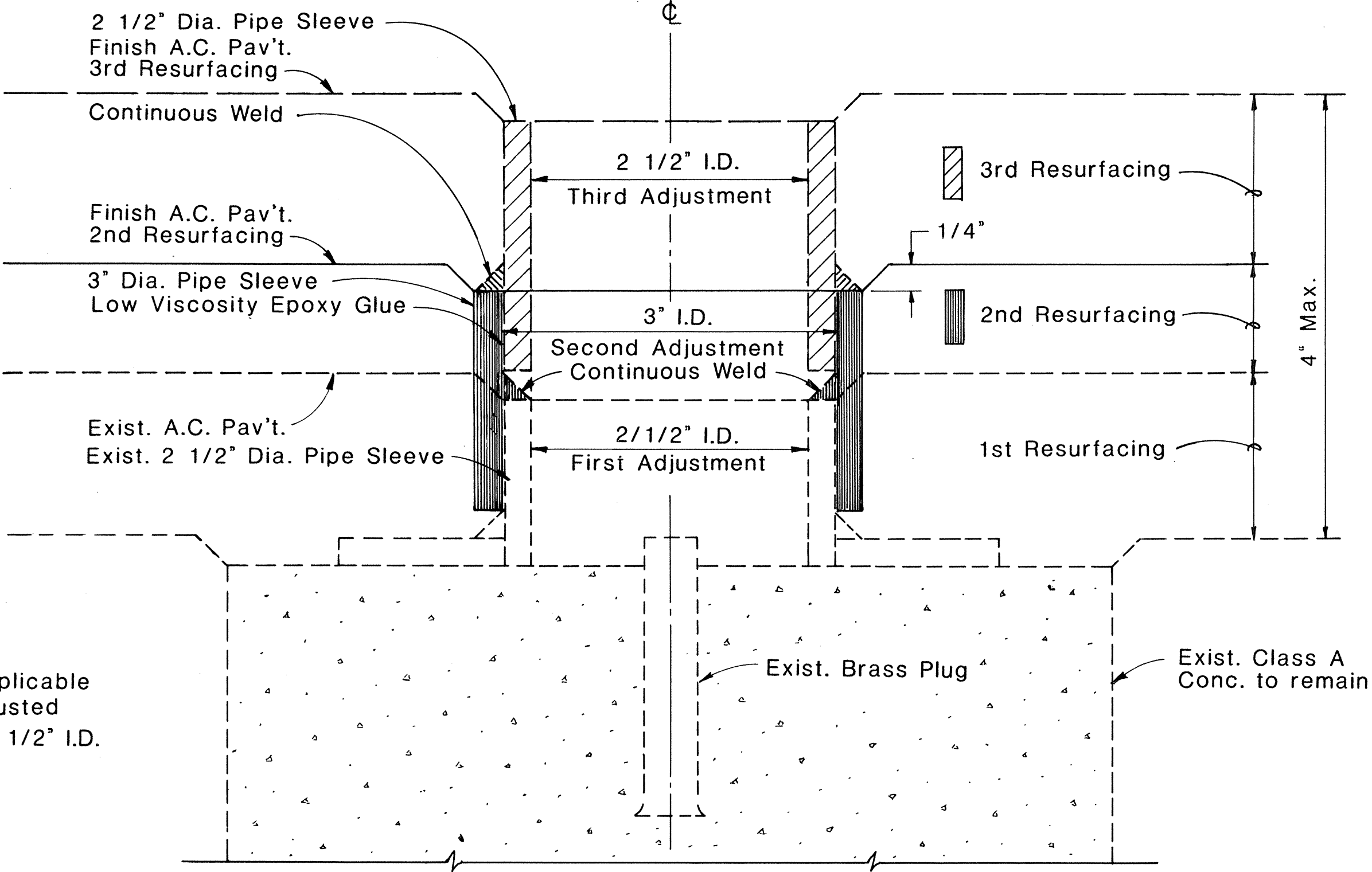


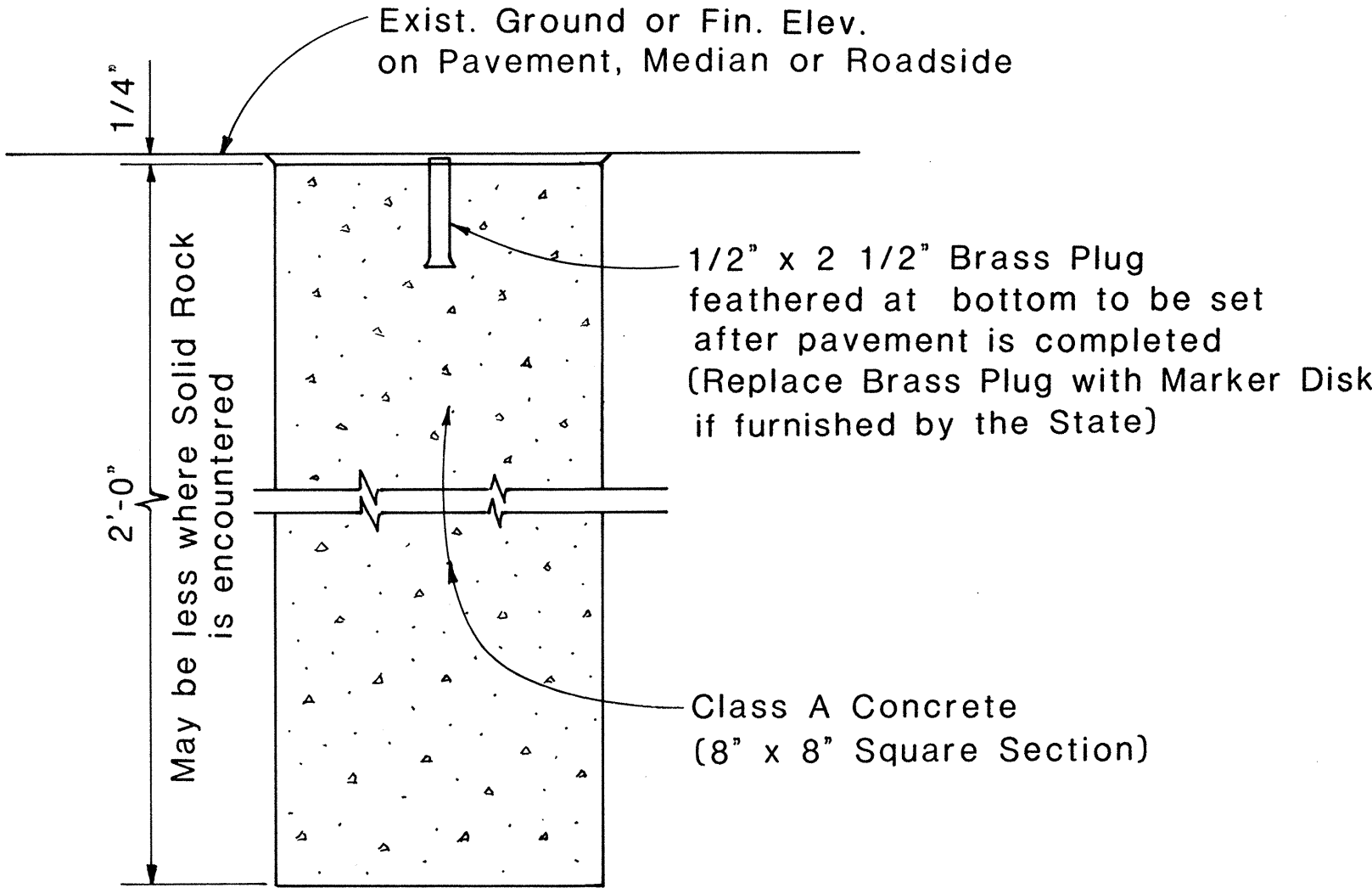
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900(24)	1986	18	28



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

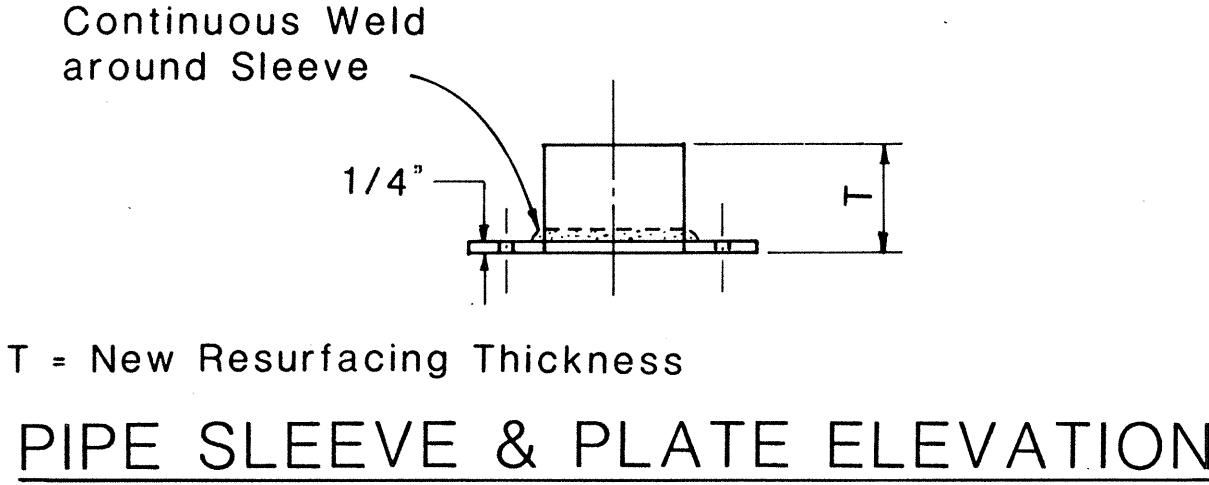
Scale: 1 1/2" = 1'-0"

APPROVAL RECOMMENDED:

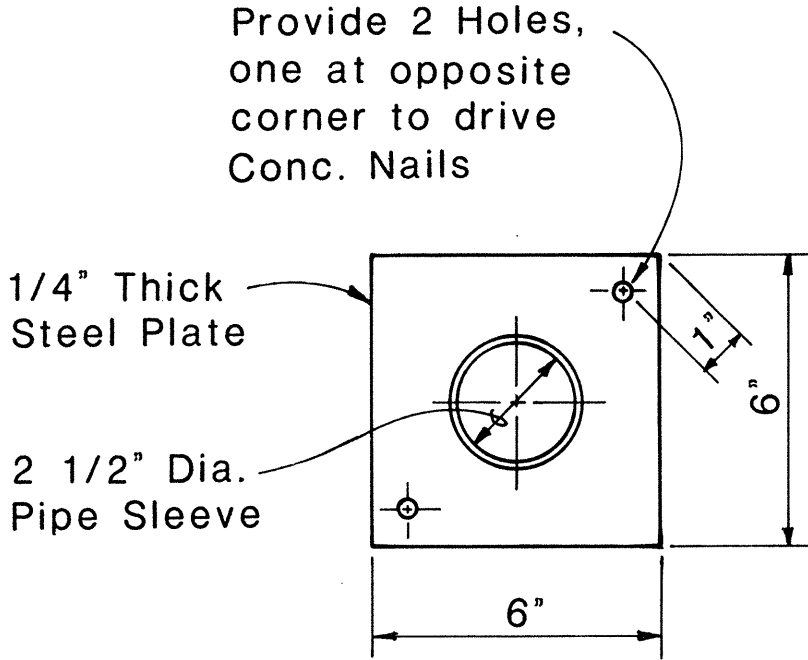
Mike Mima 6-20-83
HIGHWAY DESIGN ENGINEER DATE

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

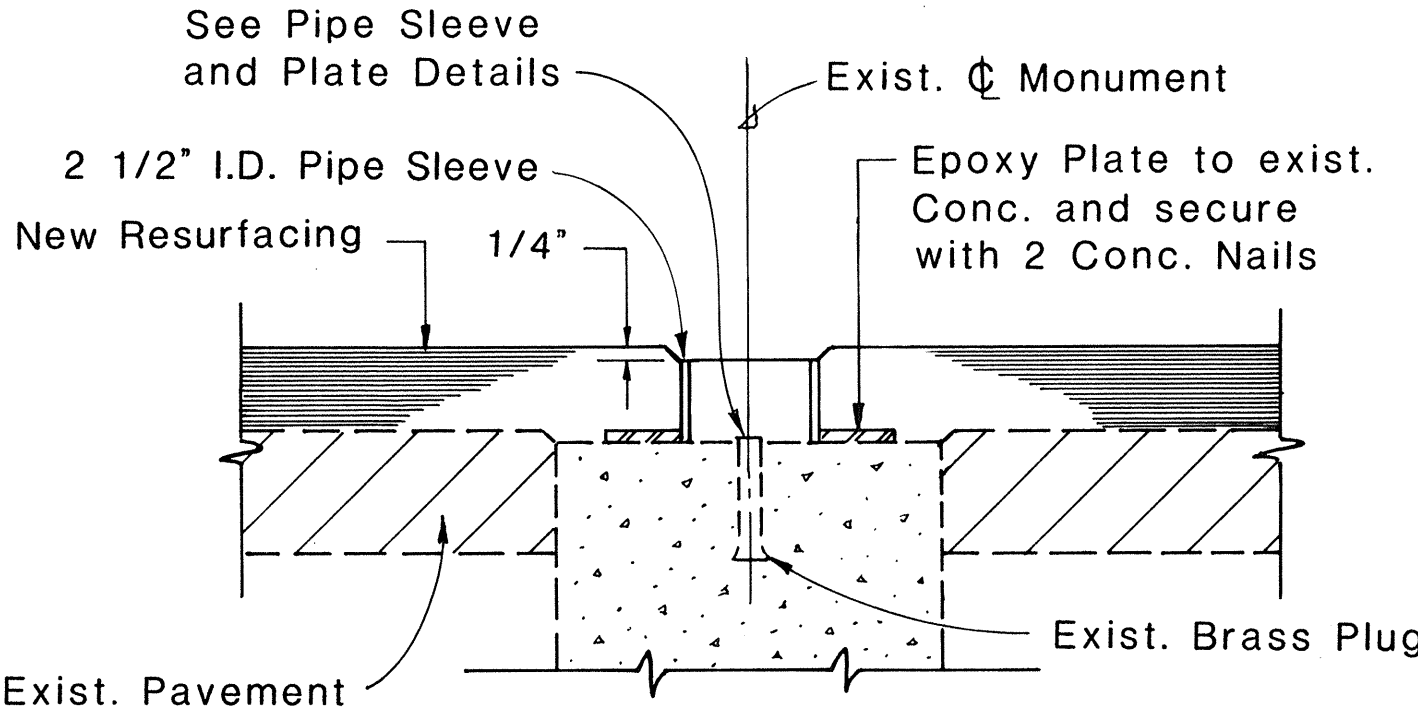
ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
NO.	



PIPE SLEEVE & PLATE ELEVATION



PIPE SLEEVE & PLATE PLAN



SECTION THRU MONUMENT

NOTE
These Adjustment Details also apply to Centerline Monuments utilized as Stationline Reference Points.

