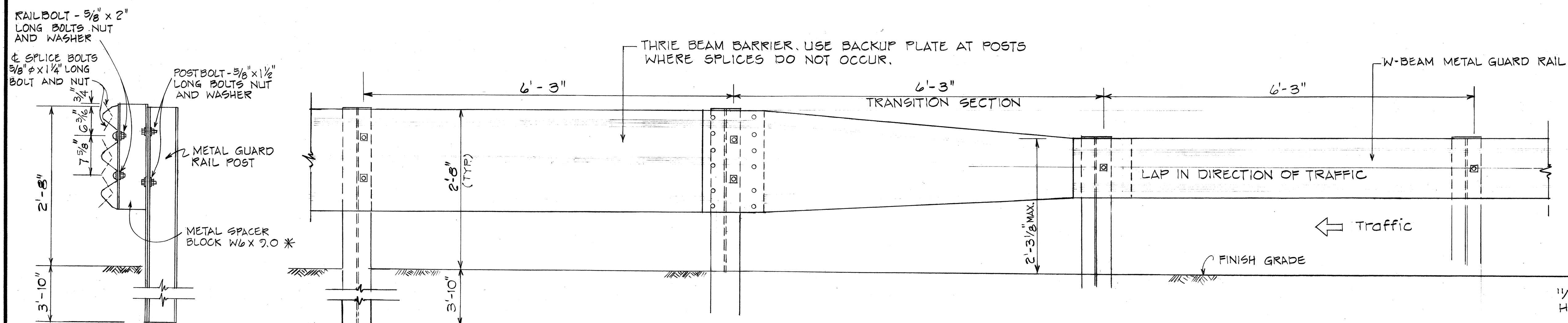
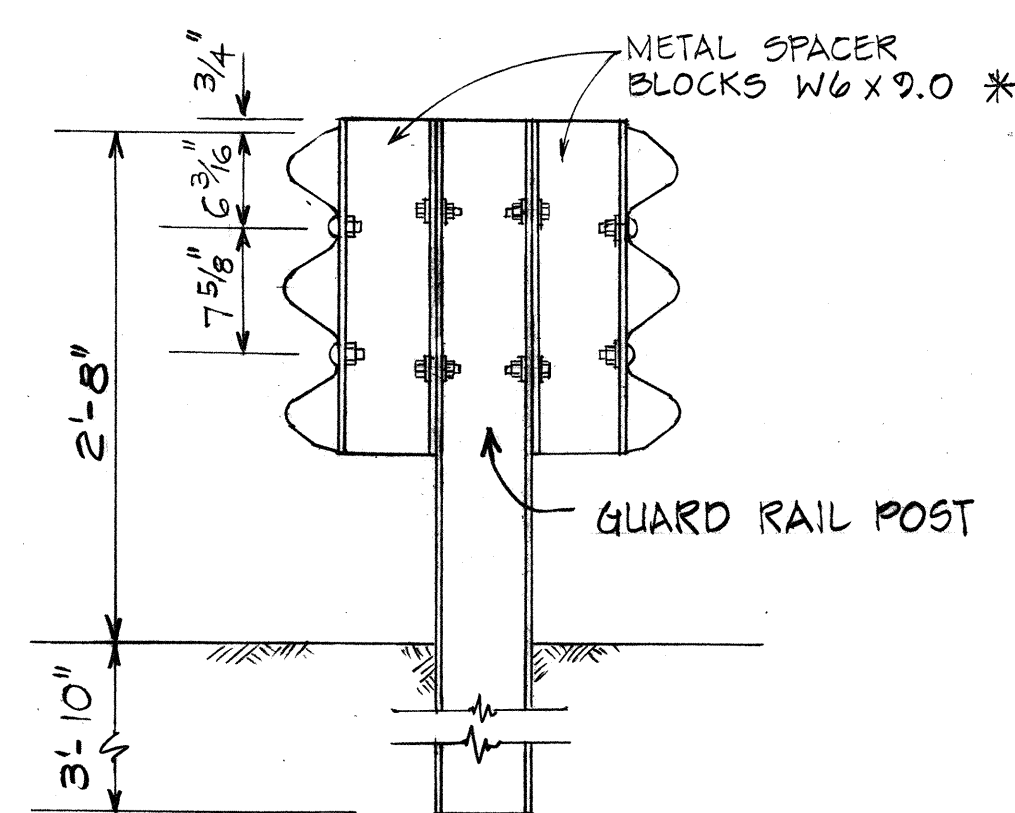


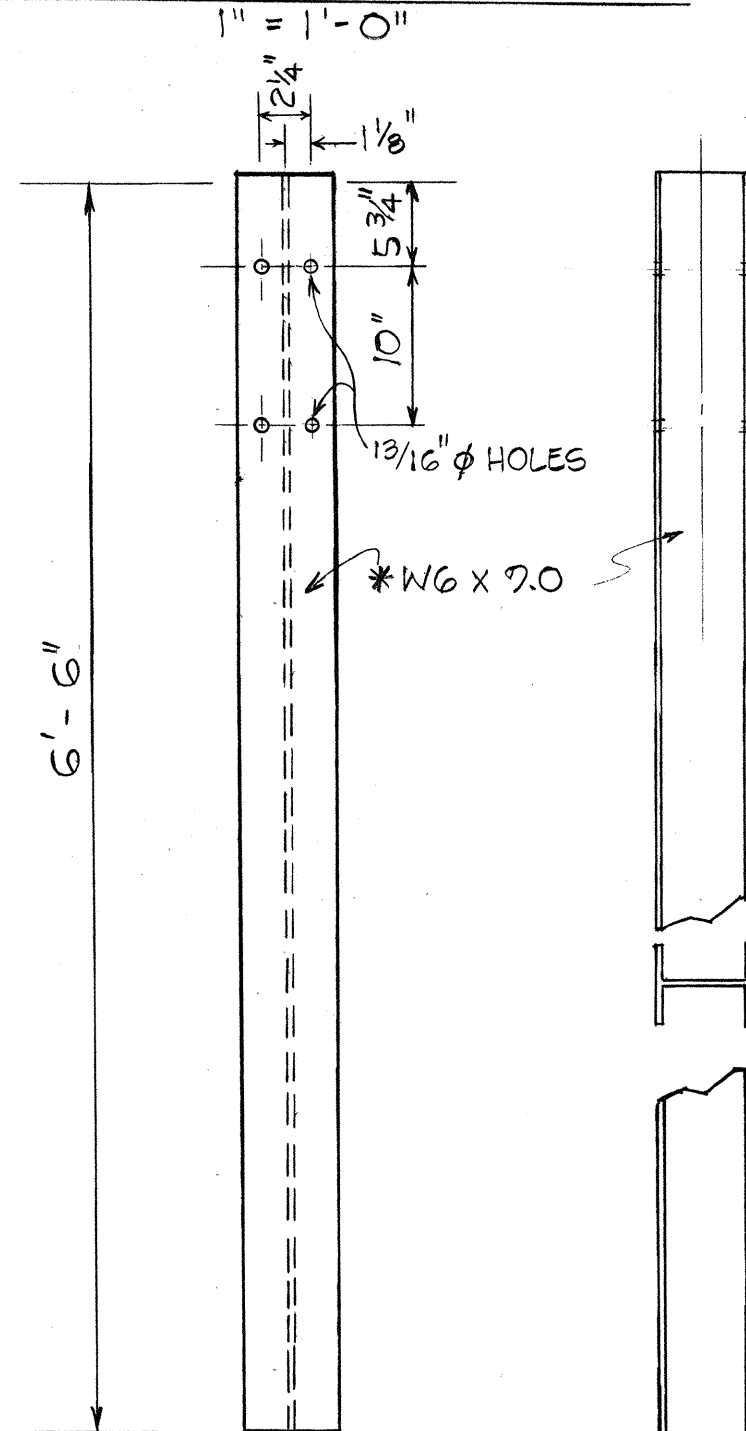
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FR-078-1(25)	1984	14	52



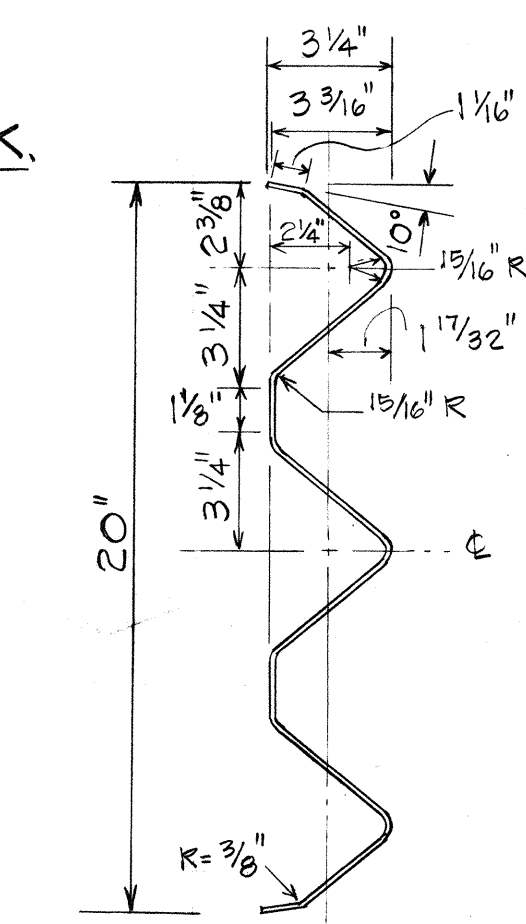
SINGLE METAL GUARD RAIL ON METAL POST W/METAL SPACER BLK.



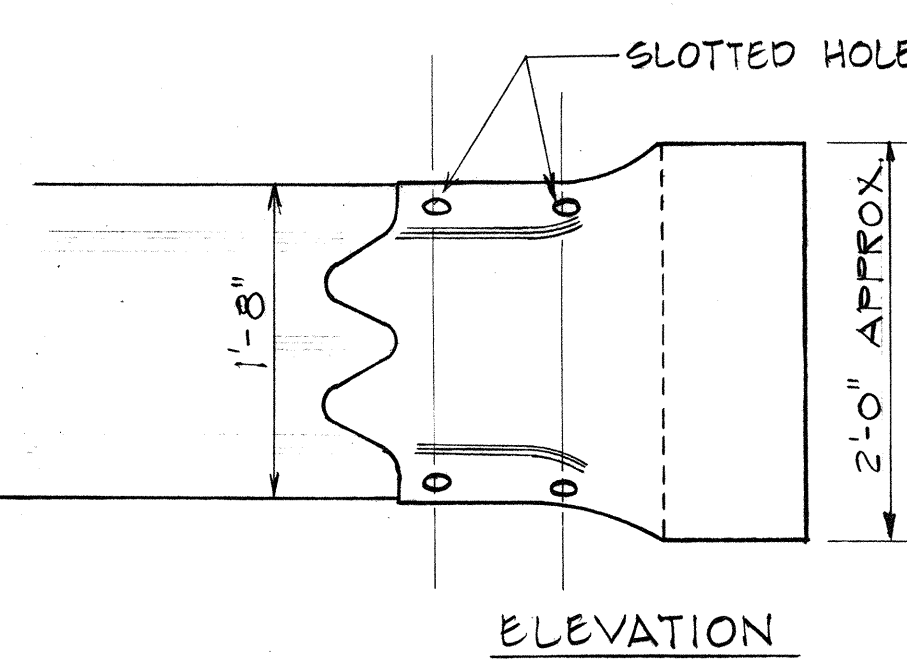
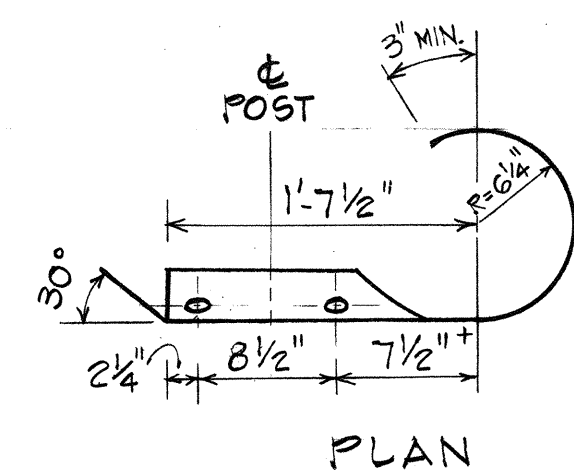
DOUBLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK



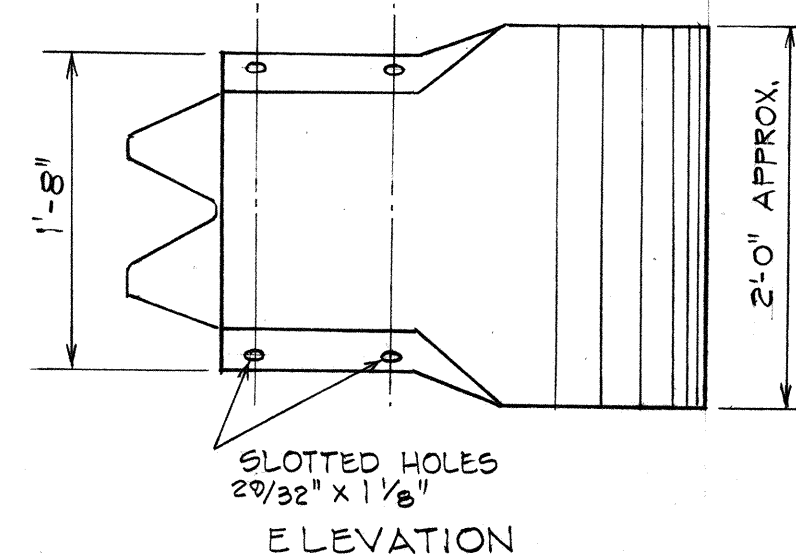
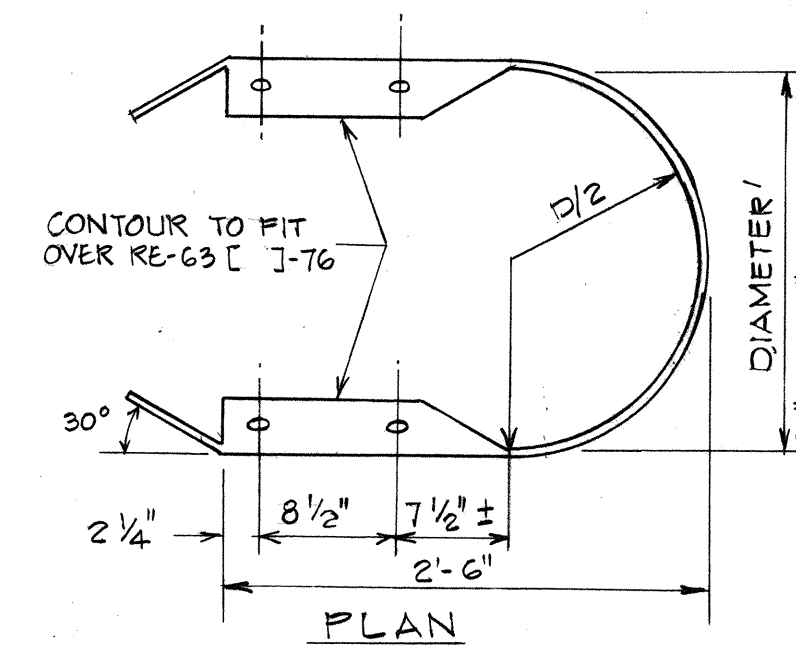
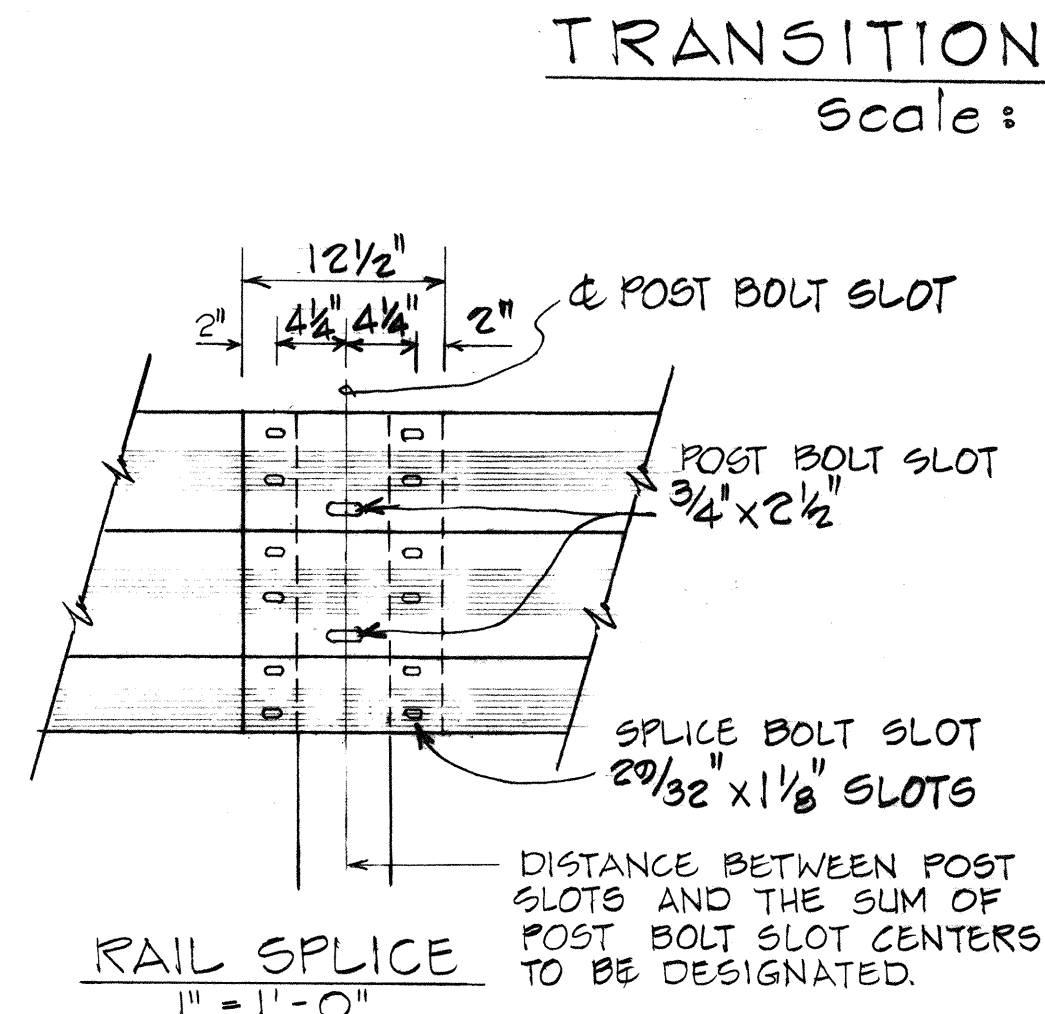
POST DETAILS



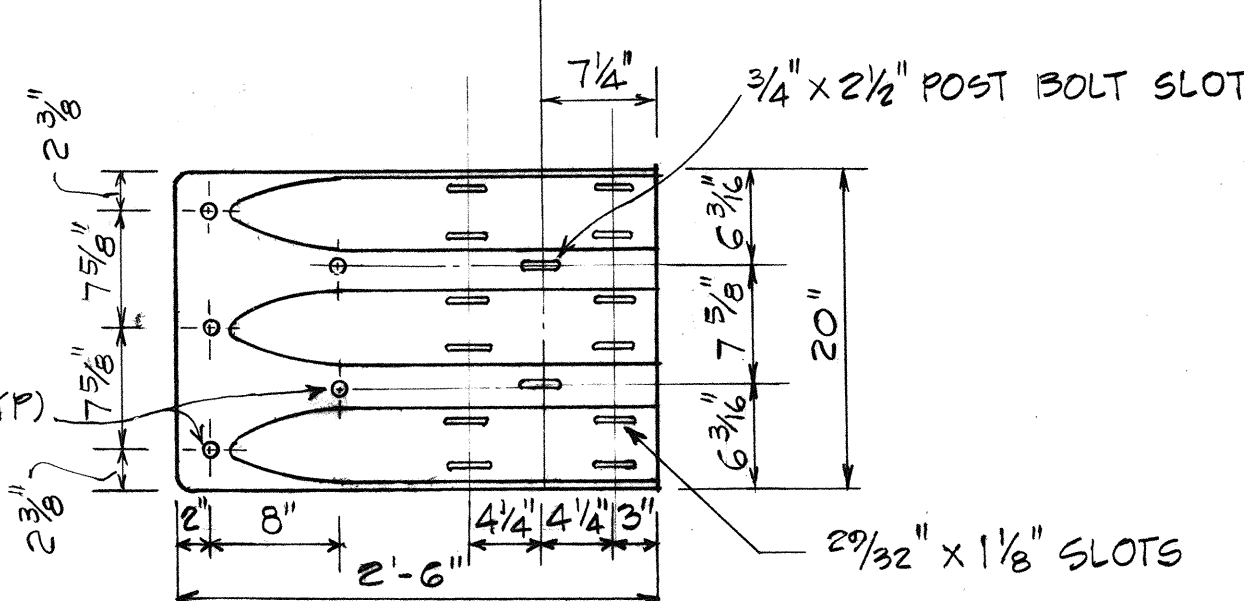
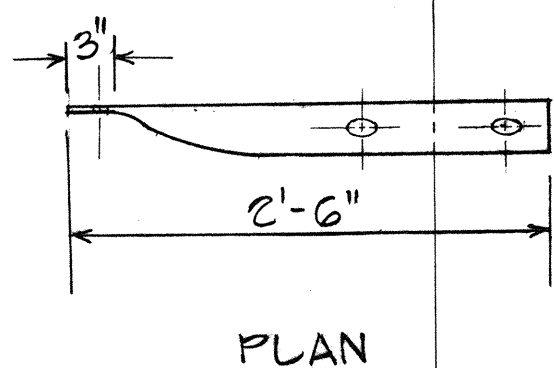
SECTION THRU RAIL ELEMENT



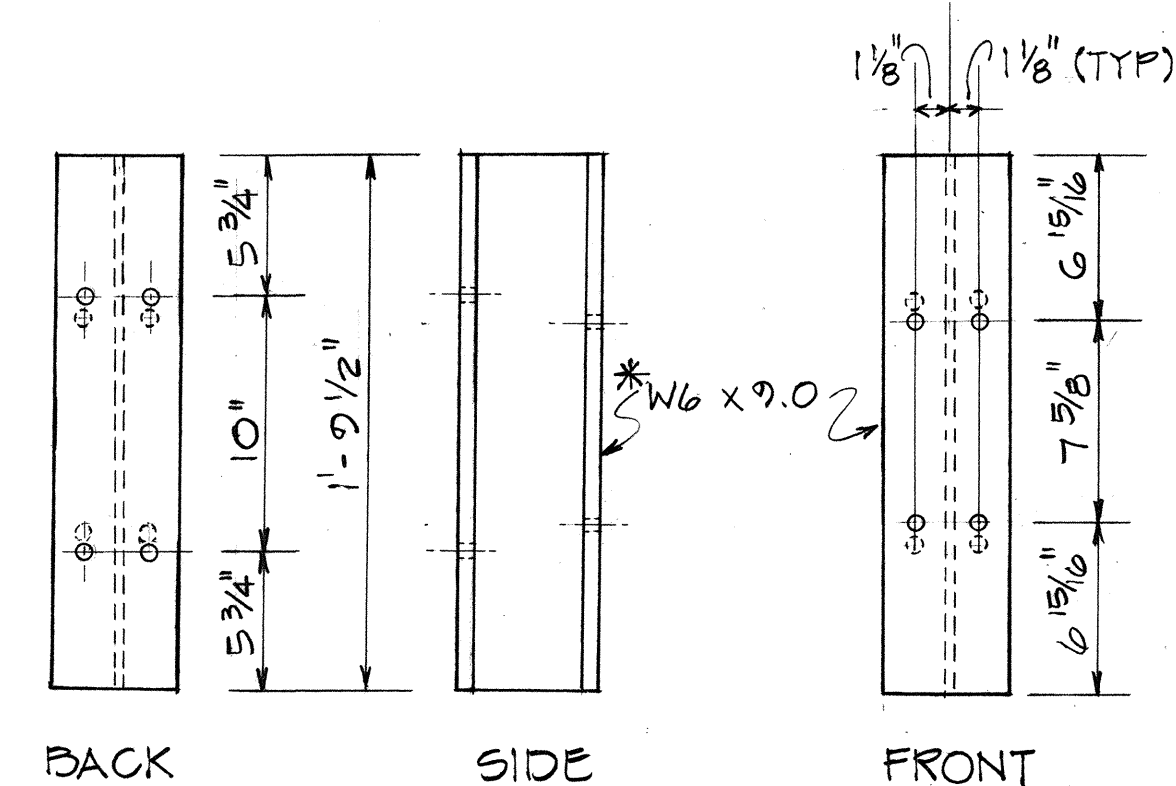
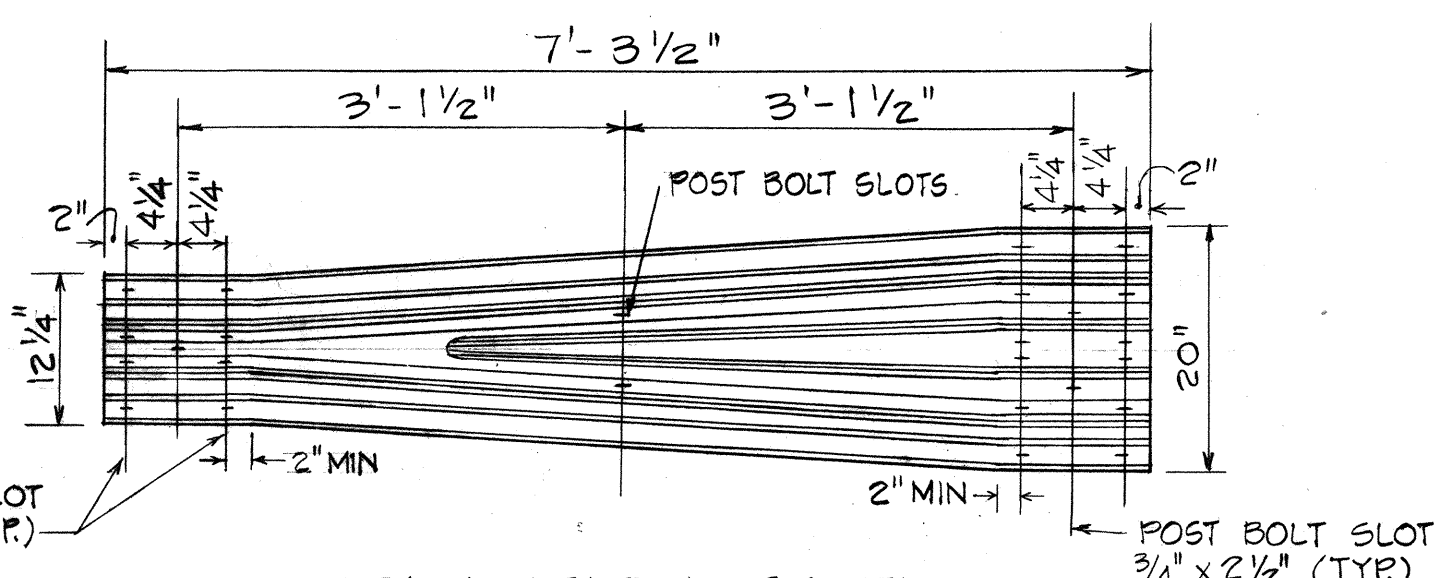
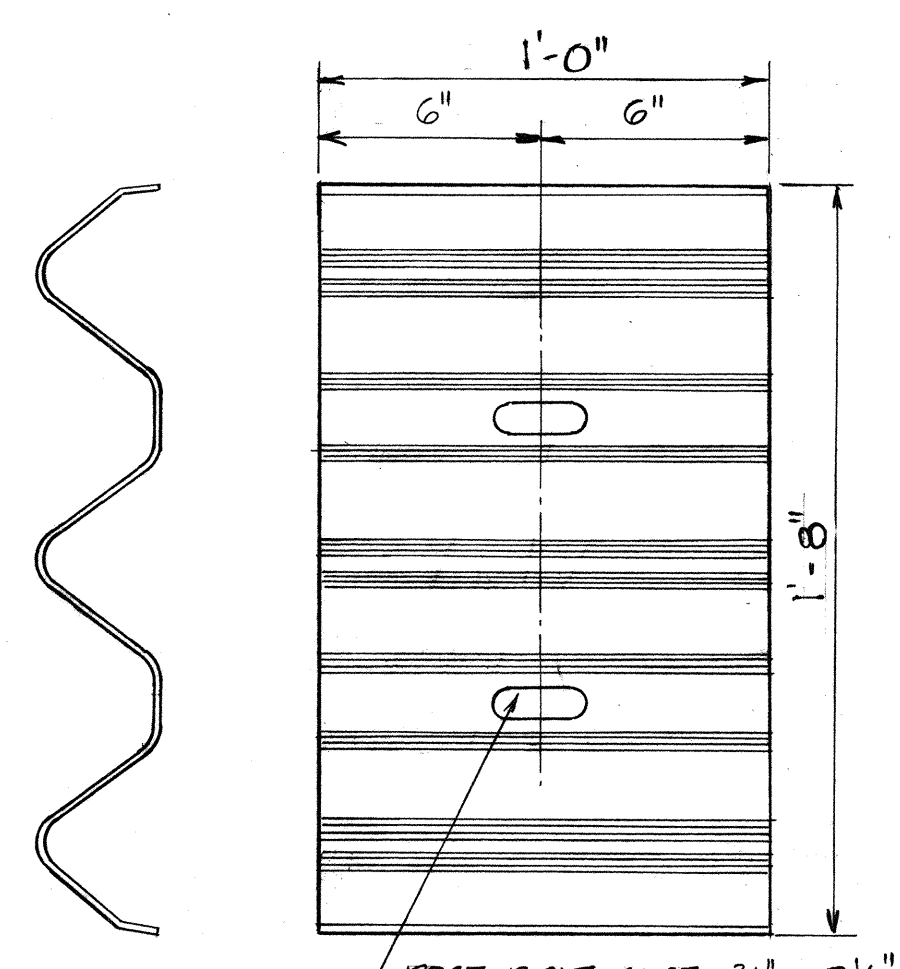
END SECTION (ROUNDED)



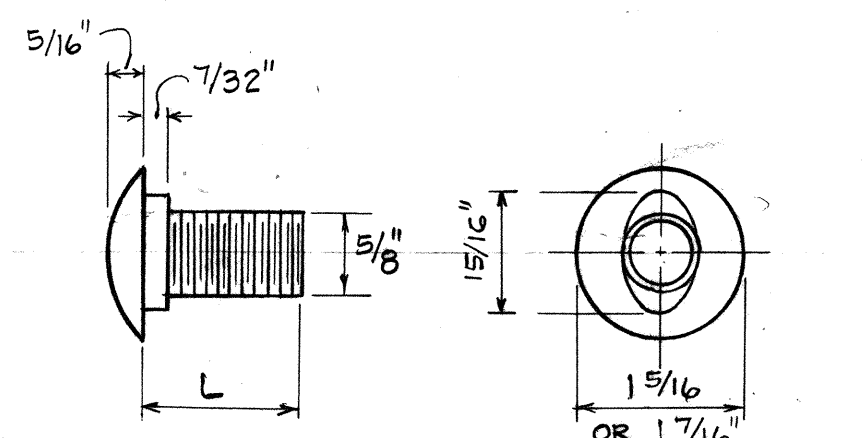
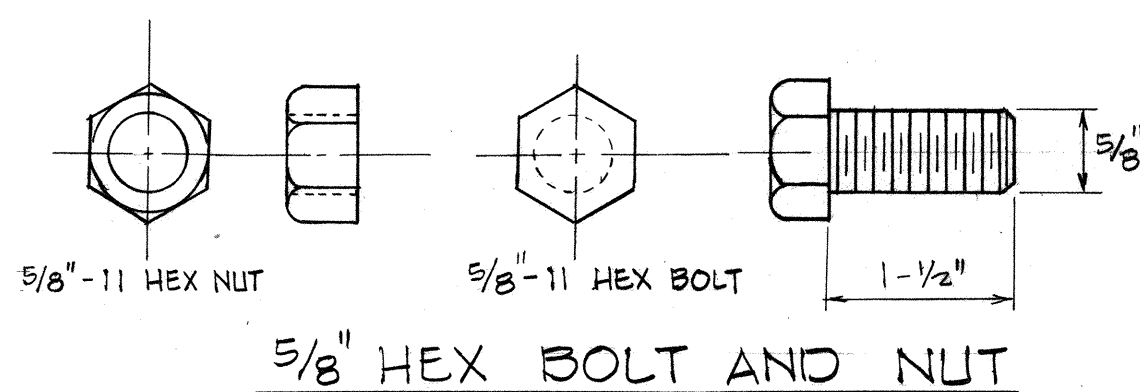
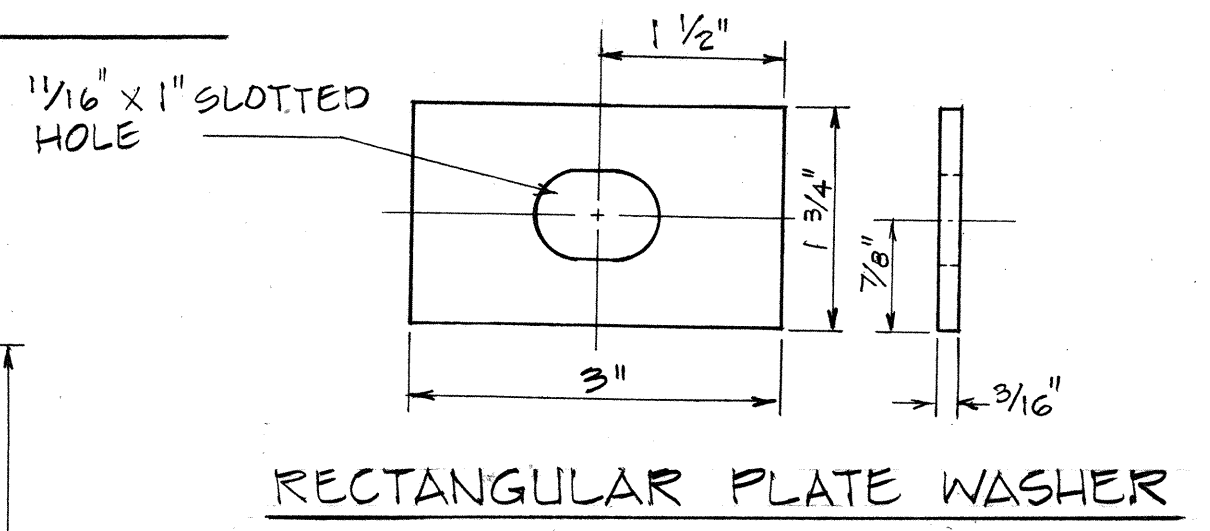
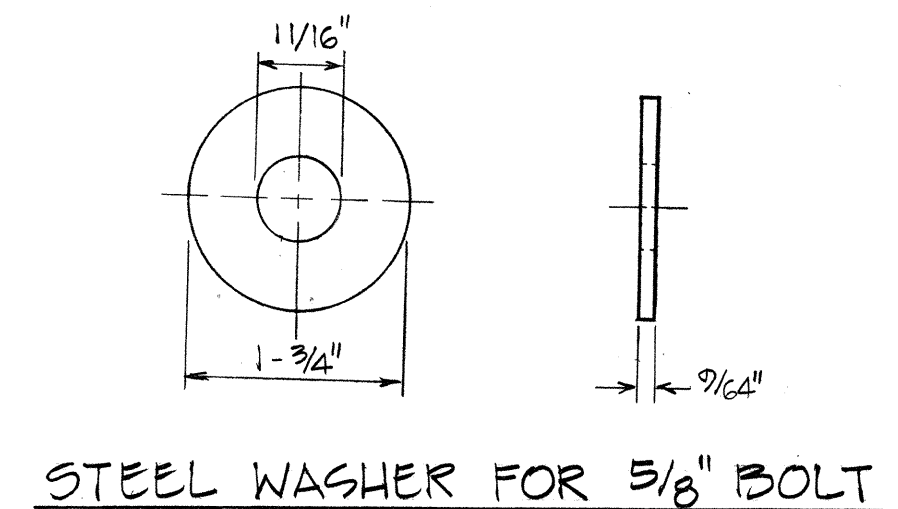
END SECTION (BUFFER)



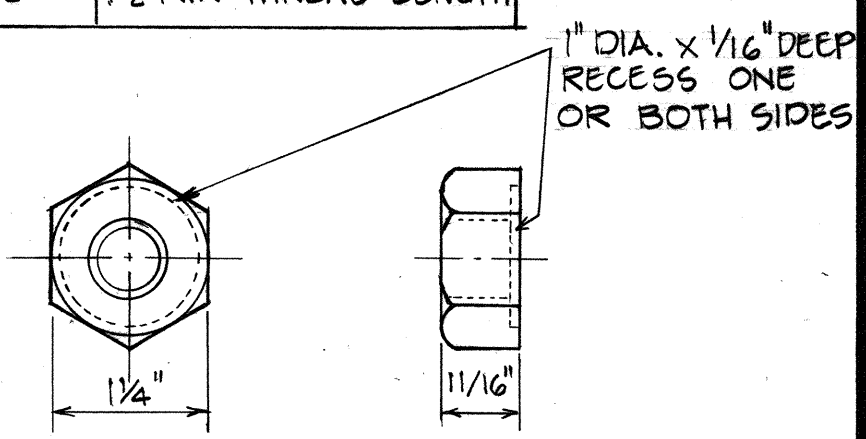
TERMINAL CONNECTOR



SPACER BLOCK



L	THREAD LENGTH
1 1/4"	FULL THREAD
2"	1/2" MIN THREAD LENGTH



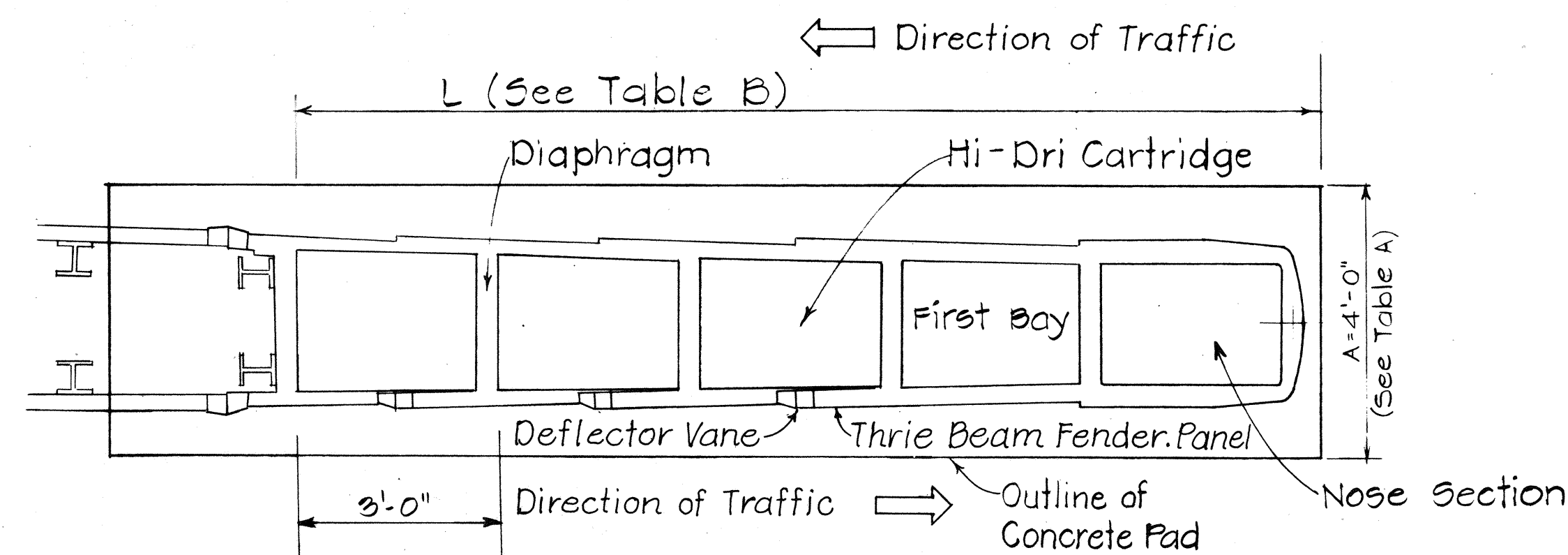
* REPLACED WGXB.S, WHICH IS ACCEPTABLE AS AN ALTERNATE.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

