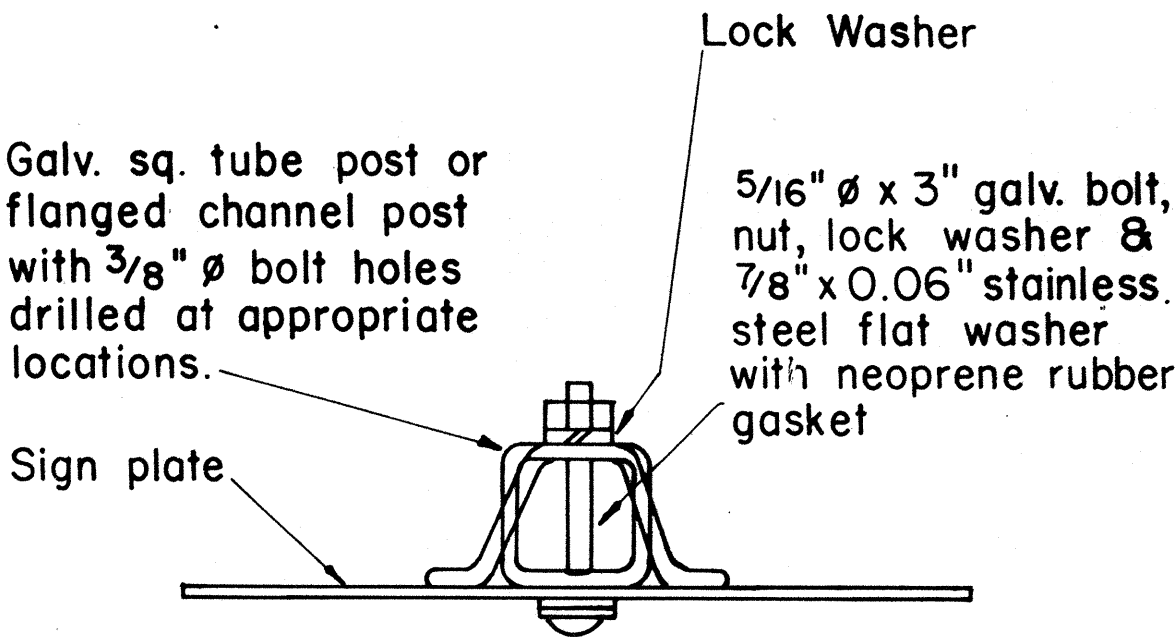


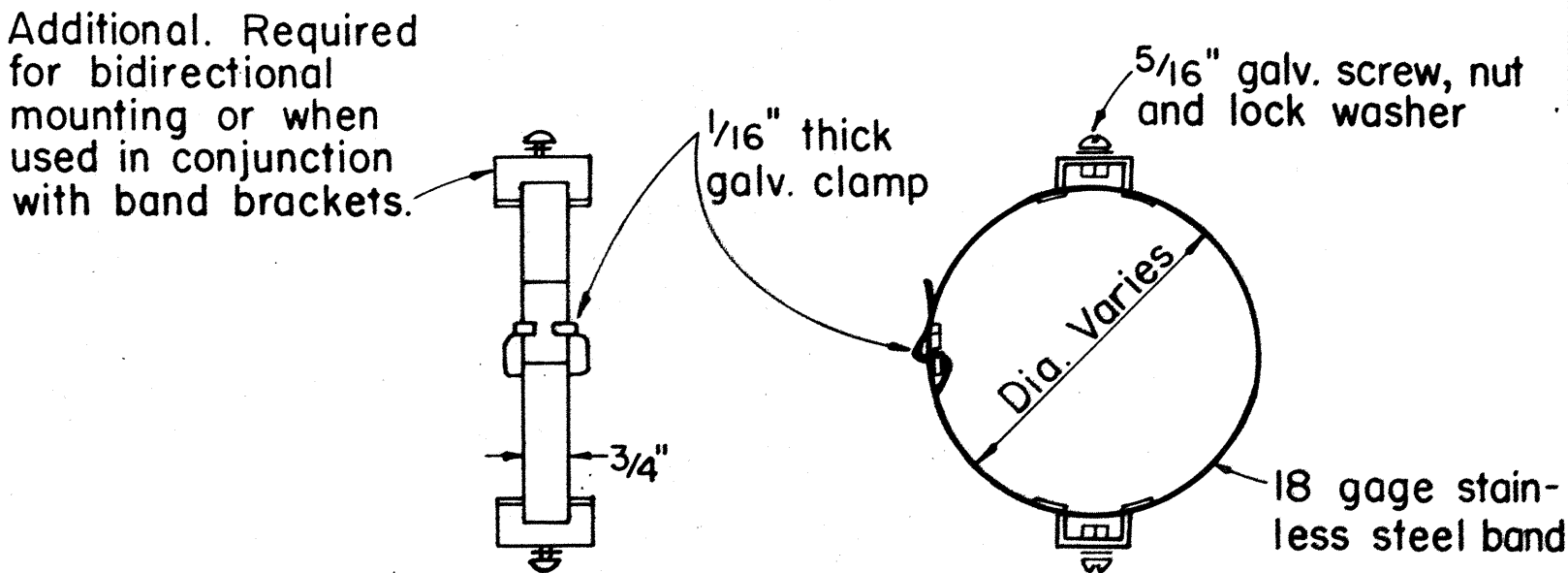
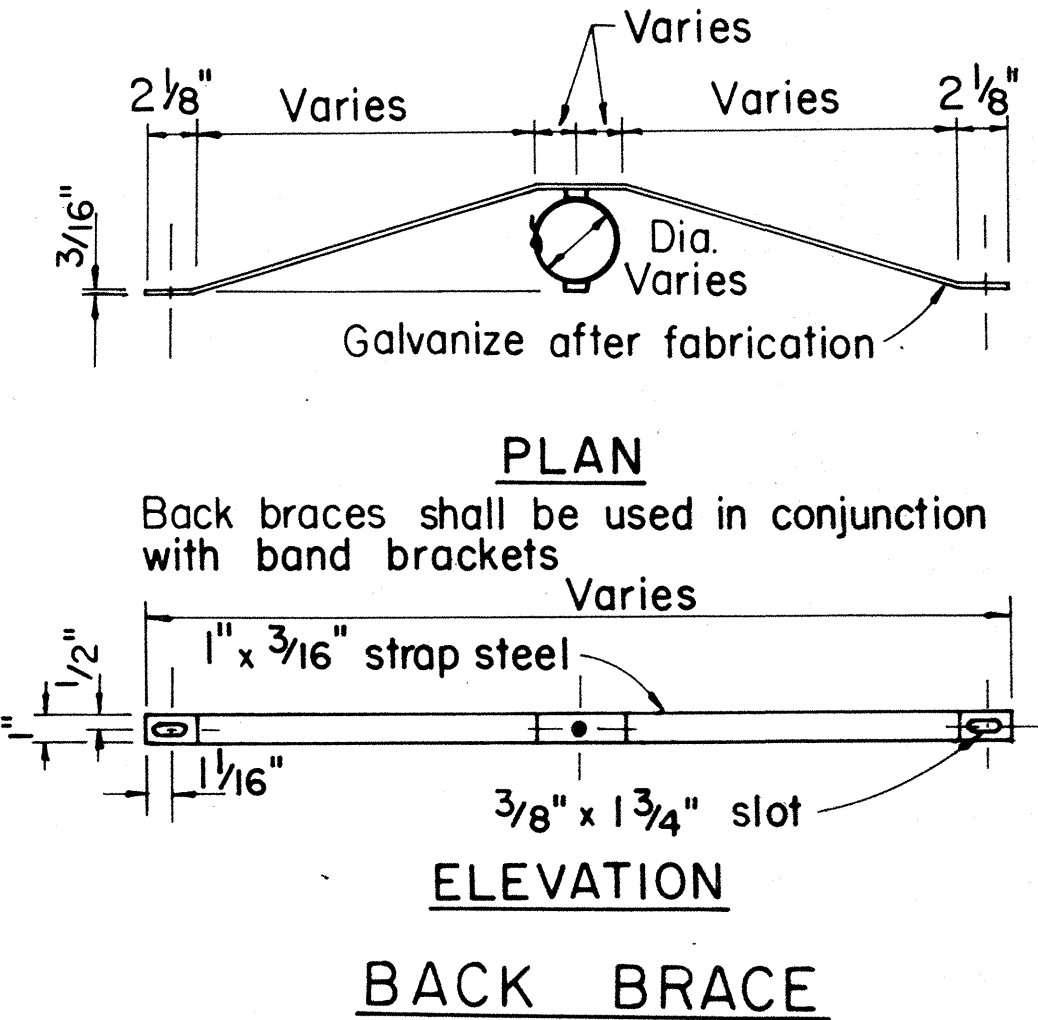
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1 (17) F-083-1 (26)	1984	38	57

GENERAL NOTES

- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Sign 48" and wider or larger than 10 sq. ft. in area shall be mounted on two or more sign posts except as noted below.
- Signs 48" and wider or larger than 10 sq. ft. in area may be mounted on objects other than sign posts (i.e. on highway lighting poles) as follows:
 - Signs 48" and wider but less than 10 sq. ft. in area shall be mounted with a minimum of two sets of band bracket and back braces.
 - Signs larger than 10 sq. ft. and less than 28 sq. ft. in area shall be mounted with a minimum of two sets of band brackets and back braces.
 - Signs larger than 28 sq. ft. in area shall be mounted with a minimum of three sets of band bracket and back braces.
- All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
- Sign posts shall extend 3 1/2" above each sign, where required, for attachment of City and County street name signs.
- (R) or (L) indicates right or left and shown on the plans.
- * 7. See plans for special details of signs along bikeways.
- ** 8. The minimum lateral distances shown are guidelines and shall be exceeded whenever possible. The Contractor shall place signs at the maximum practical lateral distance from the edge of the traveled way up to 30 feet and shall utilize protected locations whenever possible. Final locations of all signs shall be approved by the Engineer.
- Signs in medians shall be placed at midpoint of median up to a maximum distance of 30 feet from the edge of traveled way. When appropriate, signs for opposing directions shall be placed back to back.
- Anchor bases shall be installed for all signpost installations, unless otherwise shown or directed. See sheets DT 100A and DT 100B.



GALVANIZED SQUARE TUBE OR FLANGED CHANNEL POST



BAND BRACKET

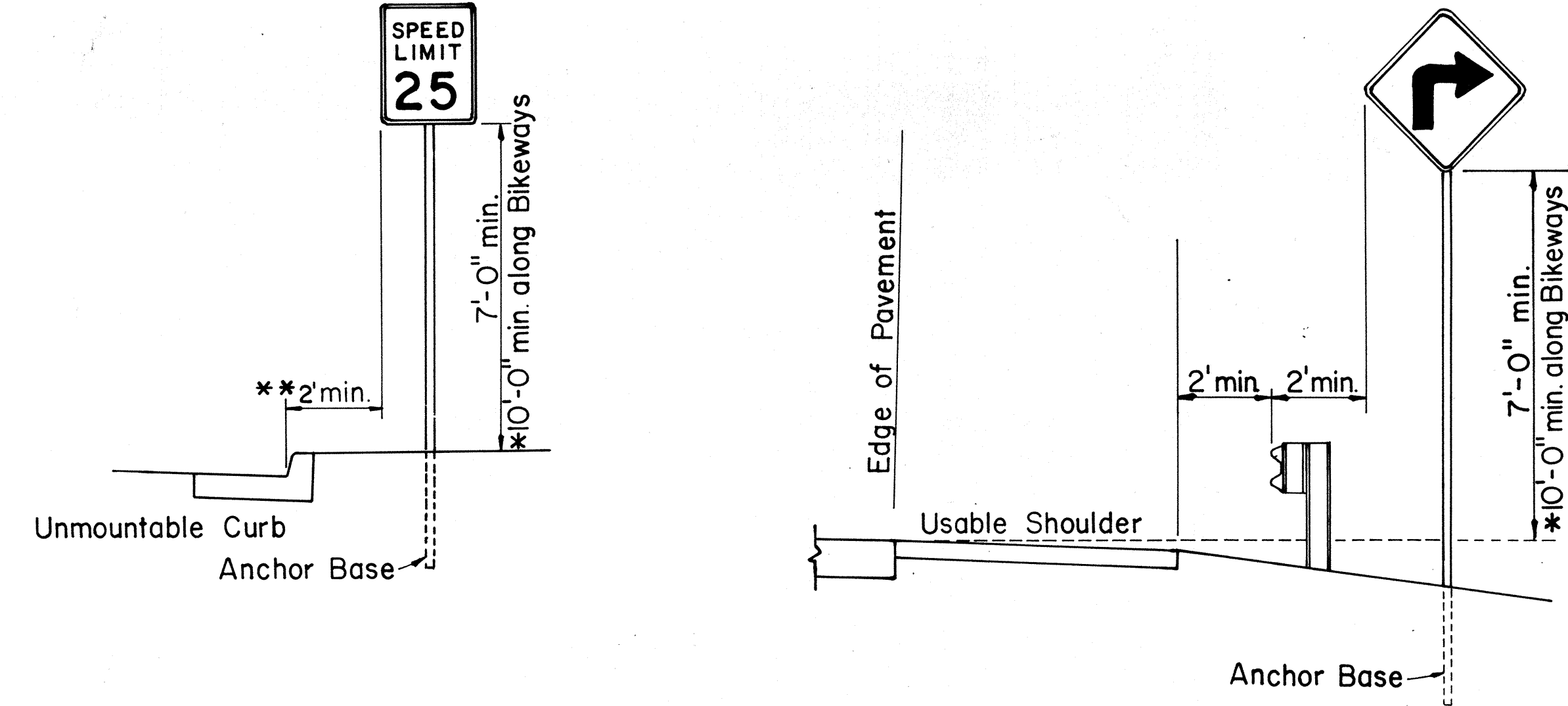
APPROVAL RECOMMENDED:
Eiichi Tanaka 10/14/83
 TRAFFIC ENGINEER DATE

APPROVED:
H. Fujiyama 10-18-83
 ASSISTANT CHIEF, ENGINEERING DATE

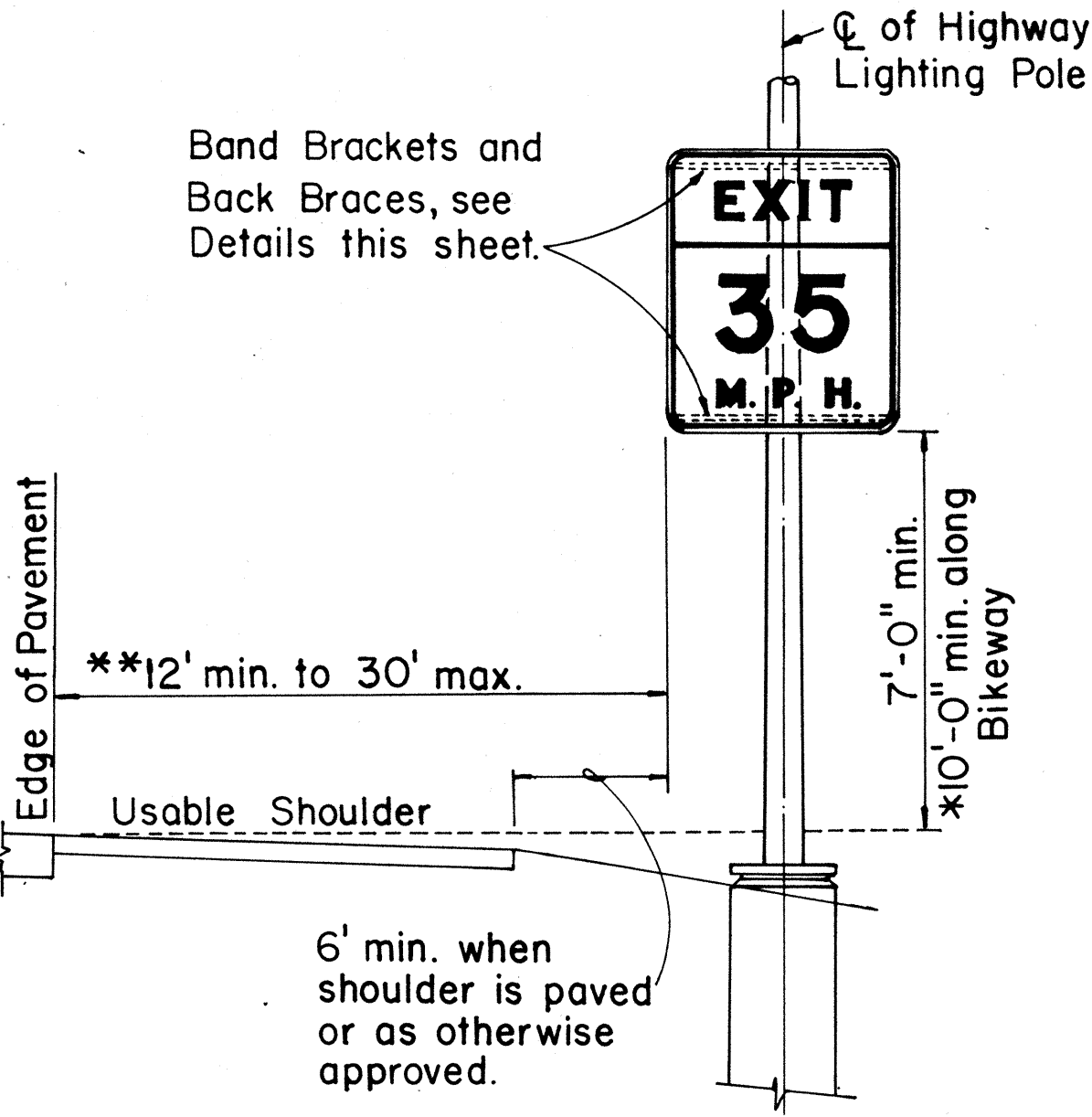
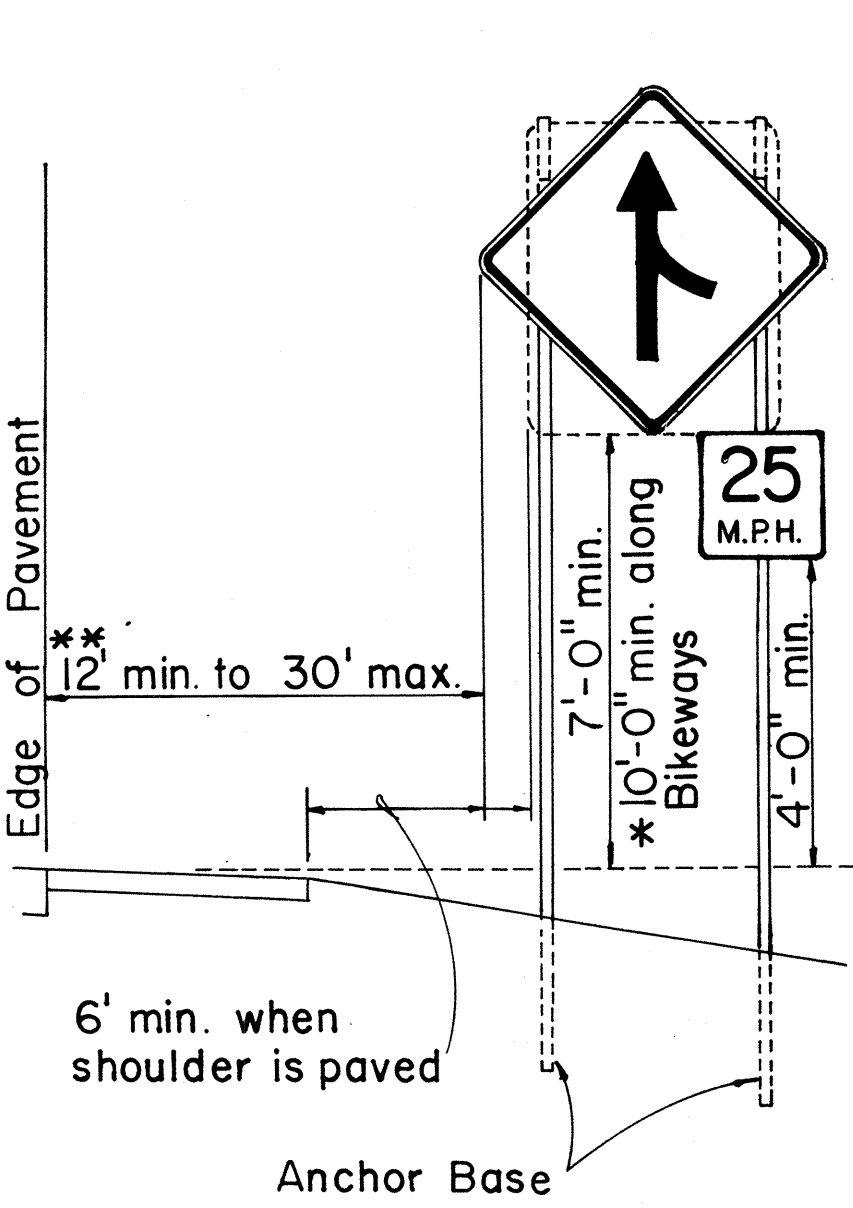
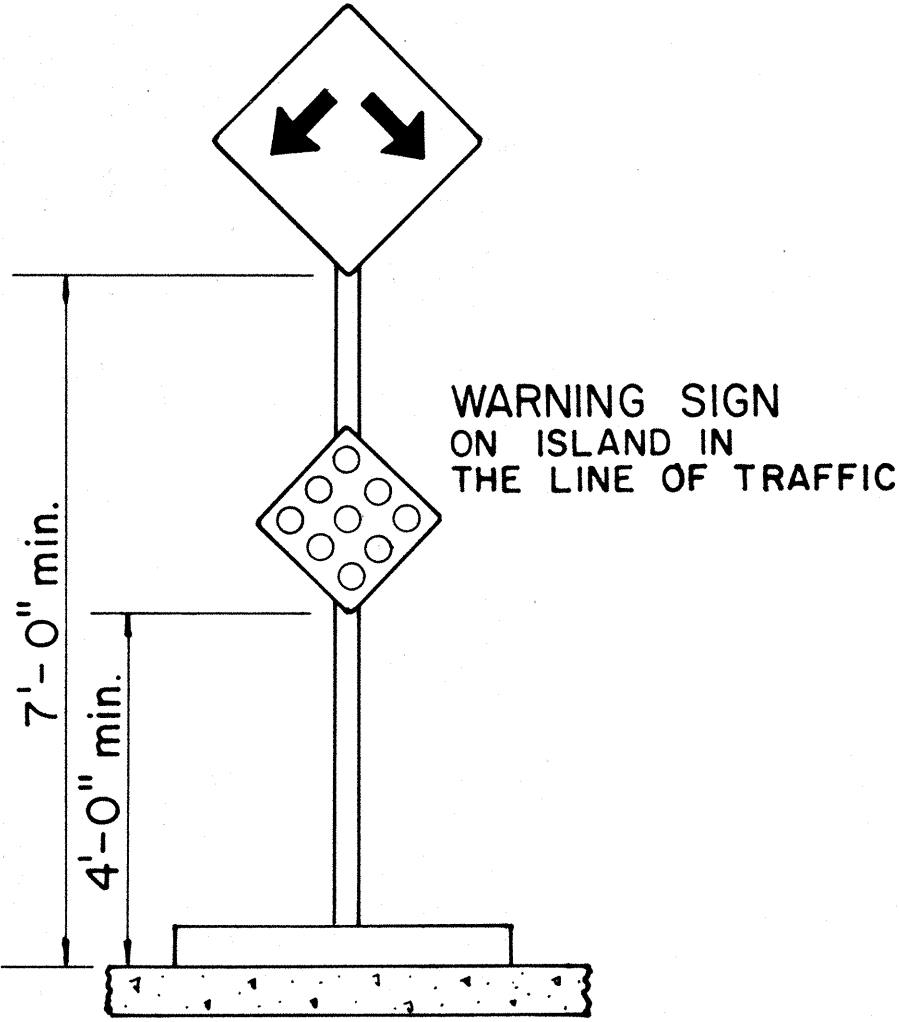
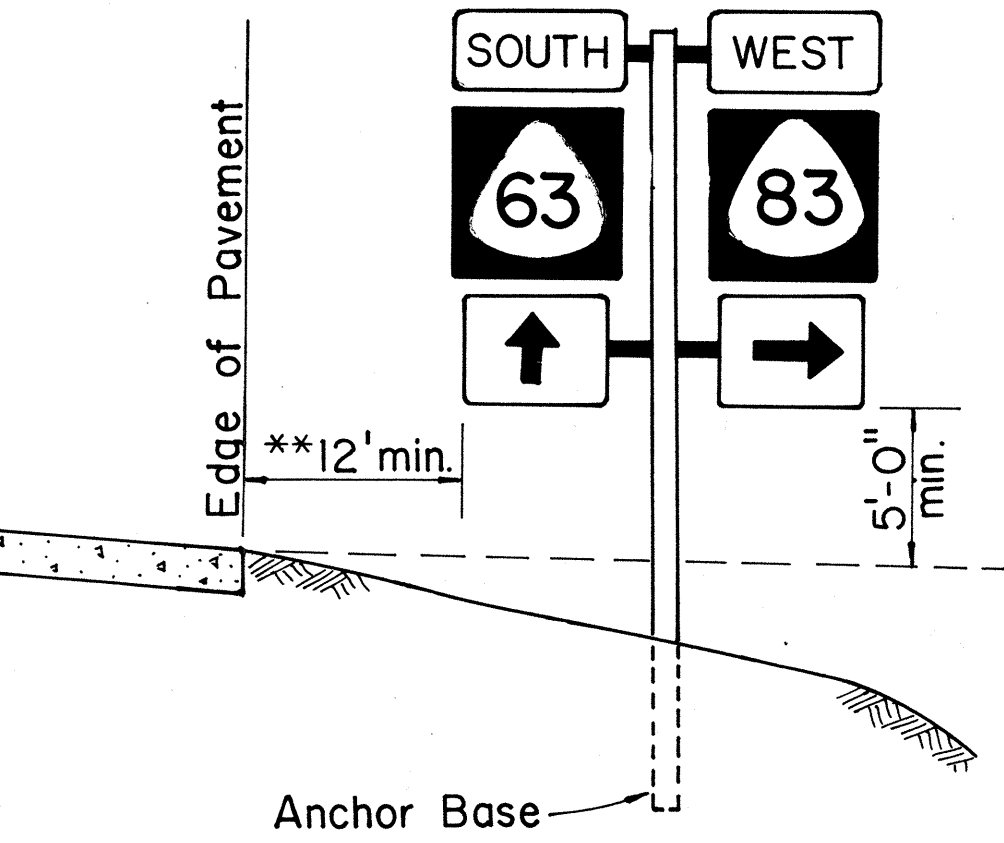
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 MISCELLANEOUS SIGN DETAILS

Not to Scale: Oct. 1983
 SHEET NO. OF SHEETS DT 100



ROADSIDE ASSEMBLY RURAL DISTRICT



HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

TYPICAL MOUNTING DETAILS

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 100 approved 11/15/77	<i>[Signature]</i>	10-18-83

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED 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-083-1 (17) F-083-1 (20)	1984	39	57

A or A,	C	C,
36"	6"	-
48"	9"	19"
60"	12"	24"

NOTE: Frame stiffeners are required when D is greater than 24". See Gen. Note 4.

GENERAL NOTES

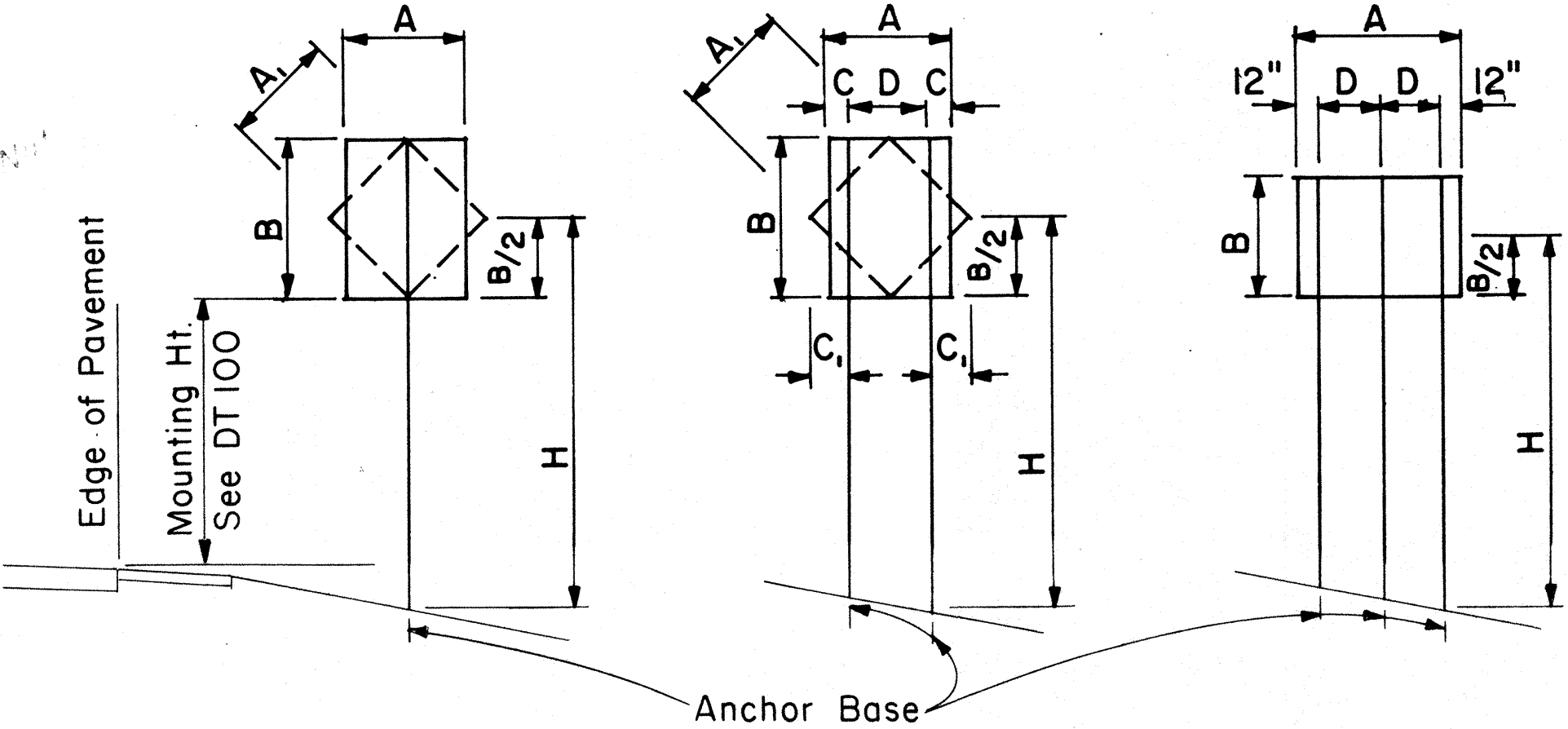
- Sign posts and base posts shall be flanged channel type structural steel conforming to ASTM A 499 and galvanized in accordance with ASTM A 123.
NOMINAL DIMENSIONS:
2.50 lbs./ft. - 3.125" x 1.562"
4.00 lbs./ft. - 3.500" x 1.750"
- Retainer - Spacer Strap shall be AISI 1020 steel and galvanized in accordance with ASTM A 123.
- Retainer and Connector Bolts shall be 5/16 - 18 UNC x 1.75" long hex. head, integral flange conforming to ASTM A 354 Grade BC. Nuts shall be 5/16 - 18 UNC hex. head, integral flange conforming to ASTM A 563 Grade D. All bolts and nuts shall be cadmium plated per Federal spec. QQP 416 B, Class 2, Type 2.
- All accessories, fittings and stiffener details (as required) shall be submitted to Engineer for approval 20 days prior to installation.
- For additional details see sht. DT 100.
- Basic formulas for use with the windload charts:
Factor = $A \times B \times H$
Therefore, if sign area ($A \times B$) is known,
Maximum $H = \frac{\text{Factor}}{\text{sign area (A x B)}}$
and if H is known,
Maximum sign area ($A \times B$) = $\frac{\text{Factor}}{H}$

APPROVAL RECOMMENDED:

Eishi Tanaka 9/21/82
TRAFFIC ENGINEER DATE

APPROVED:
Robert J. Sakai 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION			
STANDARD DETAILS			
GALVANIZED FLANGED CHANNEL			
SIGN POST MOUNTING			
Scale: As Shown		Date: Sept. 1982	
SHEET No. OF SHEETS DT 100A			



1-POST Sign area 10 sq. ft. and less
2-POST Sign area greater than 10 sq. ft. or A= 48"- 60"
3-POST A = greater than 60"

TYPICAL INSTALLATION

Not to Scale

FLANGED CHANNEL: 1-POST INSTALLATION

Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)						A x B (Area sq. ft.)
		7	8	9	10	11	12	
2.50 lbs./ft.	57	8.14	7.13	6.33	5.70	5.18	4.75	
4.00 lbs./ft.	112	-	-	-	-	-	9.33	

FLANGED CHANNEL: 2-POST INSTALLATION

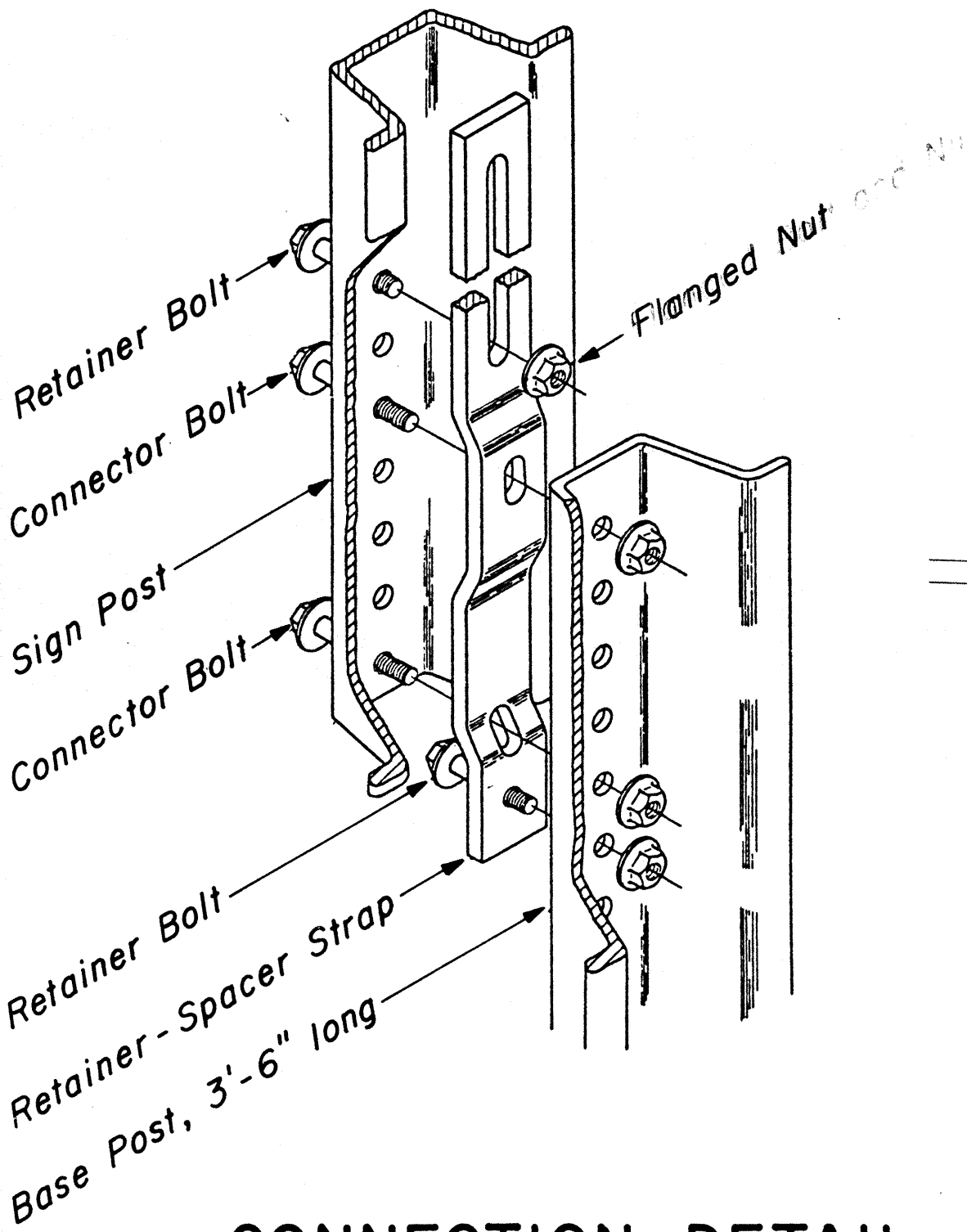
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)						A x B (Area sq. ft.)
		7	8	9	10	11	12	
2.50 lbs./ft.	124	17.71	15.50	13.77	12.40	11.27	10.33	
4.00 lbs./ft.	241	34.43	30.13	26.78	24.10	21.91	20.08	

FLANGED CHANNEL: 3-POST INSTALLATION

Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)						A x B (Area sq. ft.)
		7	8	9	10	11	12	
2.50 lbs./ft.	187	26.71	23.38	20.78	18.70	17.00	15.58	
4.00 lbs./ft.	362	51.71	45.25	40.22	36.20	32.91	30.17	

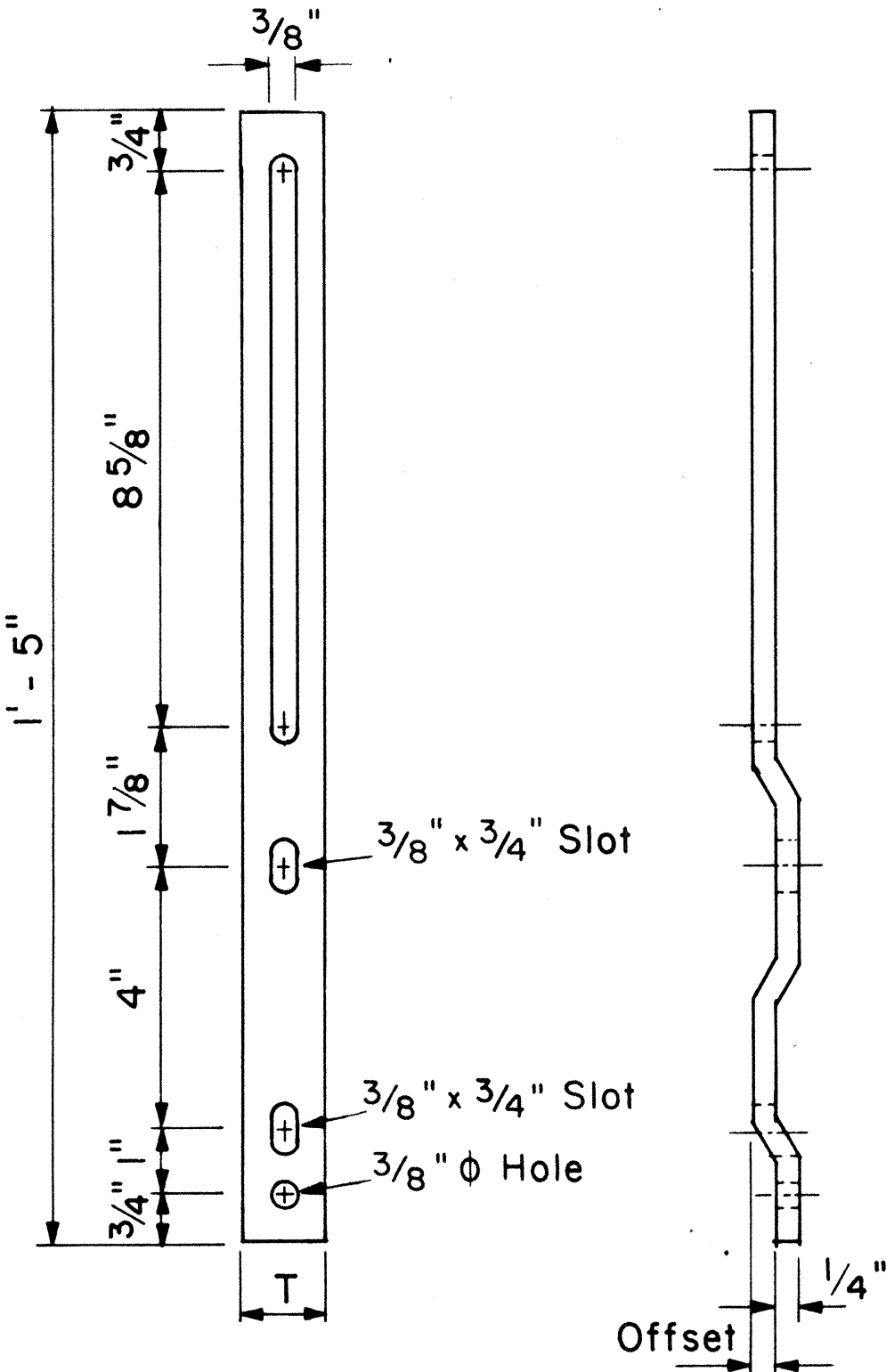
WINDLOAD CHARTS

NO.	REVISION	APPROVED BY	DATE



CONNECTION DETAIL

Not to Scale

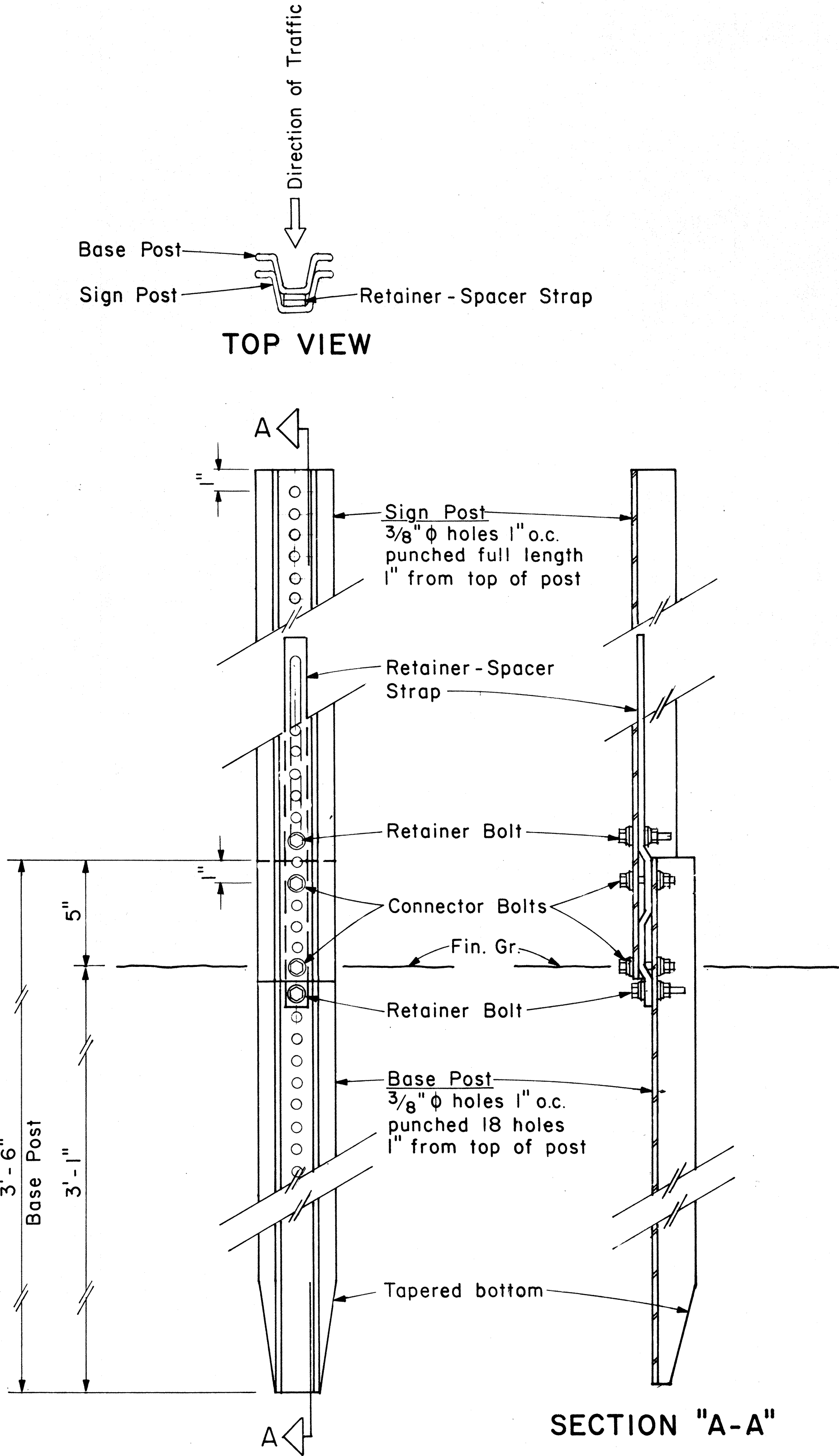


RETAINER-SPACER STRAP

Not to Scale

RETAINER-SPACER STRAP

Post Size	T	Offset
2.50 lbs./ft.	1.00"	0.145"
4.00 lbs./ft.	1.12"	0.280"