DETAILS FOR ADJUSTED CENTERLINE MONUMENT

Scale: 3" = 1'-0"

NO.	REVISION	APPROVED	
		BY	DATE
1	Delete Note No. 1	<i>MD</i>	11-12-84

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

**CENTERLINE AND REFERENCE
SURVEY MONUMENT**

Scale: As Shown Date: May, 1983

SHEET NO. OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900(24)	1986	19	28



CW20-1a 48" x 48"



CW20-2d 48" x 48"



CW20-3b 48" x 48"



CW20-4d 48" x 48"



CW20-5d(L) 48" x 48"



CW20-7c 36" x 36"
24" x 18"
CW20-7c-A 48" x 48"
24" x 18"



CW21-1 30" x 30"



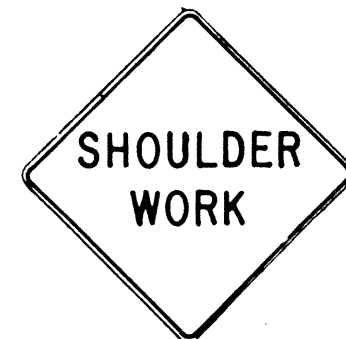
CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



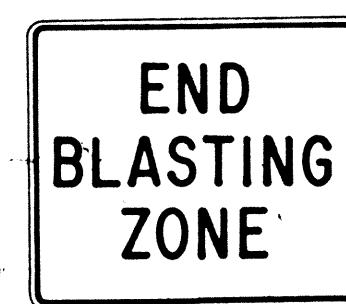
CW21-6 30" x 30"



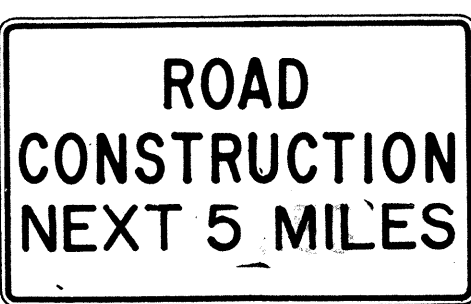
CW22-1b 48" x 48"



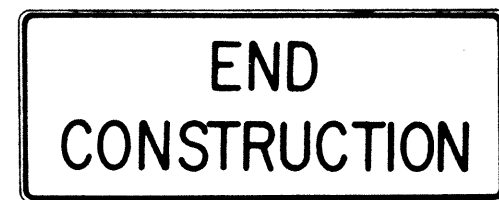
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



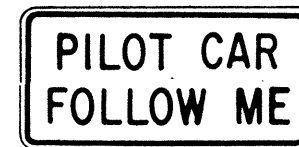
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



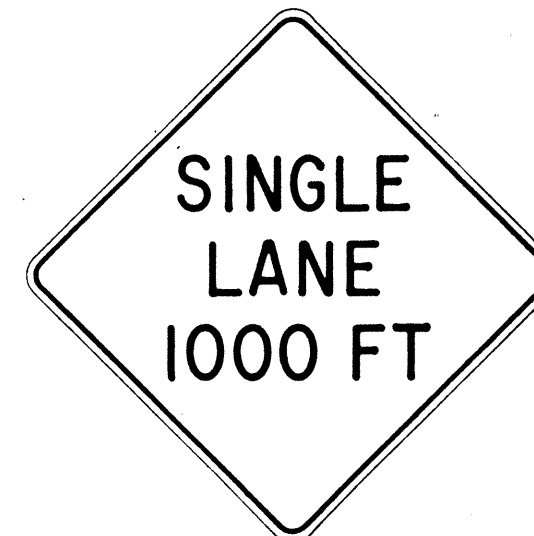
CM4-10(R) 48" x 18"



CG20-4 36" x 18"



CW23-1 36" x 36"



CW23-2b 48" x 48"



CW23-3(R) 48" x 48"

GENERAL NOTES

- Sign details shall conform to the latest editions of FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," "Standard Alphabets for Highway Signs," and "Standard Highway Signs," and as amended.
- All construction signs shall be reflectorized.
- All construction signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- For "CW" series signs, suffixes a,b,c and d are as follows:
a-1500 FT, b-1000 FT,
c-500 FT and d-AHEAD.

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 104 Approved 12-30-69	H.T.	3/23/72
2	Revised General Note 1	H.T.	10/16/74
3	Revised General Note 2	H.T.	9-16-75
4	Revised General Note 2 and sign CG20-1(5)	H.T.	9-14-76
5	Revised General Note 1 and sign CW20-7c	E.T.	9/18/85

APPROVAL RECOMMENDED:
Erich Tanaka 3/21/72
TRAFFIC ENGINEER DATE

APPROVED:
William Salsich 2/23/72
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS CONSTRUCTION SIGNS

NOT TO SCALE

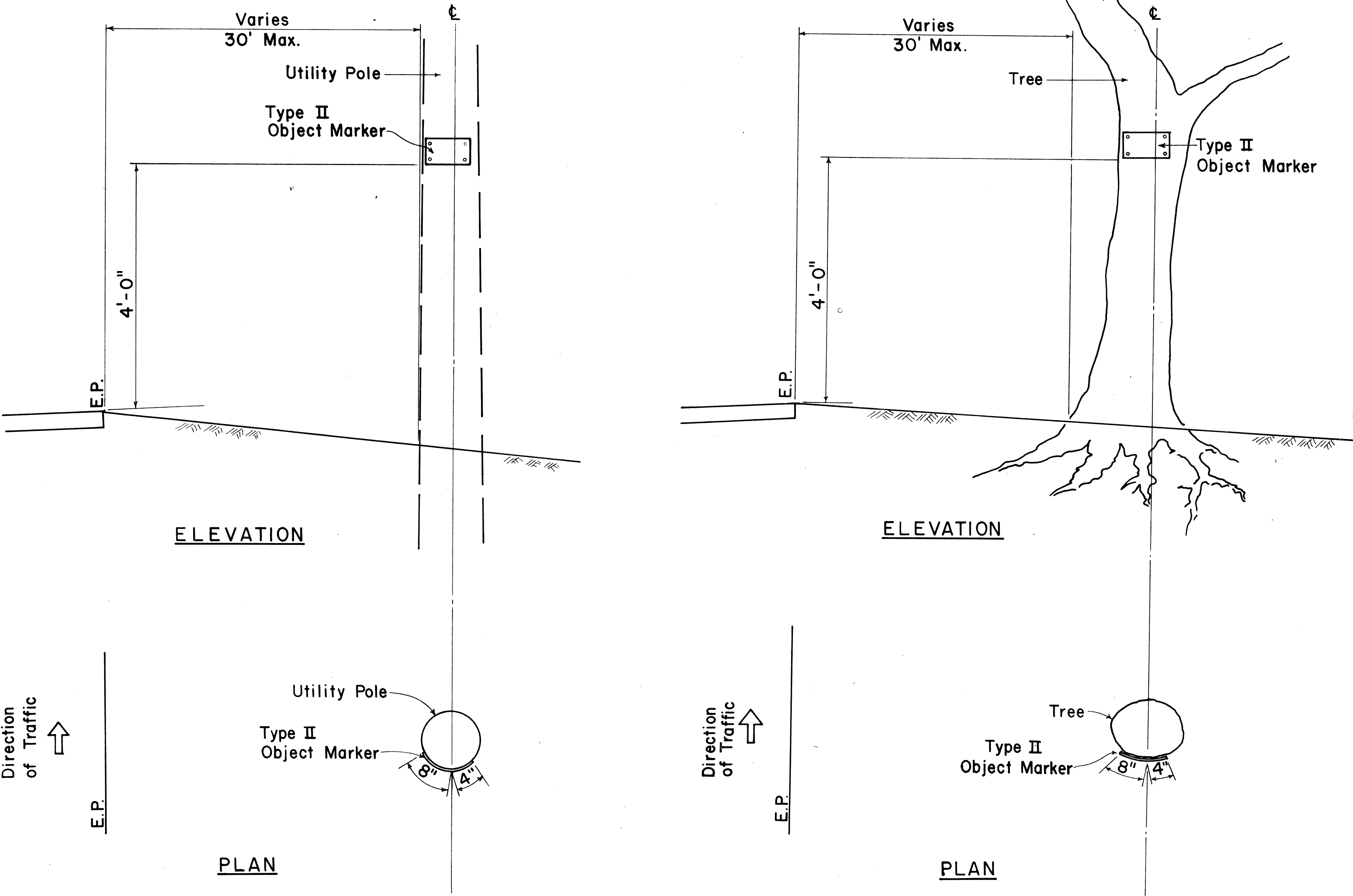
SHEET No. OF SHEETS DT 104

DATE	____
DESIGNED BY	____
CHECKED BY	____
NOTED BY	____
ORIGINAL PLAN	____

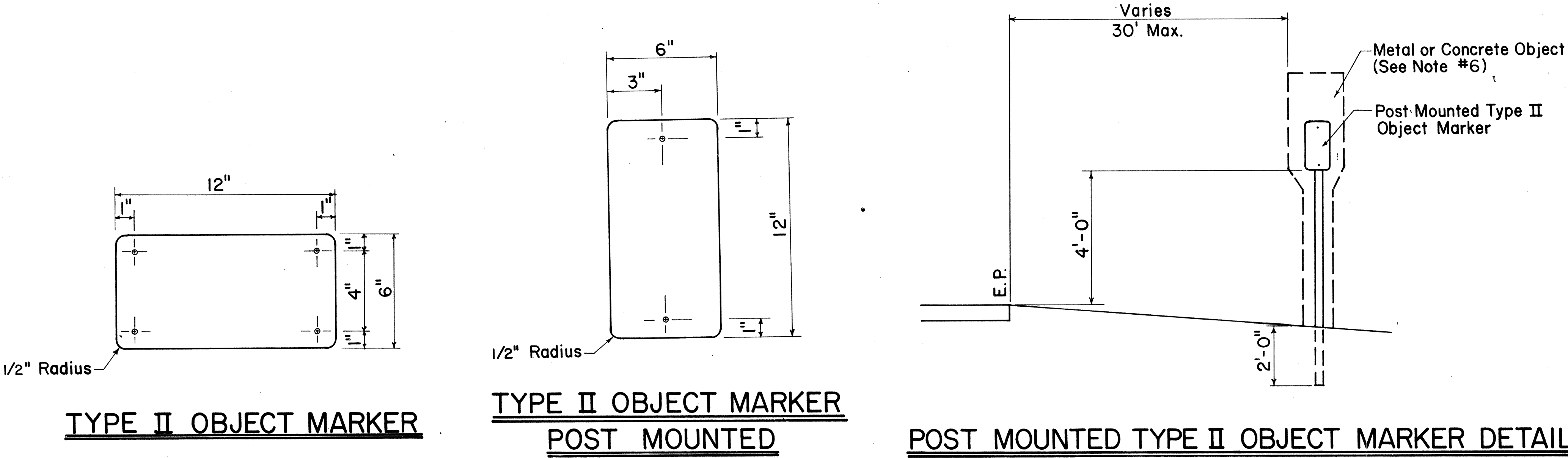
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900(24)	1986	21	28

GENERAL NOTES

1. All objects (utility poles or trees) that are within the State highway right of way and within 30 feet of the roadway edge of pavement shall be marked as directed by the Engineer.
2. The Contractor shall prepare the mounting surface of each object as directed by the Engineer and place the Type II Object Marker as shown on this plan.
3. Type II Object Markers shall be mounted on utility poles and trees with 13/4" galv. roofing nails (4 ea.).
4. Branches of trees which obscure the object markers shall be trimmed. (Payment shall be incidental to Type II Object Markers as shown in the proposal).
5. Type II Object Markers for utility poles and trees, etc., shall be made of amber reflective sheeting material overlayed on 0.020" aluminum sheeting.
6. Objects such as concrete posts, concrete or rock walls and boxes, metal posts (greater than 2" in diameter), or metal boxes shall be marked with post mounted object markers. Post mounted Type II Object Markers shall conform to the following requirements:
 - a. It shall consist of amber reflective sheeting material overlayed on 0.063" thick sheet aluminum backing of the dimensions shown on the plans.
 - b. It shall be mounted on either metal posts or flexible delineator posts with 1/4"x2" galv. bolts, nuts and washers. Metal posts shall be galvanized and shall be either 1 1/2"x1 1/2", 12 gage square tube posts or 1.12 lbs. per ft. flanged channel posts.



TYPICAL TYPE II OBJECT MARKER MOUNTING DETAIL



TYPE II OBJECT MARKER

TYPE II OBJECT MARKER
POST MOUNTED

POST MOUNTED TYPE II OBJECT MARKER DETAIL

APPROVAL RECOMMENDED:

Eiichi Tanaka 3/30/83
TRAFFIC ENGINEER DATE

APPROVED:

S. Fujiyama 3-31-83
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

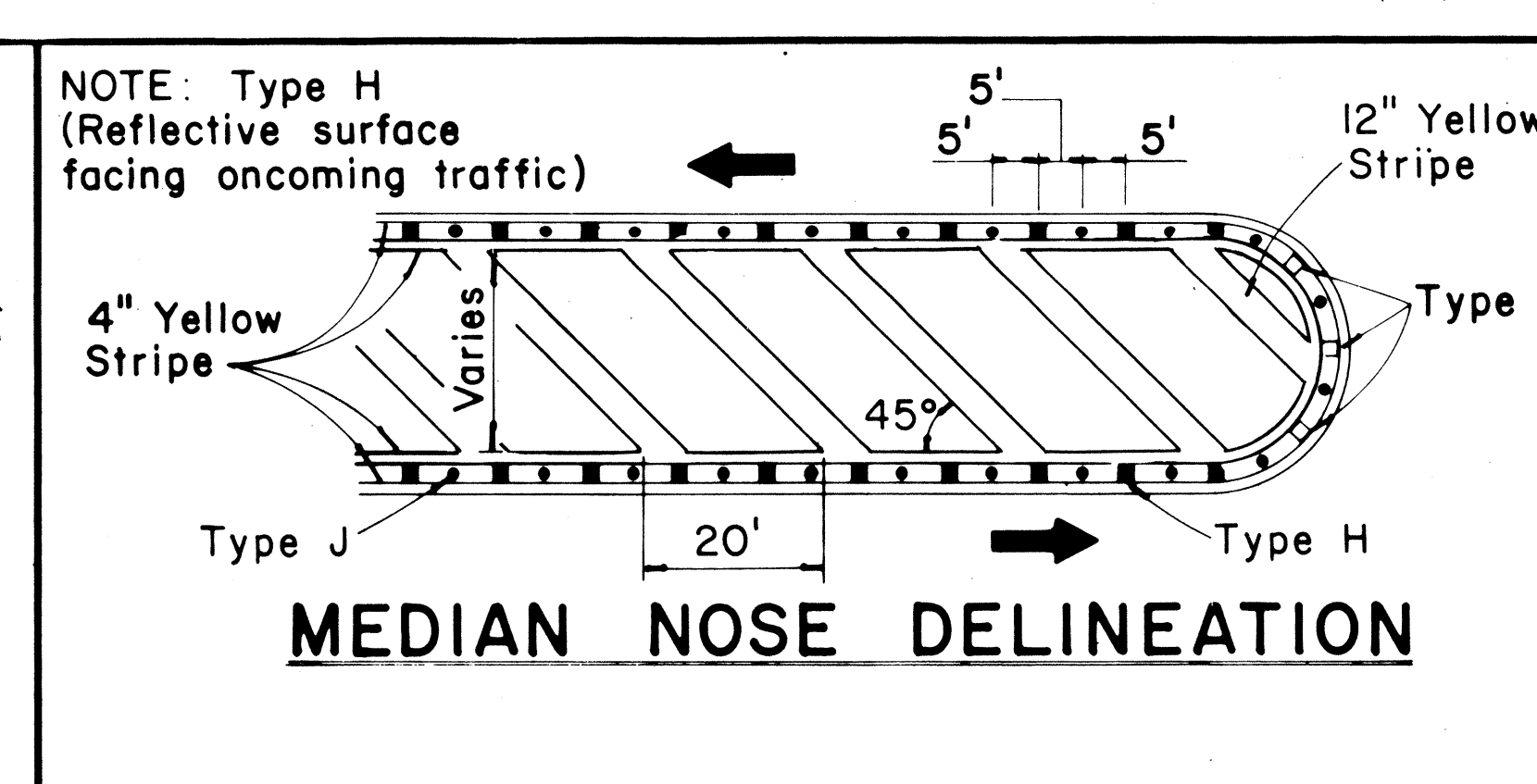
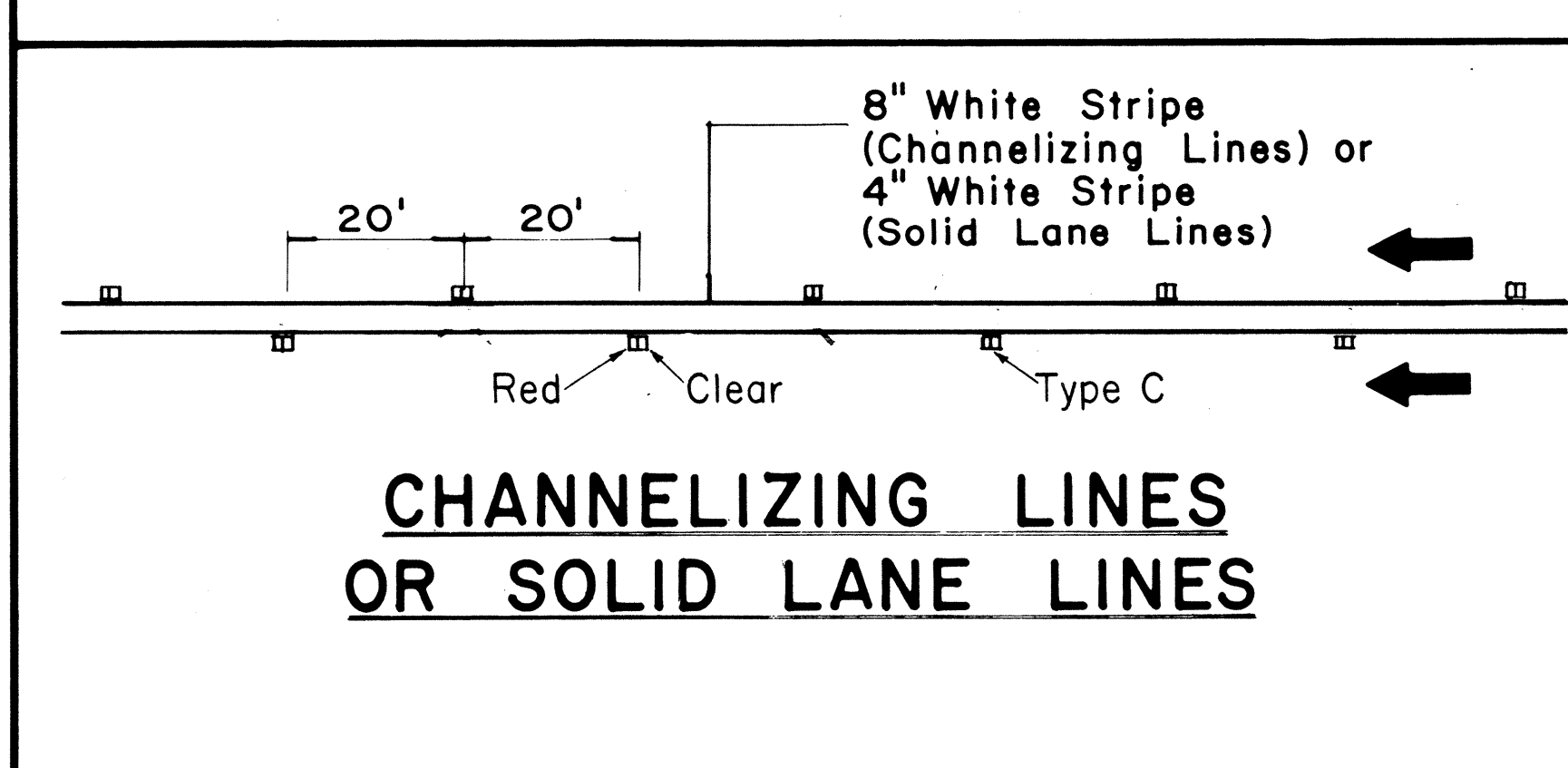
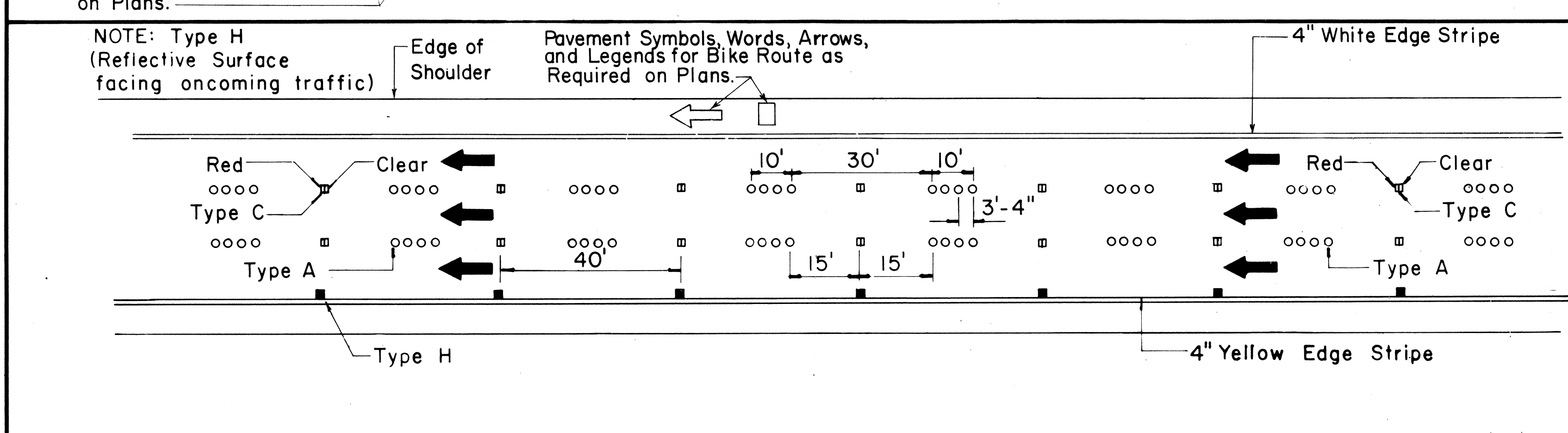
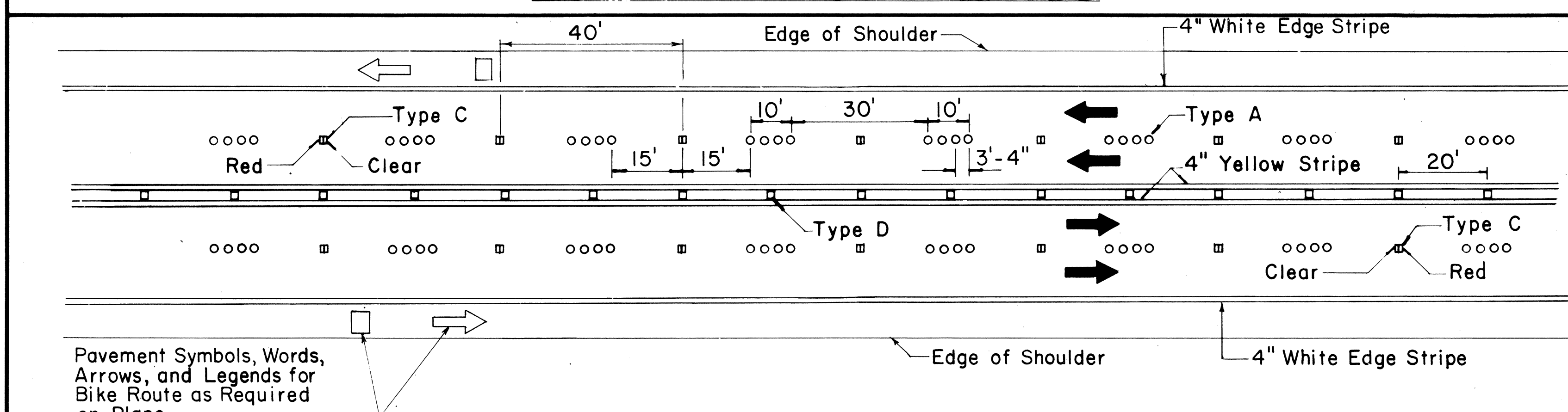
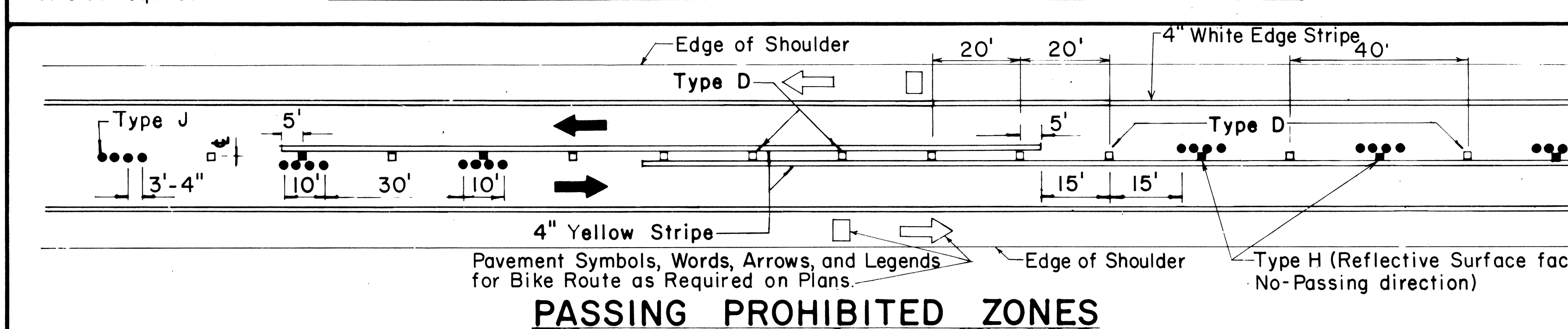
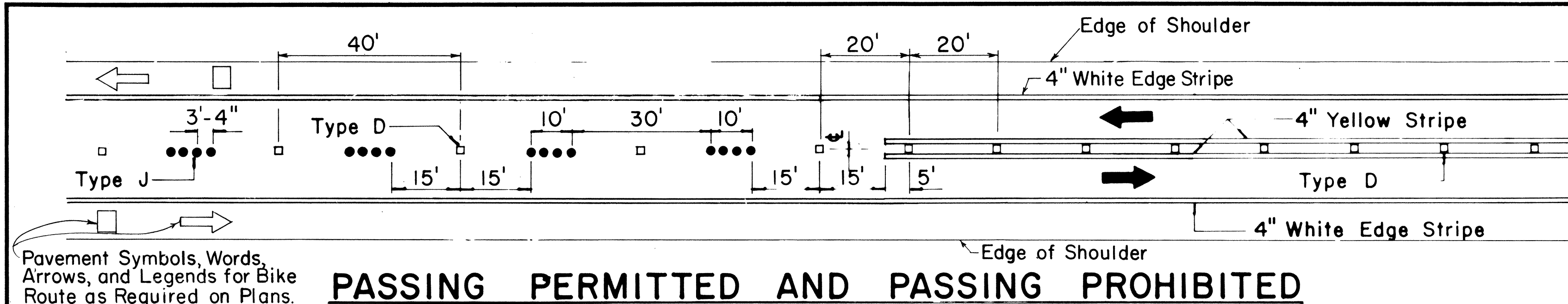
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
TYPE II OBJECT MARKERS

Scale: Not to scale Date: March 1983
SHEET No. OF SHEETS DT III

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900/28	1986	22	28

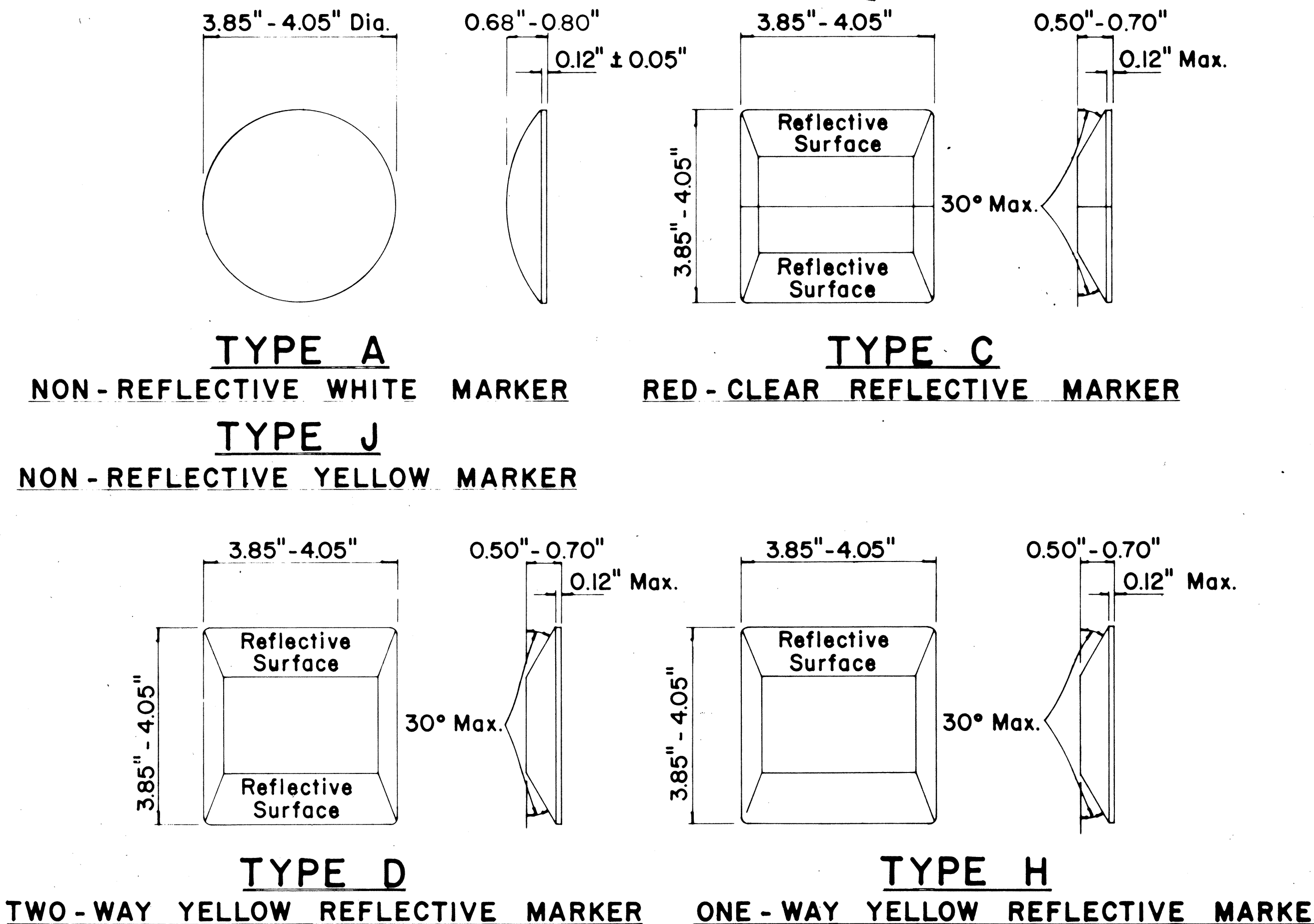


TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

MISCELLANEOUS



GENERAL NOTES

- Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- Layout and installation of pavement marking and striping shall be done by the Contractor. The Contractor shall check the layouts with the Engineer prior to performing work.
- Edge lines shall not be continued through intersections and shall not be broken for driveways unless otherwise shown or directed.