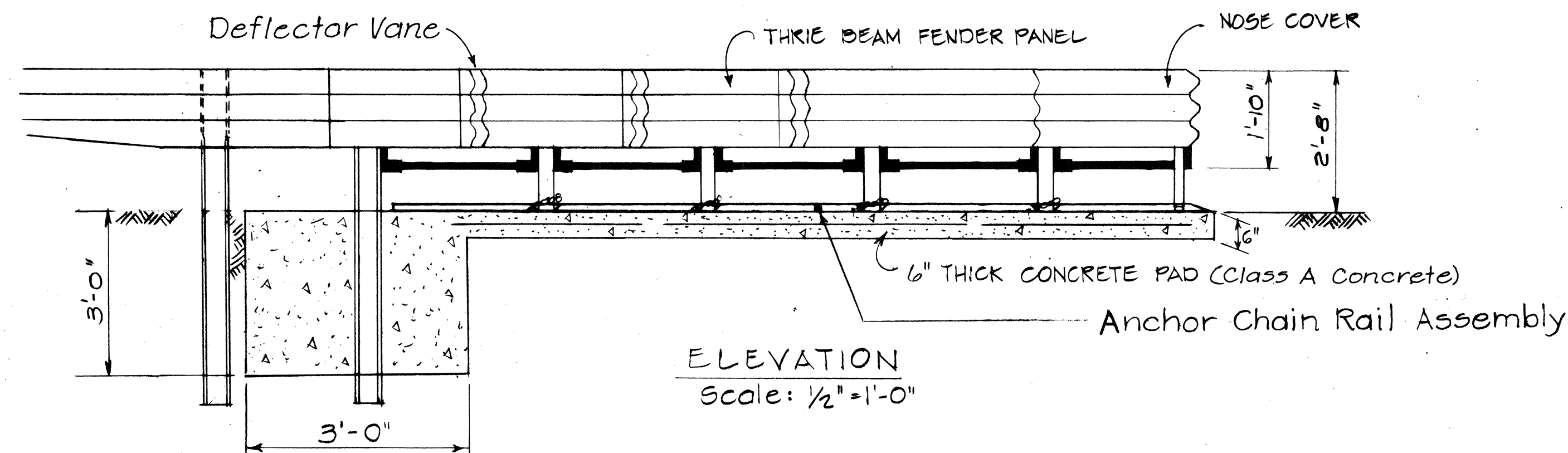
TYPICAL DETAIL
GUARD RAIL TYPE 3
THRE BEAM

FA Project No. F-FR-078-1(25)
Scale: As Shown Date: April, 1980
SHEET No. 1 OF 13 SHEETS

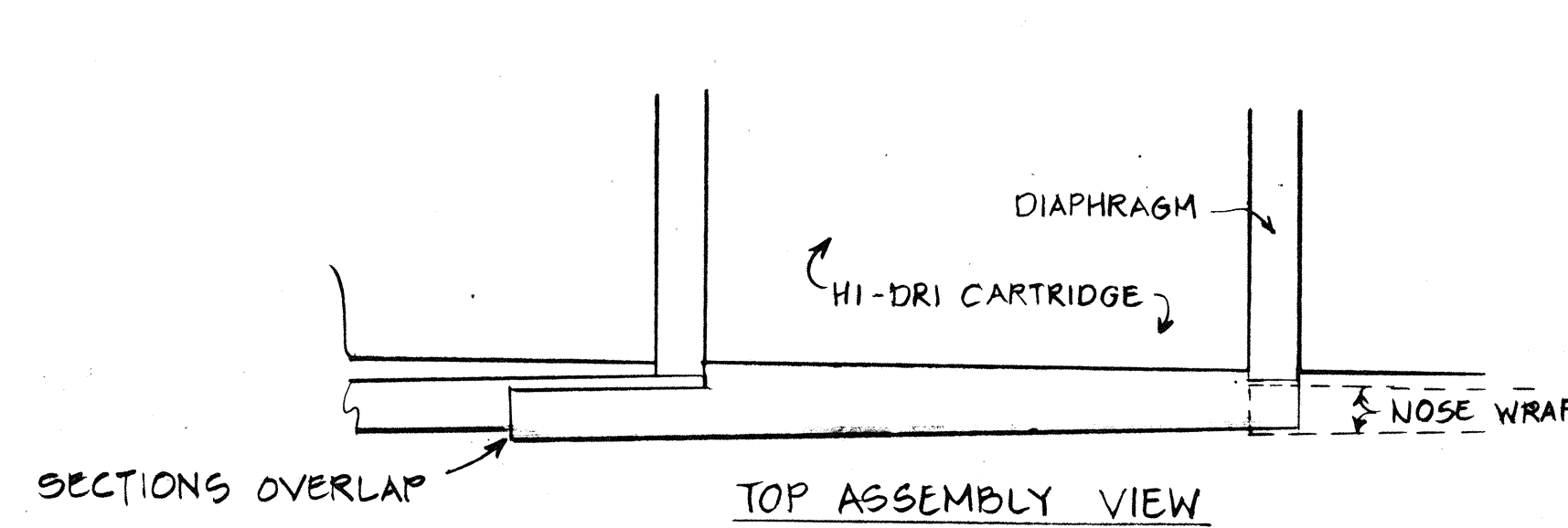
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FR-078-1(25)	1984	15	52



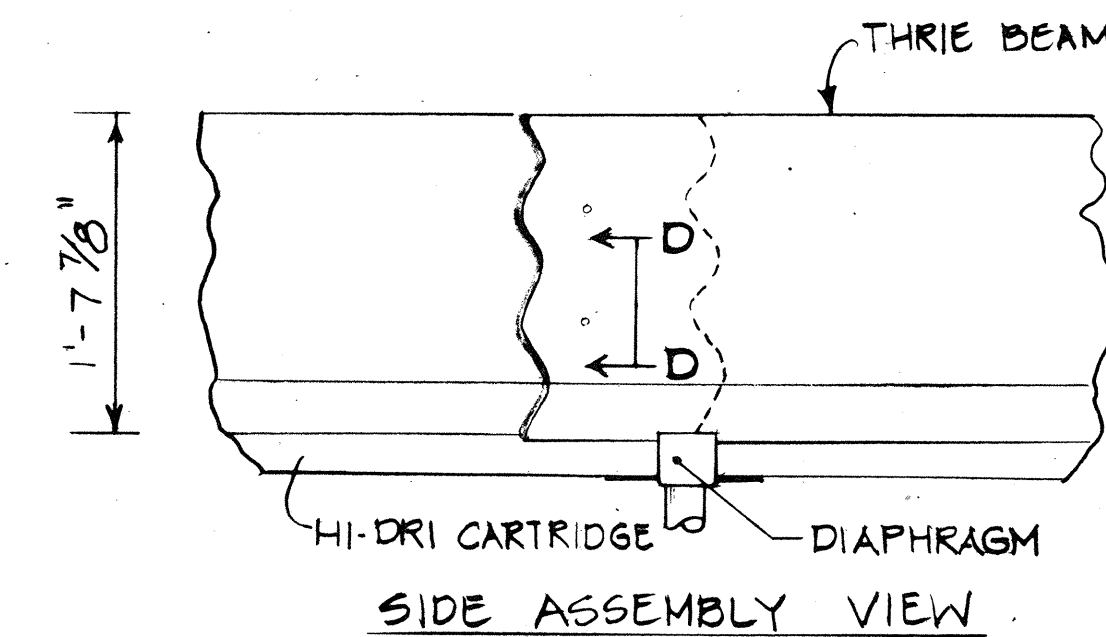
PLAN
Scale: 1/2"=1'-0"



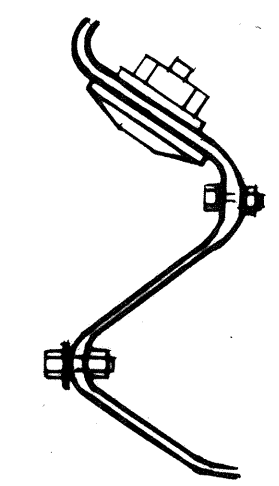
ELEVATION
Scale: 1/2"=1'-0"



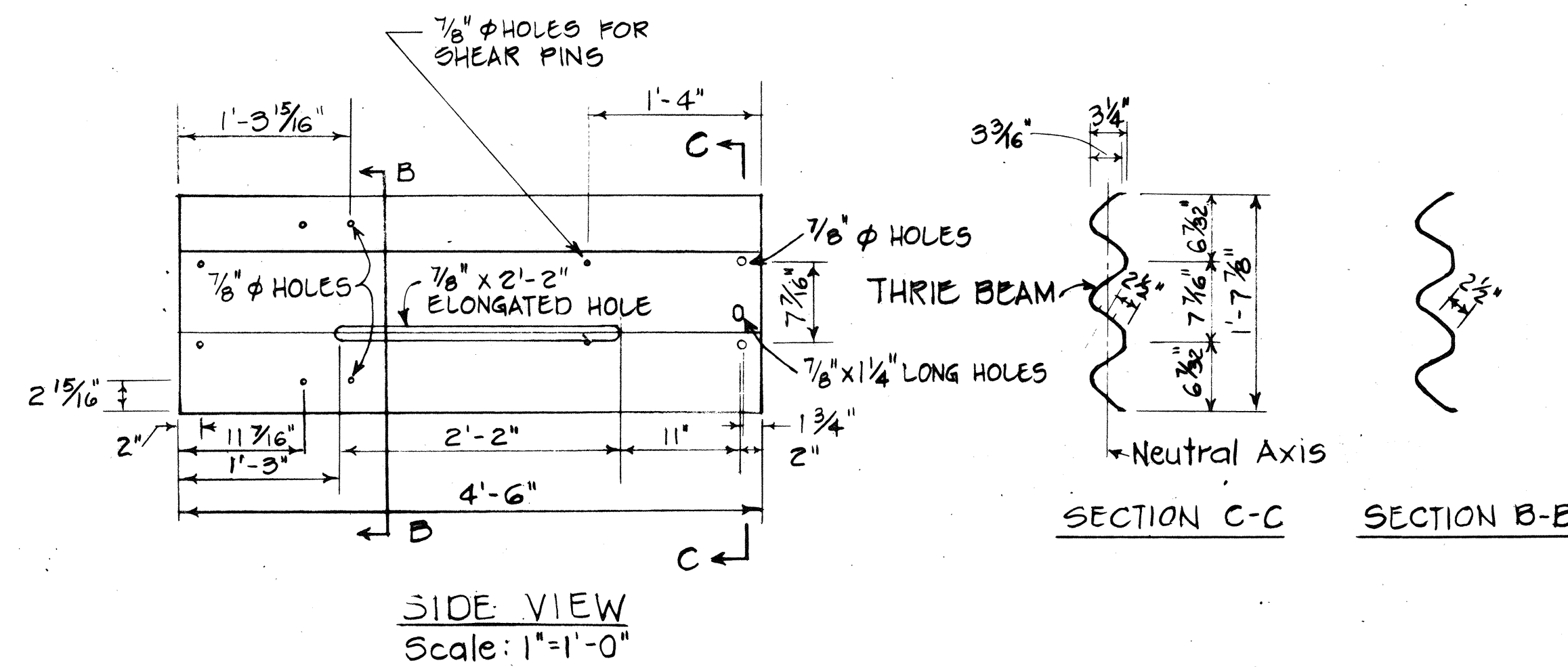
TOP ASSEMBLY VIEW



SIDE ASSEMBLY VIEW



SECTION D-D



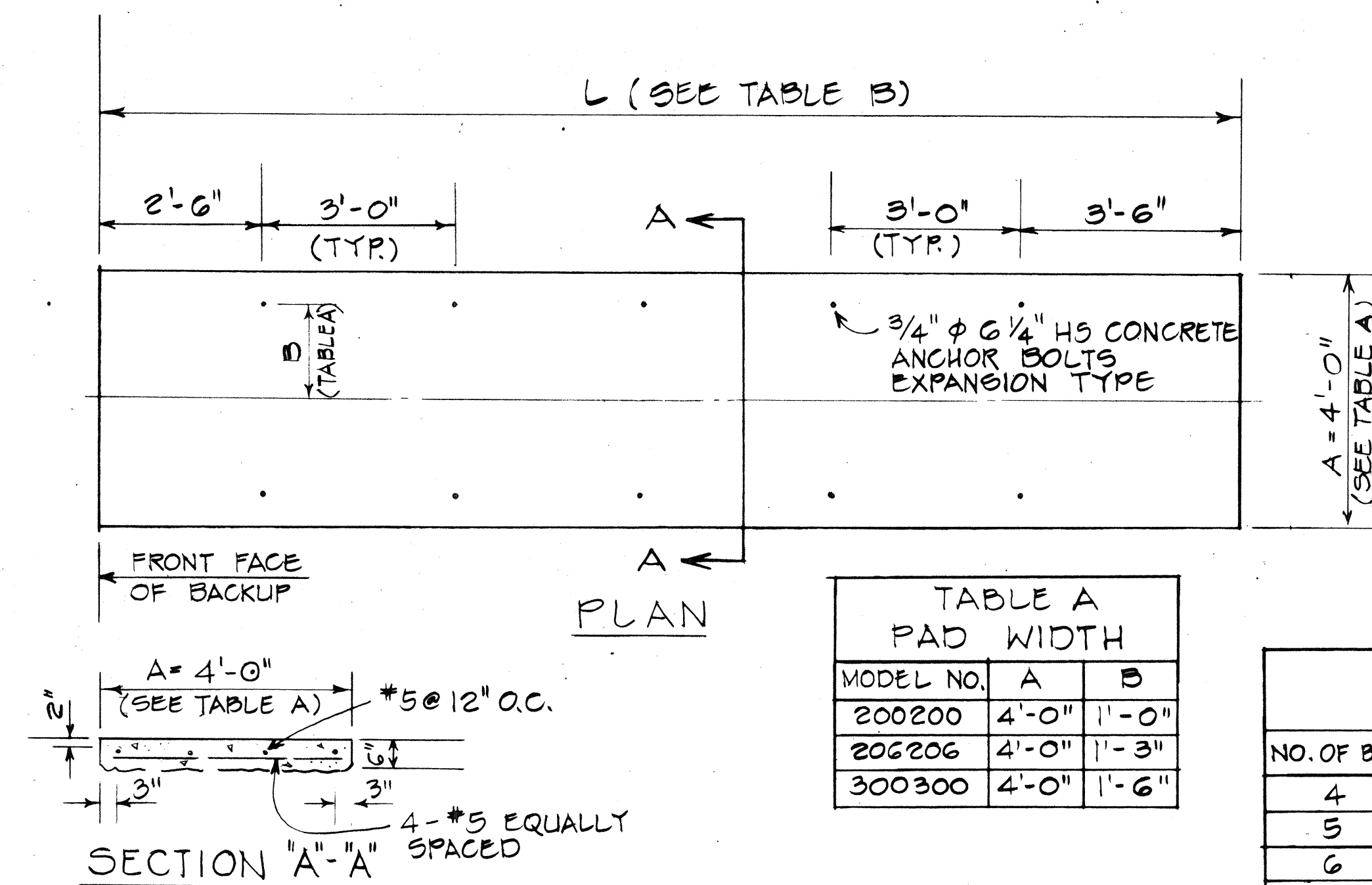
SIDE VIEW
Scale: 1"=1'-0"

SECTION C-C

SECTION B-B

NOTE:

1. The Contractor shall verify with the manufacturer, any amendments or revisions thereof as may be made from time to time, shall be used in this project.
2. Constant longitudinal and transverse slope throughout Concrete Pad.
3. Concrete Pad cross slope shall not exceed 3%.
4. Outline of concrete pad shall match grades with surrounding median area.



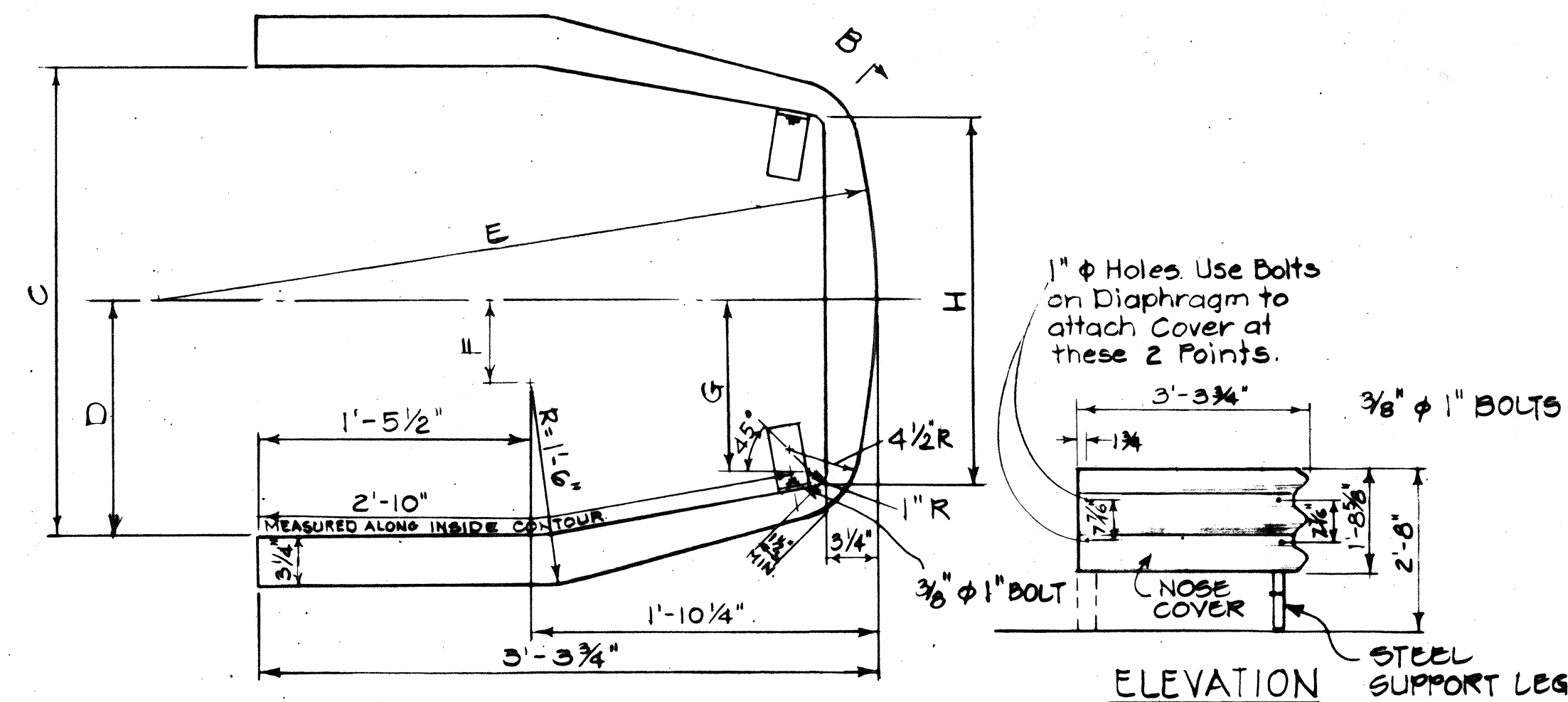
PLAN

MODEL NO.	A	B
200200	4'-0"	1'-0"
206206	4'-0"	1'-3"
300300	4'-0"	1'-6"

NO. OF BAYS	L	ANCHOR BOLTS QUAN.
4	15'-6"	14
5	18'-6"	16
6	21'-6"	20
7	24'-6"	22
8	27'-6"	24
9	30'-6"	26
10	33'-6"	30
3	12'-6"	12

CONCRETE PAD DETAILS

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



ELEVATION

PLAN
N.T.S.

UNIT SIZE	ASST. NO.	C	D	E	F	G	H
2'-0"	35-02-031	2'-0"	1'-0"	2'-1 1/8"	3'-4"	8"	1'-6"
2'-6"	35-02-032	2'-6"	1'-3"	3'-10"	6'-4"	11"	2'-0"
3'-0"	35-02-032	2'-6"	1'-3"	3'-10"	6'-4"	11"	2'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

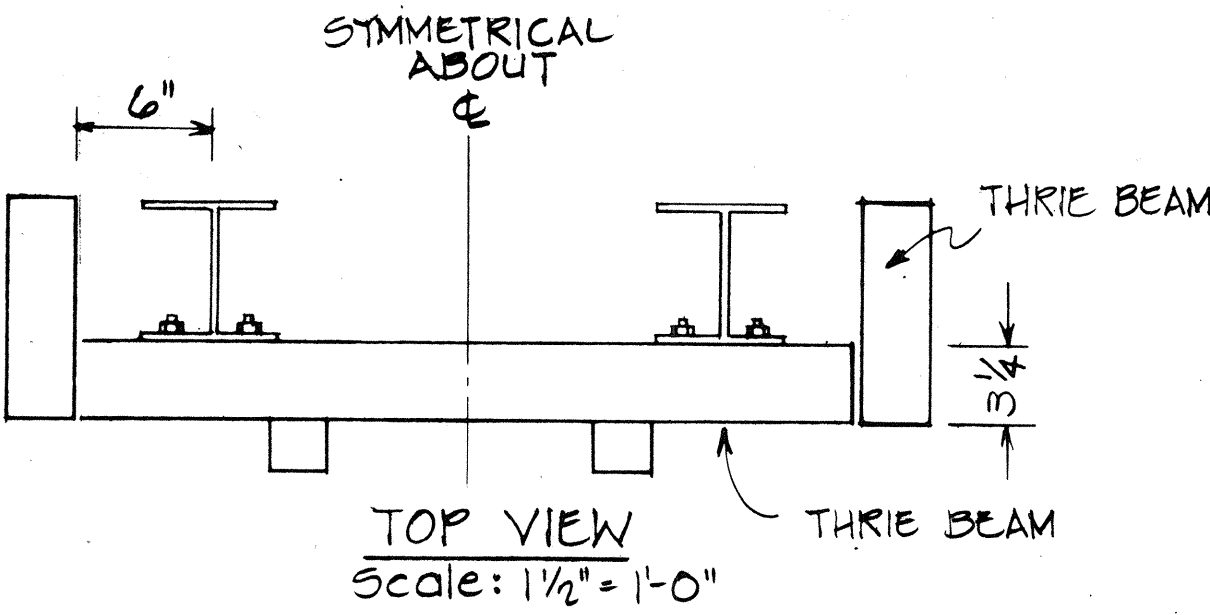
**DETAILS OF GUARD RAIL
ENERGY ABSORBING TERMINAL**

MOANALUA ROAD RESURFACING
F.A. Project No. F-FR-078-1(25)

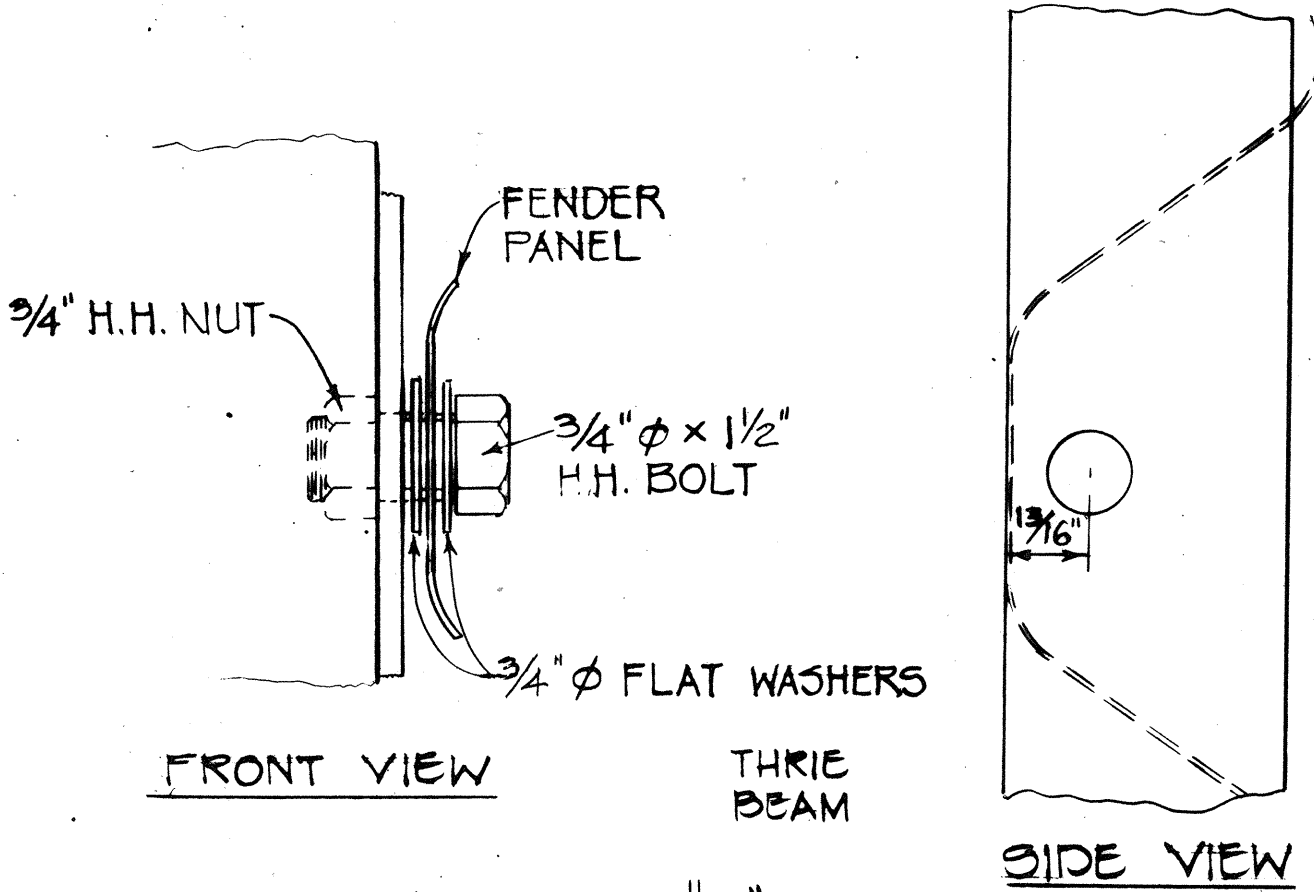
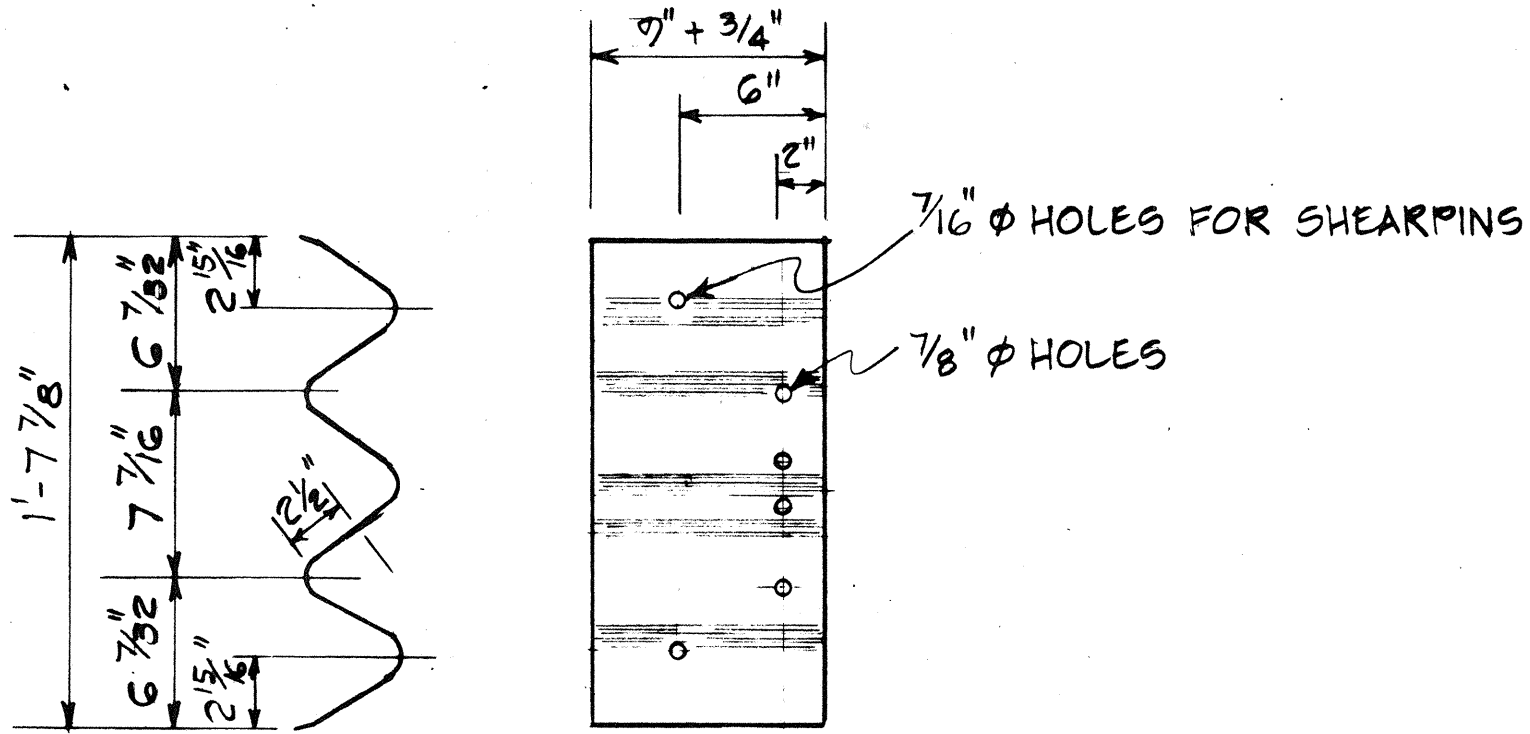
Scale: As Shown Date: 1978

SHEET No. 2 OF 13 SHEETS

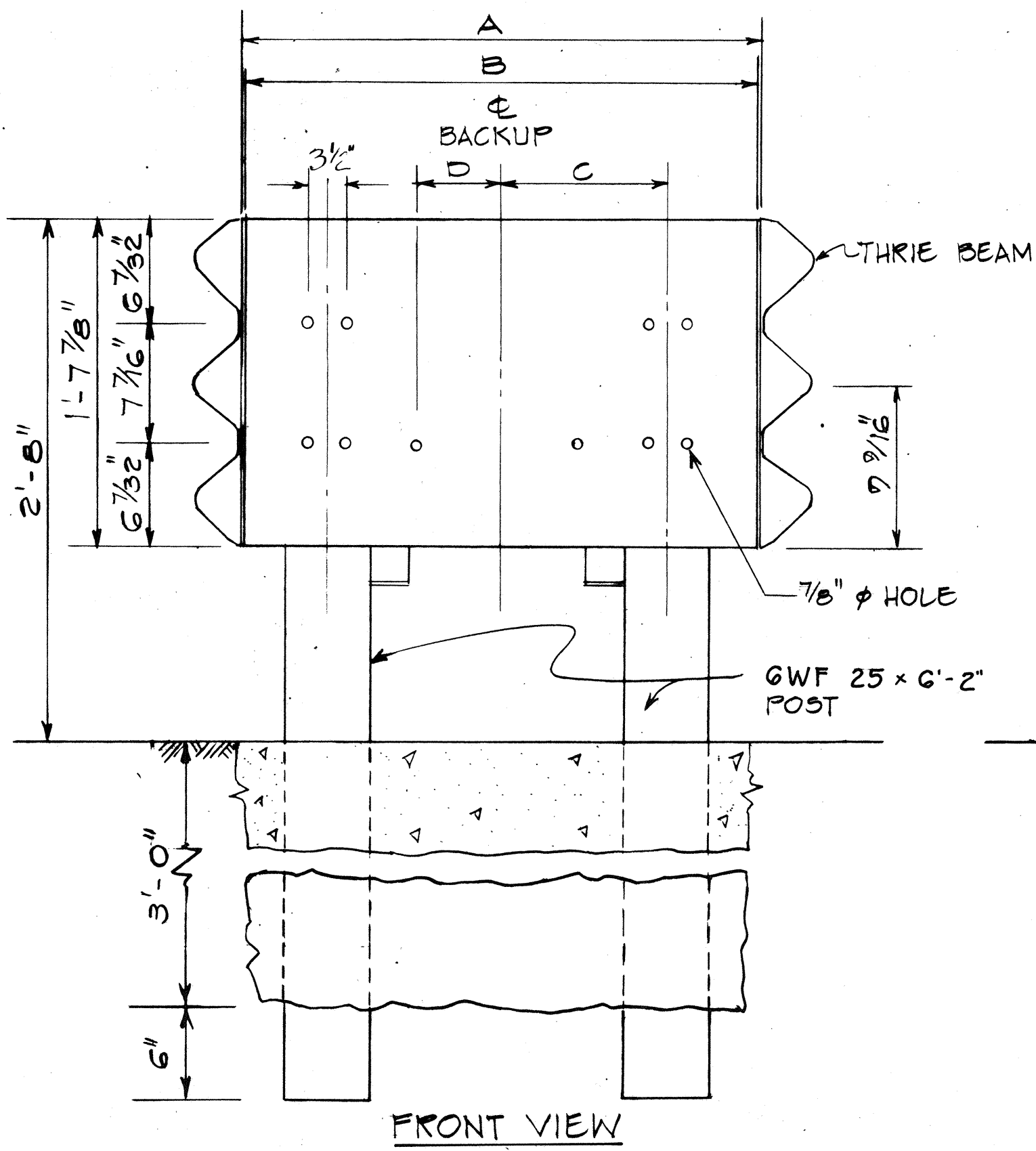
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FR-078-1(25)	1984	16	52



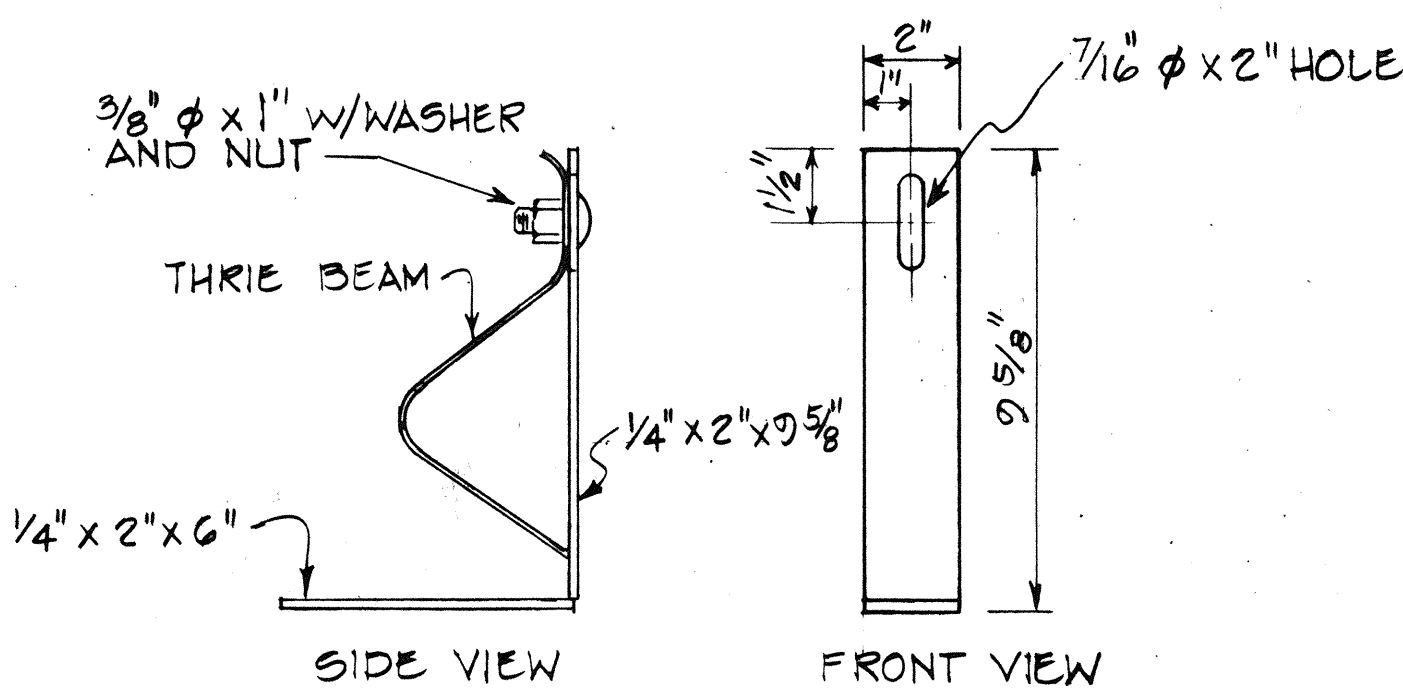
UNIT WIDTH	A	B	C	D
2'-0"	2'-0"	1'-11 1/2"	0'-6"	2"
2'-6"	2'-6"	2'-5 1/2"	0'-7"	5"
3'-0"	3'-0"	2'-11 1/2"	1'-0"	8"



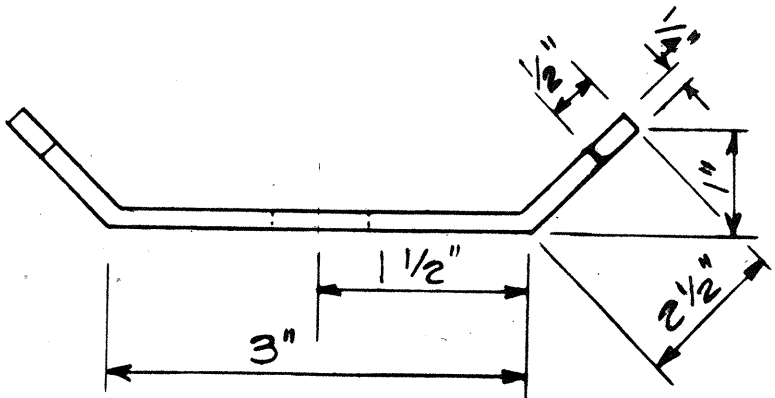
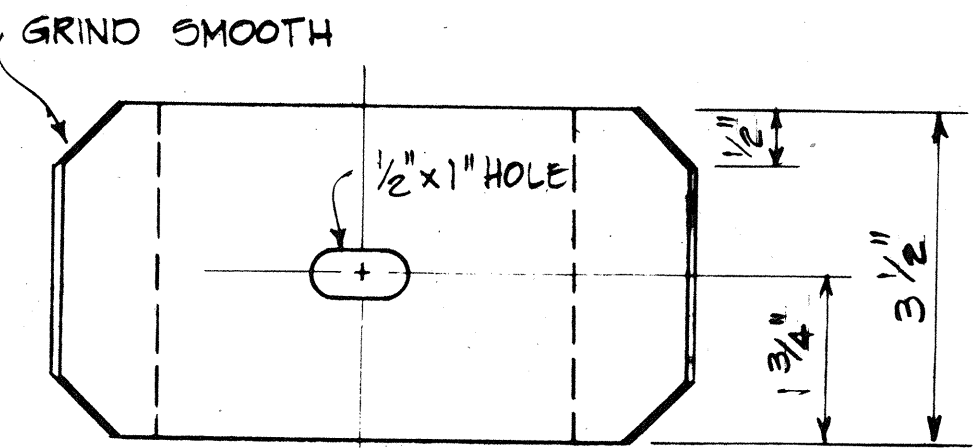
DETAIL "A"
Scale: 1/2" = 1'



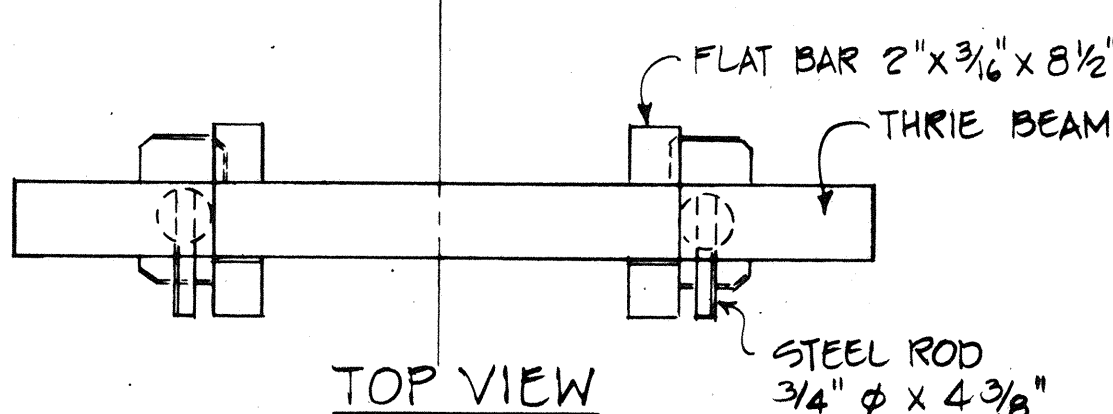
WIDE FLANGE BACKUP
(FOR NARROW UNITS)
Scale: 1 1/2" = 1'-0"