TOP VIEW

SECTION "A-A"

BACK VIEW

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"

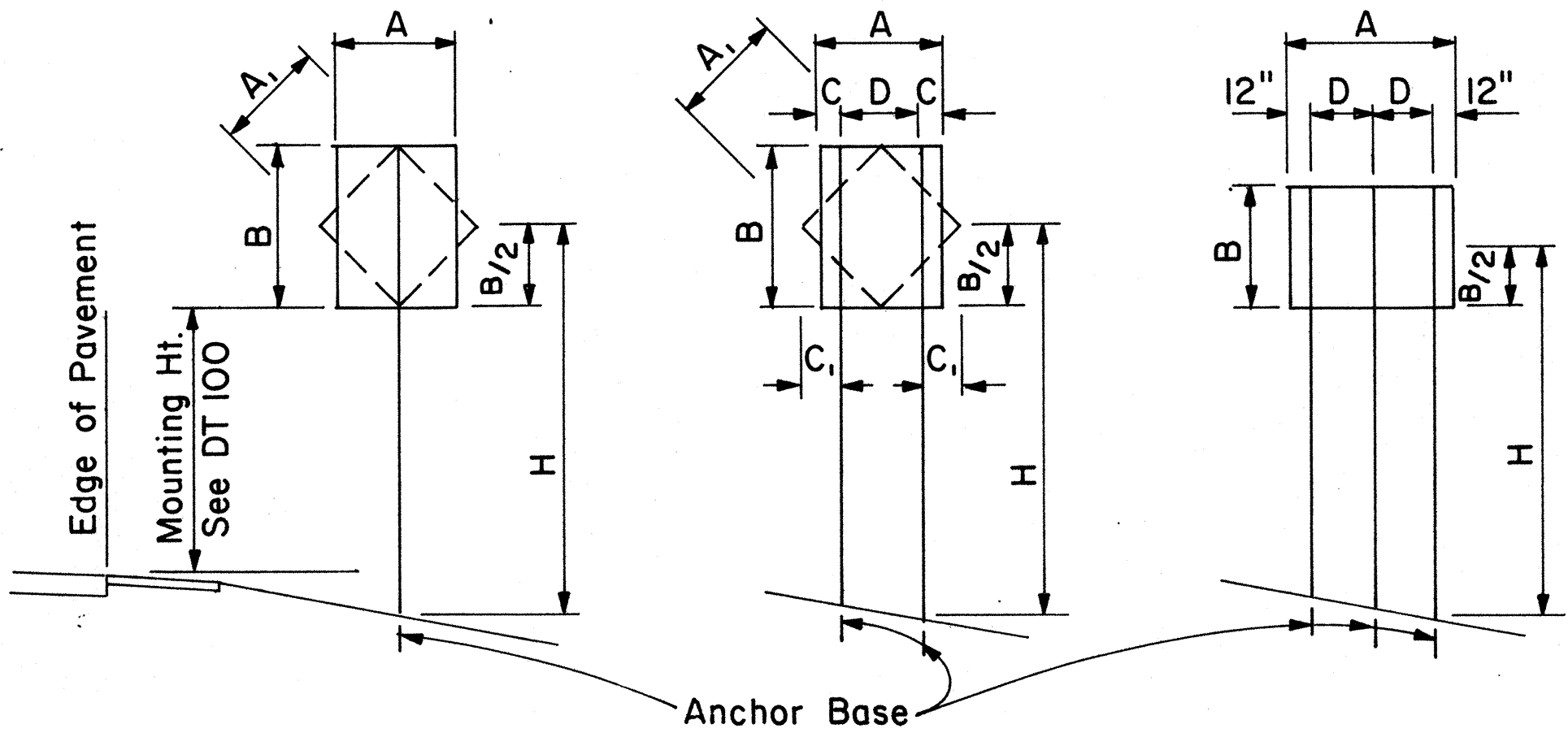
ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

GENERAL NOTES

- Square tube sign posts shall conform to Subsection 713.11(C) Square Tube Posts of the Specifications.
- All accessories, fittings and stiffener details (as required) shall be submitted to Engineer for approval 20 days prior to installation.
- Square tube posts shall be perforated with 7/16" ϕ holes, 1" o.c., 4 sides, along entire length of post.
- All posts shall be 12 gage unless otherwise specified or shown on the plans.
- For additional details see sht. DT 100.
- Basic formulas for use with the windload charts:
Factor = $A \times B \times H$
Therefore, if sign area ($A \times B$) is known,
Maximum $H = \frac{\text{Factor}}{\text{sign area (A x B)}}$
and if H is known,
Maximum sign area ($A \times B$) = $\frac{\text{Factor}}{H}$

A or A ₁	C	C ₁
36"	6"	-
48"	9"	19"
60"	12"	24"

NOTE: Frame stiffeners are required when D is greater than 24". See Gen. Note 2.



1 - POST 2 - POST 3 - POST
Sign area 10 sq. ft. and less Sign area greater than 10 sq. ft. or A = 48" - 60" A = greater than 60"

TYPICAL INSTALLATION
Not to Scale

SQUARE TUBE: 1 - POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2"	62	8.8	7.7	6.8	6.1	5.6	4.8
2 1/2"	107	-	-	-	-	9.6	8.8
		A x B (Area, sq. ft.)					

SQUARE TUBE: 2 - POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2"	122	17.4	15.2	13.5	12.2	11.0	10.1
2 1/2"	212	30.2	26.5	23.5	21.1	19.2	17.6
2 1/2", 10 ga.	260	37.0	32.0	28.6	26.0	23.5	21.5
		A x B (Area, sq. ft.)					

SQUARE TUBE: 3 - POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2"	183	26.0	22.8	20.3	18.2	16.6	15.2
2 1/2"	318	45.4	39.5	35.2	31.5	28.8	26.5
2 1/2", 10 ga.	388	55.0	48.5	43.0	38.5	35.0	32.0
		A x B (Area, sq. ft.)					

WINDLOAD CHARTS

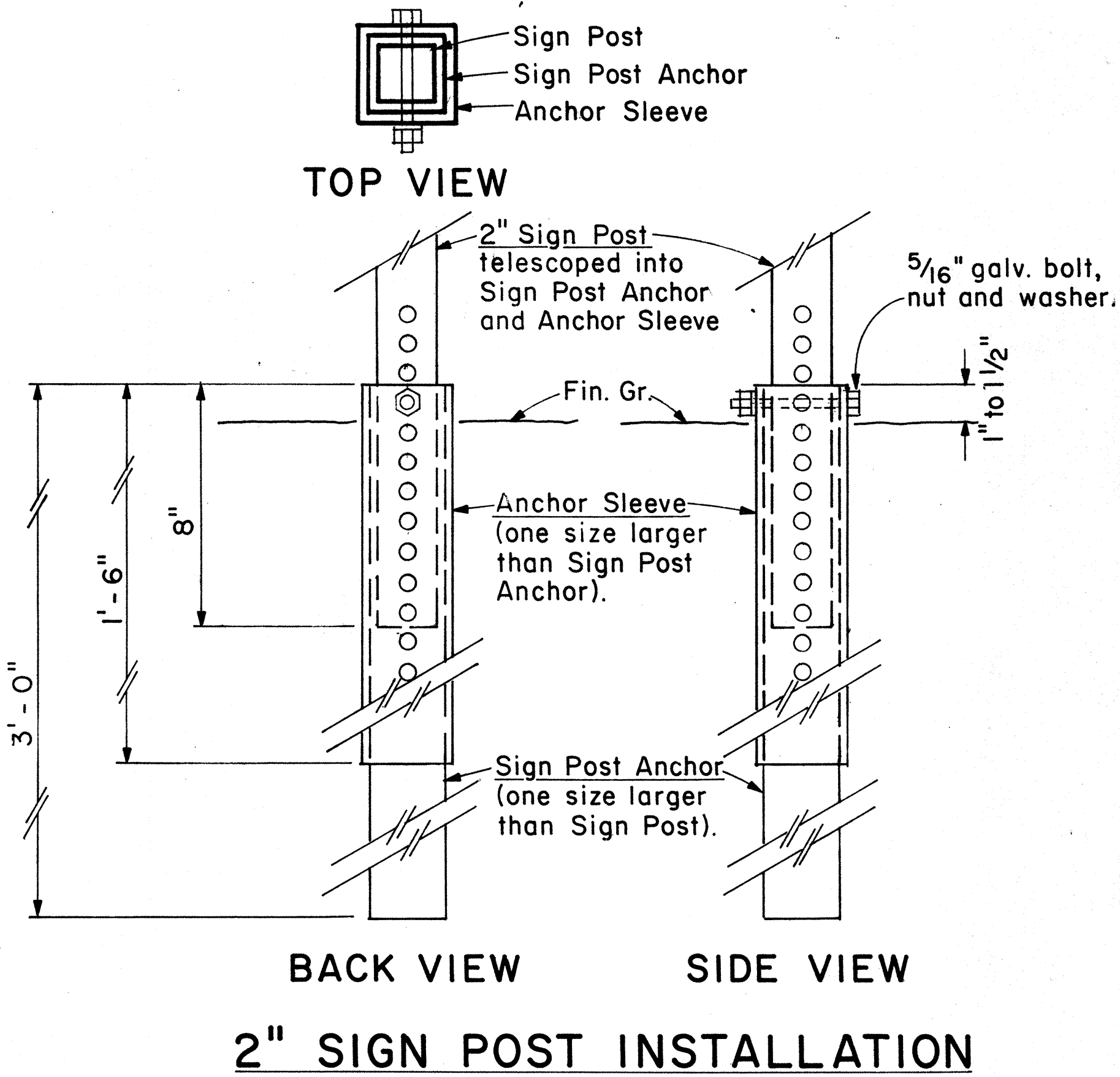
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

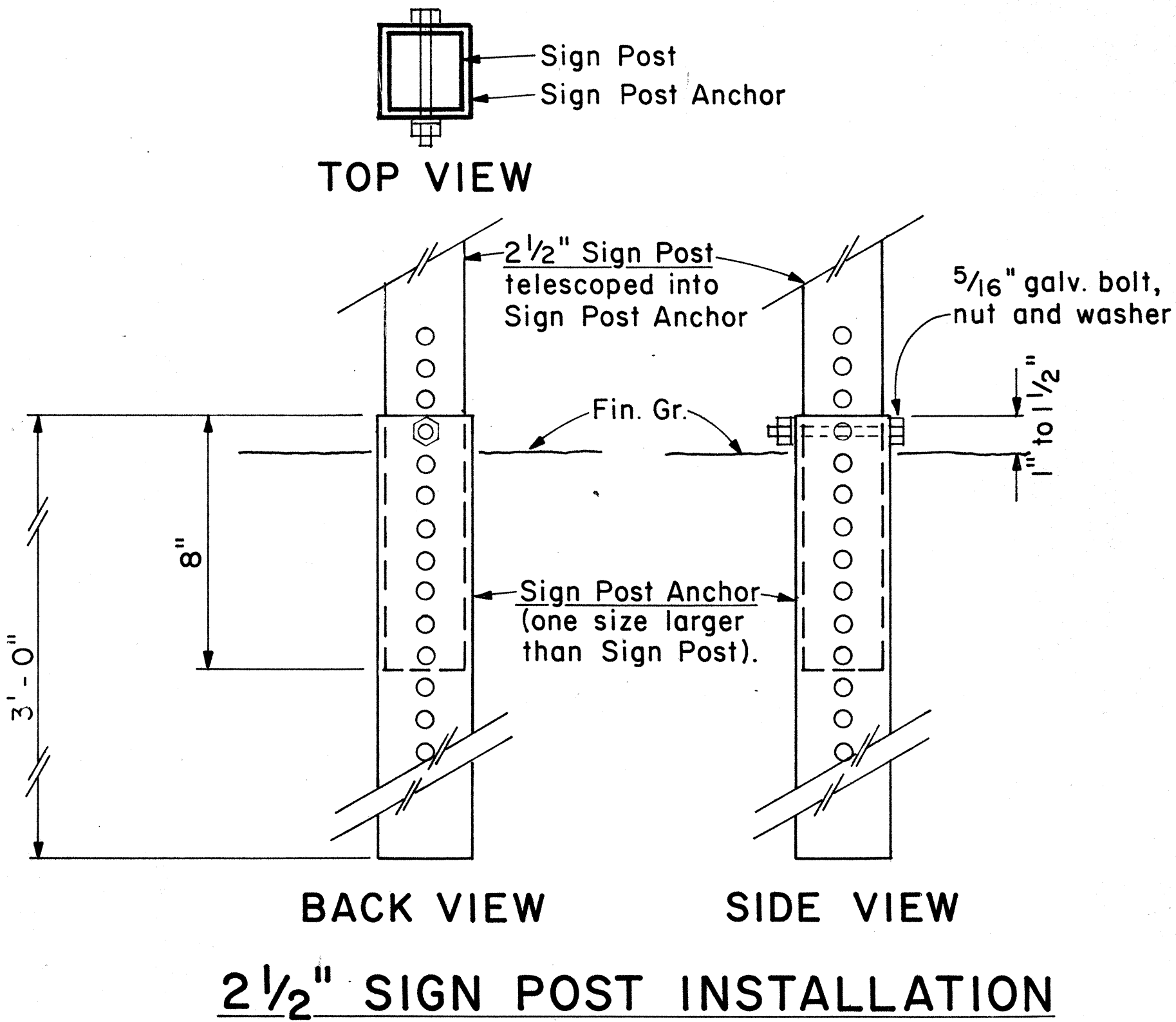
STANDARD DETAILS
GALVANIZED SQUARE TUBE
SIGN POST MOUNTING

Scale: As Shown Date: Sep. 1982

SHEET NO. OF SHEETS DT100B



2" SIGN POST INSTALLATION



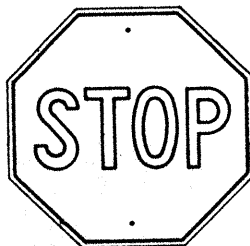
2 1/2" SIGN POST INSTALLATION

ANCHOR BASE DETAIL

Scale: 3" = 1' - 0"

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

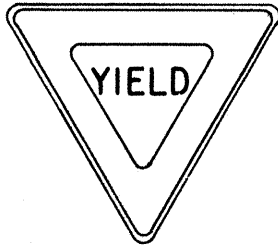
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(19) F-083-1(20)	1984	41	57



R1-1 30"x 30"
R1-1-A 36"x 36"

4-WAY

R1-3 12"x 6"
R1-3-A 18"x 9"



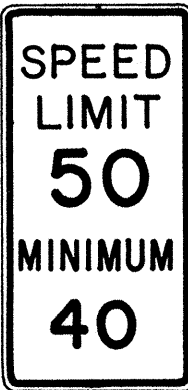
R1-2 36"x 36"x 36"
R1-2-A 48"x 48"x 48"



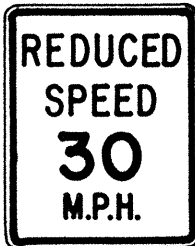
R2-1(50) 24"x 30"
R2-1(50)-A 48"x 60"



R2-2(40) 24"x 24"
R2-2(40)-A 48"x 48"



R2-4a(50/40) 24"x 48"
R2-4a(50/40)-A 48"x 96"



R2-5b(30) 24"x 30"
R2-5b(30)-A 48"x 60"



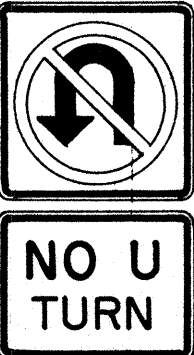
R3-1 24"x 24"
24"x 18"
R3-1-A 48"x 48"
48"x 36"



R3-2 24"x 24"
24"x 18"
R3-2-A 48"x 48"
48"x 36"



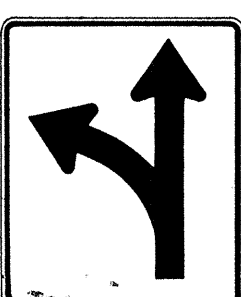
R3-3 24"x 24"
R3-3-A 48"x 48"



R3-4 24"x 24"
24"x 18"
R3-4-A 48"x 48"
48"x 36"



R3-5(L) 30"x 36"
R3-5(L)-A 48"x 60"



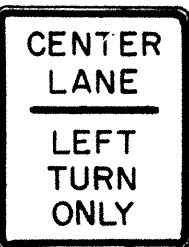
R3-6(L) 30"x 36"
R3-6(L)-A 48"x 60"



R3-7(R) 30"x 30"
R3-7(R)-A 48"x 48"



R3-8(L) 30"x 30"
R3-8(L)-A 36"x 36"
R3-8(L)-B 48"x 48"



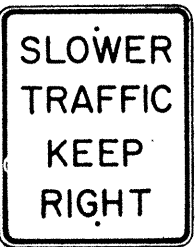
R3-9 24"x 30"



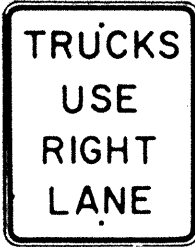
R4-1 24"x 30"



R4-2 24"x 30"



R4-3 24"x 30"
R4-3-A 48"x 60"



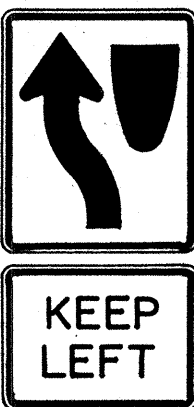
R4-5 24"x 30"



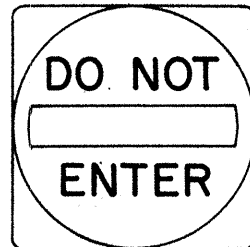
R4-6(500) 24"x 30"



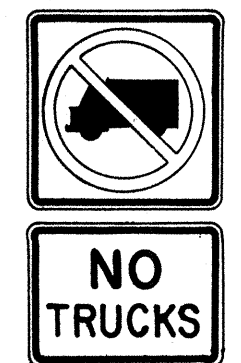
R4-7 24"x 30"
24"x 18"



R4-8 24"x 30"
24"x 18"



R5-1 30"x 30"
R5-1-A 48"x 48"



R5-2 24"x 24"
24"x 18"



R5-4 24"x 30"



R5-6 24"x 24"
24"x 18"



R5-9 36"x 24"



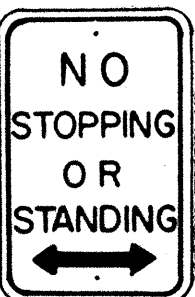
R6-1(R) 36"x 12"



R6-2(R) 18"x 24"



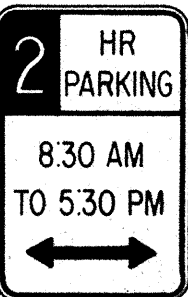
R7-1 12"x 18"
R7-1-A 24"x 30"



R7-4 12"x 18"
R7-4-A 24"x 30"



R7-1,7(R) 12"x 18"



R7-108 12"x 18"



R7-201 12"x 6"
R7-201-A 24"x 12"



R8-1 24"x 30"



R8-2 24"x 30"



R8-3 24"x 30"



R8-4 30"x 24"
R8-4-A 48"x 36"



R8-5 24"x 30"



R8-6 24"x 30"



R8-7 30"x 24"
R8-7-A 48"x 36"



R9-1 18"x 24"



R9-2 12"x 18"



R9-3 12"x 18"



R9-4 18"x 24"



R10-1 12"x 18"



R10-2 12"x 18"



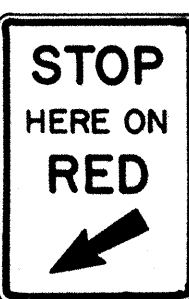
R10-3 9"x 12"



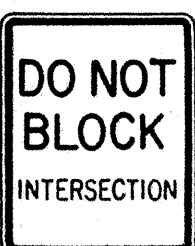
R10-4 9"x 12"



R10-5 24"x 30"



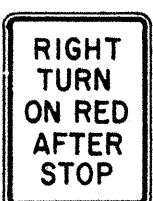
R10-6 24"x 36"



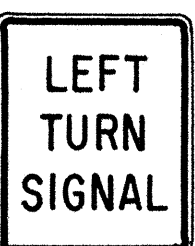
R10-7 24"x 30"



R10-8 24"x 30"



R10-9 24"x 30"



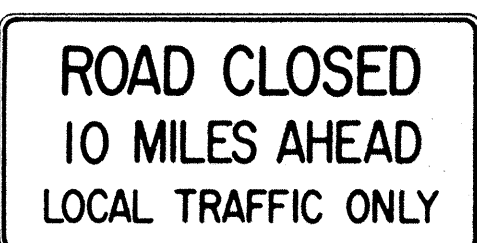
R10-10 24"x 30"



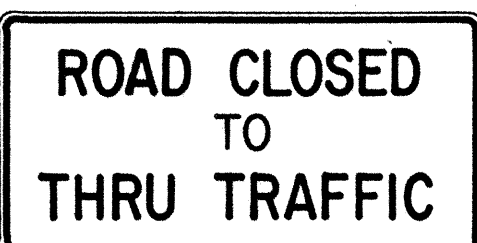
R11-1 24"x 30"



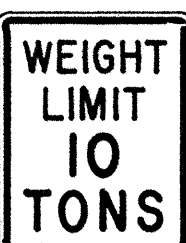
R11-2 48"x 30"



R11-3(10) 60"x 30"



R11-4 60"x 30"



R12-1(10) 24"x 30"

GENERAL NOTES

- Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
- All regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory 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.
- All signs shall be erected without educational plaques unless called for in the plans.

APPROVAL RECOMMENDED:
Enishi Tanaka 3/11/72
 TRAFFIC ENGINEER DATE

APPROVED:
Robert Johnson 3-20-72
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1	H.T.	10/10/74
3	Added General Note 5	H.T.	6/9/75

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

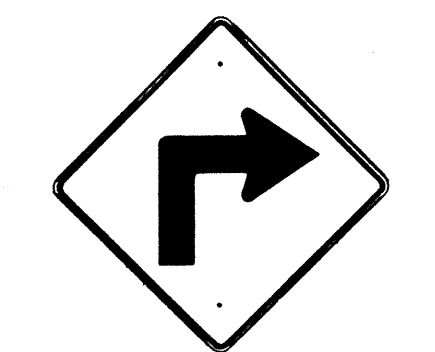
STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE

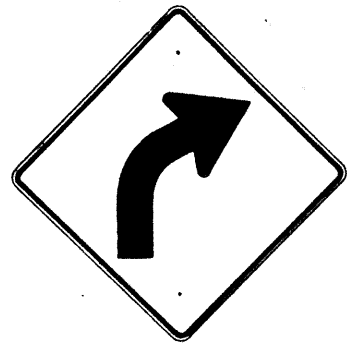
SHEET No. 41 OF SHEETS DT 101

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

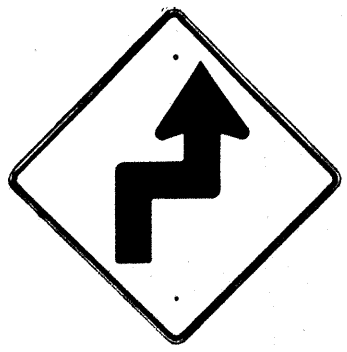
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII *	HAW.	F-083-1(19) F-083-1(20)	1984	42	57



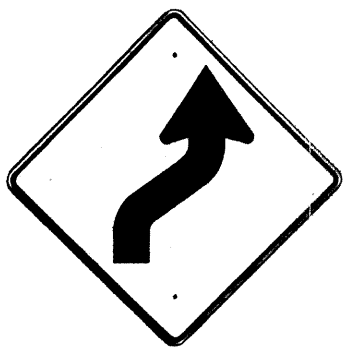
W1-1(R) 30"x 30"
W1-1(R)-A 48"x 48"



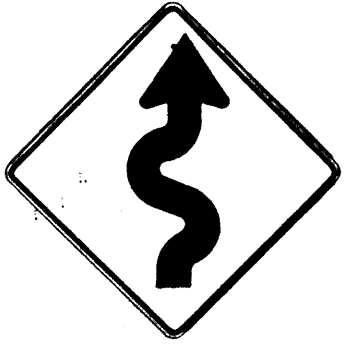
W1-2(R) 30"x 30"
W1-2(R)-A 48"x 48"



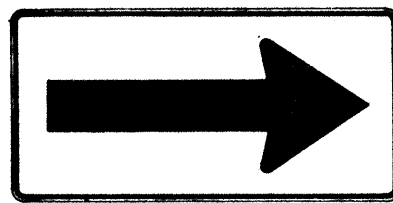
W1-3(R) 30"x 30"
W1-3(R)-A 48"x 48"



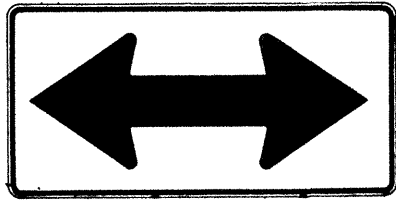
W1-4(R) 30"x 30"
W1-4(R)-A 48"x 48"



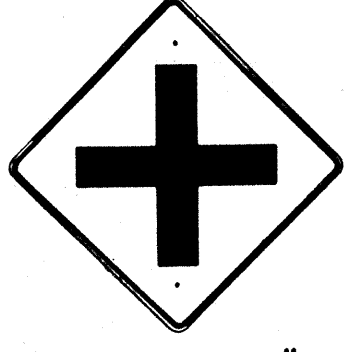
W1-5(R) 30"x 30"
W1-5(R)-A 48"x 48"



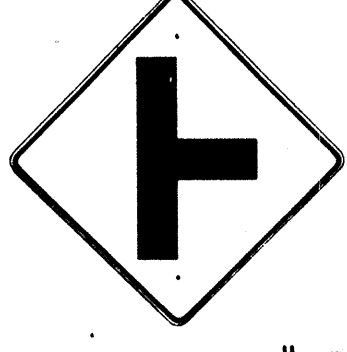
W1-6 48"x 24"



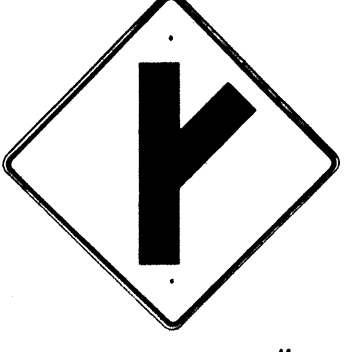
W1-7 48"x 24"



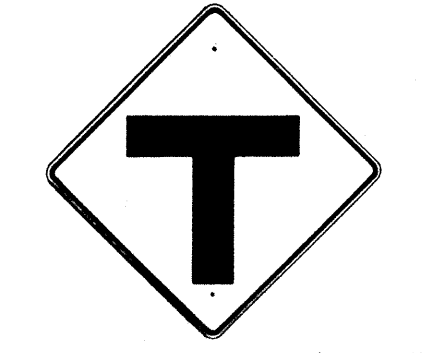
W2-1 30"x 30"
W2-1-A 48"x 48"



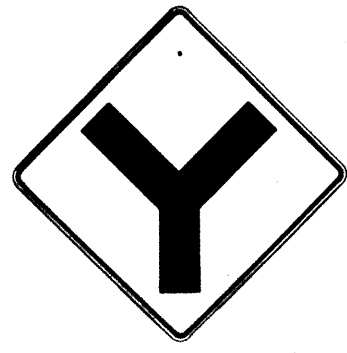
W2-2 30"x 30"
W2-2-A 48"x 48"



W2-3(R) 30"x 30"
W2-3(R)-A 48"x 48"



W2-4 30"x 30"
W2-4-A 48"x 48"



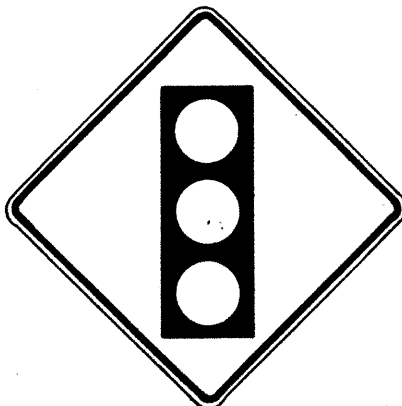
W2-5 30"x 30"
W2-5-A 48"x 48"



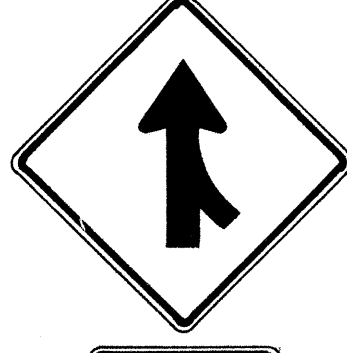
W3-1 30"x 30"
W3-1-A 36"x 36"



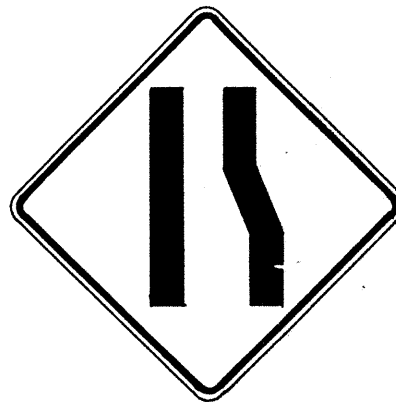
W3-2 30"x 30"
W3-2-A 36"x 36"



W3-3 36"x 36"
24"x 18"



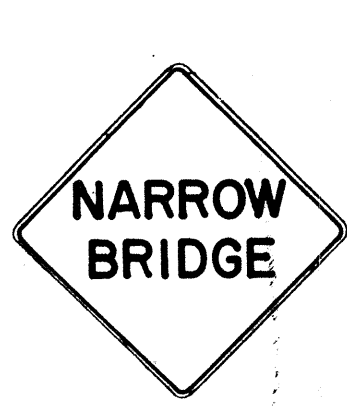
W4-1(R) 30"x 30"
24"x 18"
W4-1(R)-A 48"x 48"
24"x 18"



W4-2(R) 36"x 36"
W4-2(R)-A 48"x 48"



W5-1 36"x 36"



W5-2 30"x 30"
W5-2-A 36"x 36"



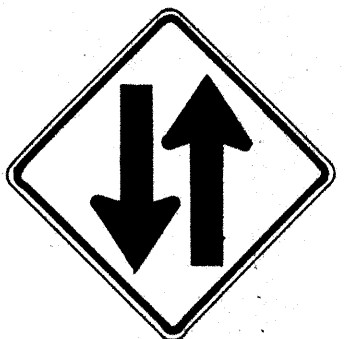
W5-3 36"x 36"



W6-1 36"x 36"
24"x 18"



W6-2 36"x 36"
24"x 18"



W6-3 30"x 30"
24"x 18"
W6-3-A 36"x 36"
24"x 18"
W6-3-B 48"x 48"
24"x 18"



W7-1 30"x 30"
24"x 18"
W7-1-A 36"x 36"
24"x 18"



W7-2 24"x 18"



W8-1 30"x 30"
W8-1-A 36"x 36"



W8-2 30"x 30"
W8-2-A 36"x 36"



W8-3 30"x 30"
W8-3-A 36"x 36"



W8-4 30"x 30"
W8-4-A 36"x 36"



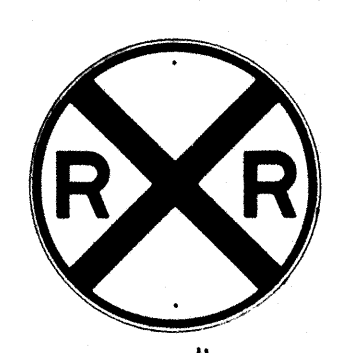
W8-5 30"x 30"
24"x 18"
W8-5-A 36"x 36"
24"x 18"



W9-1(R) 30"x 30"
W9-1(R)-A 36"x 36"
W9-1(R)-B 48"x 48"



W9-2(L) 36"x 36"
W9-2(L)-A 48"x 48"



W10-1 36" Diameter



W11-1 30"x 30"
24"x 18"
W11-1-A 36"x 36"
24"x 18"



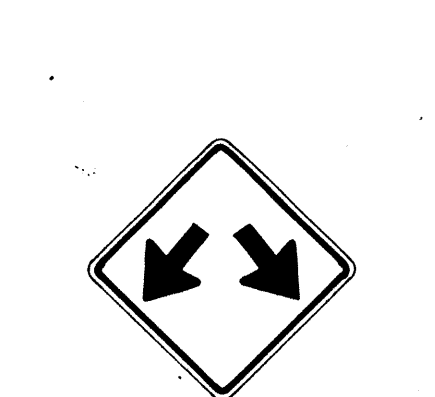
W11-2 30"x 30"
24"x 18"
W11-2-A 36"x 36"
24"x 18"



W11-4 30"x 30"
24"x 18"
W11-4-A 36"x 36"
24"x 18"



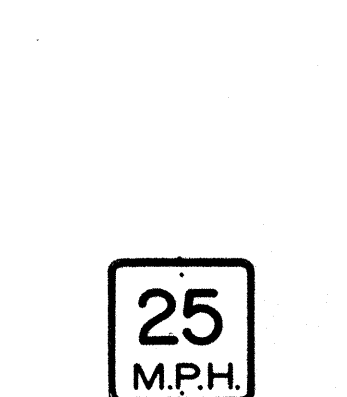
W11-5 30"x 30"
24"x 18"
W11-5-A 36"x 36"
24"x 18"



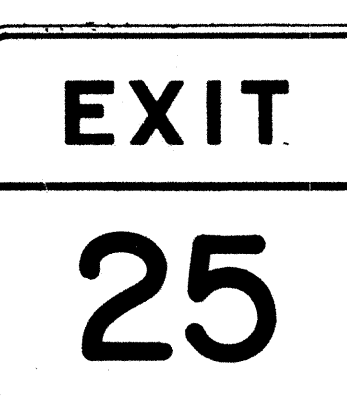
W12-1 24"x 24"
W12-1-A 36"x 36"
W12-1-B 48"x 48"



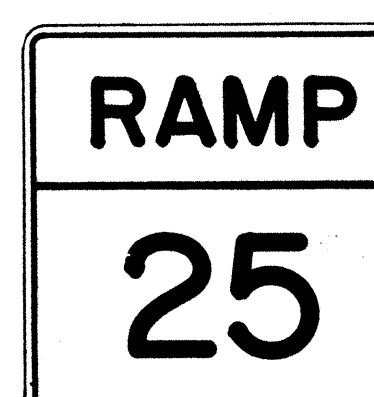
W12-2(12'-6") 36"x 36"
24"x 18"



W13-1(25) 18"x 18"
W13-1(25)-A 24"x 24"



W13-2(25) 48"x 60"



W13-3(25) 48"x 60"



W14-1 30"x 30"



W14-3 36"x 48" x 48"

GENERAL NOTES

- Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
- All warning signs shall be reflectorized unless otherwise specified.
- All warning 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.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized.

APPROVAL RECOMMENDED:
Eishi Tanaka 3/17/12
TRAFFIC ENGINEER DATE

APPROVED:
Walter D. Sisk 3-30-12
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.C.	3/20/12
2	Revised General Note 1	H.C.	10/16/94
3	Revised General Note 5	M.H.	9-16-75
4	Revised General Note 5	H.C.	9-14-76
5	Added Note 1	H.C.	11-9-79

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS WARNING SIGNS

NOT TO SCALE
SHEET No. OF SHEETS DT 102

DATE	_____
SURVEY PLOTTED BY	_____
DESIGNED BY	_____
NOTED BY	_____
CHECKED BY	_____
NO.	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(19) F-083-1(20)	1984	43	57

General Notes

- Sign details shall conform to the latest editions of the following FHWA publications:
 - "Standard Alphabets for Highway Signs," and as amended.
 - "Standard Highway Signs," and as amended.
 - "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- All signs shall be reflectorized with reflective sheeting, unless otherwise specified.
- All signs shall have $\frac{3}{8}$ " bolt holes drilled at appropriate locations.
- Numerals in () indicate numerals to be inserted for sign message. (R) or (L) indicates right or left.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized with reflective sheeting.
- All signs shall be erected without educational plaques unless called for in the plans.

