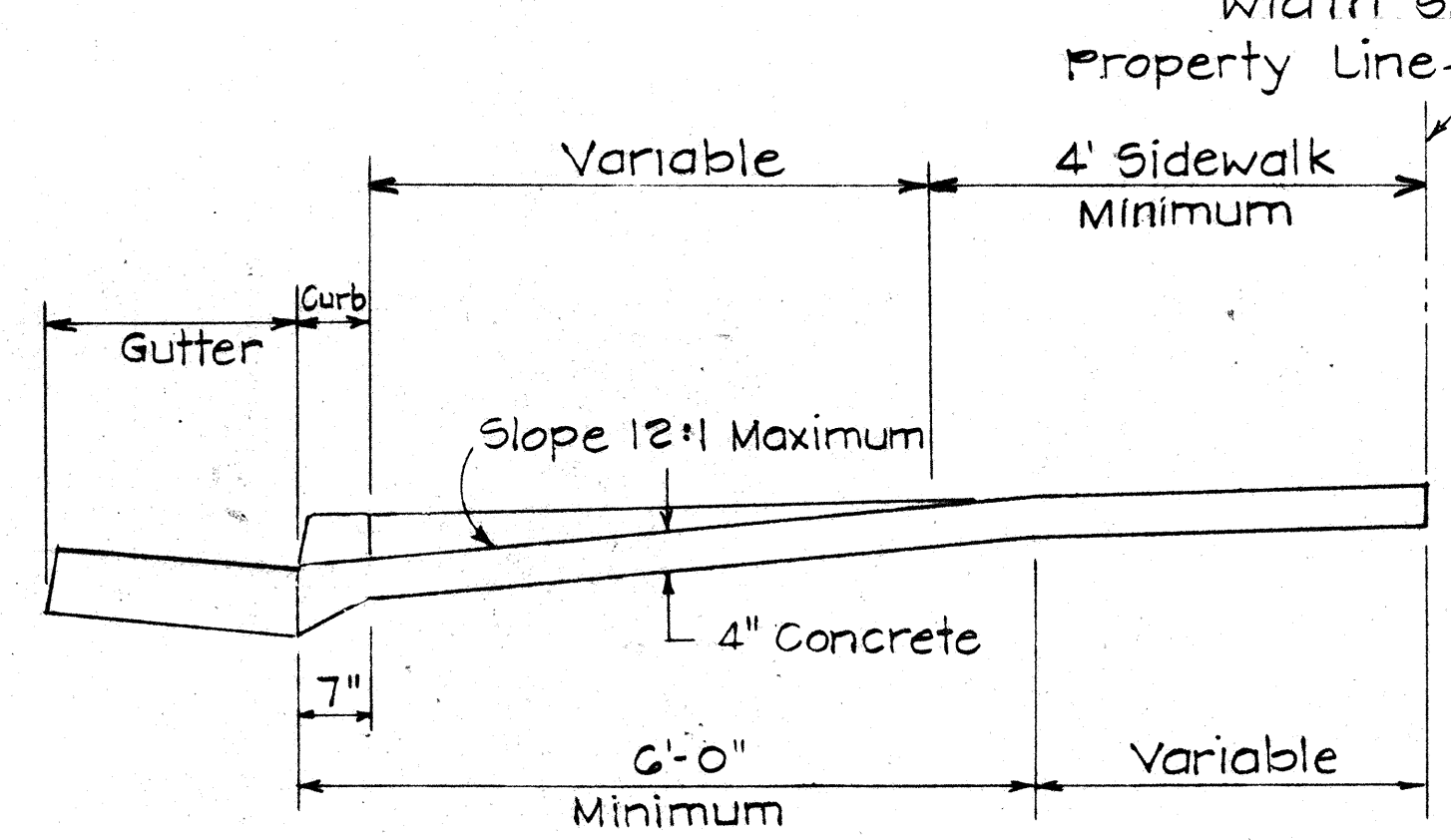
SHEET NO. 2 OF 6 SHEETS

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

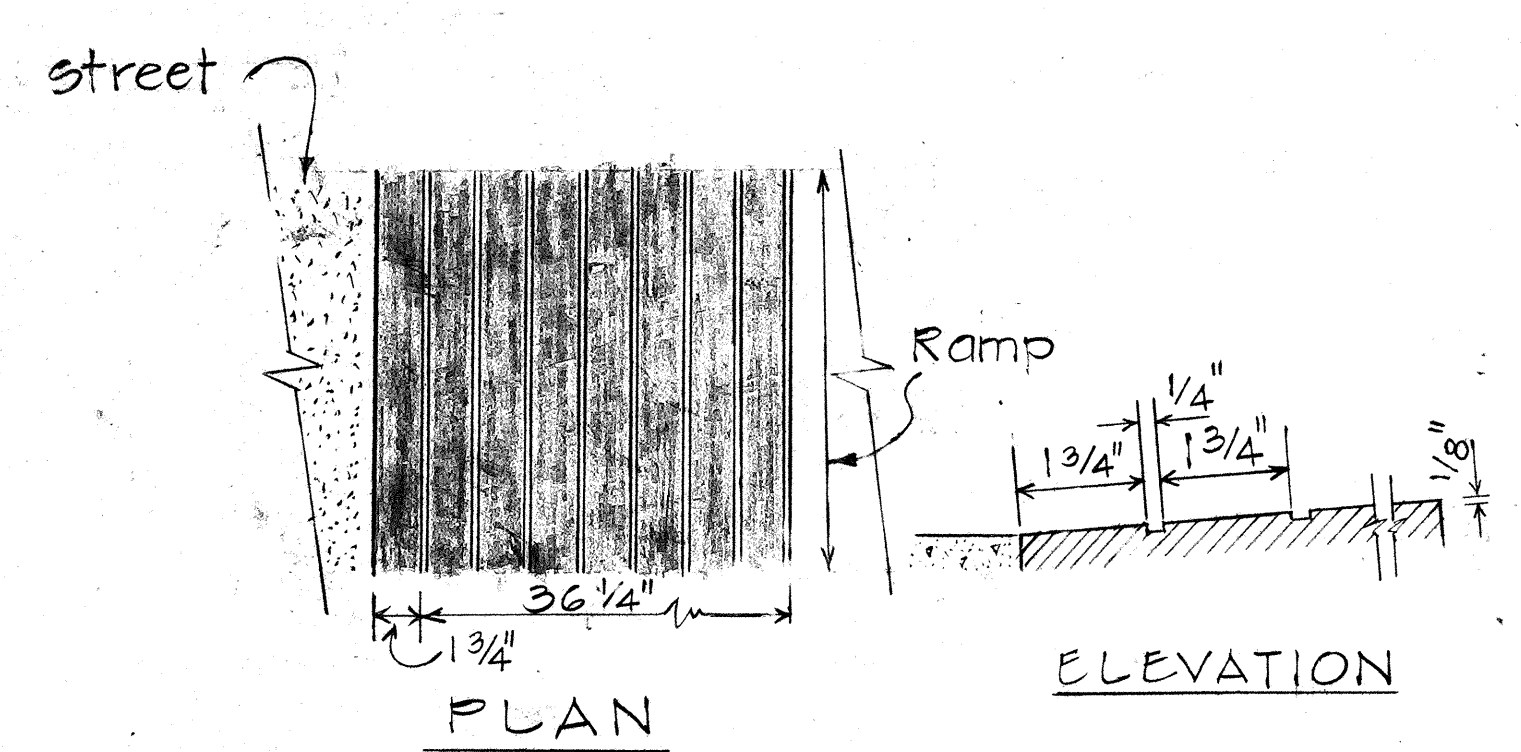
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F.R. 009-1(14) HES-083(16)	1981	11	30



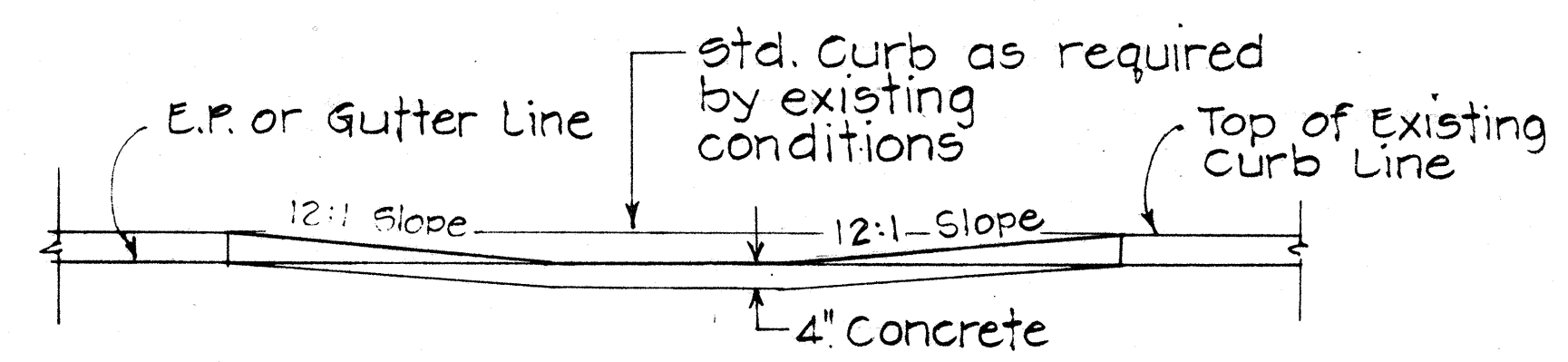
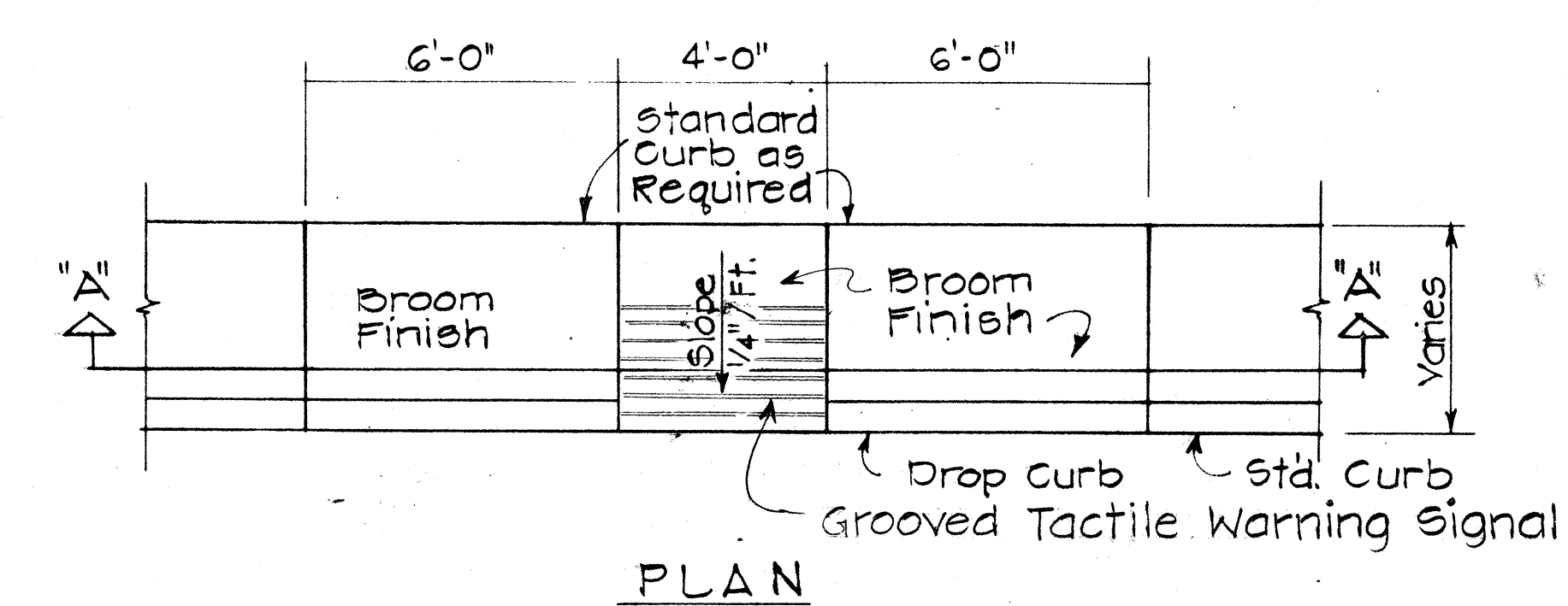
* Where dimension is less than 3', Flare width shall be 5'