LEGEND

- Type A
- Type C
- Type D
- Type H
- Type J

APPROVAL RECOMMENDED:

Eishi Tanaka 7/21/78
TRAFFIC ENGINEER DATE

APPROVED:

Harbert J. Zekisch 7/24/78
ASSISTANT CHIEF, ENGINEERING DATE

No	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.T.	7/24/78
2	Delete Type A Markers from Bike Route Delineation.	H.T.	10/15/79
3	Added General Note 3. Revised left edge stripe.	H.T.	9-28-83
4	Revised Channelizing Lines or Solid Lane Lines.	H.T.	7/18/85

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

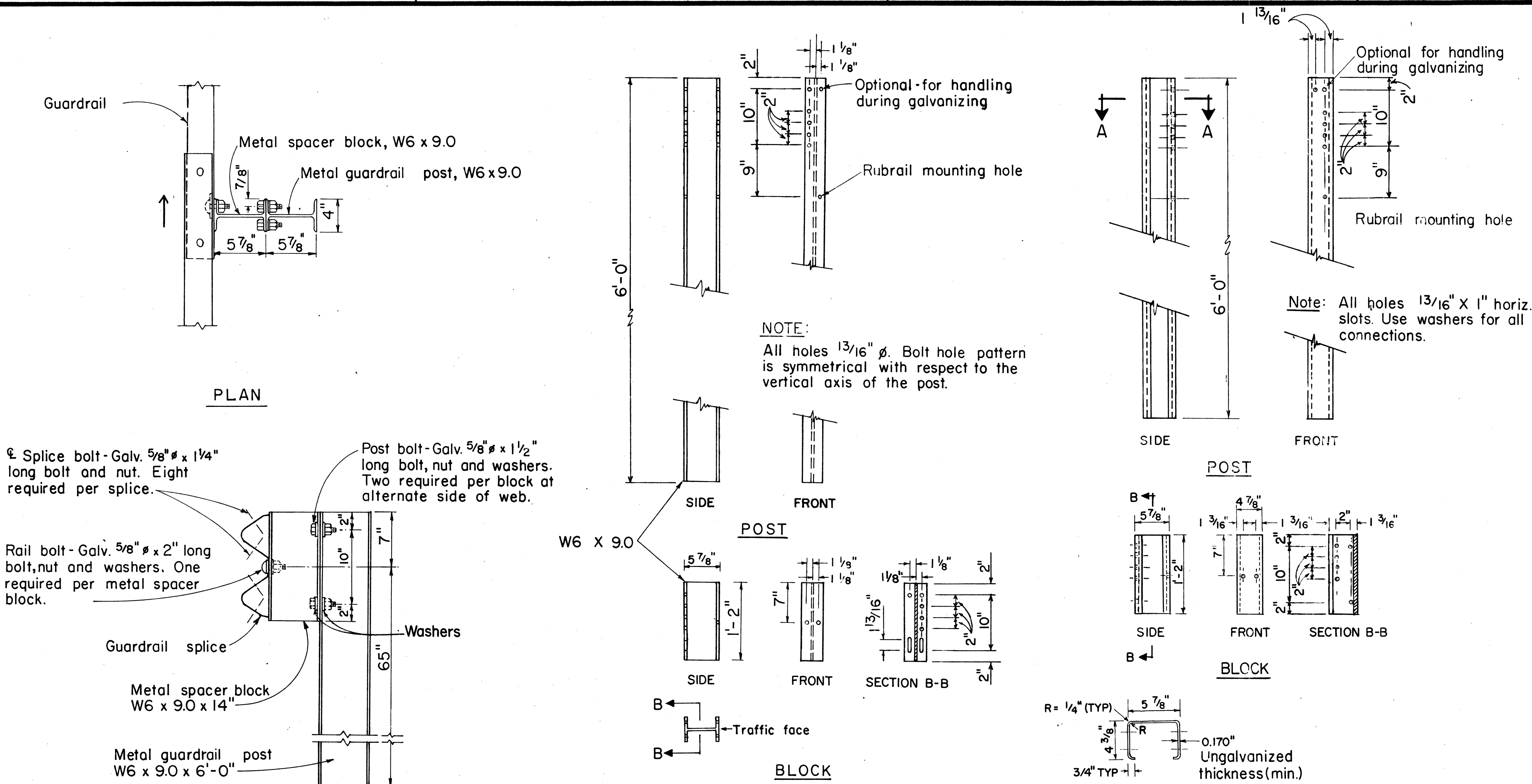
STANDARD DETAILS RAISED PAVEMENT MARKERS AND STRIPING

Not to Scale July 1978
SHEET No. OF SHEETS DT 300

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900(24)	1986	23	28

GENERAL NOTES

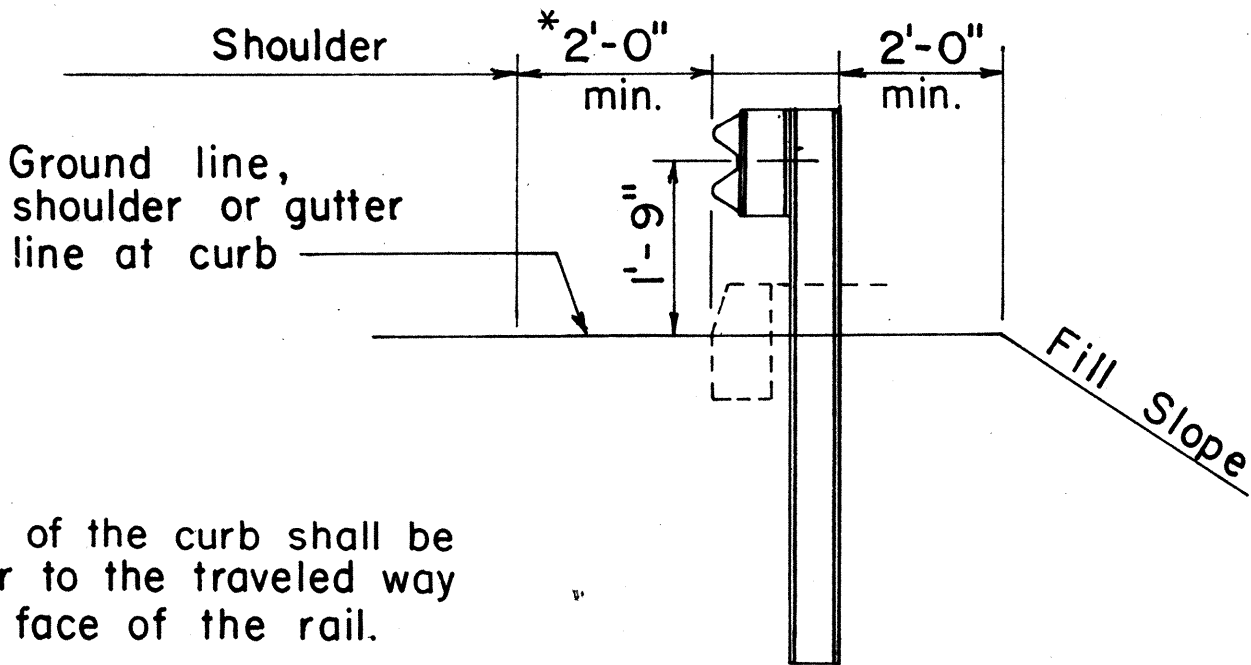
- Both of the alternate type posts may be used on any one project however, only one type of post shall be used in any single run of guardrail.
- All hardware, posts and blocks shall be galvanized. No punching, drilling or cutting will be permitted after galvanizing.
- Connection details for bent plate 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.



ELEVATION

SINGLE METAL GUARDRAIL ON METAL POST WITH METAL SPACER BLOCK

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



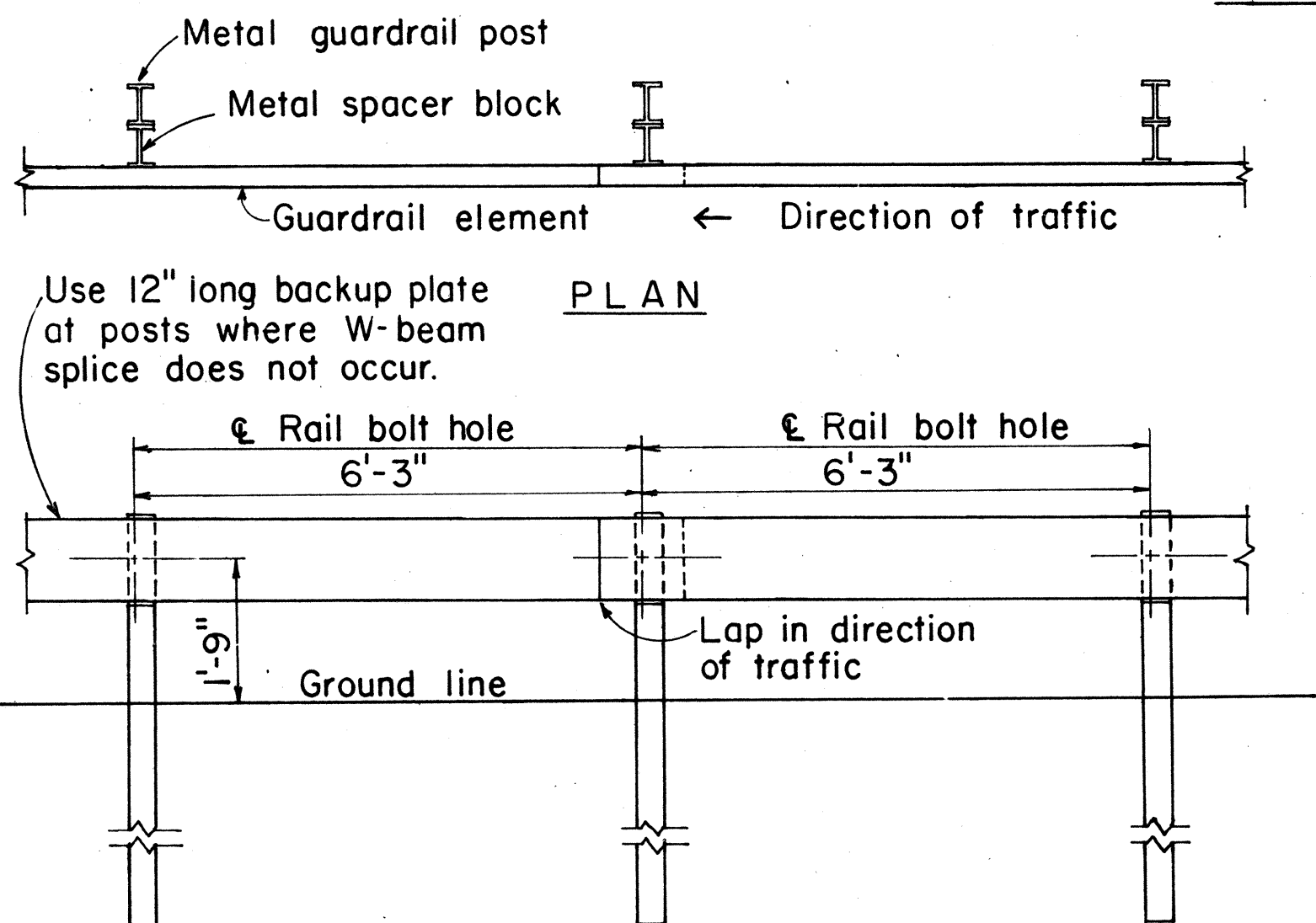
AT SHOULDER SECTION

TYPICAL METAL GUARDRAIL DETAIL

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

STRUCTURAL SHAPE POST AND BLOCK

SCALE: 1" = 1'-0"



ELEVATION

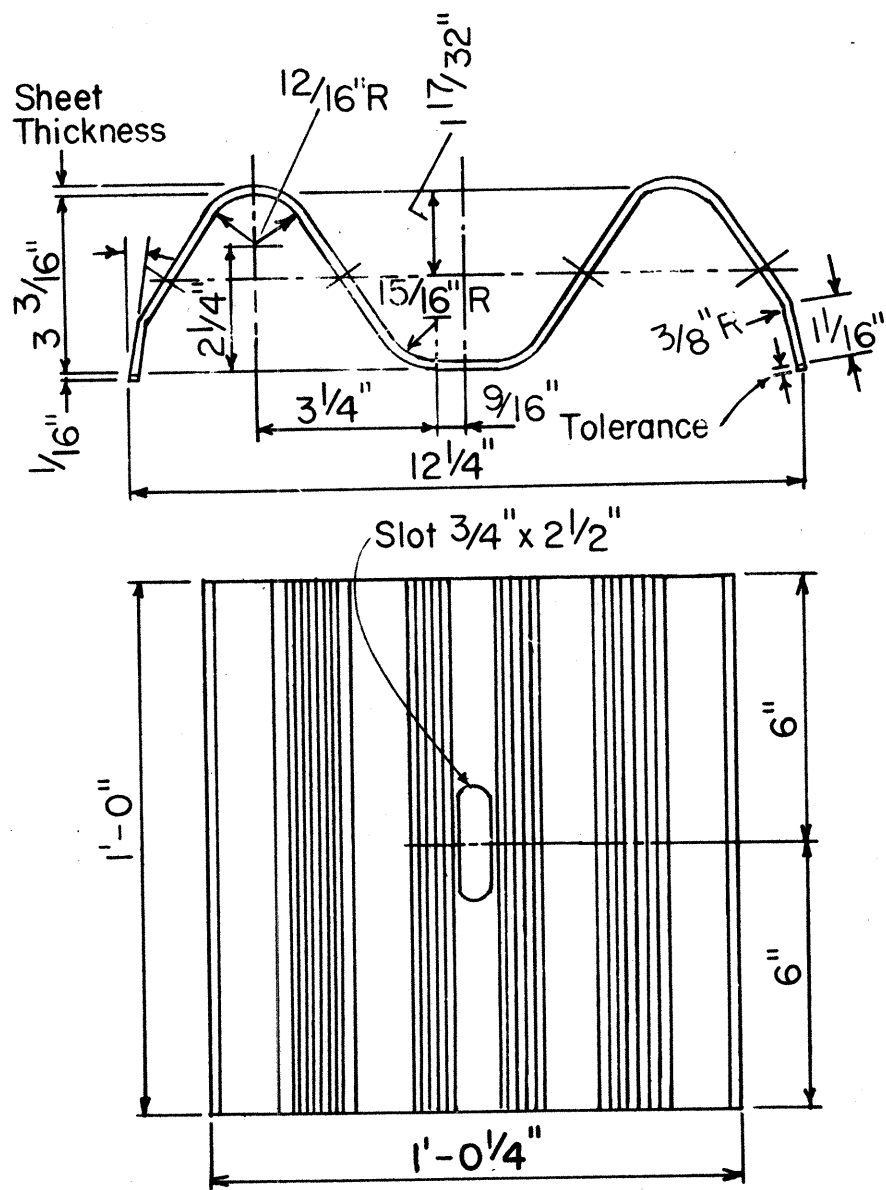
METAL GUARDRAIL ON METAL POST WITH METAL SPACER BLOCK

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

SECTION A-A N.T.S.

BENT PLATE POST AND BLOCK

SCALE: 1" = 1'-0"



BACK-UP-PLATE N.T.S.