ALL WAY

R1-4 18"x 6"

REDUCED SPEED
35
AHEAD

R2-5d(35) 24"x 30"

R2-5d(35)-A 48"x 60"

SPEED LIMIT
ENFORCED
BY
VASCAR

4" Series D
- 4" Series C
- 3" Series D
- 5" Series C

R2-10 24"x 30"

CENTER LANE

ONLY

R3-9b 24"x 36"

BUS STOP

R7-107(R) 12"x 24"

RESERVED PARKING

R7-8 12"x 18"

R7-8-A 24"x 30"

ANY TIME

4" Series C
1 1/2"

R8-3a 24"x 24"

24"x 18"

R8-3a-A 48"x 48"

NO PED XING

R9-3a 18"x 18"

18"x 12"

R9-3a-A 24"x 24"

24"x 18"

USE CROSSWALK

R9-3b(R) 18"x 12"

USE CROSSWALK

R9-3b(L) 18"x 12"

NO TURN ON RED

R10-11a 24"x 30"

TURN RIGHT ANY TIME WITH CAUTION

4" Series C

R16-1 24"x 30"

NO LEFT TURN ON RED

4" Series D -
3" Series D -
2" Series D -
3" Series D -

R16-3 18"x 24"

NO RIGHT TURN ON RED

R16-4 18"x 24"

UNLICENSED VEHICLES
BICYCLES, CYCLES
UNDER 5 H P,
PEDESTRIANS
KEEP OUT
FREEWAY

3" Series C
4" Series E

R16-5 36"x 42"

TURN AHEAD

8" Series F
5" Series D

R16-6 24"x 30"

U
TURN
OK

8" Series F
5" Series D

R16-7 24"x 30"

MOTOR-DRIVEN CYCLES PROHIBITED

4" Series B

R5-8 30"x 24"

U
TURN
AHEAD

W17-1(L) 60"x 60"

STOP AHEAD

W3-1a 36"x 36"

24"x 18"

W3-1a-A 48"x 48"

24"x 18"

YIELD AHEAD

W3-2a 36"x 36"

24"x 18"

W3-2a-A 48"x 48"

24"x 18"

STOP AHEAD WHEN FLASHING

6" Series C

W3-4 48"x 48"

TRUCK CROSSING

W8-6 30"x 30"

W8-6-A 36"x 36"

THRU TRAFFIC MERGE LEFT

6" Series E

W9-3(L) 48"x 48"

EQUESTRIAN XING

W11-7 36"x 36"

24"x 18"

W11-7-A 48"x 48"

24"x 18"

FIRE STATION

W11-8 36"x 36"

24"x 18"

W11-8-A 48"x 48"

24"x 18"

W11-9 36"x 36"

W11-9-A 48"x 48"

LIMITED SIGHT DISTANCE

W14-4 36"x 36"

W14-4-A 48"x 48"

DELAYED GREEN

4" Series C

W15-1 24"x 24"

ADVANCE GREEN

W15-2 24"x 24"

END FREEWAY 1/2 MI

8" Series E

CW16-1(1/2) 60"x 60"

RIGHT LANE EXIT ONLY

8" Series E

W18-1 48"x 60"

SCHOOL BUS STOP AHEAD

S3-1 30"x 30"

8:00 AM TO 3:30 PM

S4-1 24"x 10"

WHEN CHILDREN ARE PRESENT

S4-2 24"x 10"

SCHOOL

S4-3 24"x 8"

WHEN FLASHING

S4-4 24"x 10"

SIDEWALK CLOSED

7" Series D

CW23-4 48"x 48"

USE SIDEWALK

4" Series C

R18-1 24"x 18"

APPROVAL RECOMMENDED:
Eishi Tanaka 5/2/78
 TRAFFIC ENGINEER DATE

APPROVED:
Robert Z. Zalewski 5/3/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht.DT103 approved 3/20/72	H.T.	5/3/78
2	Added General Note 6	H.T.	11/9/79

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978

SHEET NO. OF SHEETS DT 103

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(17) F-083-1(20)	1984	44	57



CW 20-1a 48" x 48"



CW 20-2d 48" x 48"



CW 20-3b 48" x 48"



CW 20-4d 48" x 48"



CW 20-5d(L) 48" x 48"



CW 20-7c 48" x 48"



CW 21-1 30" x 30"



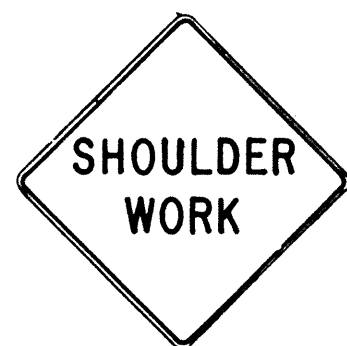
CW 21-2 30" x 30"



CW 21-3 36" x 36"



CW 21-4 36" x 36"



CW 21-5 30" x 30"



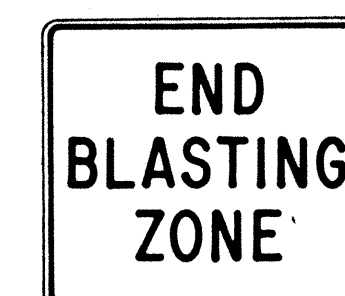
CW 21-6 30" x 30"



CW 22-1b 48" x 48"



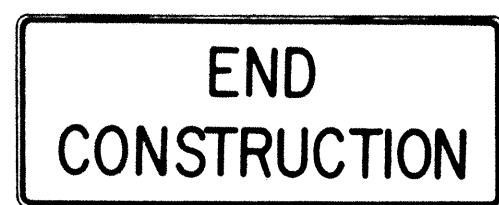
CW 22-2 42" x 36"



CW 22-3 42" x 36"



CG 20-1(5) 60" x 36"



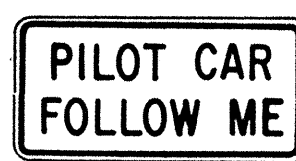
CG 20-2 60" x 24"



CM 4-9(R) 30" x 24"



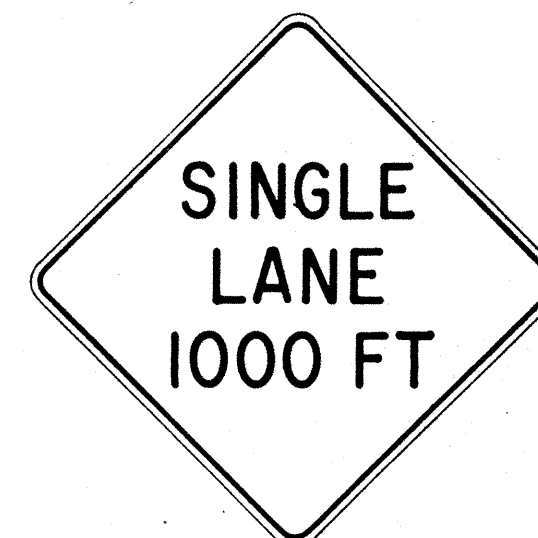
CM 4-10(R) 48" x 18"



CG 20-4 36" x 18"



CW 23-1 36" x 36"



CW 23-2b 48" x 48"



CW 23-3(R) 48" x 48"

GENERAL NOTES

- Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, 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.	10/10/74
3	Revised General Note 2	H.T.	9-16-75
4	Revised General Note 2 and sign CG 20-1(5)	H.T.	9-14-76

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

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

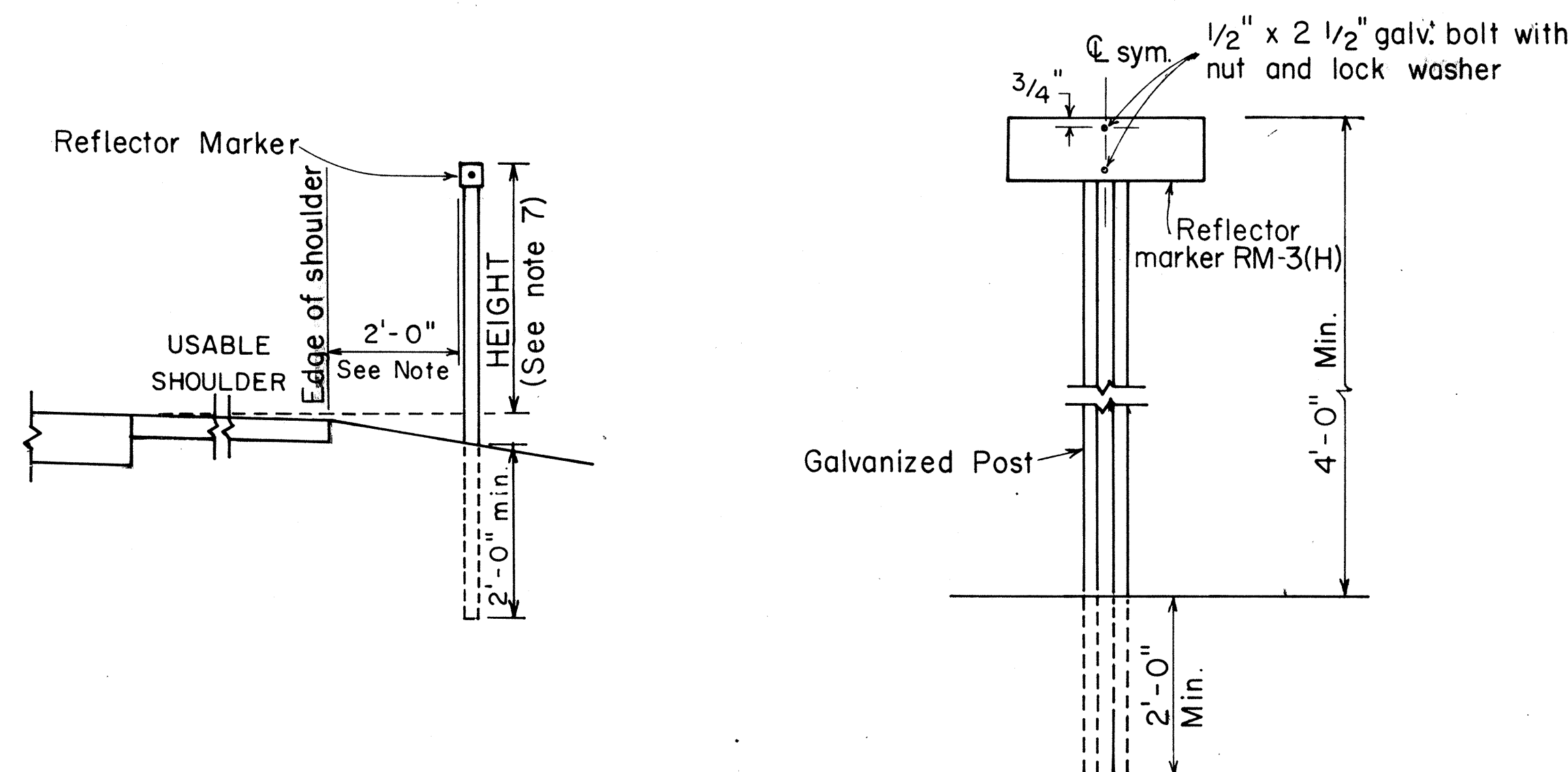
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS CONSTRUCTION SIGNS
NOT TO SCALE
SHEET No. 44 OF 44 SHEETS DT 104

ORIGINAL PLAN	DATE
NO.	
SURVEY PLOTTED BY	
DRAWN BY	
REVIEWED BY	
QUANTITIES BY	
CHECKED BY	

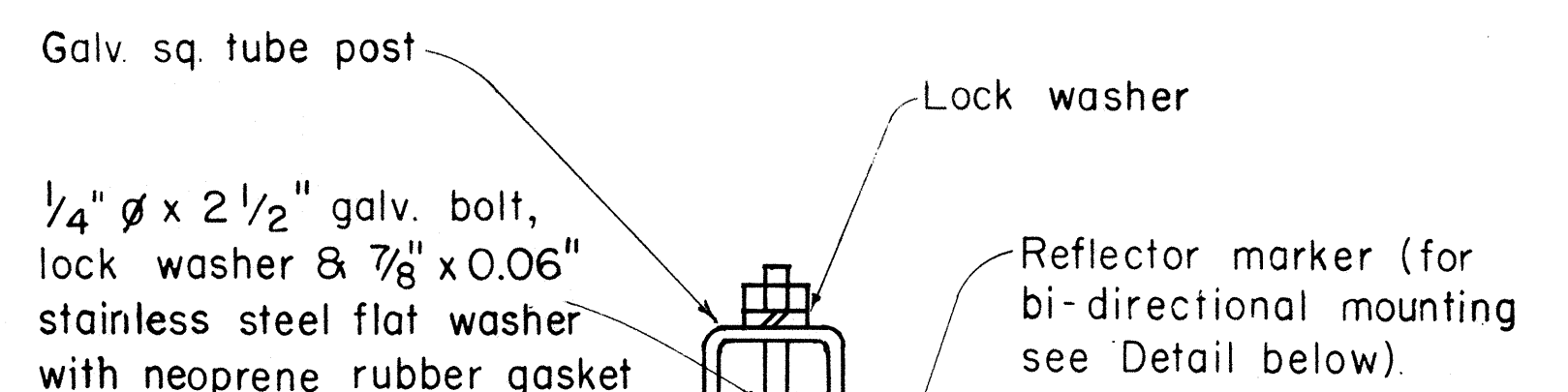
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(19) F-083-1(20)	1984	45	57

GENERAL NOTES:

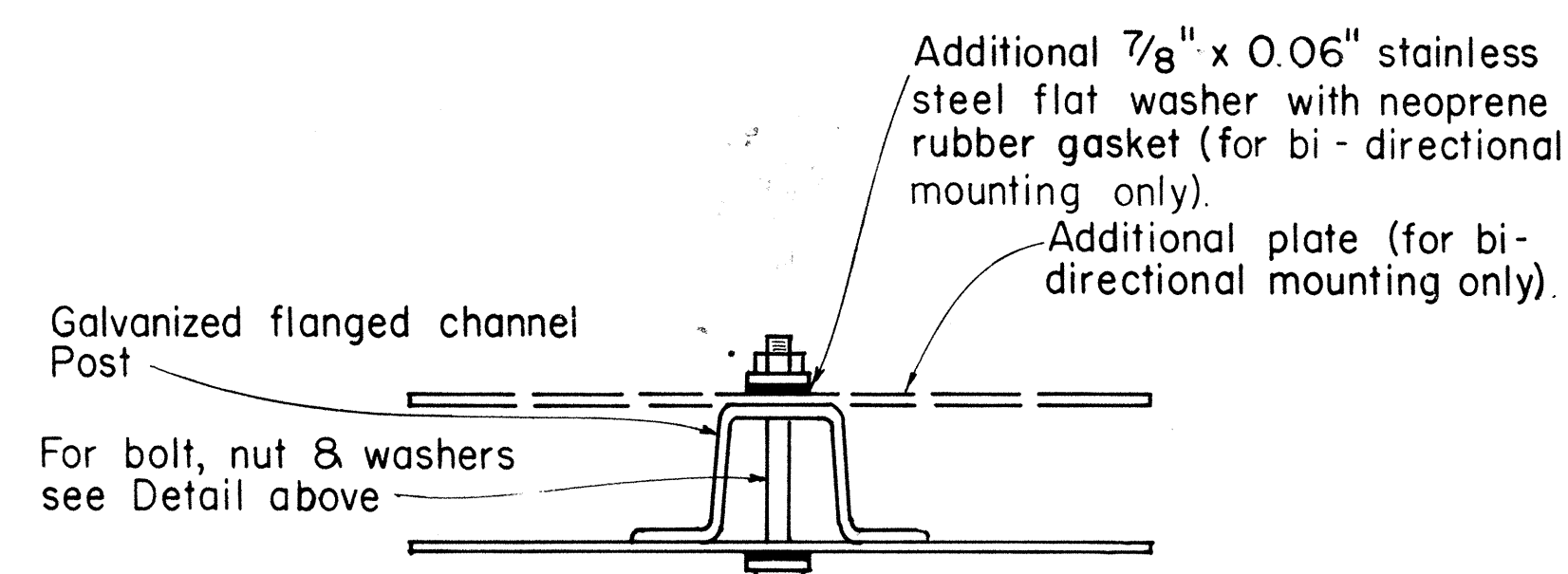
1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
2. (R) or (L) indicates right or left and shall be as shown on the plans.
3. Reflector markers RM-1 and RM-2 shall be:
 - a) Yellow if placed along the left edge of divided roadways, one-way roadways, and ramps in the direction of travel.
 - b) White if placed along the right edge of divided roadways, one-way roadways, and ramps in the direction of travel.
4. For RM-4, the stripes shall slope downward at an angle of 45° toward the side of the obstruction that traffic is to pass.
5. For reflector marker RM-9, reflective sheeting material may be used as an alternate.
6. (H) indicates horizontal mounting of reflector marker.
7. Height = 4'-0" min. for RM-1, RM-2 and RM-3.
Height = 5'-6" min. for RM-4 and RM-9.
8. Final locations of reflector markers shall be approved by the Engineer.



REFLECTOR MARKER MOUNTING DETAIL

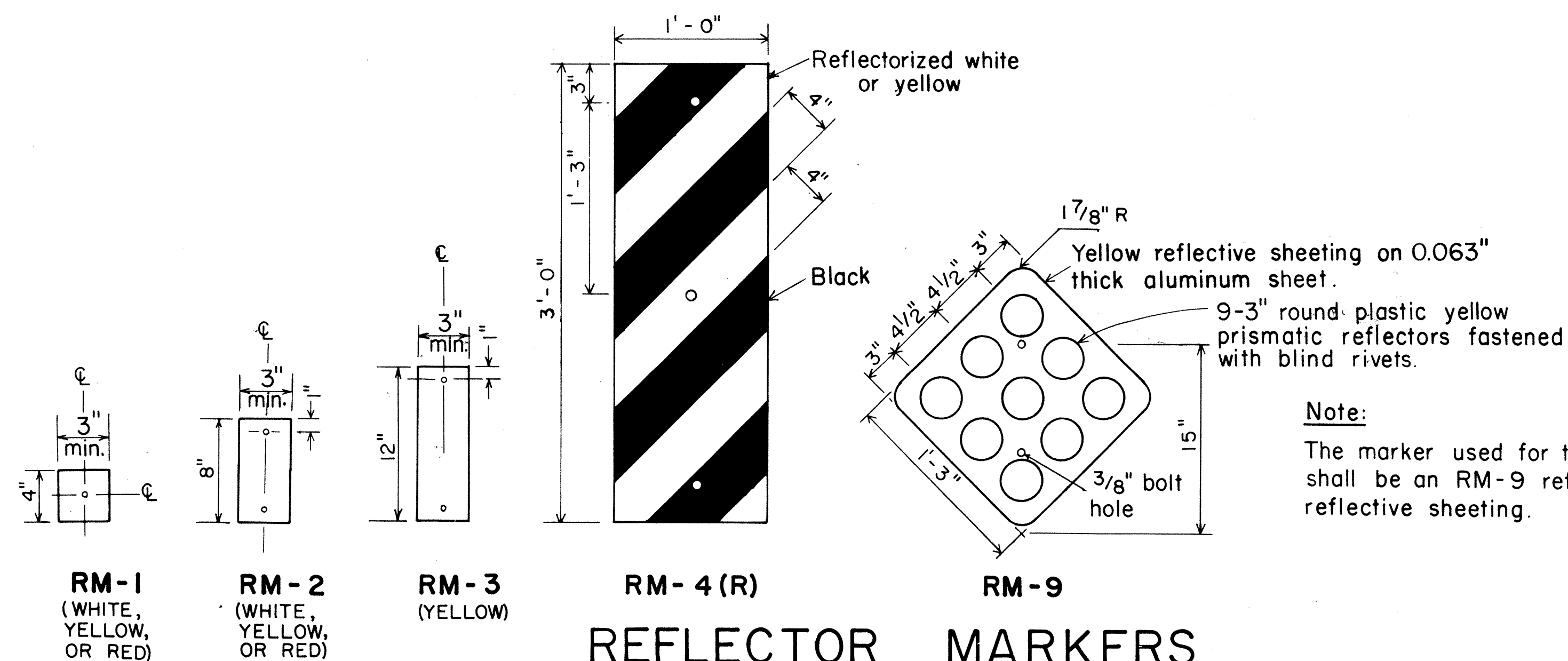


GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS



Note:

The marker used for the end of a roadway shall be an RM-9 reflectorized with red reflective sheeting.

APPROVAL RECOMMENDED:
Erich Tanaka 11/1/77
TRAFFIC ENGINEER DATE

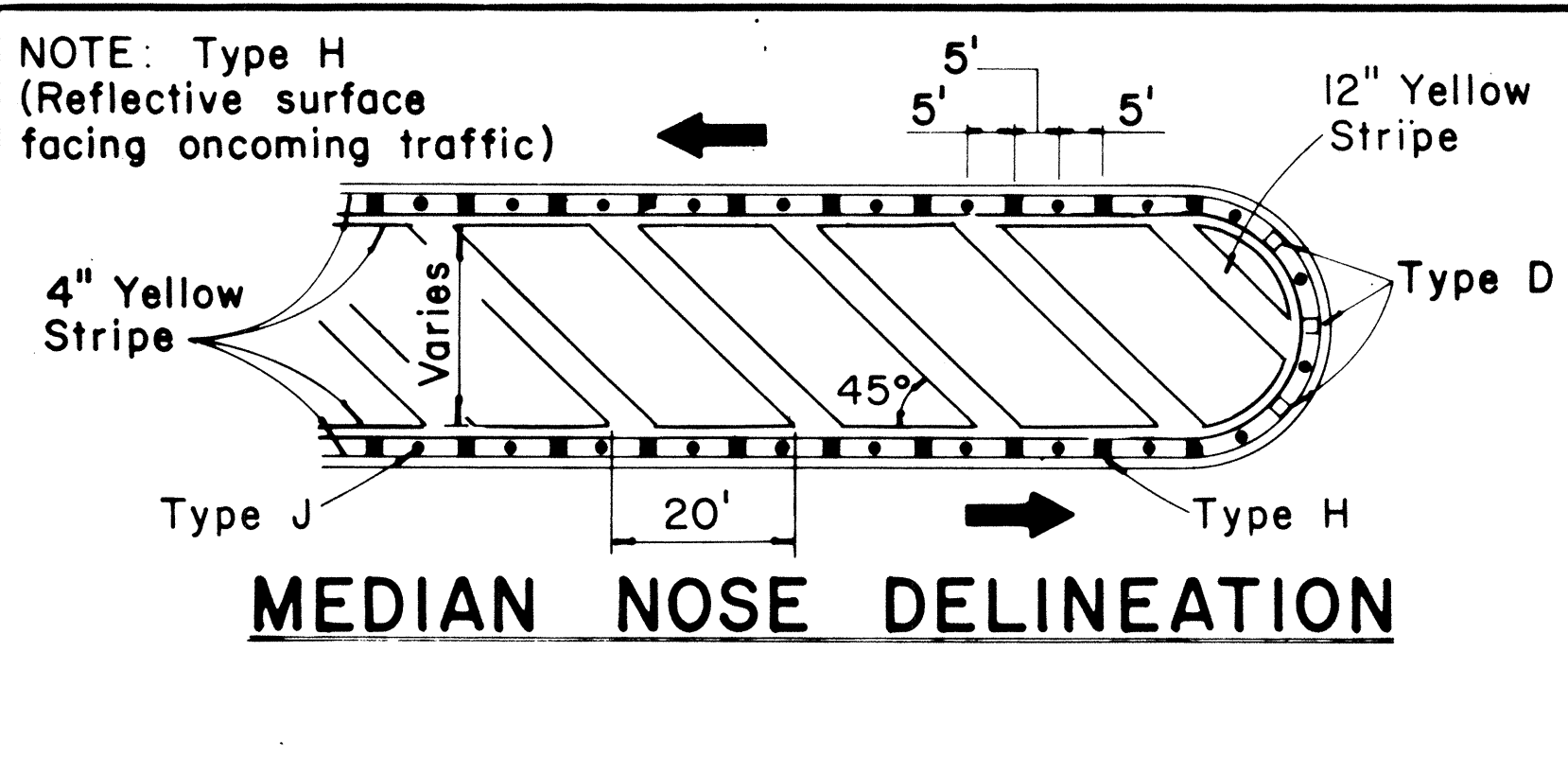
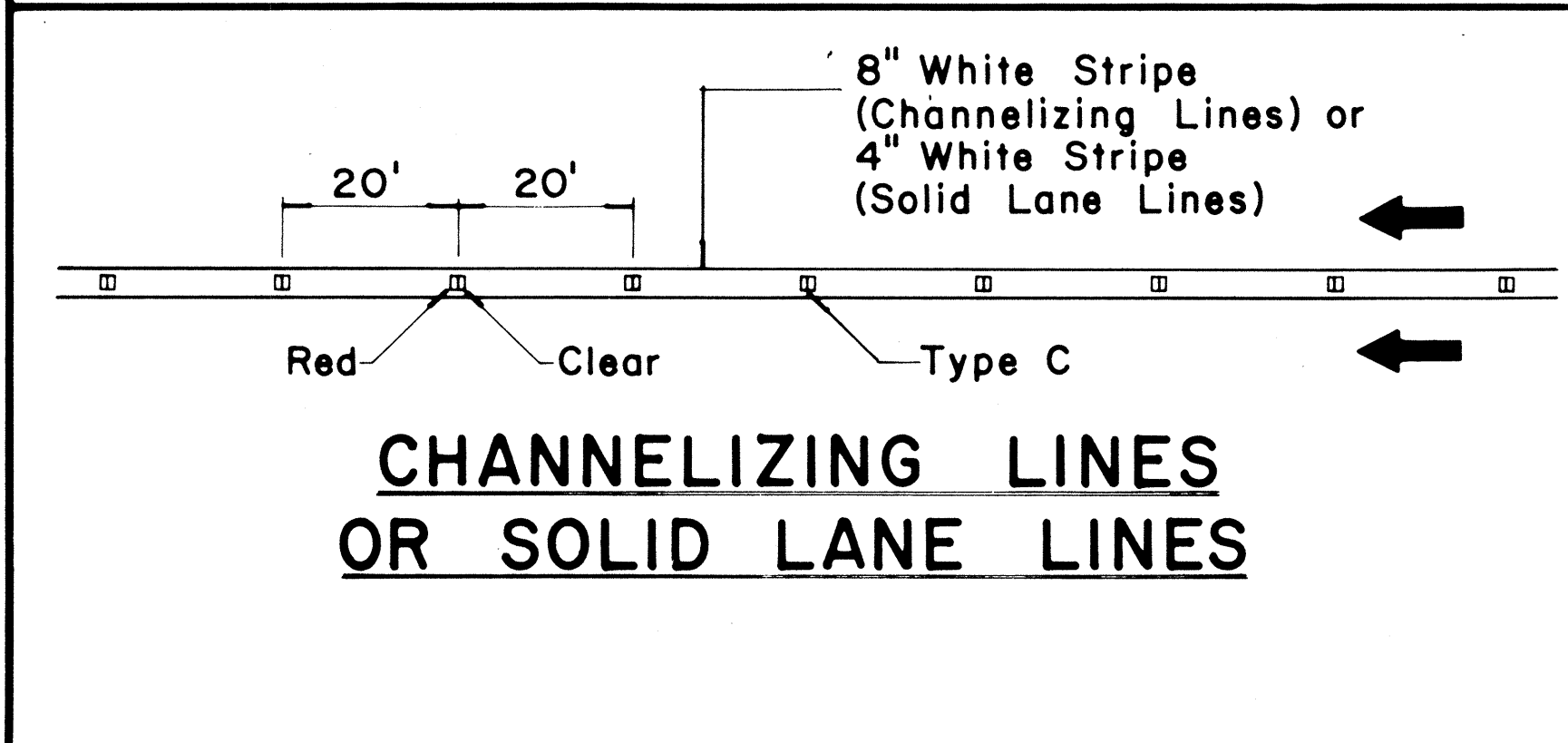
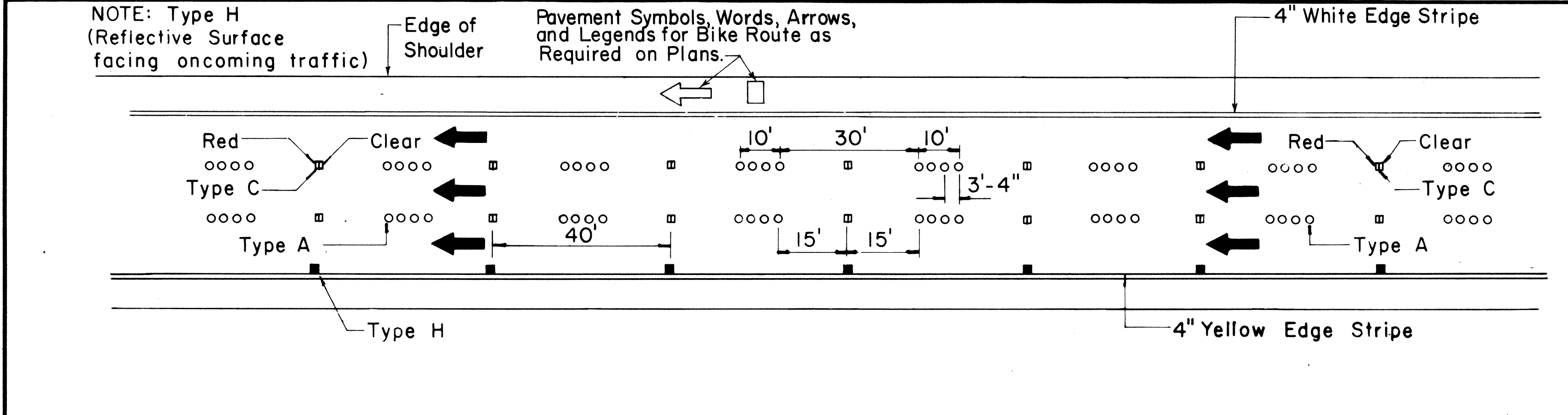
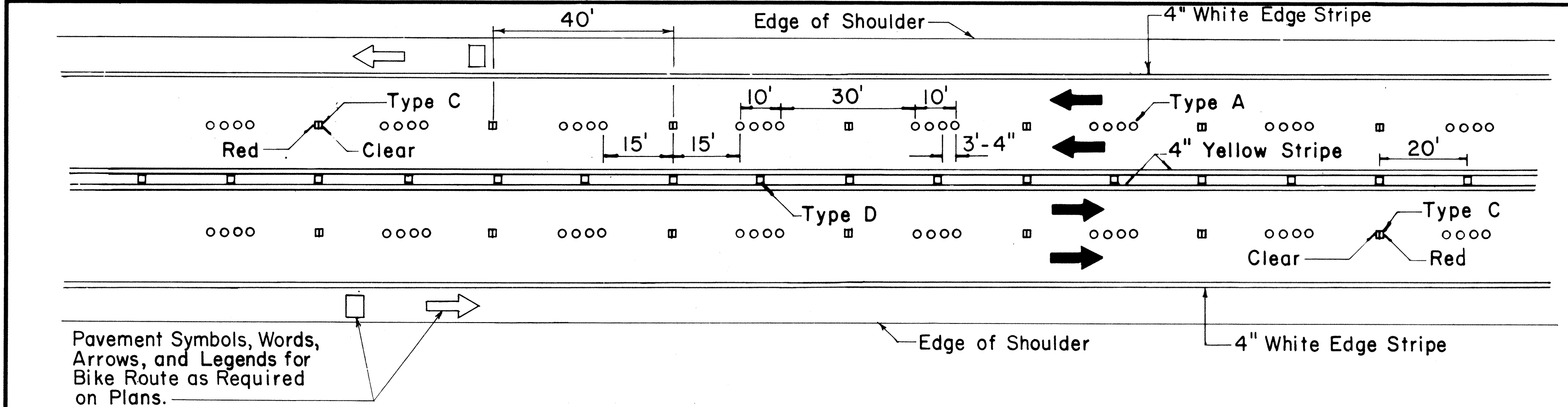
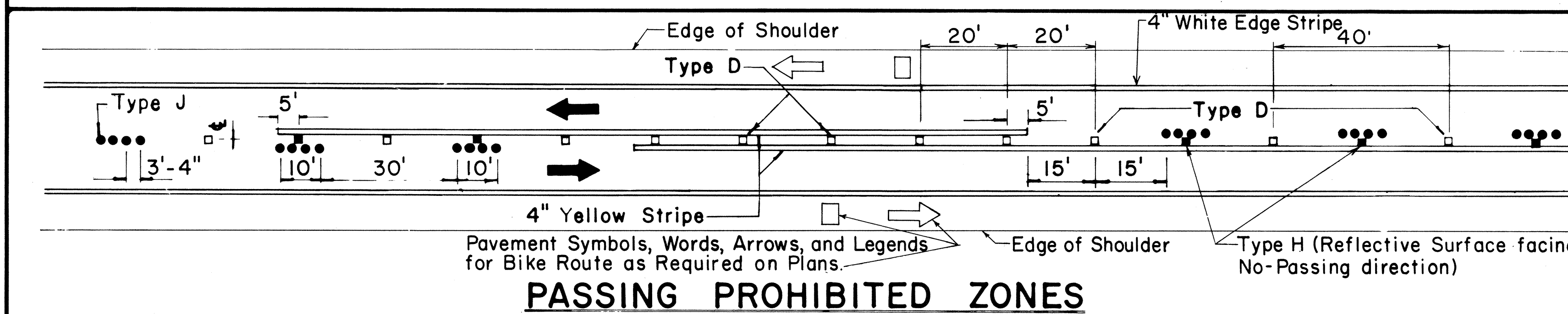
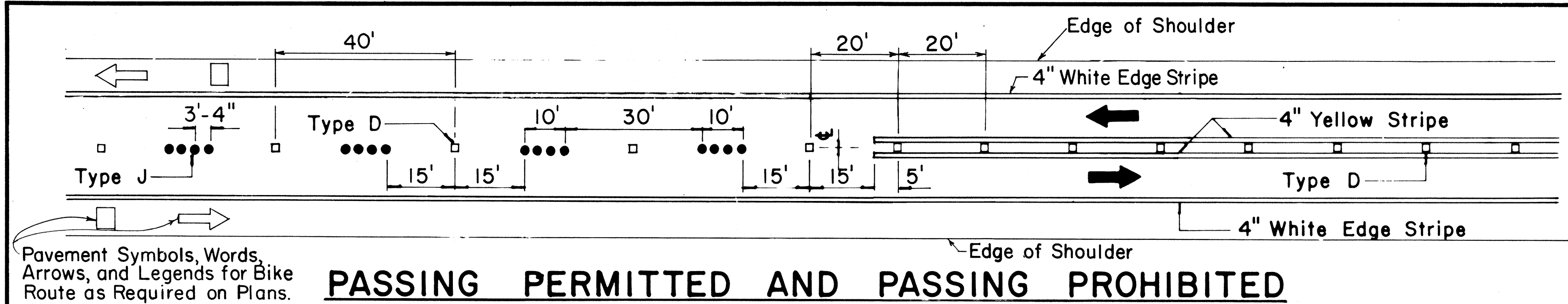
APPROVED:
Robert B. Sakai 11/15/77
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised Mounting Details	H-1	4/23/80
2	Revised General Notes, Mounting Details and Reflector Markers.	p/d	7-28-83

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
STANDARD DETAILS	
MISCELLANEOUS REFLECTOR MARKERS	
Not to scale	June, 1977

SHEET No. OF SHEETS DT 110

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(19) F-083-1(20)	1984	46	57

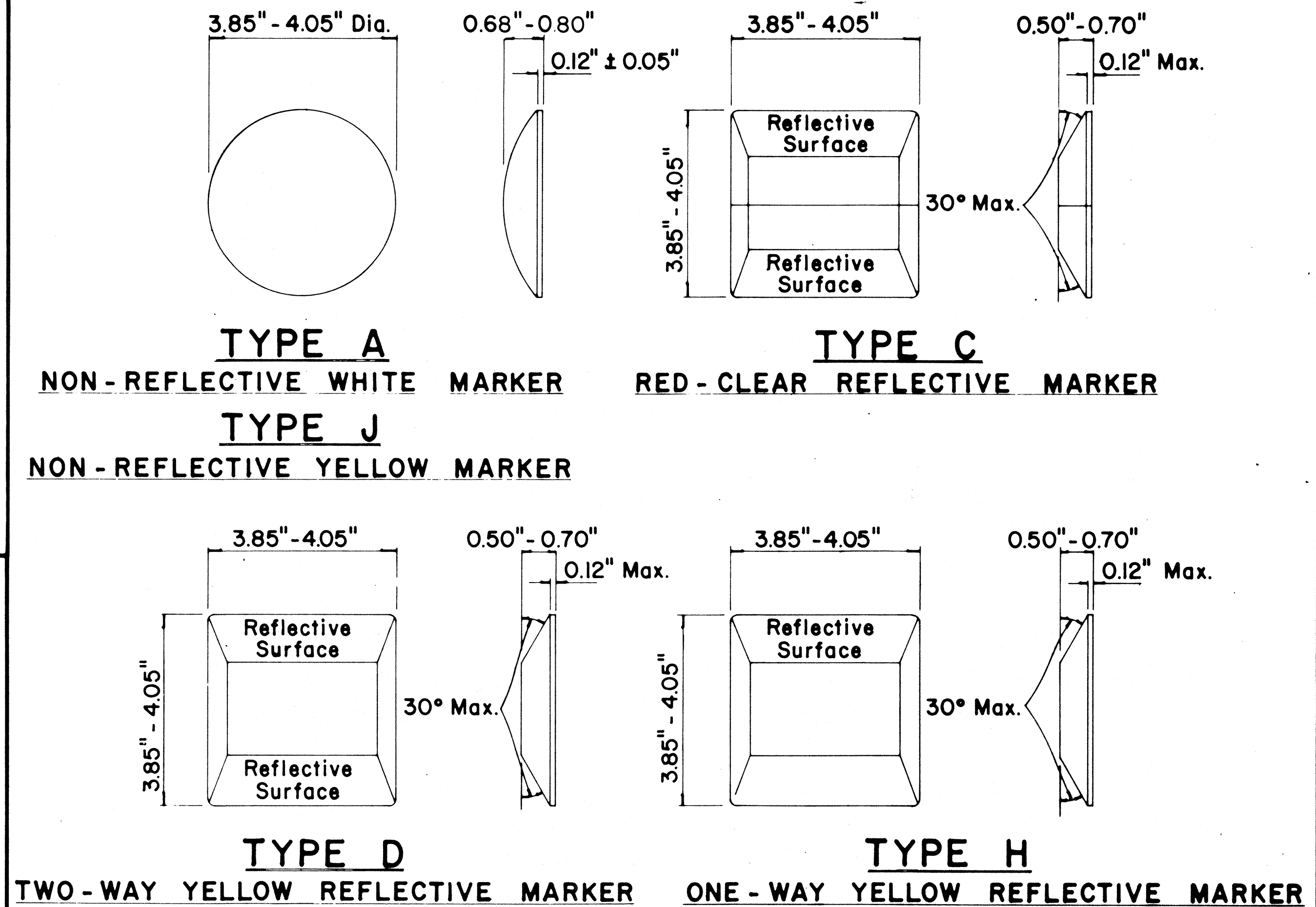


TWO - LANE

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:
Erich Tanaka 7/21/78
TRAFFIC ENGINEER DATE

APPROVED:
Harbert S. Zerkow 7/24/78
ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

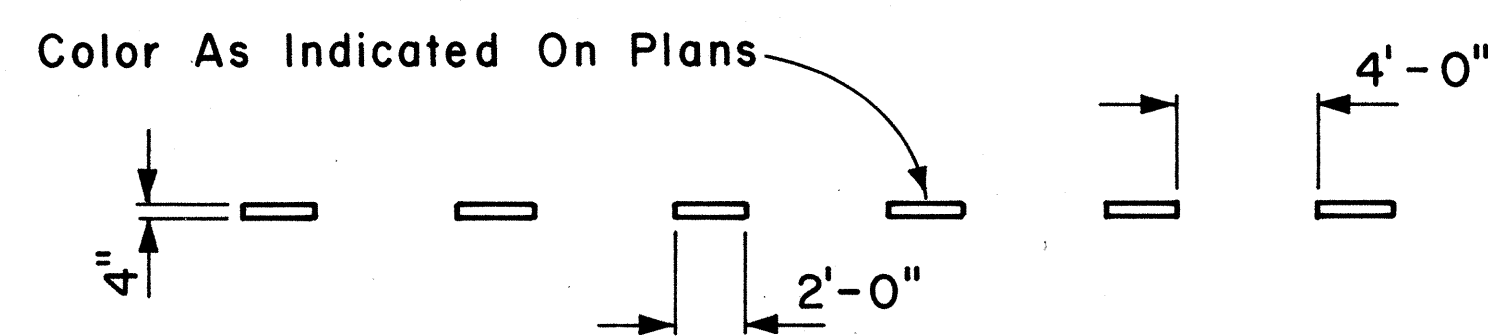
Not to Scale July 1978.

SHEET No. OF SHEETS DT 300

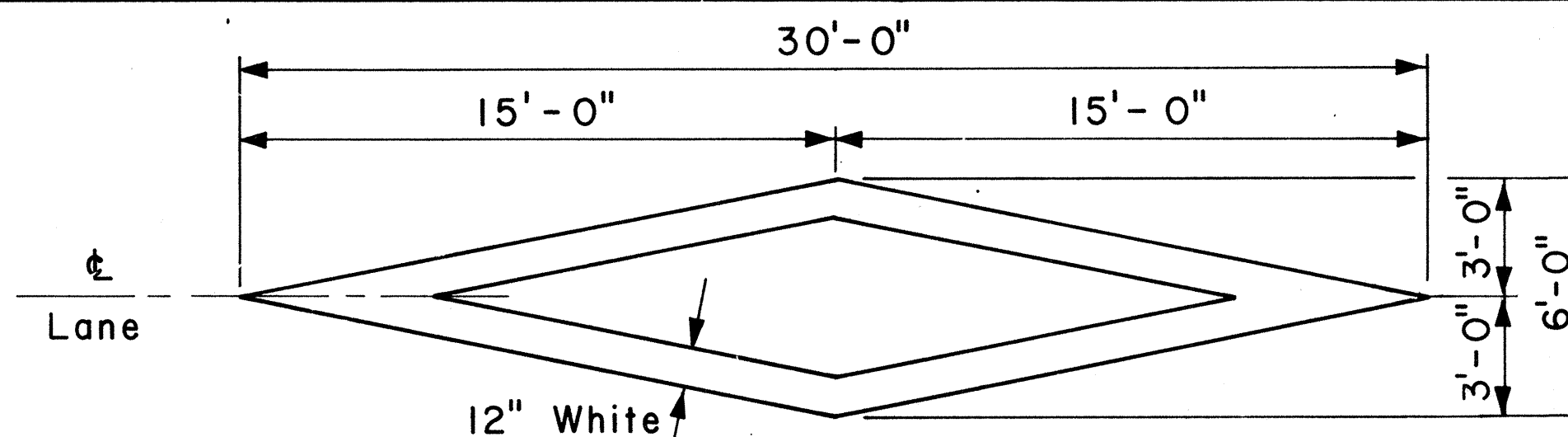
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(10) F-083-1(12)	1984	47	57

GENERAL NOTES:

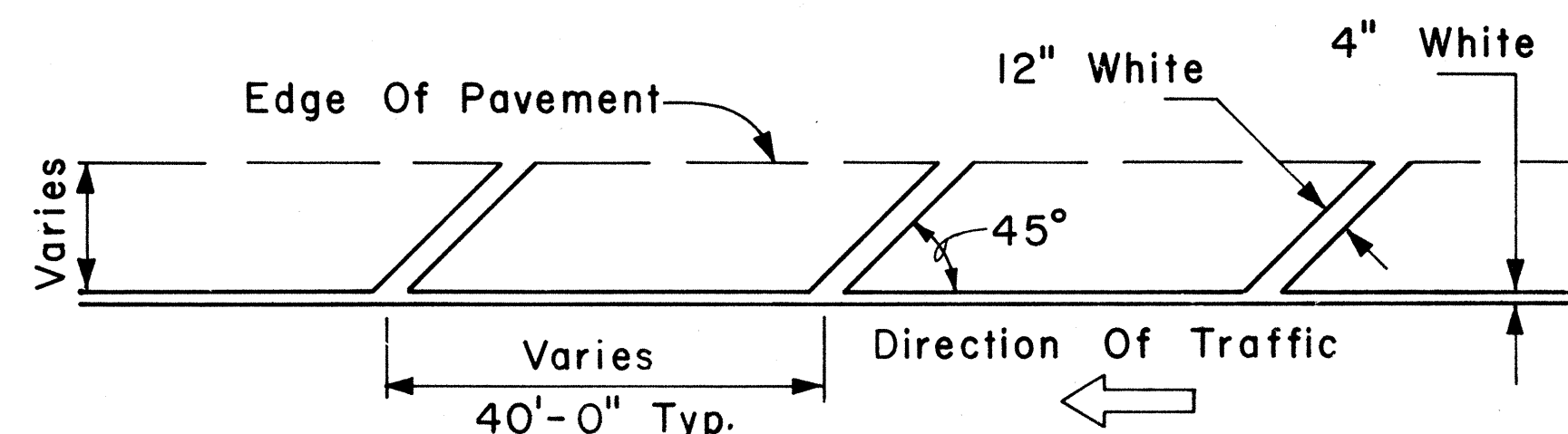
1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and striping with the Engineer prior to performing work.
3. For additional pavement marking details, see sheet DT 300.