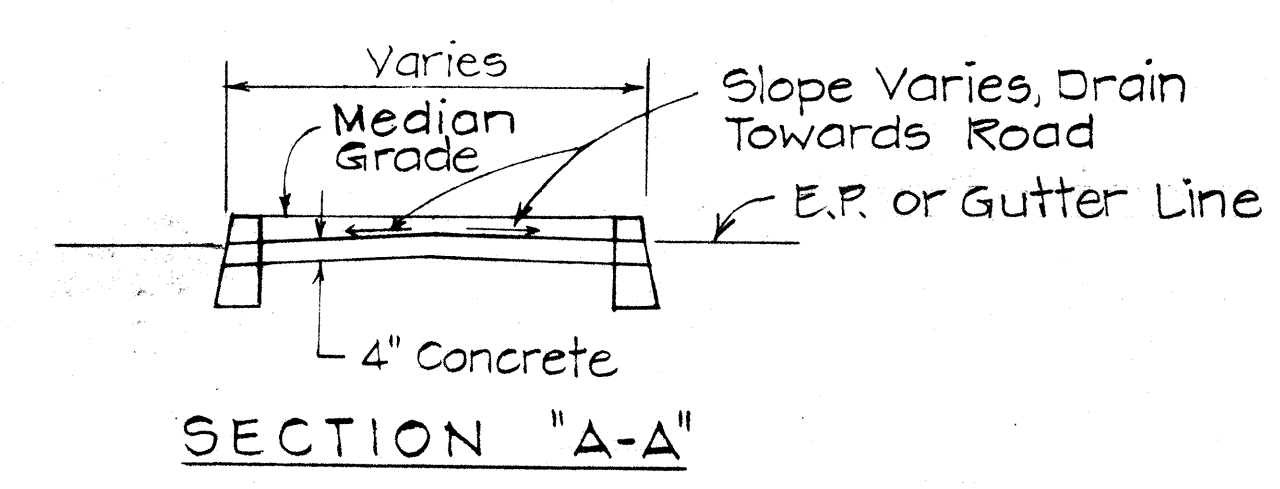
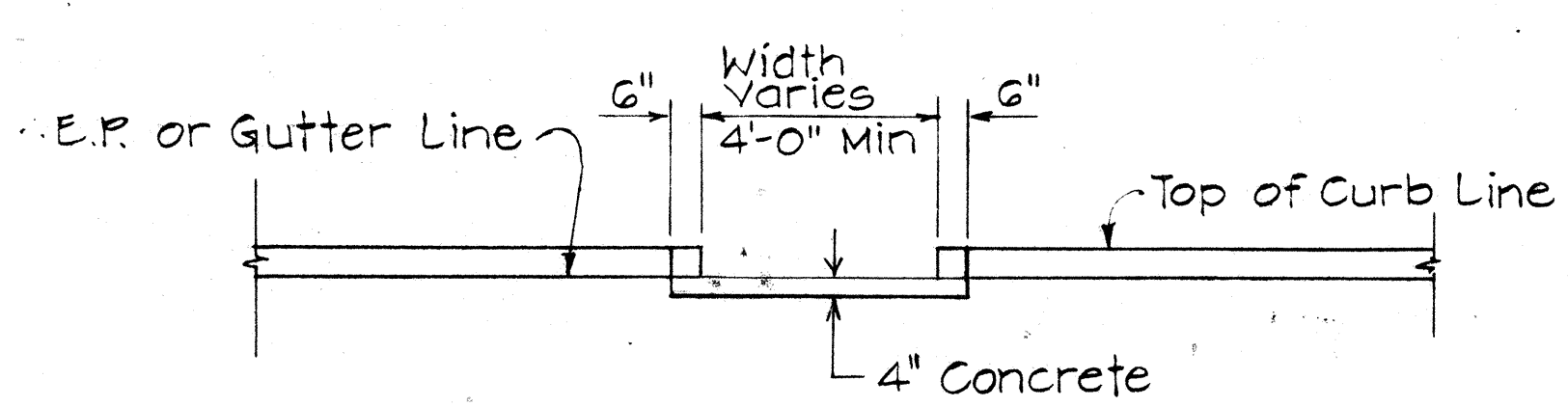
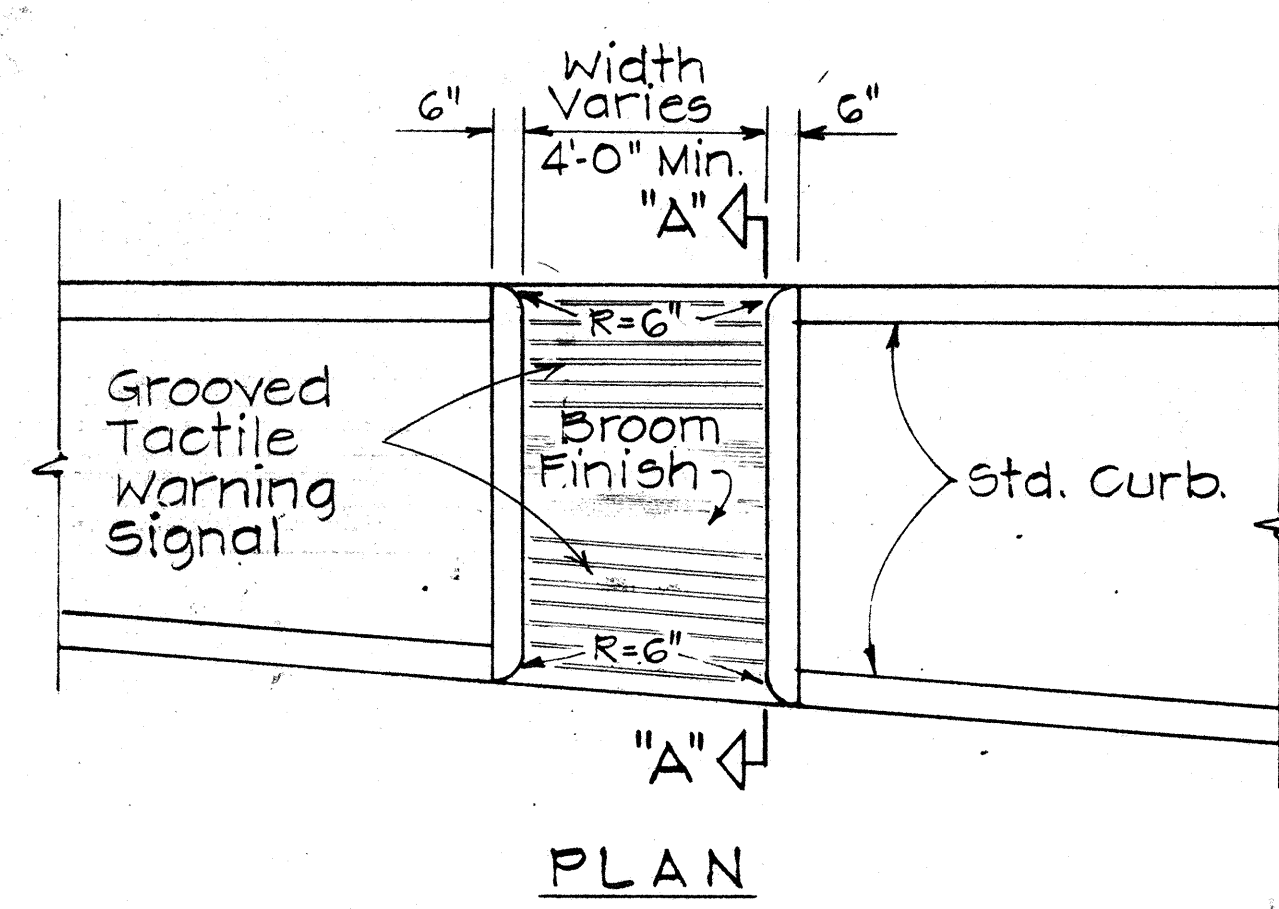
WHEELCHAIR RAMP - TYPE "A"
USE WHERE OBSTRUCTIONS EXIST