NO.	REVISION	APPROVED BY	DATE
1	Supersedes sht. DT 500 approved 12/30/69.	H.T.	9/22/82
2	Added General Notes No. 6	P.D.	9-28-83
3	Added details for adjusting guardrail height and added Back-up Plate and washer	E.T.	9/18/85

APPROVAL RECOMMENDED:

TRAFFIC ENGINEER

9/1/82
DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING

9/22/82
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

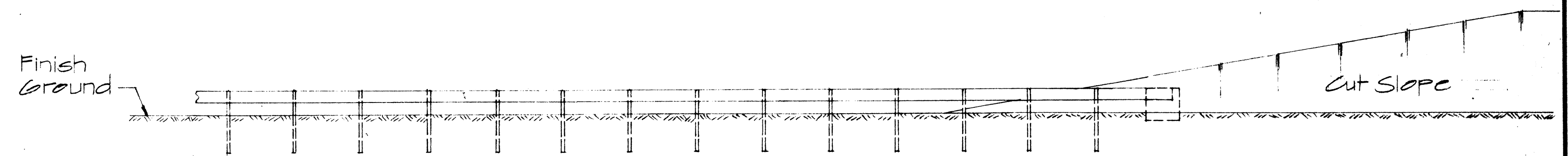
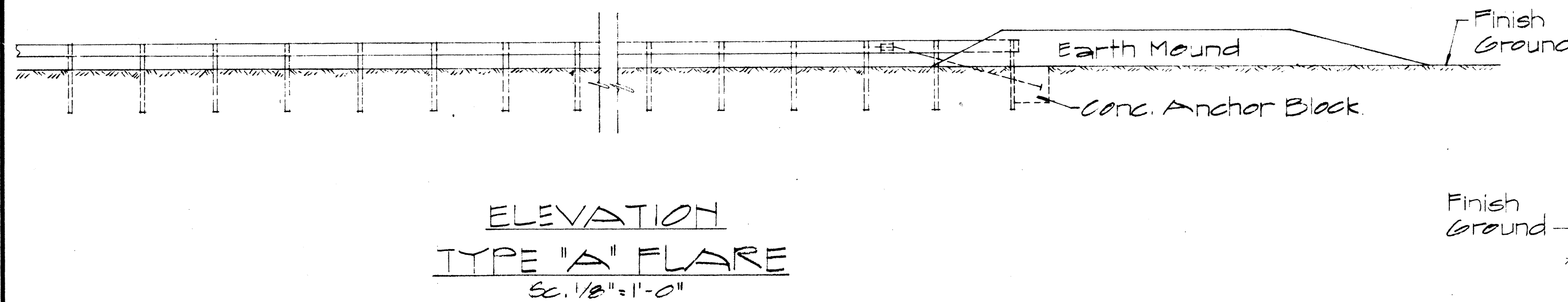
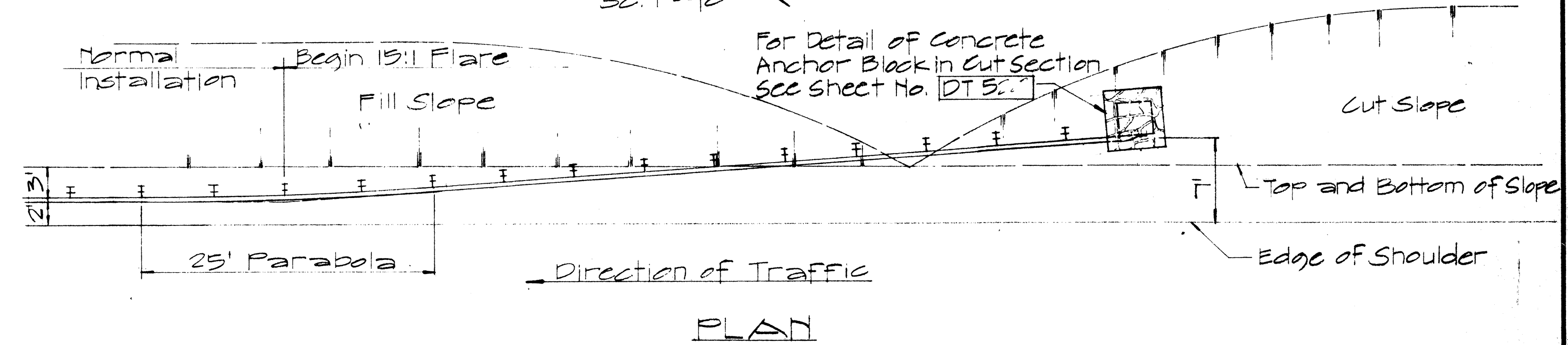
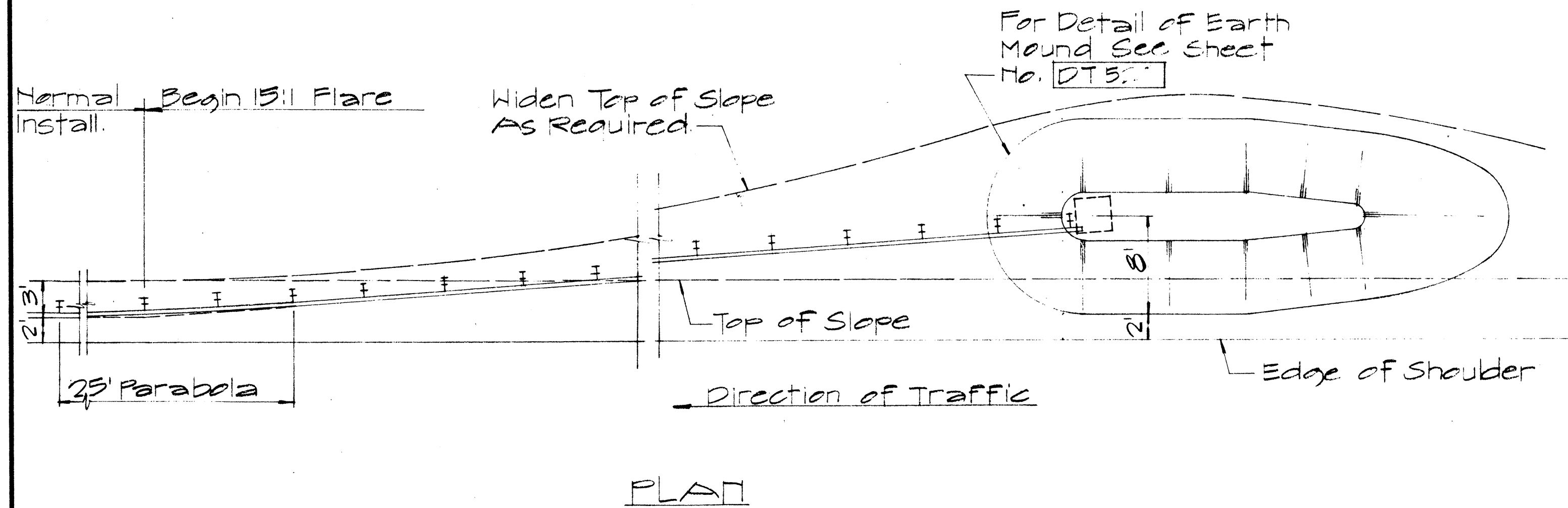
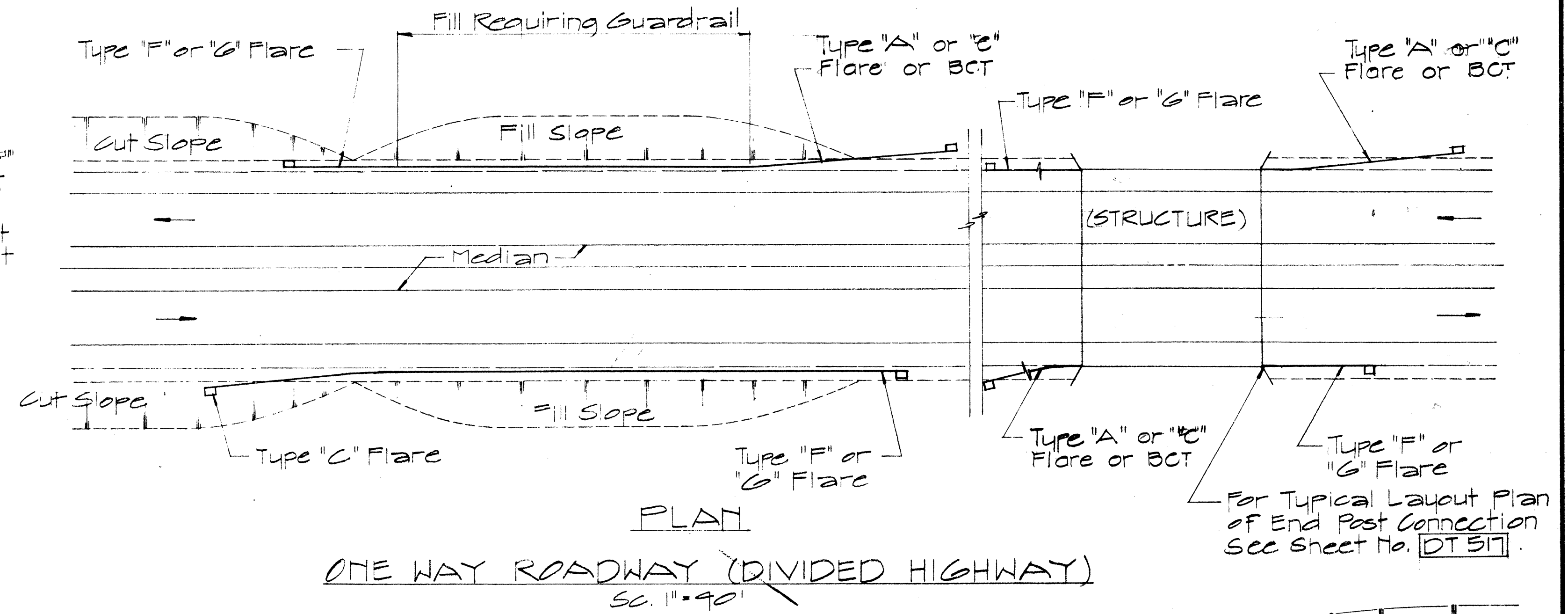
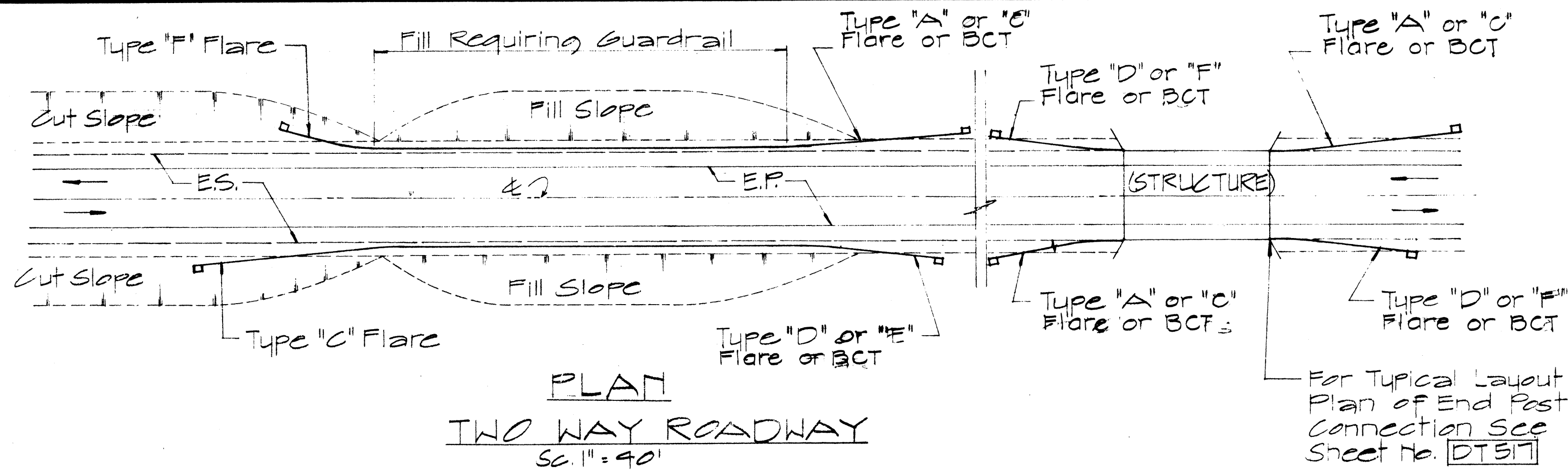
STANDARD DETAILS METAL GUARDRAIL

Scale: As Shown July, 1982
SHEET No. OF SHEETS DT 500

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-090008A	1986	25	28

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:
Etsuki Tanaka 12/23/62
TRAFFIC ENGINEER DATE

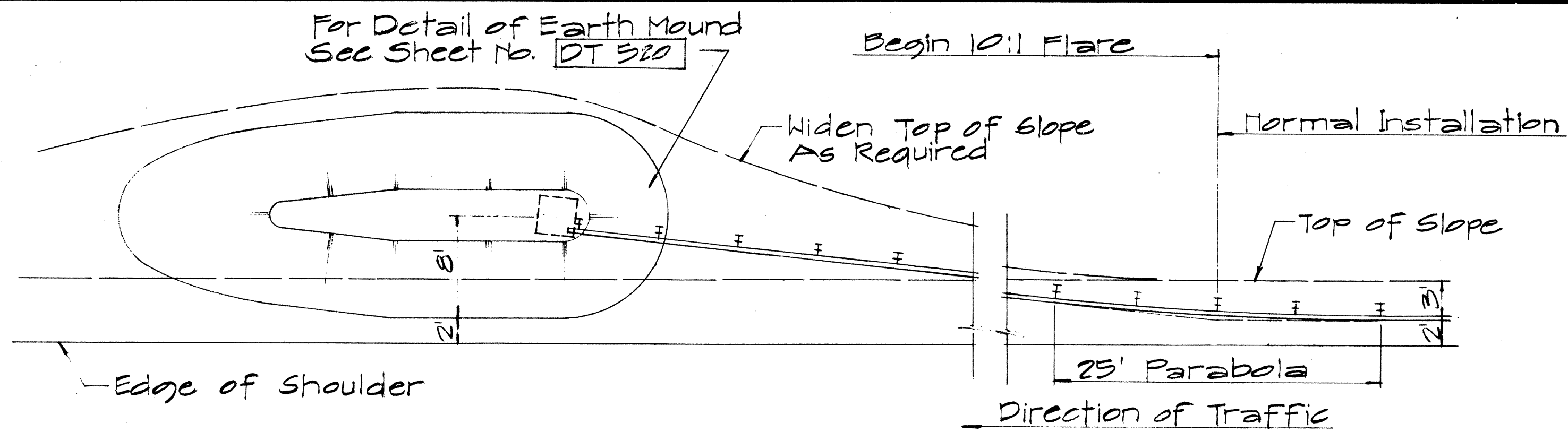
APPROVED
W. S. S. S. 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Delete Type "B" Flare and Type "E" Flare	H.T.	6/15/78

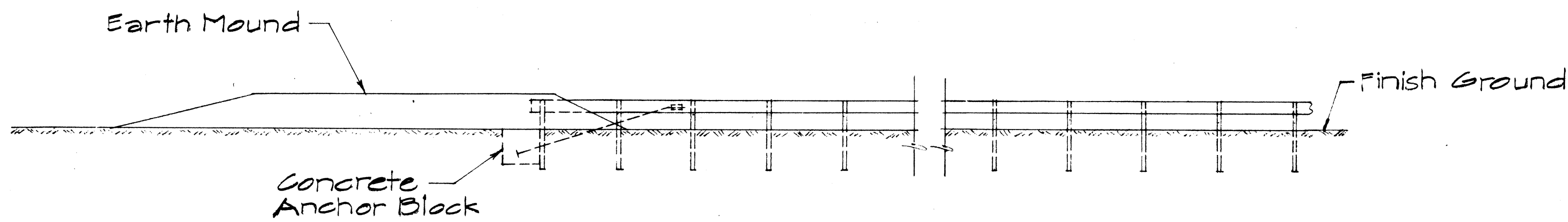
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
OF APPROACH END
FLARE - ONE & TWO
WAY ROADWAY
SC. As Noted April 1969
SHEET No. OF SHEETS DT 516