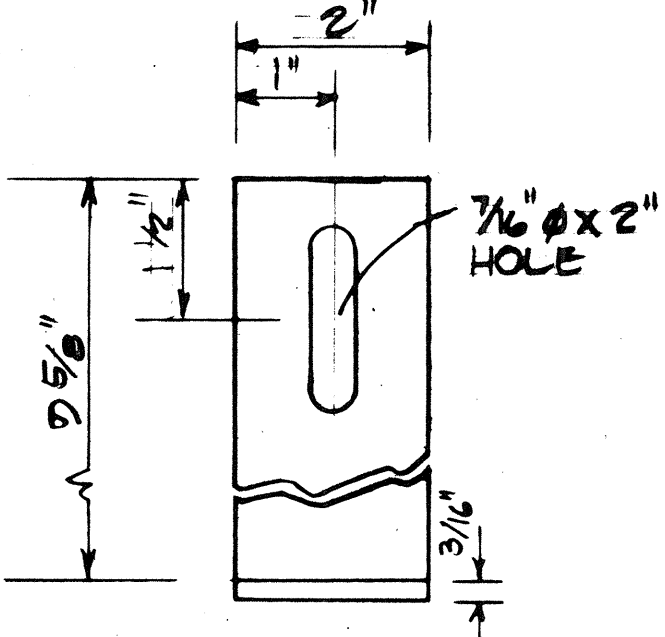
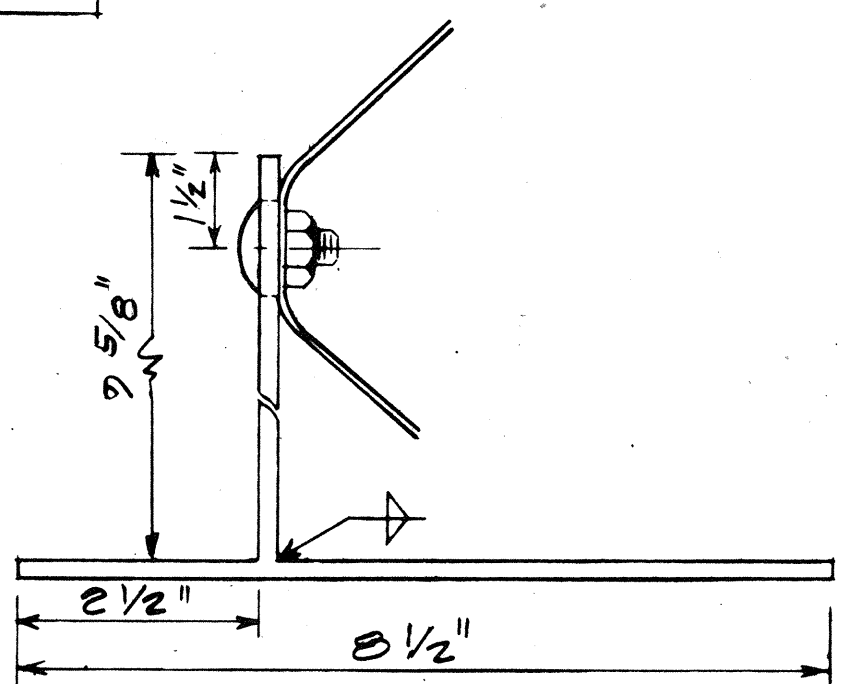
CARTRIDGE CLIP DETAIL
Scale: 3" = 1'-0"



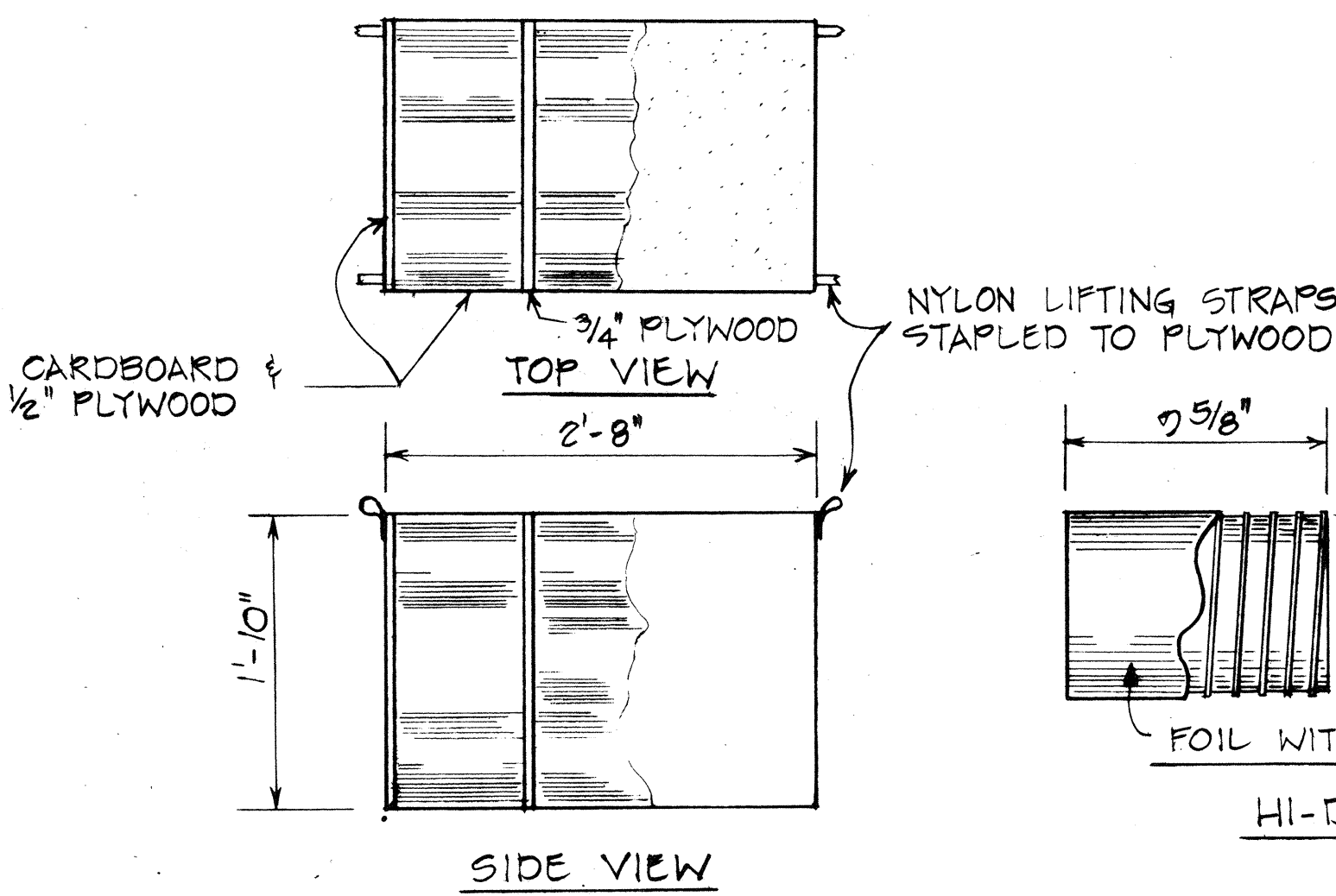
DETAIL B
Scale: 6" = 1'-0"



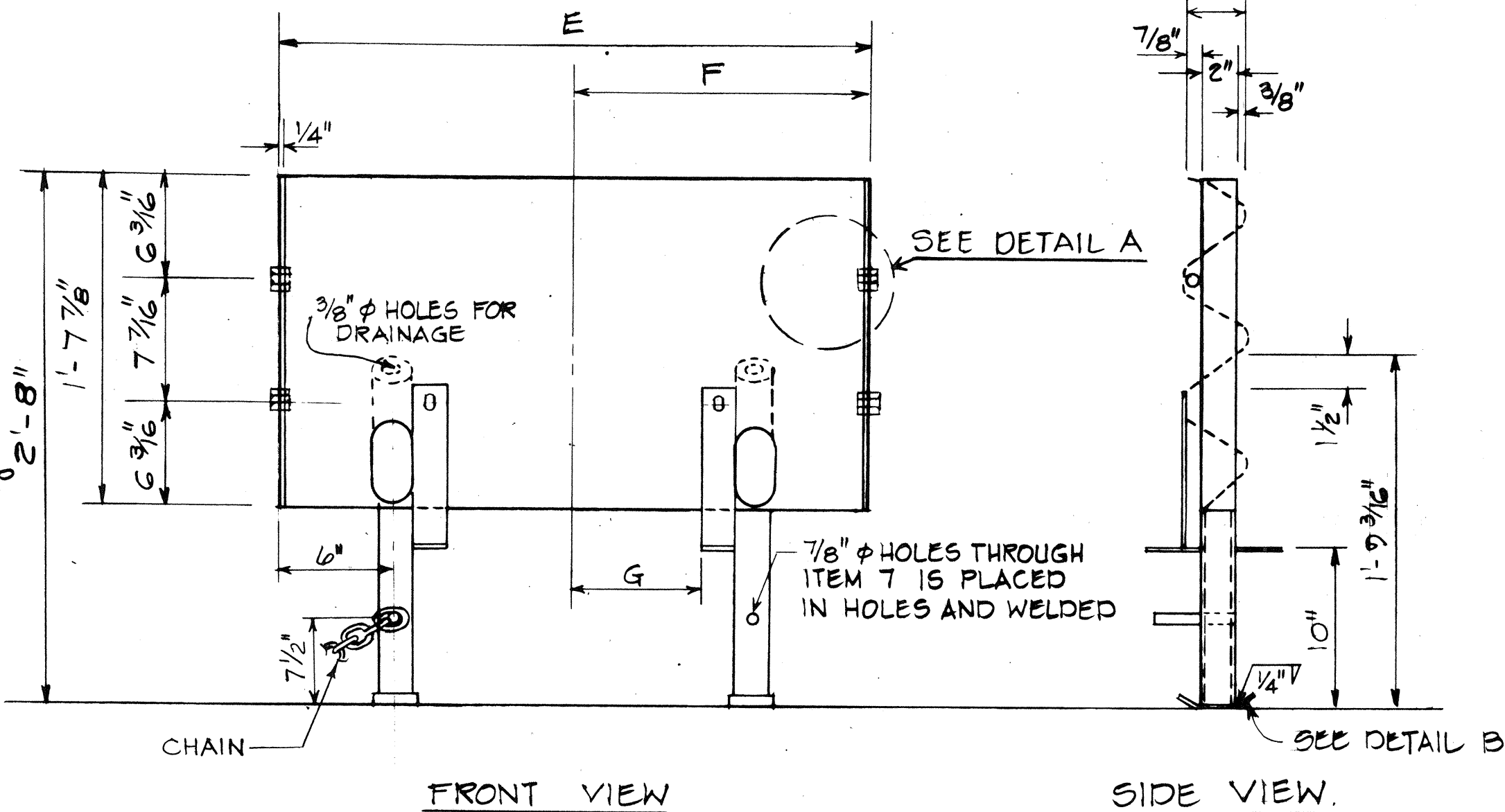
MODEL NO.	E	F	G
2002005	2'-0"	1'-0"	
2062063	2'-6"	1'-3"	5 3/4"
3003005	3'-0"	1'-6"	8 3/4"



CARTRIDGE CLIP DETAIL
Scale: 6" = 1'-0"



HI-DRI CARTRIDGE
Not to Scale



THRIE BEAM DIAPHRAGM DETAILS
Scale: 1 1/2" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

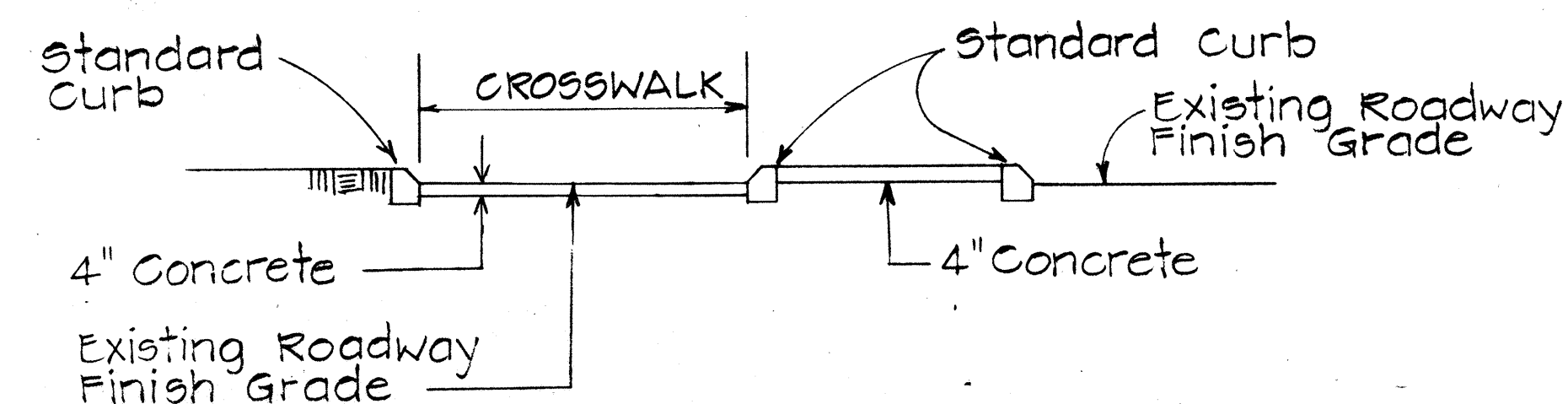
DETAILS OF GUARD RAIL
ENERGY ABSORBING TERMINAL

MOANALUA ROAD RESURFACING
F.A. Project No. F-FR-078-1(25)

Scale: As Shown Date: 1978

SHEET NO. 3 OF 13 SHEETS

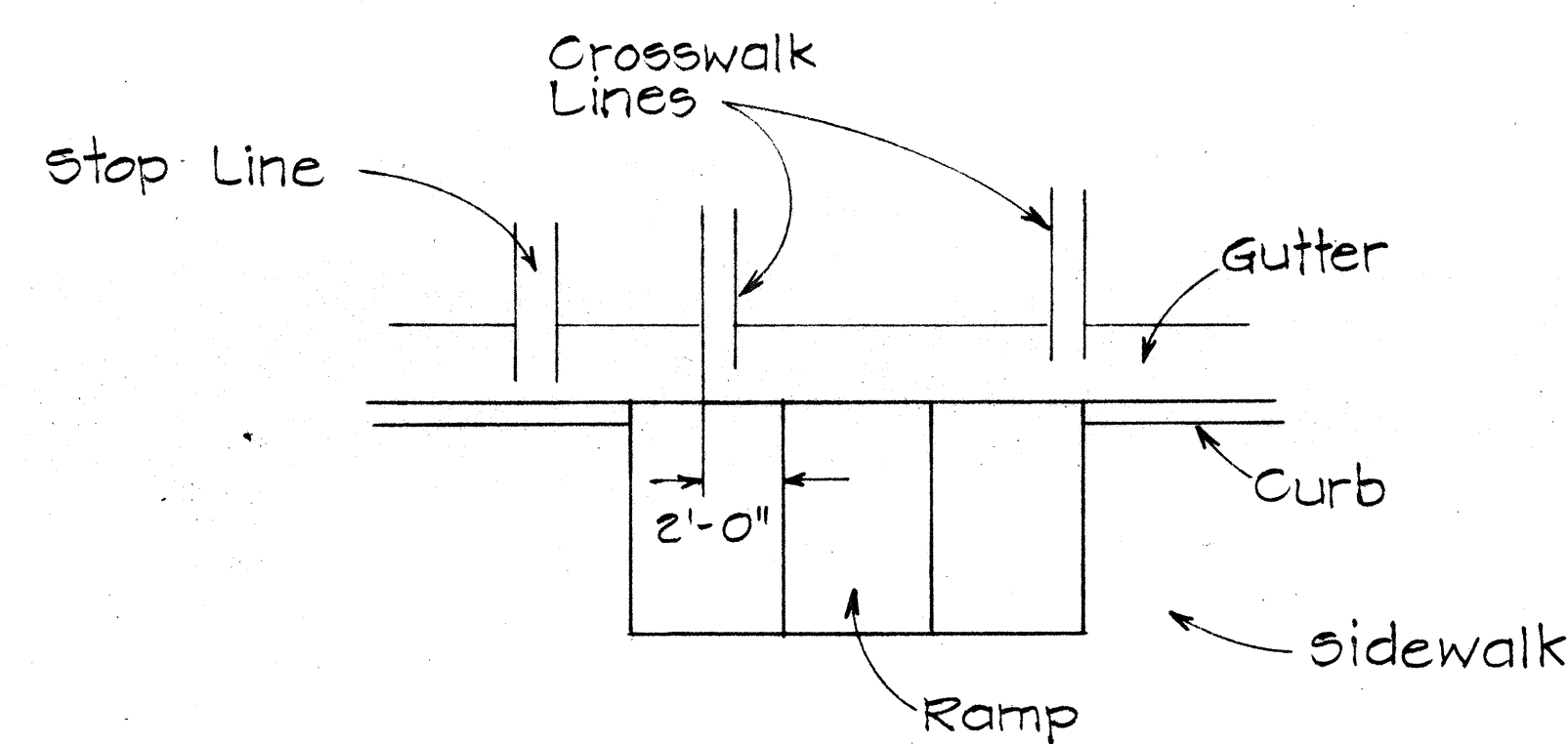
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-PR-078 1(25)	1985	C0 16 S-1	52



SECTION "A-A"

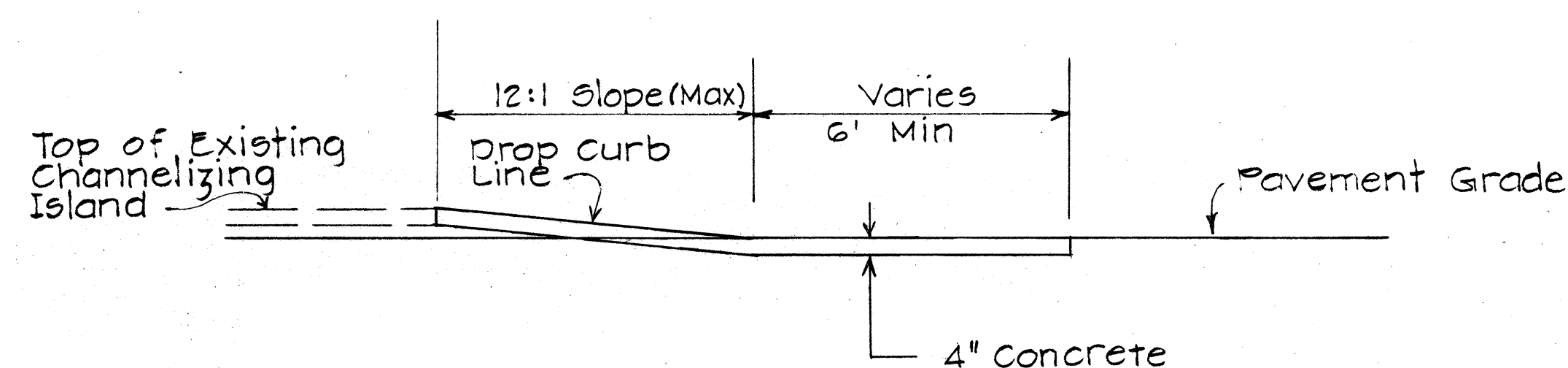
Use at Median Nose Crossings
Scale: 1" = 5'

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



TYPICAL INSTALLATION AT CROSSWALKS

Scale: 1" = 5'



SECTION "B-B"

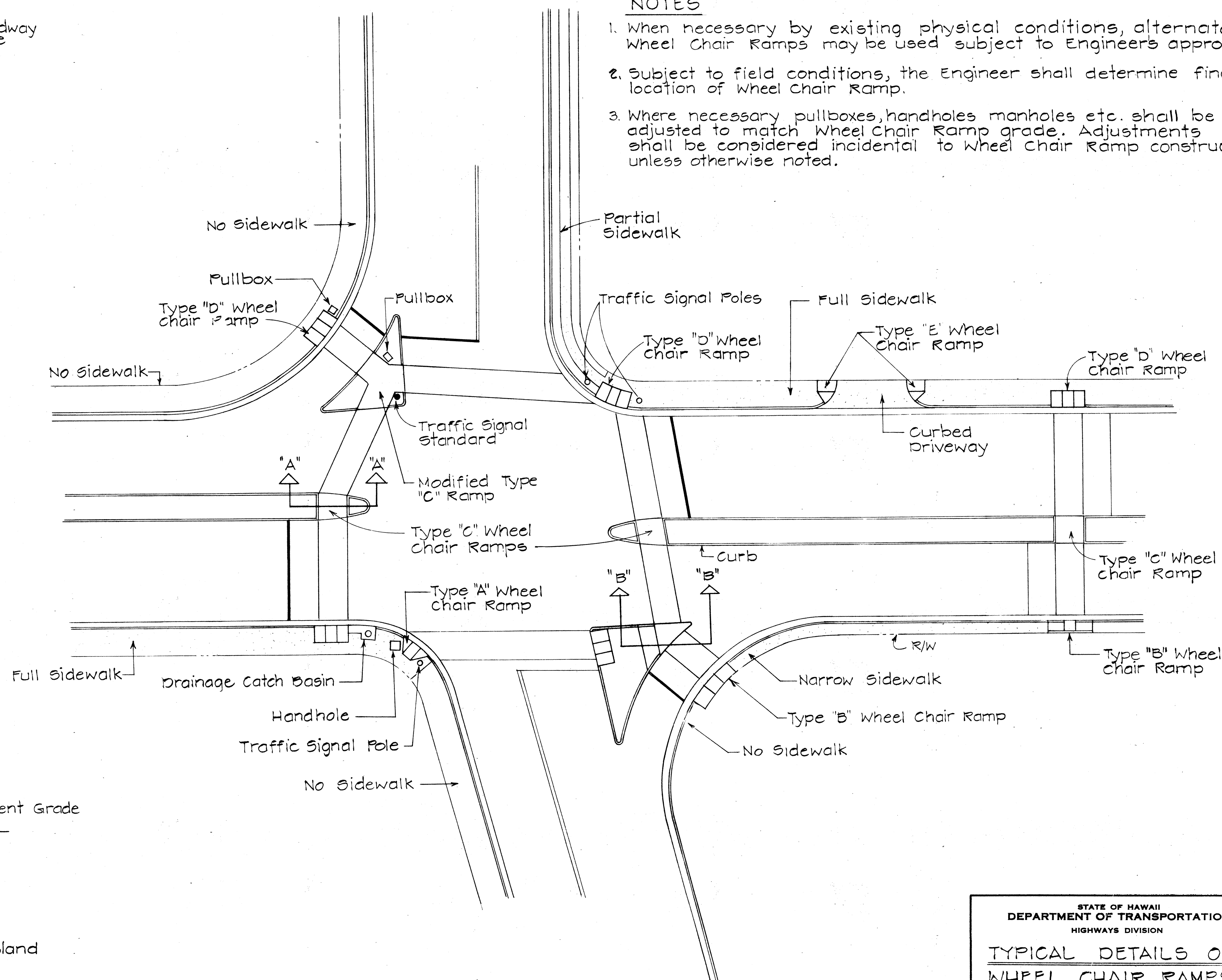
TYPE "B" MODIFIED WHEEL CHAIR RAMP

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 Engineers 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 WHEELCHAIR RAMPS

Scale: 1" = 20'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS OF WHEEL CHAIR RAMPS