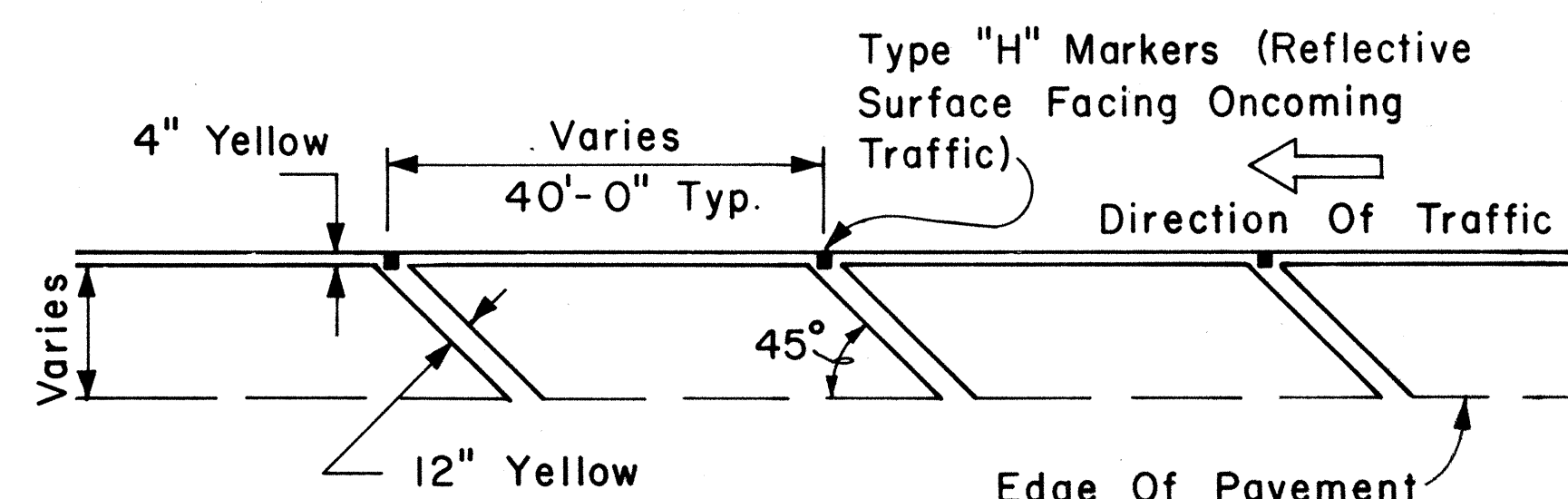
4" GUIDE LINE



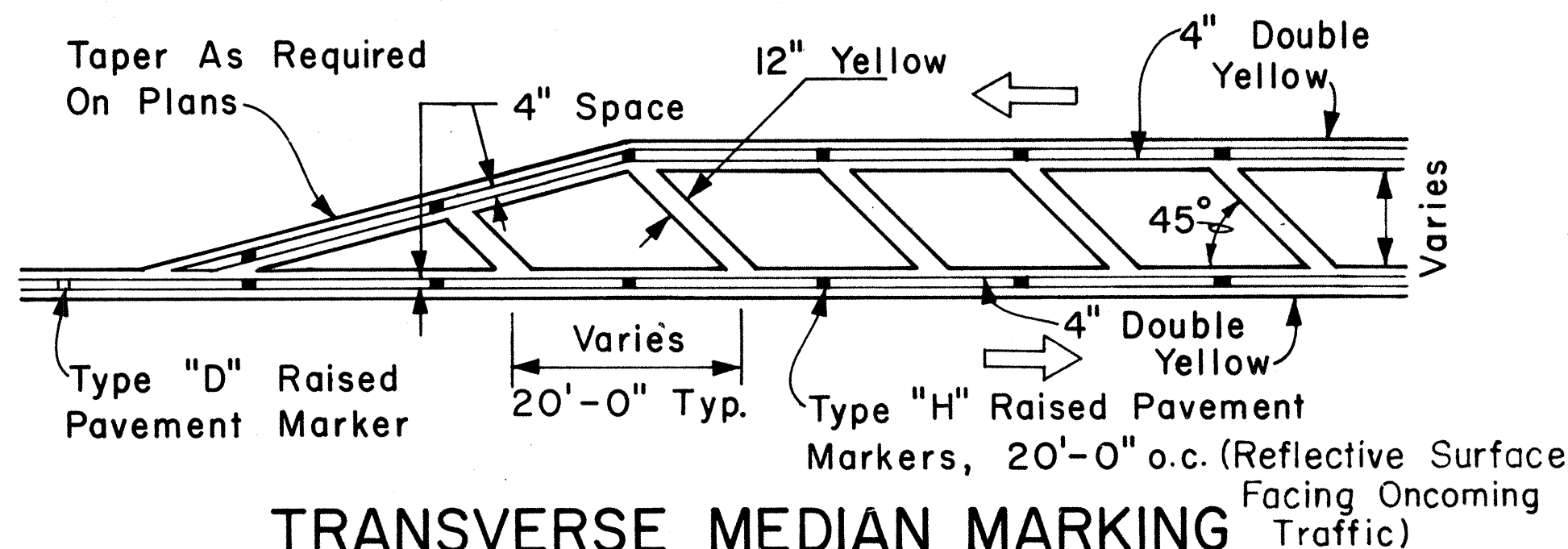
PAVEMENT DIAMOND



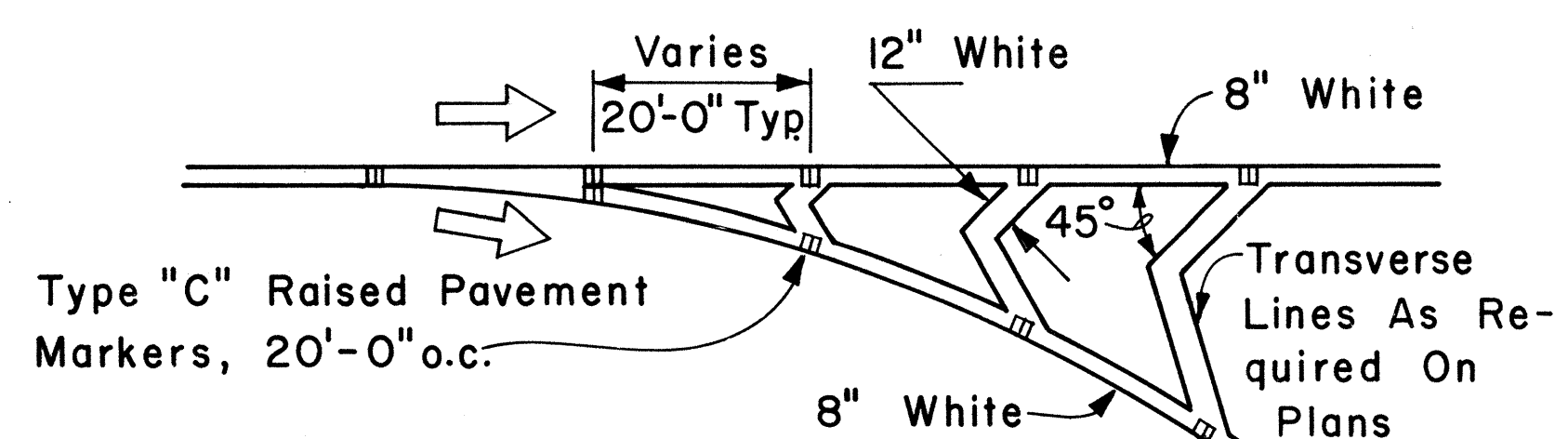
TRANSVERSE RIGHT SHOULDER MARKING



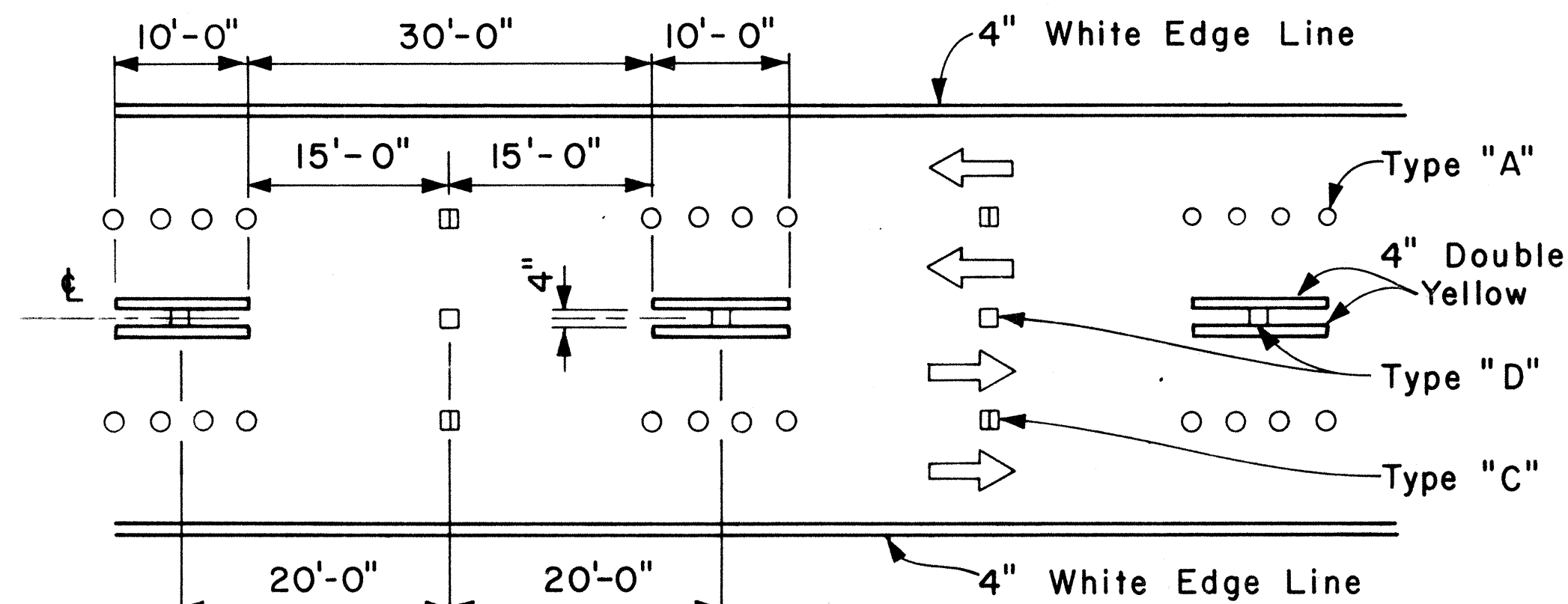
TRANSVERSE LEFT SHOULDER MARKING



TRANSVERSE MEDIAN MARKING

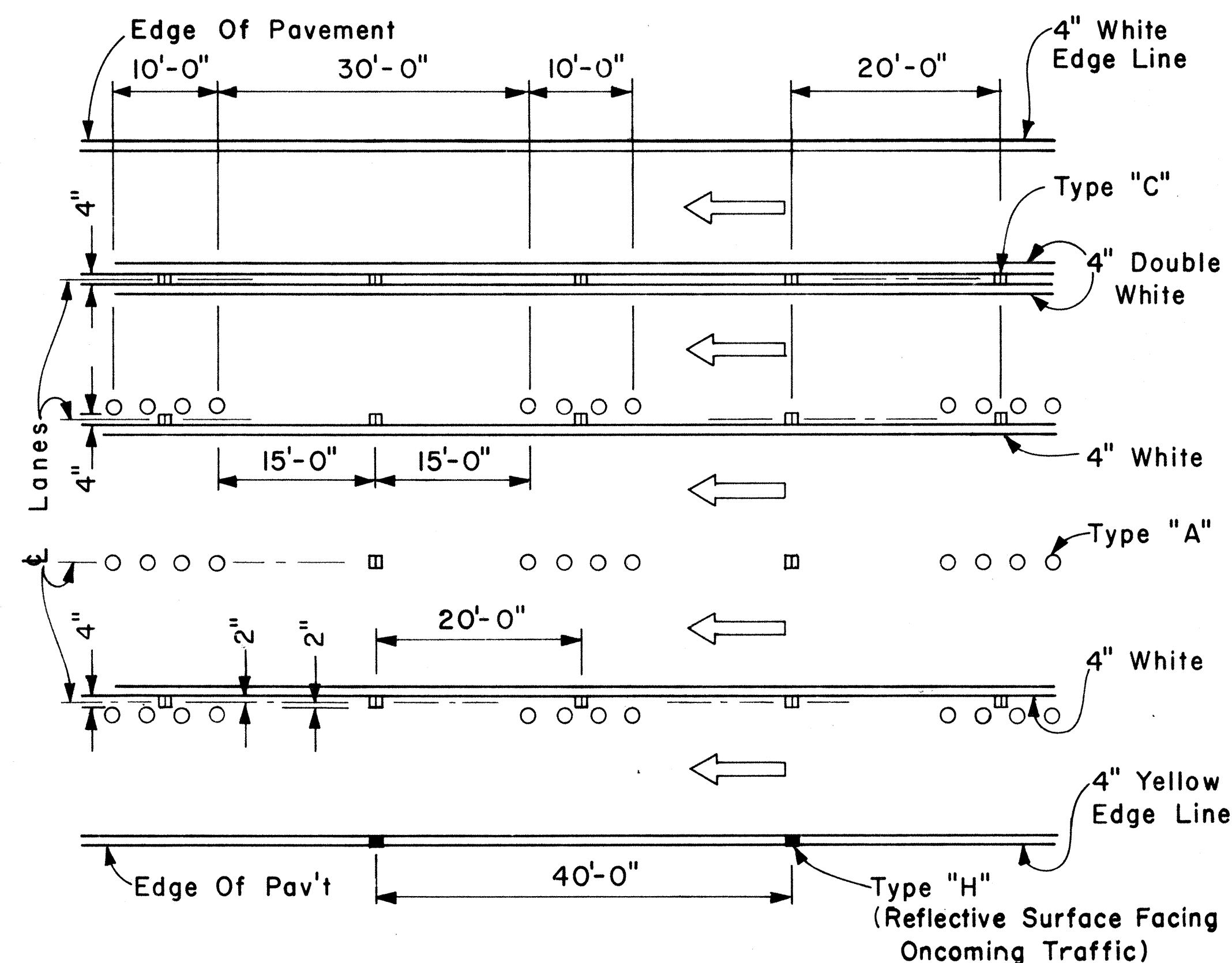


CHANNELIZING ISLAND



NOTE: Traffic Cone Usage Required.

MULTI-LANE REVERSIBLE LANES



MULTI-LANE LANE CHANGE RESTRICTION ZONES

APPROVAL RECOMMENDED:
Eishi Tanaka 5/2/78
TRAFFIC ENGINEER DATE

APPROVED:
Herbert Z. Zakeiah 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

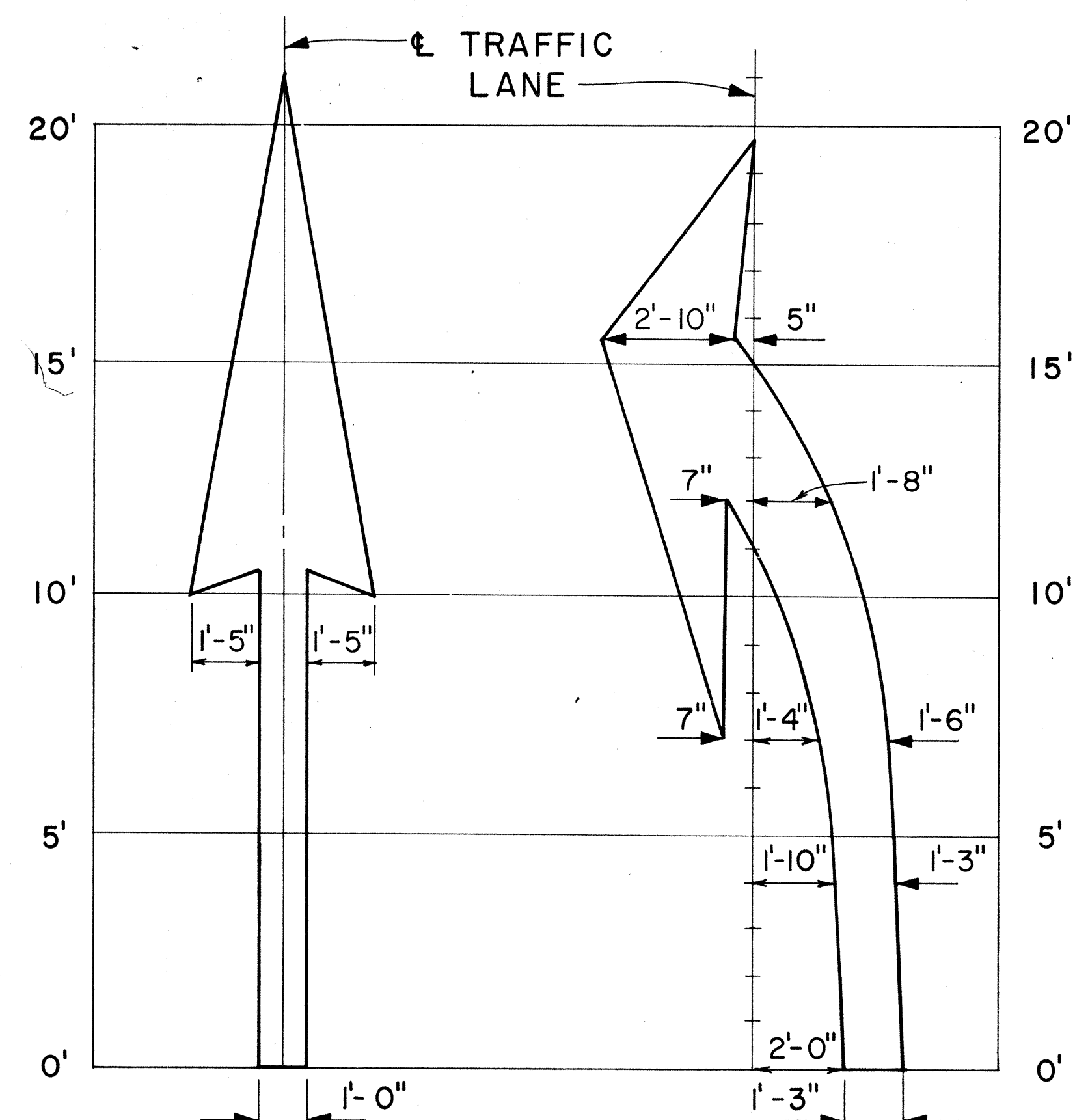
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Scale: Not to Scale Date: April, 1978
SHEET NO. OF SHEETS DT 302

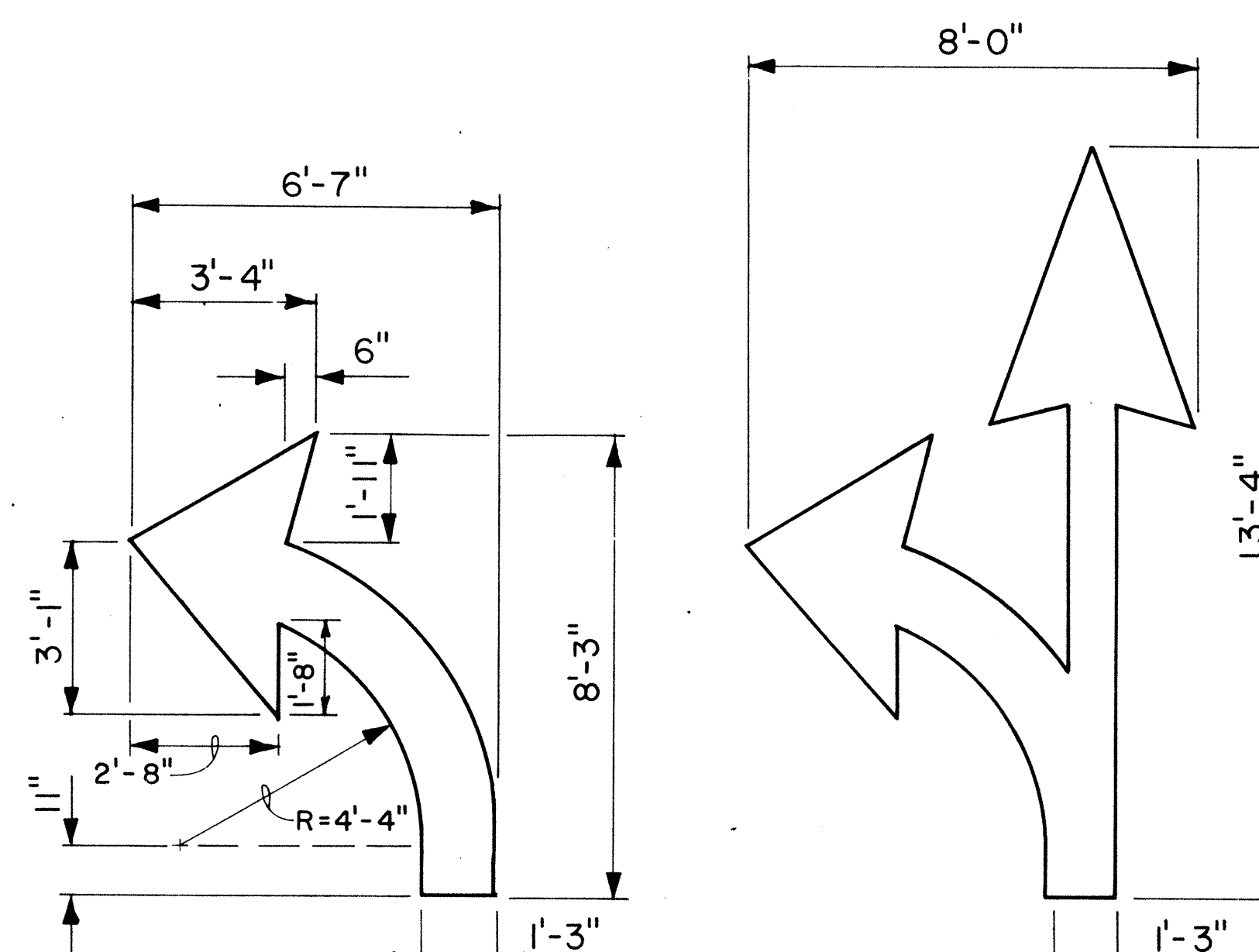
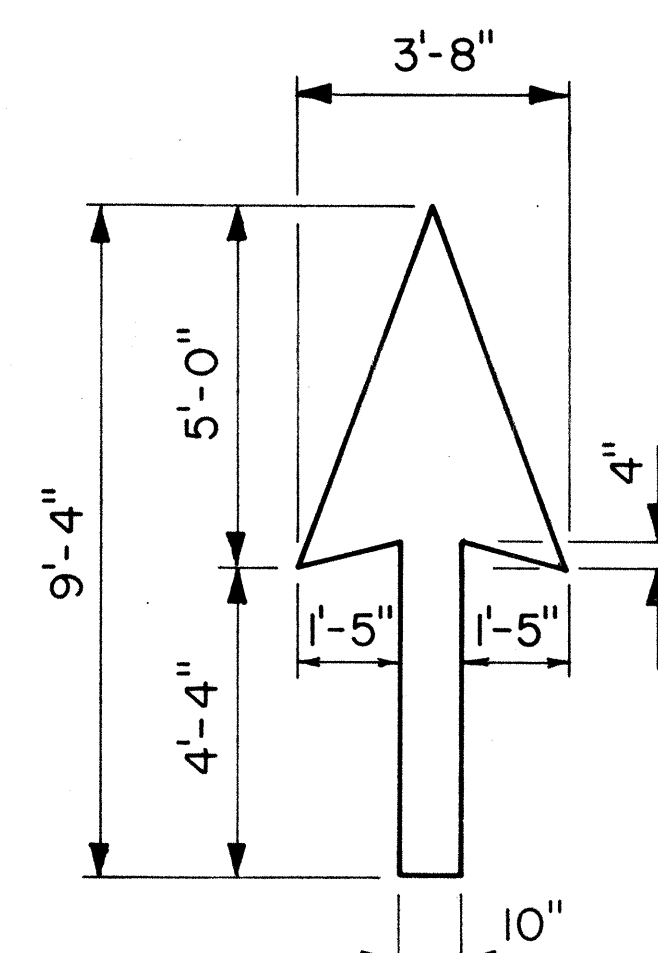
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(10) F-083-1(20)	1984	48	57

GENERAL NOTES:

1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and striping with the Engineer prior to performing work.
3. For additional pavement marking details, see sheet DT 300.



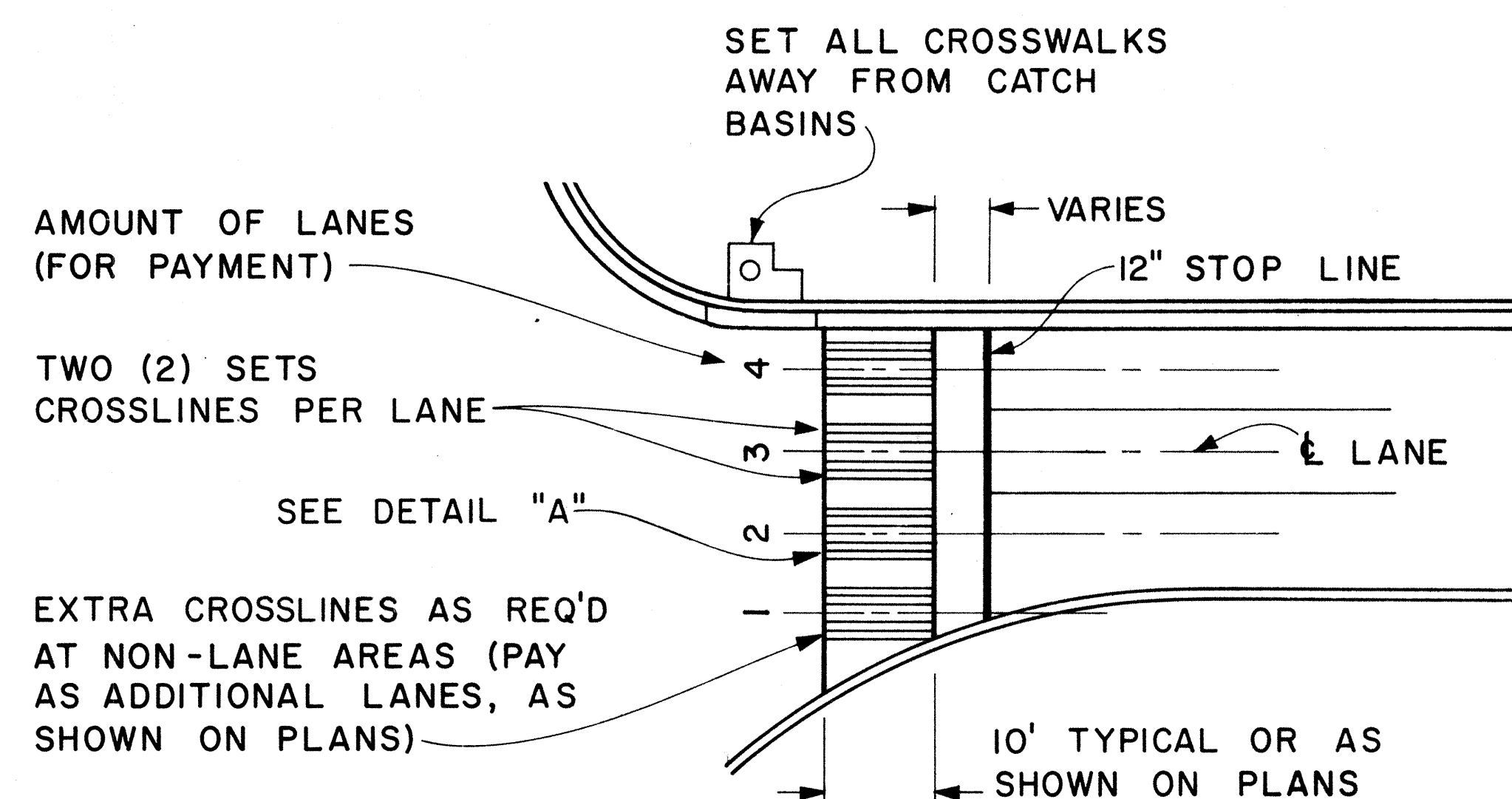
ELONGATED



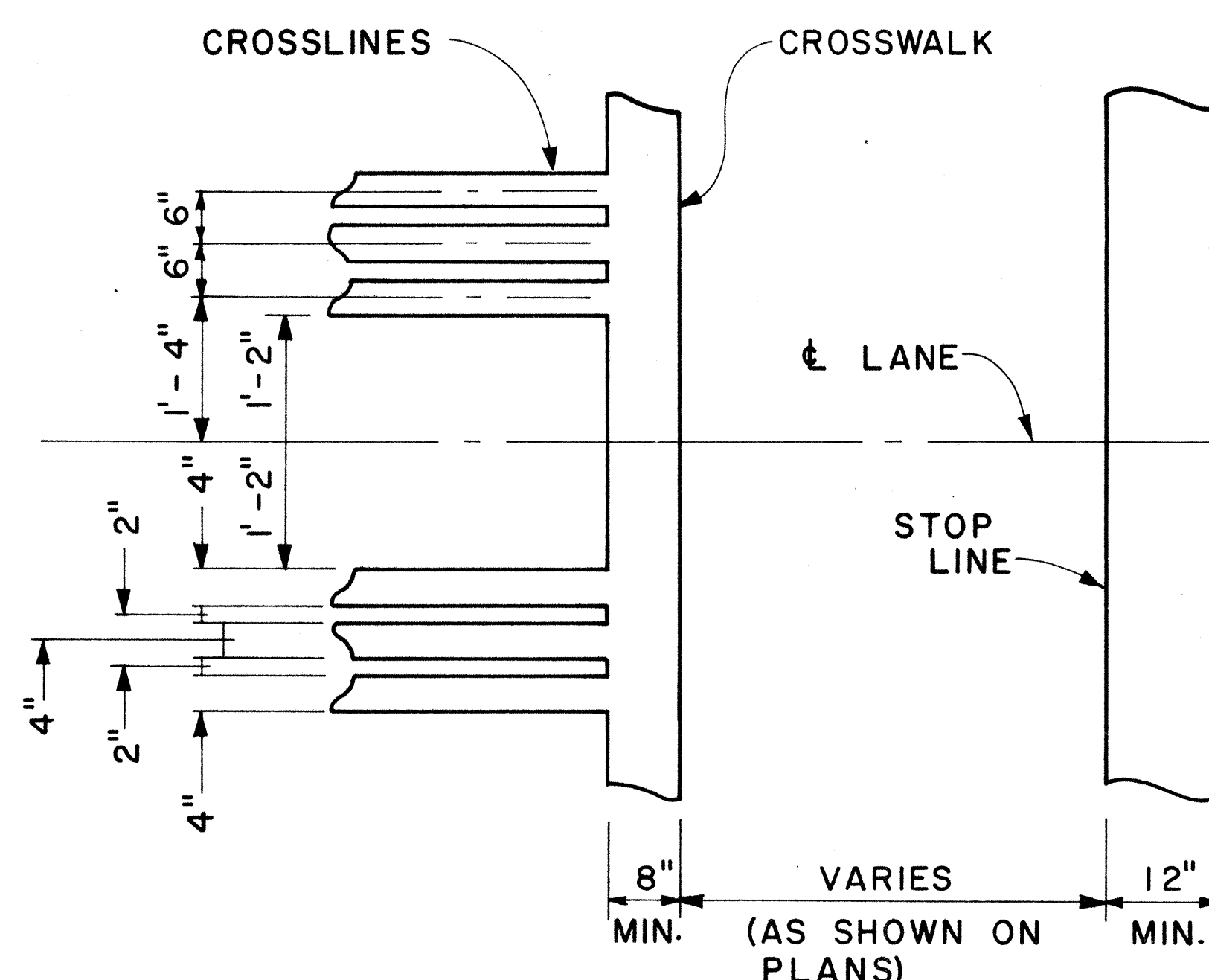
STANDARD

PAVEMENT ARROWS

Scale: 3/8" = 1'



PLAN



DETAIL "A"

CROSSWALK & STOP LINE

Scale: Not to Scale

APPROVAL RECOMMENDED:
Erich Tanaka 5/2/78
 TRAFFIC ENGINEER DATE

APPROVED:
Harvey Z. Zakaish 5/3/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
 MISCELLANEOUS
 PAVEMENT MARKINGS

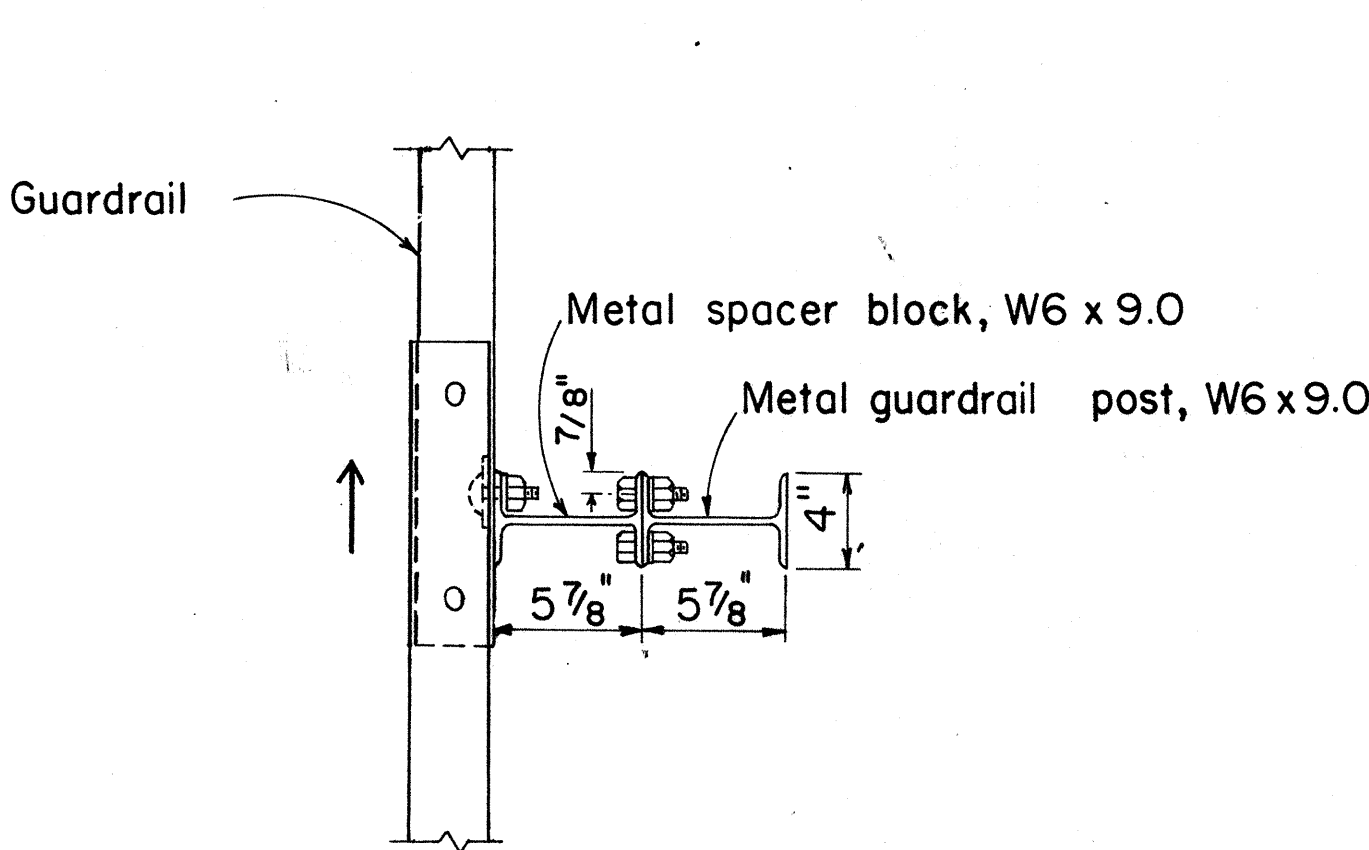
Scale: As Shown Date: March, 1978

SHEET No. OF SHEETS DT 306

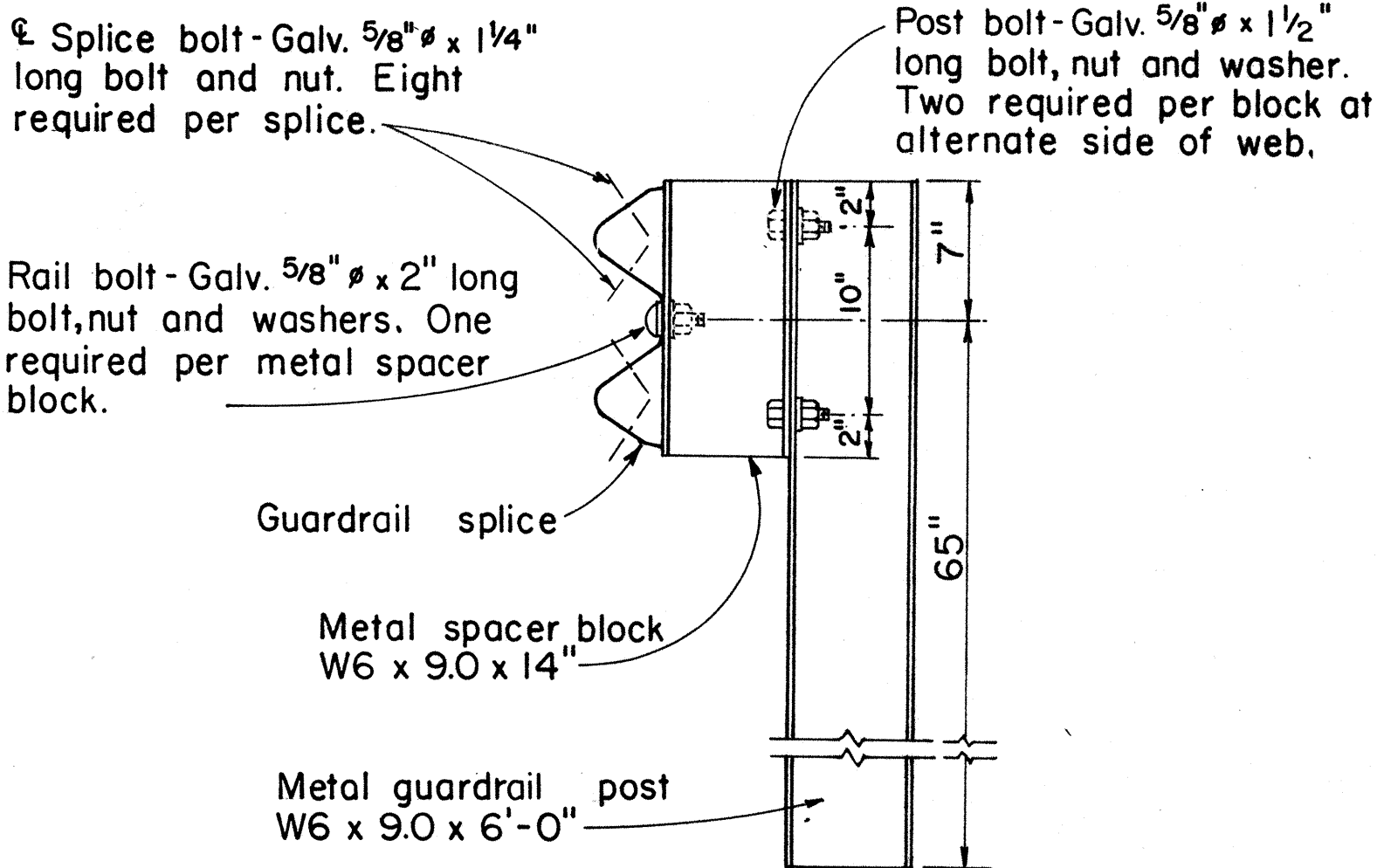
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1 (17) F-083-1 (20)	1984	49	57

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.