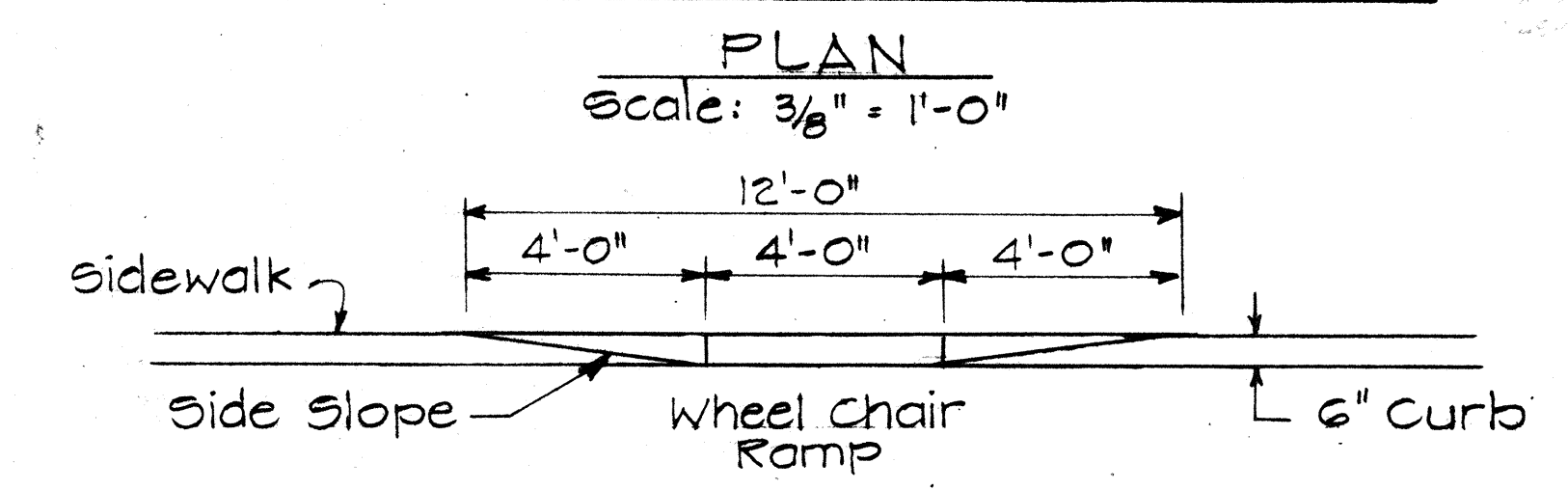
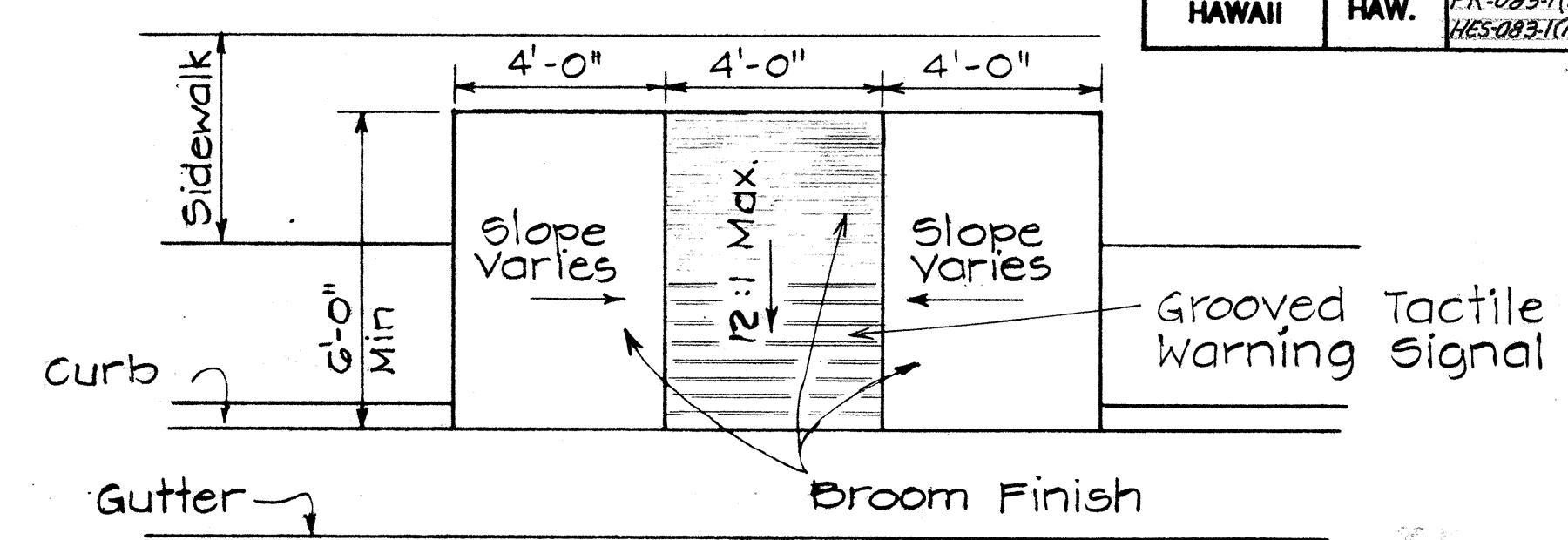
GROOVED TACTILE WARNING SIGNAL



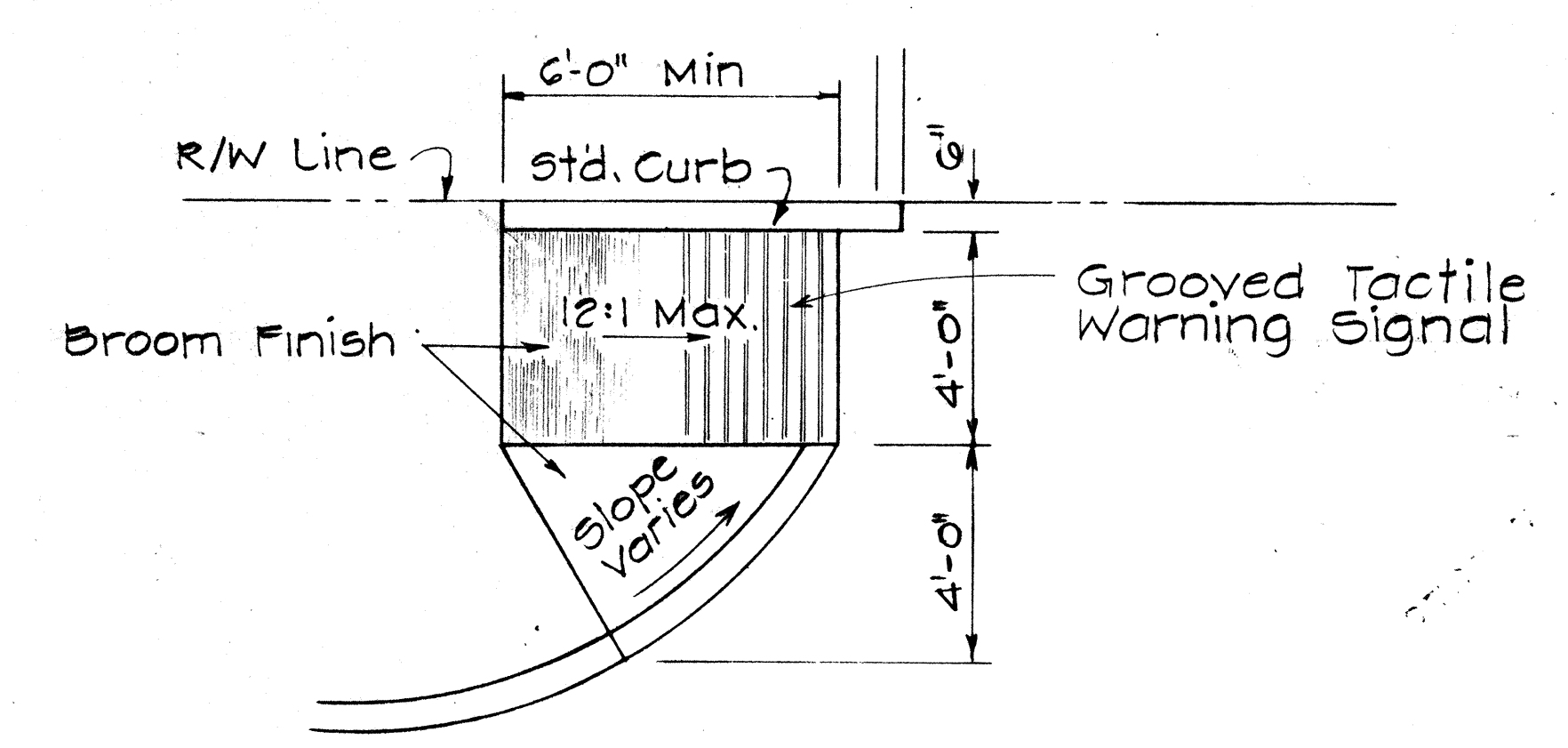
WHEELCHAIR RAMP - TYPE "B"
USE AT SIDEWALKS WITH LESS THAN 6'-0" WIDTH



WHEELCHAIR RAMP - TYPE "C"
USE AT MEDIAN CROSSINGS, ISLANDS



WHEELCHAIR RAMP - TYPE "D"
USE WHEN IDEAL CONDITIONS EXIST



WHEELCHAIR RAMP - TYPE "E"
USE AT CURBED DRIVEWAYS
Scale: 3/8" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

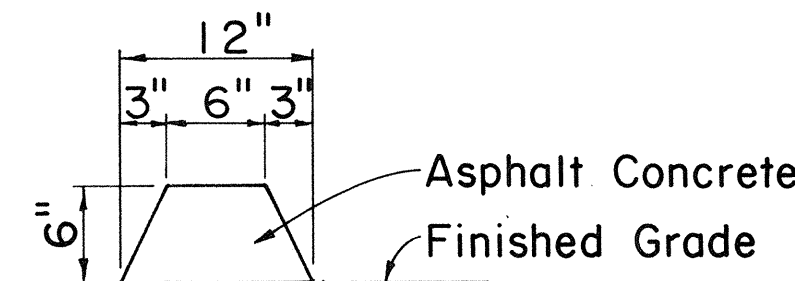
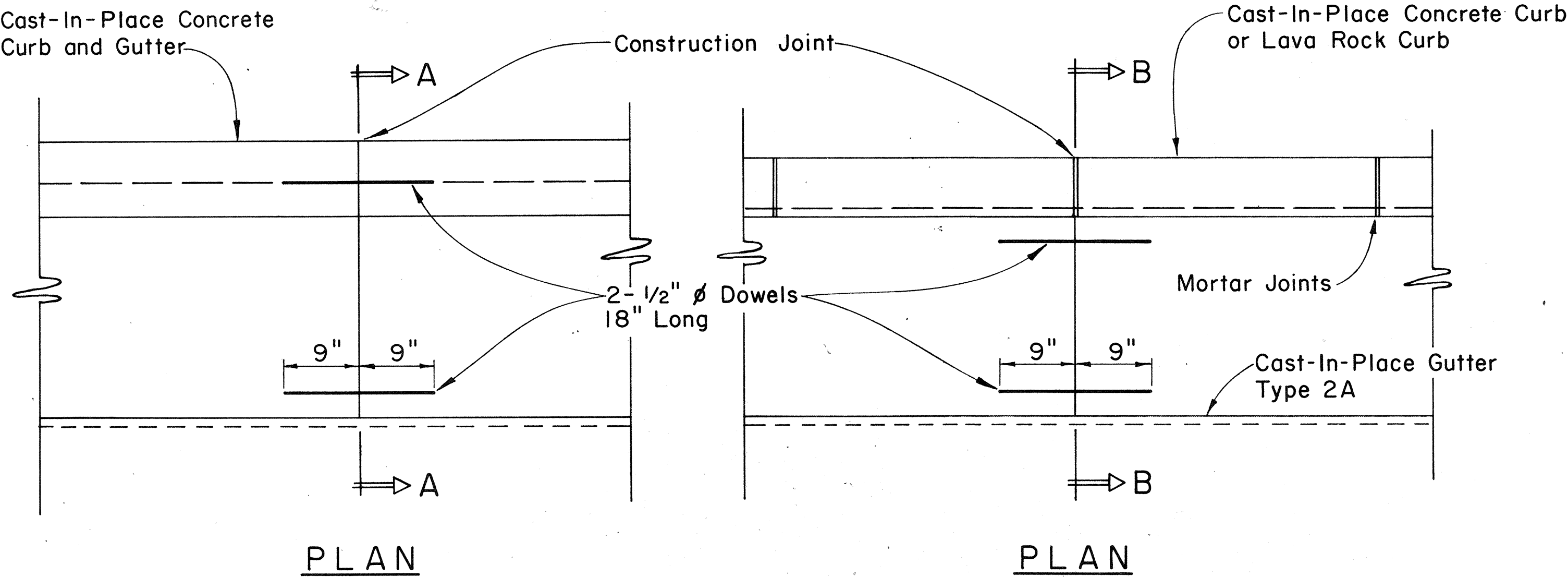
**TYPICAL DETAILS OF
WHEEL CHAIR RAMPS**