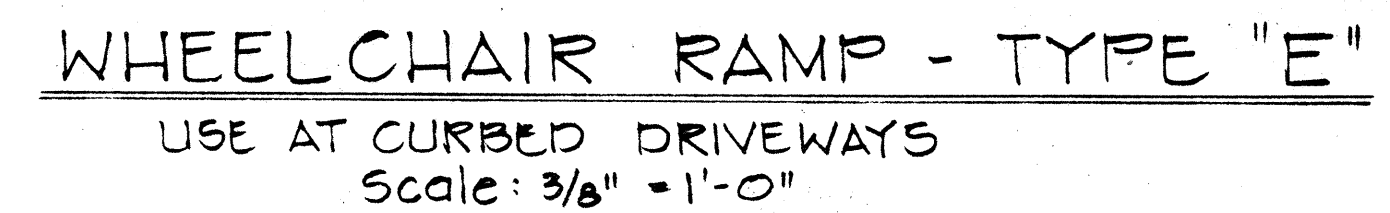
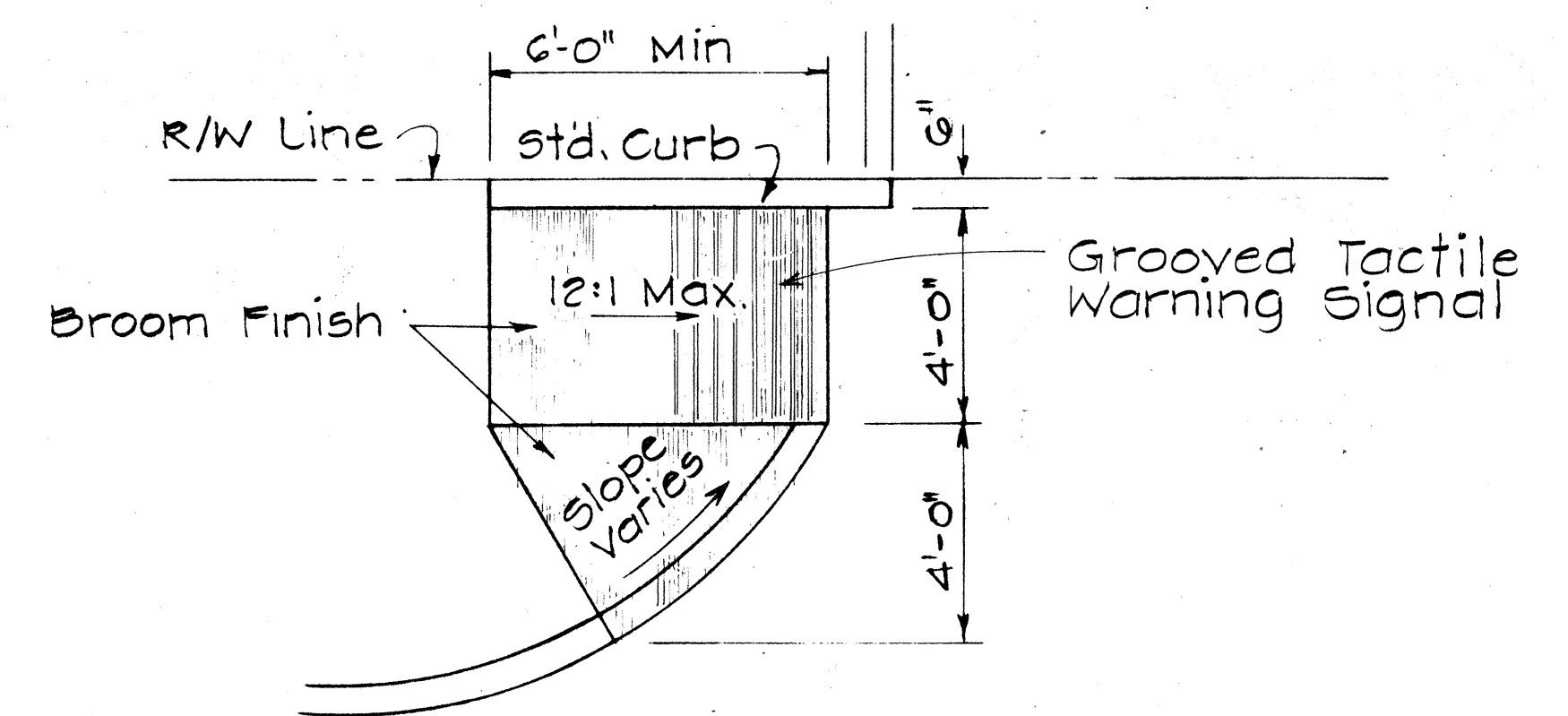
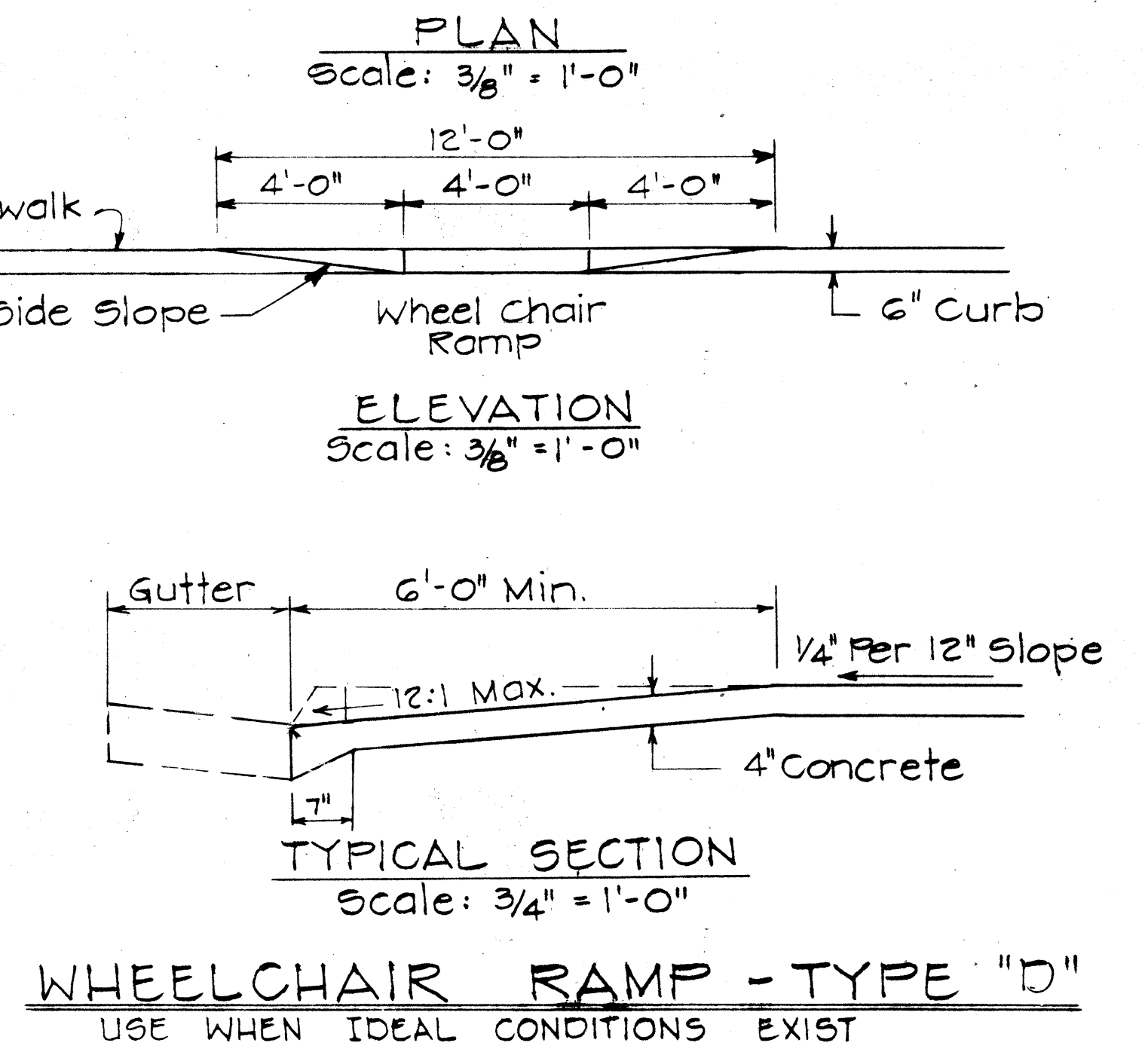
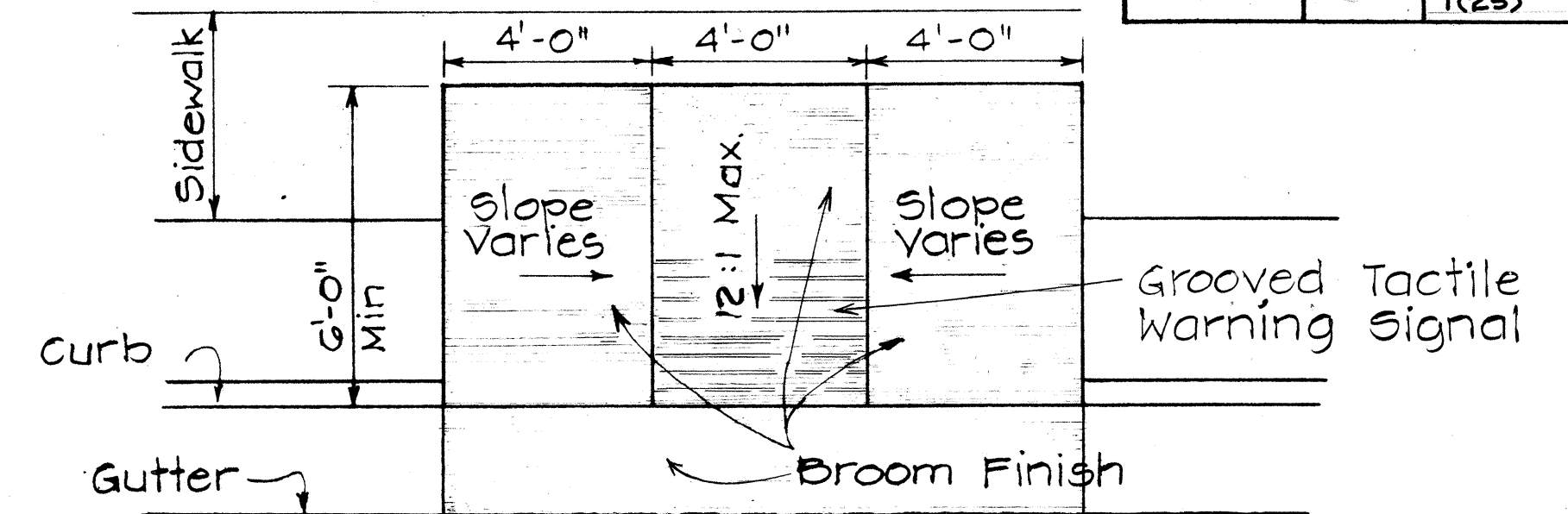
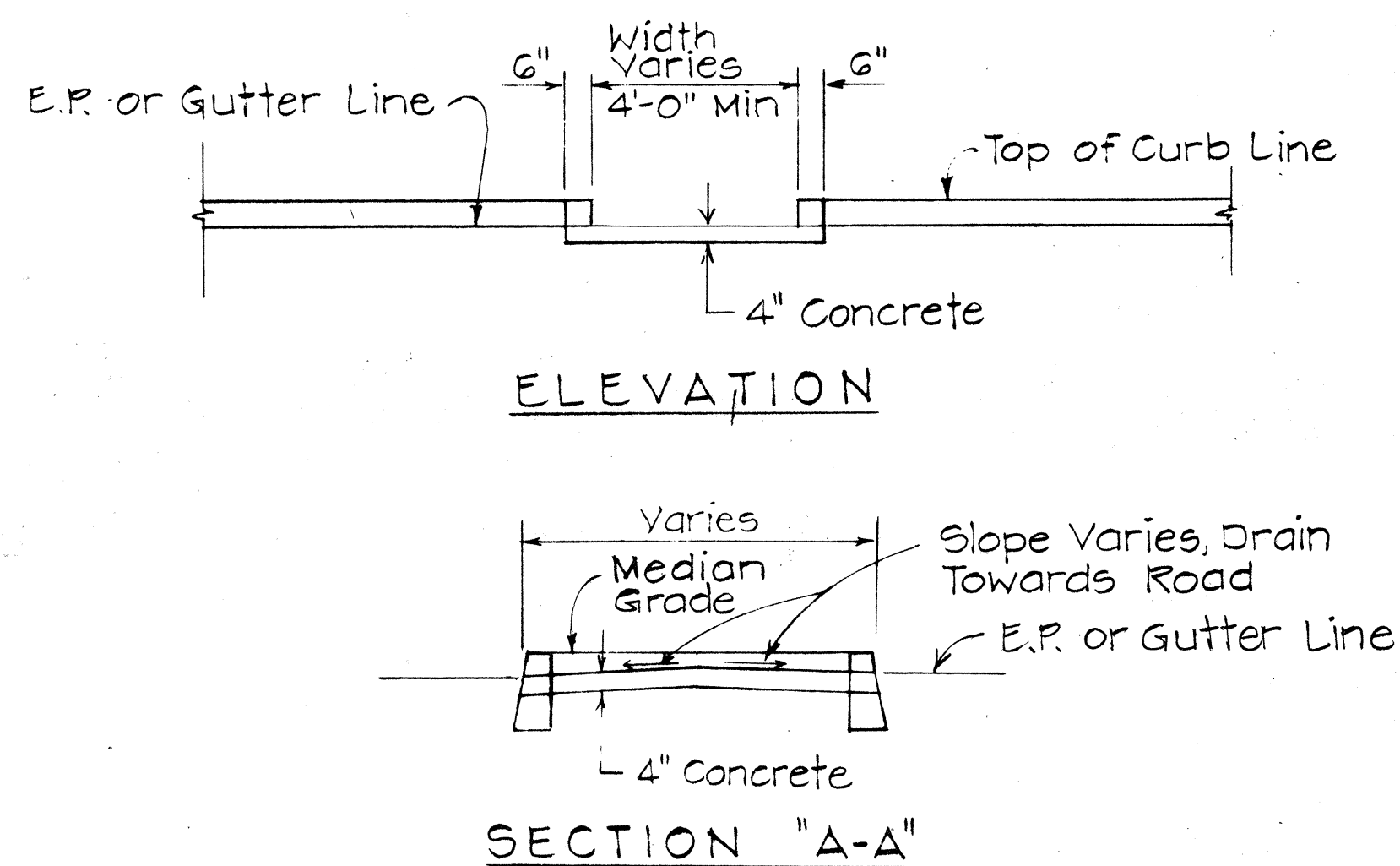
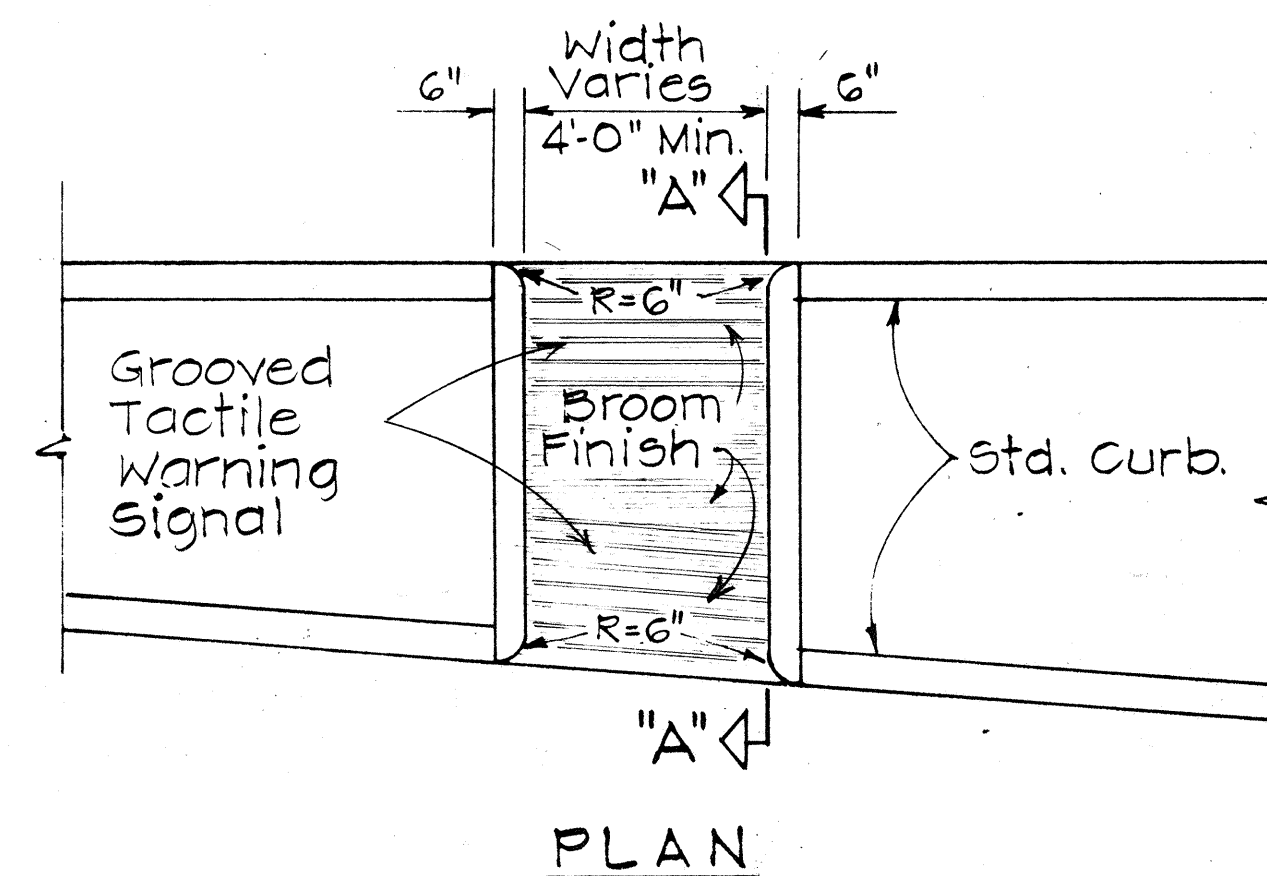
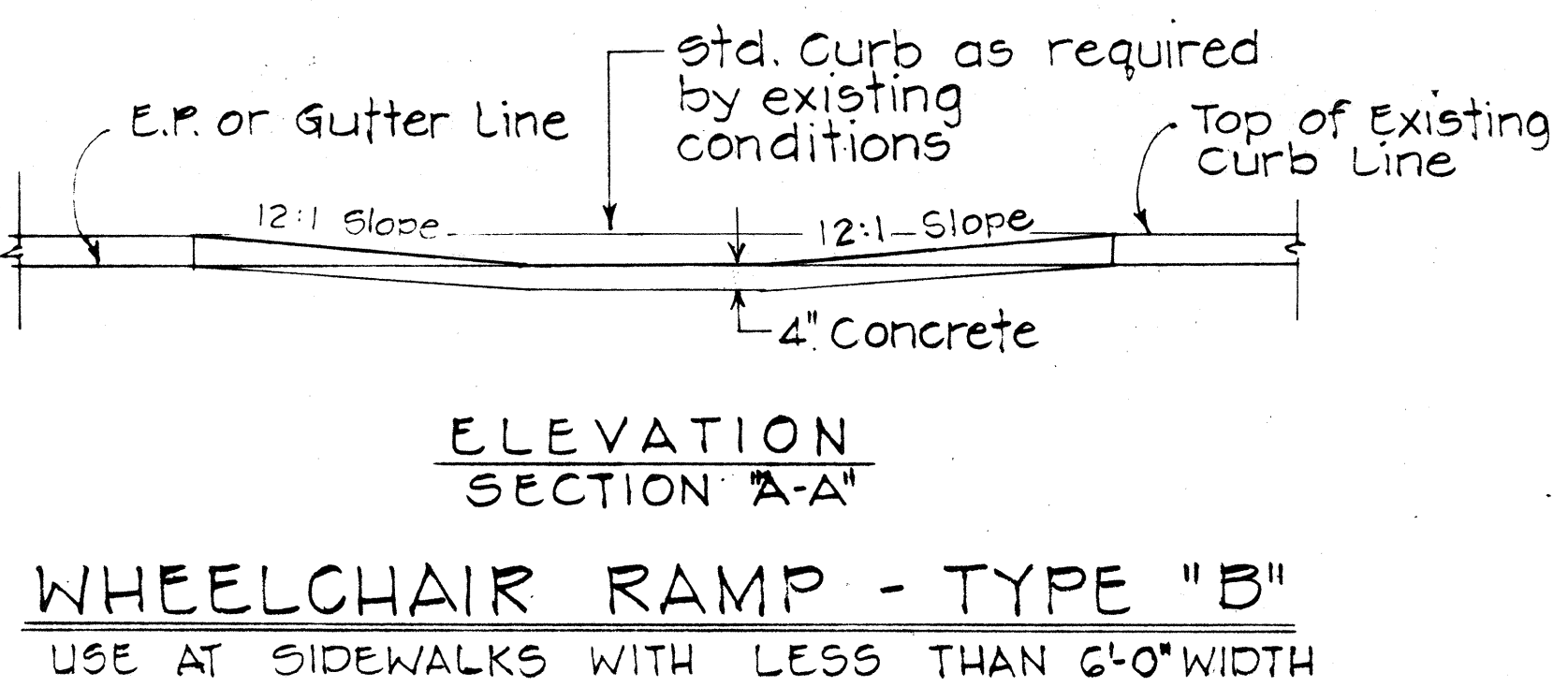
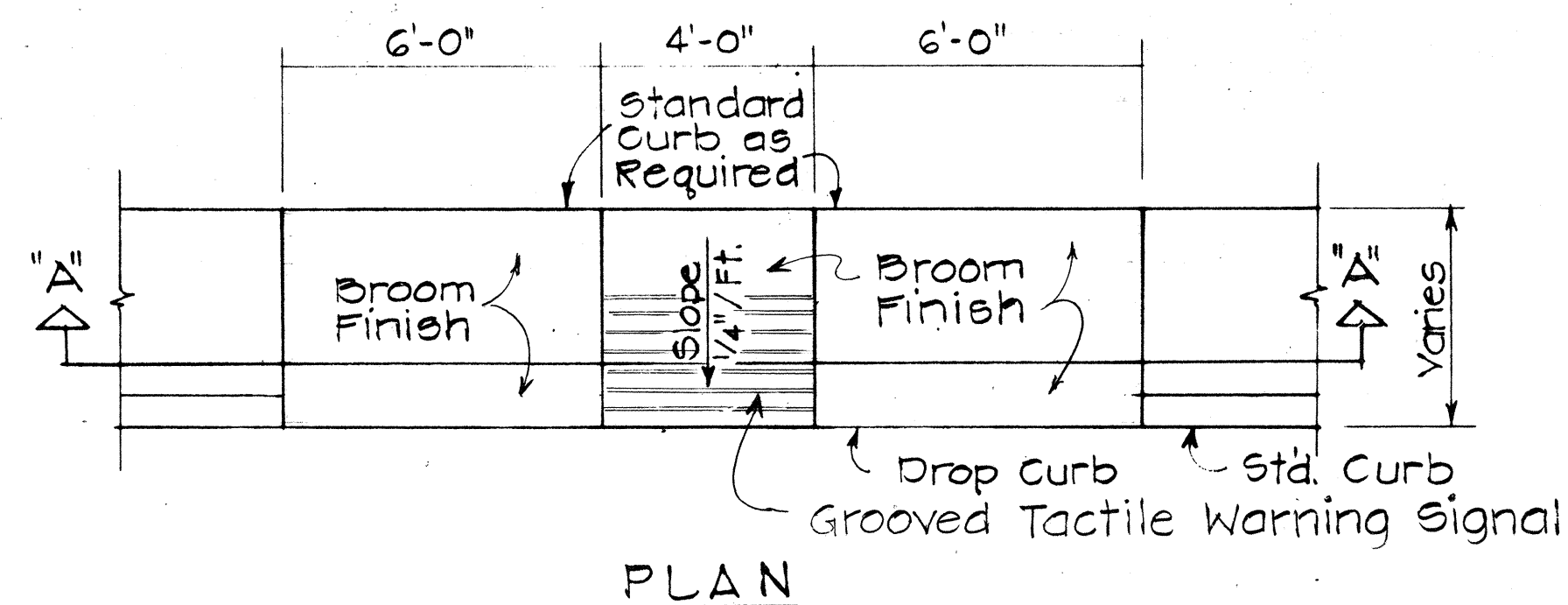
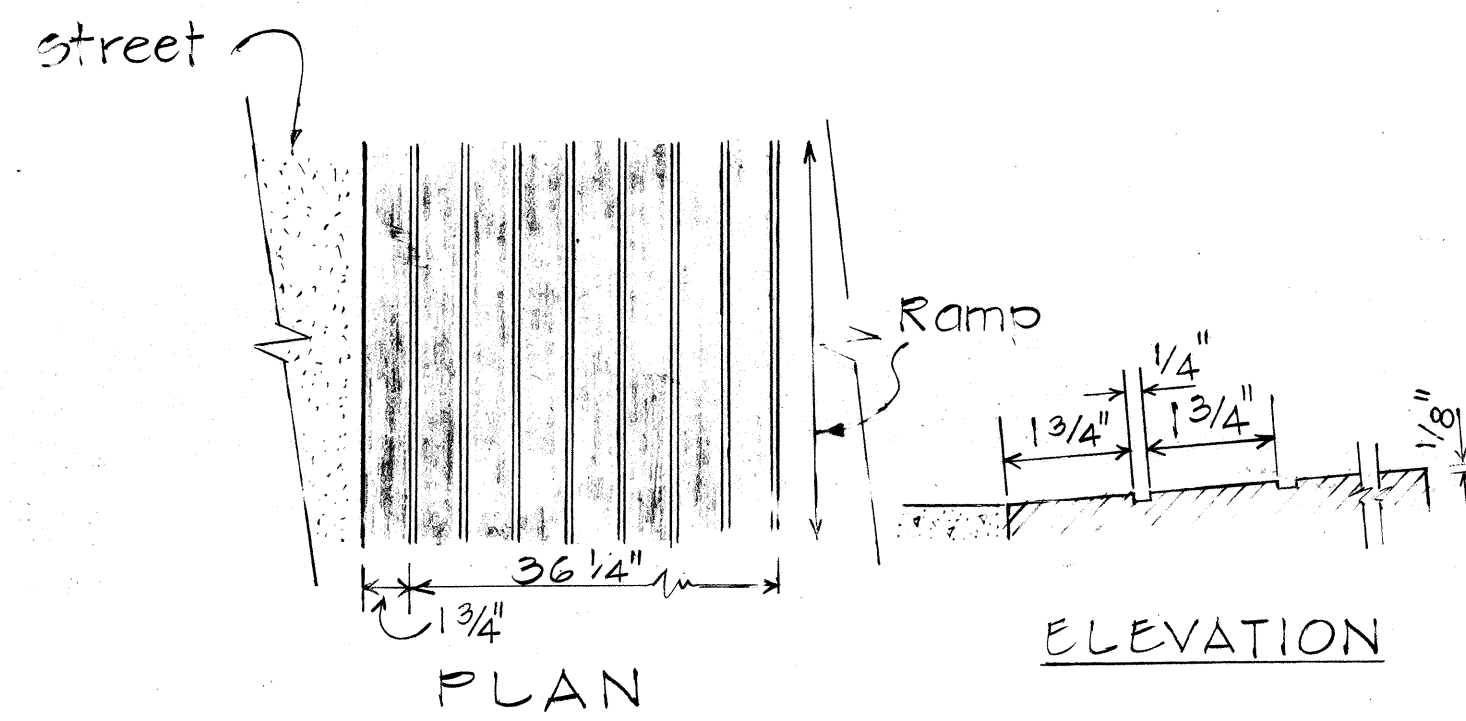
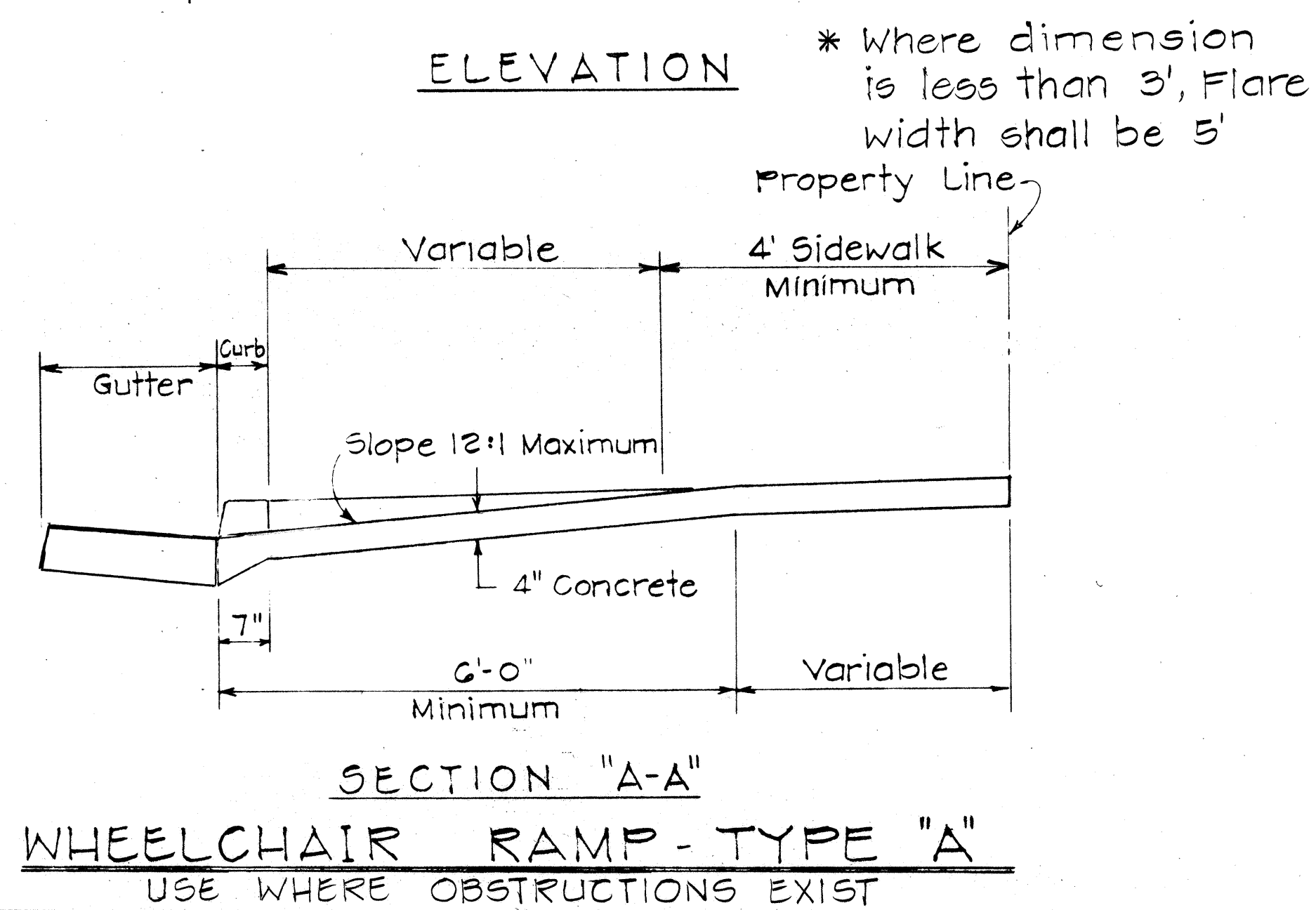
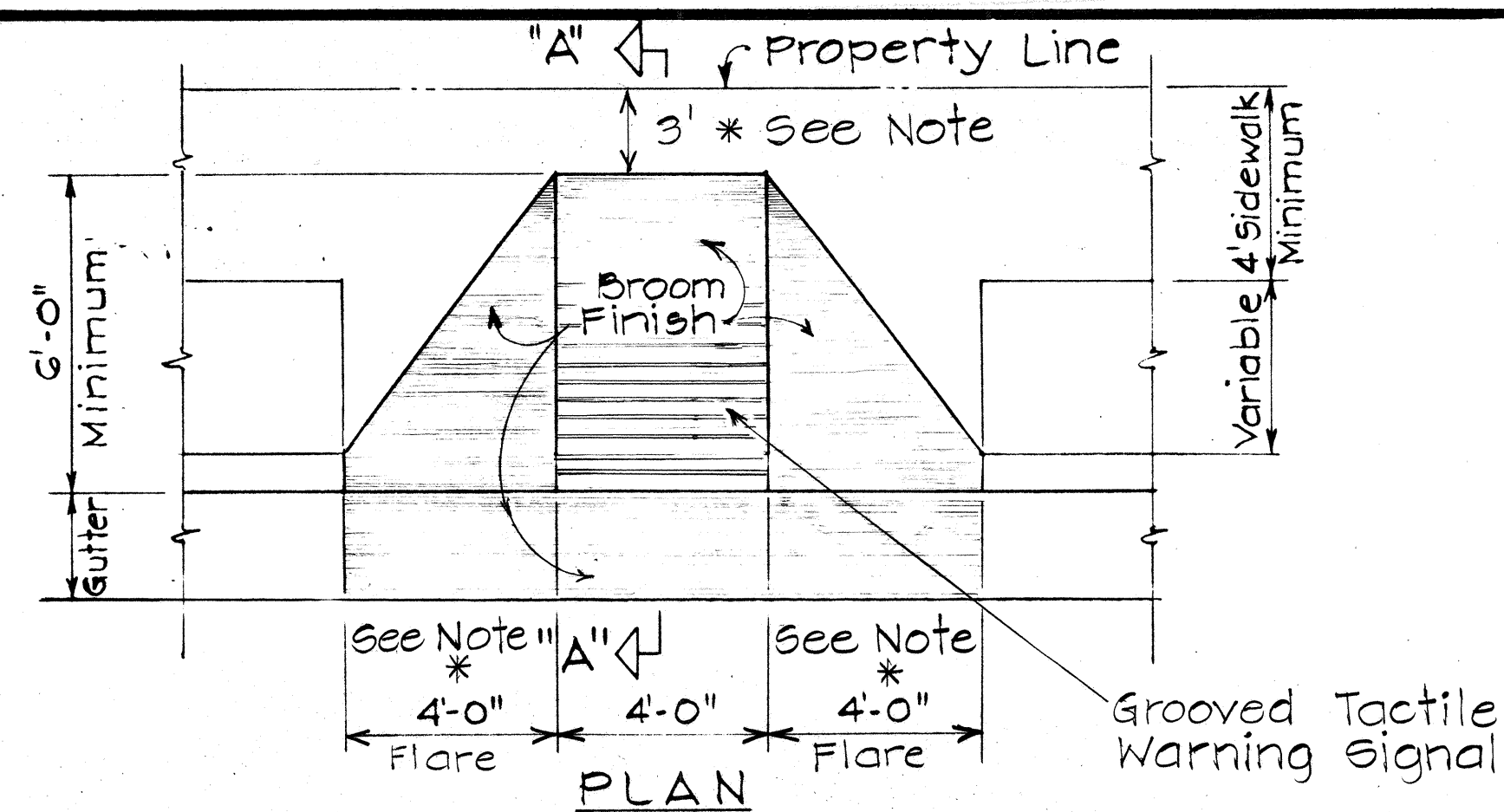
Scale: As Shown May, 1978

SHEET NO. 3A OF 13 SHEETS

C.O. 16 S-1

DATE	.....
SURVEY PLANNED BY	.....
DRAWN BY	.....
DESIGNED BY	.....
NOTED 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-PR-078-1(25)	1985	C016 S-2	52



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**TYPICAL DETAILS OF
WHEEL CHAIR RAMPS**

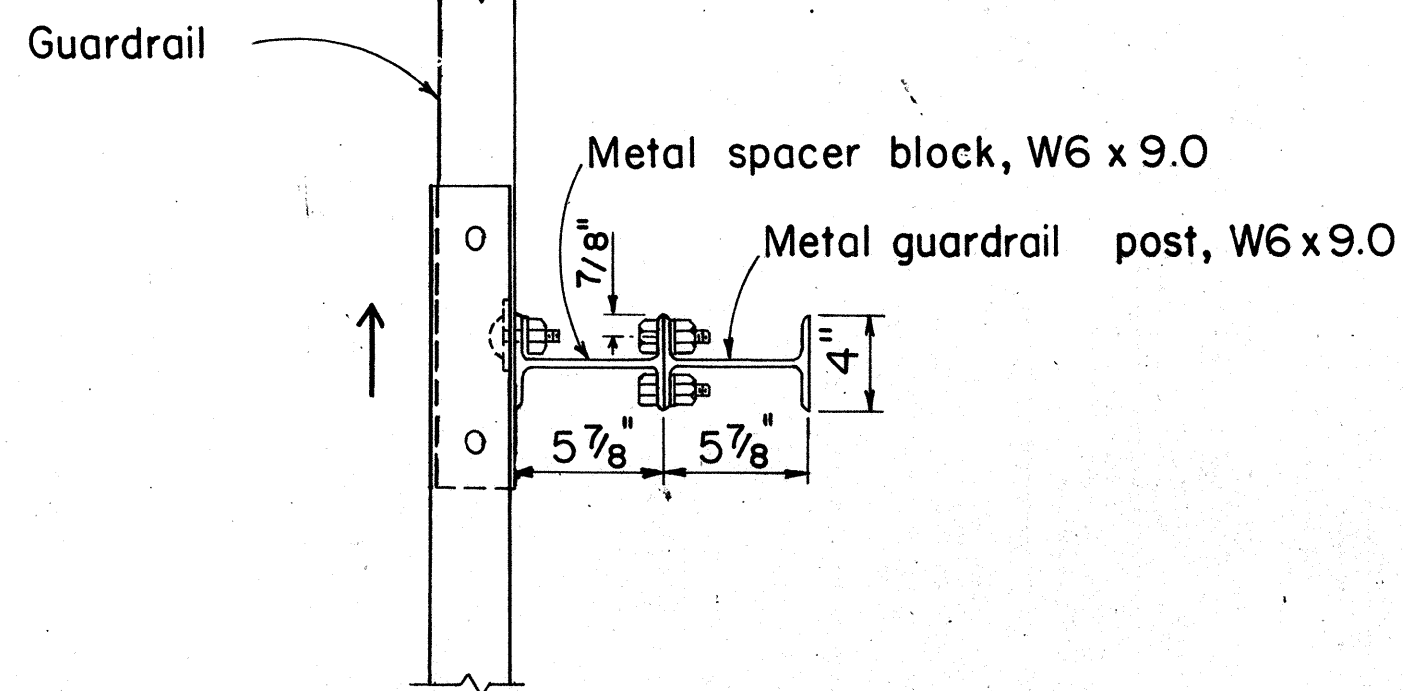
Scale: As Shown May, 1978
SHEET NO. 3B OF 13 SHEETS

C.O. 16 S-2

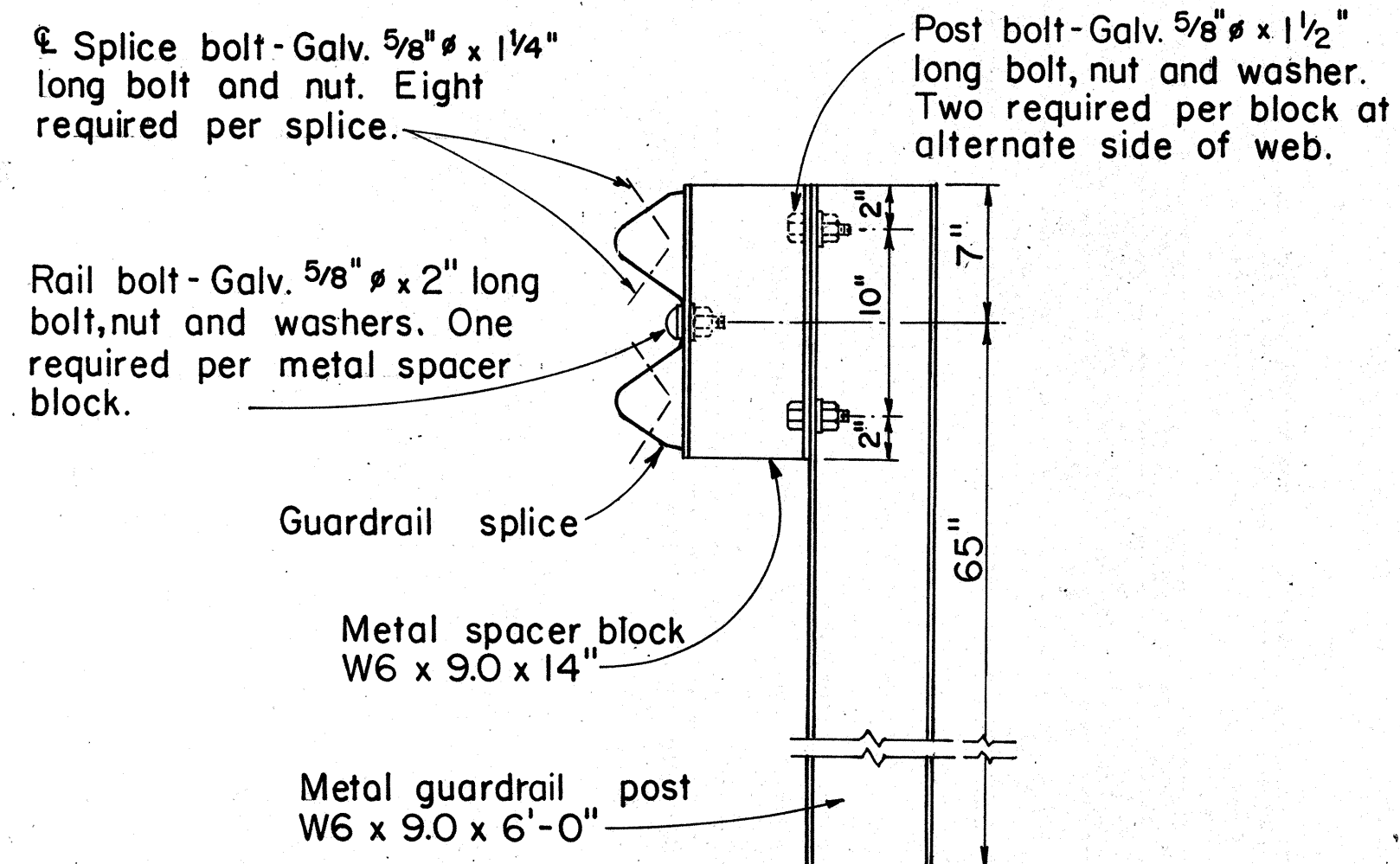
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	PR-078-1(25)	1984	17	52

GENERAL NOTES

- Both of the alternate type posts may be used on any one project however, only one type of post shall be used in any single run of guardrail.
- All hardware, posts and blocks shall be galvanized. No punching, drilling or cutting will be permitted after galvanizing.
- Connection details for bent plate post and block shall be similar to the details shown for structural shape post, and block.
- Where conditions require, special post lengths in increments of 6 inches may be specified.
- For details of rail elements, bolts and nuts, see sheet DT 501.
- All fasteners, posts, blocks and rail elements shall conform to the latest edition and amendments of "A Guide to Standardized Highway Barrier Rail Hardware", a report prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee.



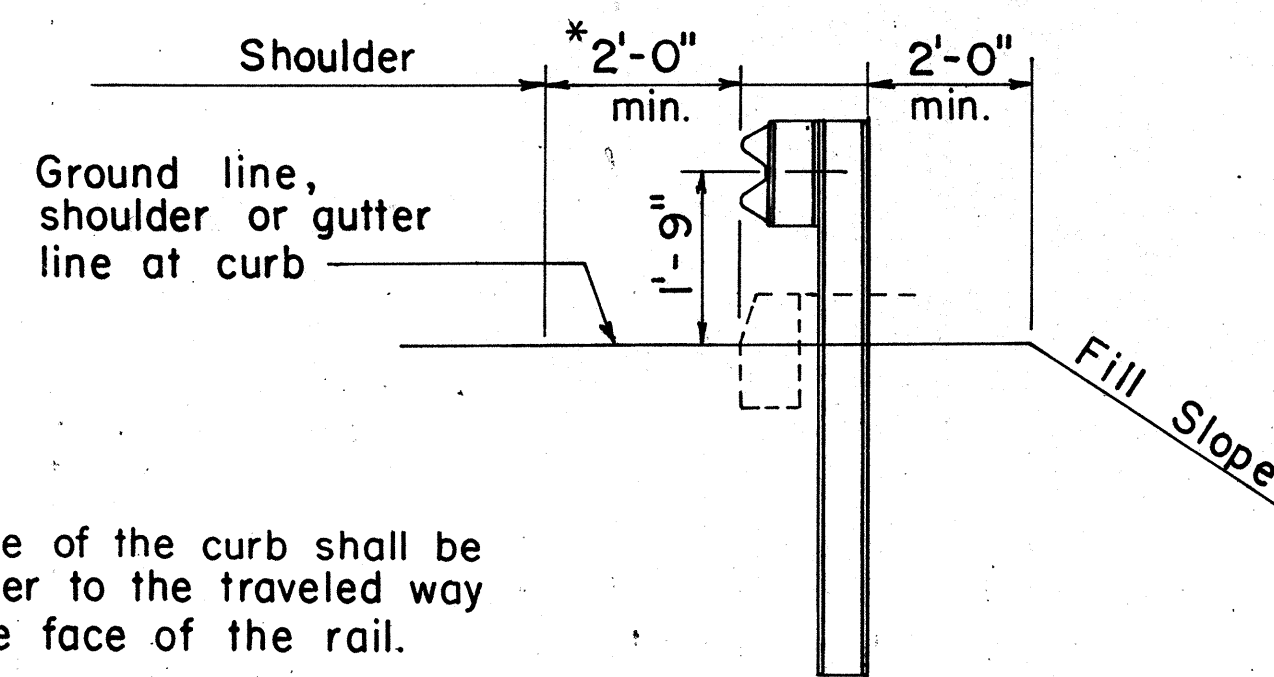
PLAN



ELEVATION

SINGLE METAL GUARDRAIL ON METAL POST WITH METAL SPACER BLOCK

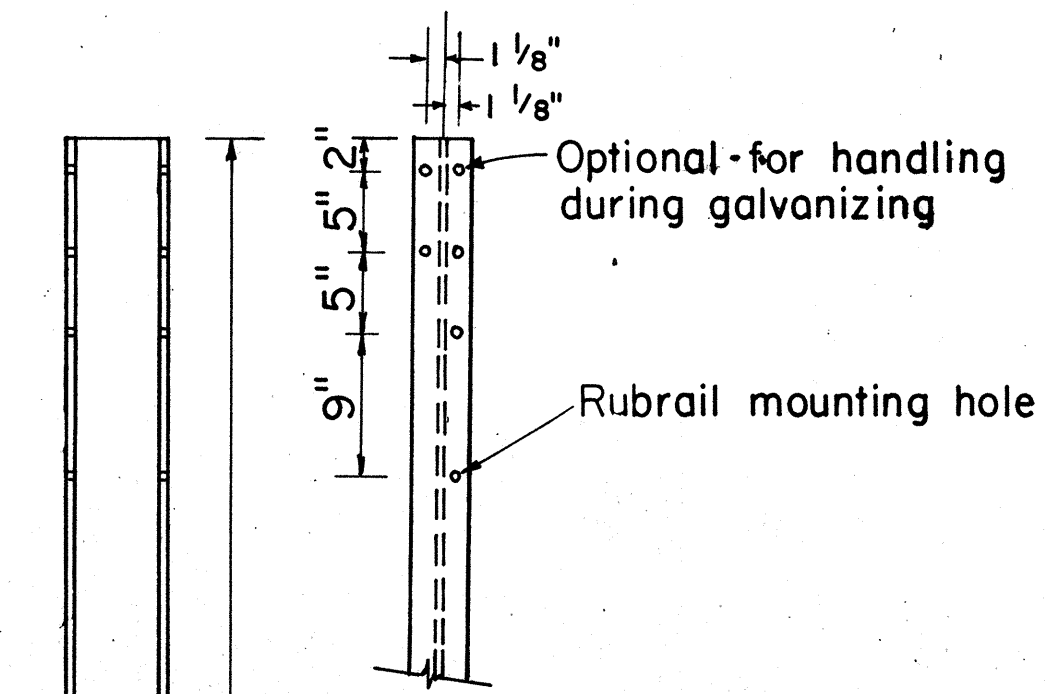
SCALE: 1/2" = 1'-0"



AT SHOULDER SECTION

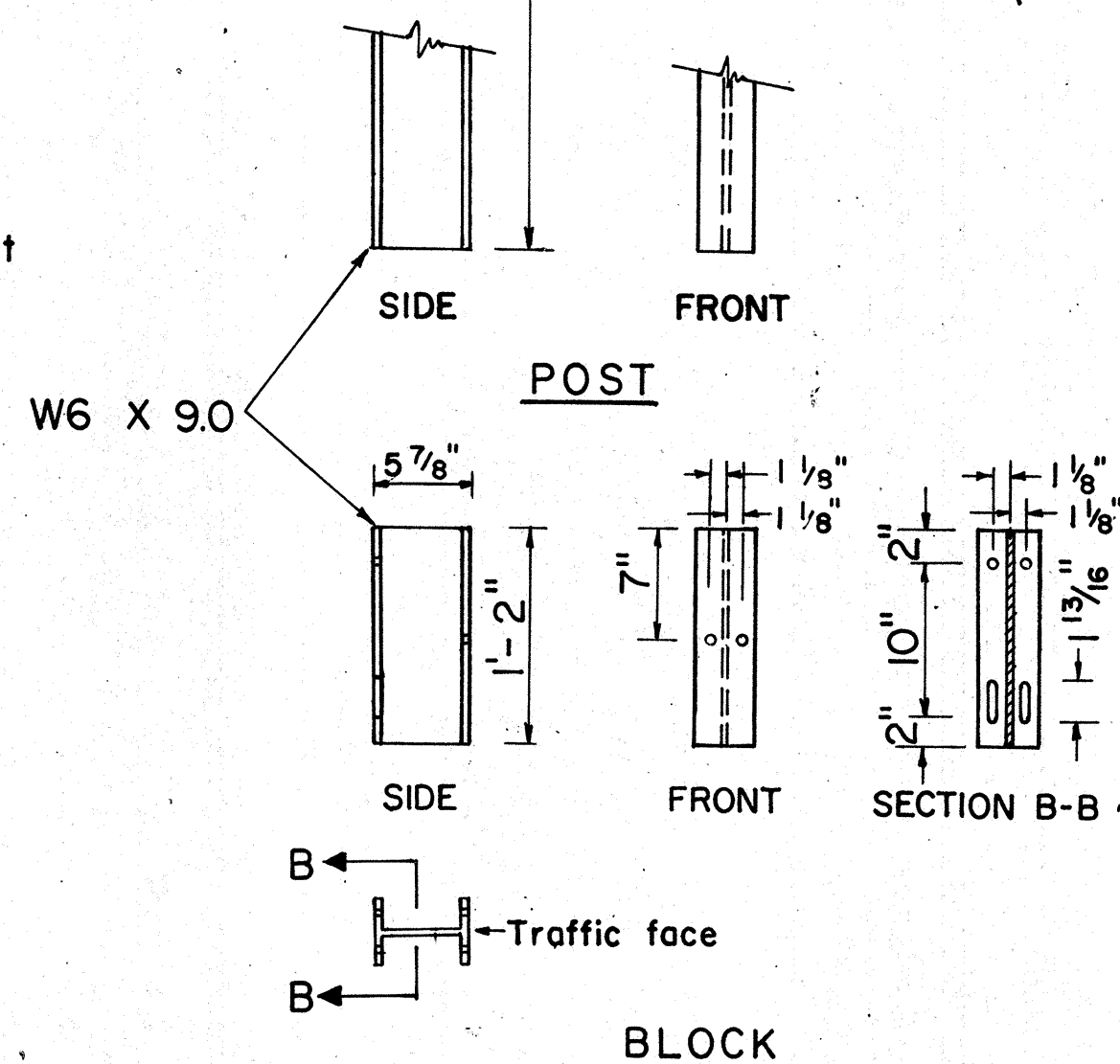
TYPICAL METAL GUARDRAIL DETAIL

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



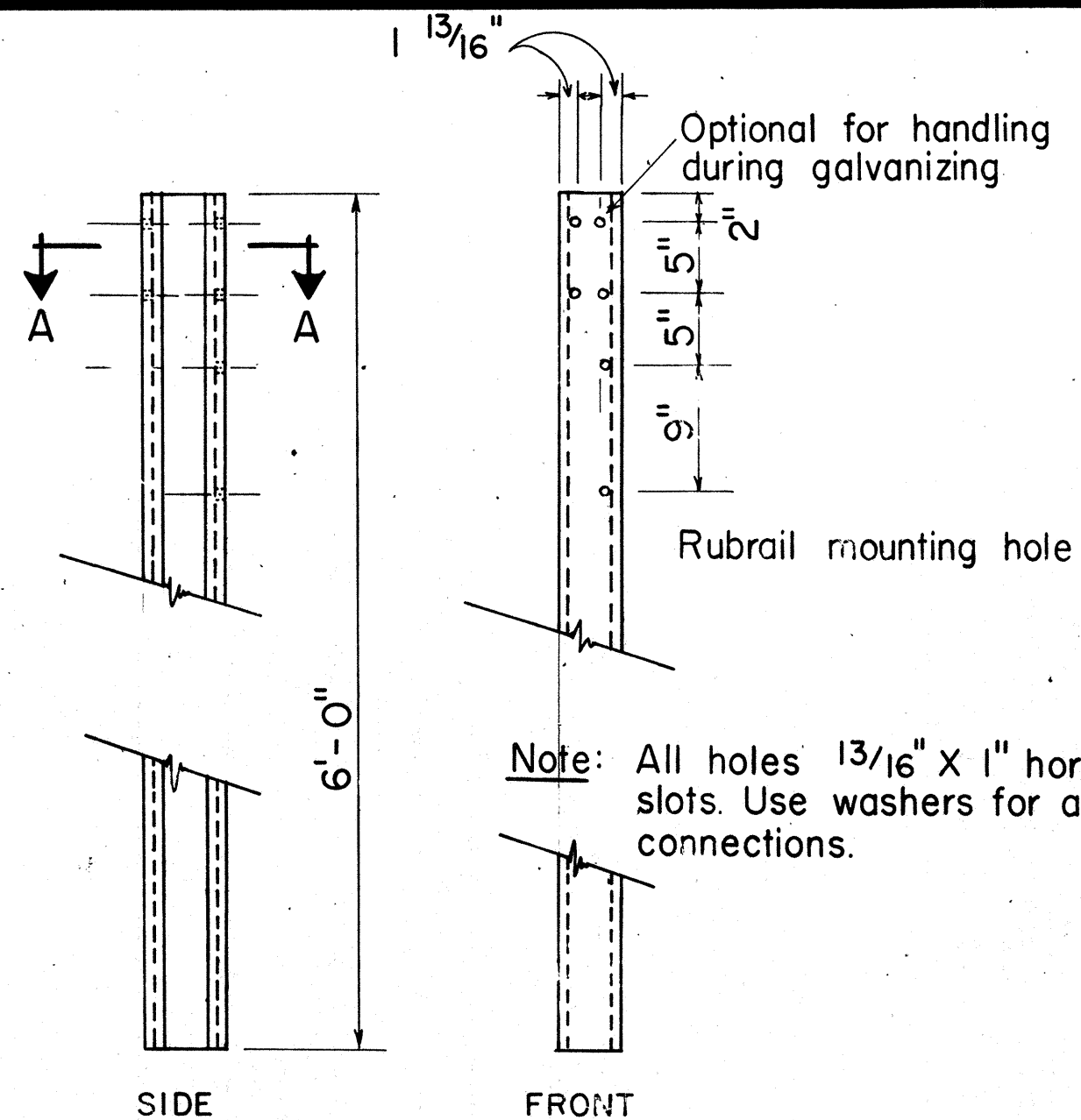
NOTE:

All holes 13/16" ϕ . Bolt hole pattern is symmetrical with respect to the vertical axis of the post.