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
TRACED BY	DRAWN BY	
NOTED BY	CHECKED BY	
NO.		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-03000	1986	26	28



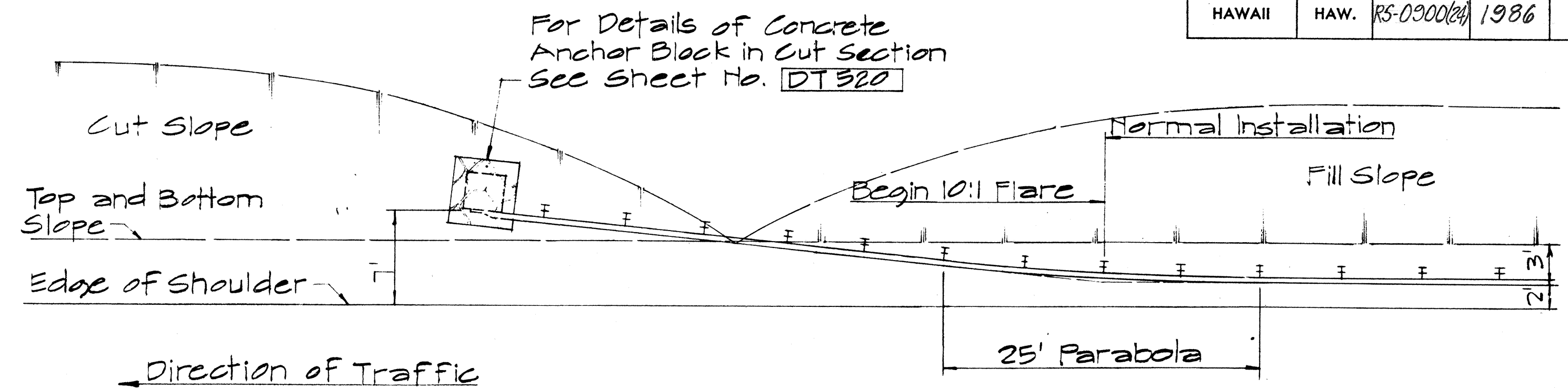
PLAN



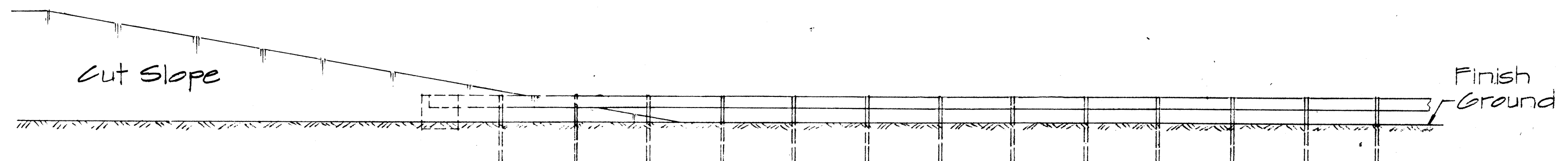
ELEVATION

TYPE "D" FLARE

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



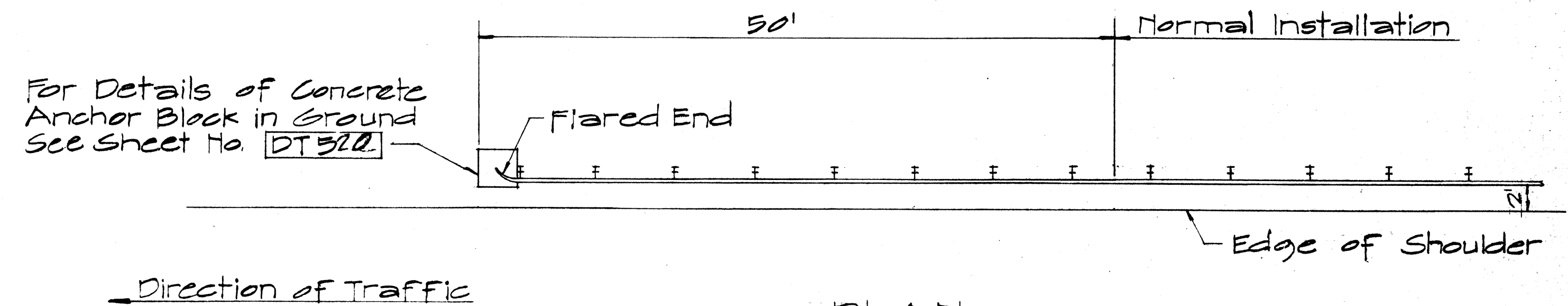
PLAN



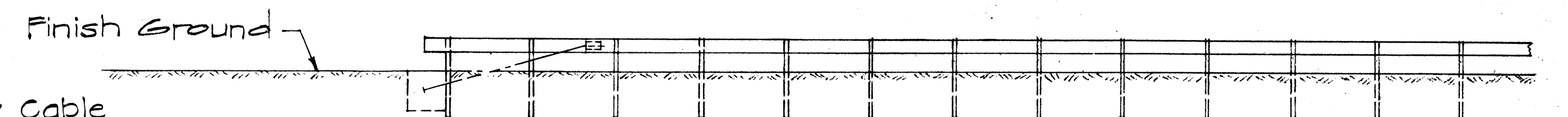
ELEVATION

TYPE "F" FLARE

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



PLAN



ELEVATION

TYPE "G" FLARE

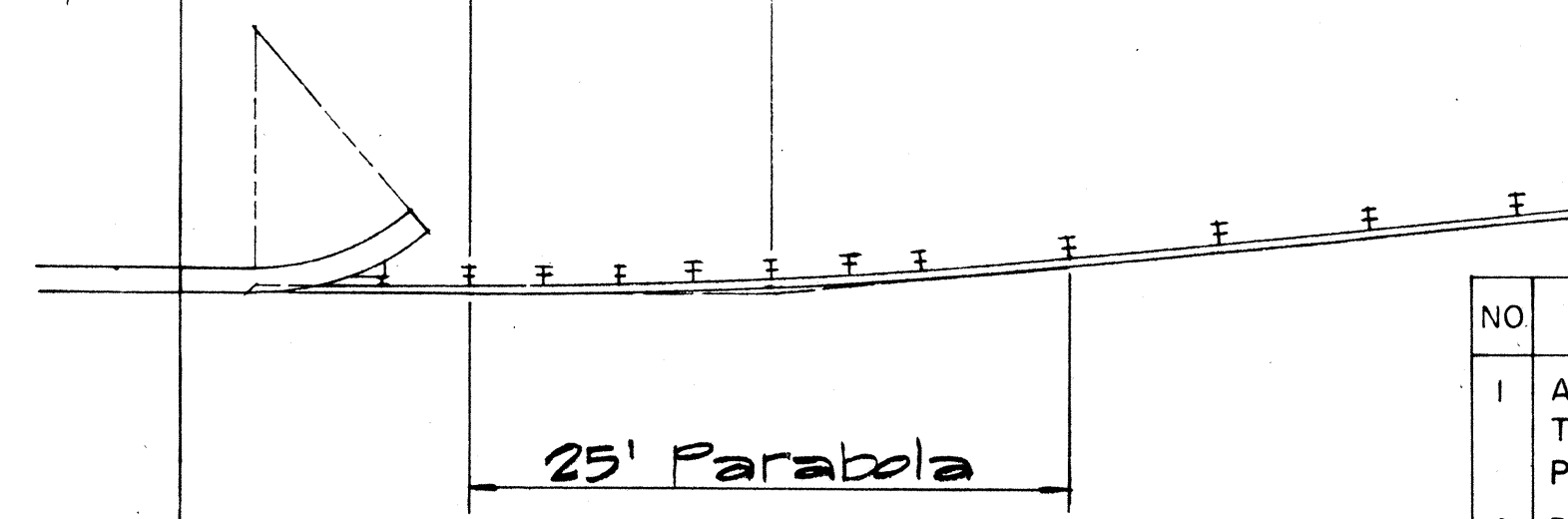
Sc. 1/8" = 1'-0"

NOTE:

For detail of Breakaway Cable Terminal (BCT) See Sheet No. DT 510

Typical Conc. 11'-23 1/4" Parapet

Begin Type "A", "C", "D" or "F" Flare or BCT



TYPICAL LAYOUT PLAN OF END POST CONNECTION

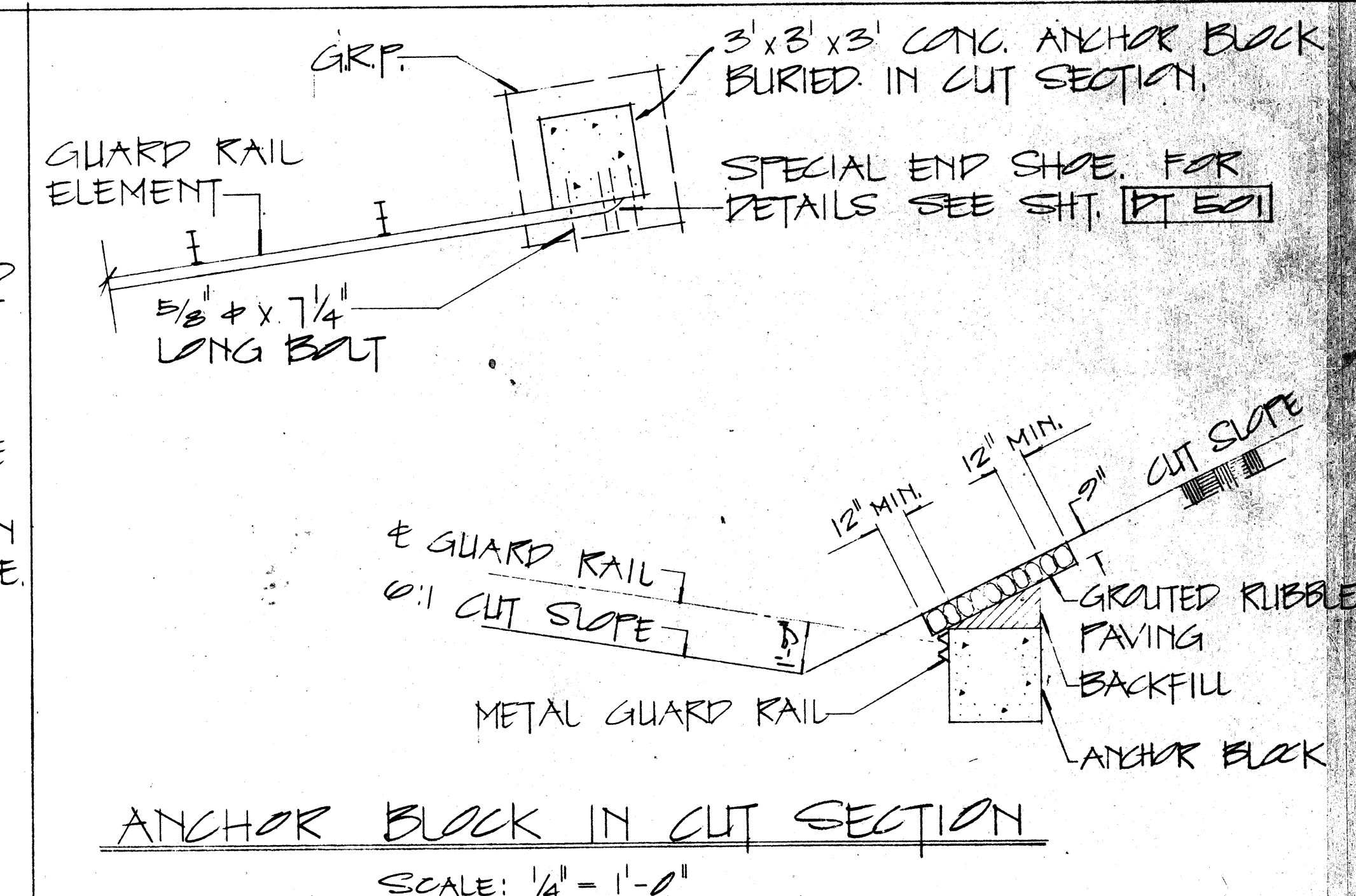
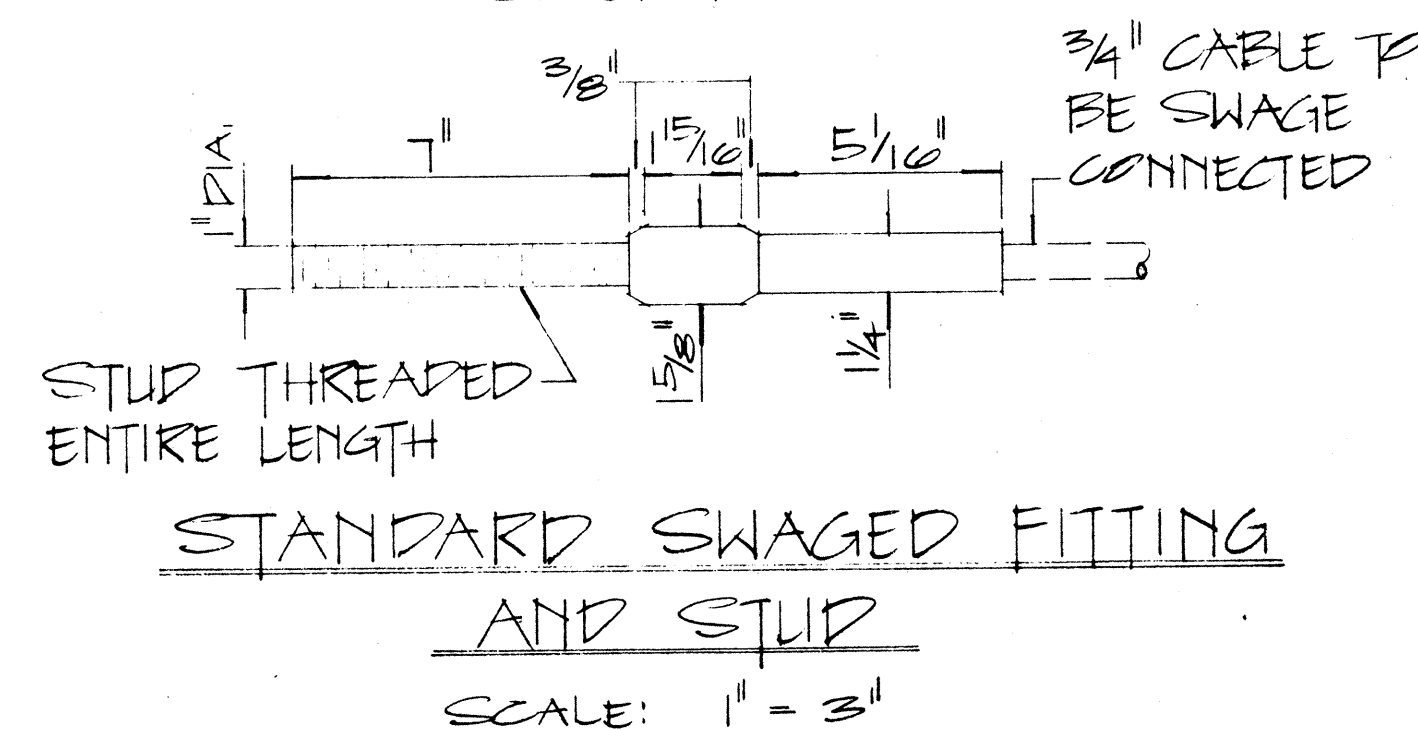
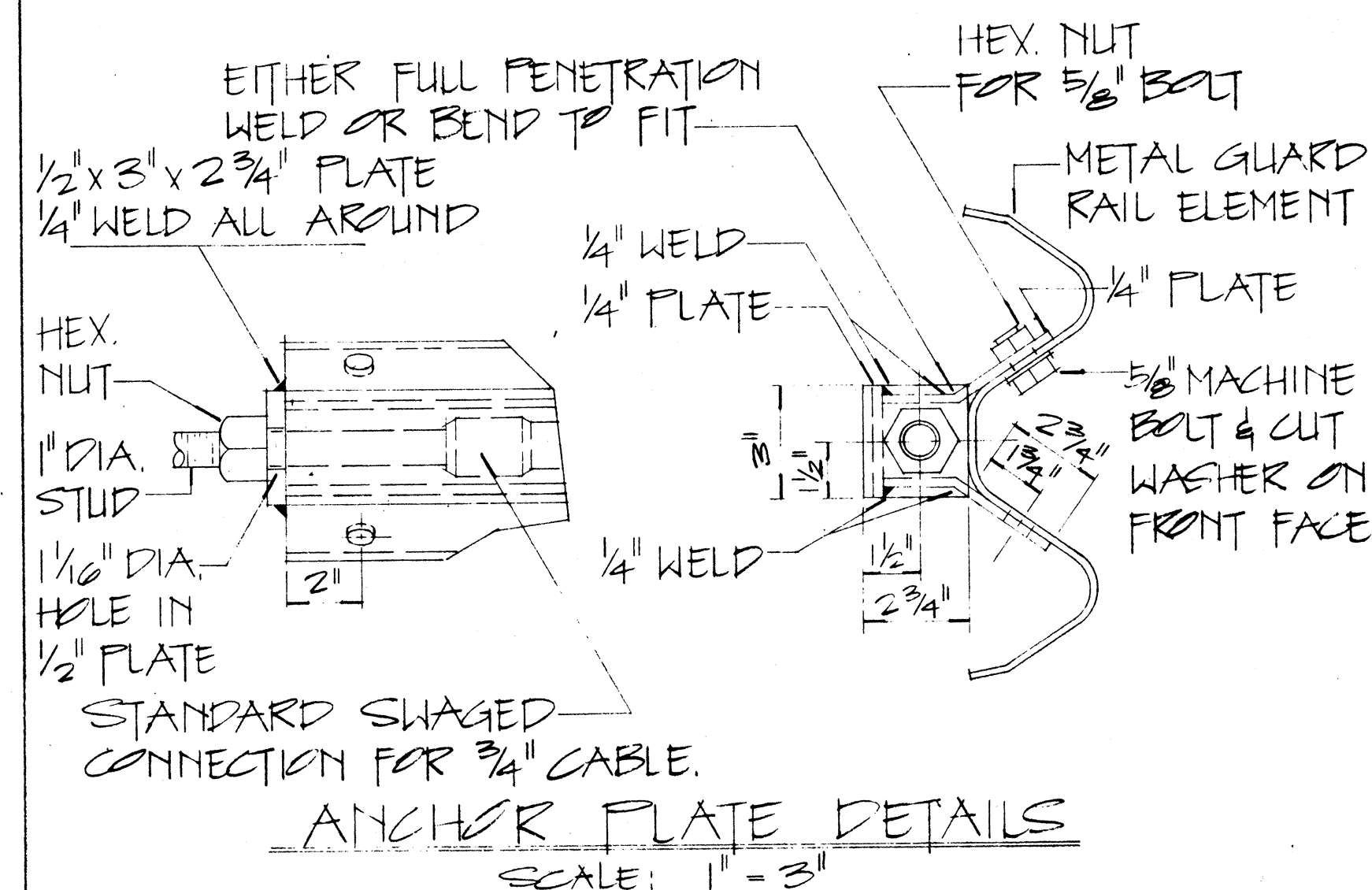
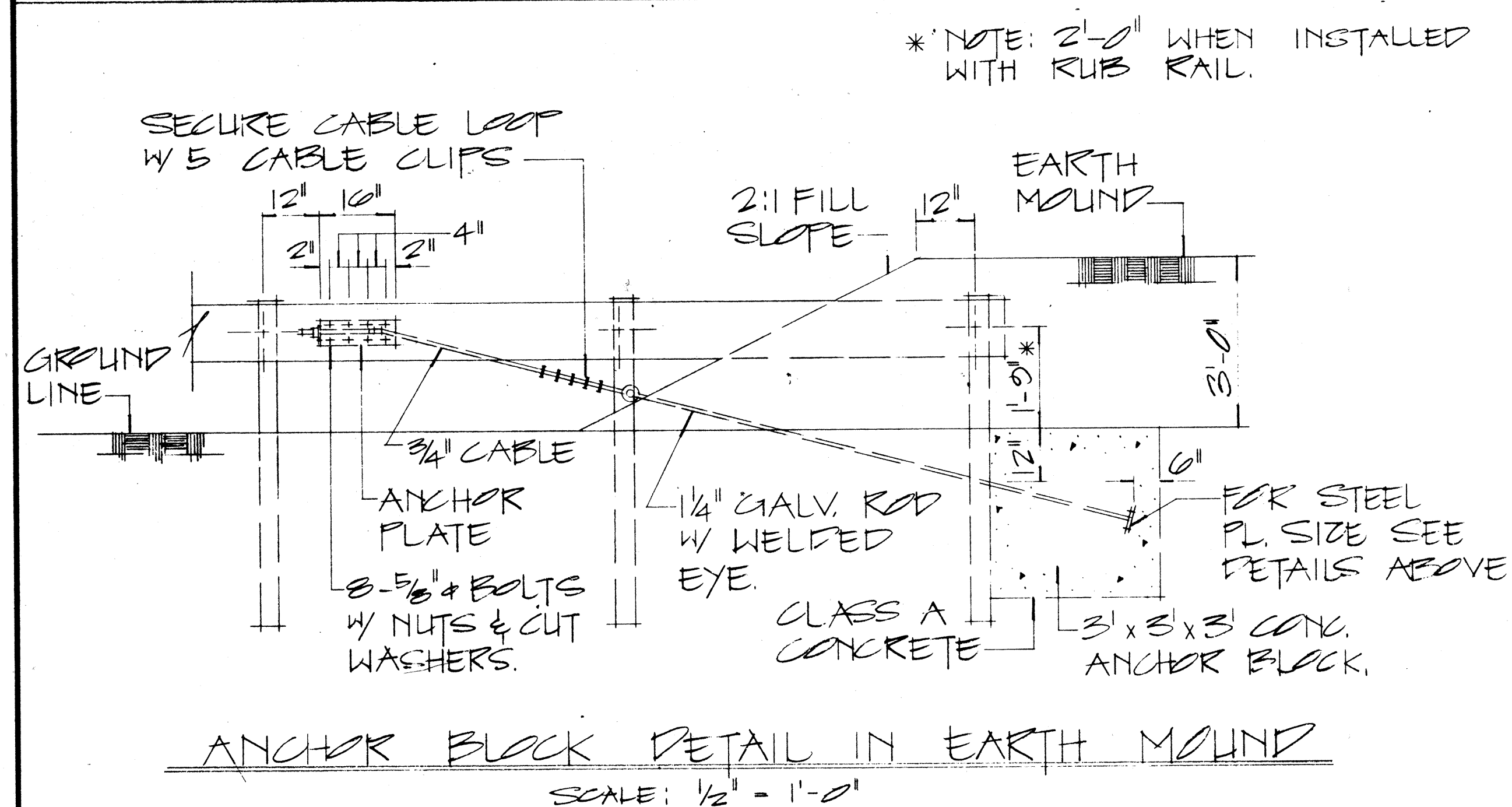
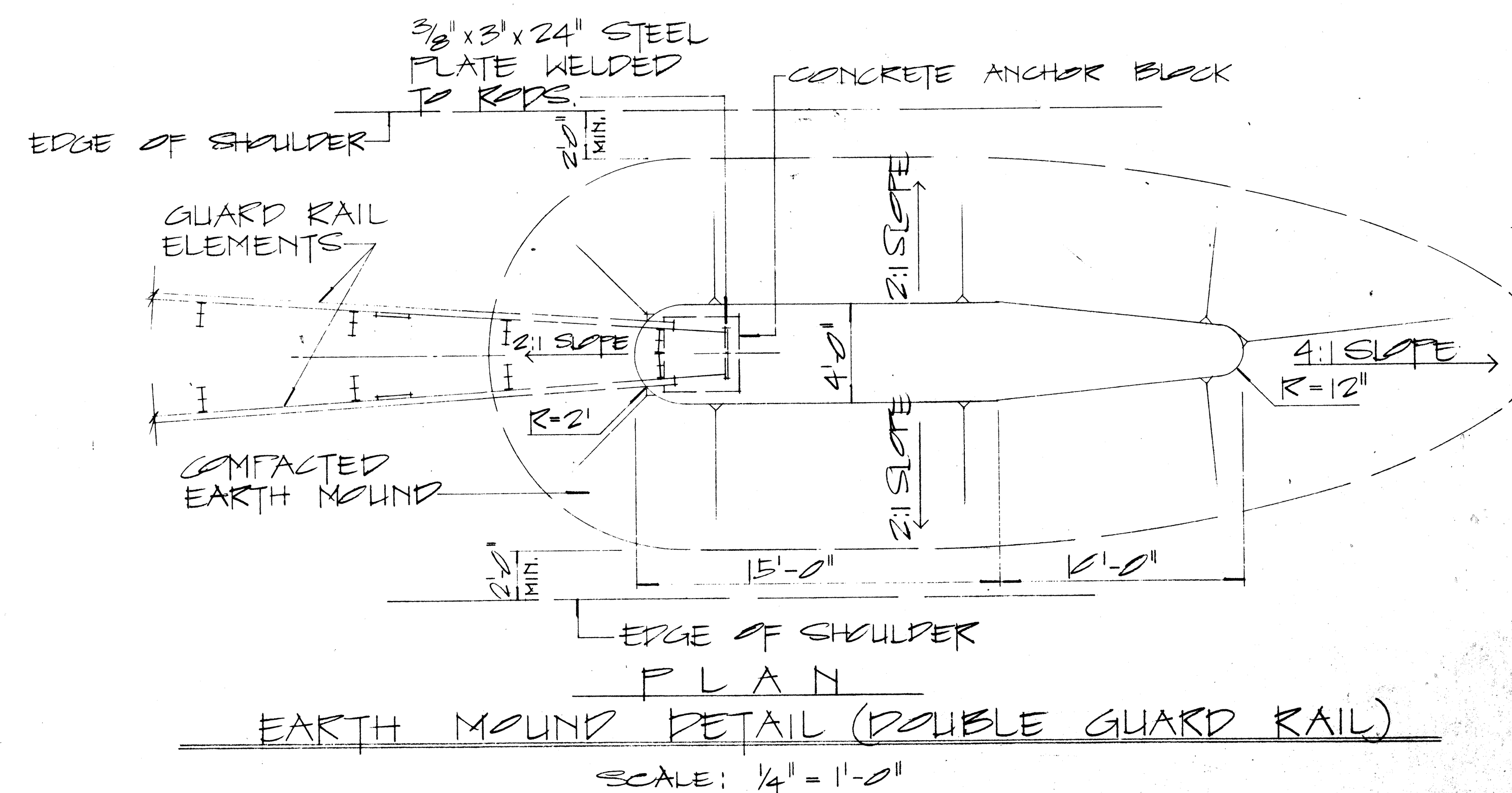
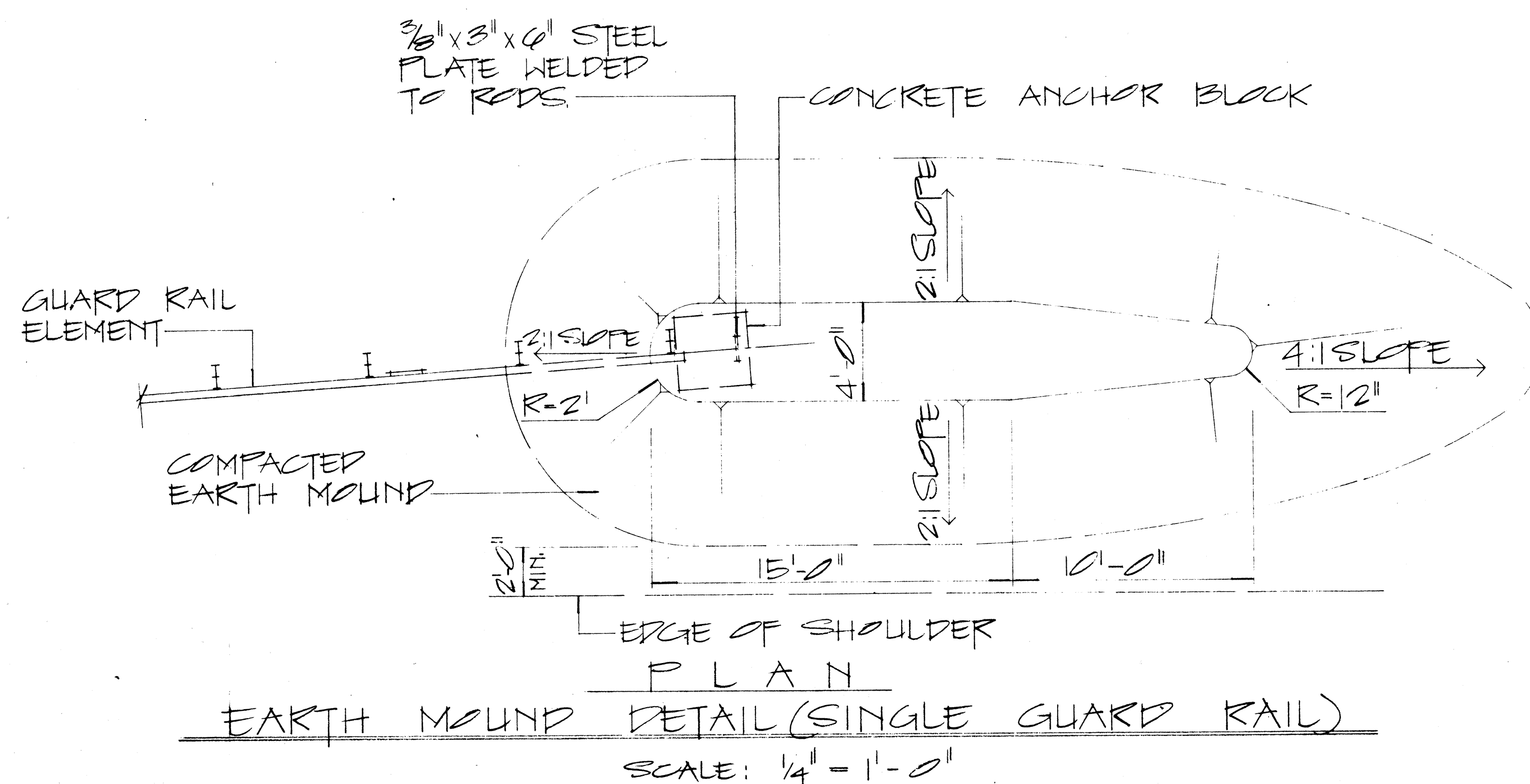
Sc. 1/8" = 1'-0"

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

APPROVAL RECOMMENDED:
Erich Tanaka 12/29/69
 TRAFFIC ENGINEER DATE
 APPROVED:
W. J. Kal 12-30-69
 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. OF SHEETS DT 517

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900(24)	1986	27	28



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:
Eishi Tanaka
TRAFFIC ENGINEER
DATE 12/29/62