Scale: As Shown May, 1978

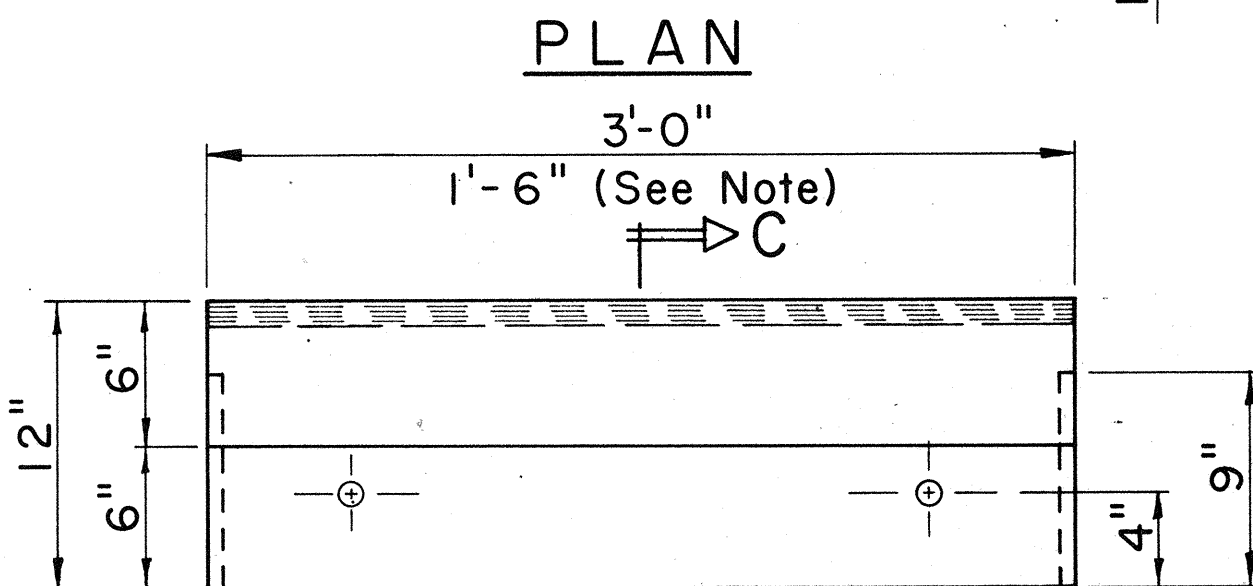
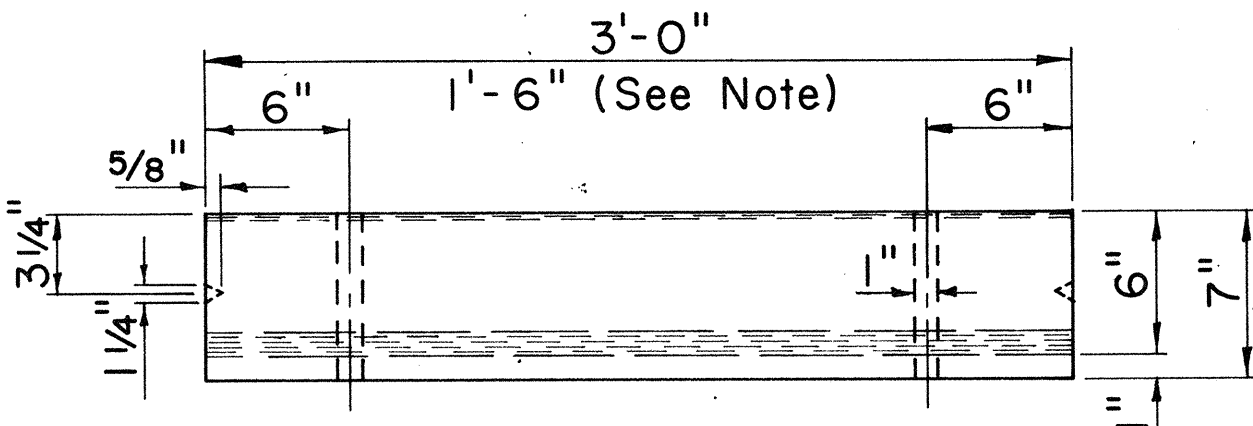
SHEET NO. 3 OF 6 SHEETS

DATE	10/1/78
DESIGNED BY	W. H. HARRIS
CHECKED BY	W. H. HARRIS
NOTED BY	W. H. HARRIS
QUANTITIES BY	W. H. HARRIS
NO.	1

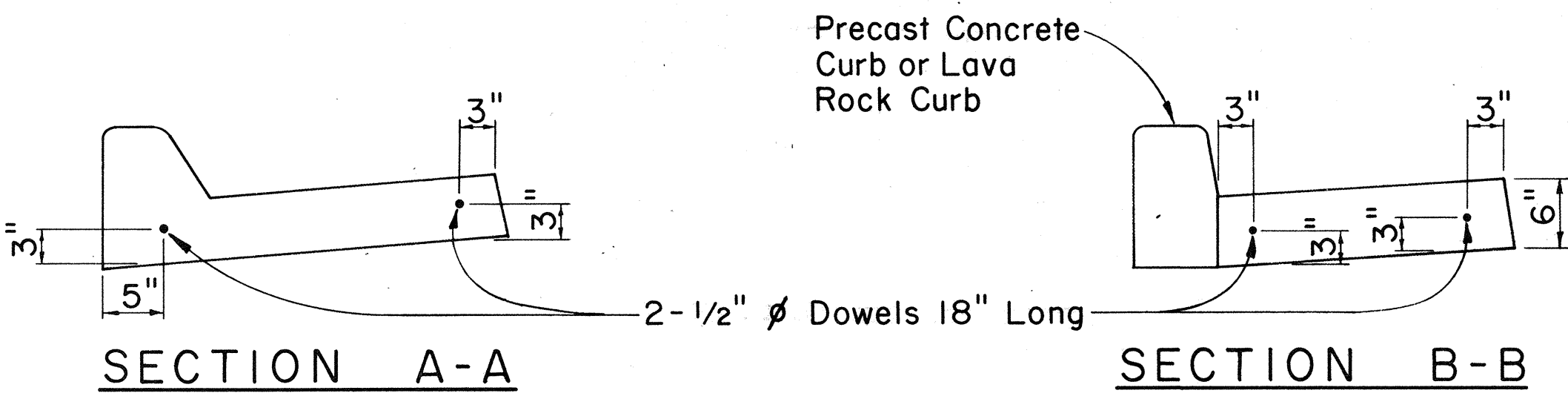
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FR-0831(14) HES-0831(16)	1981	12	30



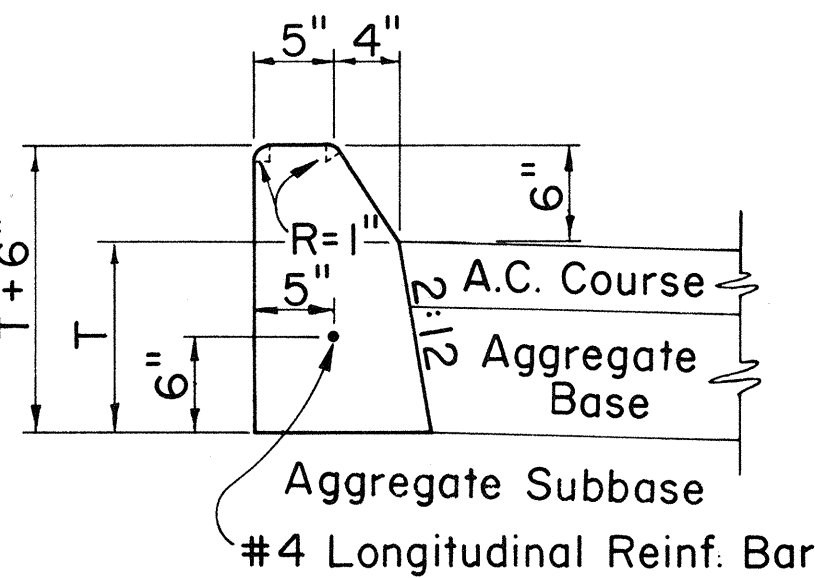
CURB, TYPE 6
BITUMINOUS CURB
Scale: 1 1/2" = 1'-0"



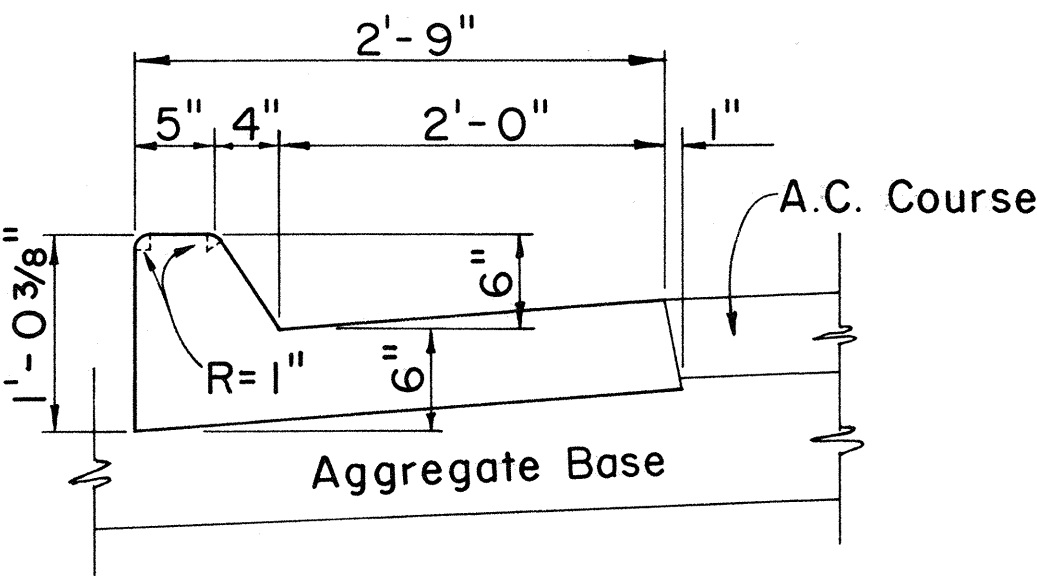
PLAN
ELEVATION



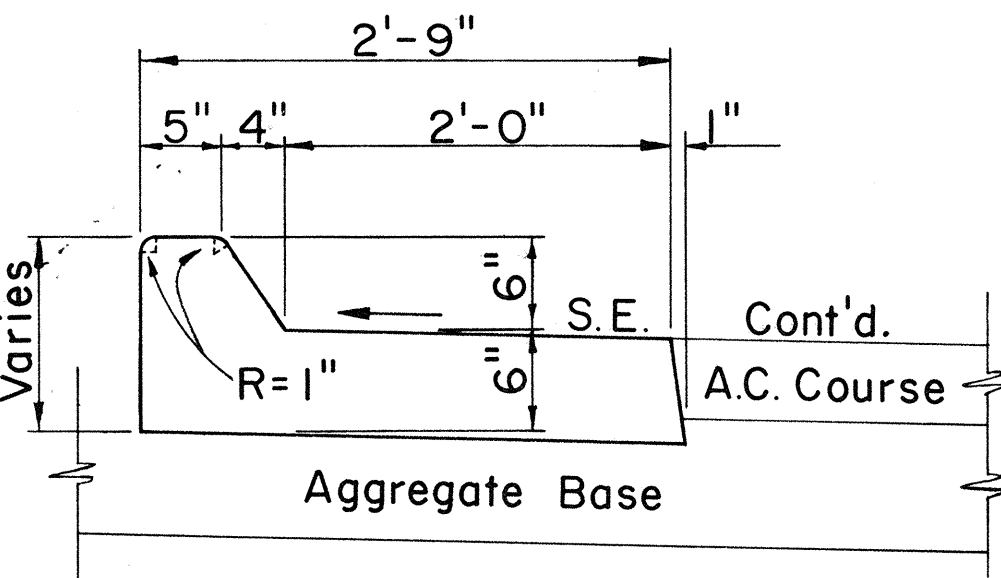
CAST-IN-PLACE CURB & GUTTER
CAST-IN-PLACE GUTTER
CONSTRUCTION JOINT DETAIL
Scale: 1" = 1'-0"