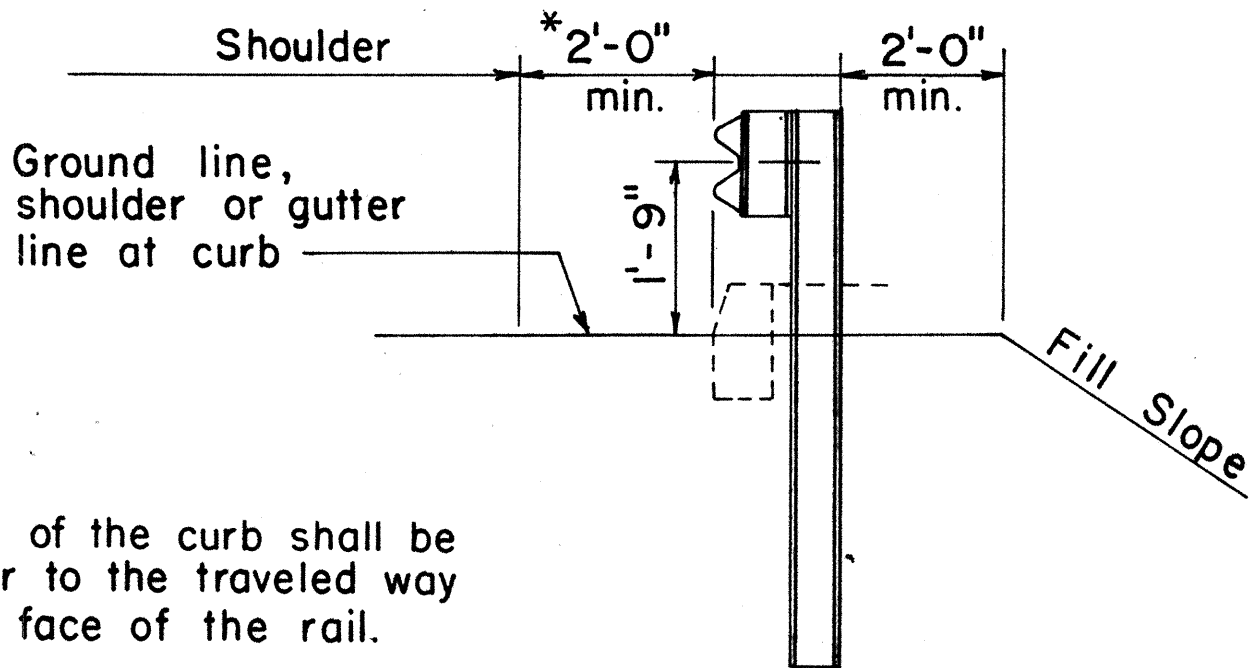
PLAN



ELEVATION

SINGLE METAL GUARDRAIL ON METAL POST WITH METAL SPACER BLOCK

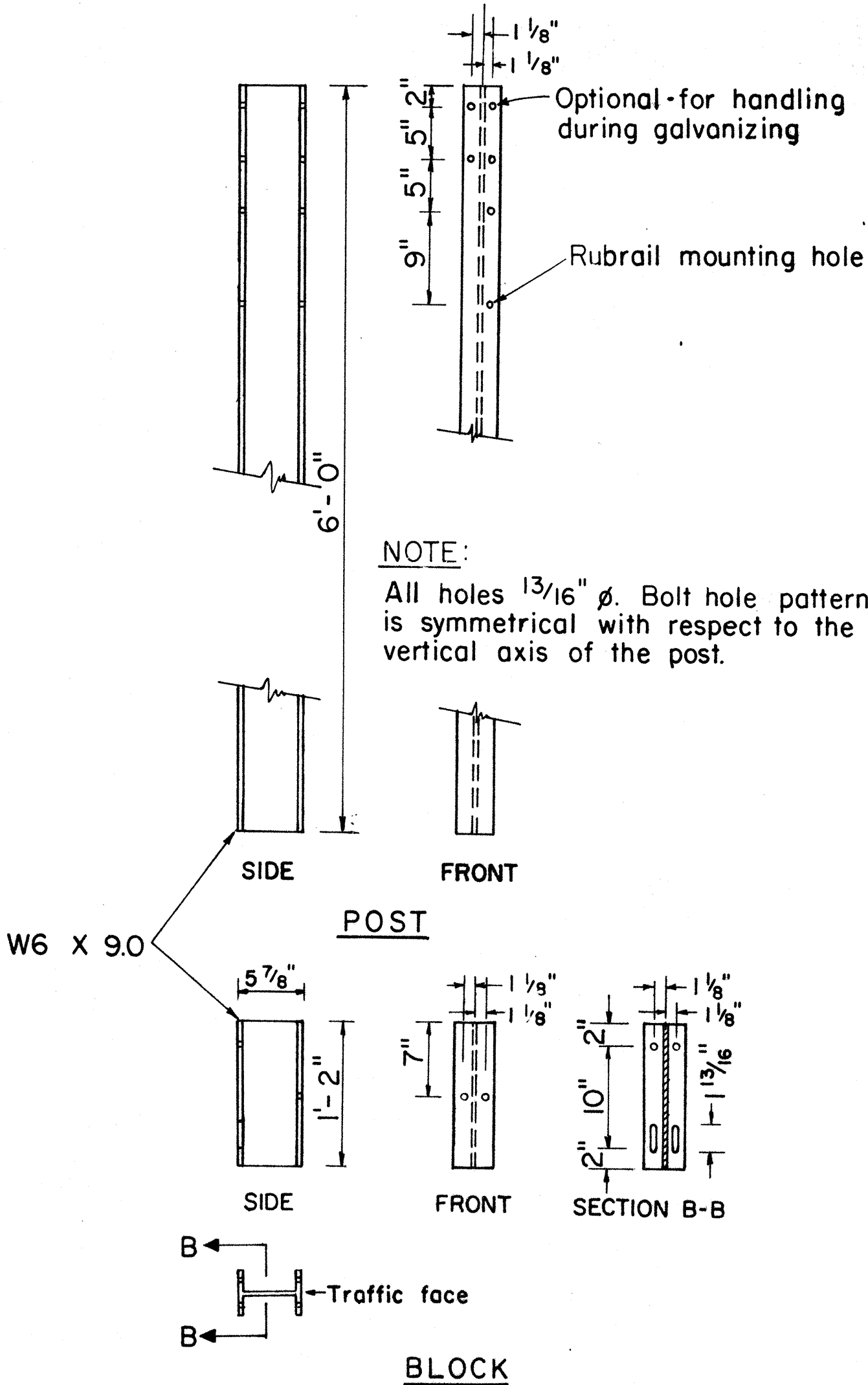
SCALE: 1 1/2" = 1'-0"



AT SHOULDER SECTION

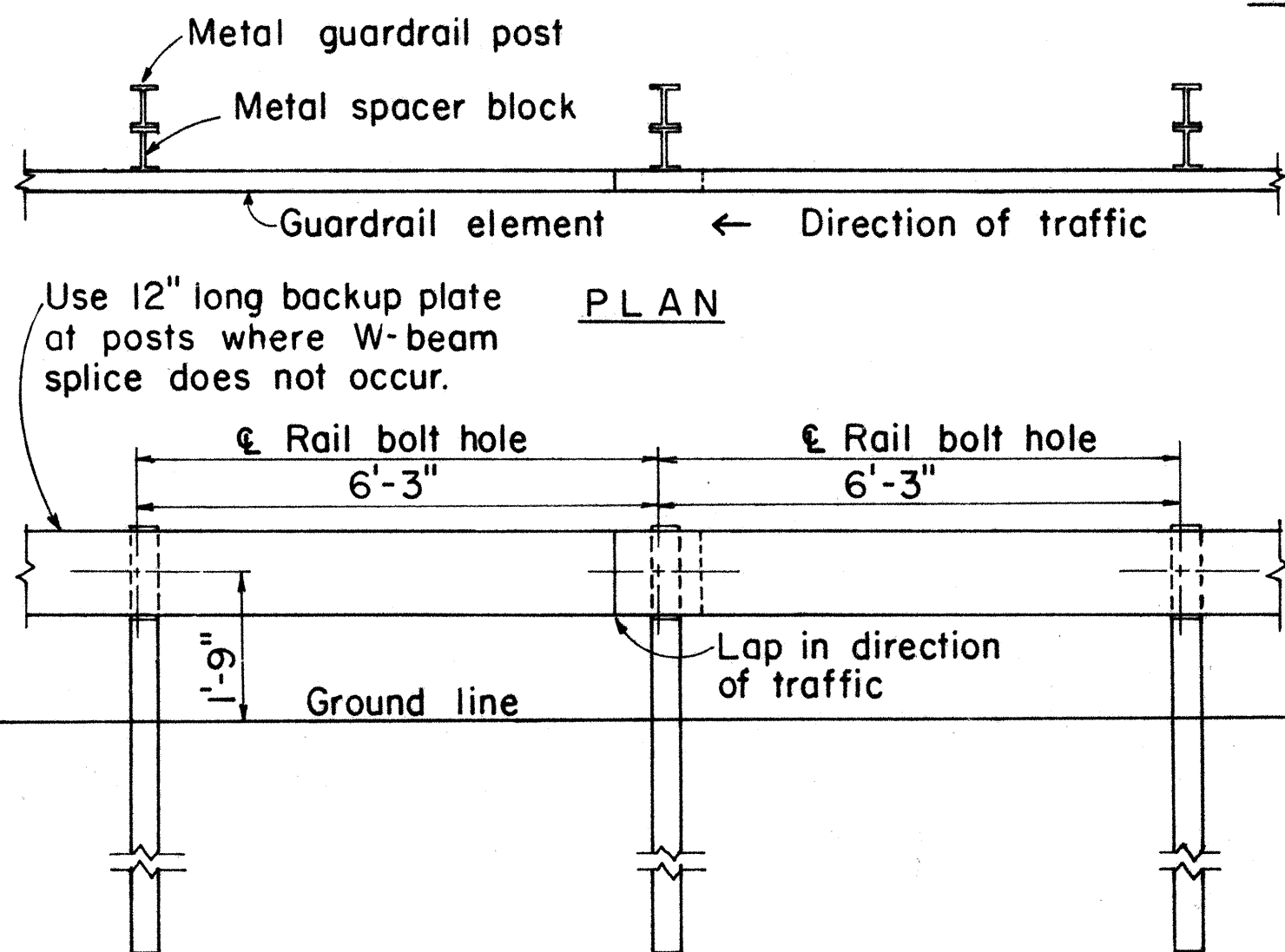
TYPICAL METAL GUARDRAIL DETAIL

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



STRUCTURAL SHAPE POST AND BLOCK

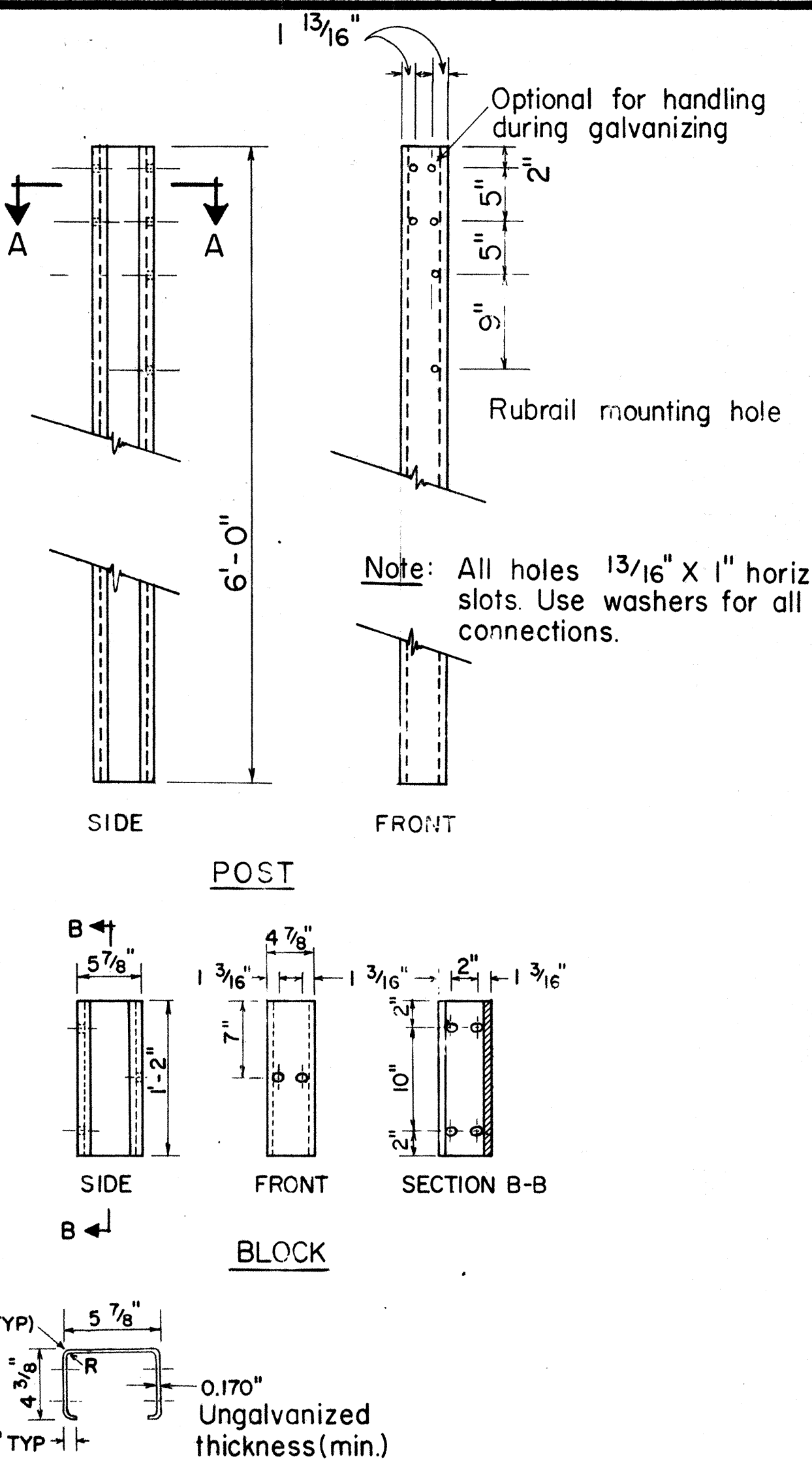
SCALE: 1" = 1'-0"



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"

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.T.	9/22/82
2	Added General Notes No. 6	J.D.	9-28-83

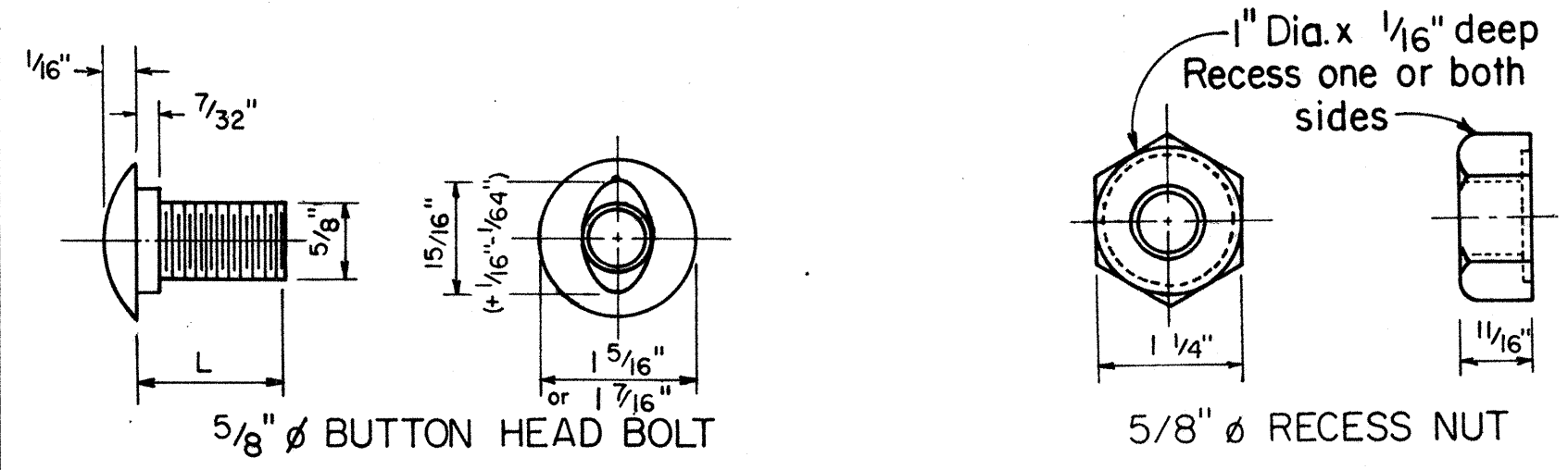
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS METAL GUARDRAIL

Scale: As Shown July, 1982

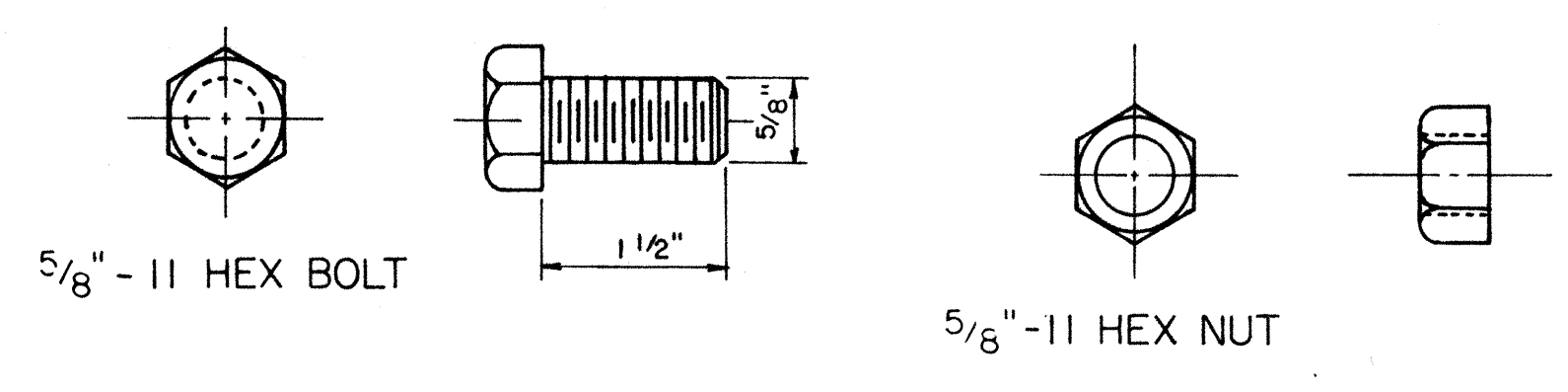
SHEET NO. OF SHEETS DT 500

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1 (17) F-083-1 (20)	1984	50	57

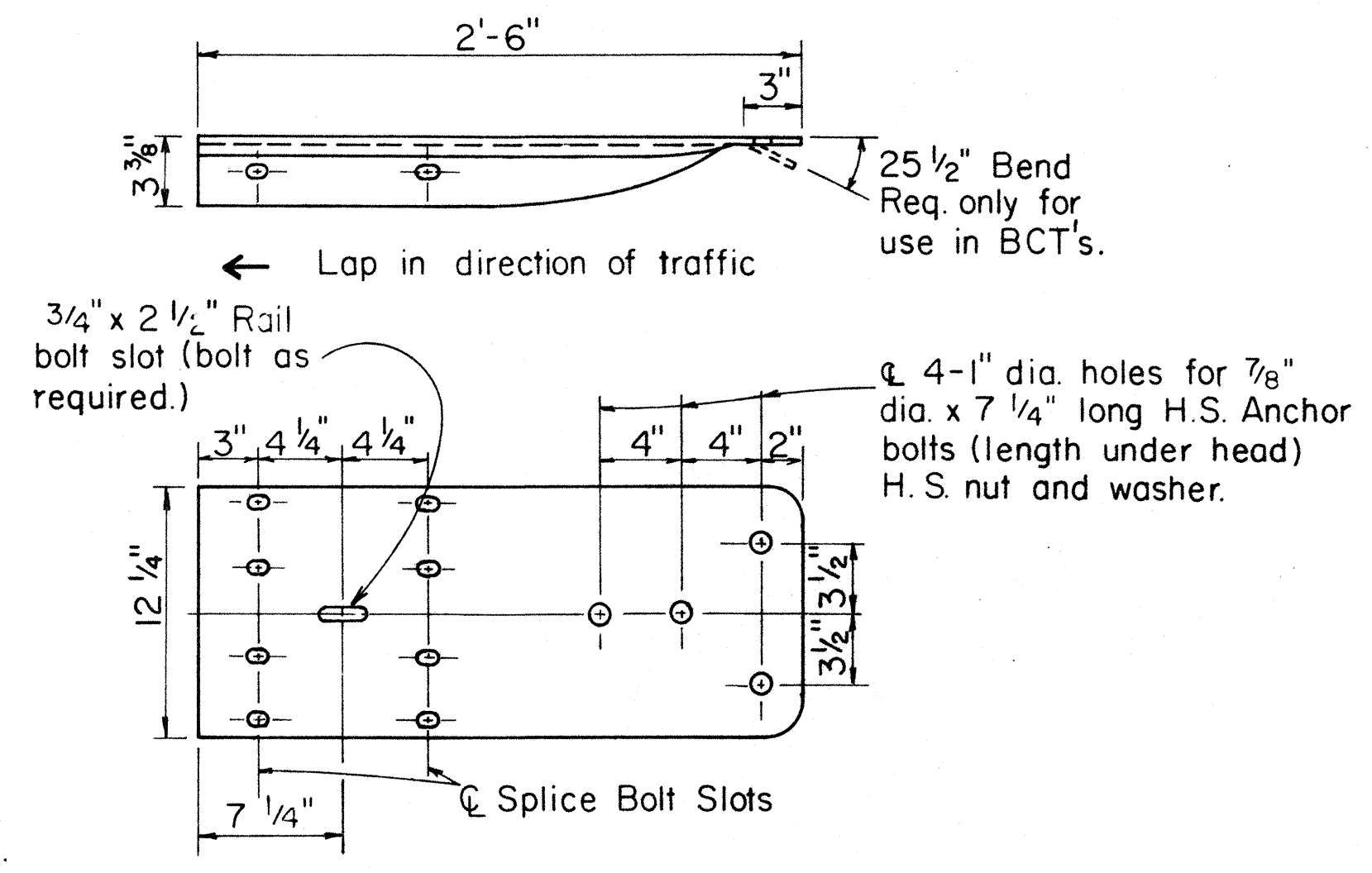


L	Thread Length	Intended Use
1 1/4"	Full length thread	Splice rail elements
2"	1 1/2" min. thread len.	Fasten rails to posts

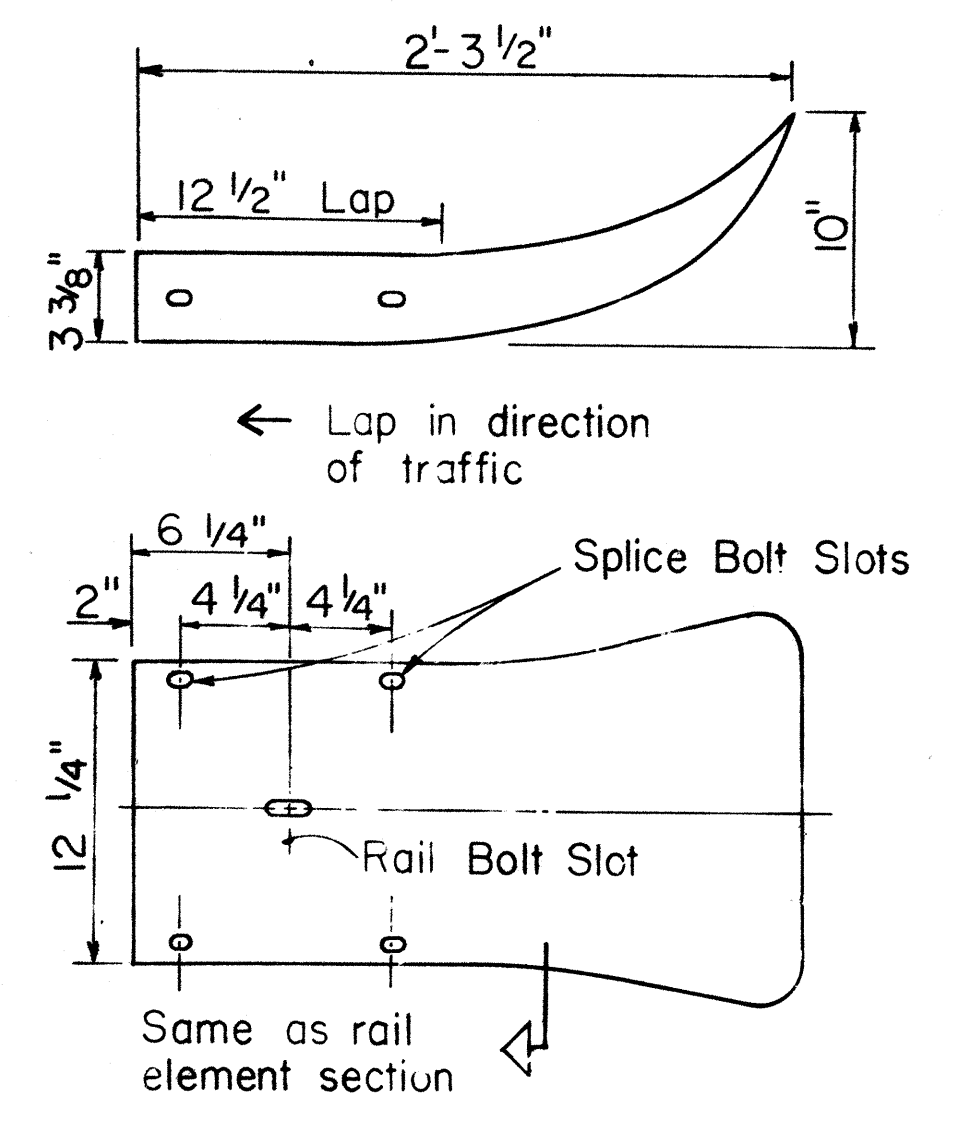
**5/8" BUTTON HEAD BOLT
AND RECESS NUT**
Scale: N.T.S.



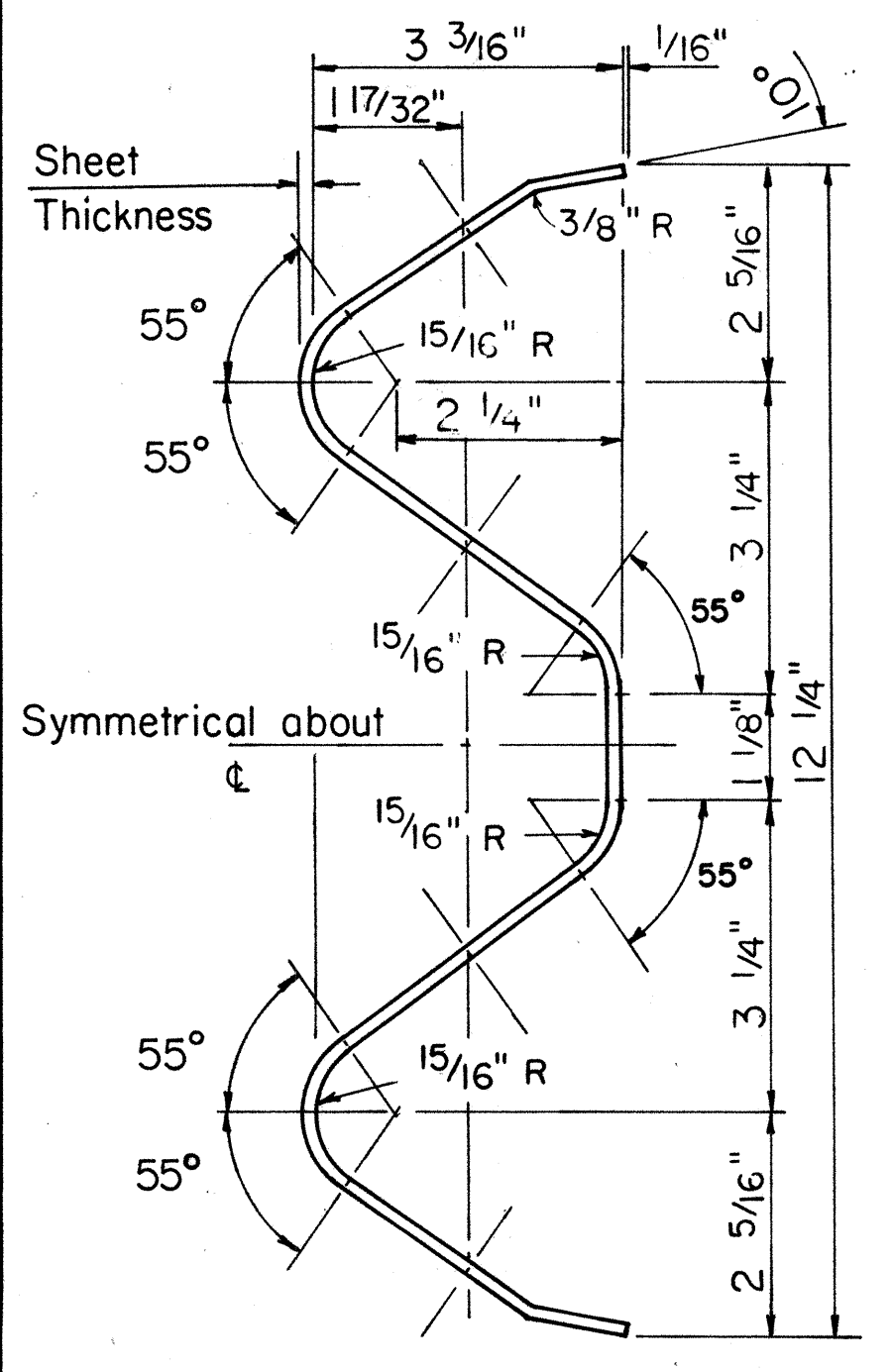
5/8" HEX POST BOLT AND NUT
Scale: N.T.S.



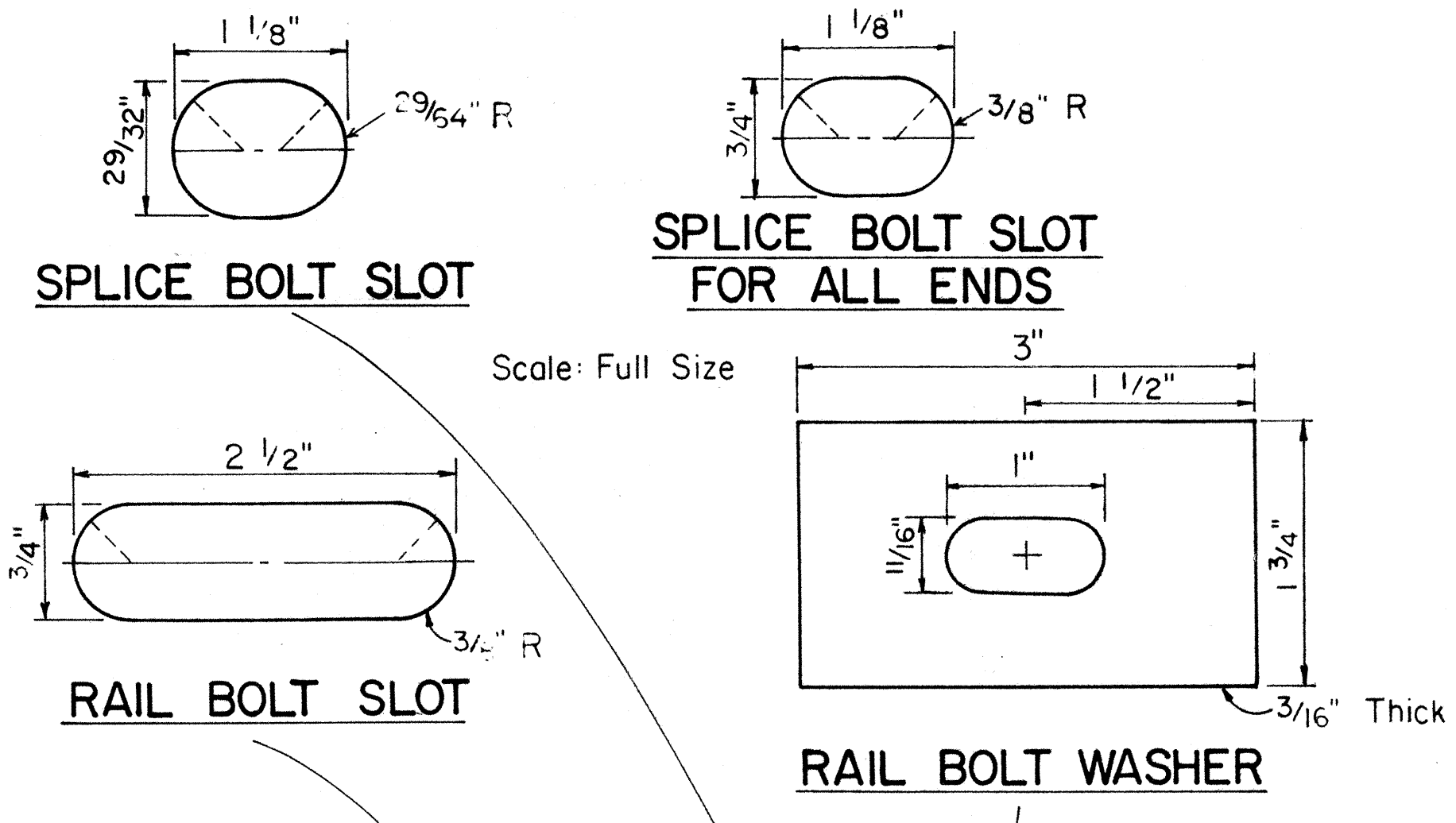
W BEAM TERMINAL CONNECTOR
Scale: 1 1/2" = 1'-0"
Lap in direction of traffic



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



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

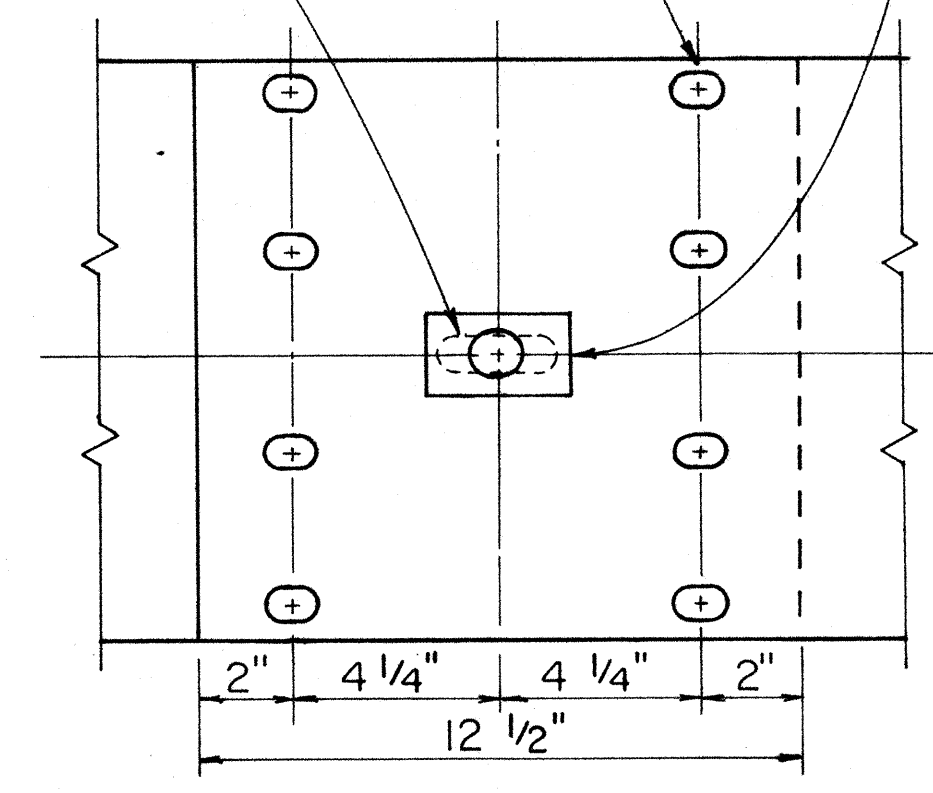


SPLICE BOLT SLOT

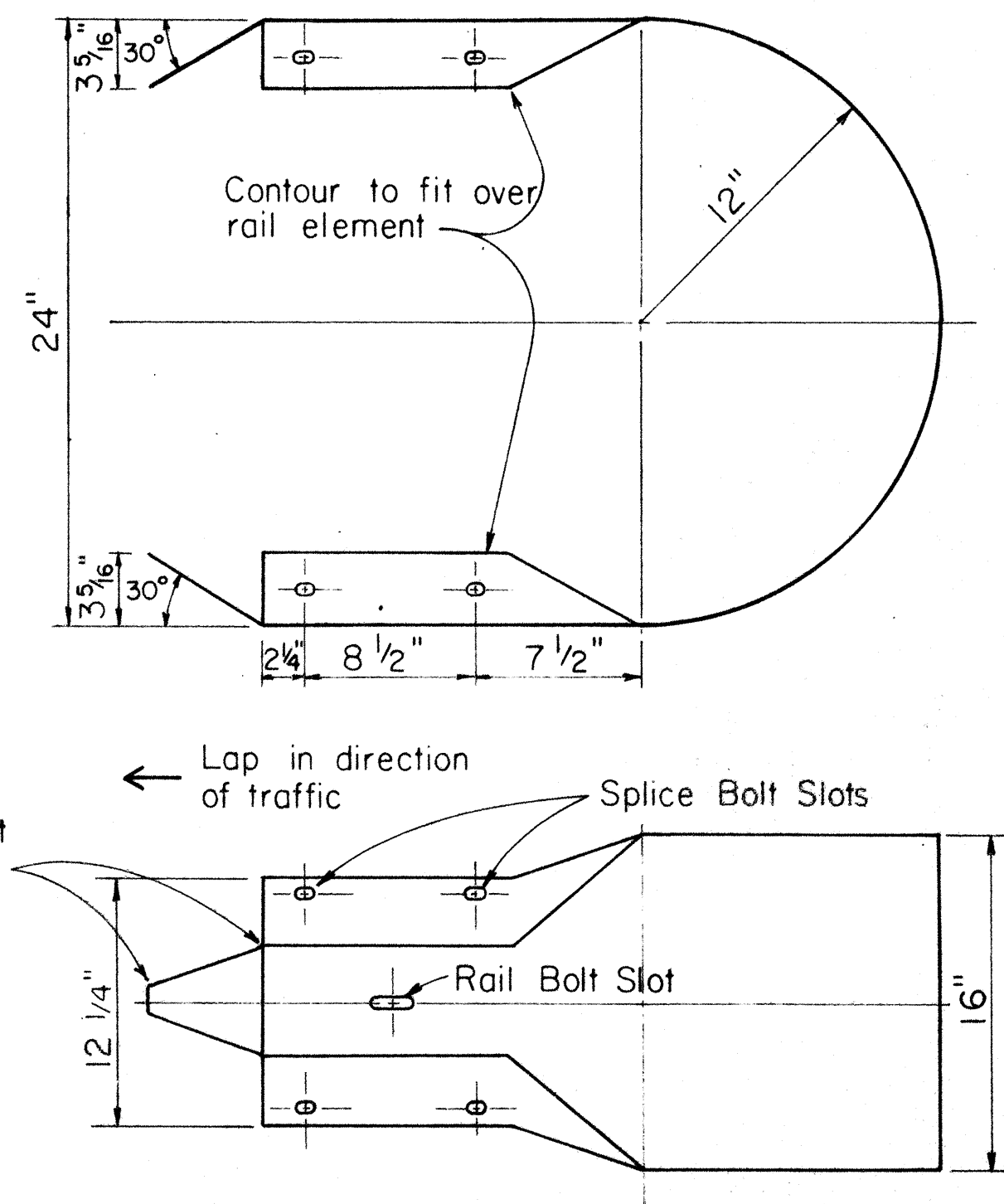
**SPLICE BOLT SLOT
FOR ALL ENDS**

RAIL BOLT SLOT

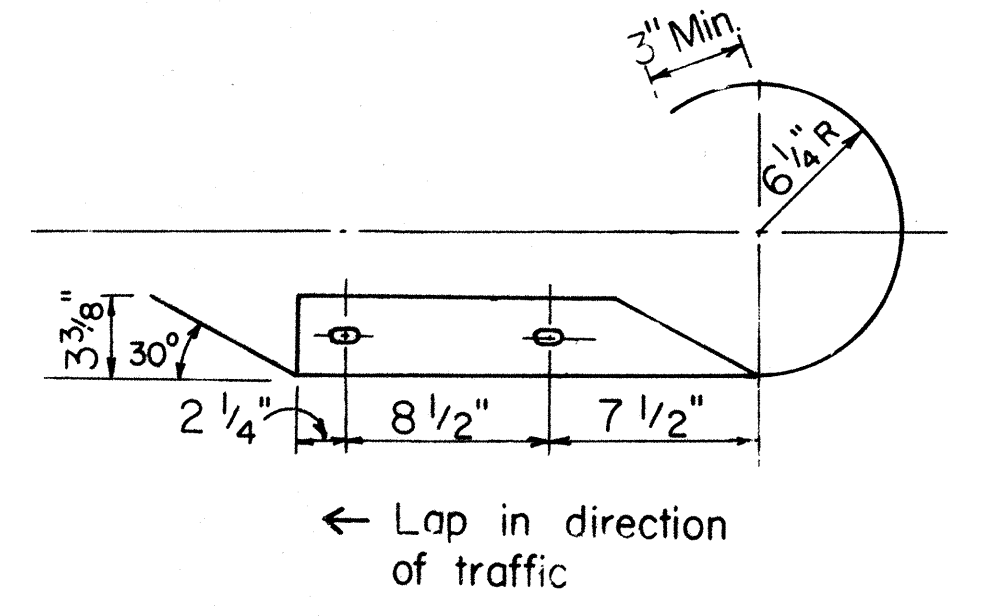
RAIL BOLT WASHER



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



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



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

ORIGINAL PLAN	DATE
DESIGNED BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
NO.	