APPROVED:
[Signature]
ASSISTANT CHIEF, ENGINEERING
DATE 12-30-62

NO.	REVISION	APPROVED BY	DATE

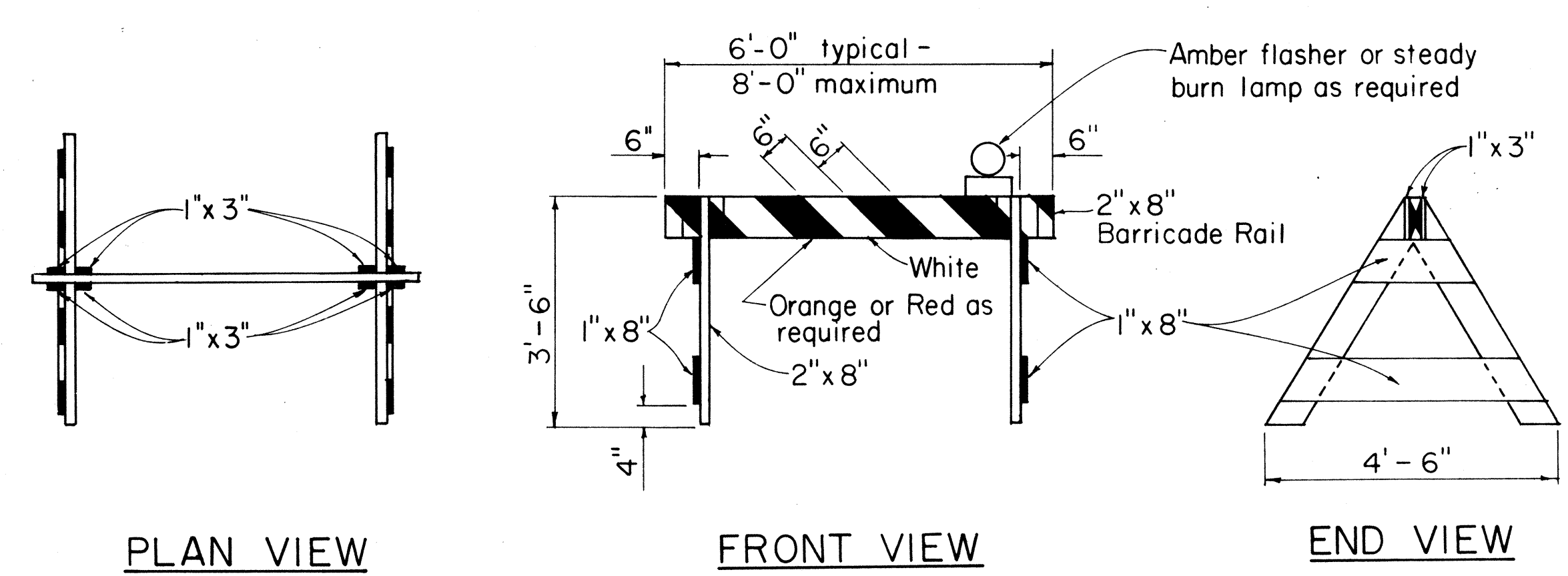
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
EARTH MOUND AND
ANCHOR BLOCK DETAILS

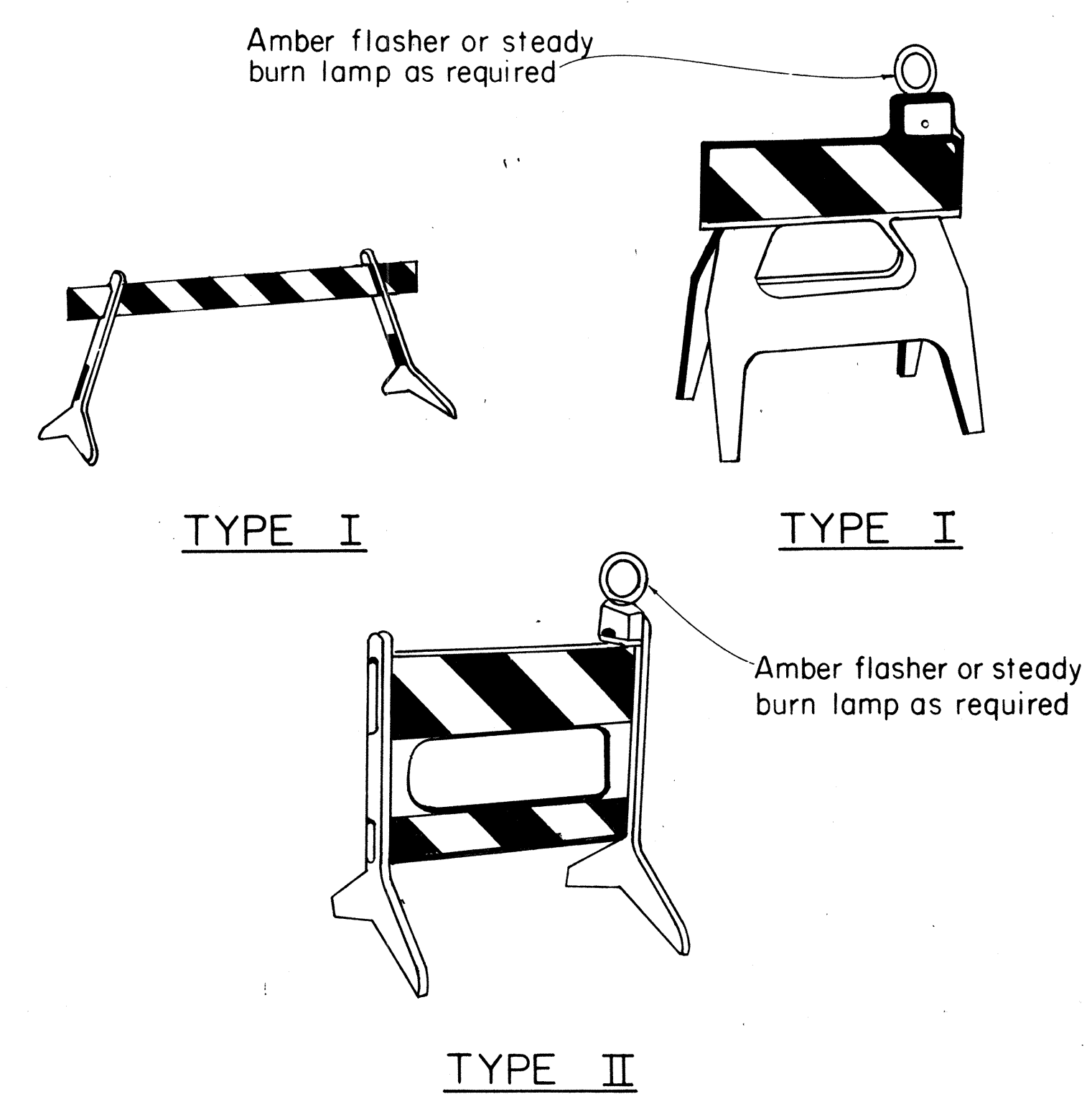
SCALE: AS SHOWN OCT 1960

SHEET No. OF SHEETS 152

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900024	1986	28	28

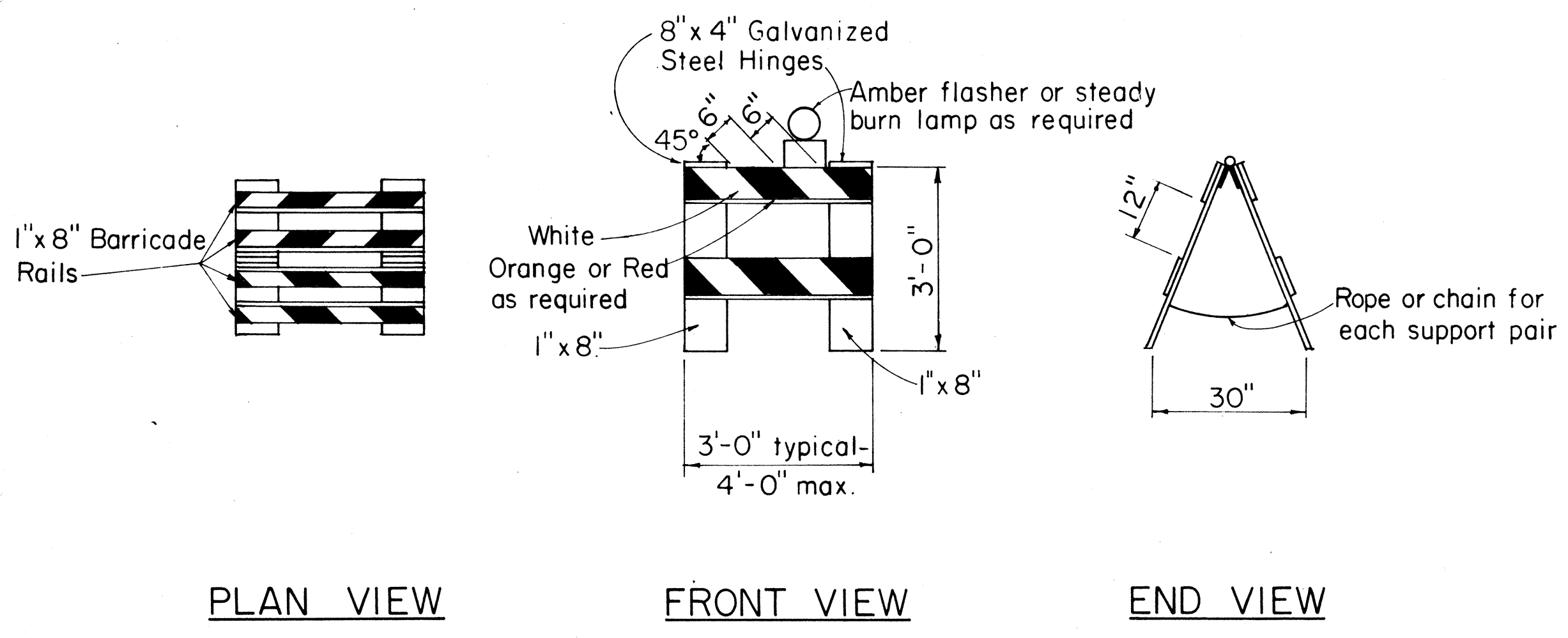


TYPE I BARRICADE
Scale: 1/2" = 1'-0"

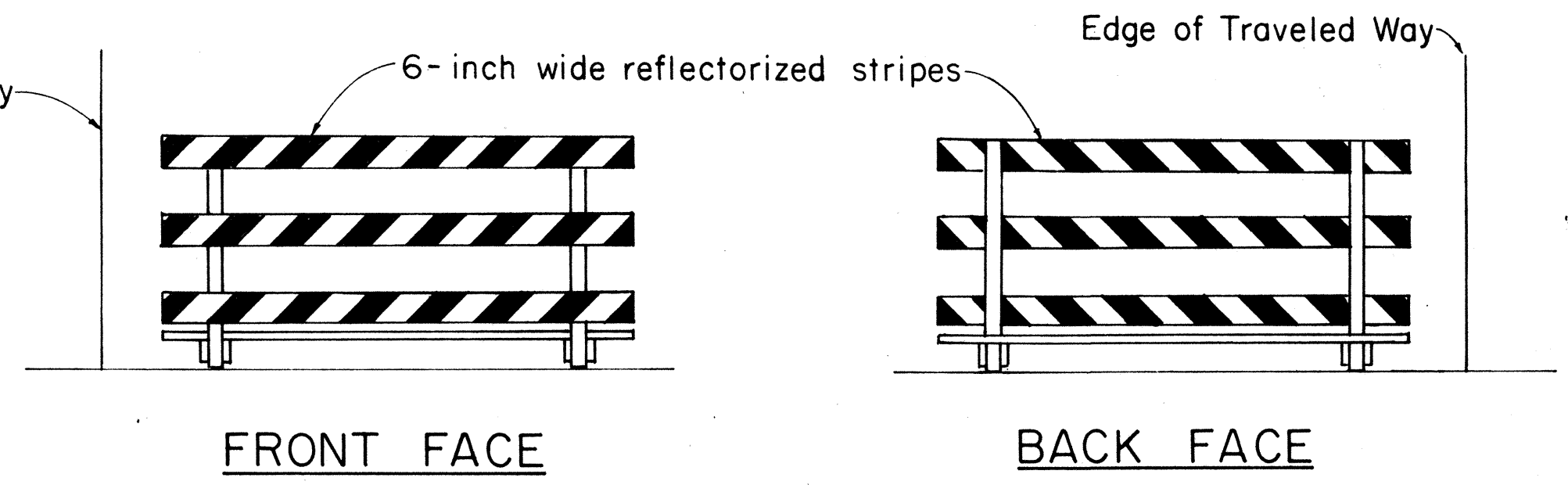


PLASTIC MOLDED BARRICADE OPTIONS*
Not to Scale

* Shop Drawings must be submitted for approval.

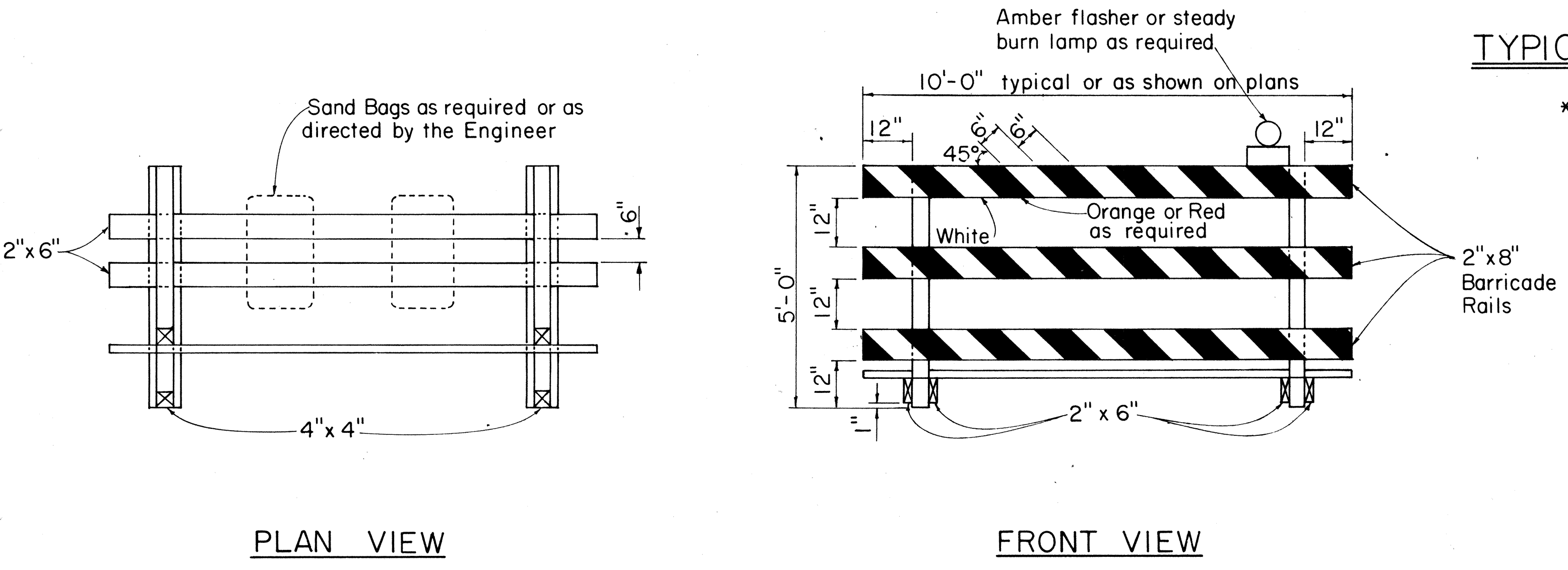


TYPE II BARRICADE
Scale: 1/2" = 1'-0"



TYPICAL BARRICADE STRIPING DETAILS**
Not to Scale

** Similar for Types I & II



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

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

APPROVED:
Robert S. DeFazio 10/23/81
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes DT 800 Approved 12/30/69	H.T.	10/23/81

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

BARRICADES

SCALE: As Shown

SHEET NO. OF SHEETS DT 800

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