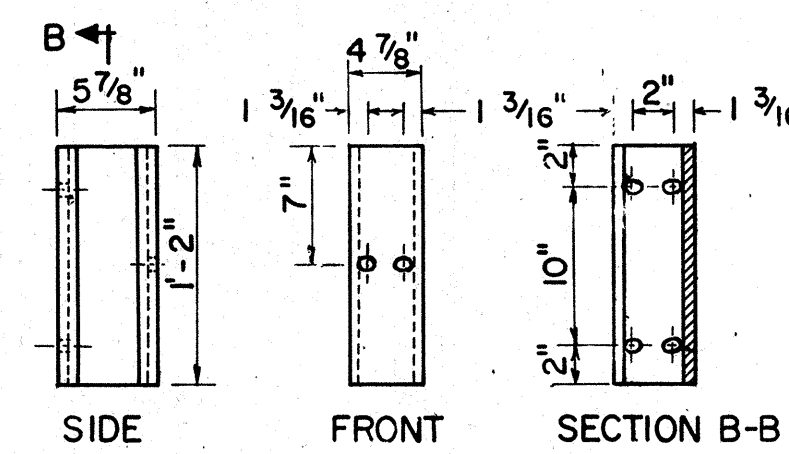


STRUCTURAL SHAPE POST AND BLOCK

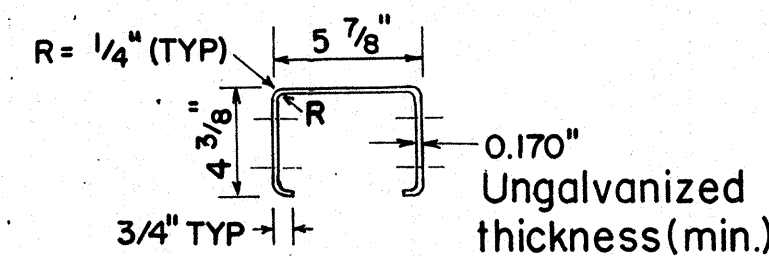
SCALE: 1" = 1'-0"



POST



BLOCK

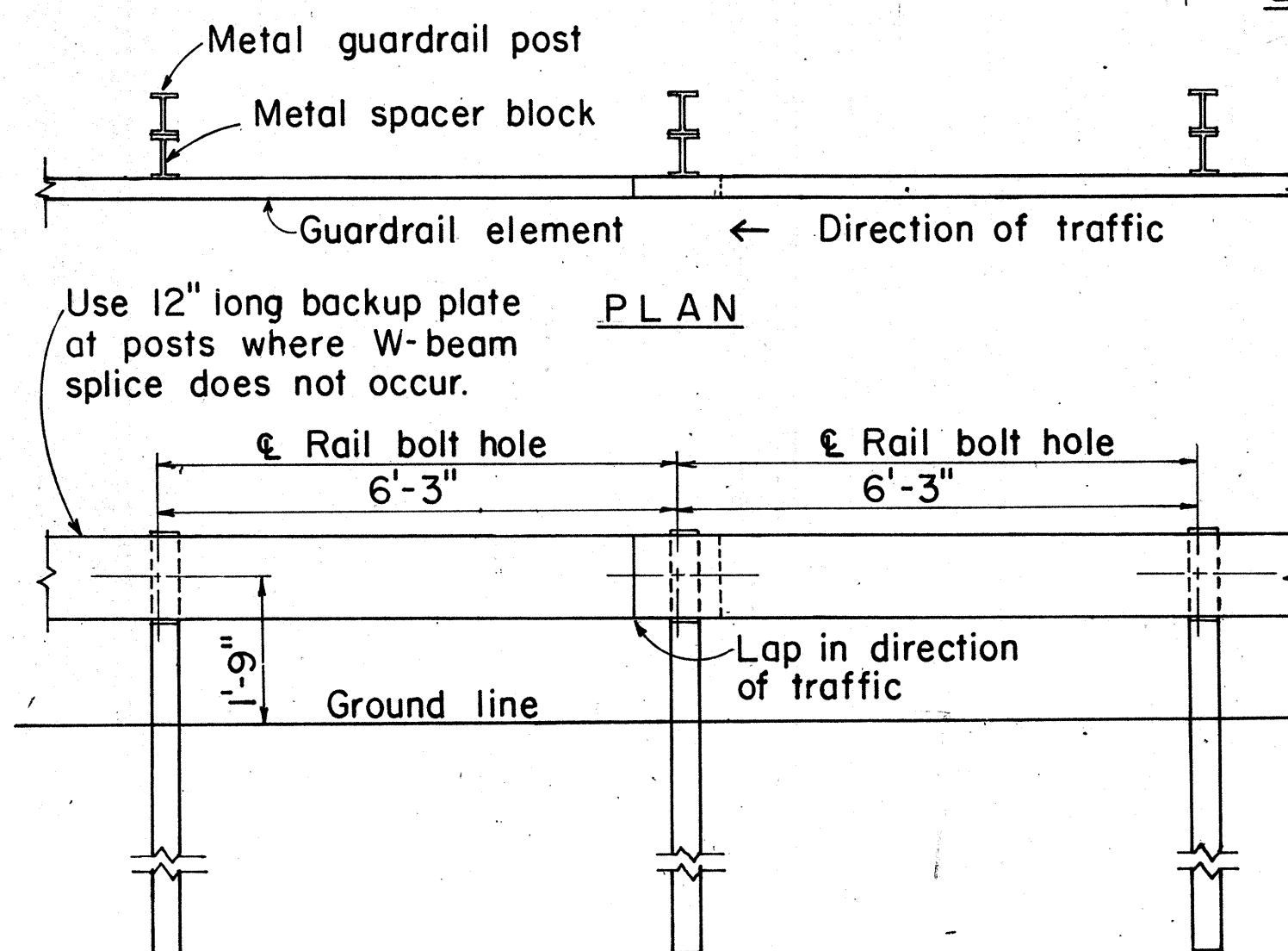


SECTION A-A

N.T.S.

BENT PLATE POST AND BLOCK

SCALE: 1" = 1'-0"



ELEVATION

METAL GUARDRAIL ON METAL POST WITH METAL SPACER BLOCK

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

APPROVAL RECOMMENDED:

TRAFFIC ENGINEER

9/1/82
DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING

9/22/82
DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes sht. DT 500 approved 12/30/69.	H.P.	9/22/82
2	Added General Notes No. 6	J.D.O.	9-28-83

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

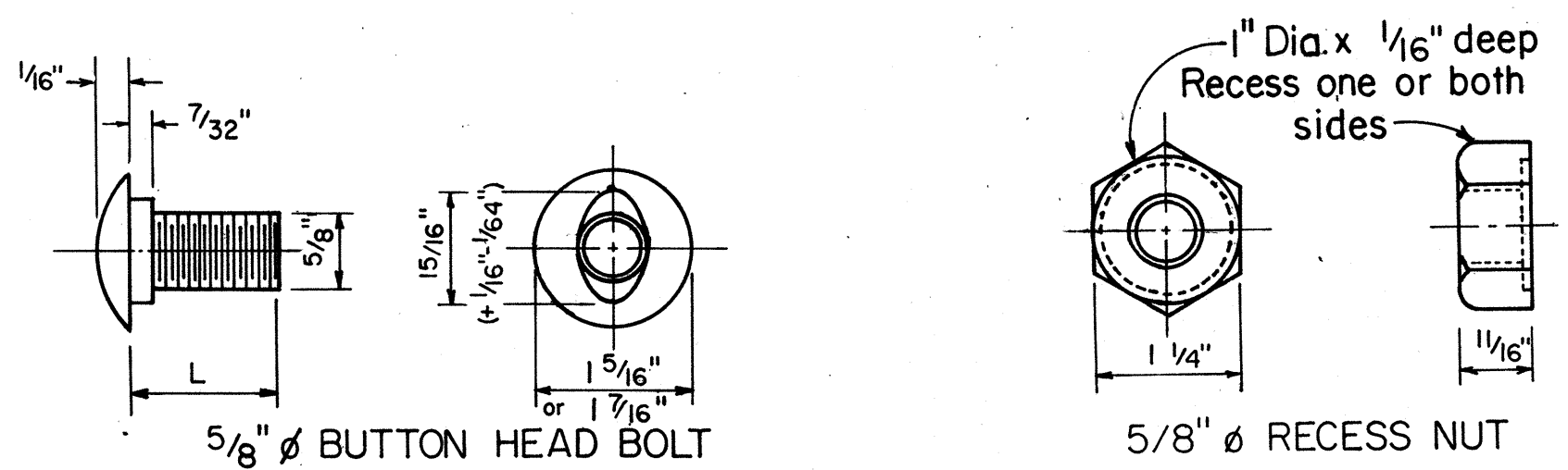
STANDARD DETAILS METAL GUARDRAIL

Scale: As Shown July, 1982

SHEET NO. 4 OF 13 SHEETS DT 500

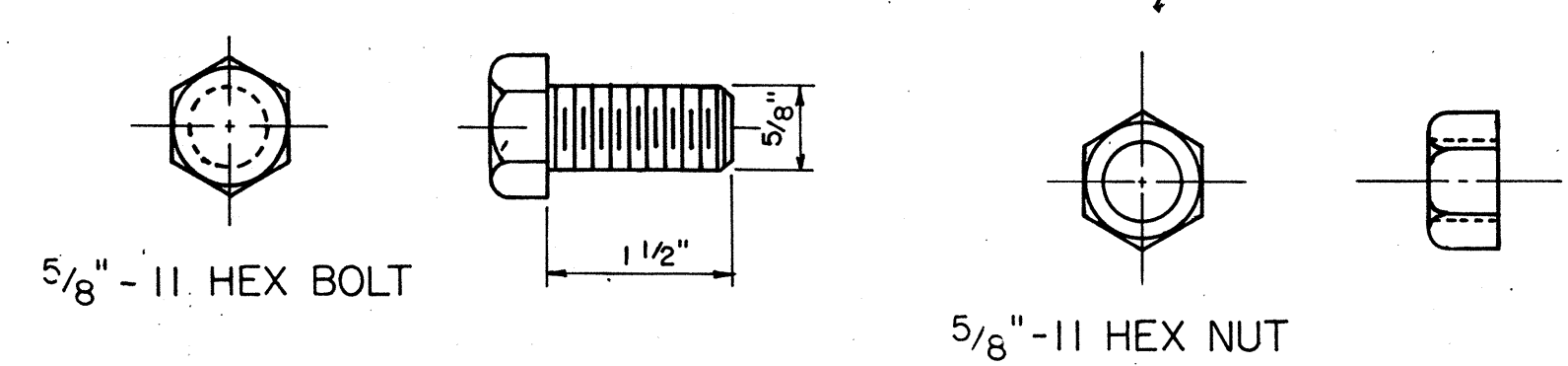
DATE	
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-PR-078-1(25)	1984	18	52

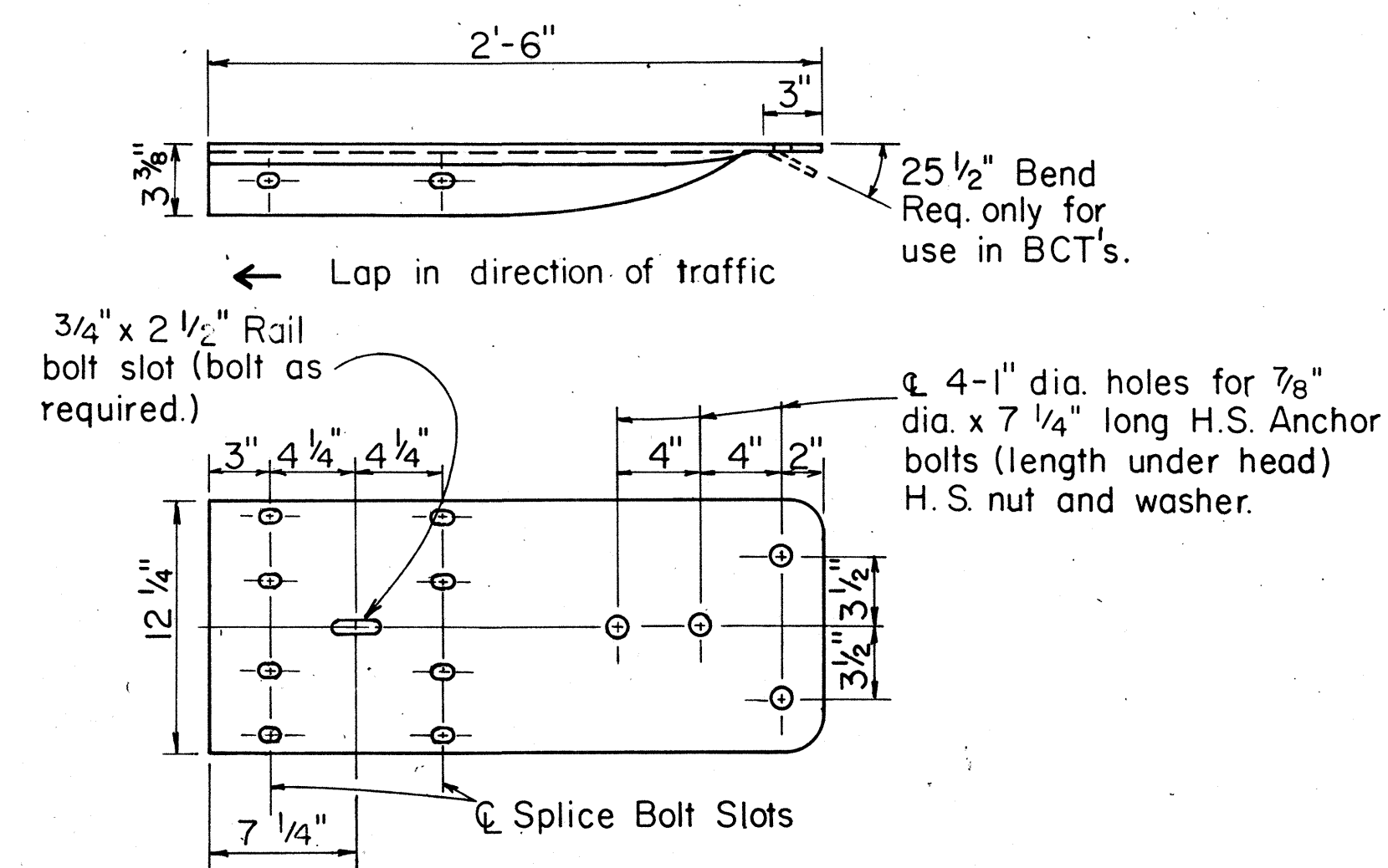


L	Thread Length	Intended Use
1 1/4"	Full length thread	Splice rail elements
2"	1 1/2" min. thread len.	Fasten rails to posts

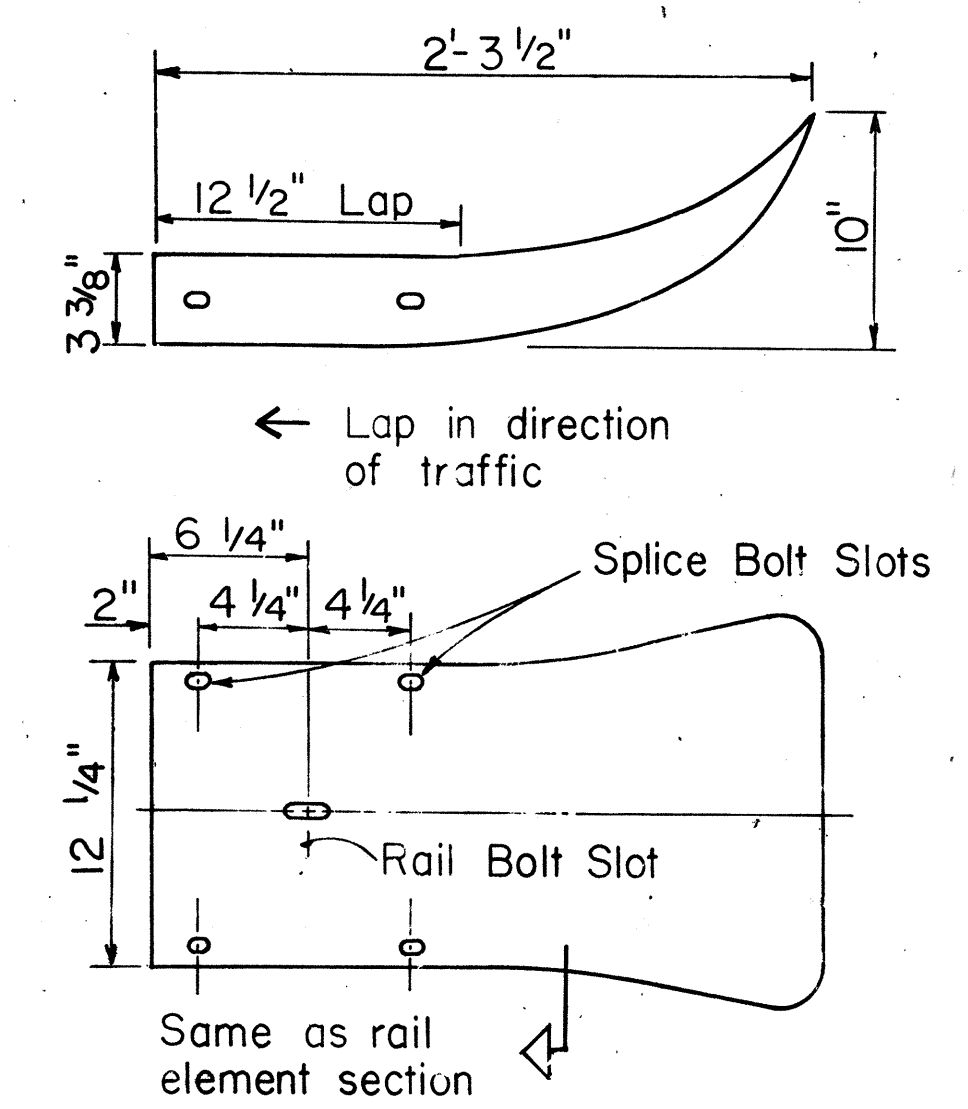
**5/8" BUTTON HEAD BOLT
AND RECESS NUT**
Scale: NTS



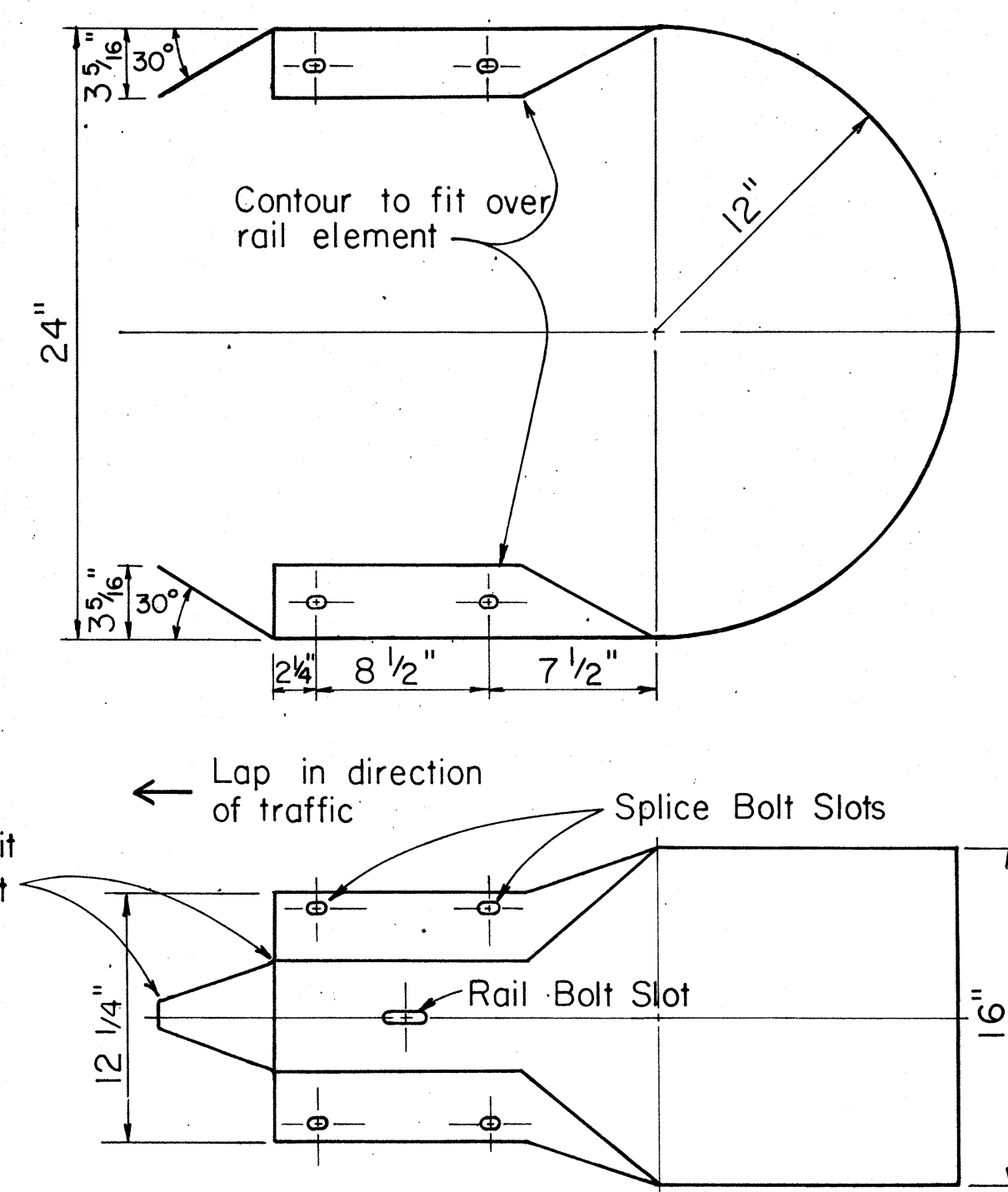
5/8" HEX POST BOLT AND NUT
Scale: N.T.S.



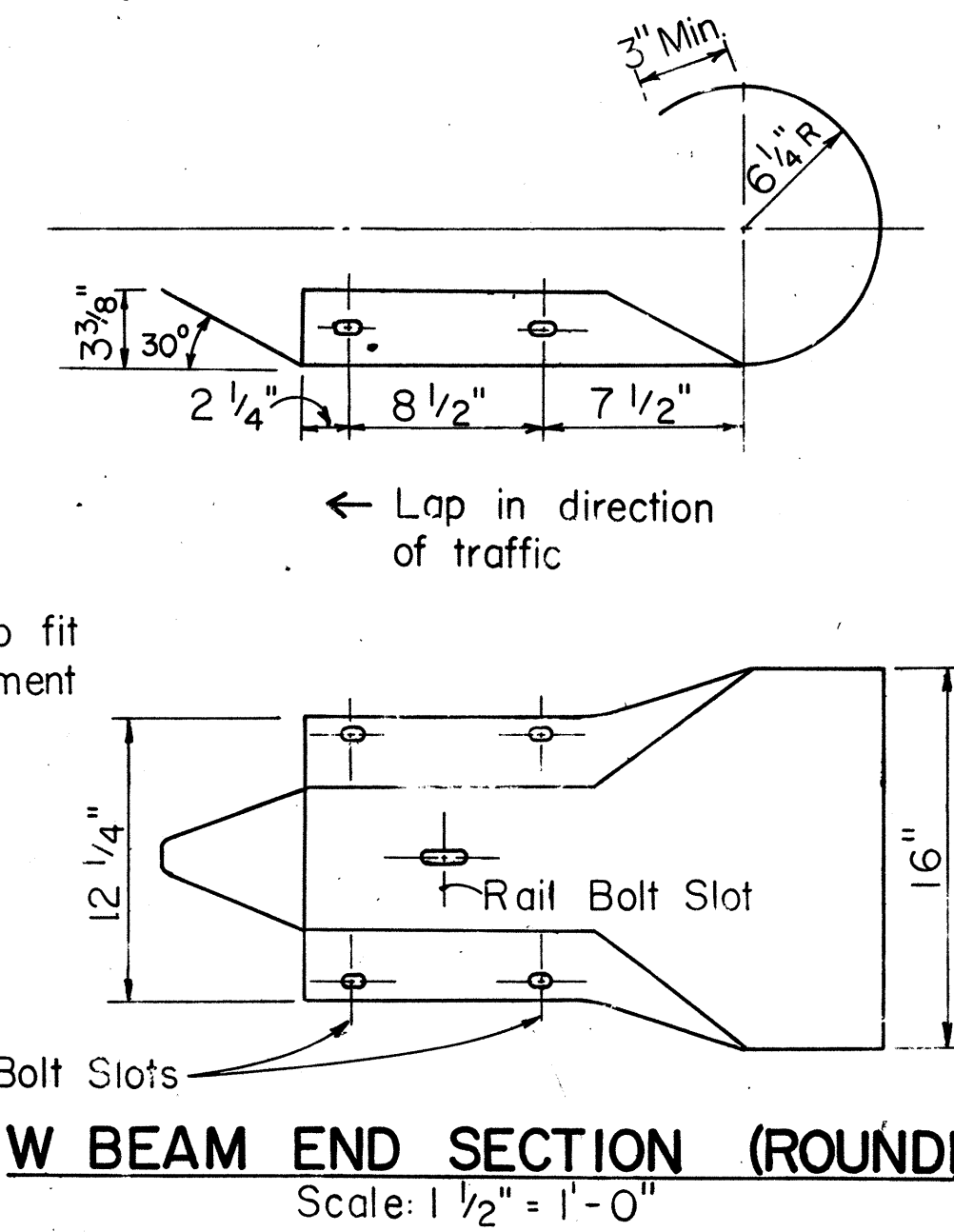
W BEAM TERMINAL CONNECTOR
Scale: 1 1/2" = 1'-0"



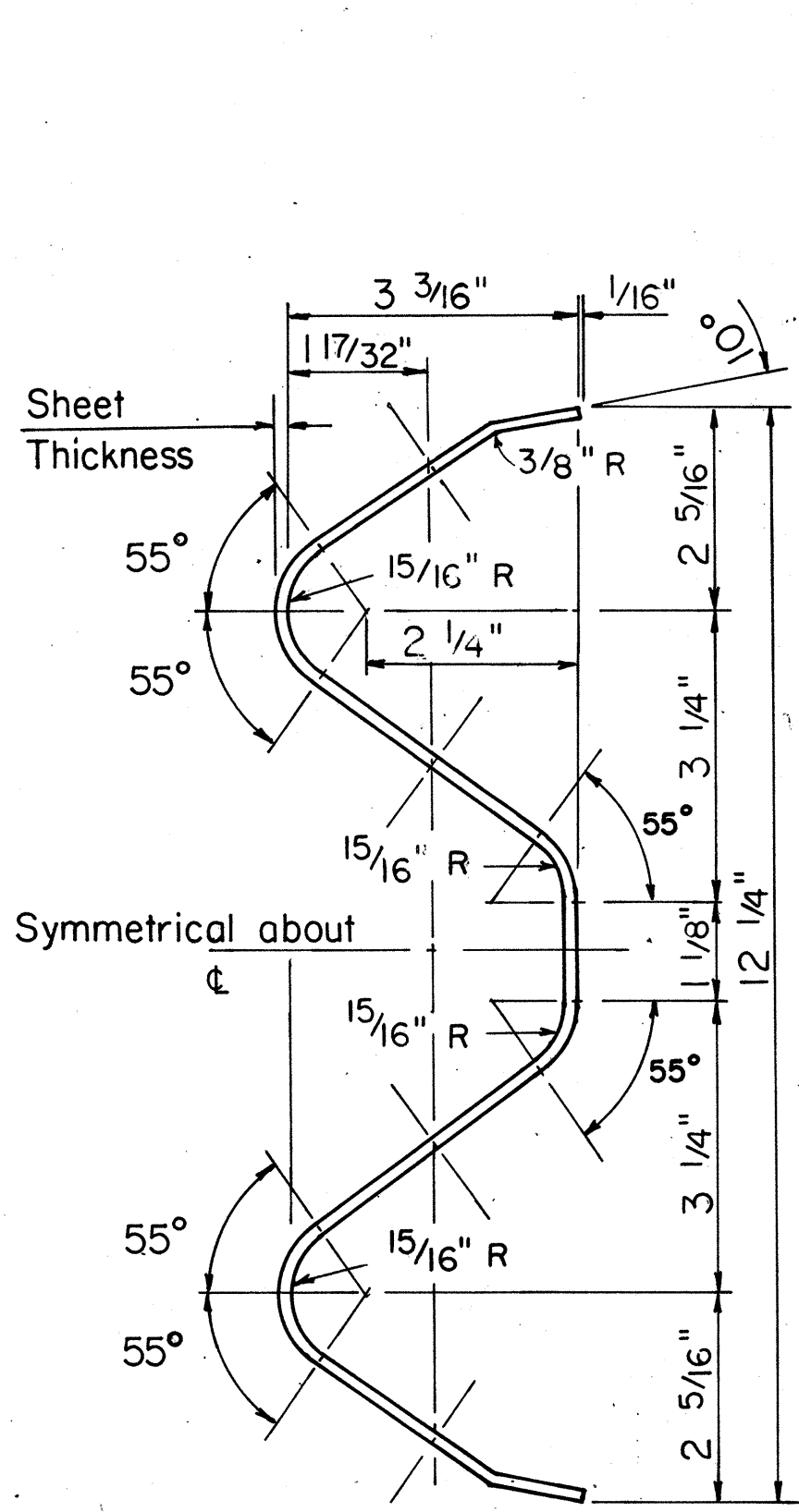
W BEAM END SECTION (FLARED)
Scale: 1 1/2" = 1'-0"



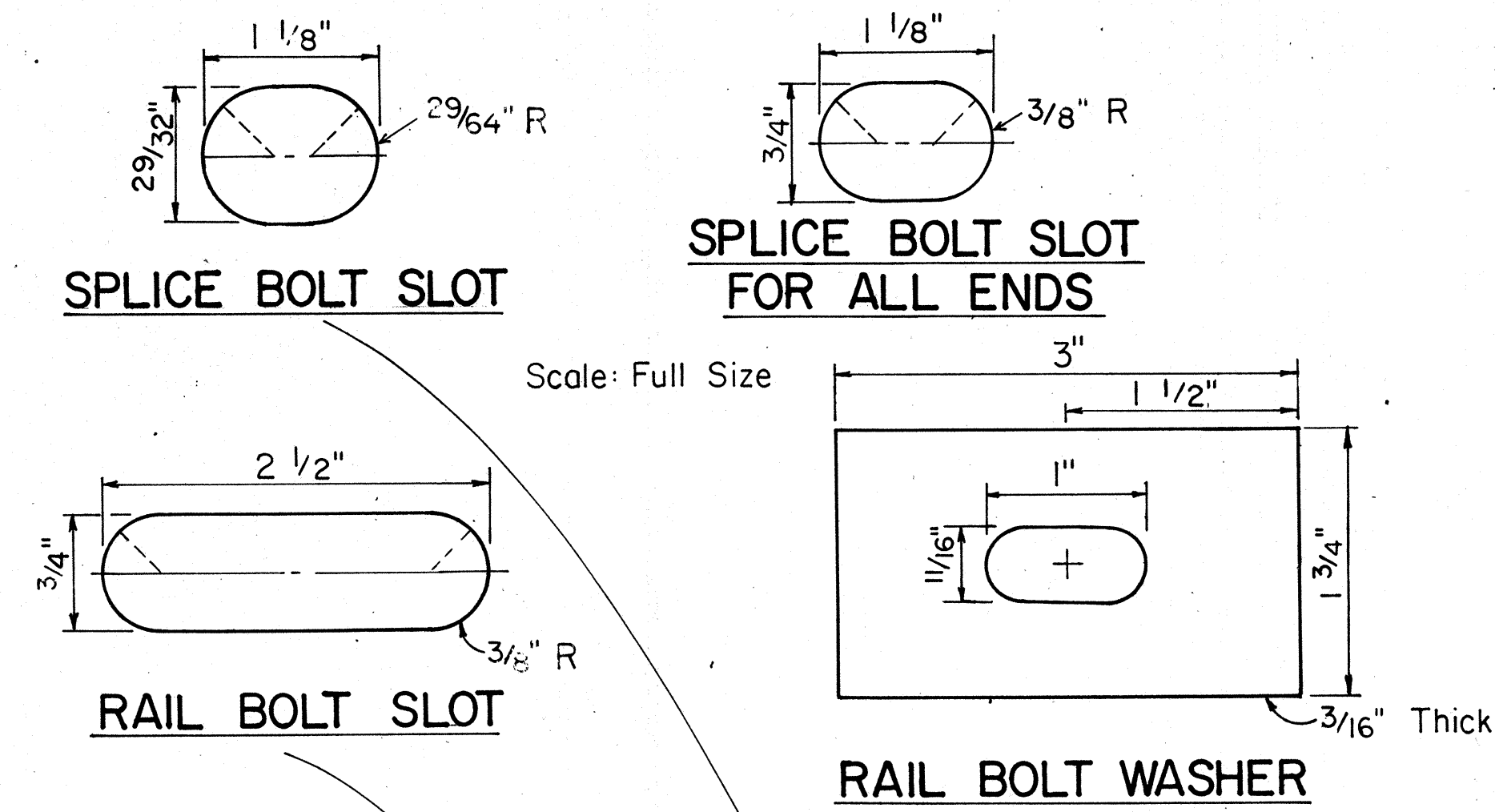
W BEAM END SECTION (BUFFER)
Scale: 1 1/2" = 1'-0"



W BEAM END SECTION (ROUNDED)
Scale: 1 1/2" = 1'-0"



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

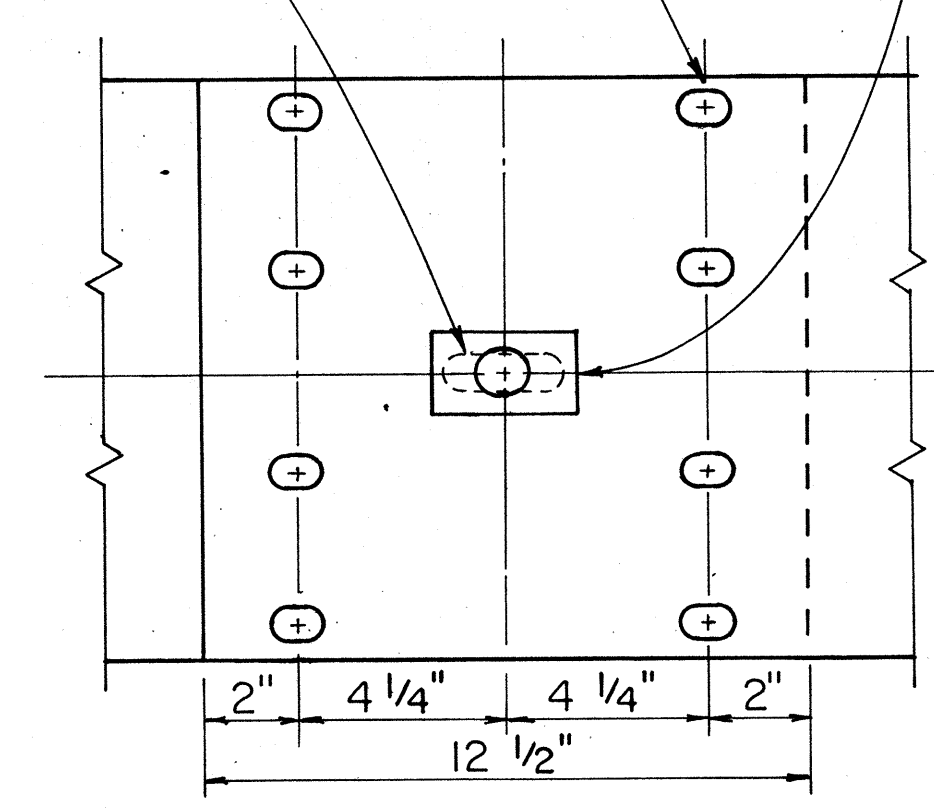


SPLICE BOLT SLOT

**SPLICE BOLT SLOT
FOR ALL ENDS**

RAIL BOLT SLOT

RAIL BOLT WASHER



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

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

NO.	REVISION	APPROVED BY	DATE
1	Supersedes sht. DT 501 approved 12/30/69	Hf.	9/22/82