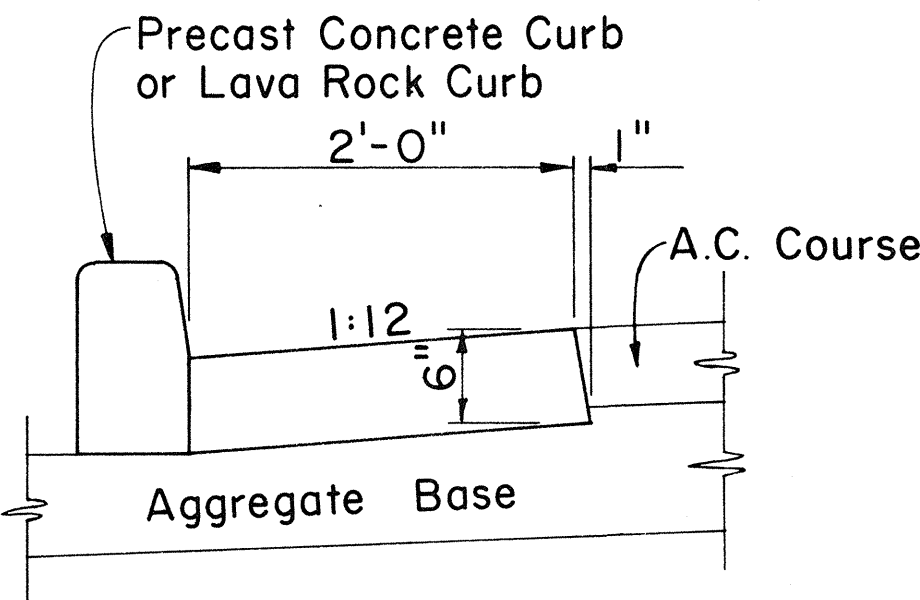
CURB, TYPE 2A



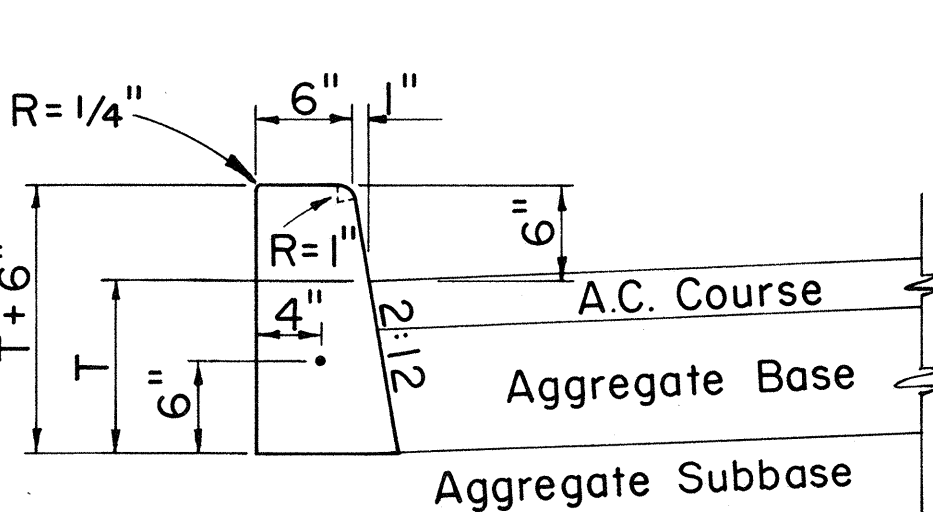
CURB & GUTTER, TYPE 2AG



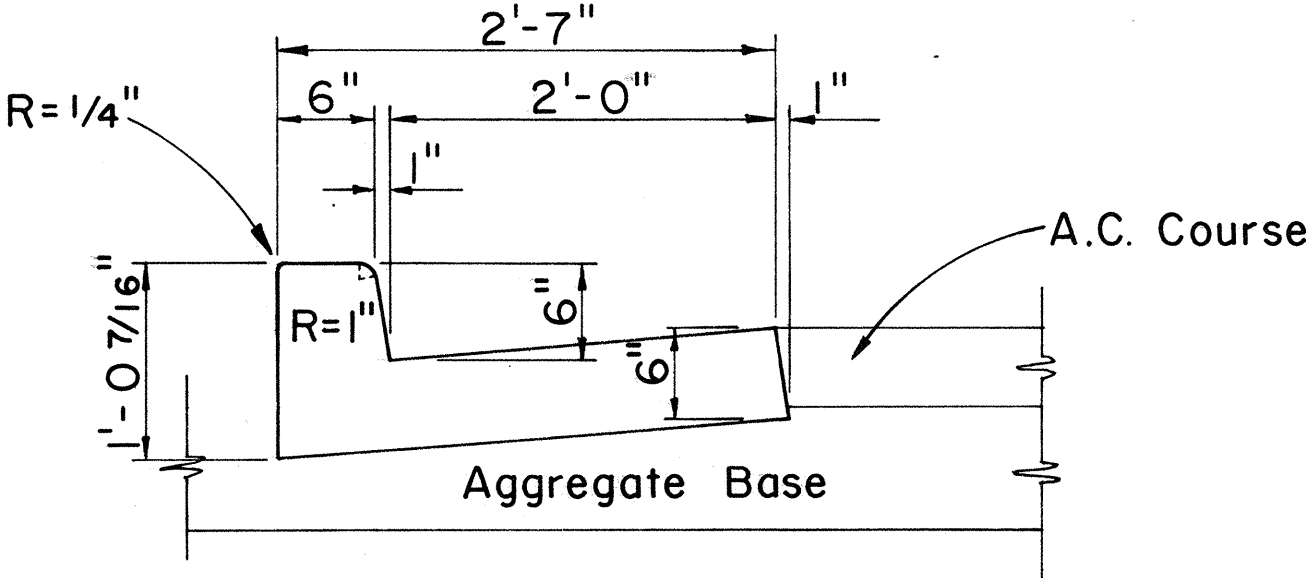
CURB & GUTTER, TYPE 2AGM



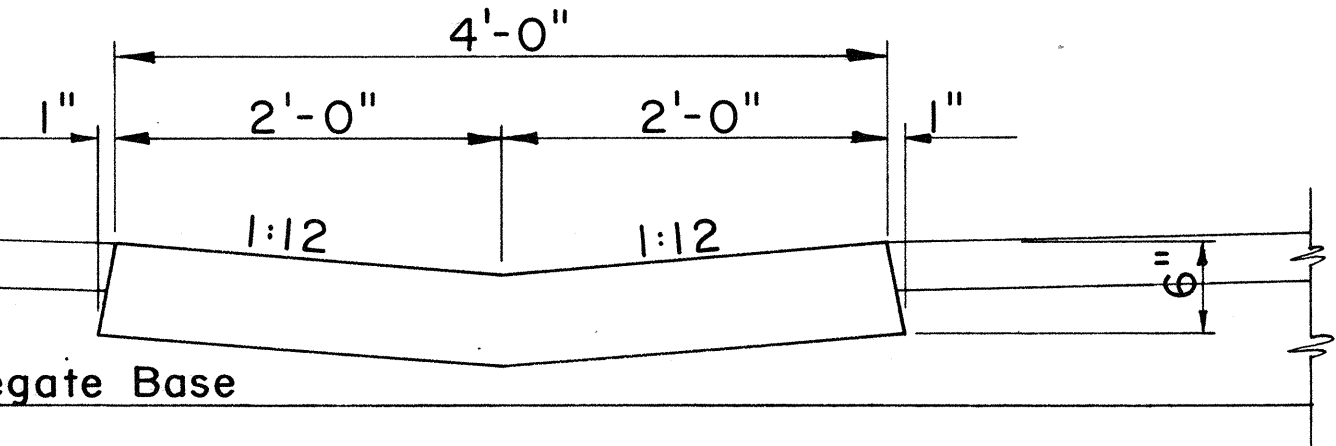
GUTTER, TYPE 2A



CURB, TYPE 2D

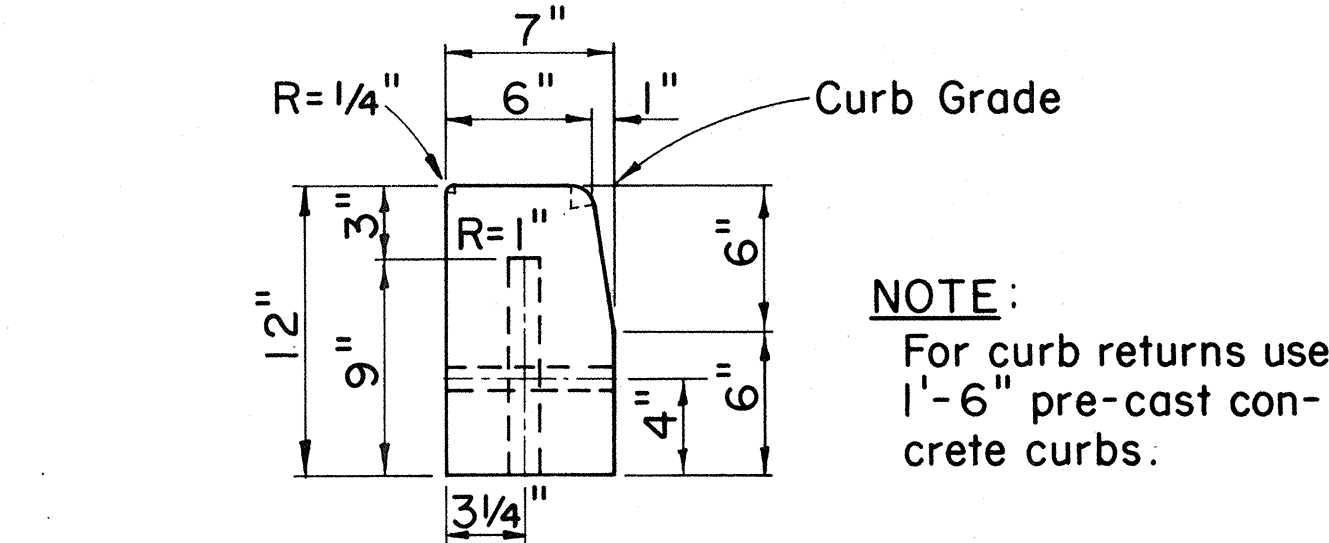


CURB & GUTTER, TYPE 2DG



GUTTER, TYPE 2G

CAST-IN-PLACE CONCRETE CURBS AND/OR GUTTERS
Scale: 1" = 1'-0"