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

APPROVAL RECOMMENDED:	9/20/82
<i>Erich Tanaka</i>	DATE
TRAFFIC ENGINEER	
APPROVED:	9/22/82
<i>Robert Z. Schick</i>	DATE
ASSISTANT CHIEF, ENGINEERING	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

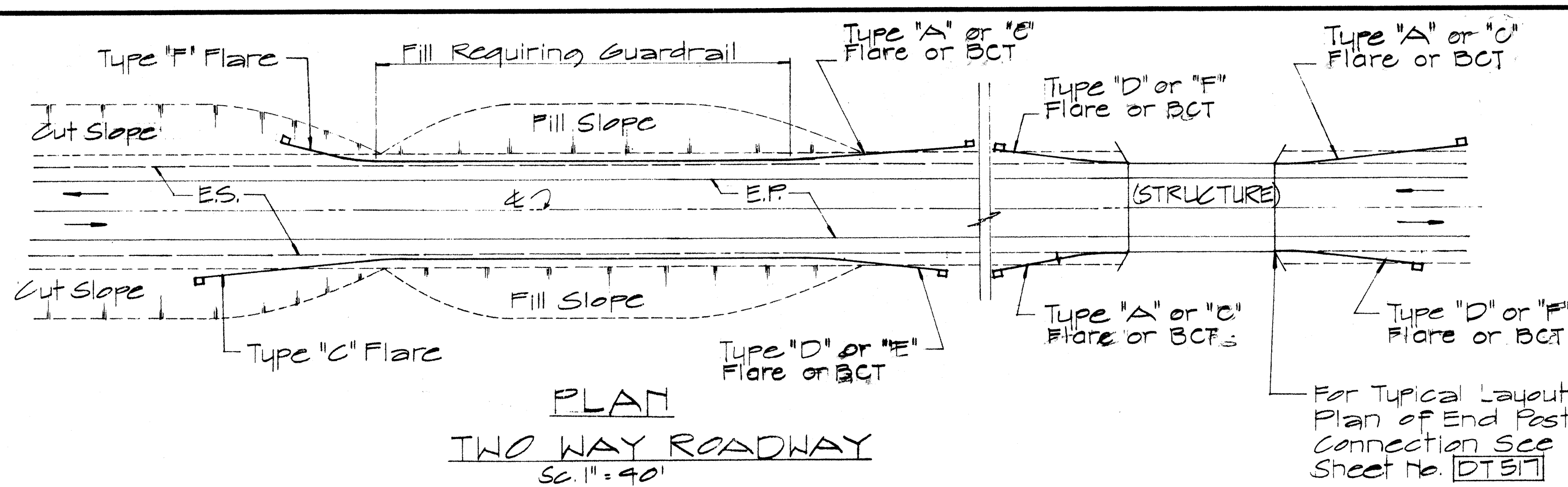
STANDARD DETAILS
METAL GUARDRAIL

Scale: As Noted July, 1982

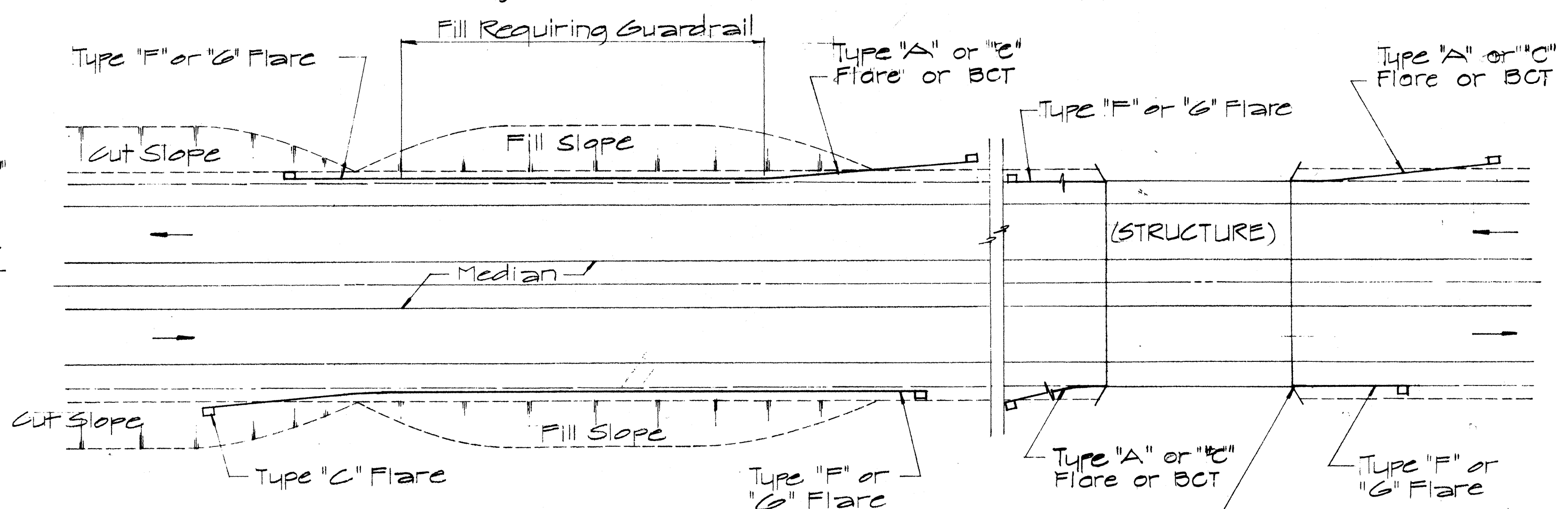
SHEET No. OF SHEETS DT 501

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(19) F-083-1(20)	1984	51	57

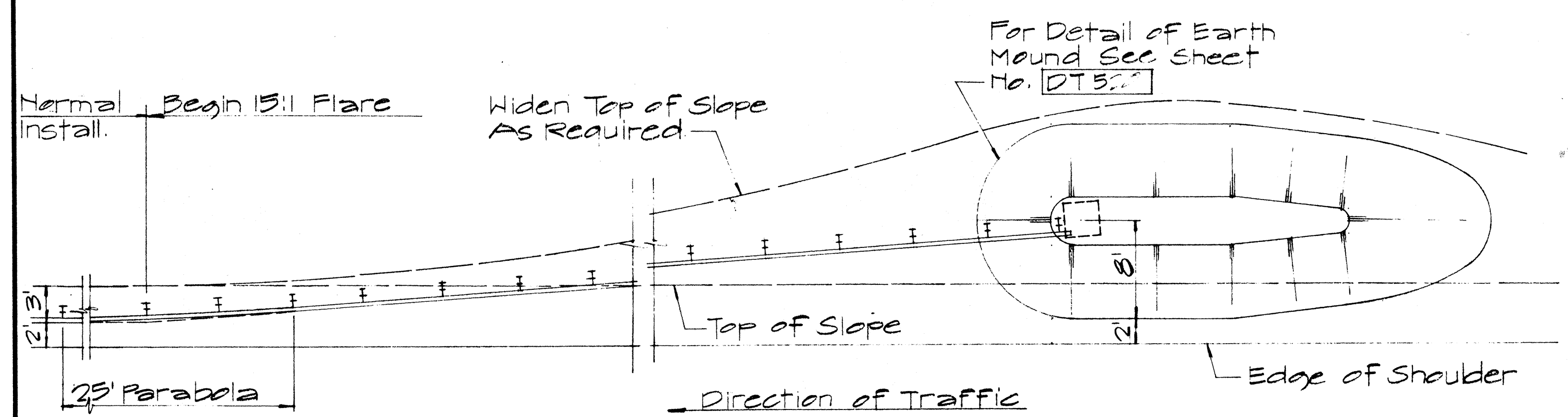
NOTE:
 1. Metal guard rail connection to structures requires End Post Connection. See structure plans.
 2. For detail of Breakaway Cable Terminal (BCT) See Sheet No. DT 519



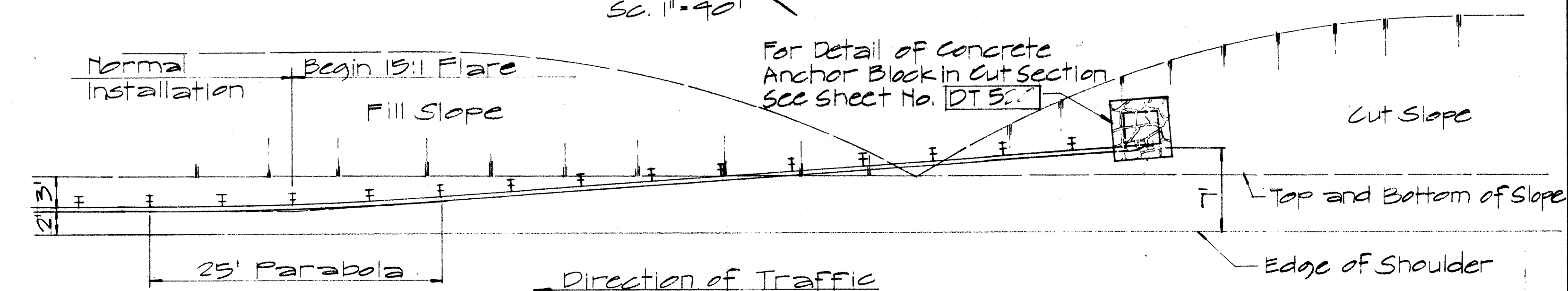
PLAN
 TWO WAY ROADWAY
 SC. 1" = 40'



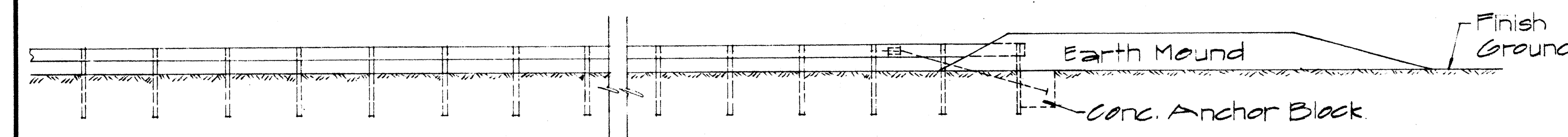
PLAN
 ONE WAY ROADWAY (DIVIDED HIGHWAY)
 SC. 1" = 40'



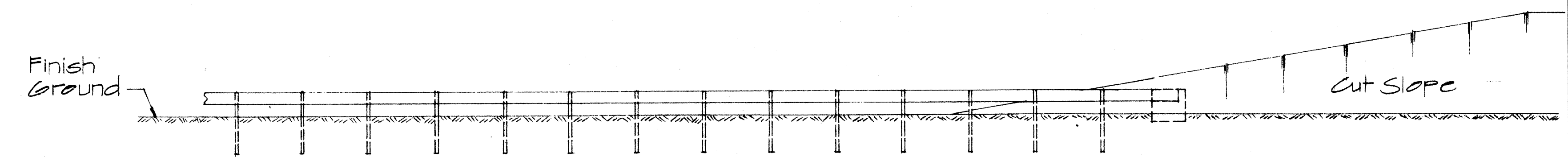
PLAN



PLAN



ELEVATION
 TYPE "A" FLARE
 SC. 1/8" = 1'-0"



ELEVATION
 TYPE "C" FLARE
 SC. 1/8" = 1'-0"

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

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

NO.	REVISION	APPROVED BY	DATE
1	Delete Type "B" Flare and Type "E" Flare	H.T.	6/15/88

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

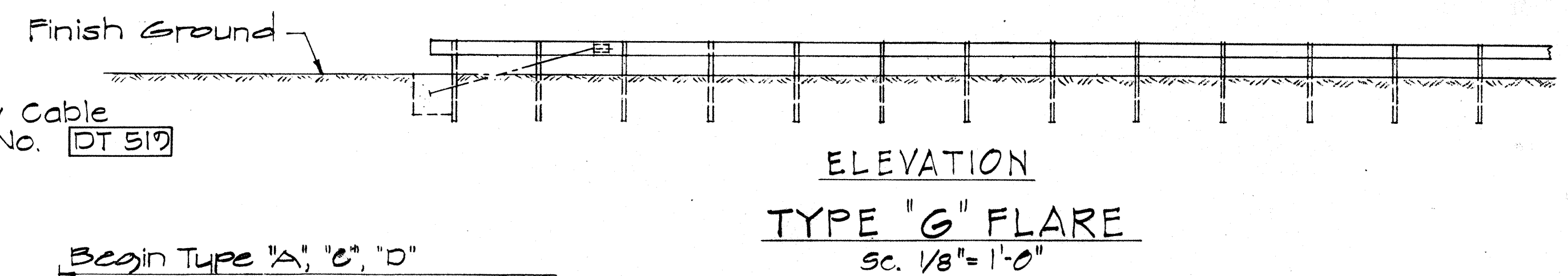
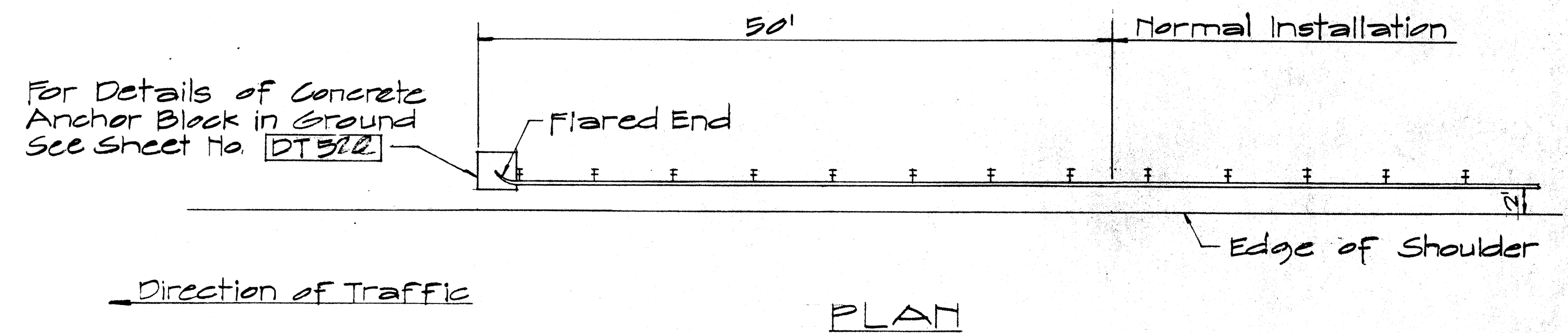
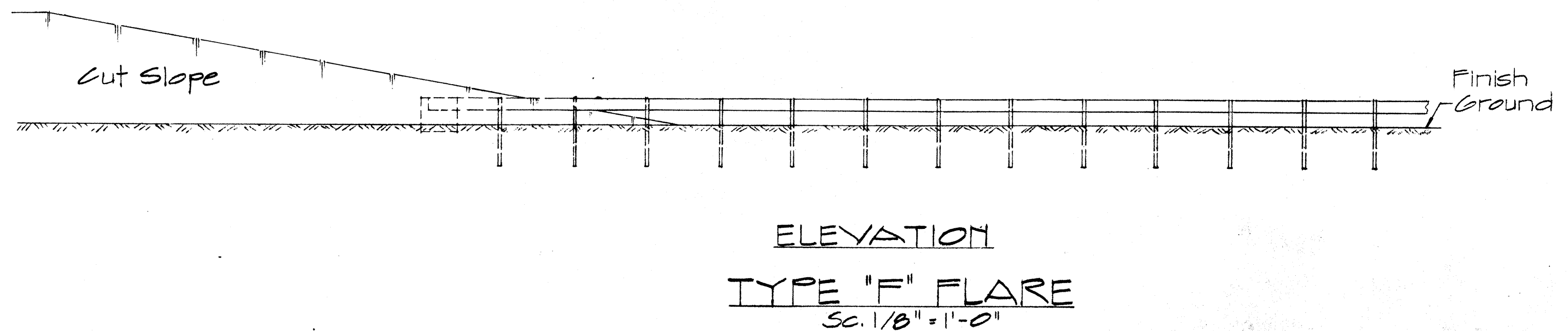
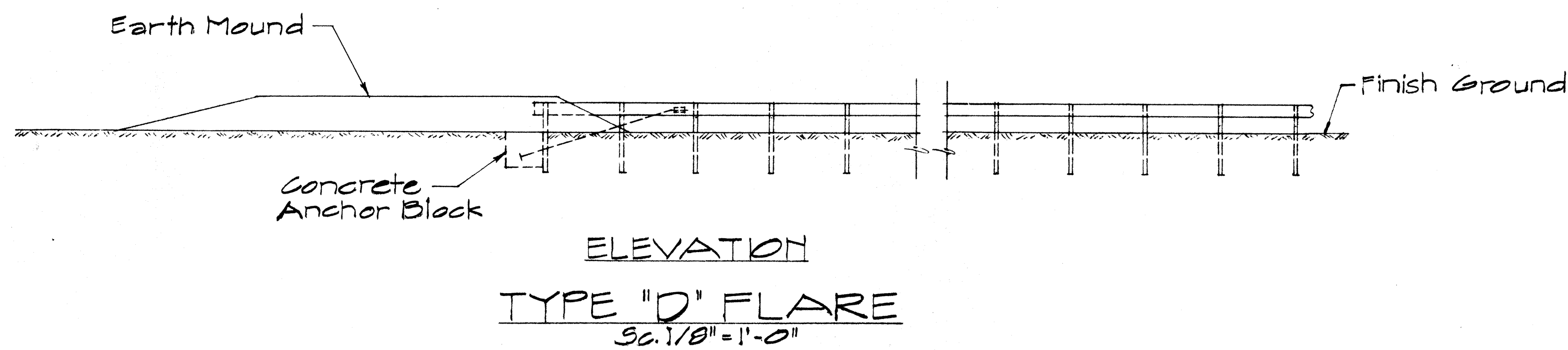
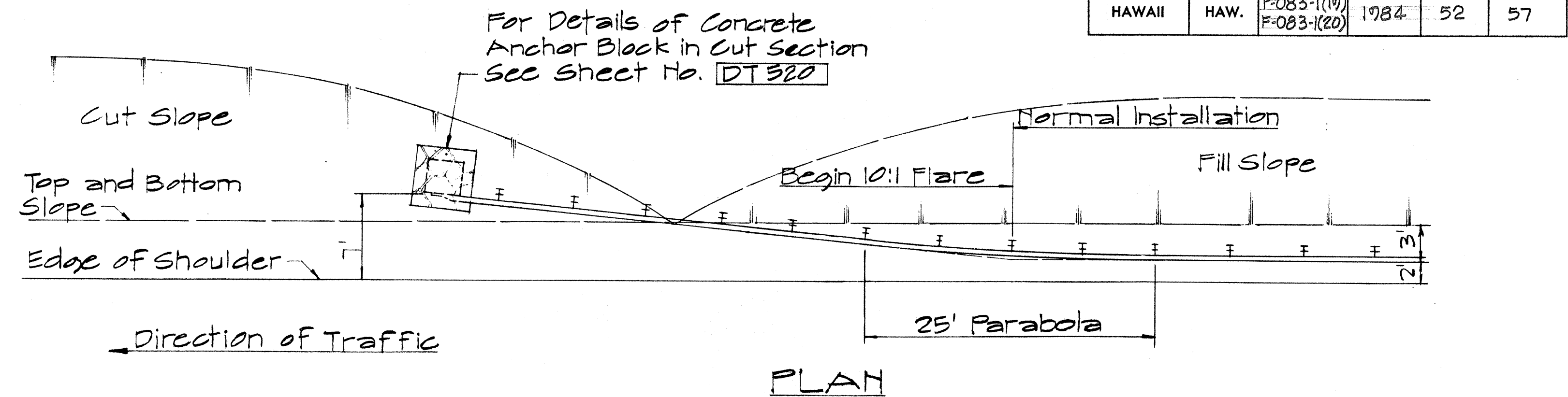
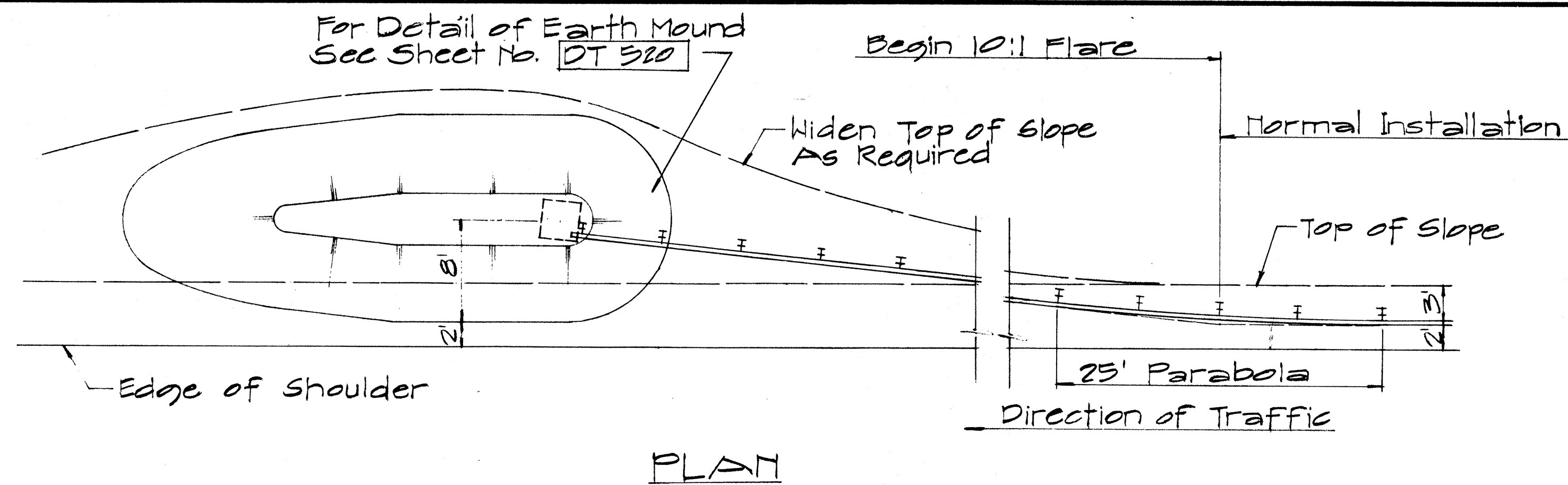
**STANDARD DETAILS
 OF APPROACH END
 FLARE - ONE & TWO
 WAY ROADWAY**

SC. As Noted April 1969

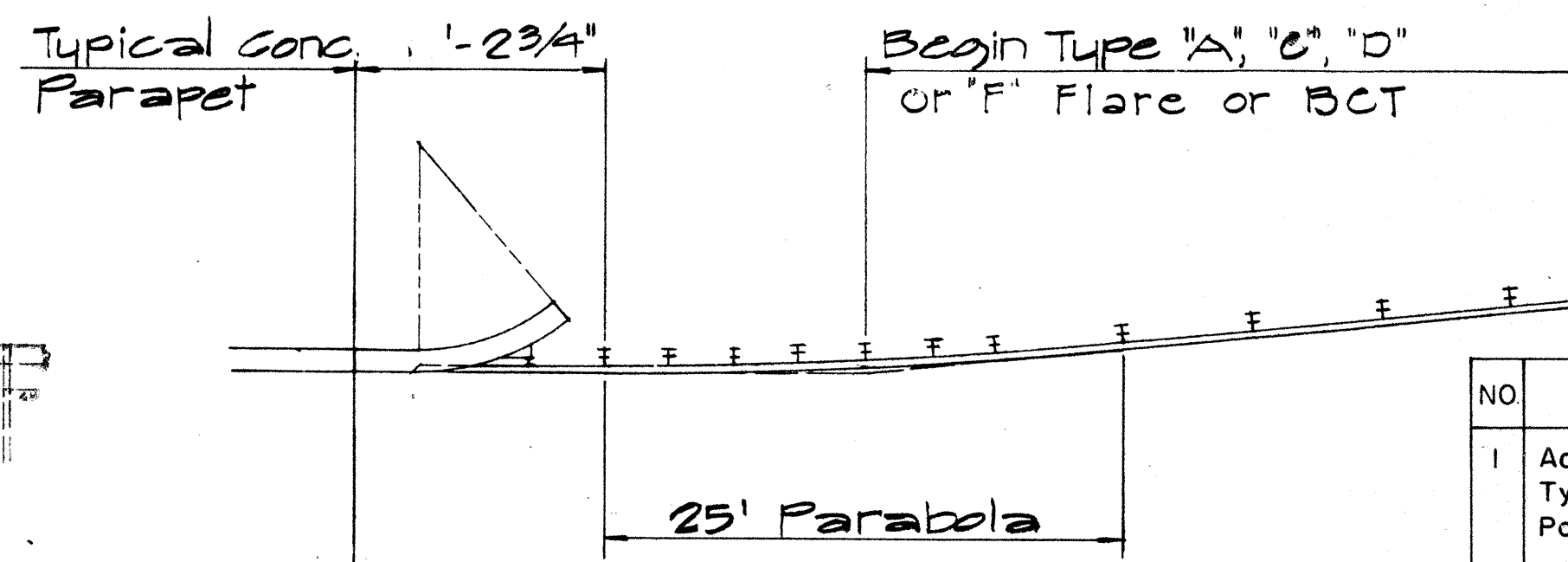
SHEET No. 51 OF 57 SHEETS DT 516

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-083-1(19) F-083-1(20)	1984	52	57



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.C.	4-12-72
2	Delete Type "B" Flare and Type "E" Flare	H.C.	6-15-78

APPROVAL RECOMMENDED:
Eishi Tanaka
TRAFFIC ENGINEER
12/23/69
DATE

APPROVED:
[Signature]
ASSISTANT CHIEF, ENGINEERING
12-30-69
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
TRAILING END
FLARE - ONE & TWO
WAY ROADWAY

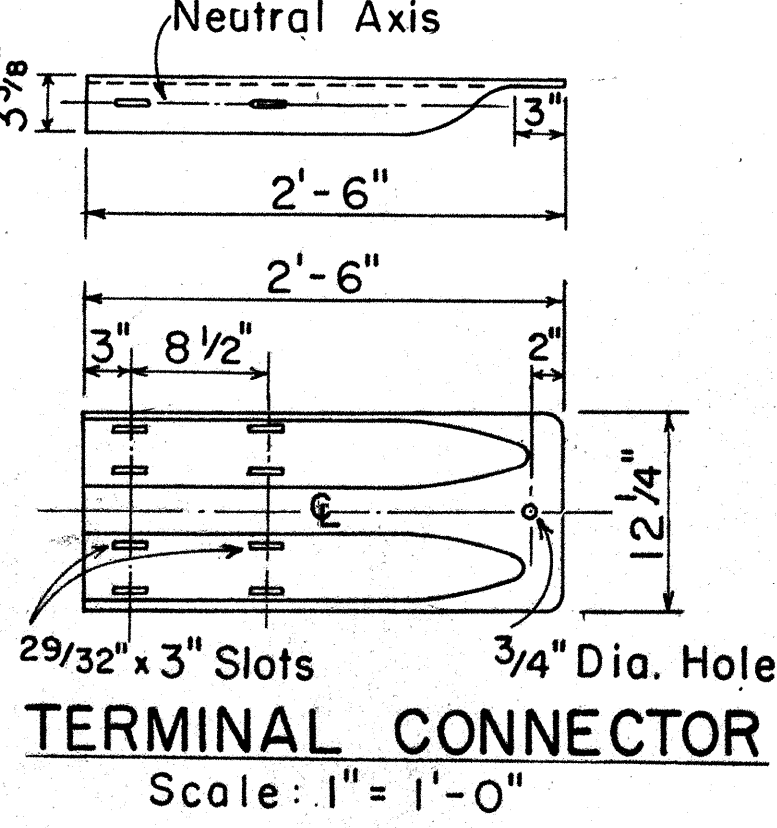
Scale: As Noted April 1969

SHEET No. OF SHEETS DT 517

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	E083-1(19) E083-1(20)	1984	53	57

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 accomodate 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 supersceded 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:

Eishi Tanaka
TRAFFIC ENGINEER

6/14/78
DATE

APPROVED:

Harbor Sakaiishi
ASSISTANT CHIEF, ENGINEERING

6/15/78
DATE

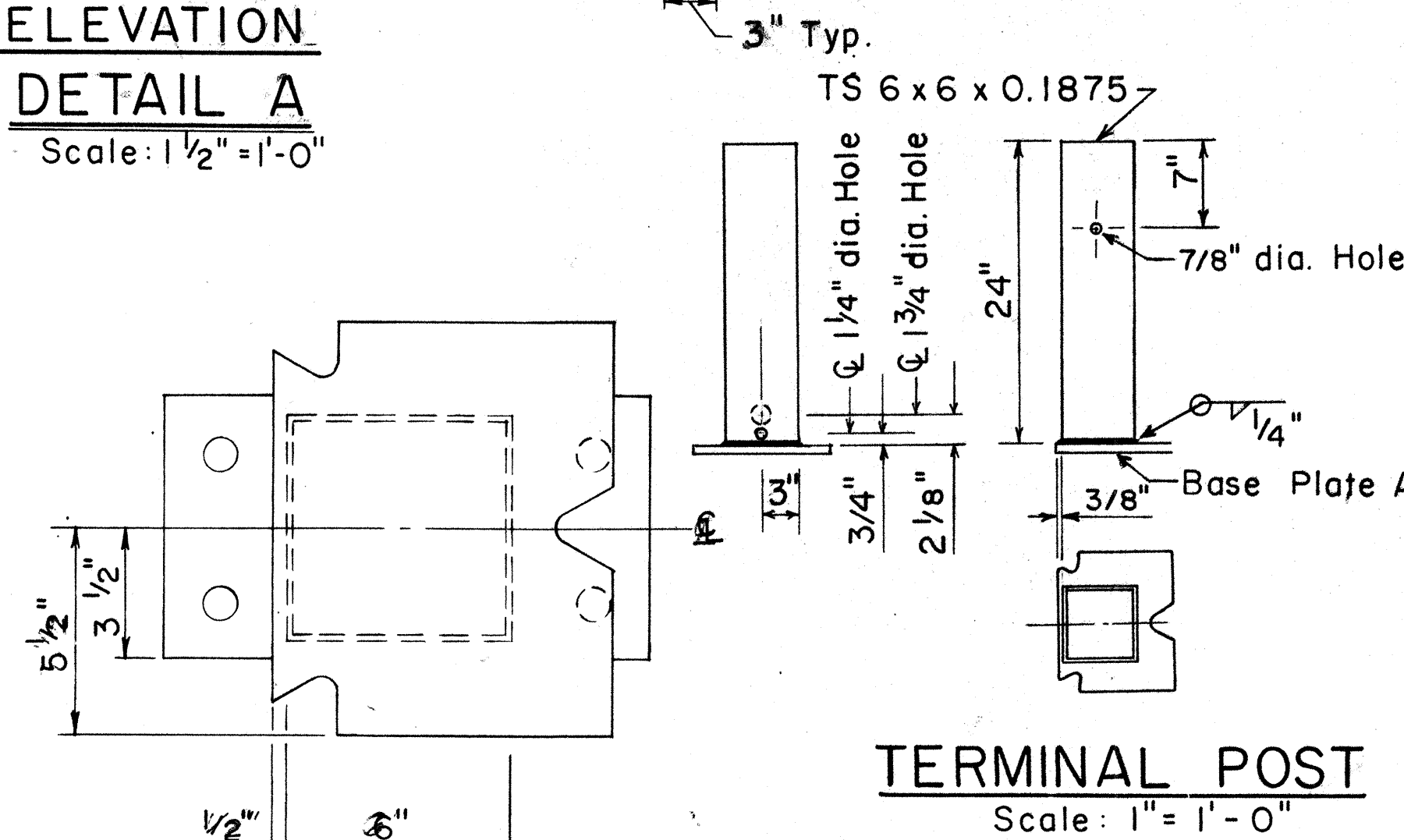
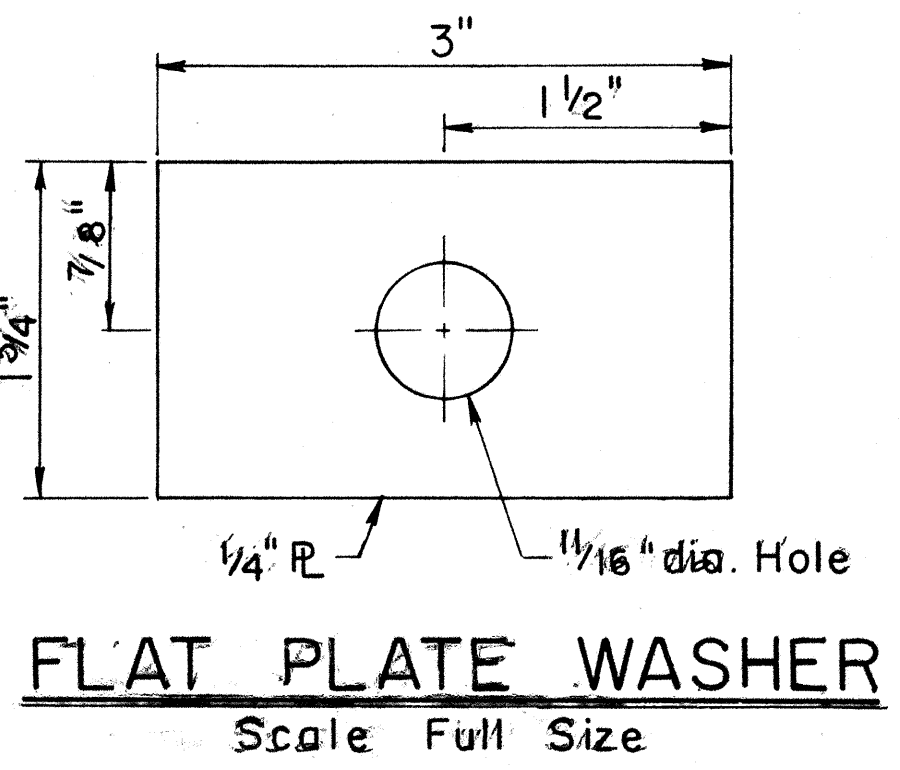
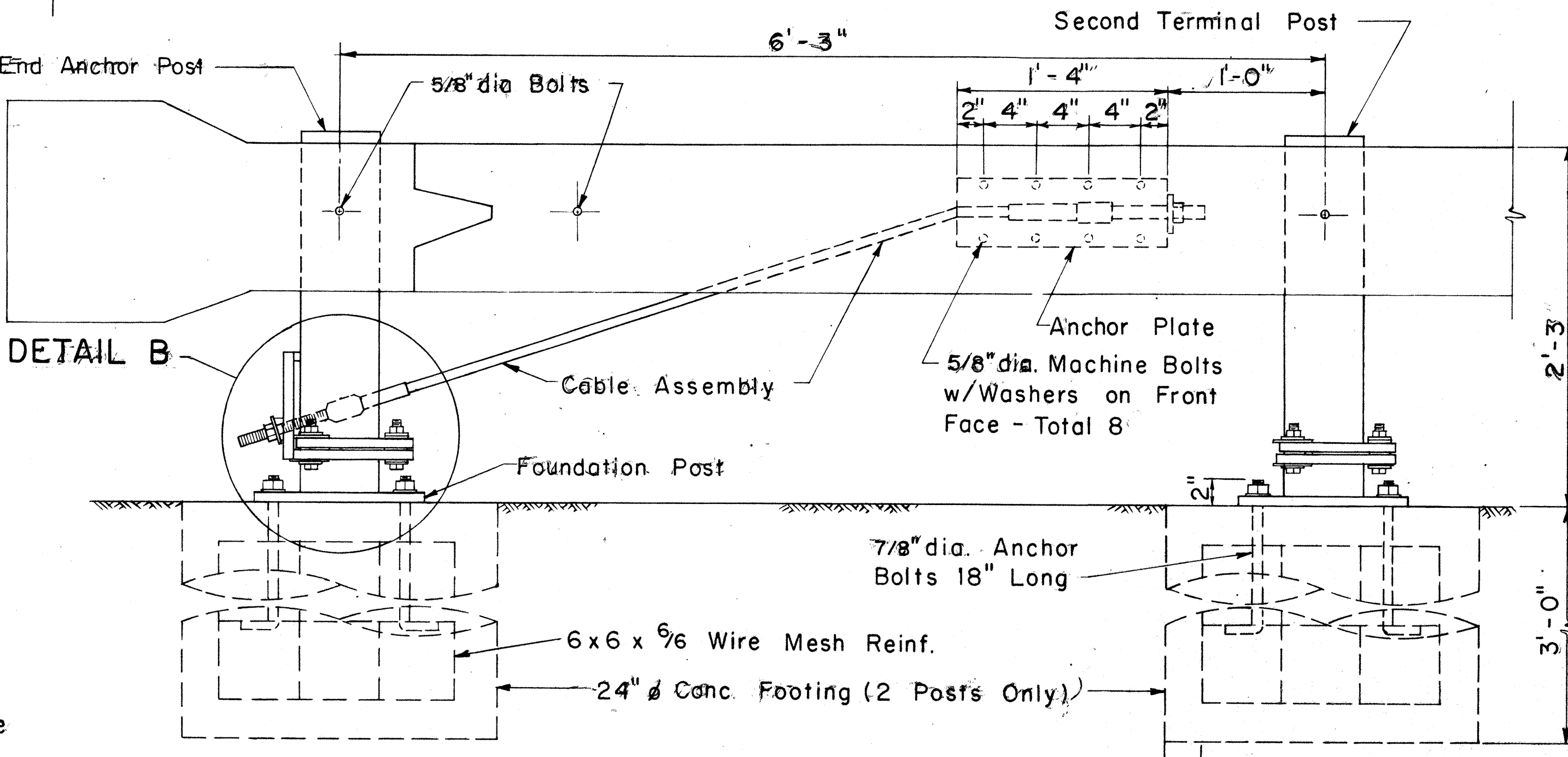
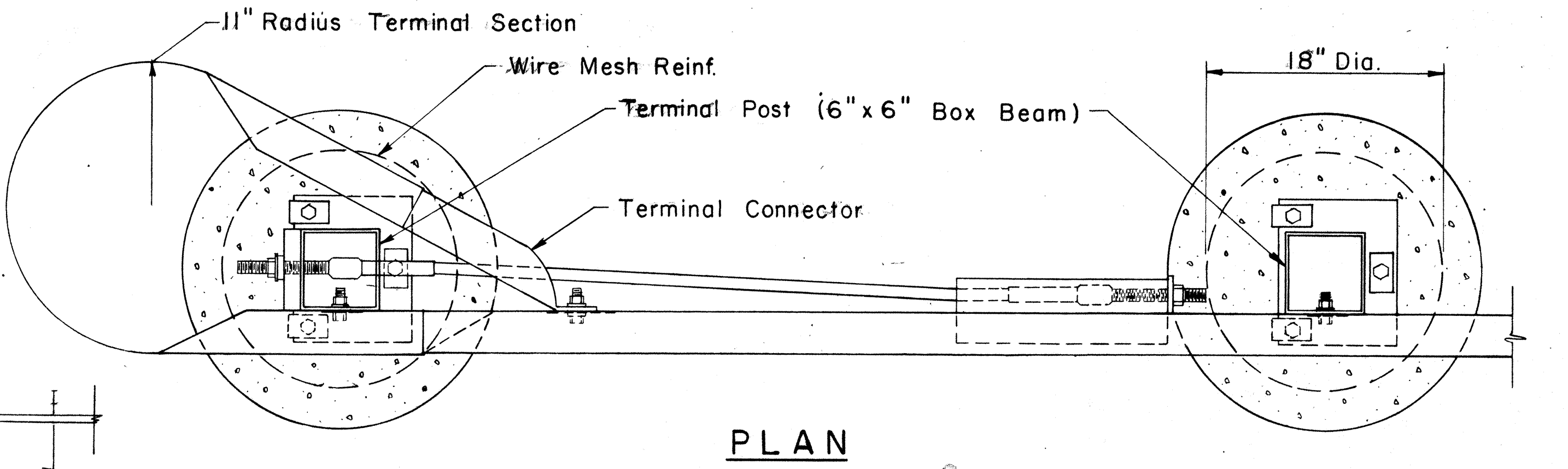
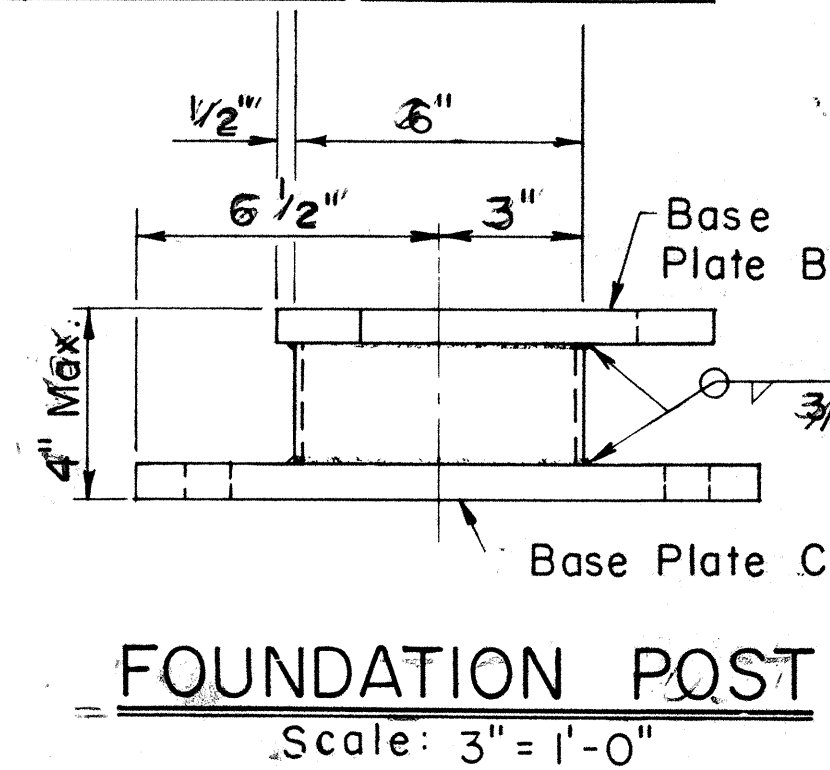
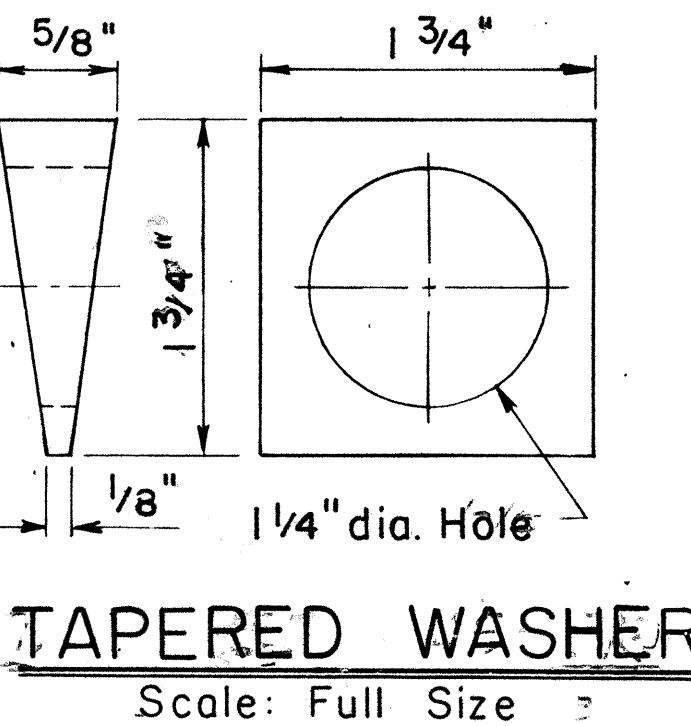
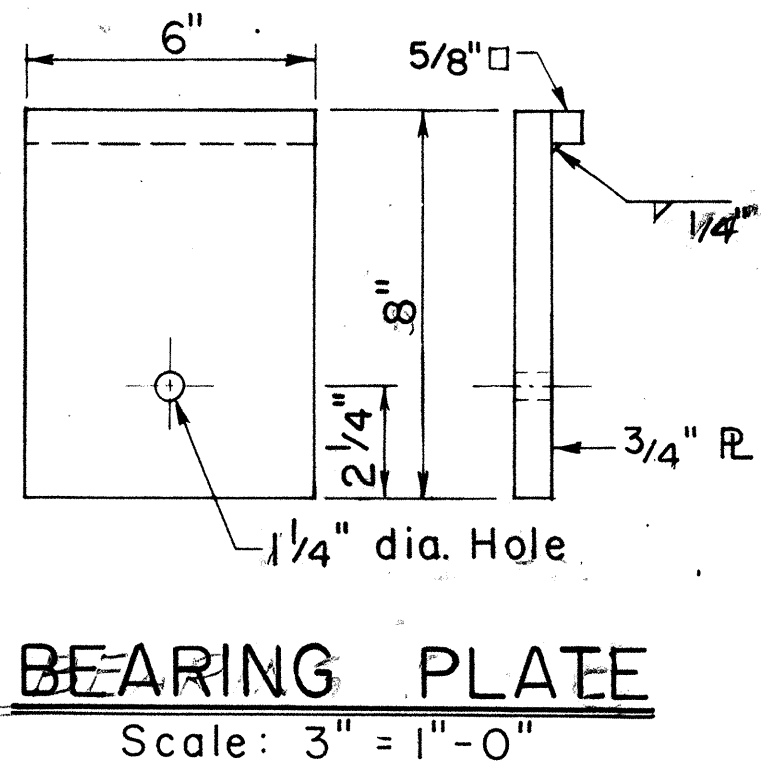
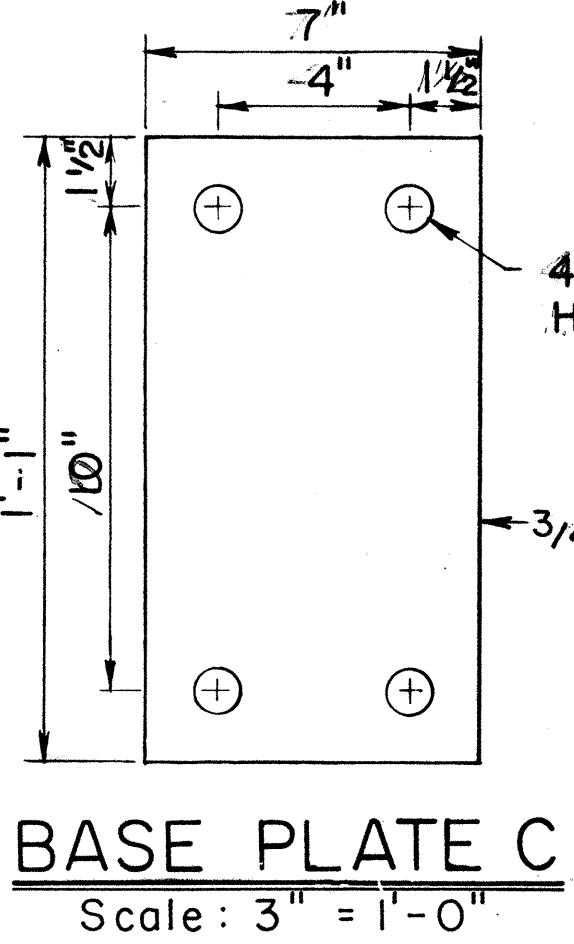
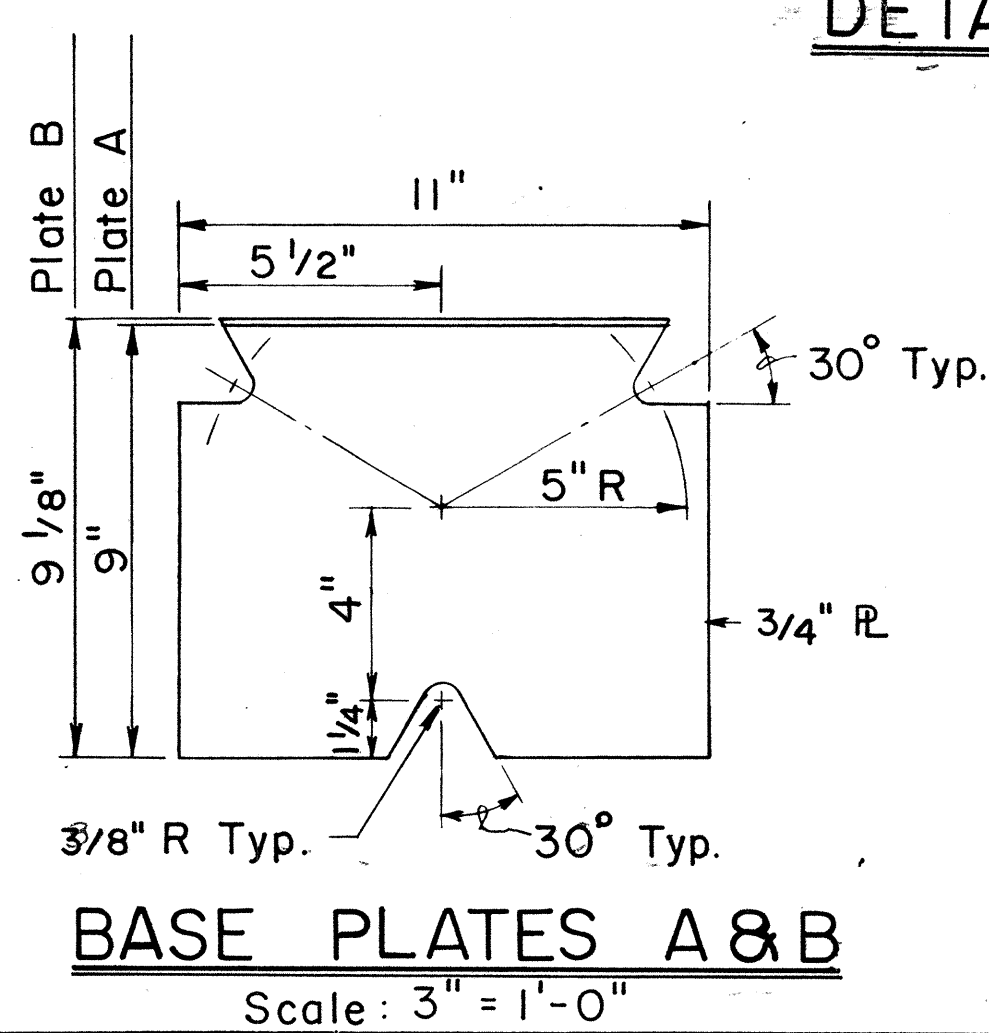
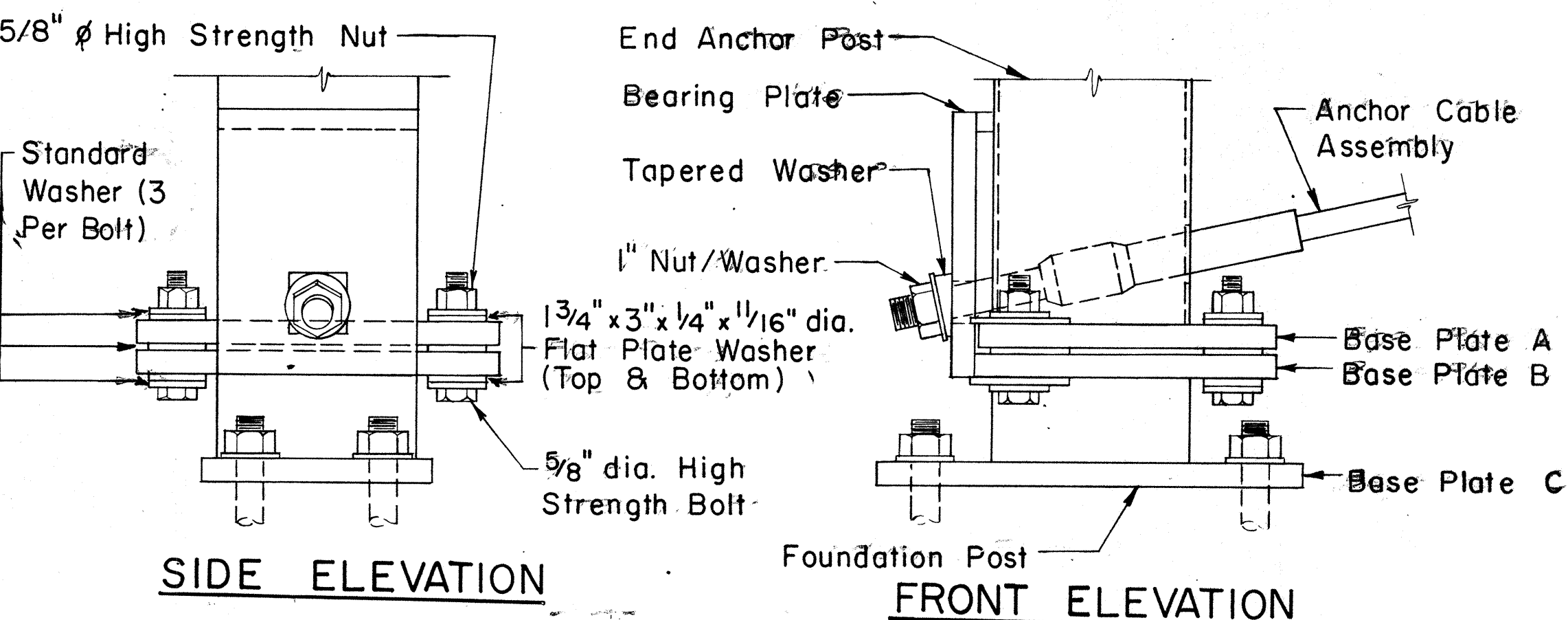
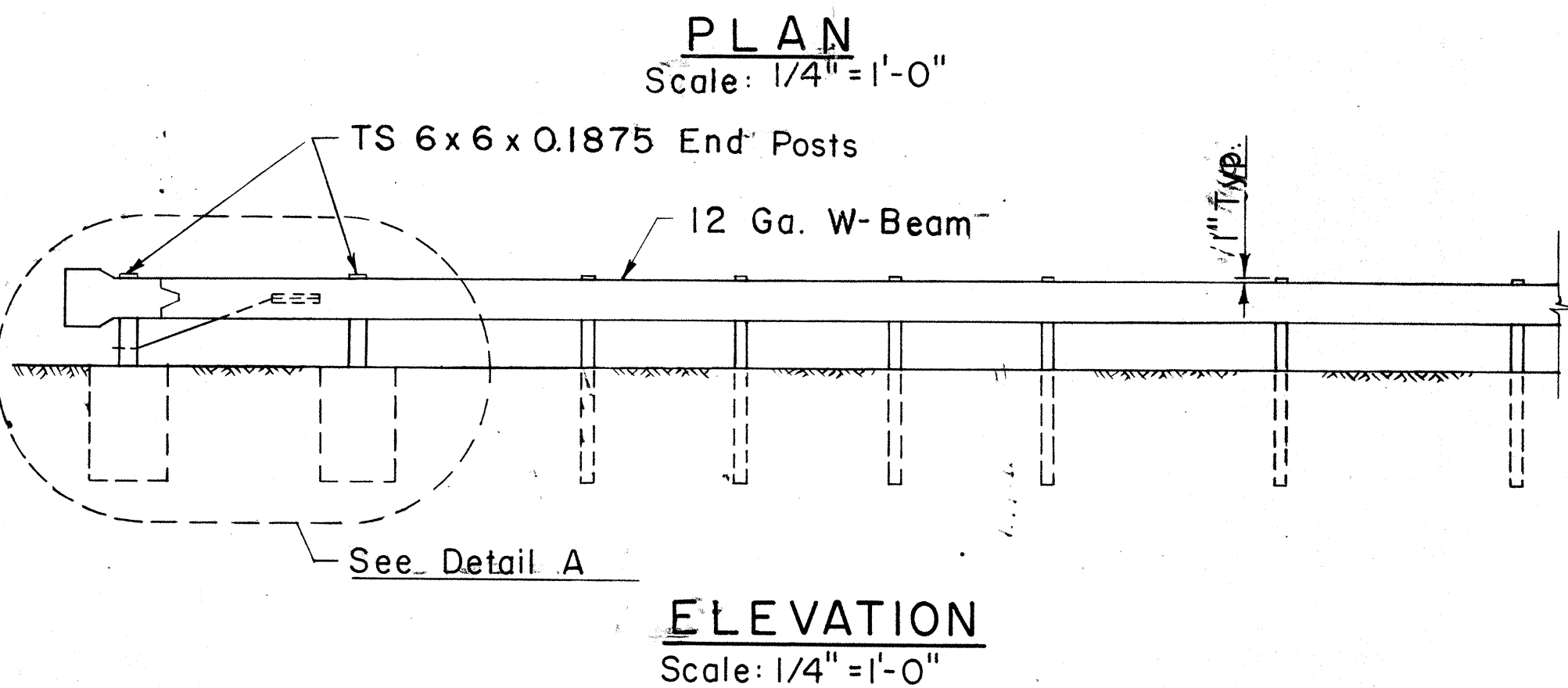
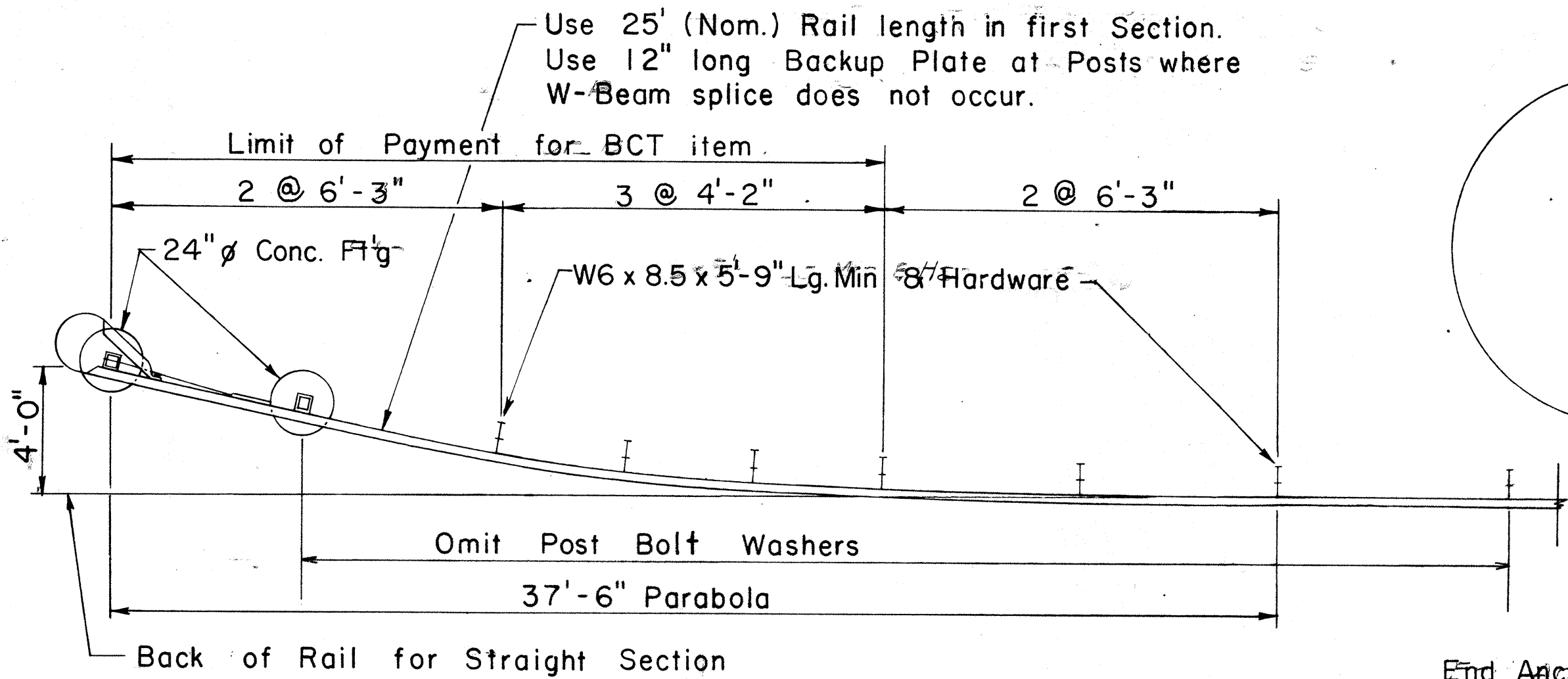
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAIL

BREAKAWAY CABLE TERMINAL (BCT)

Scale: As Shown Date: June 1978

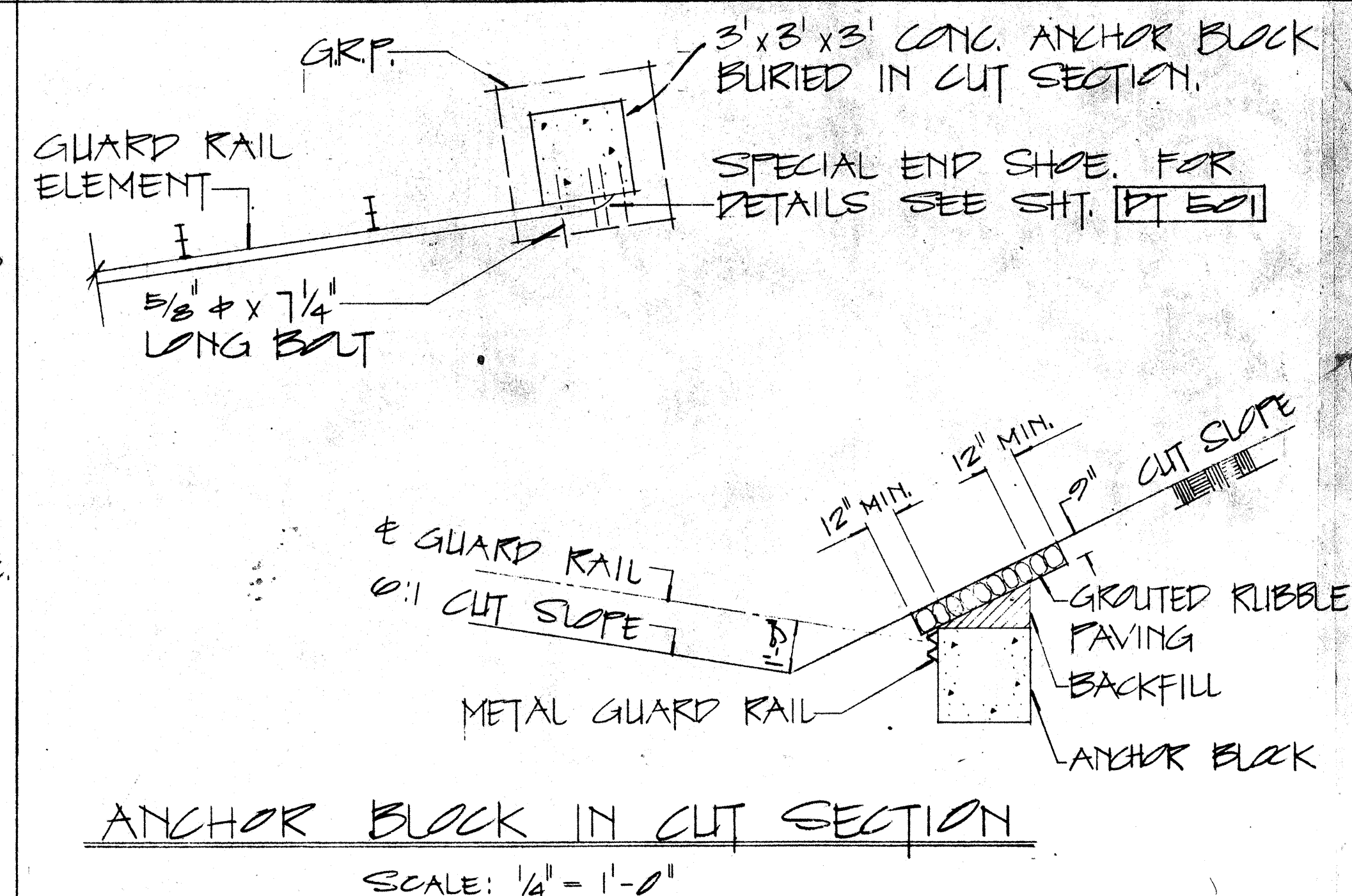
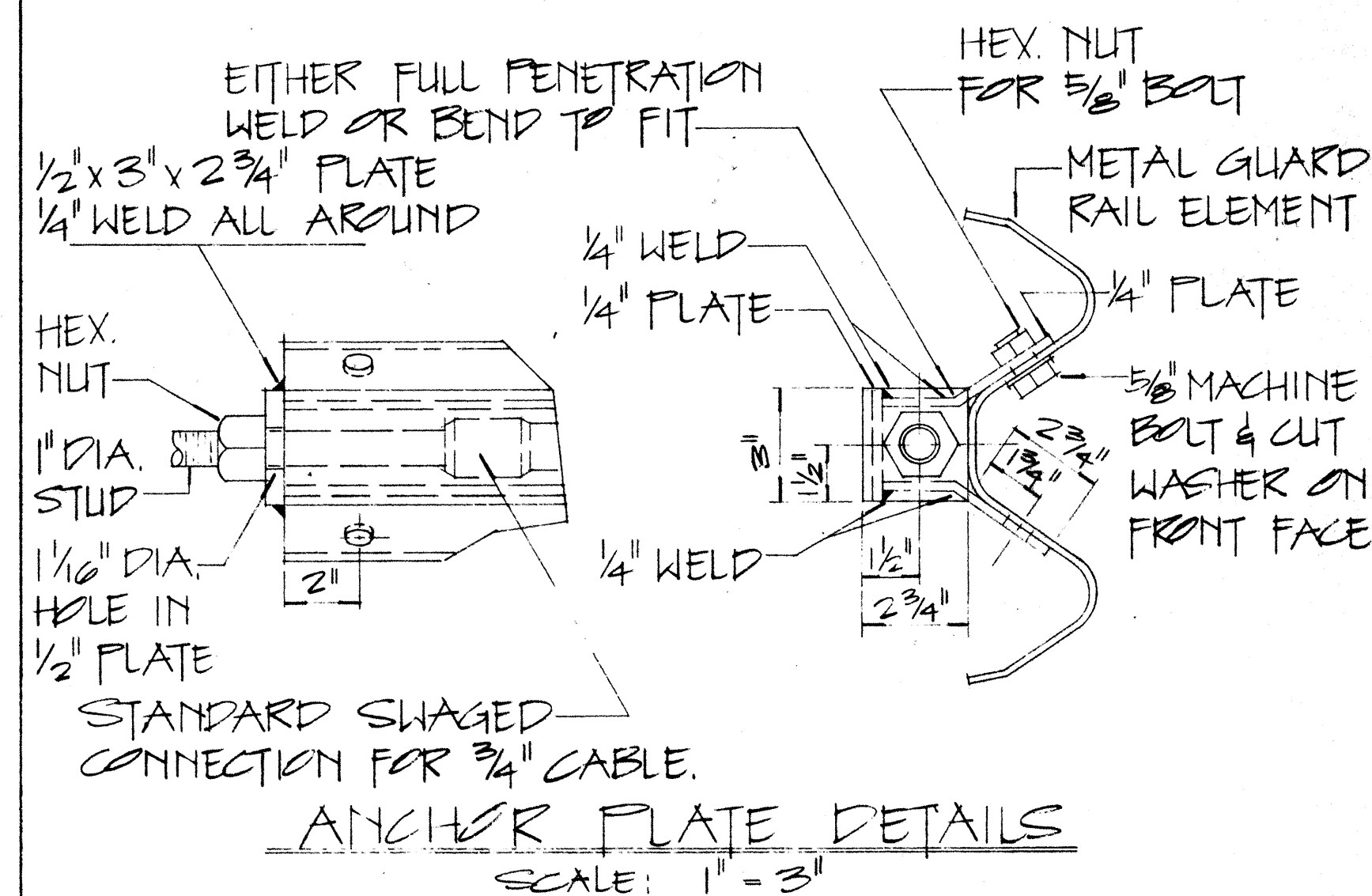
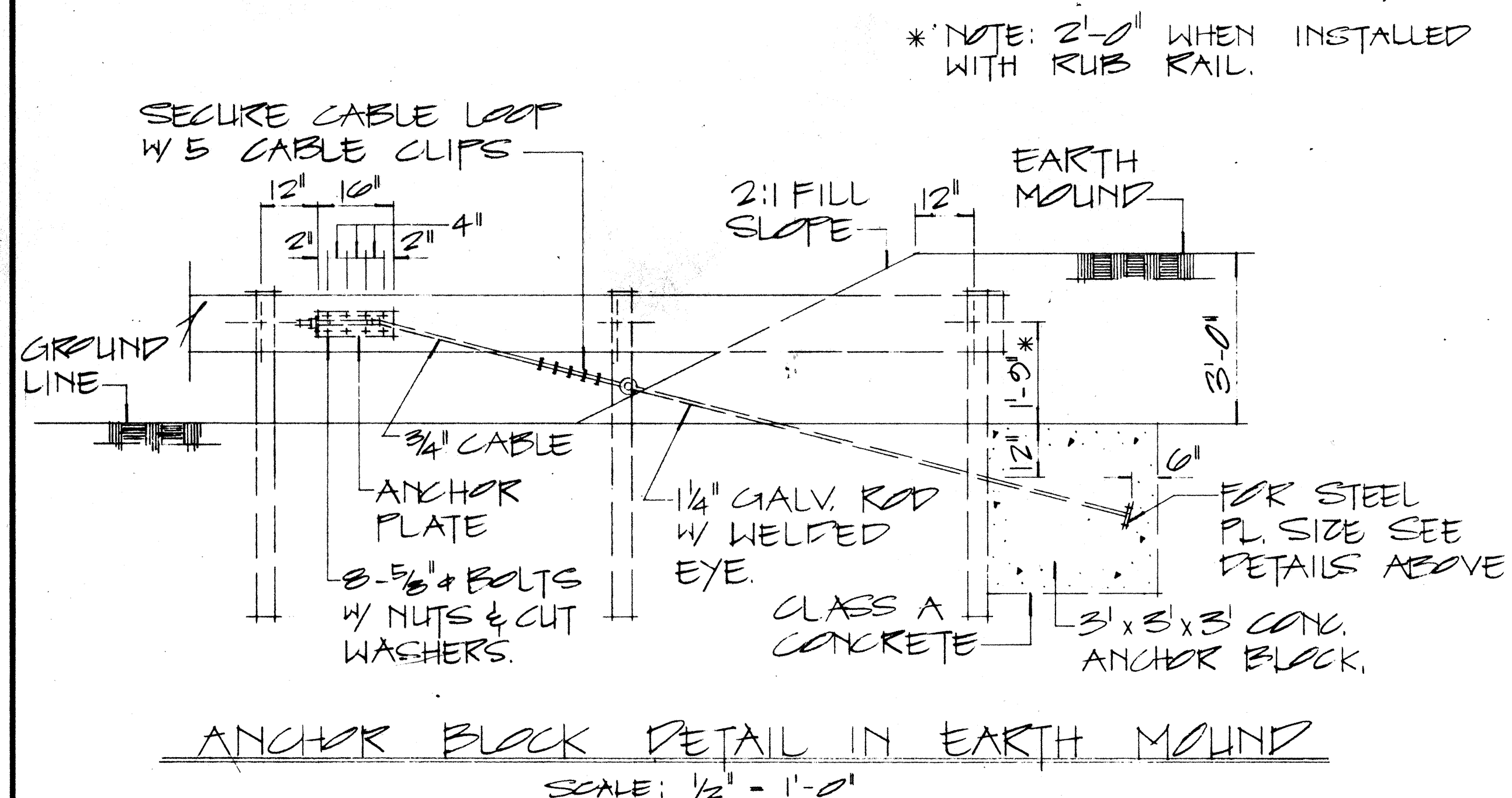
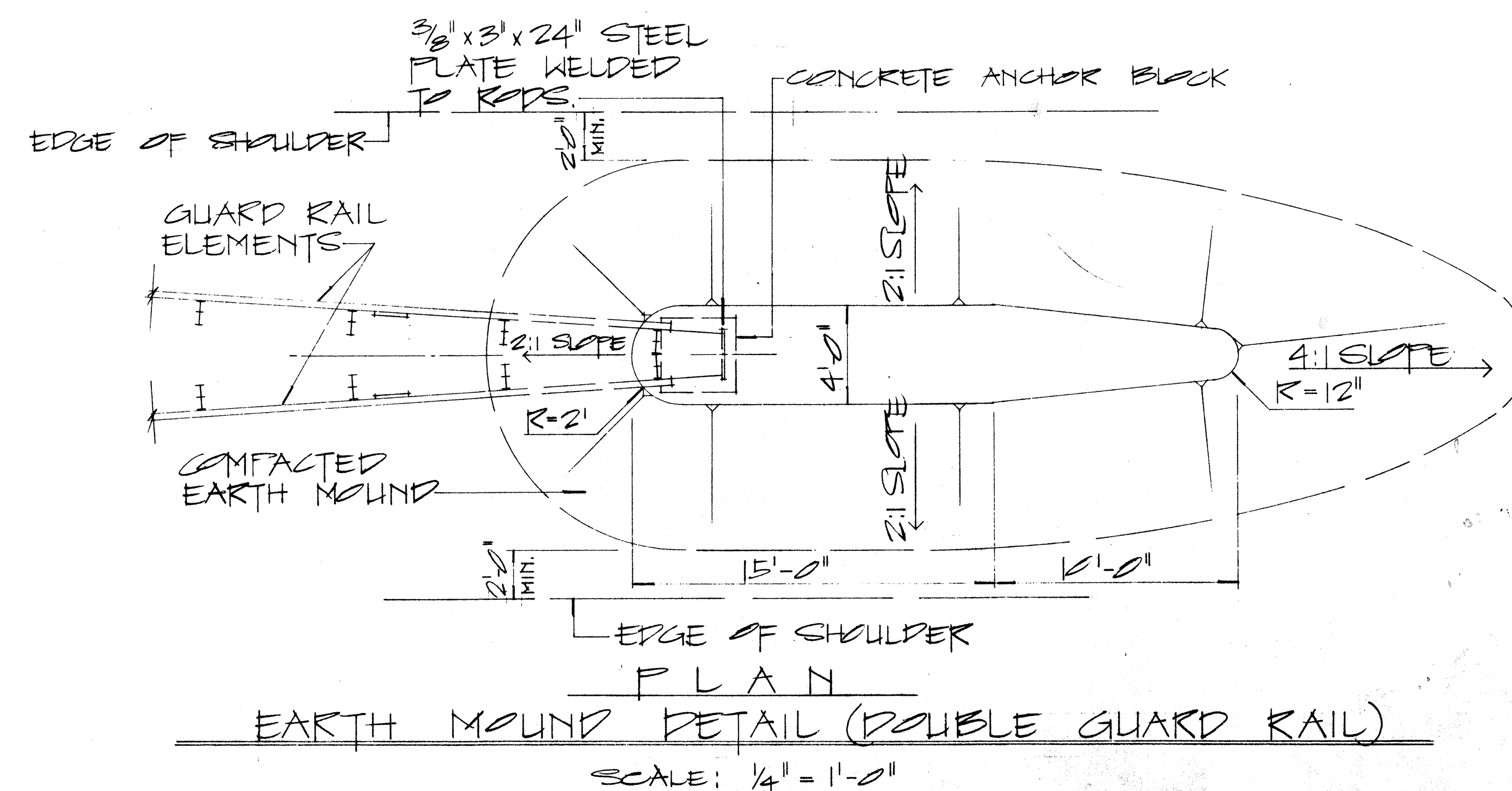
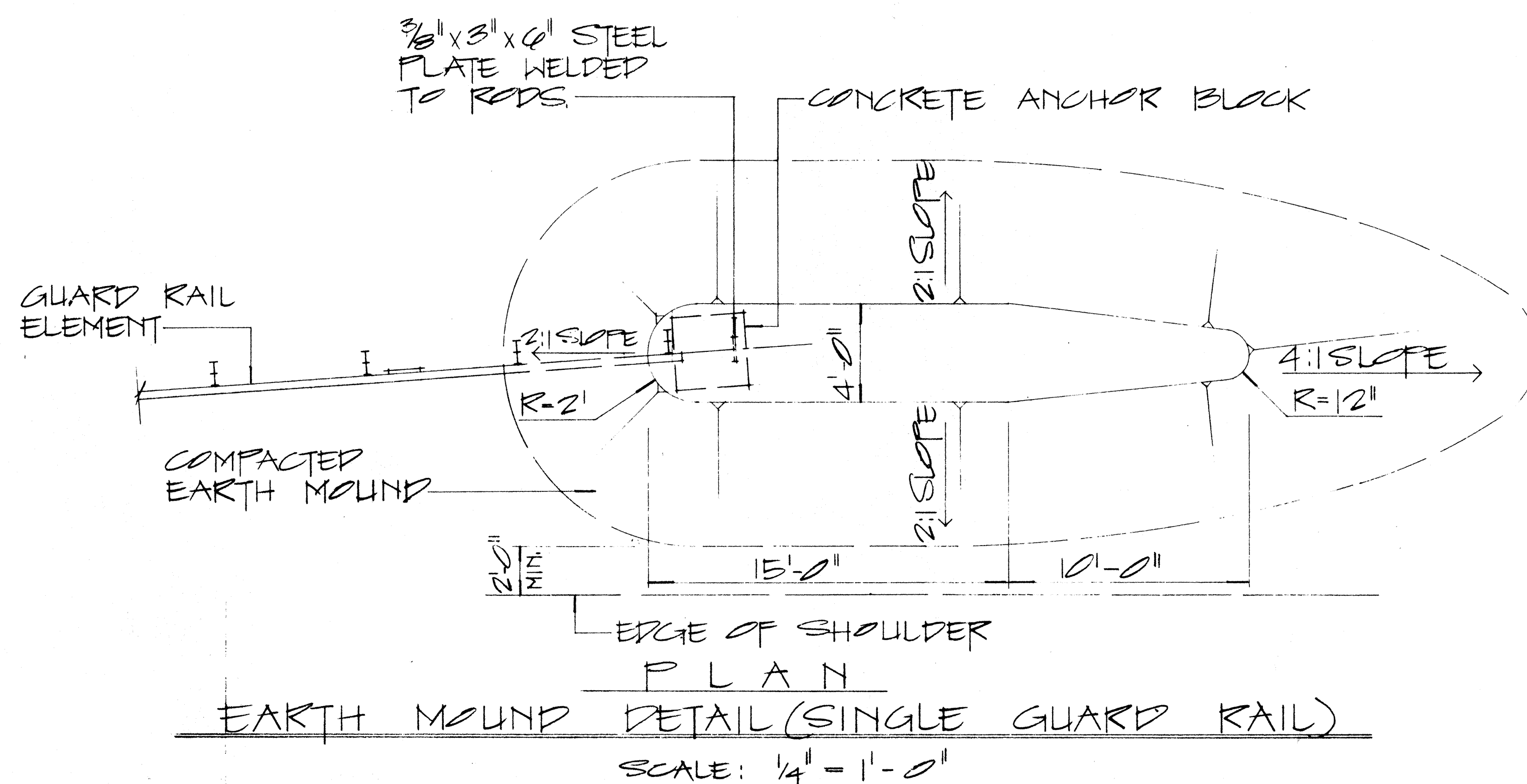
SHEET No. OF SHEETS DT 519



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

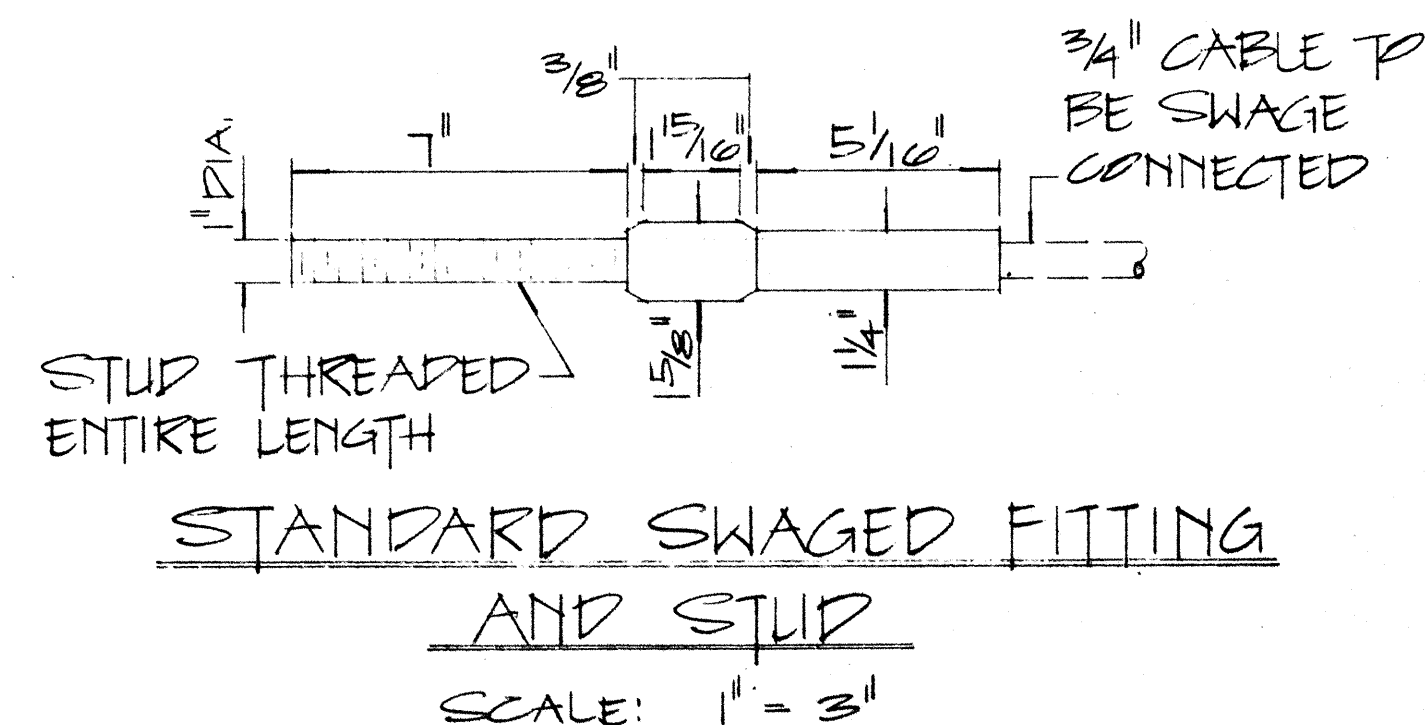
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SURVEY PLOTTED BY	
DRAWN BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(19) F-083-1(20)	1984	54	57



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: Erich Tanaka 12/29/69
TRAFFIC ENGINEER DATE

APPROVED: 2nd Lt. 2245 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED By	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