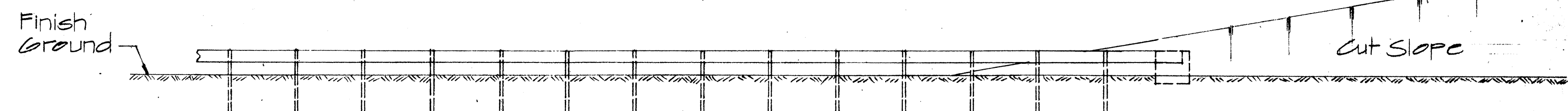
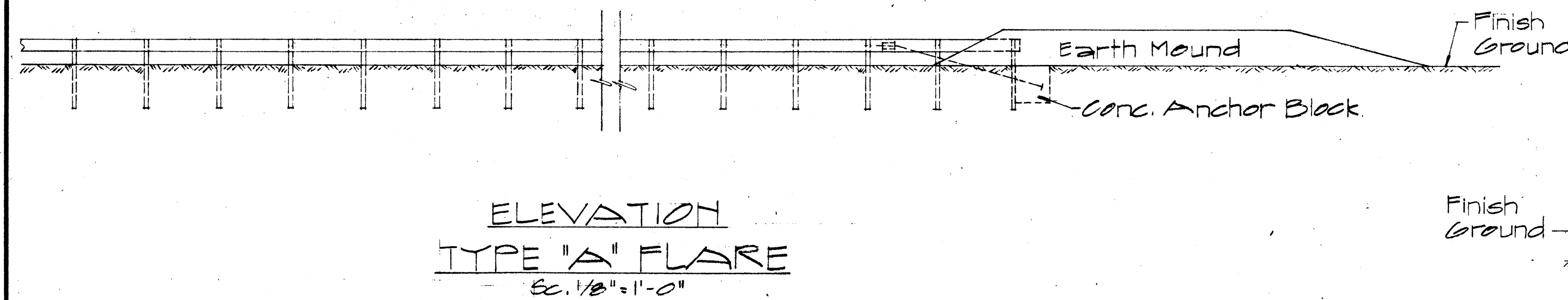
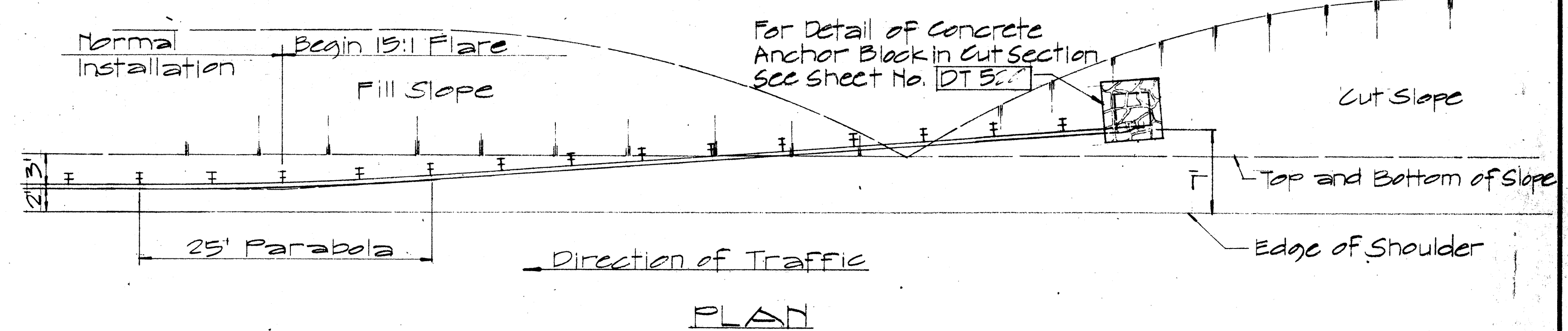
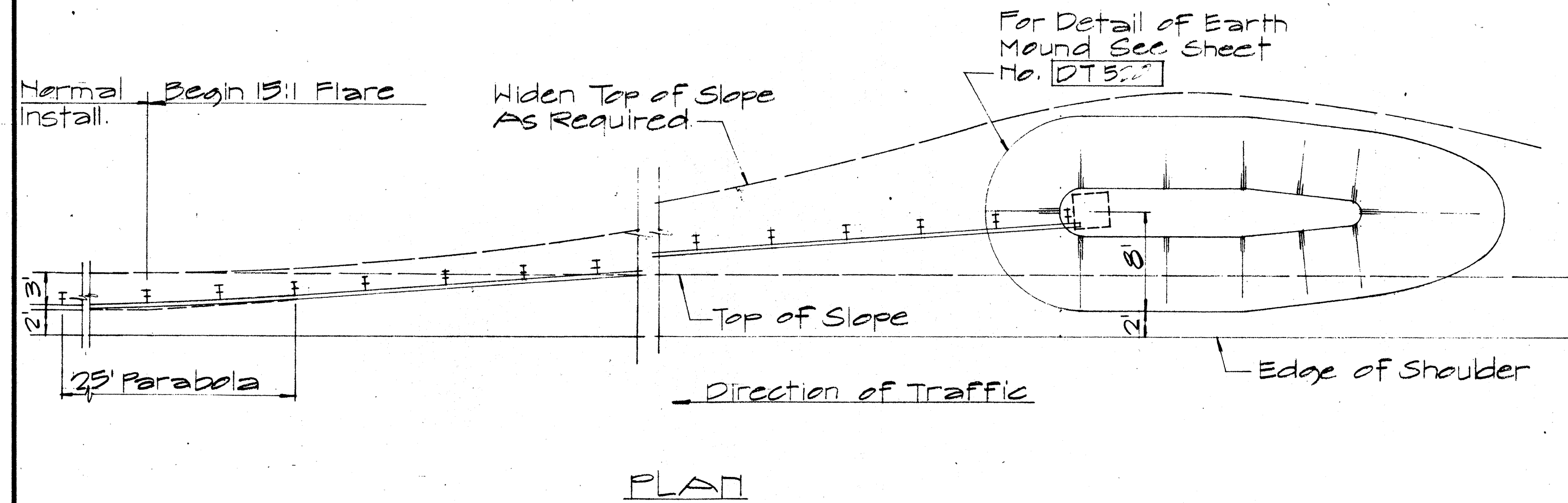
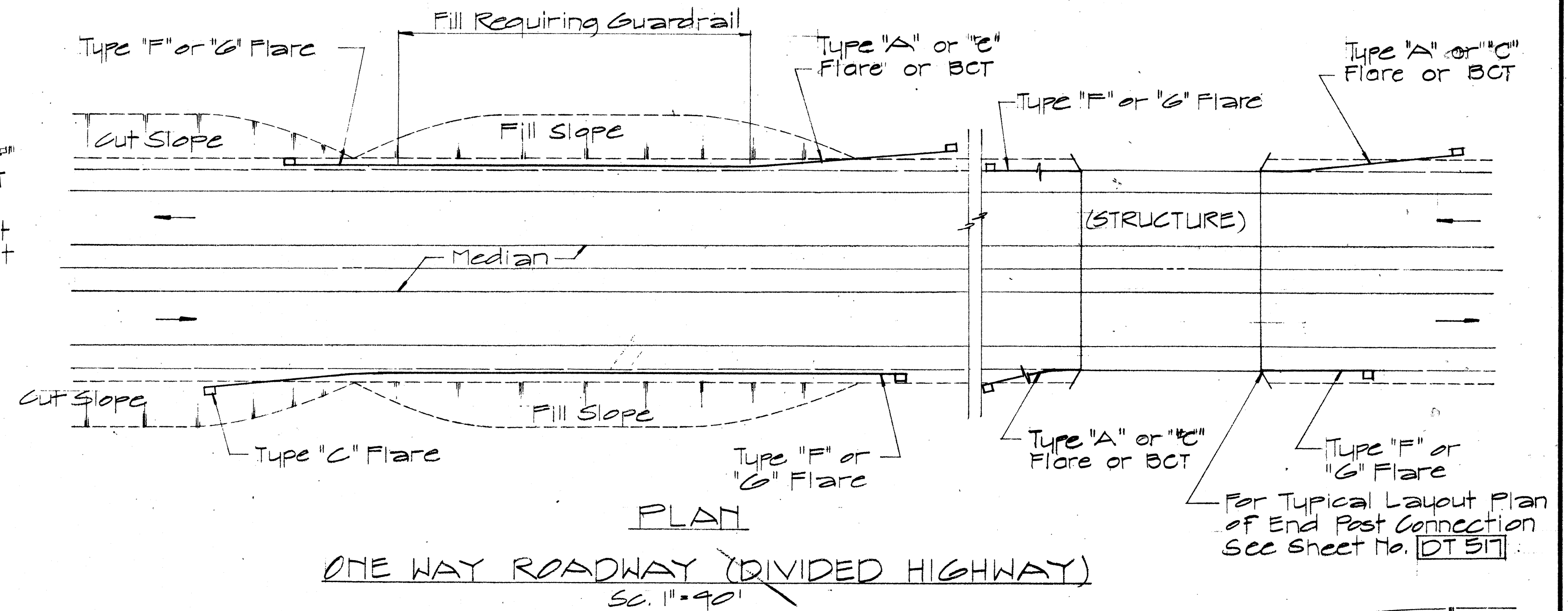
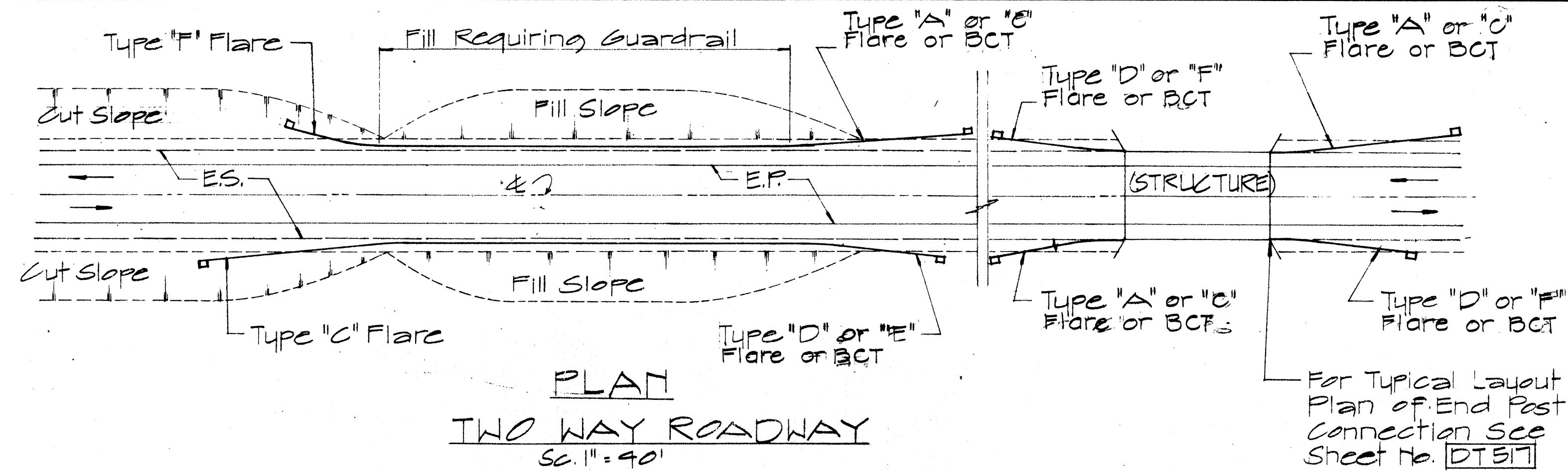
APPROVAL RECOMMENDED:
Erich Tanaka
TRAFFIC ENGINEER
9/20/82
DATE

APPROVED:
Hubert Zelenka
ASSISTANT CHIEF, ENGINEERING
9/22/82
DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS
METAL GUARDRAIL
Scale: As Noted July, 1982 SHEET NO. 5 OF 13 SHEETS DT 501

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-PR-078 1(22)	1984	19	52

- NOTE:
1. Metal guard rail connection to structures requires End Post Connection. See structure Plans.
 2. For detail of Breakaway Cable Terminal (BCT) See Sheet No. [DT 519]



APPROVAL RECOMMENDED:
Erick Tanaka
TRAFFIC ENGINEER
12/29/62
DATE

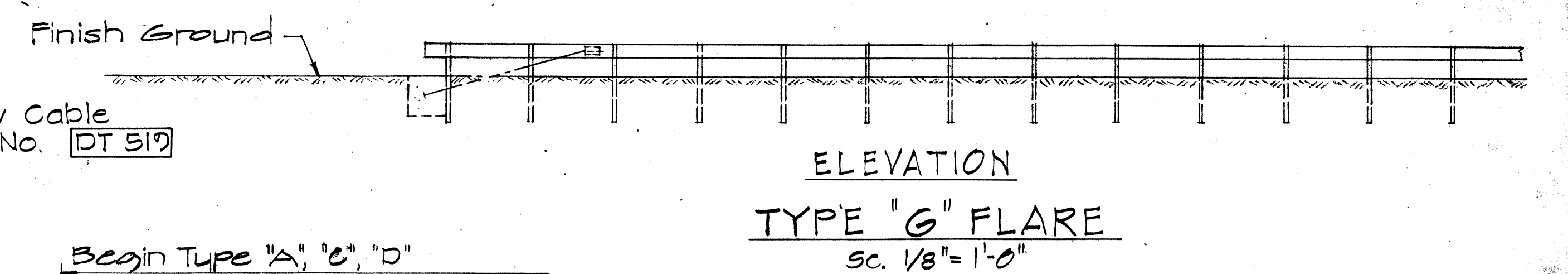
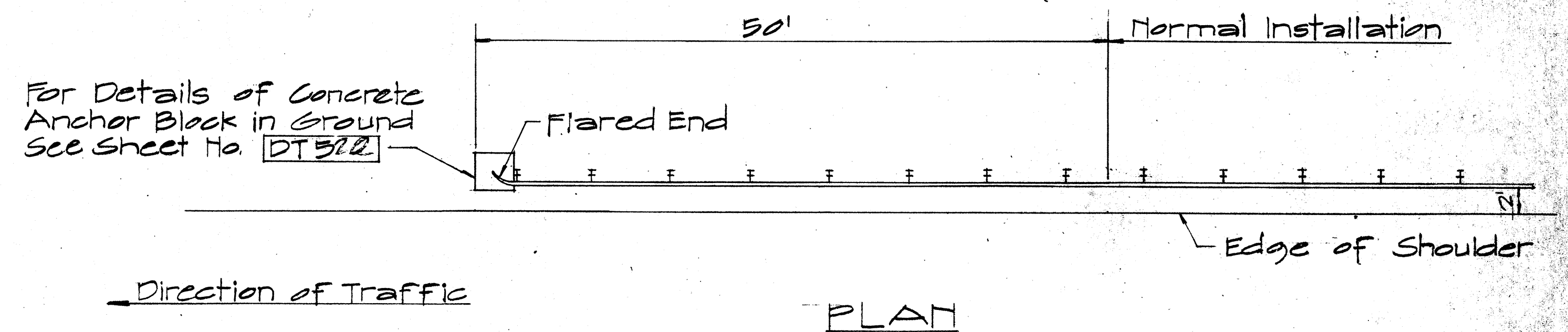
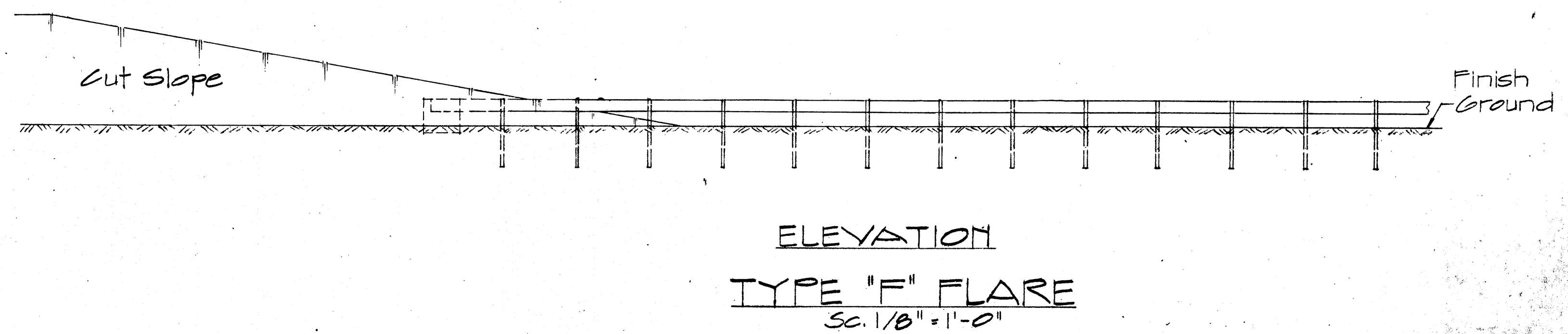
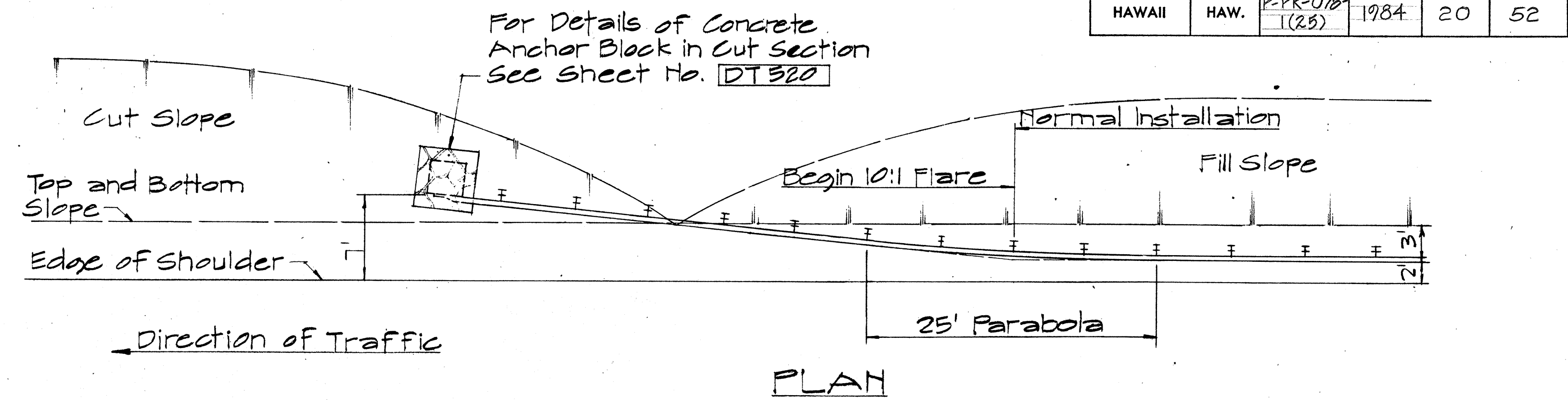
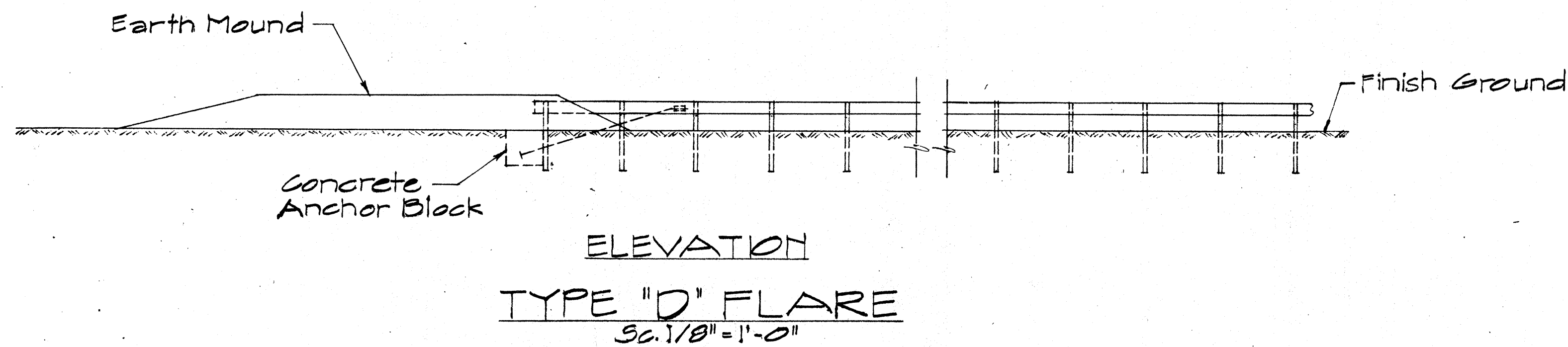
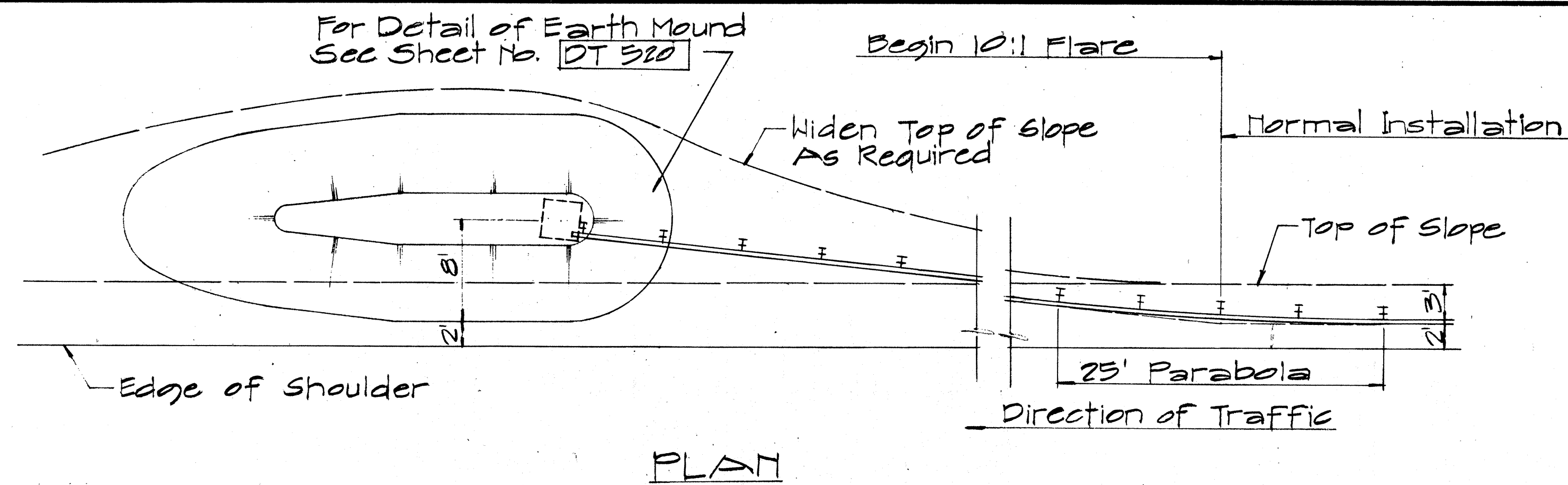
APPROVED:
W. B. Z. del
ASSISTANT CHIEF, ENGINEERING
12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE
1	Delete Type "B" Flare and Type "E" Flare.	H.T.	6/15/83

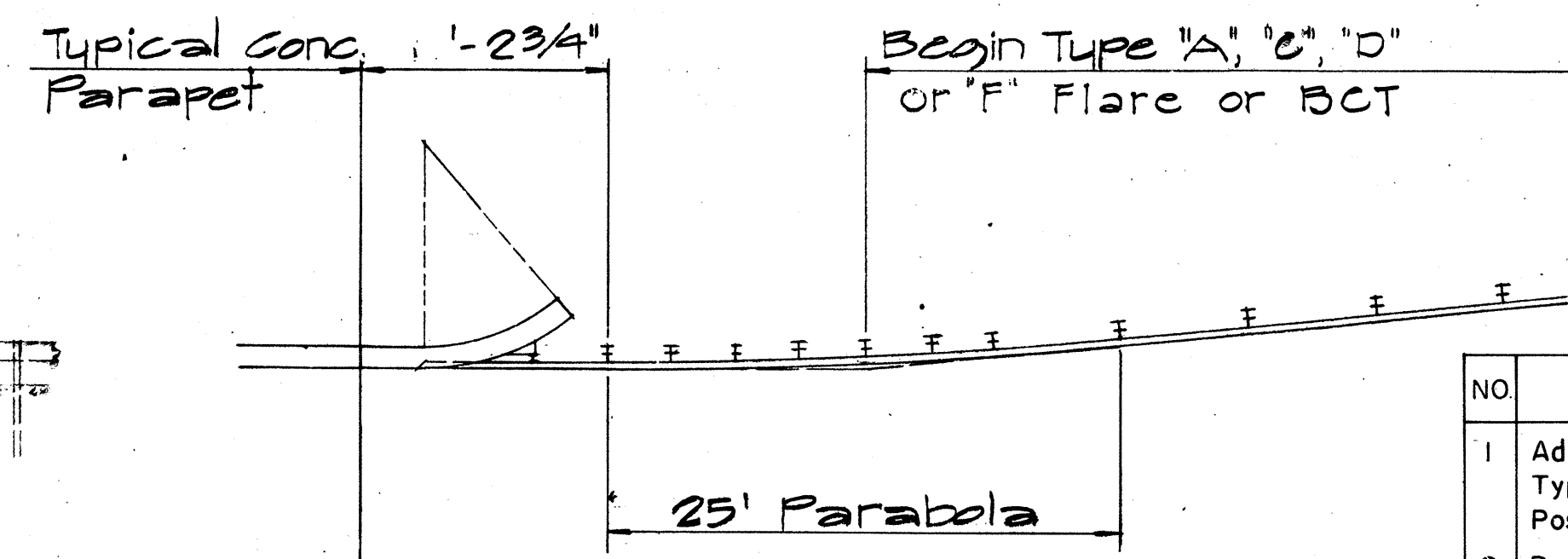
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
OF APPROACH END
FLARE - ONE & TWO
WAY ROADWAY
Sc. As Noted April 1969
SHEET No. 6 OF 13 SHEETS [DT 516]

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	PR-078-1(25)	1984	20	52



NOTE:
For detail of Breakaway Cable Terminal (BCT) See Sheet No. DT 519



TYPICAL LAYOUT PLAN OF END POST CONNECTION

Sc. 1/8" = 1'-0"

NO.	REVISION	APPROVED BY	DATE
1	Additional Posts Added to Typical Layout Plan Of End Post Connection	H.T.	4-12-72
2	Delete Type "B" Flare and Type "E" Flare	H.T.	6-15-78

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

APPROVED:
W. J. Sal 12-20-69
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

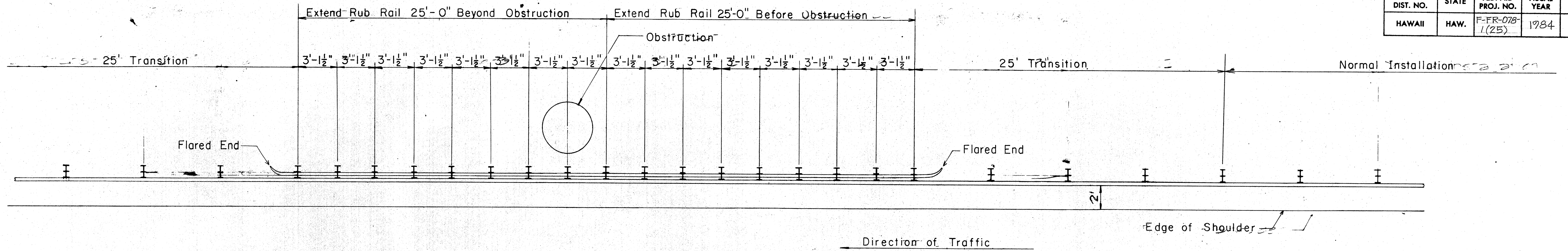
STANDARD DETAILS
TRAILING END
FLARE - ONE & TWO
WAY ROADWAY

Scale: As Noted April 1969

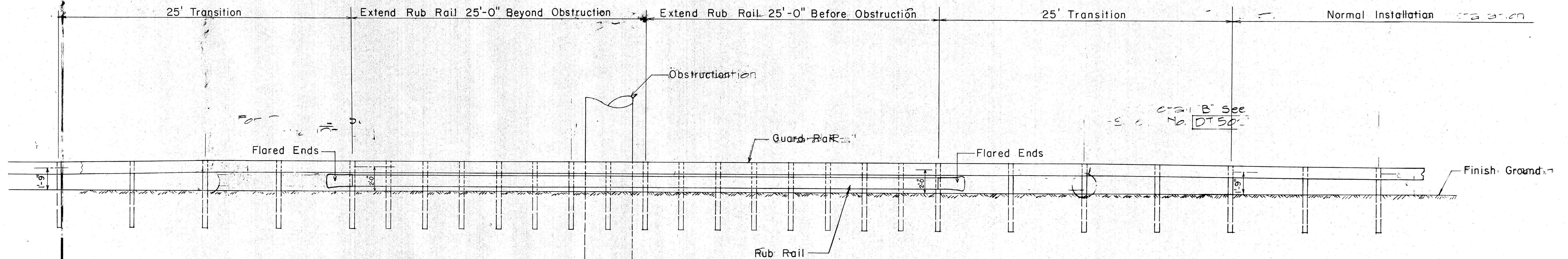
SHEET No. 7 OF 13 SHEETS DT 517

DATE	12/29/69
DESIGNED BY	
DRAWN BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-ER-078-1(25)	1984	21	52



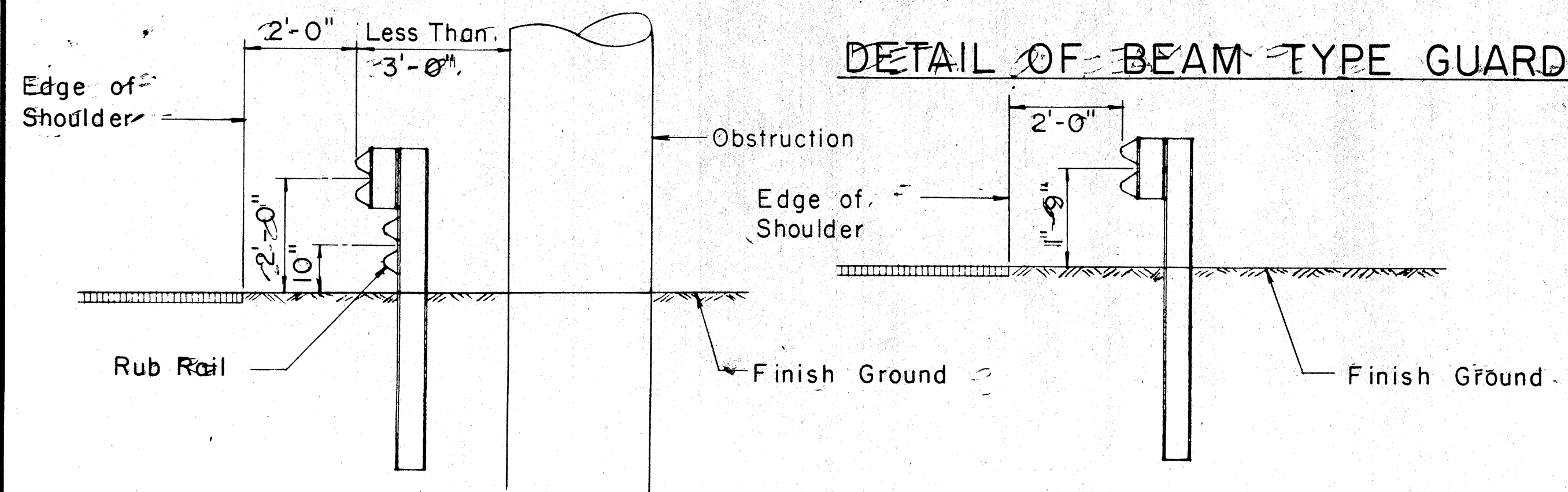
PLAN



ELEVATION

DETAIL OF BEAM TYPE GUARD RAIL WITH RUB RAIL AT OBSTRUCTION

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



TYP. SEC. AT OBSTRUCTION

TYP. SEC. AT NORMAL INSTALLATION

TYP. GUARD RAIL SECTIONS

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

APPROVAL RECOMMENDED:
E.ichi Tanaka 12/29/69
 TRAFFIC ENGINEER DATE

APPROVED:
Shunji S. Sato 12-30-69
 ASSISTANT CHIEF, ENGINEERING DATE

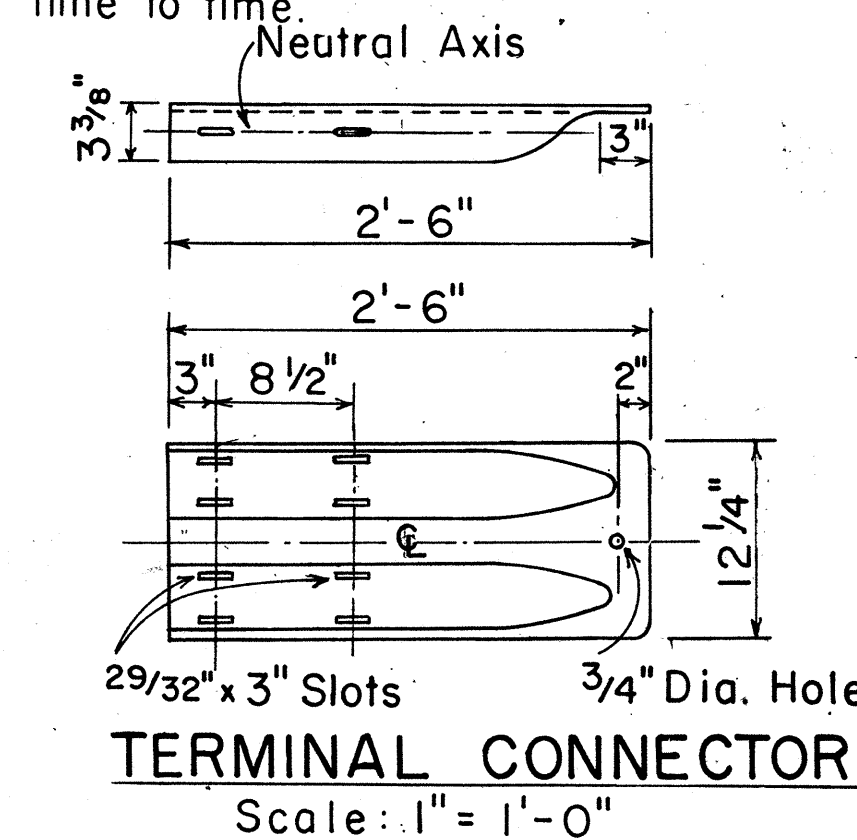
NO.	REVISION	APPROVED BY	DATE
1	Added Additional Guard Rail Posts and Installed Flared Ends at end of Rub Rail		12/29/69

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAIL
 BEAM TYPE GUARD RAIL WITH
 RUB RAIL AT OBSTRUCTION
 SHOULDER INSTALLATION
 SCALE: AS SHOWN DATE: JUNE, 1969
 SHEET No. 8 OF 13 SHEETS DT 518

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	PR-078-1(22)	1984	22	52

NOTES:

1. Anchor Plate and Anchor Cable Assembly (Standard Swaged Fitting and Stud). See Standard Detail Sheet No. DT 520.
2. Other Anchor Cable Assemblies may be used. Minimum breaking strength of assembly should be 40,000 lbs.
3. Second Terminal Post does not require holes to accommodate Anchor Cable.
4. Slip Base Load shall be controlled with a Calibrated Torque Wrench - Torque 155 - 170 ft. lbs.
5. Concrete shall be Class A.
6. B.C.T. Hardware has been superseded by "A Guide Standardized Highway Barrier Rail Hardware," A report prepared and approved by the AASHTO-AGC-ARTBA joint cooperation committee. All hardware shall conform to above mentioned publication and as revised from time to time.



APPROVAL RECOMMENDED:

Erichi Tanaka
TRAFFIC ENGINEER 6/14/78
DATE

APPROVED:

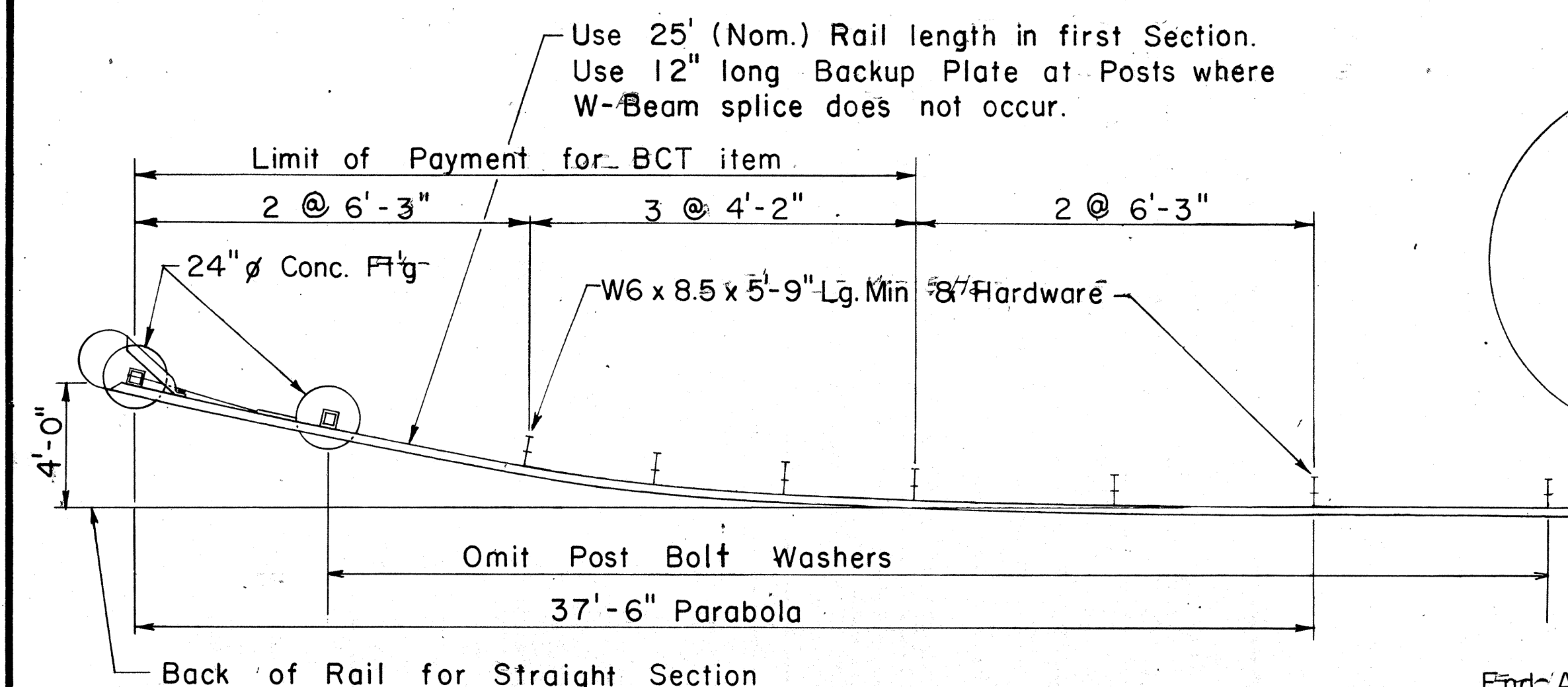
Harbor Sakai
ASSISTANT CHIEF, ENGINEERING 6/15/78
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAIL

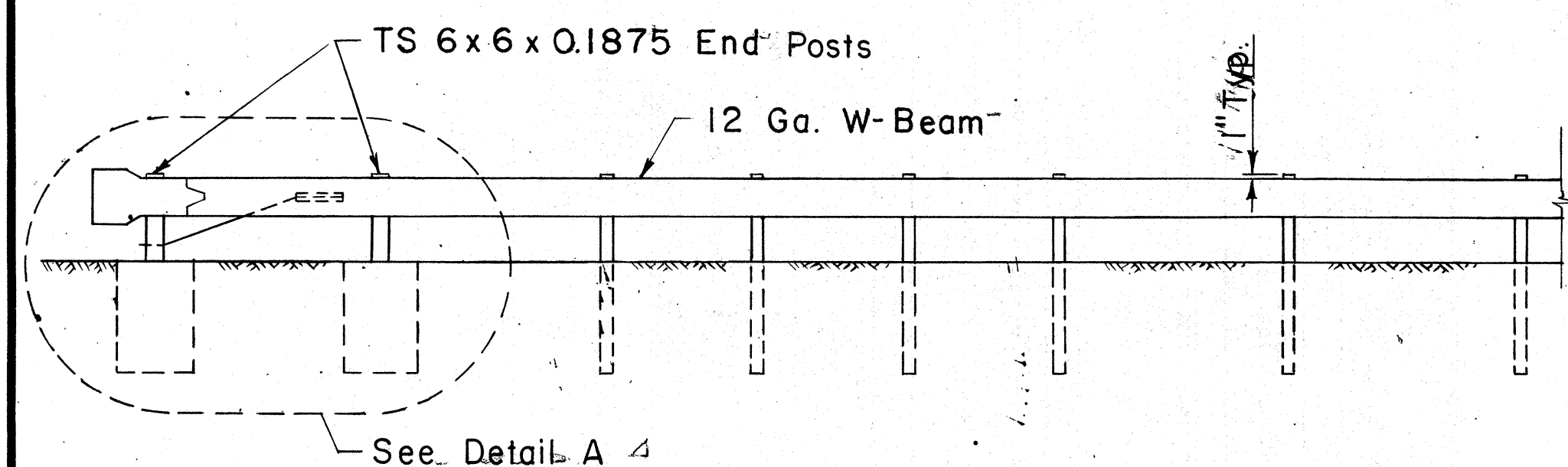
BREAKAWAY CABLE TERMINAL (BCT)