SECTION C-C
CURB, TYPE 3D
PRE-CAST CONC. CURB
Scale: 1 1/2" = 1'-0"

APPROVAL RECOMMENDED:
M. J. J. J. 12-4-69
HIGHWAY DESIGN ENGINEER DATE

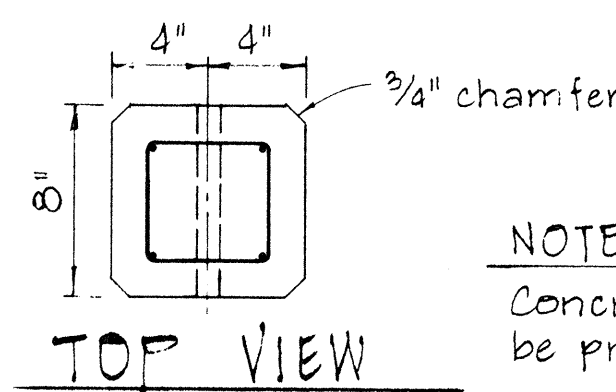
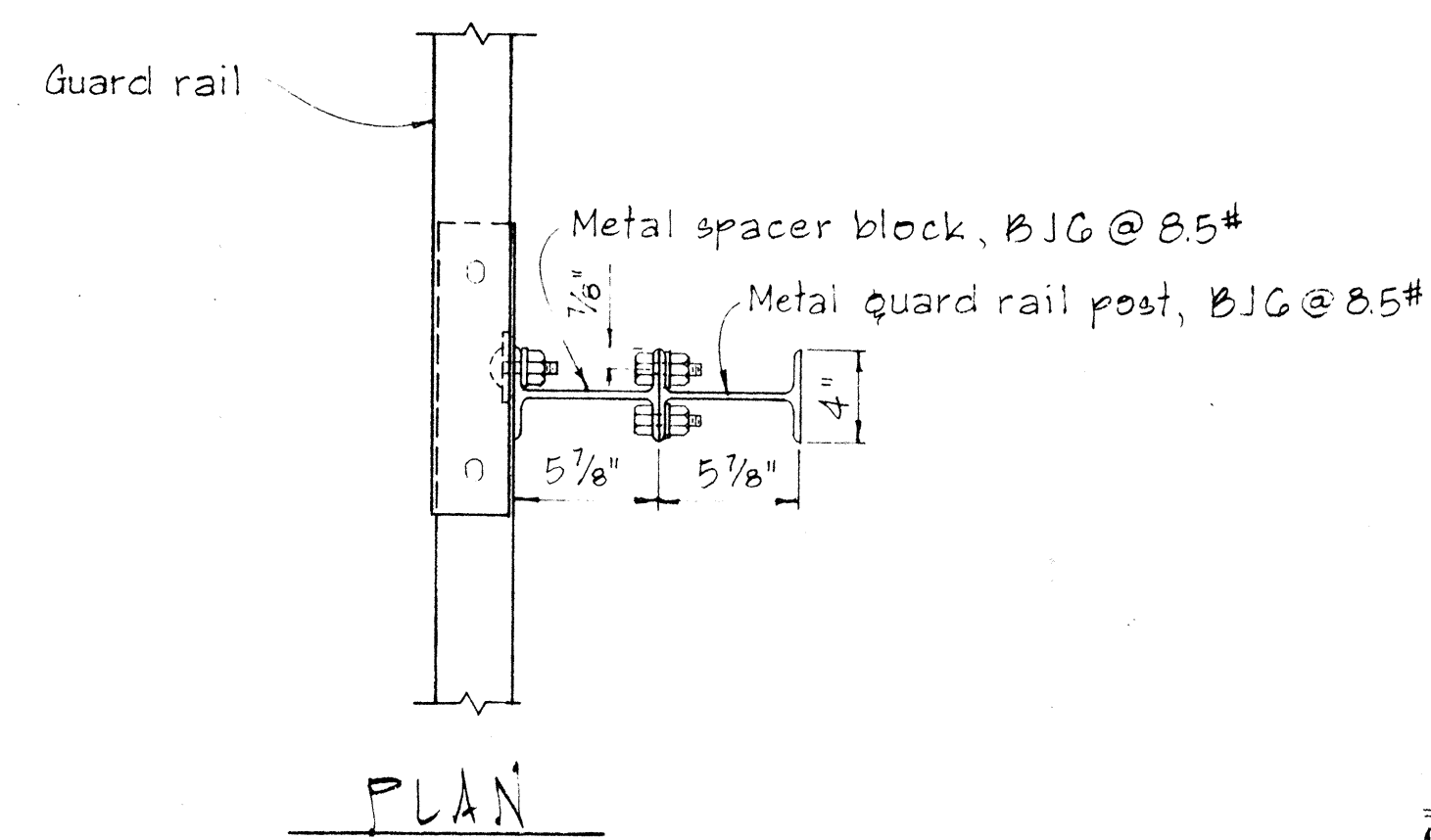
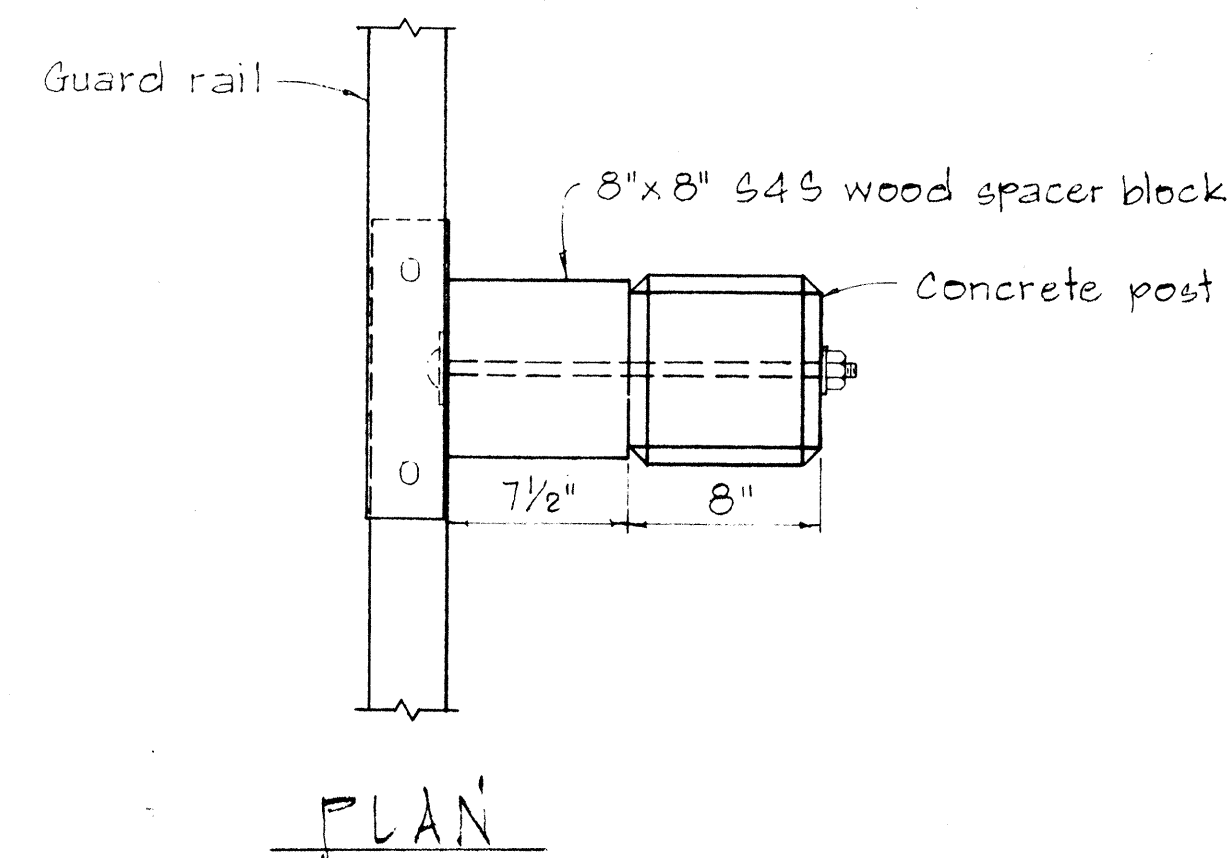
APPROVED:
Robert S. J. J. 12-10-59
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