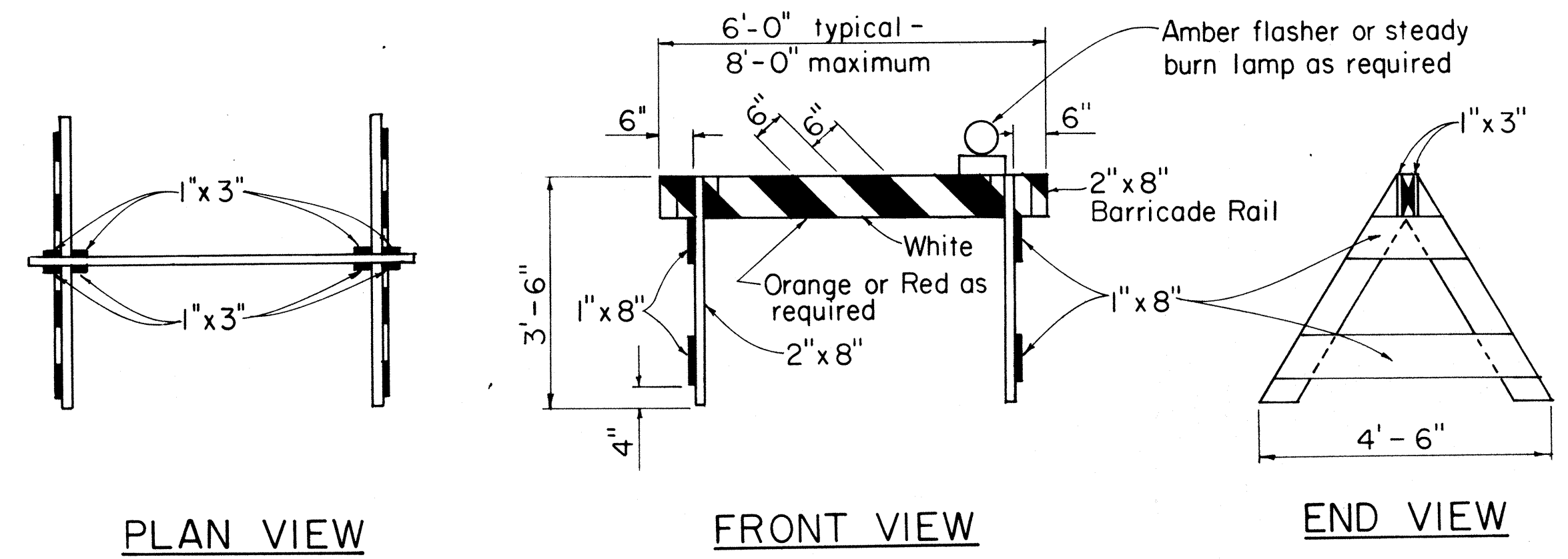
EARTH MOUND AND

ANCHOR BLOCK DETAILS

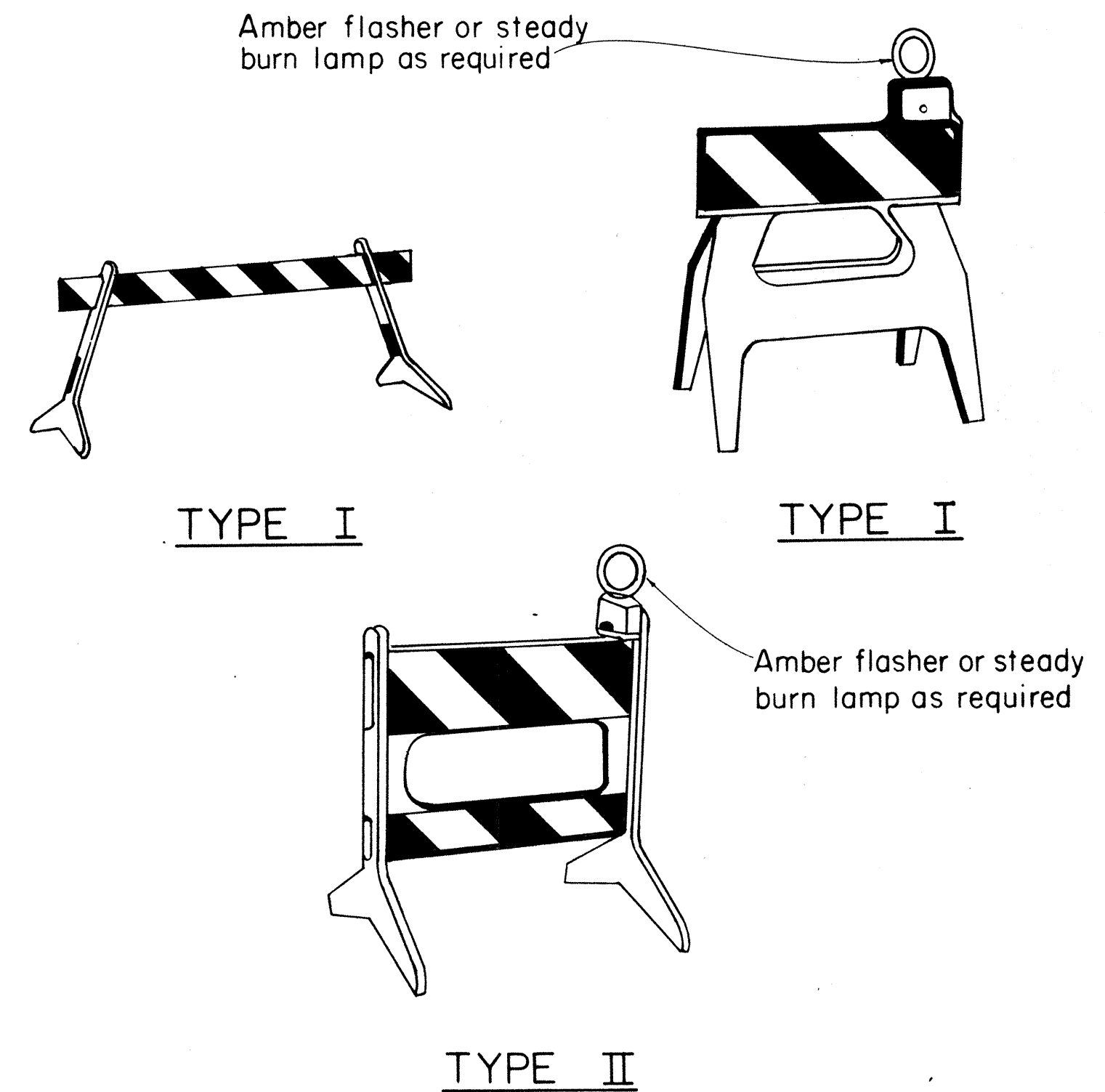
SCALE: AS SHOWN 27 1967

SHEET No. OF SHEETS 17 524

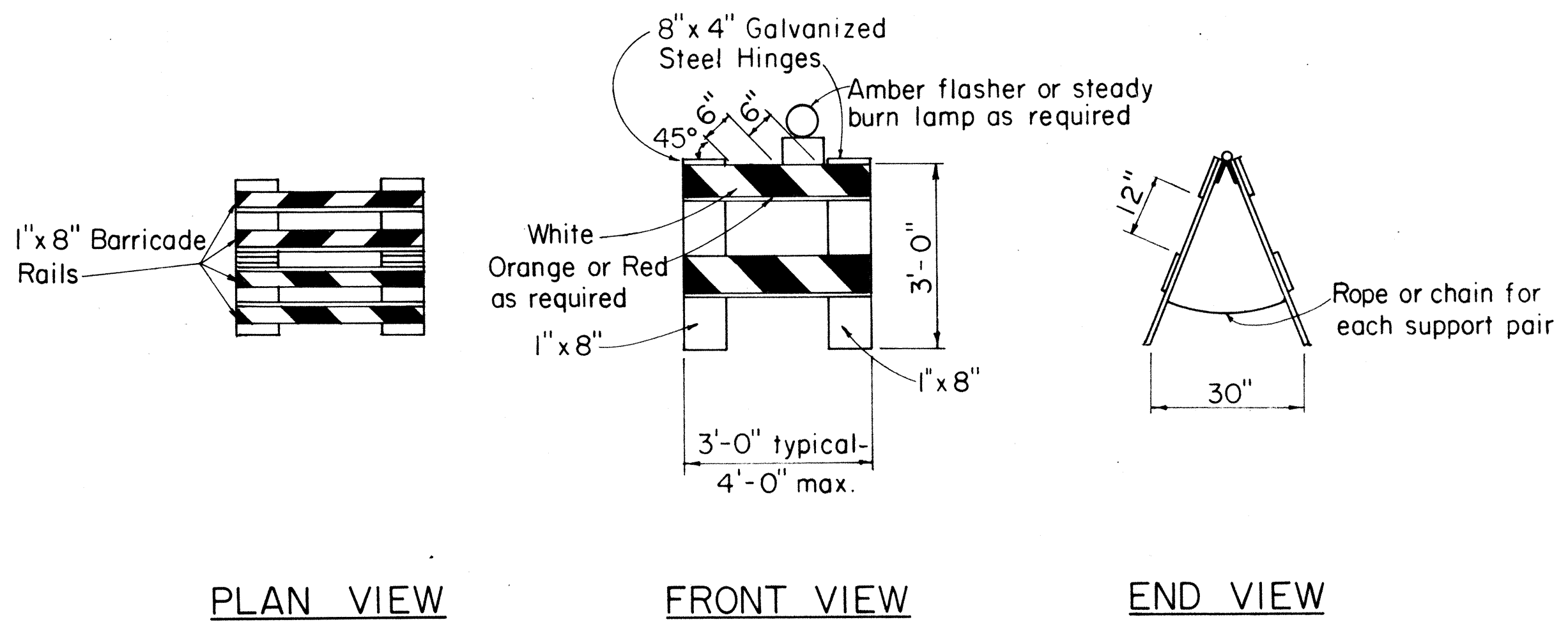
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(19) F-083-1(20)	1984	55	57



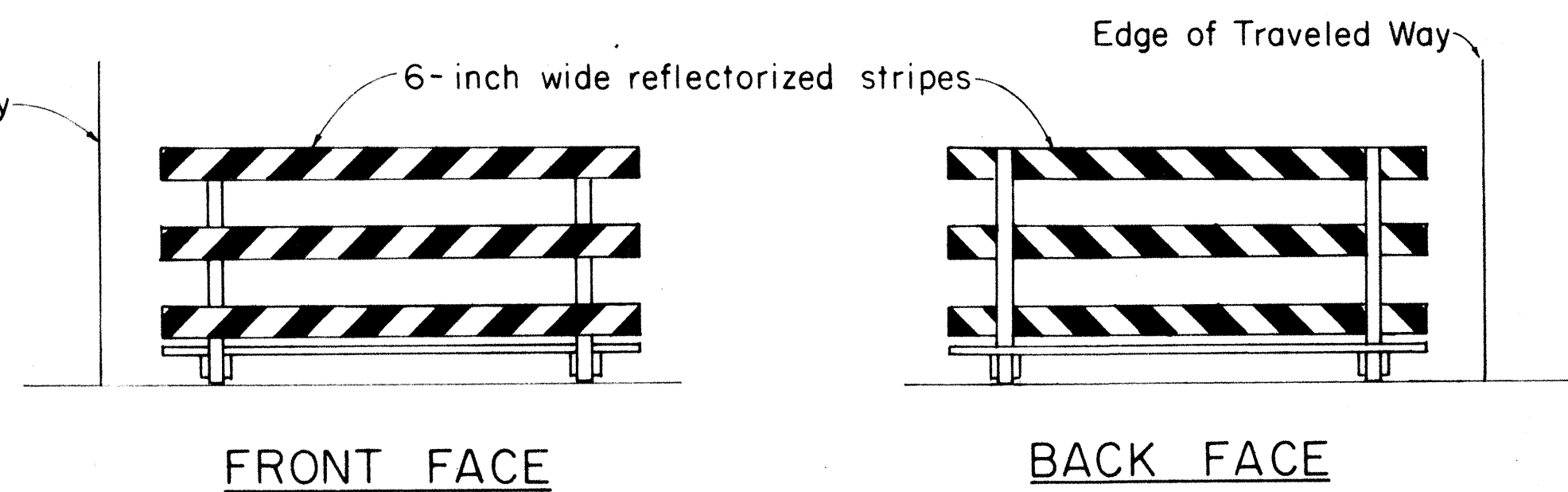
TYPE I BARRICADE
Scale: 1/2" = 1'-0"



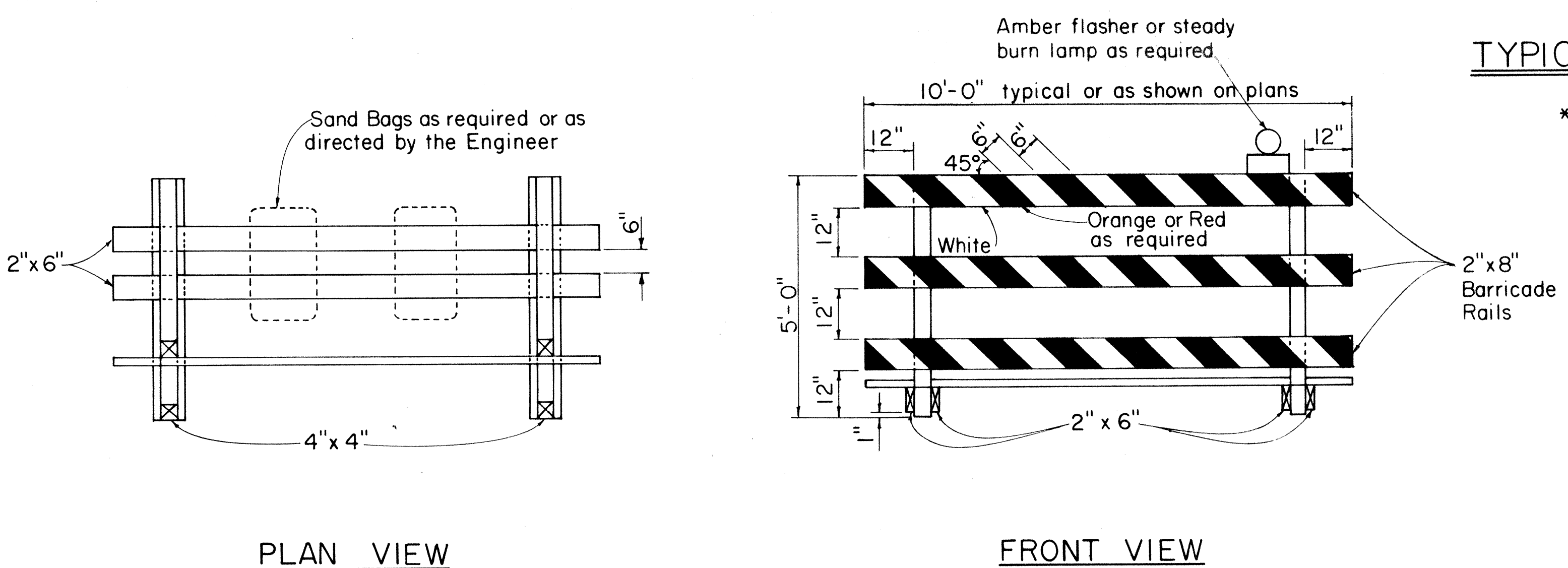
PLASTIC MOLDED BARRICADE OPTIONS*
Not to Scale
* Shop Drawings must be submitted for approval.



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"

GENERAL NOTES

1. 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.
2. Contractor may submit alternate barricade designs for approval.
3. Sandbags or other approved weights shall not be placed on top of any striped rail.
4. The Contractor is directed to Section 626.

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

APPROVED:
Albert S. Schish 10/23/81
ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

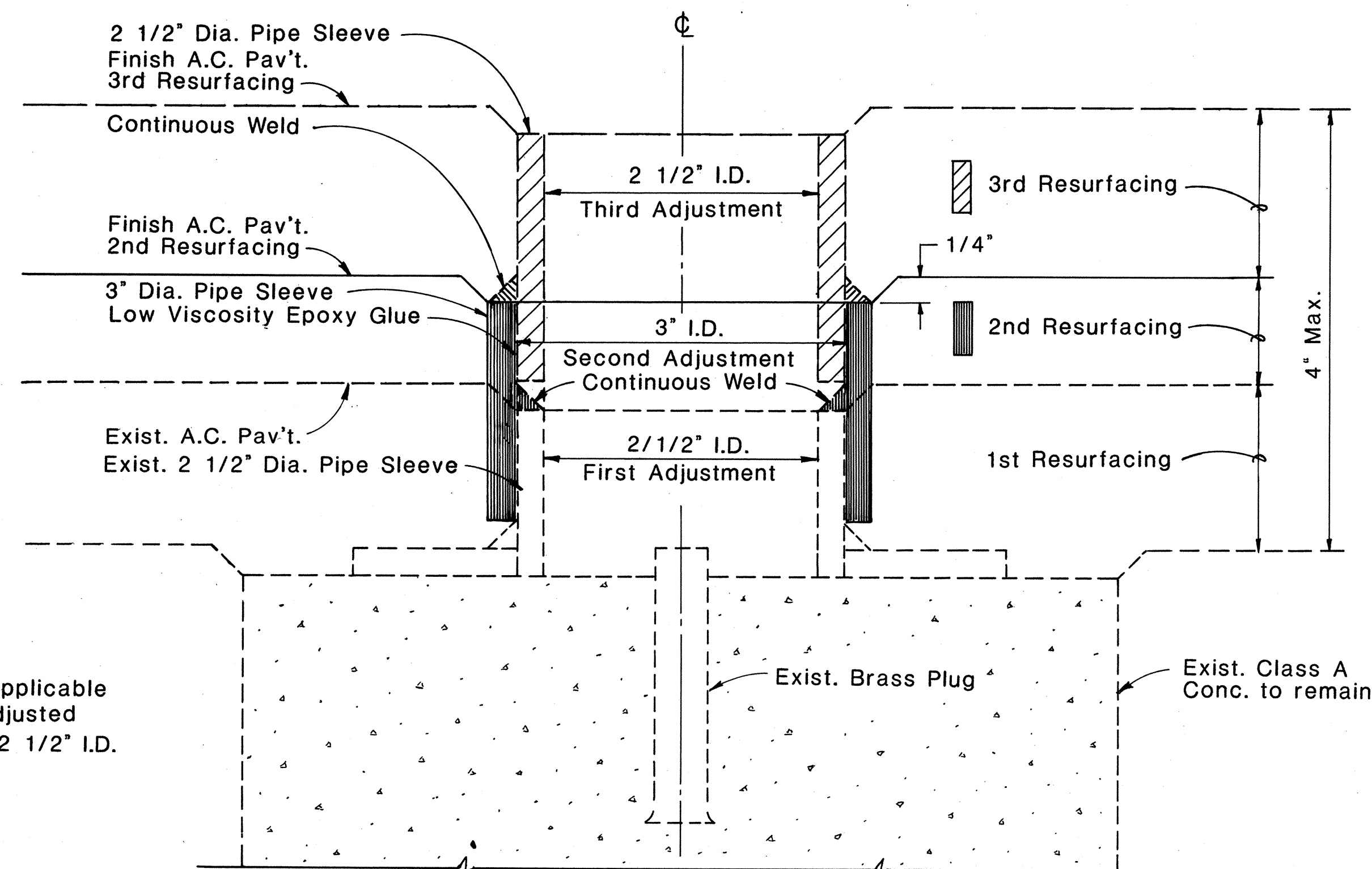
STANDARD DETAILS

BARRICADES

SCALE: As Shown
SHEET No. 55 OF SHEETS DT 800

DATE	10/21/81
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TRACED BY	
CHECKED BY	
NOTE BOOK	
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CHECKED BY	
ORIGINAL PLAN	
No.	

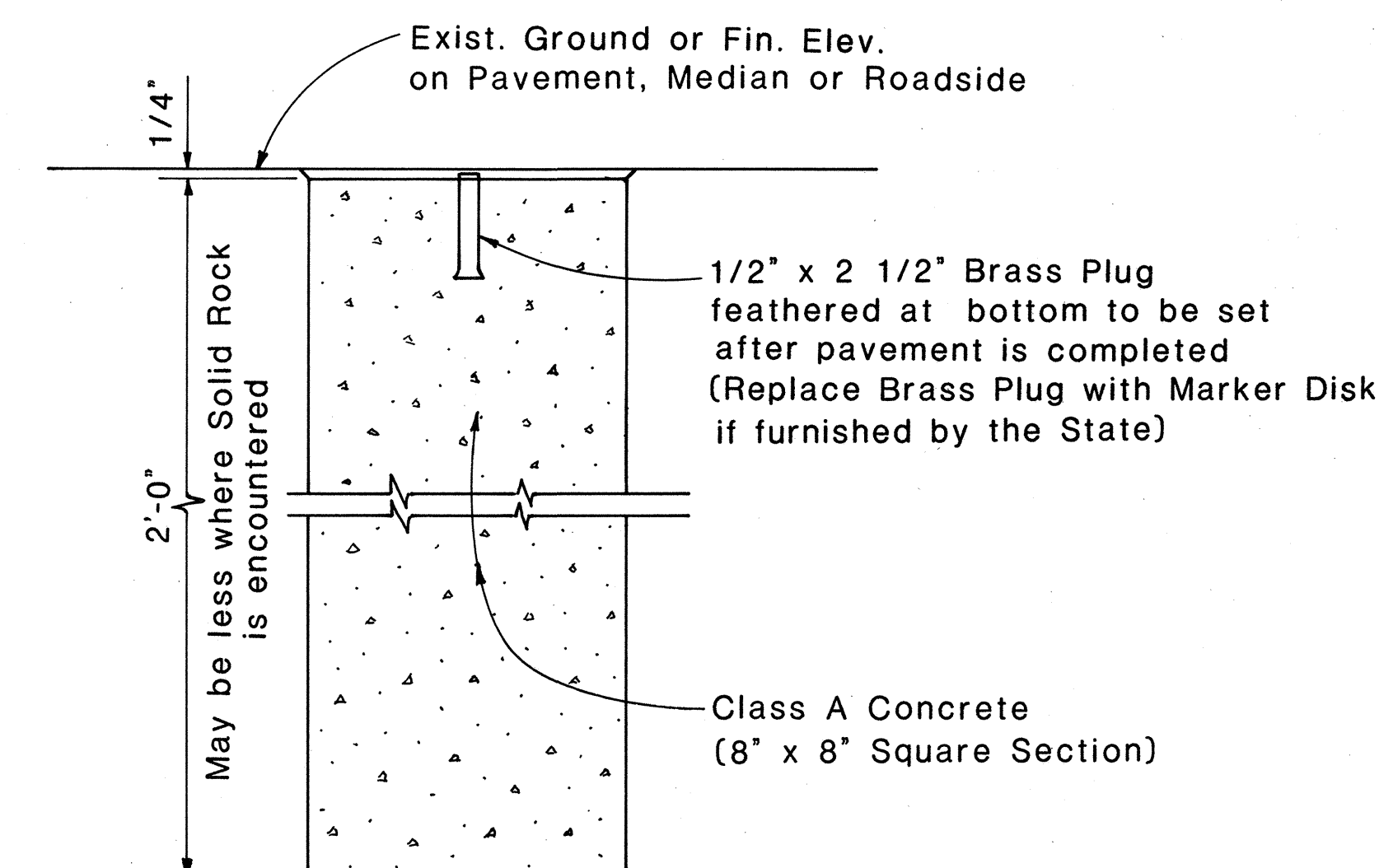
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(10) F-083-1(20)	1984	56	57



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

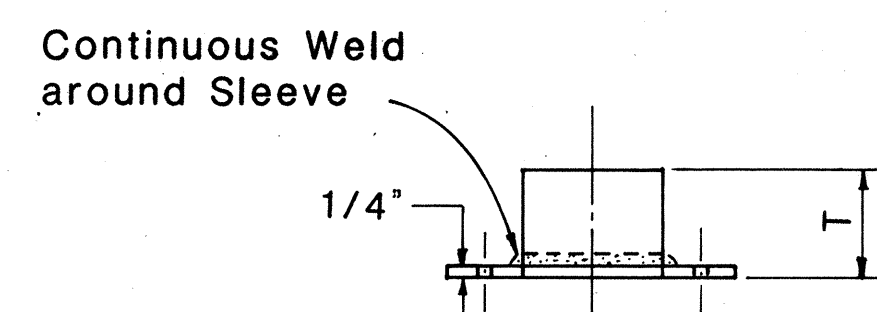
DETAIL FOR CENTERLINE MONUMENT (2ND & 3RD) ADJUSTMENTS

FULL SIZE



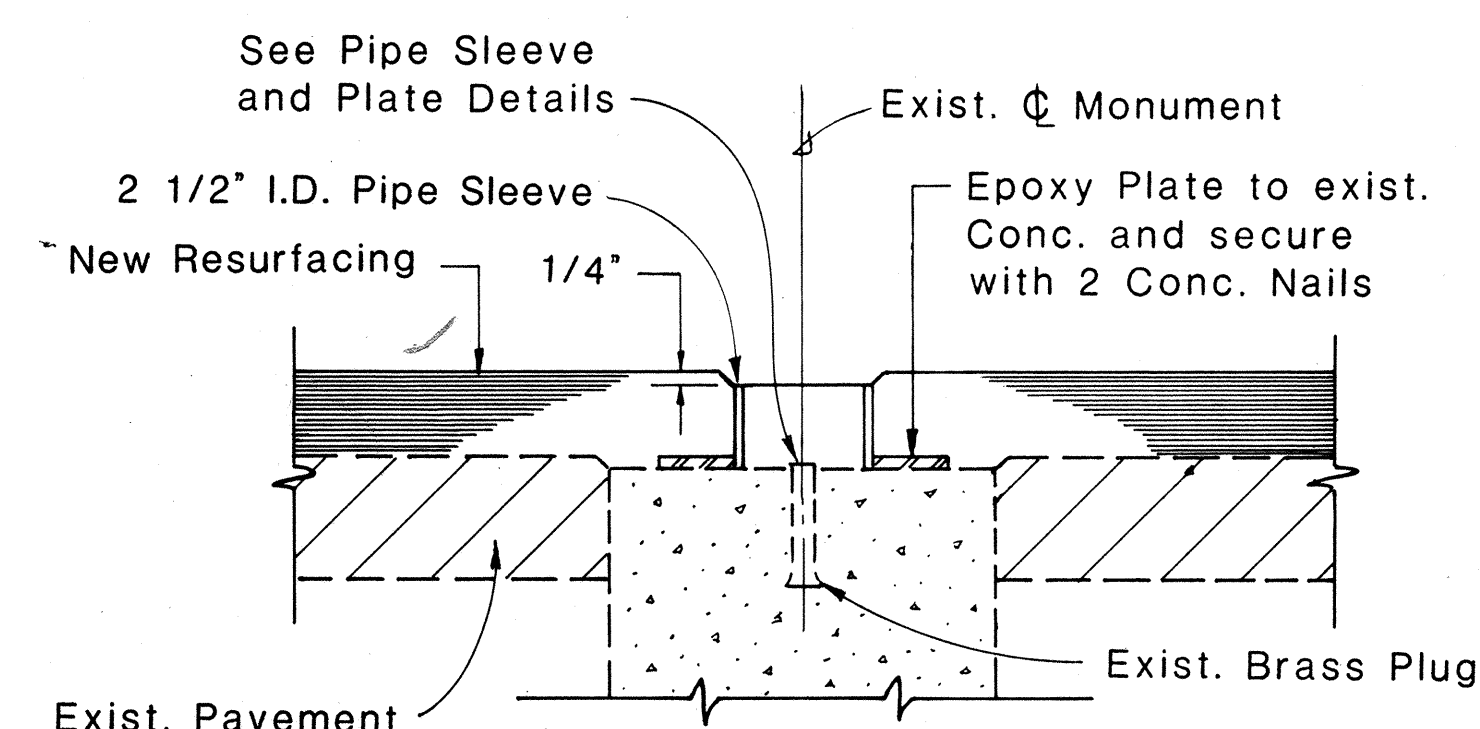
DETAIL FOR CENTERLINE & REFERENCE SURVEY MONUMENT

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



T = New Resurfacing Thickness

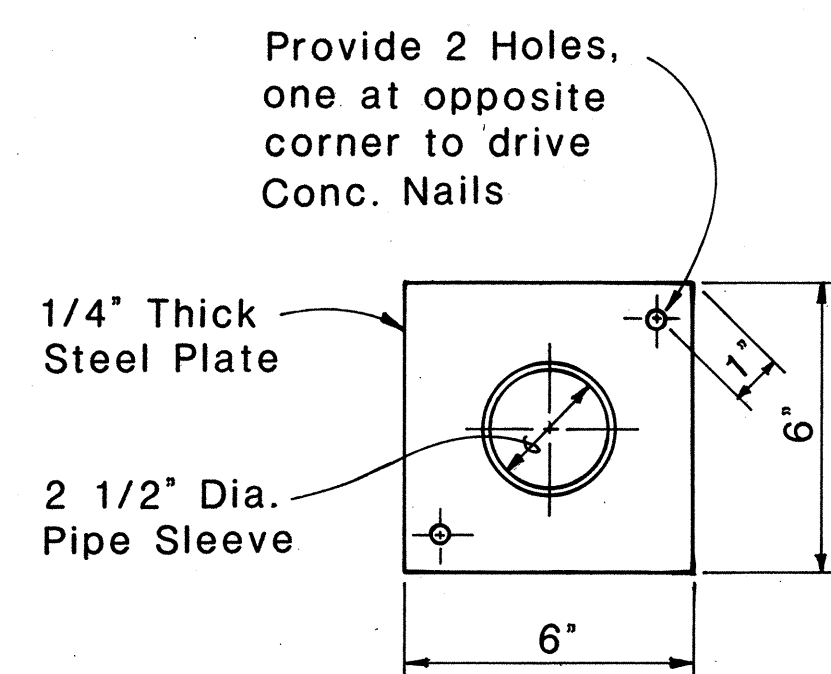
PIPE SLEEVE & PLATE ELEVATION



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.



PIPE SLEEVE & PLATE PLAN

DETAILS FOR ADJUSTED CENTERLINE MONUMENT

Scale: 3" = 1'-0"

APPROVAL RECOMMENDED:

Mike Minna 6-20-83
HIGHWAY DESIGN ENGINEER DATE

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

NO.	REVISION	APPROVED	
		BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

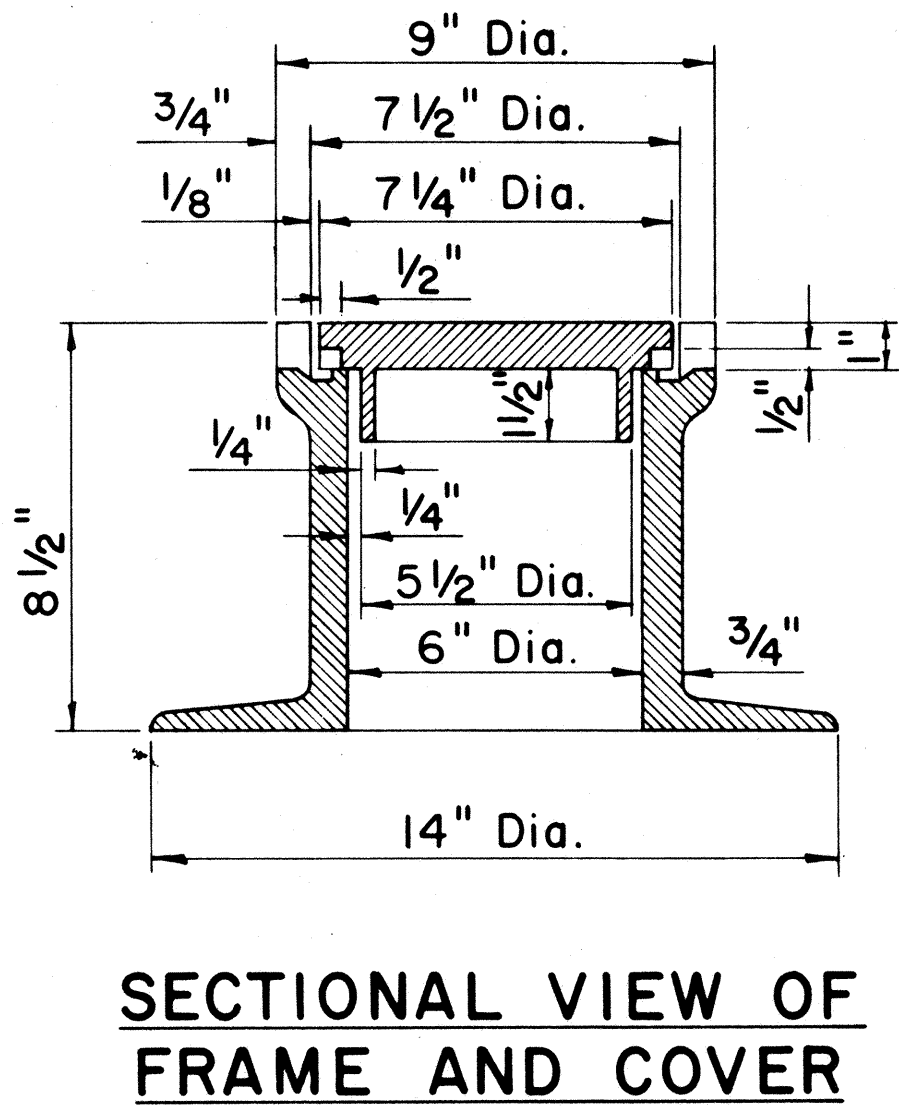
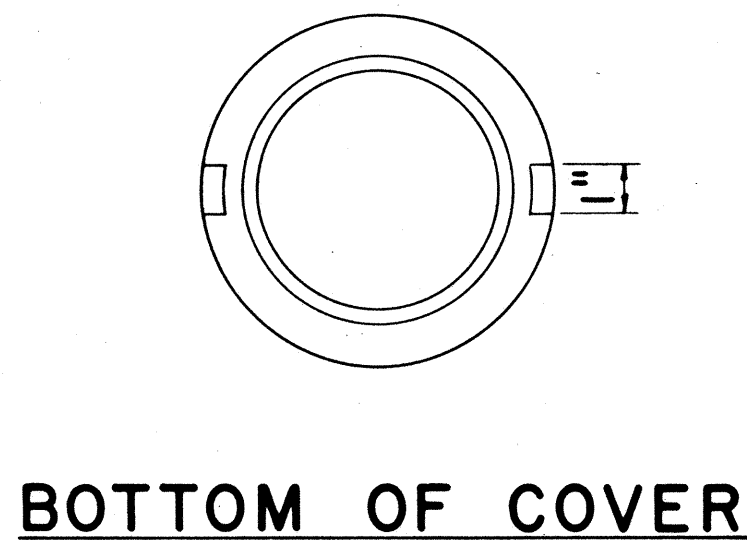
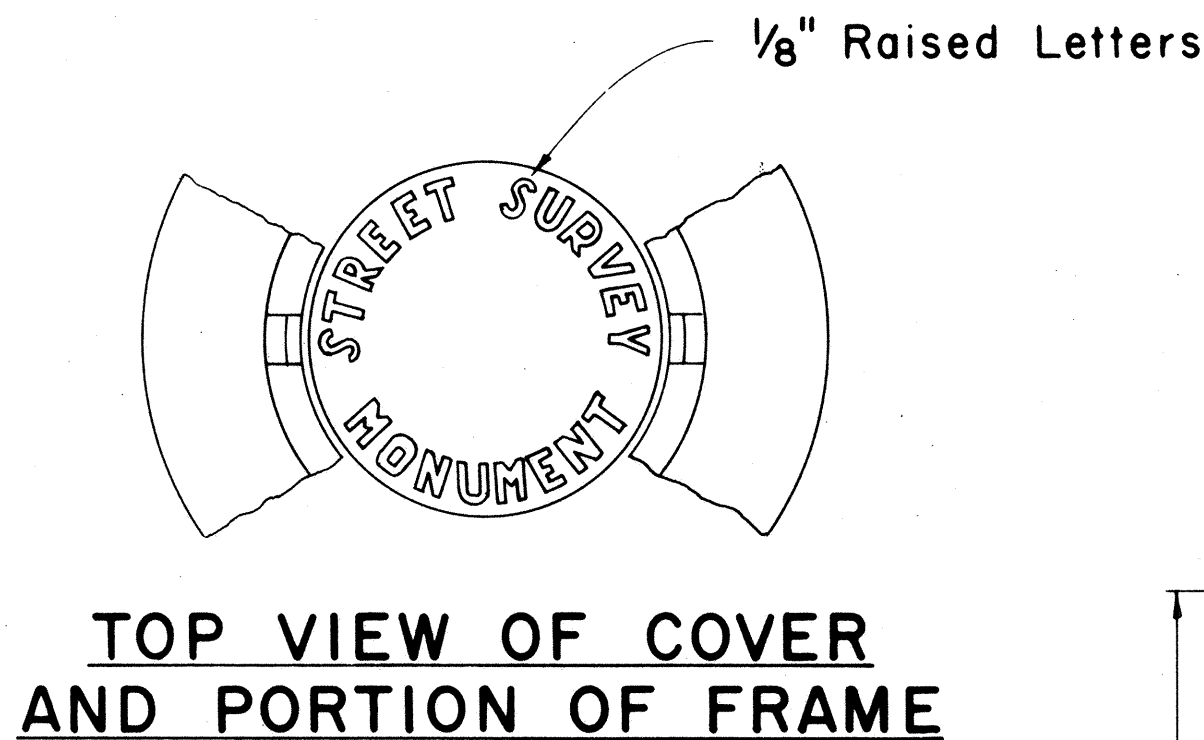
STANDARD DETAILS

CENTERLINE AND REFERENCE SURVEY MONUMENT

Scale: As Shown Date: May, 1983

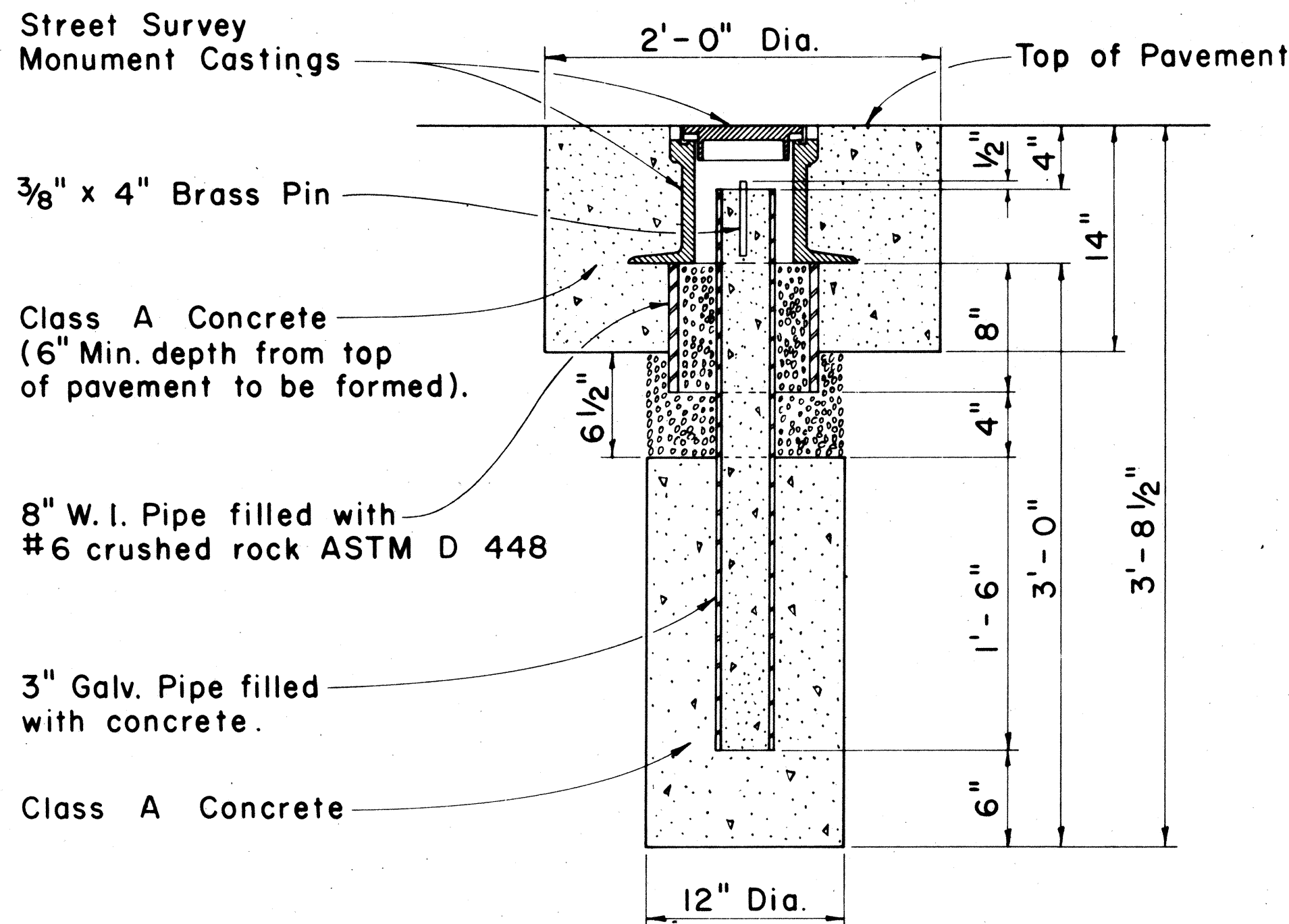
SHEET No. OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-083-1(10) F-083-1(20)	1984	57	57



STREET SURVEY MONUMENT CASTINGS

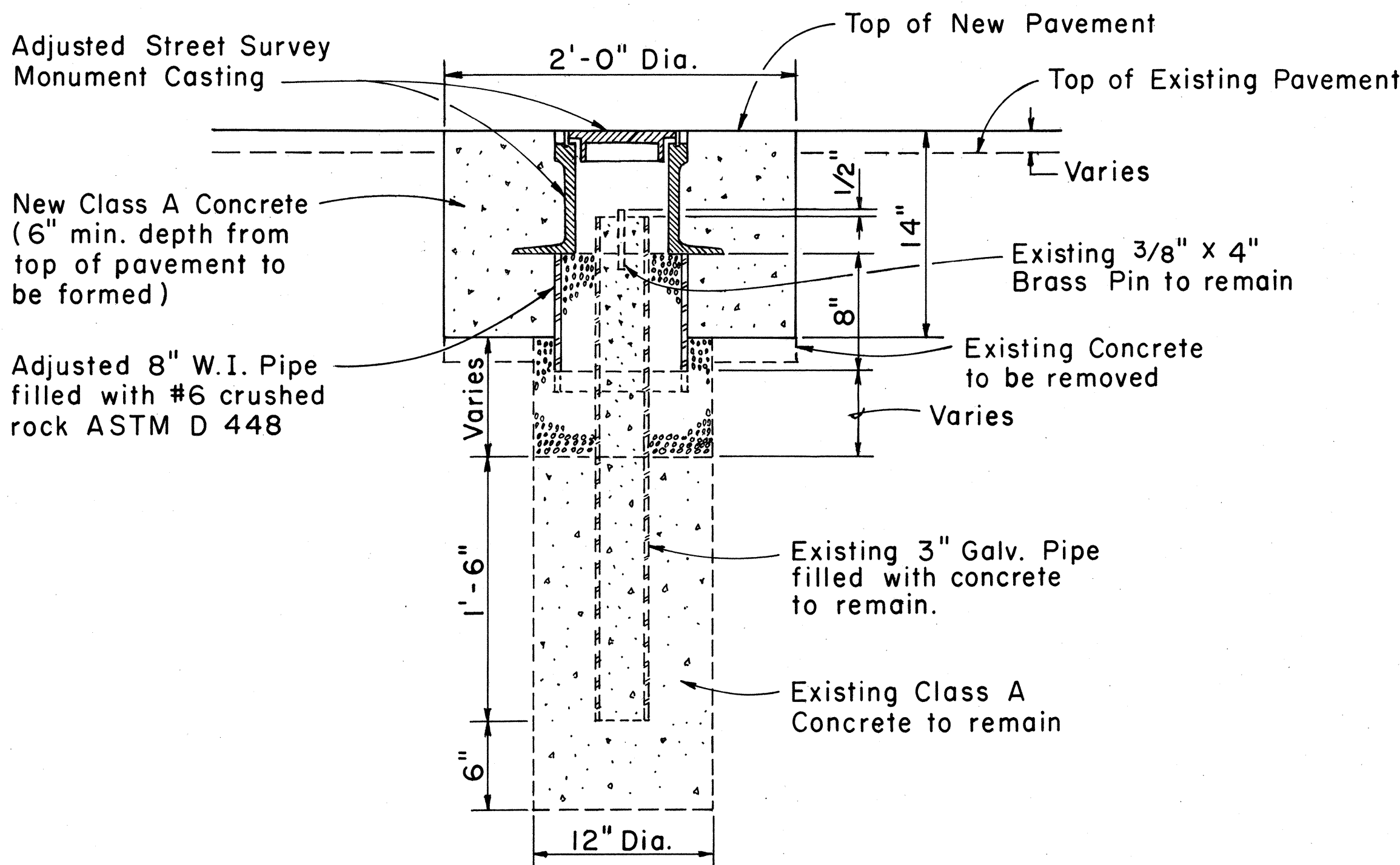
Scale: 3" = 1'-0"



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:
M. Hironaka 12-4-69
HIGHWAY DESIGN ENGINEER DATE

APPROVED:
John J. Zschaler 12-10-69
ASSISTANT CHIEF, ENGINEERING 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.	<i>J.D.</i>	6-22-83

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
STANDARD DETAILS	
STREET SURVEY MONUMENT	
SCALE: AS SHOWN	
SHEET No.	OF SHEETS DD 614.1