Scale: As Shown Date: June 1978
SHEET No. 22 OF 52 SHEETS DT 519



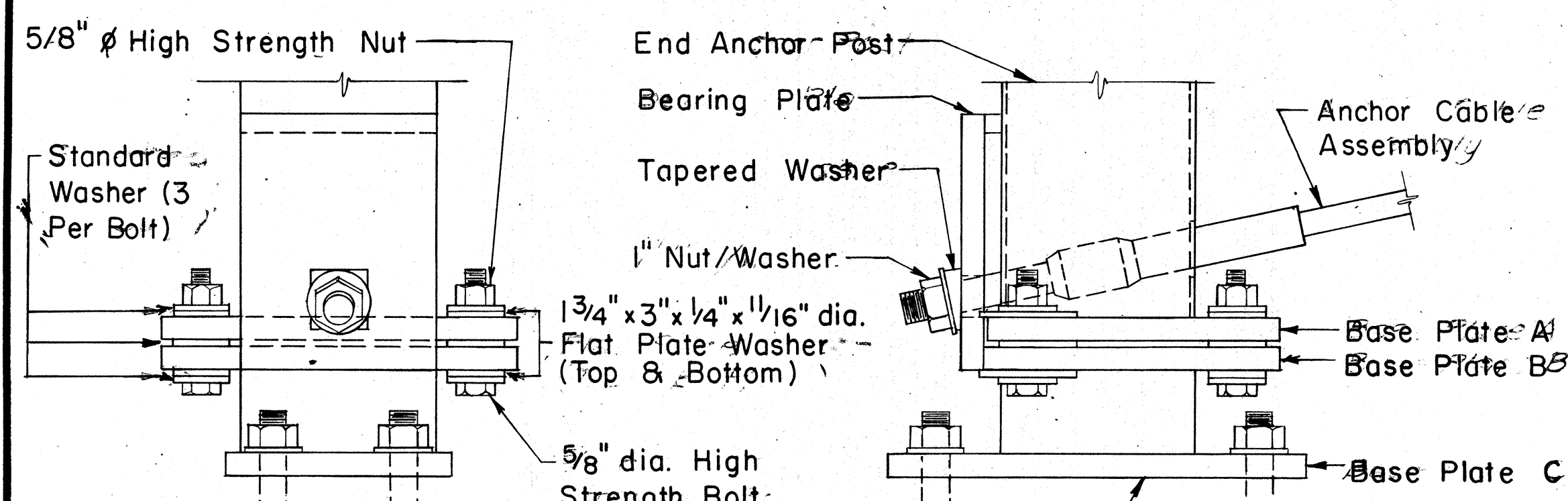
PLAN

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



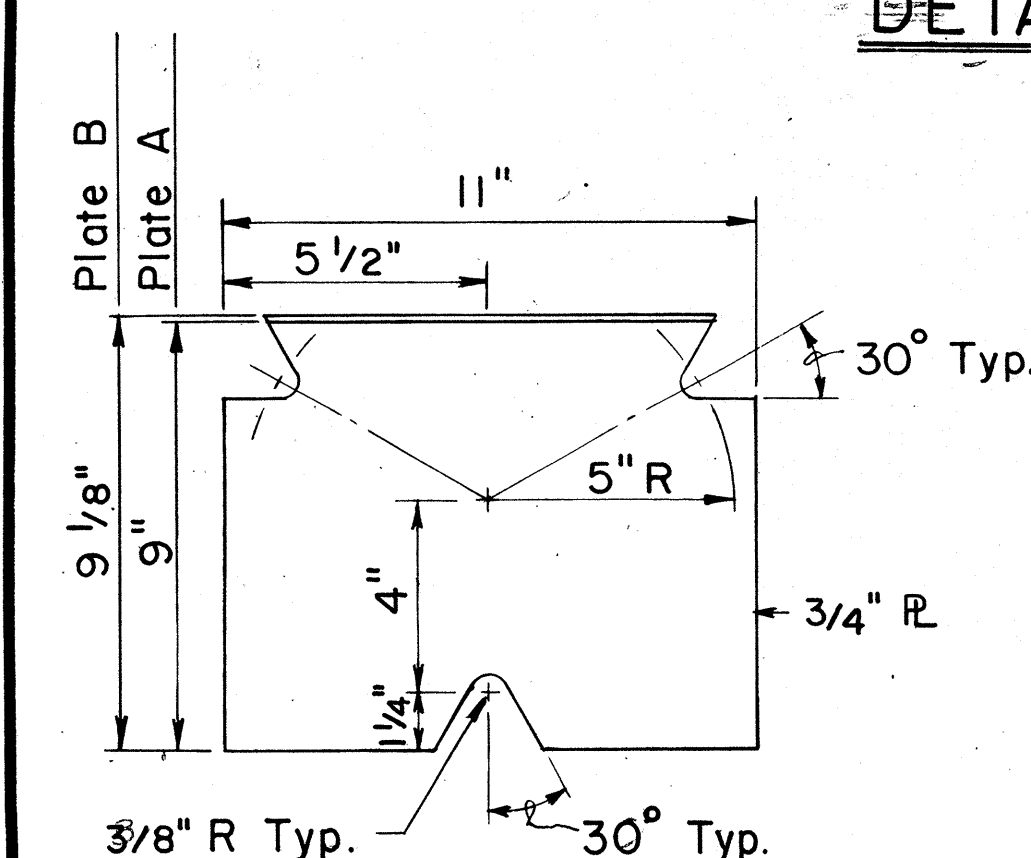
ELEVATION

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



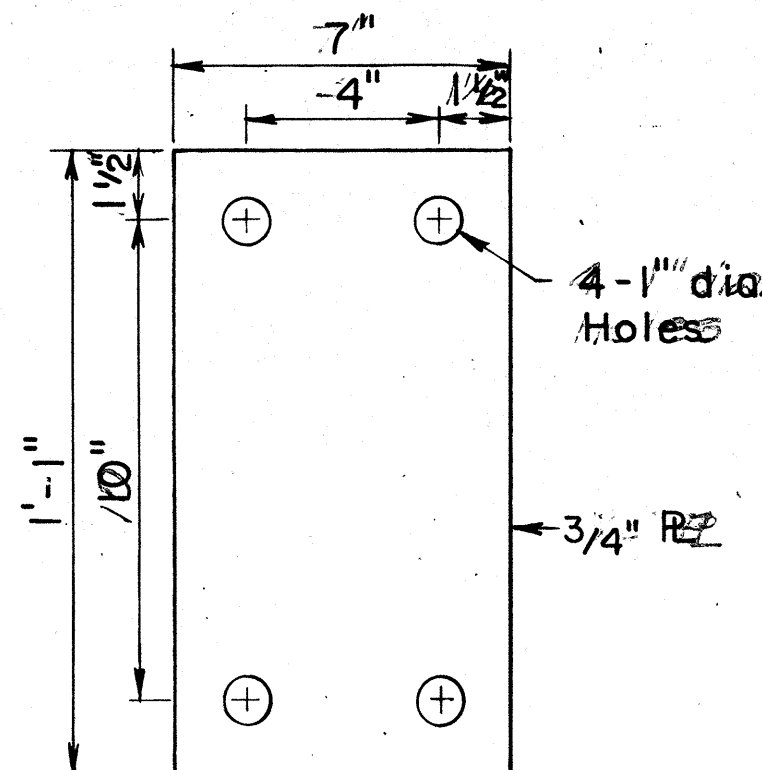
SIDE ELEVATION

DETAIL B



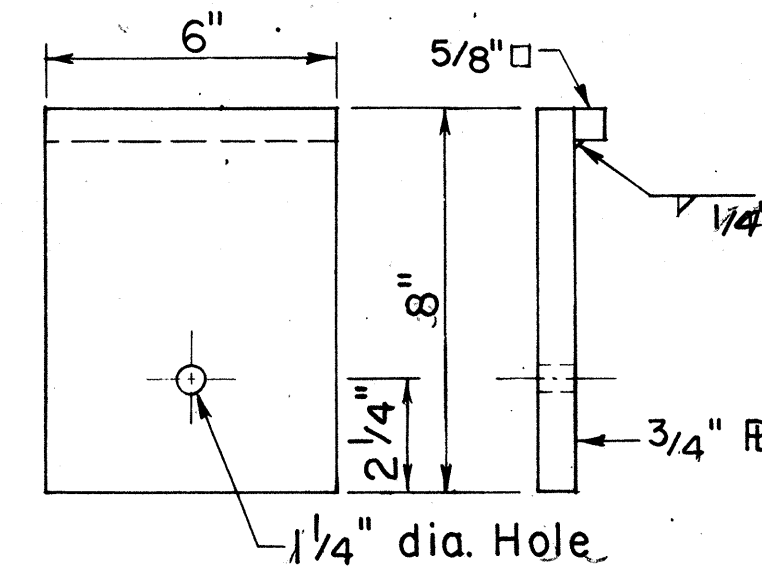
BASE PLATES A & B

Scale: 3" = 1'-0"



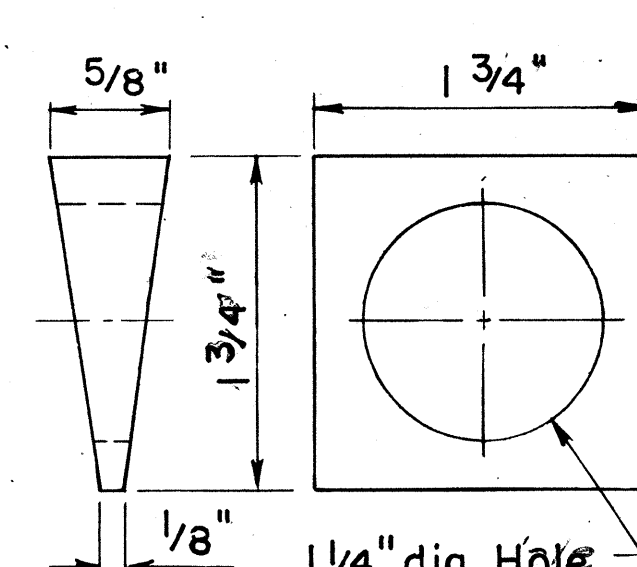
BASE PLATE C

Scale: 3" = 1'-0"



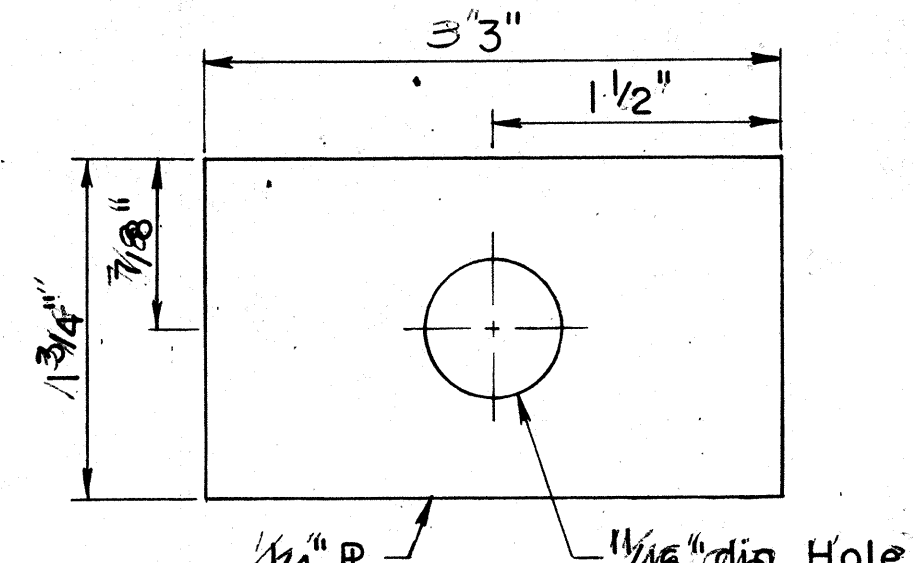
BEARING PLATE

Scale: 3" = 1'-0"



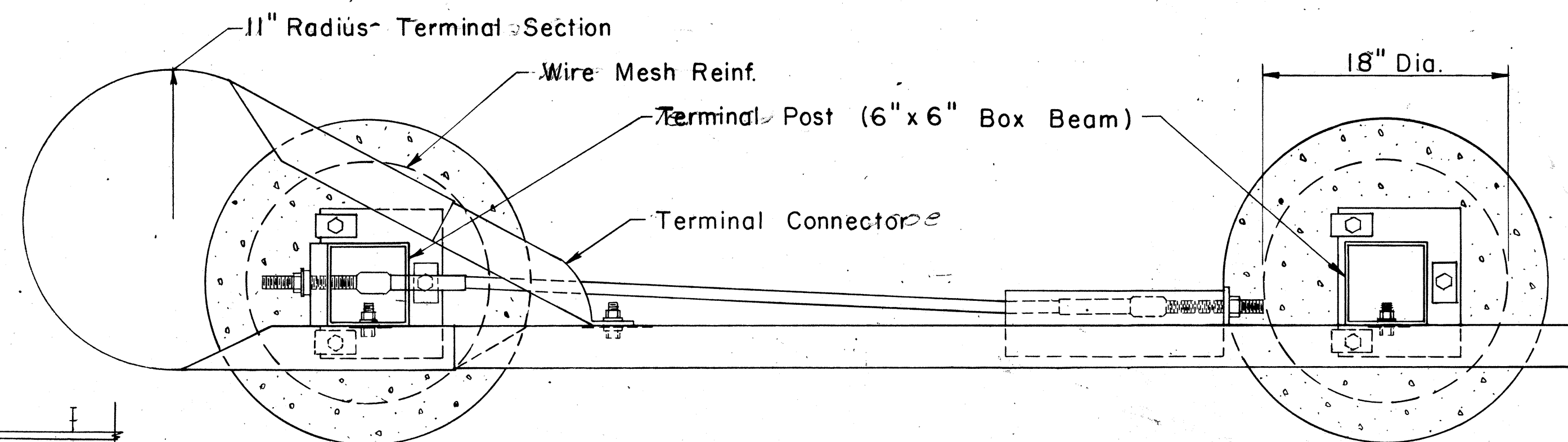
TAPERED WASHER

Scale: Full Size

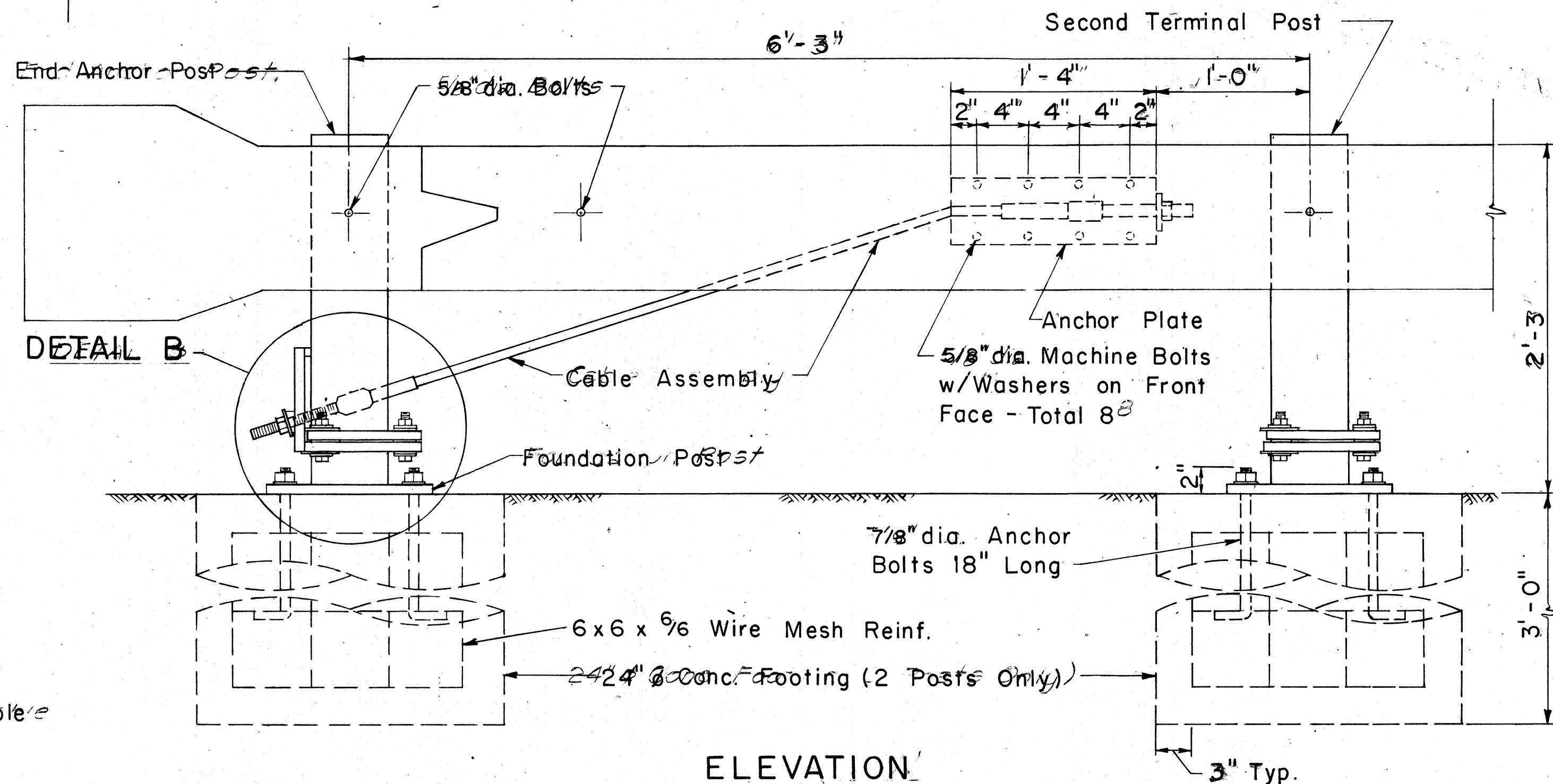


FLAT PLATE WASHER

Scale: Full Size



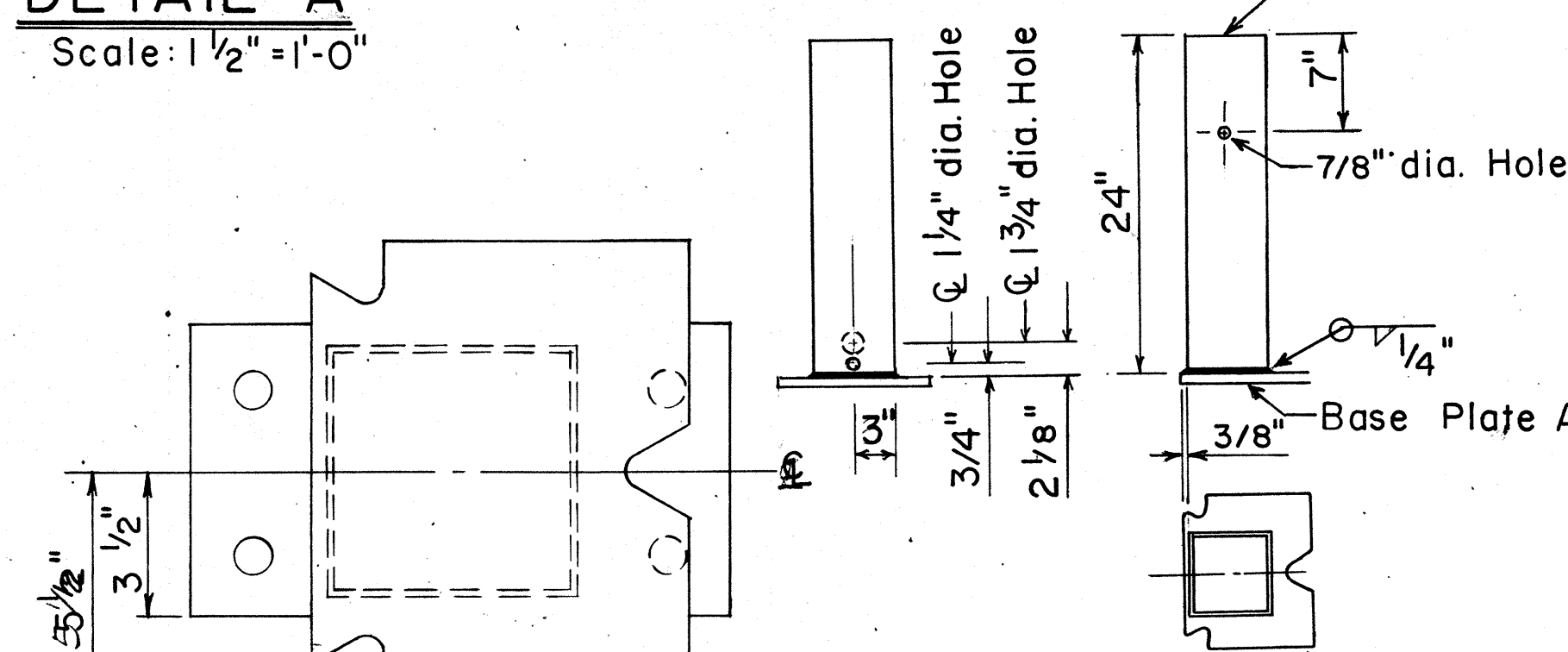
PLAN



ELEVATION

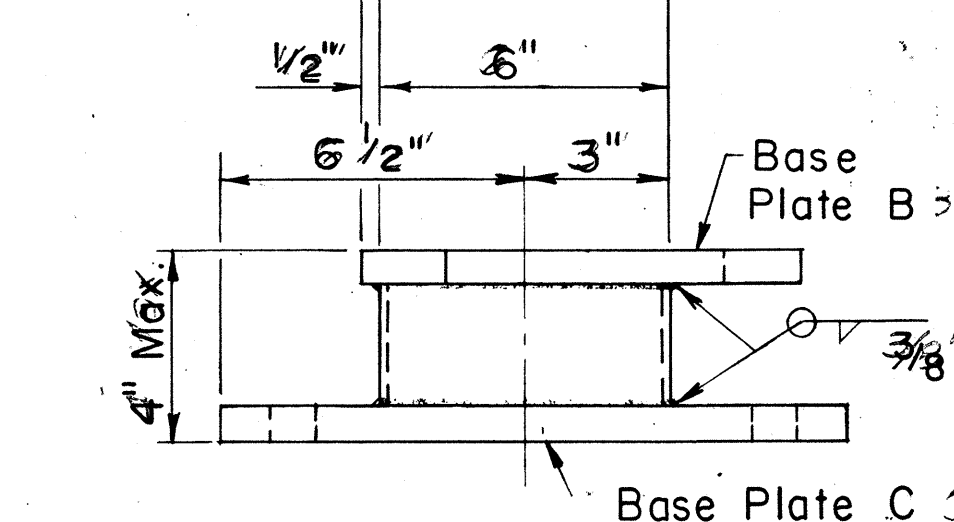
DETAIL A

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



TERMINAL POST

Scale: 1" = 1'-0"

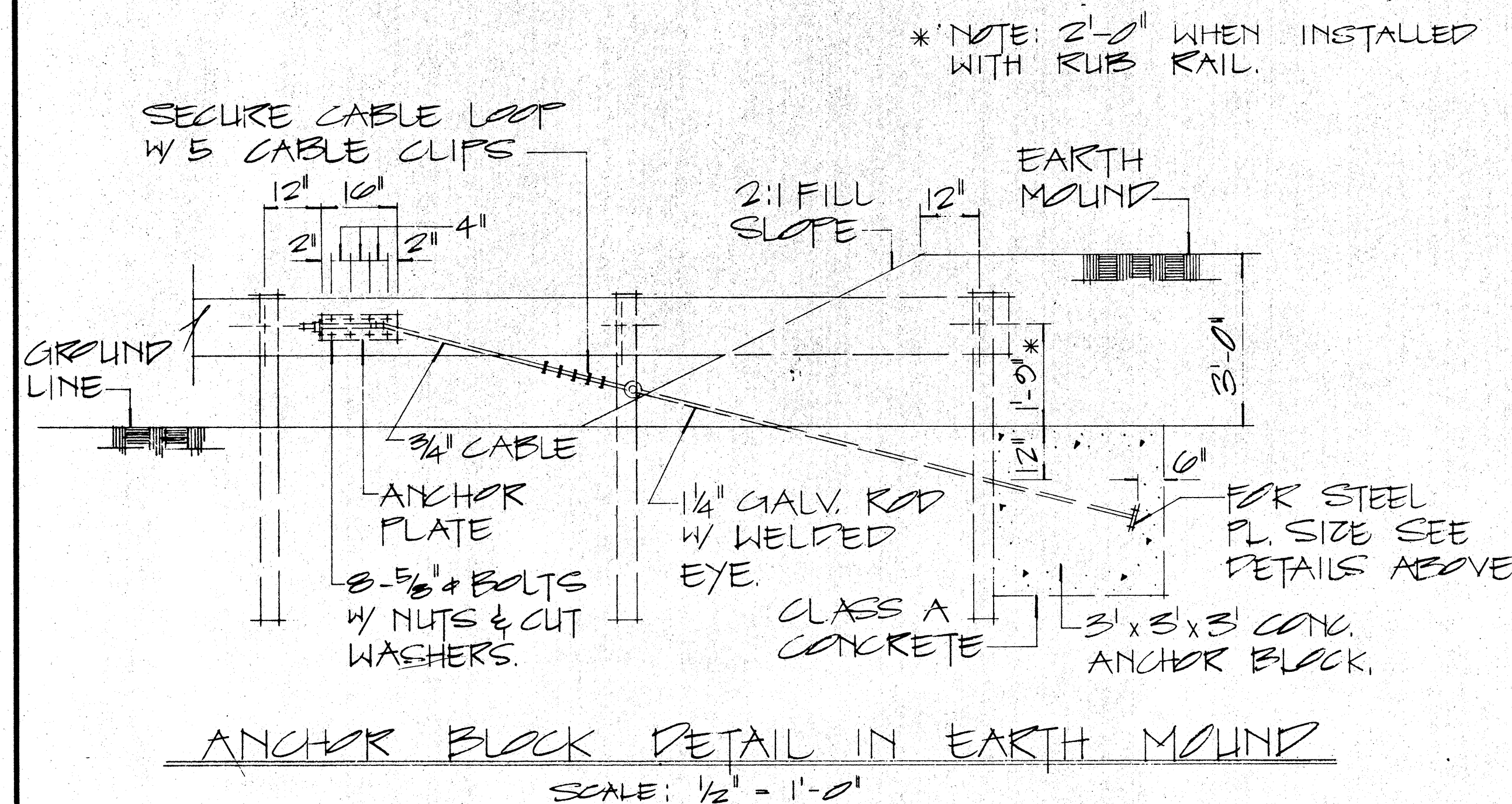
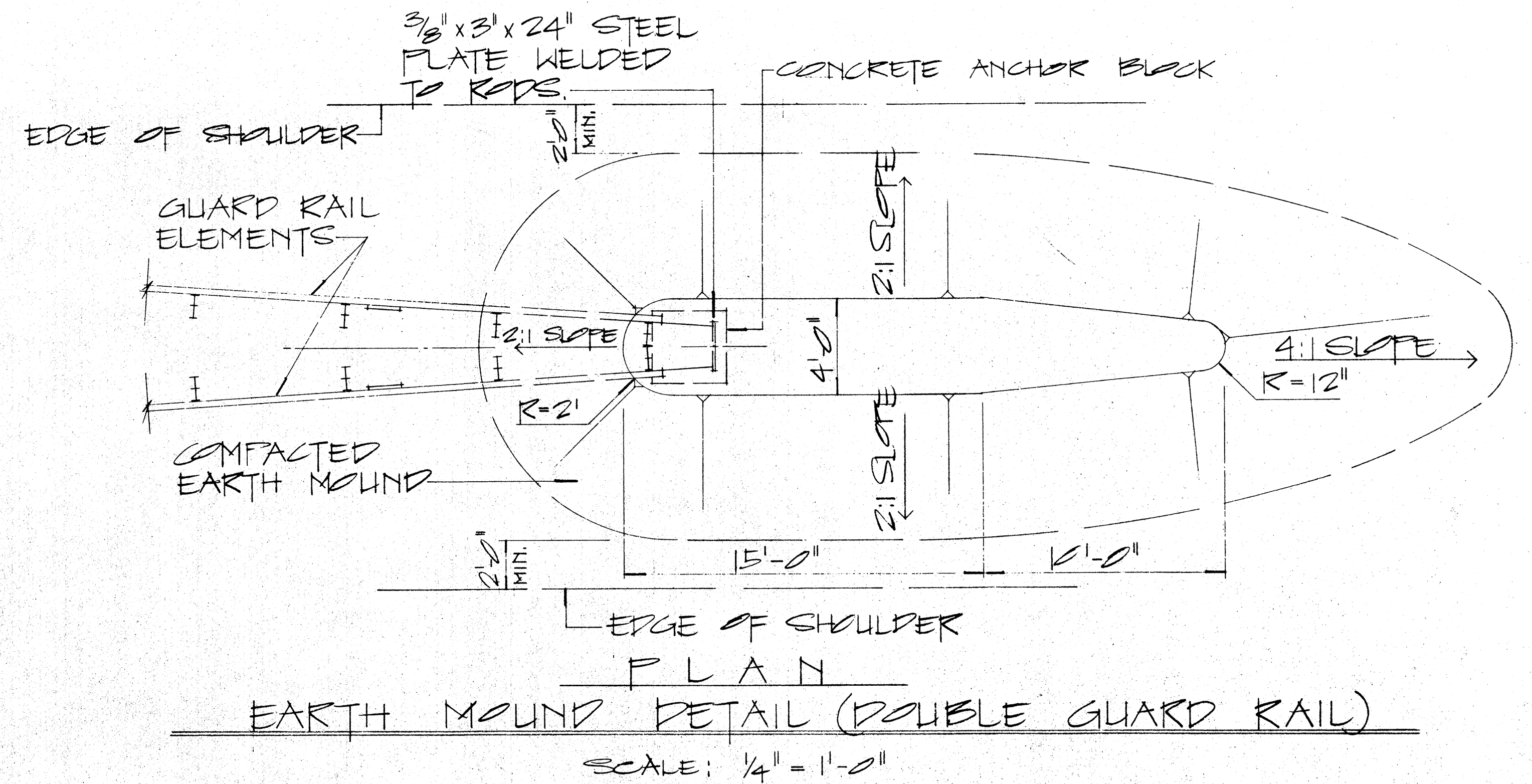
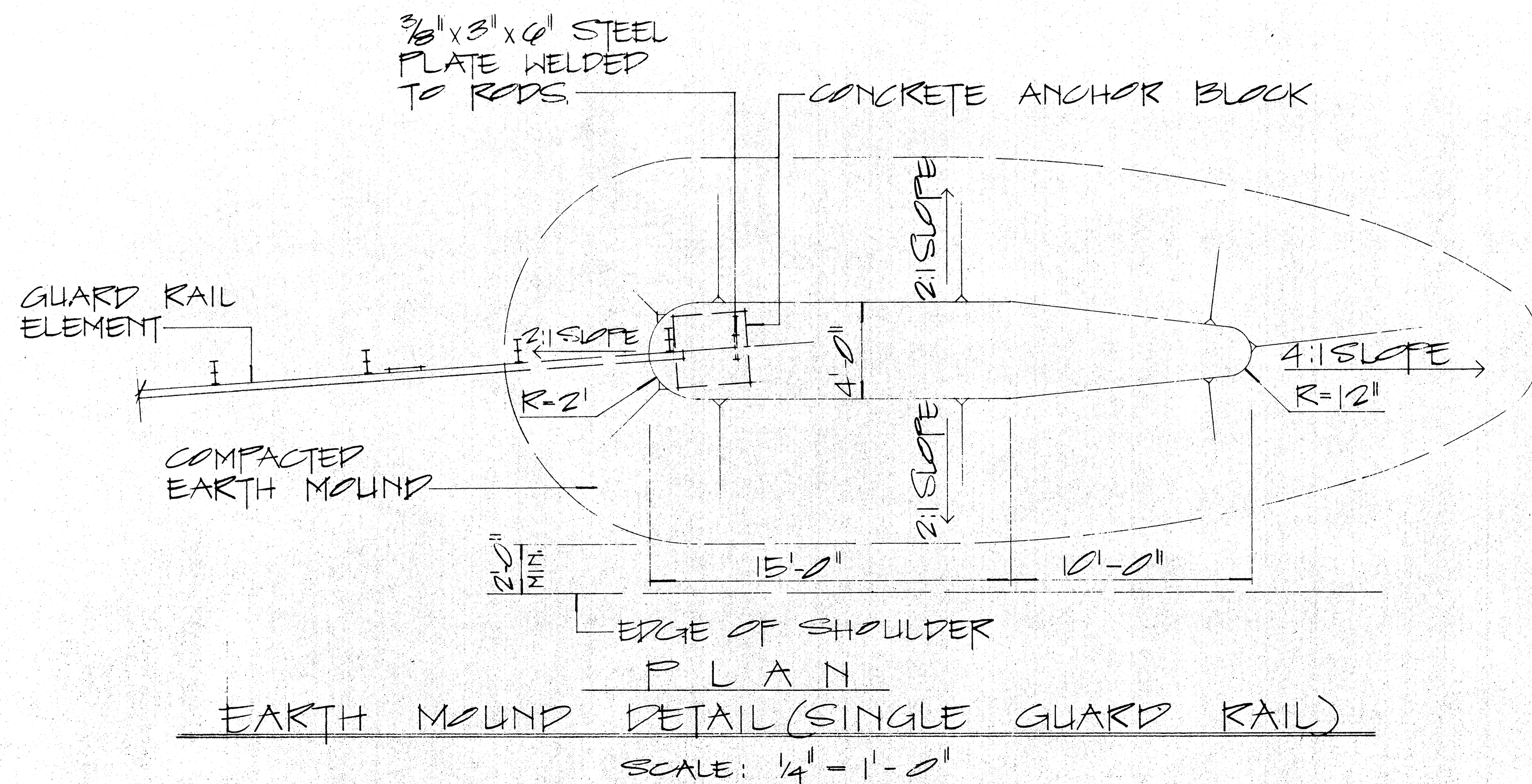


FOUNDATION POST

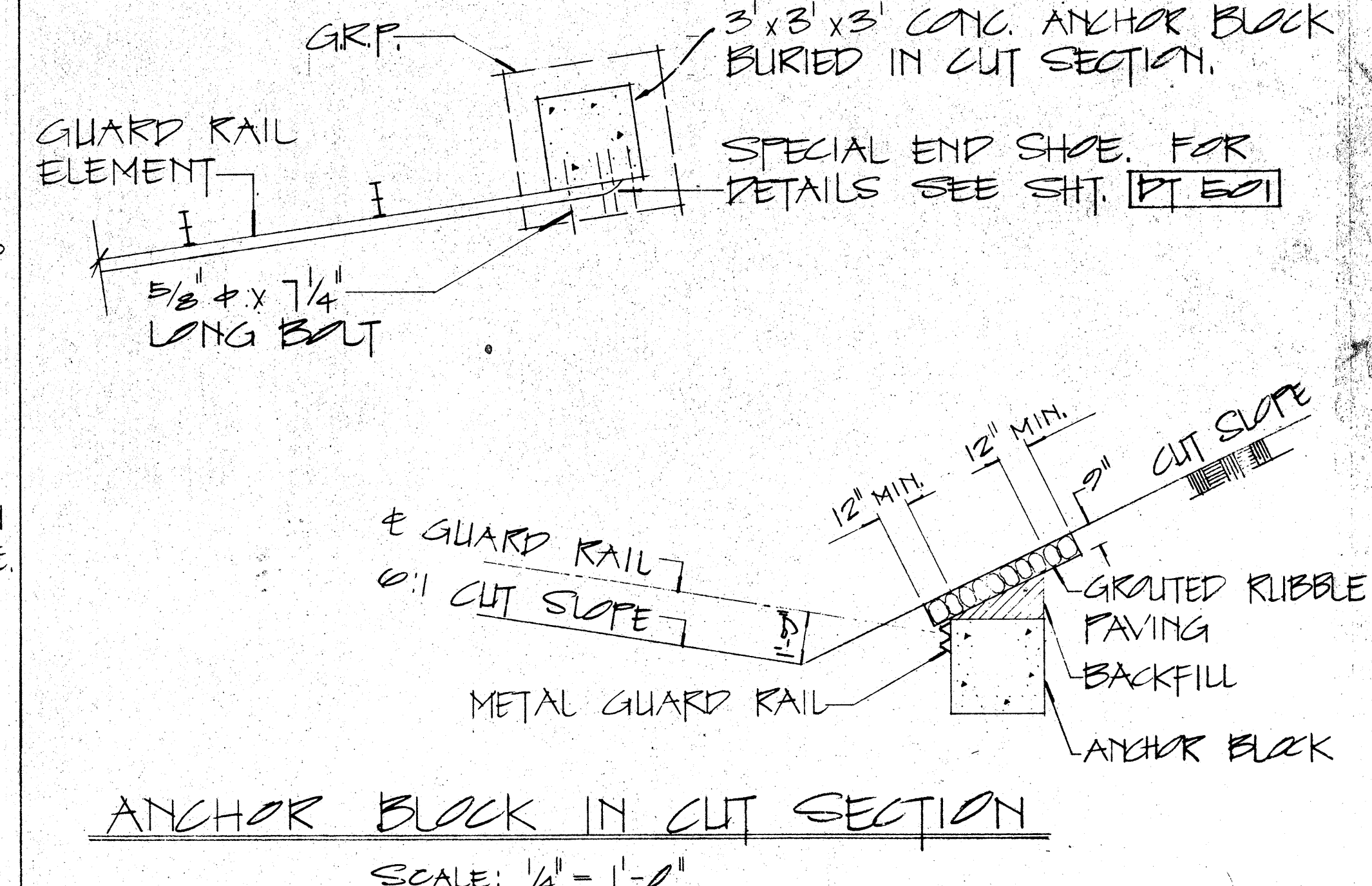
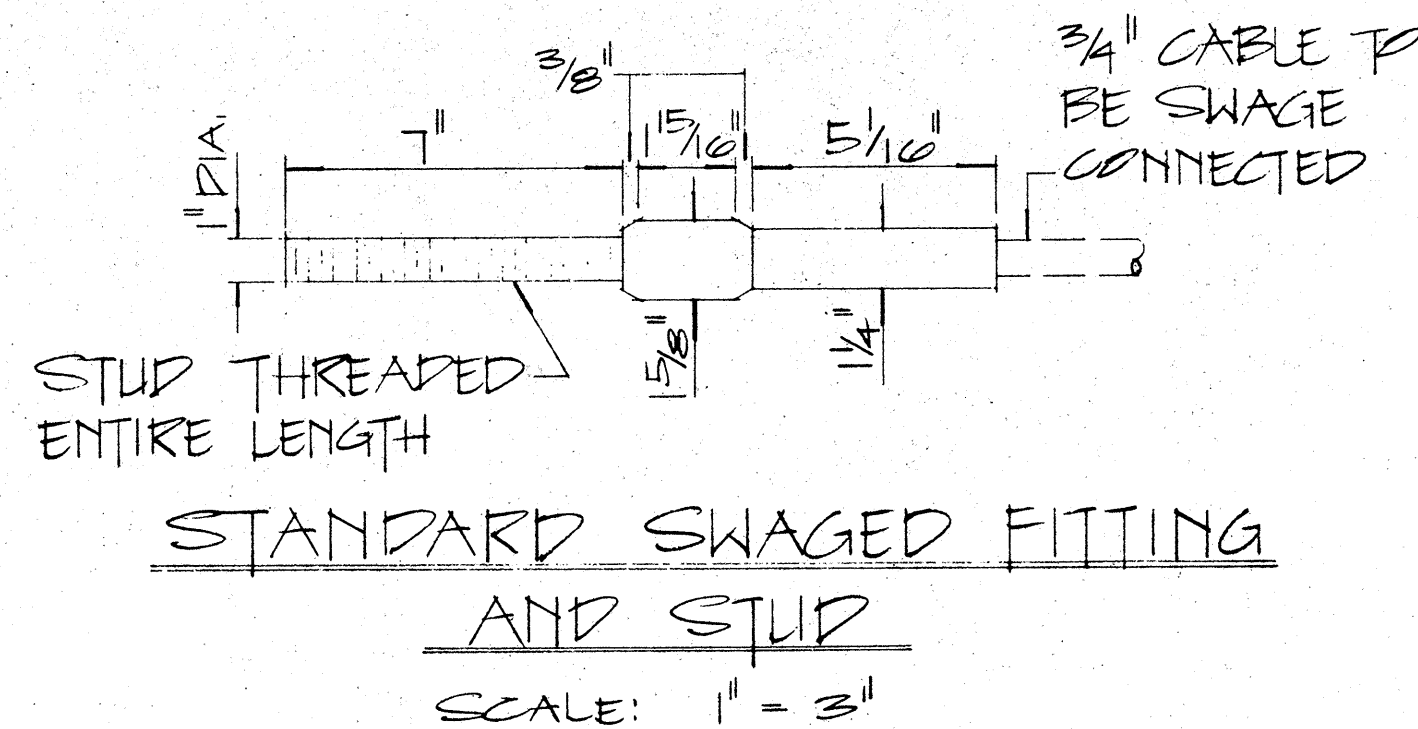
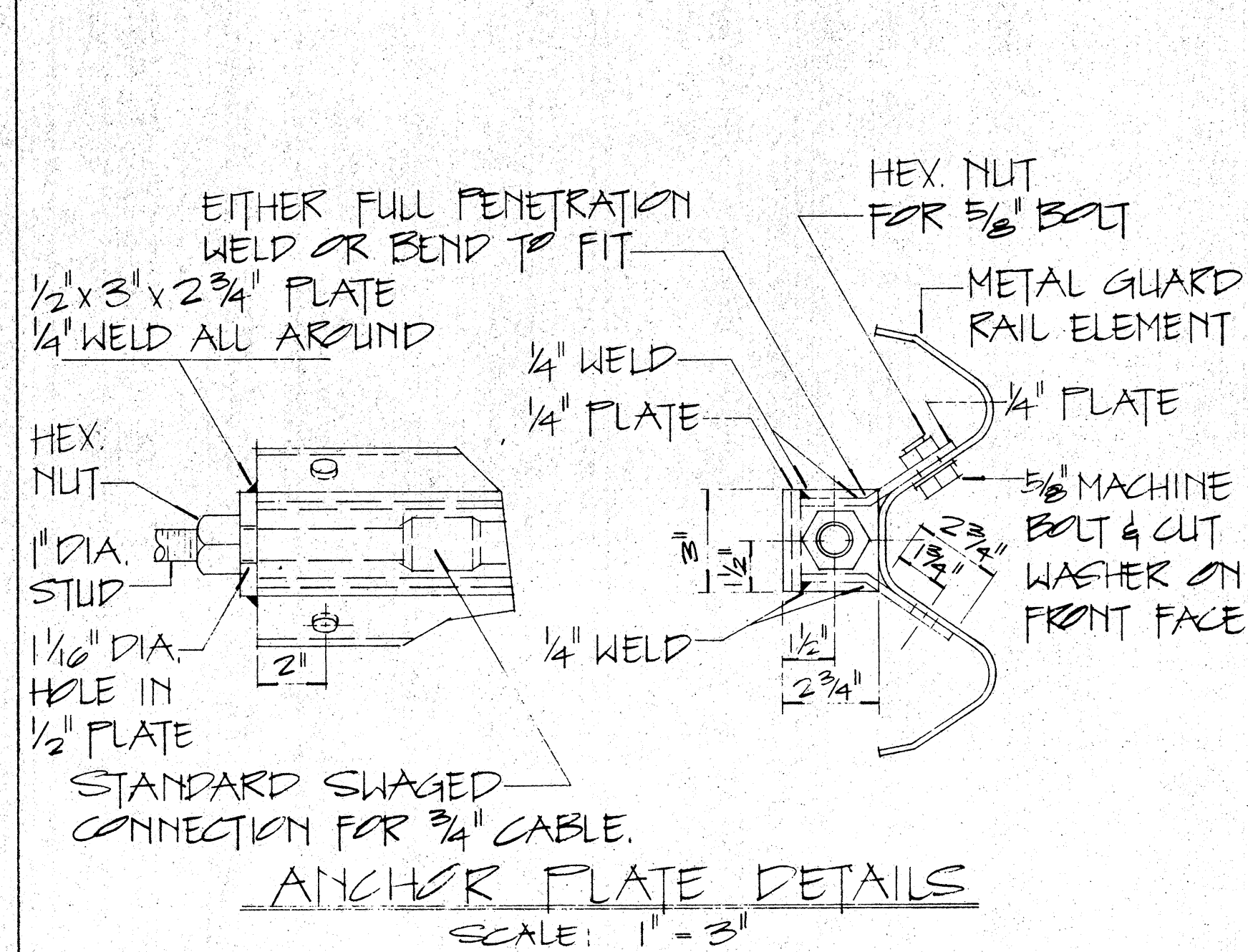
Scale: 3" = 1'-0"

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 519 Approved 12/30/69	H.T.	6/15/78
2	Added Note 6	H.T.	12/11/80

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FR-078-1(25)	1984	23	52



- NOTE:
1. GALVANIZED ANCHOR ROD, METAL GUARD RAIL AND POST BURIED IN GROUND SHALL BE COVERED WITH A MIN. 20-MIL THICKNESS OF COAL TAR ENAMEL CONFORMING TO AWWA STANDARD: C 203
 2. CONCRETE, GRP, EXCAVATION, EARTH MOUND, ANCHOR RODS AND MISCELLANEOUS APPURTENANCES NECESSARY TO ANCHOR THE GUARD RAIL ENDS SHALL BE INCIDENTAL TO THE METAL GUARD RAIL.