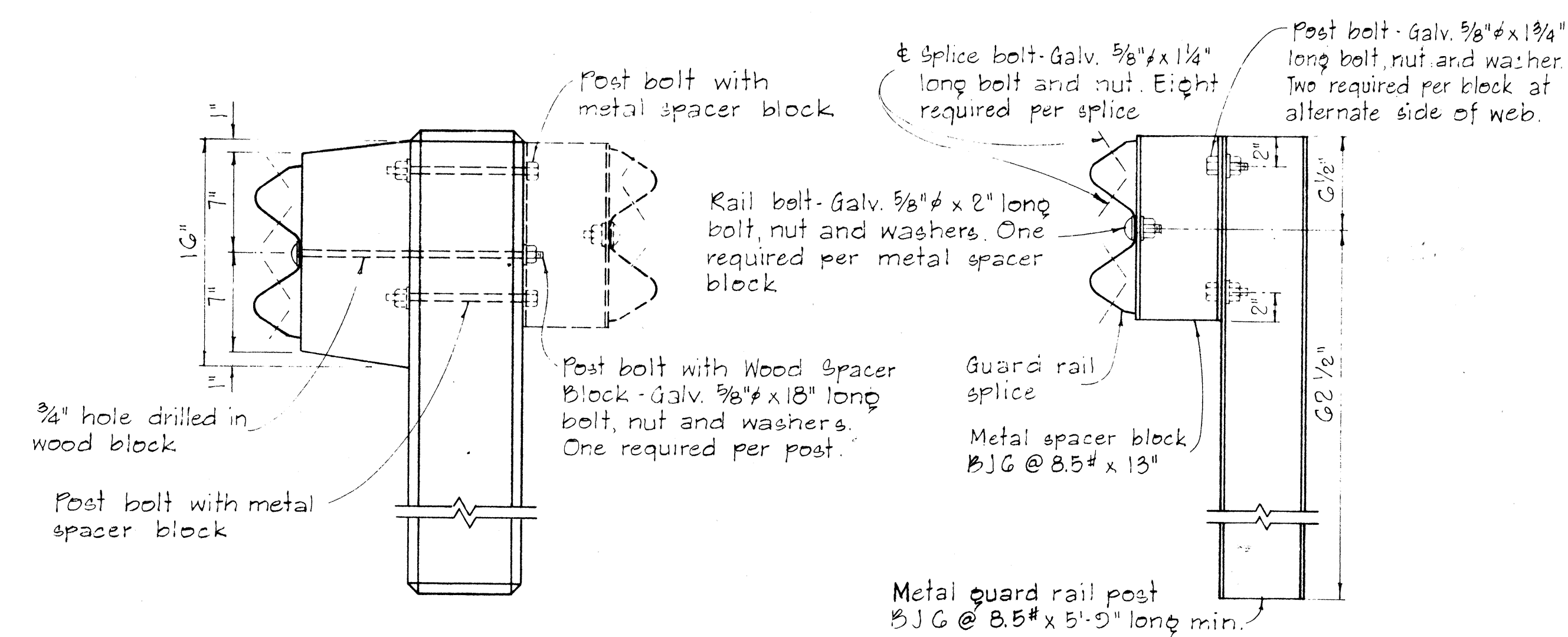
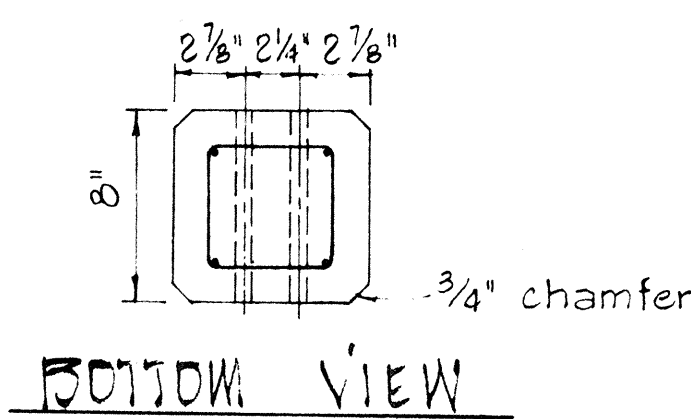
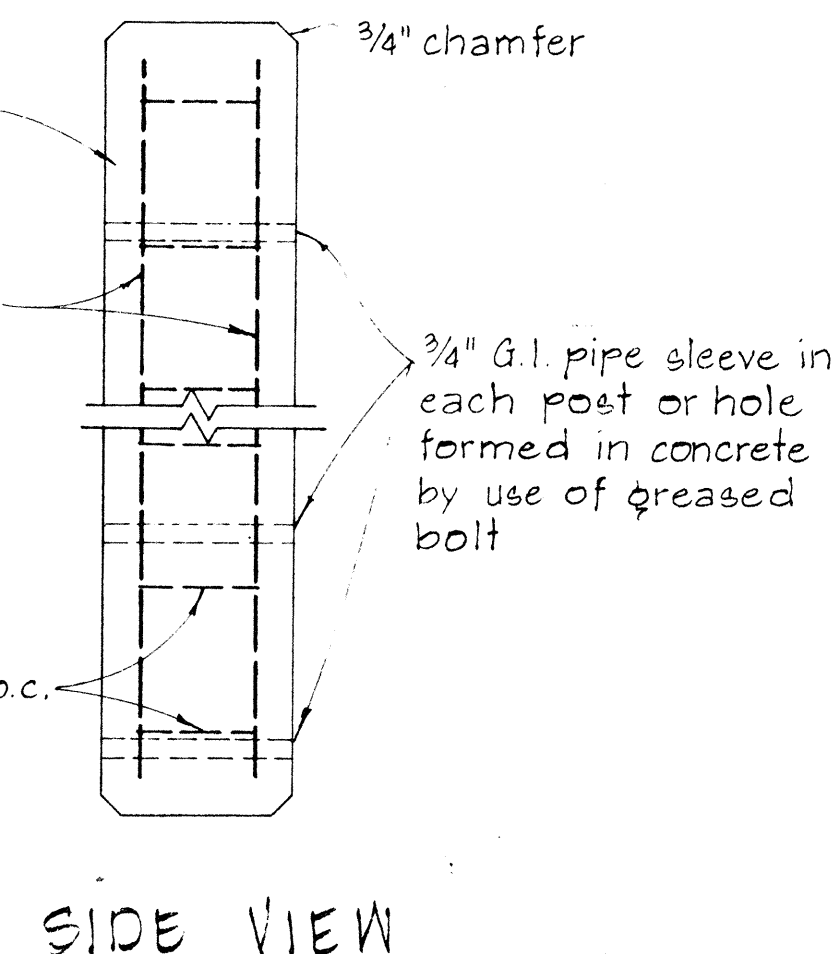
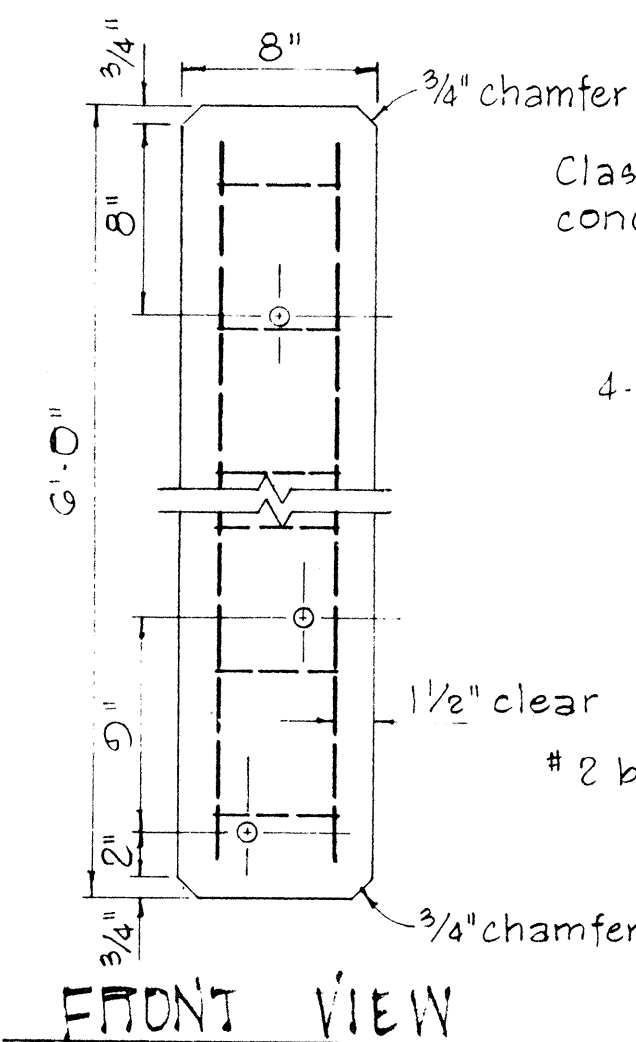
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
TYPICAL DETAILS OF CURB
AND/OR GUTTERS

Scale: As Shown
SHEET No. 4 OF 6 SHEETS DD 609.1

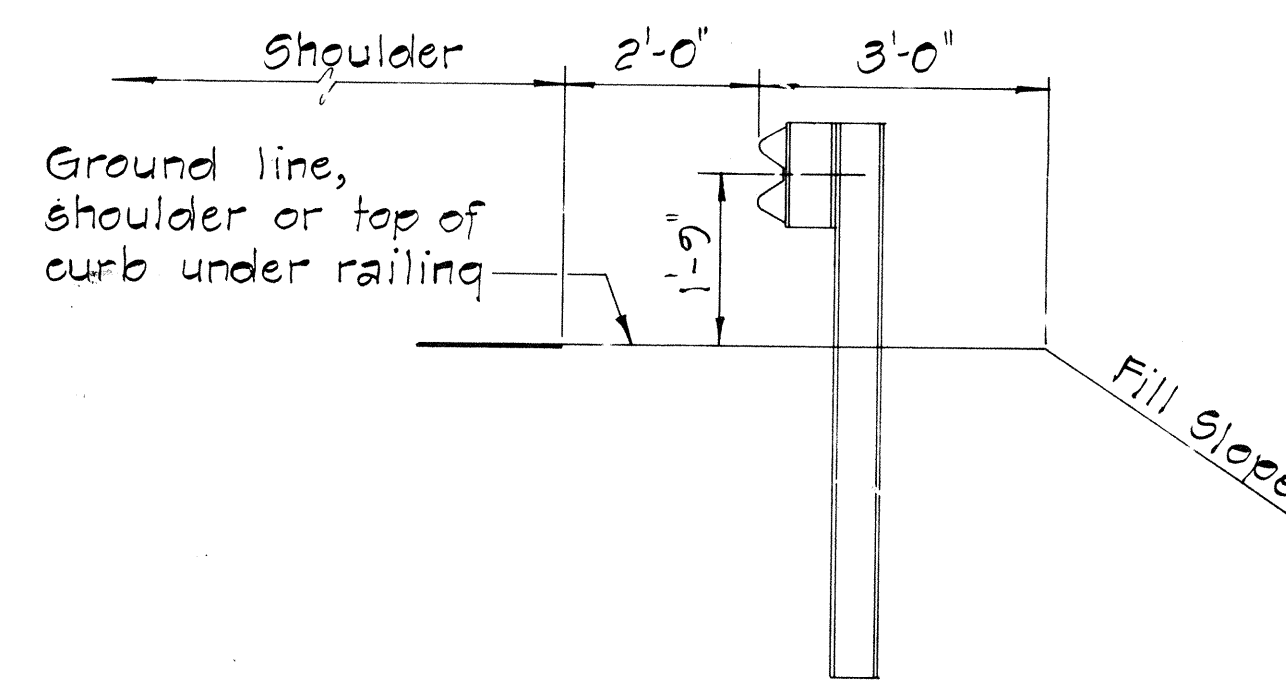
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FR-083-1(14) HES-083-1(16)	1981	13	30