APPROVAL RECOMMENDED:

Eugene Tanaka 12/29/62 DATE

TRAFFIC ENGINEER

APPROVED:

John J. Sals 12-30-69 DATE

ASSISTANT CHIEF, ENGINEERING

NO.	REVISION	APPROVED BY	DATE

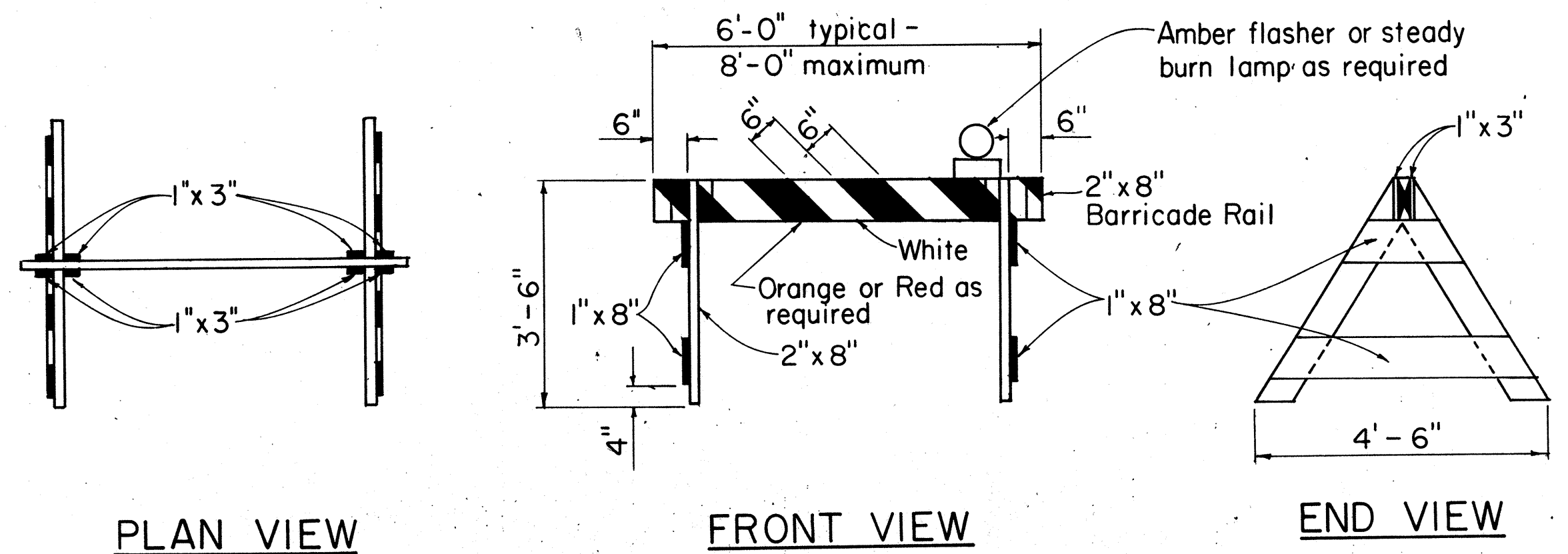
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
EARTH MOUND AND
ANCHOR BLOCK DETAILS

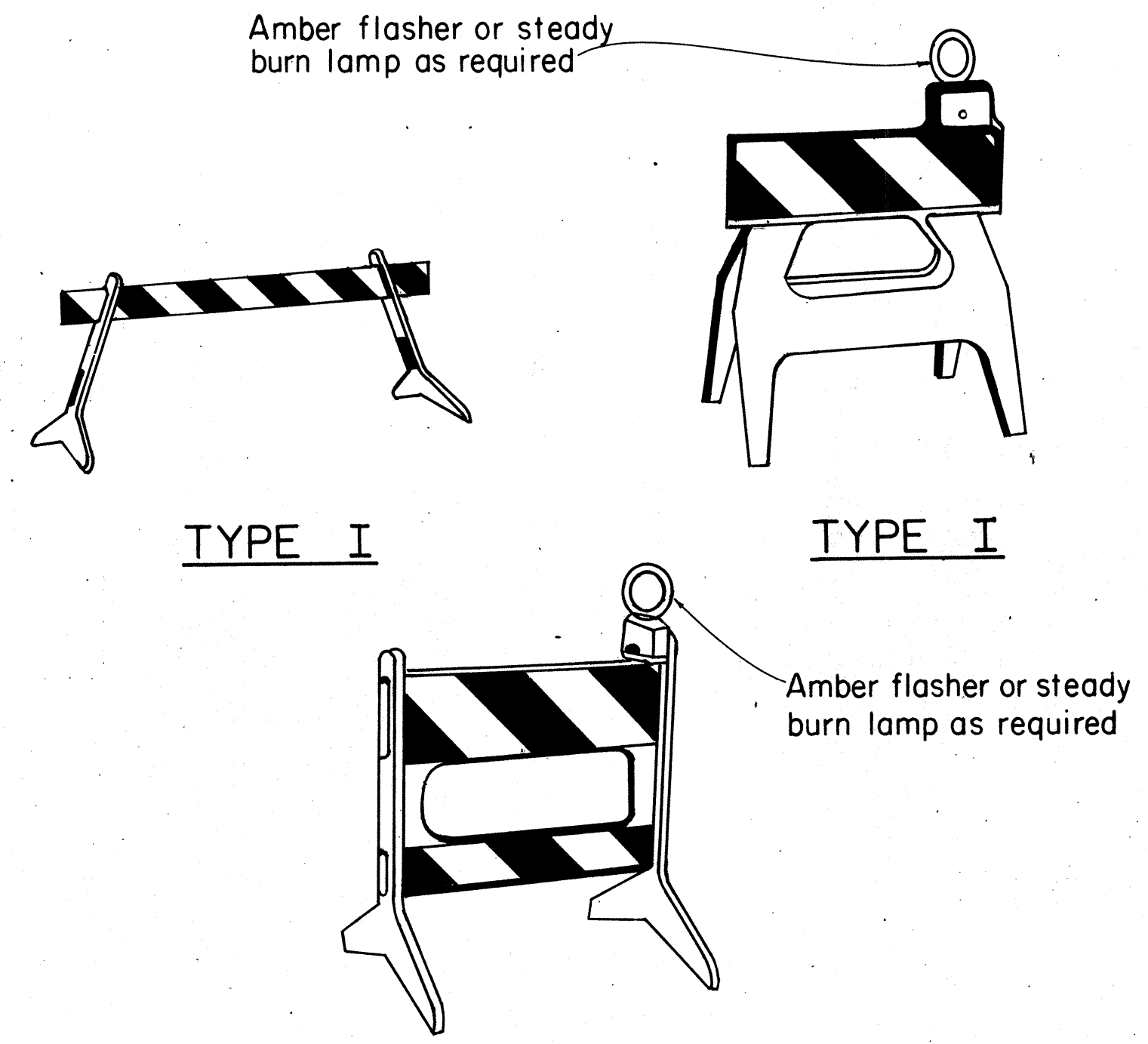
SCALE: AS SHOWN

SHEET No. 10 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	PR-078 (25)	1984	24	52



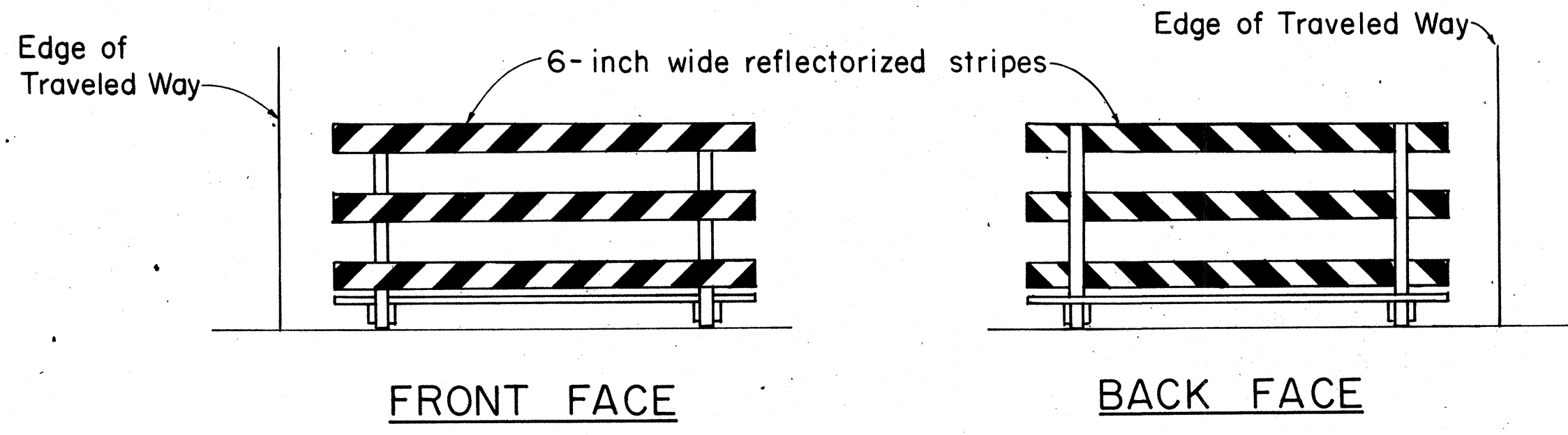
TYPE I BARRICADE
Scale: 1/2" = 1'-0"



TYPE II

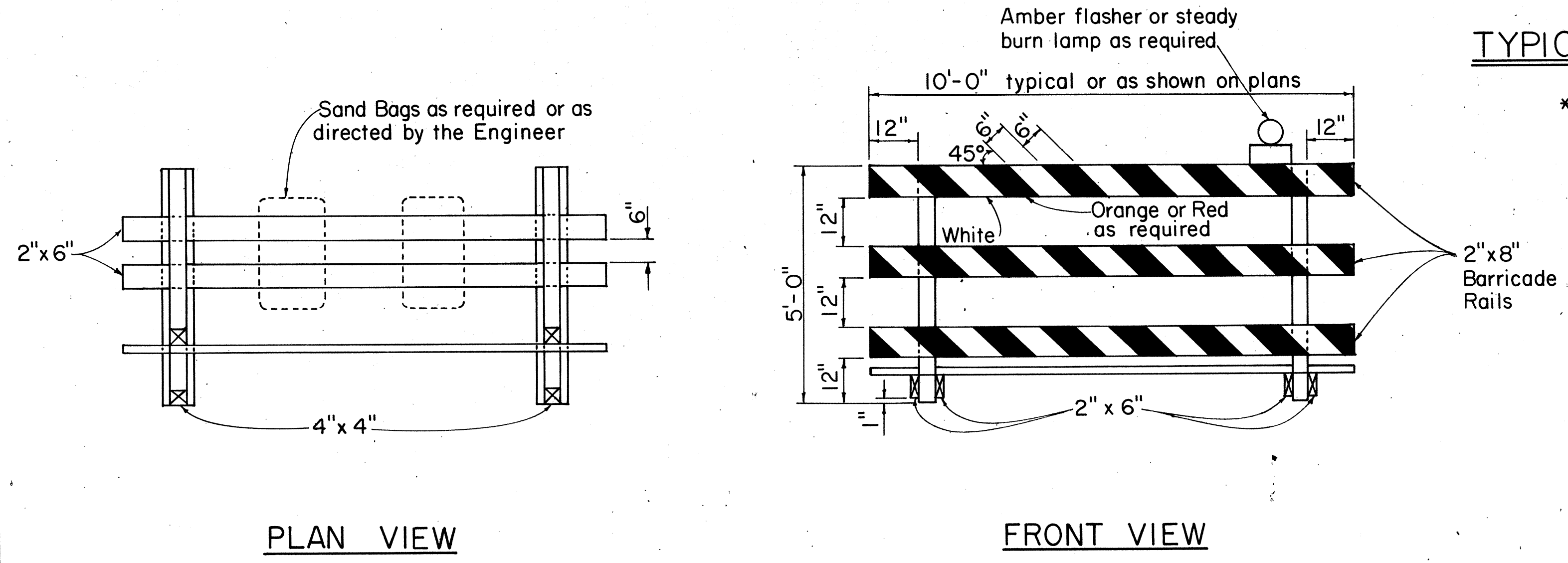
PLASTIC MOLDED BARRICADE OPTIONS*
Not to Scale

* Shop Drawings must be submitted for approval.



TYPICAL BARRICADE STRIPING DETAILS**
Not to Scale

** Similar for Types I & II



TYPE III BARRICADE
Scale: 1/2" = 1'-0"

GENERAL NOTES

- The front and back faces of each barricade rail shall be reflectorized with stripes sloping downward toward the same side (traveled way) of each barricade.
- Contractor may submit alternate barricade designs for approval.
- Sandbags or other approved weights shall not be placed on top of any striped rail.
- The Contractor is directed to Section 626.

APPROVAL RECOMMENDED:
Erich Tanaka 10/21/81
TRAFFIC ENGINEER DATE

APPROVED:
Robert P. Scher 10/23/81
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supercedes DT 800 Approved 12/30/69	HT	10/23/81

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

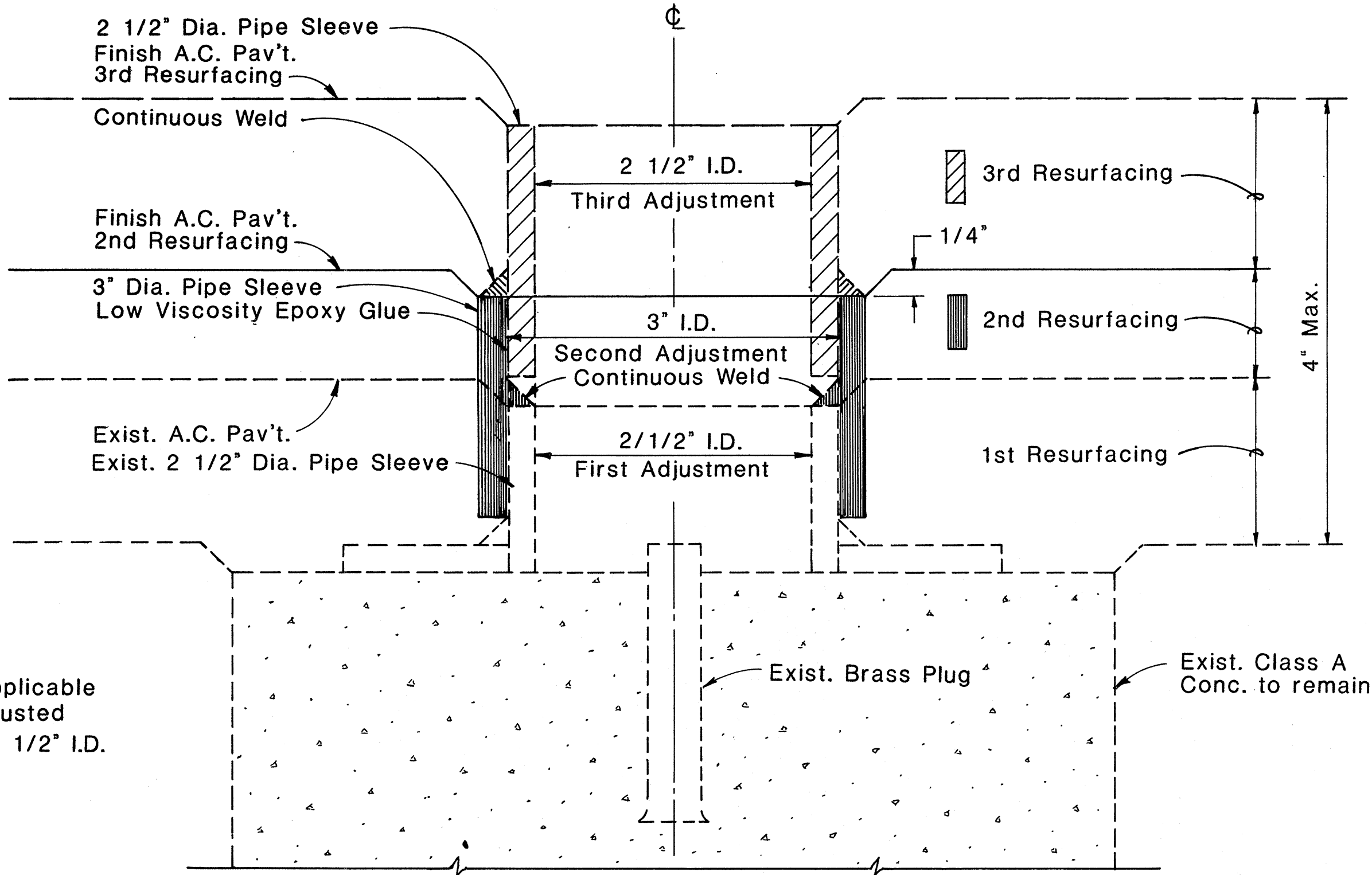
BARRICADES

SCALE: As Shown

SHEET NO. 11 OF 13 SHEETS DT 800

DATE	10/21/81
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

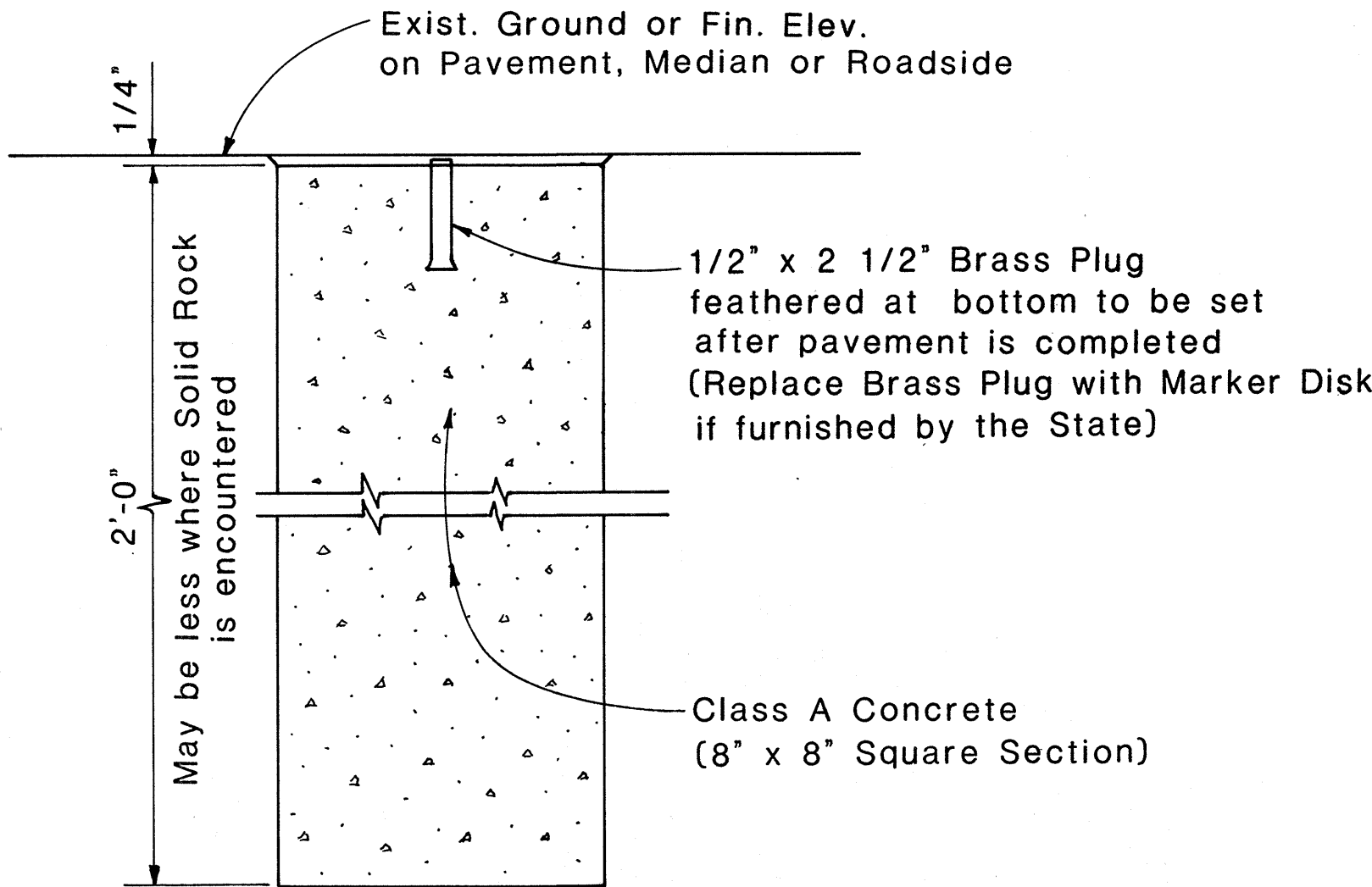
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FR-078-1(25)	1984	25	52



NOTE:
This detail is applicable only if initial adjusted pipe sleeve is 2 1/2" I.D.

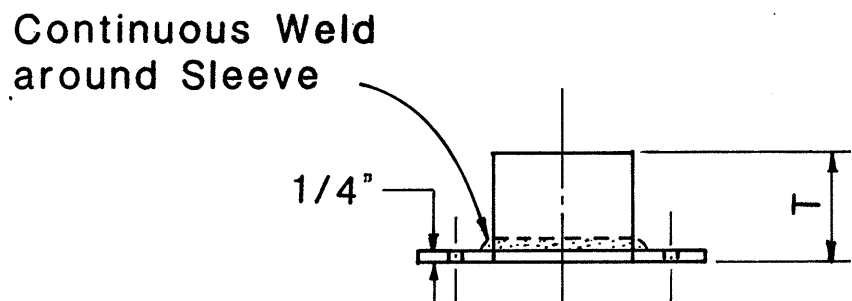
DETAIL FOR CENTERLINE MONUMENT (2ND & 3RD) ADJUSTMENTS

FULL SIZE



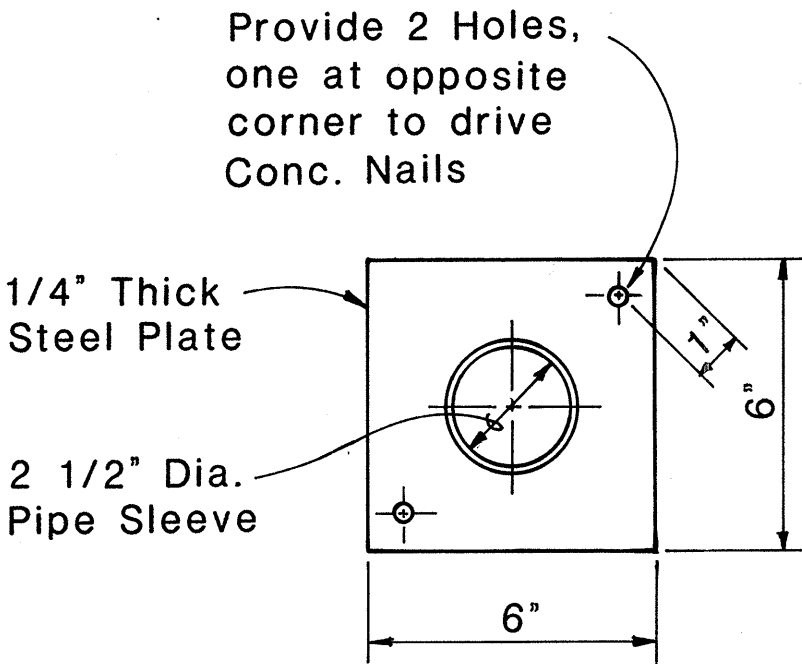
DETAIL FOR CENTERLINE & REFERENCE SURVEY MONUMENT

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

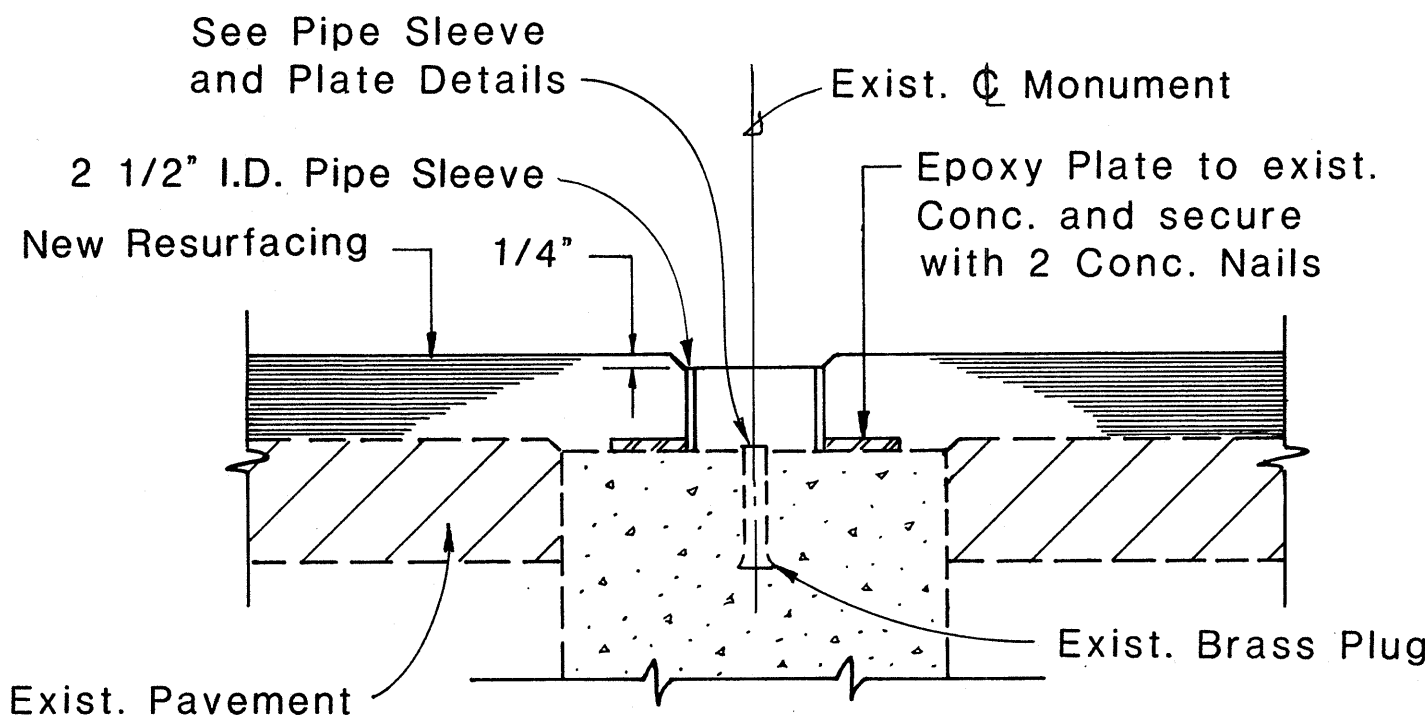


T = New Resurfacing Thickness

PIPE SLEEVE & PLATE ELEVATION



PIPE SLEEVE & PLATE PLAN



SECTION THRU MONUMENT

- NOTE:
- Adjustment of Centerline Monuments will not be paid for separately, but shall be considered incidental to the various contract items.
 - These Adjustment Details also apply to Centerline Monuments utilized as Stationline Reference Points.

DETAILS FOR ADJUSTED CENTERLINE MONUMENT

Scale: 3" = 1'-0"

APPROVAL RECOMMENDED:

Mike Minna 6-20-83
HIGHWAY DESIGN ENGINEER DATE

APPROVED:
Ed Fujiyama 6-22-83
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED	
		BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

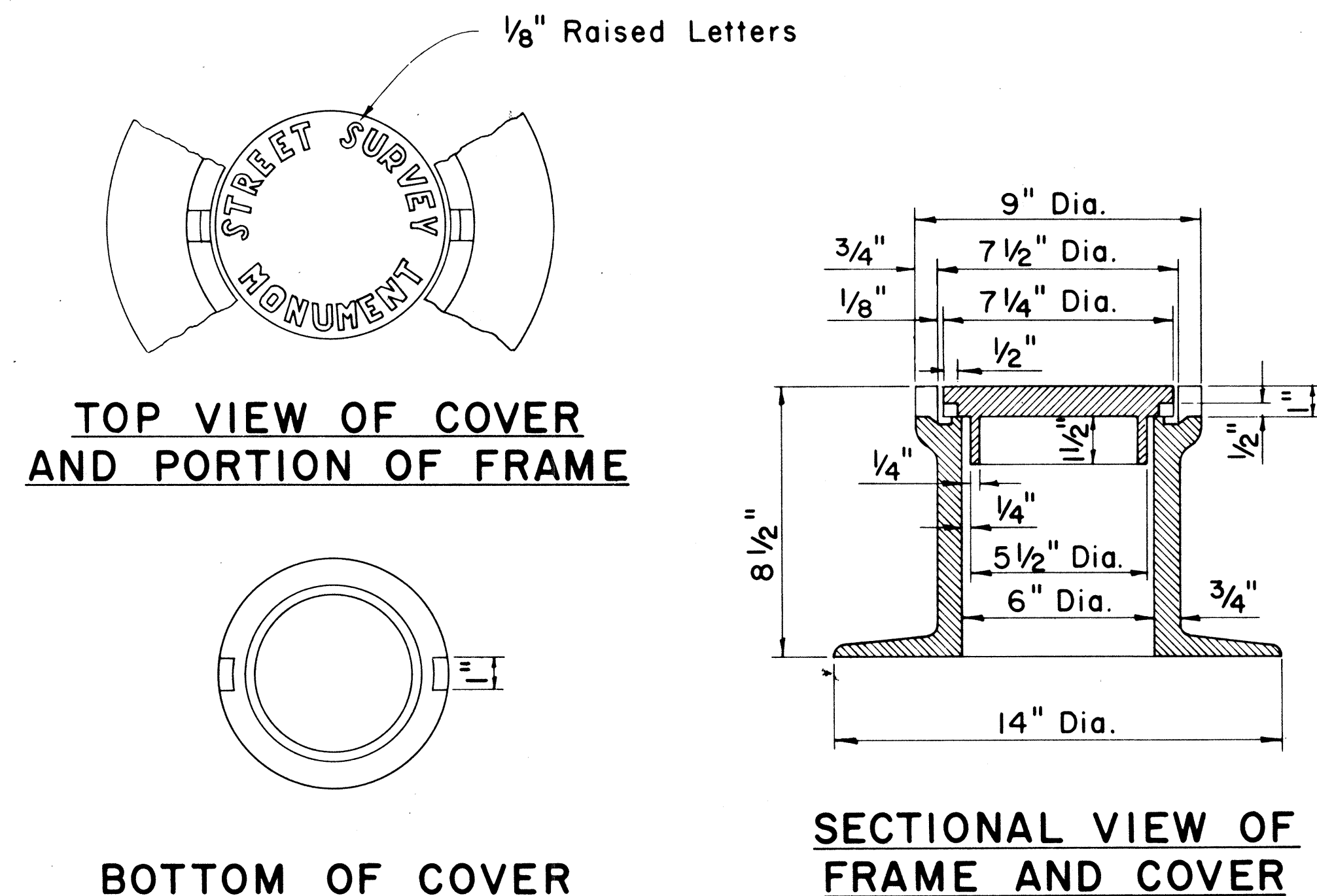
**CENTERLINE AND REFERENCE
SURVEY MONUMENT**

Scale: As Shown Date: May, 1983

SHEET No. 12 OF 13 SHEETS

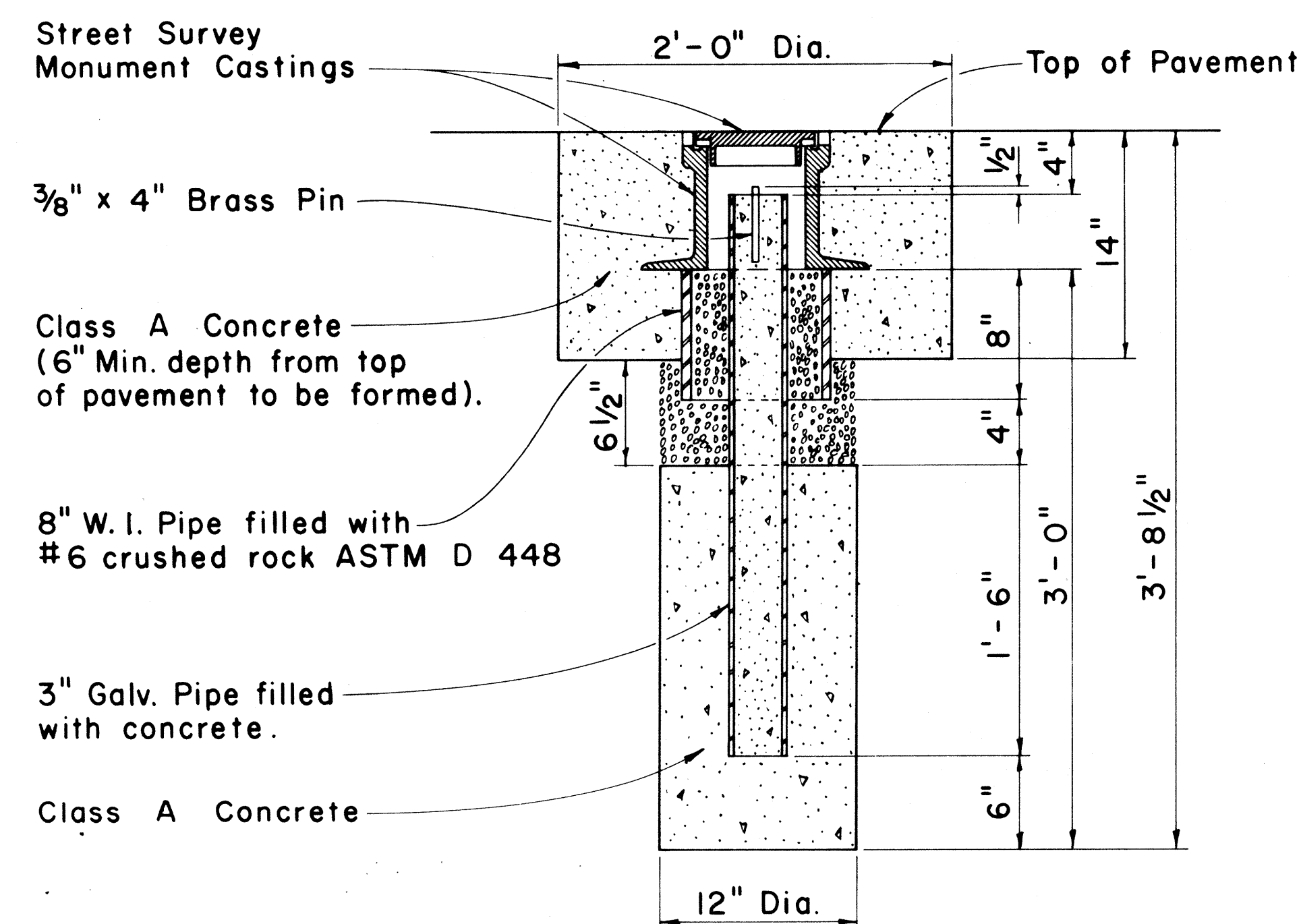
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FR-078-1(25)	1984	26	52



STREET SURVEY MONUMENT CASTINGS

Scale: 3" = 1'-0"

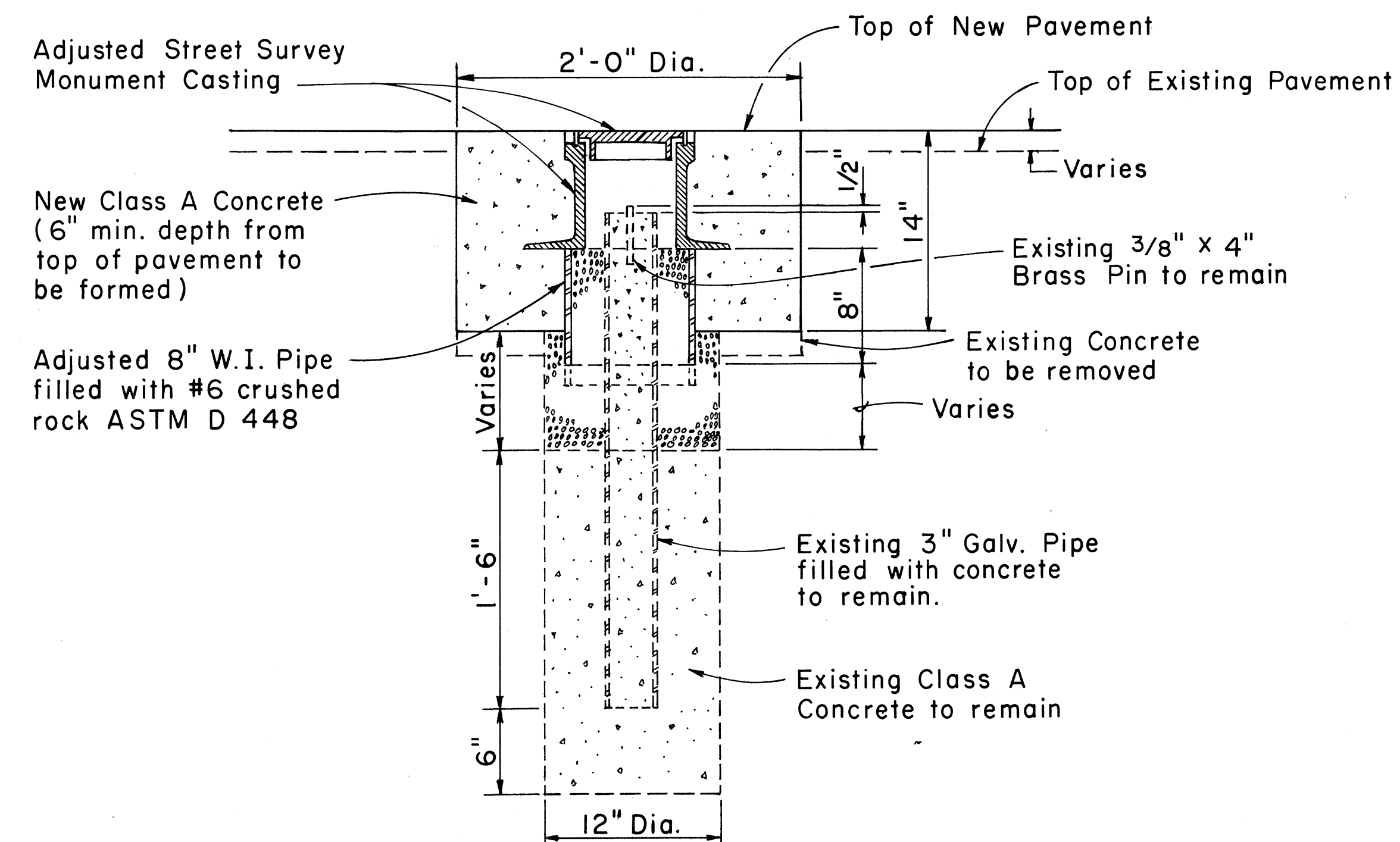


NOTE:

Where the excavation extends into solid rock the depth may be decreased if approved by the Engineer.

STREET SURVEY MONUMENT

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



DETAILS FOR ADJUSTED STREET SURVEY MONUMENT

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

APPROVAL RECOMMENDED:

 HIGHWAY DESIGN ENGINEER 12-4-69 DATE

APPROVED:

 ASSISTANT CHIEF, ENGINEERING 12-10-69 DATE

NO.	REVISION	APPROVED BY	DATE
1	Deleted "Detail For Centerline & Reference Survey Monument," added "Detail For Adjusted Street Survey Monument" and deleted "C & C" Inscription on Cover.		6-22-83

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS

STREET SURVEY MONUMENT

SCALE: AS SHOWN

SHEET No. 13 OF 13 SHEETS DD 614.1