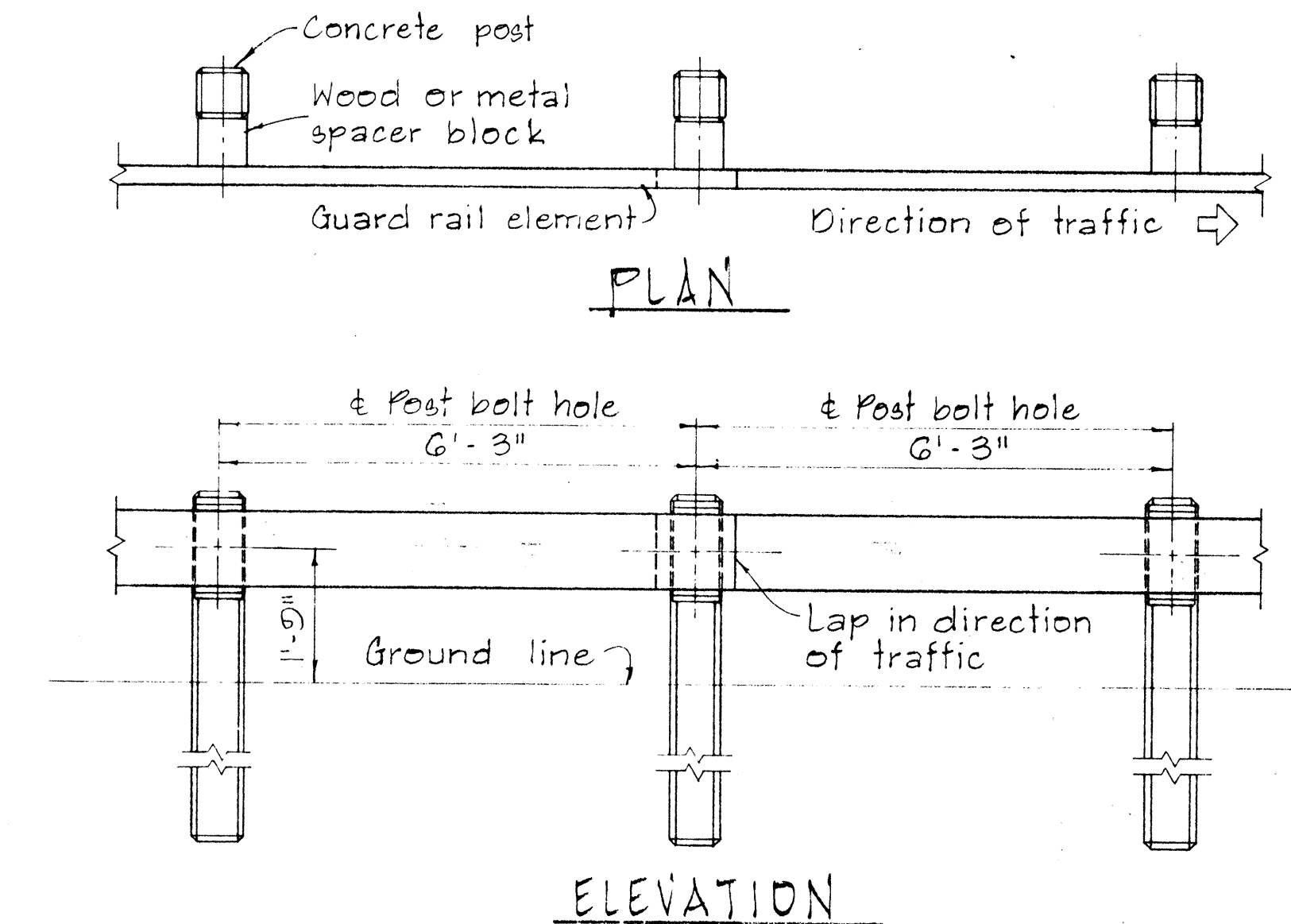
NOTE:
Concrete post shall be precast



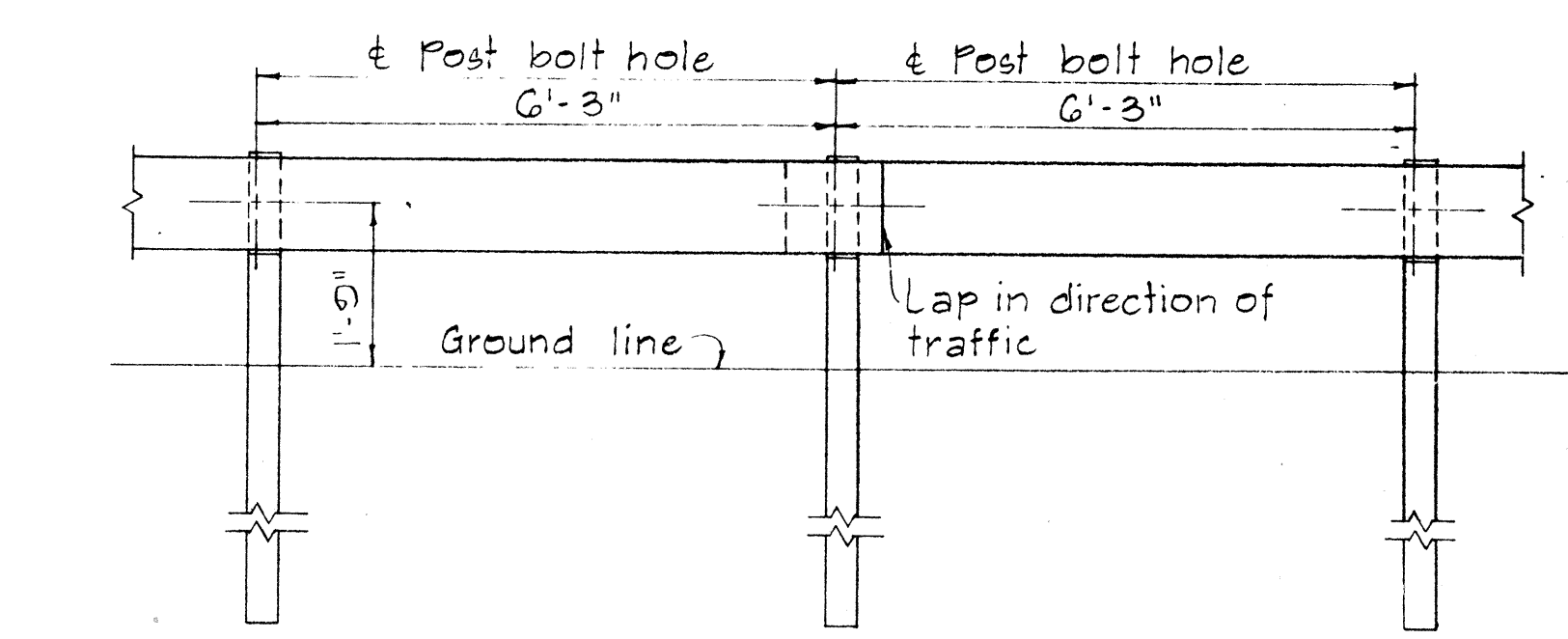
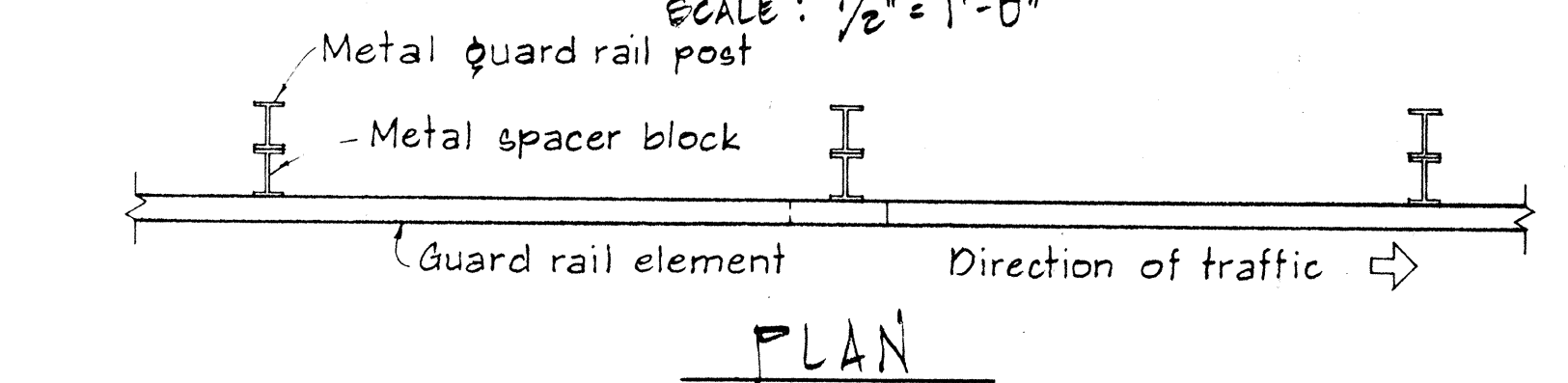
SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK
SCALE: 1 1/2" = 1'-0"



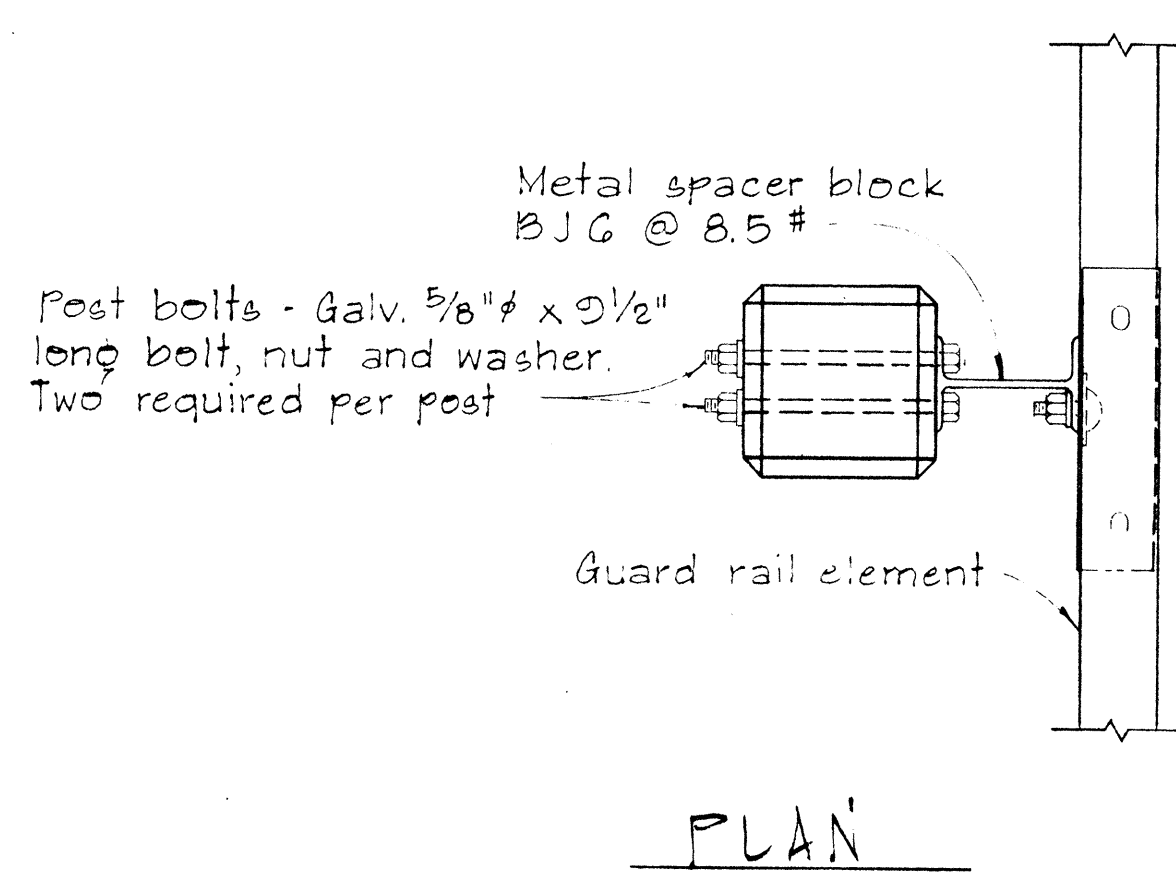
TYPICAL METAL GUARD RAIL DETAIL
SCALE: 1/2" = 1'-0"



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



METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK
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"

APPROVAL RECOMMENDED:
Erich Tanaka
TRAFFIC ENGINEER
12/29/69
DATE

APPROVED:
Hubert J. Delenda
ASSISTANT CHIEF, ENGINEERING
12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
METAL GUARD RAIL
SCALE: AS SHOWN
NOV. 1968
SHEET No. 5 OF 6 SHEETS PT 500

