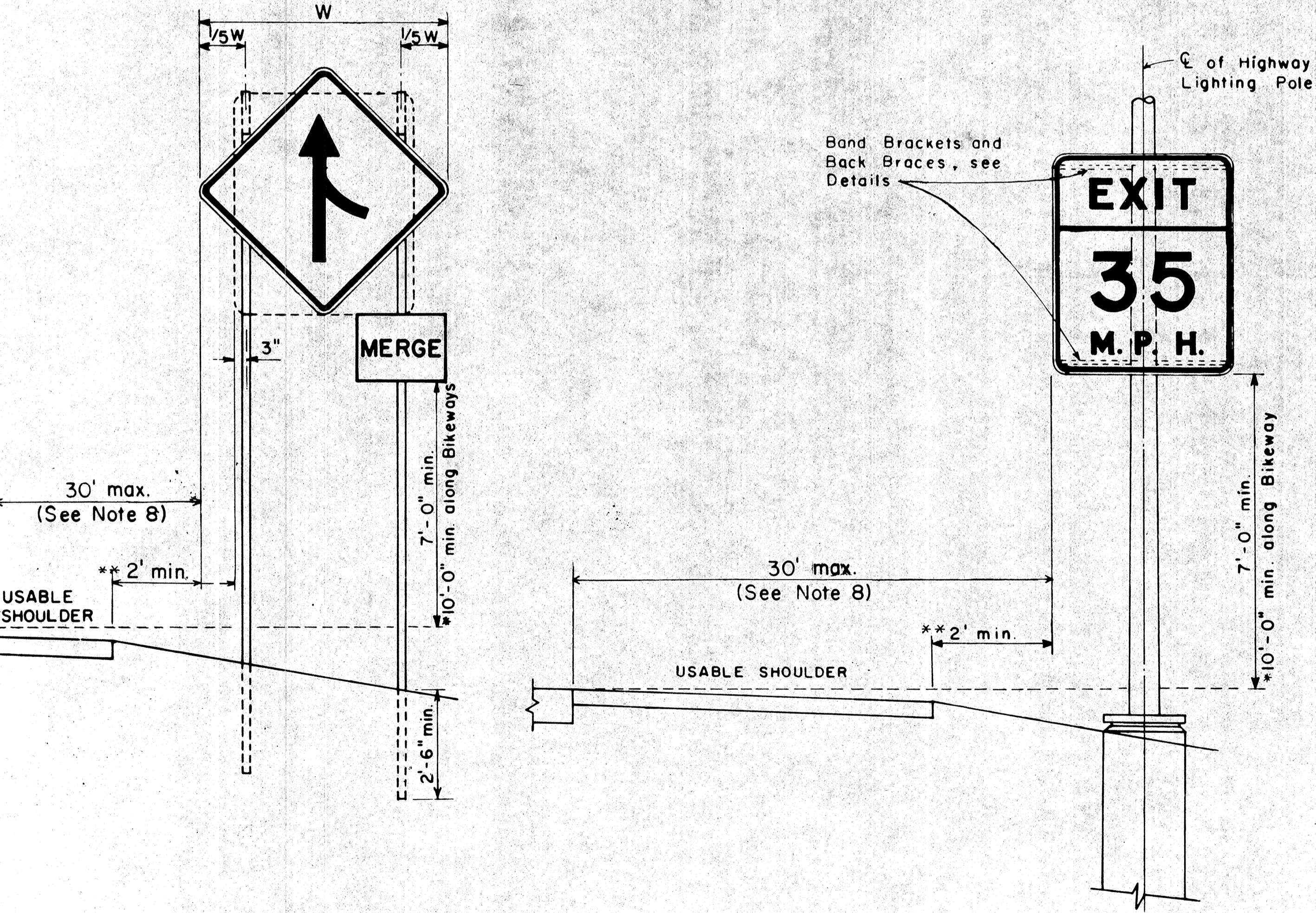
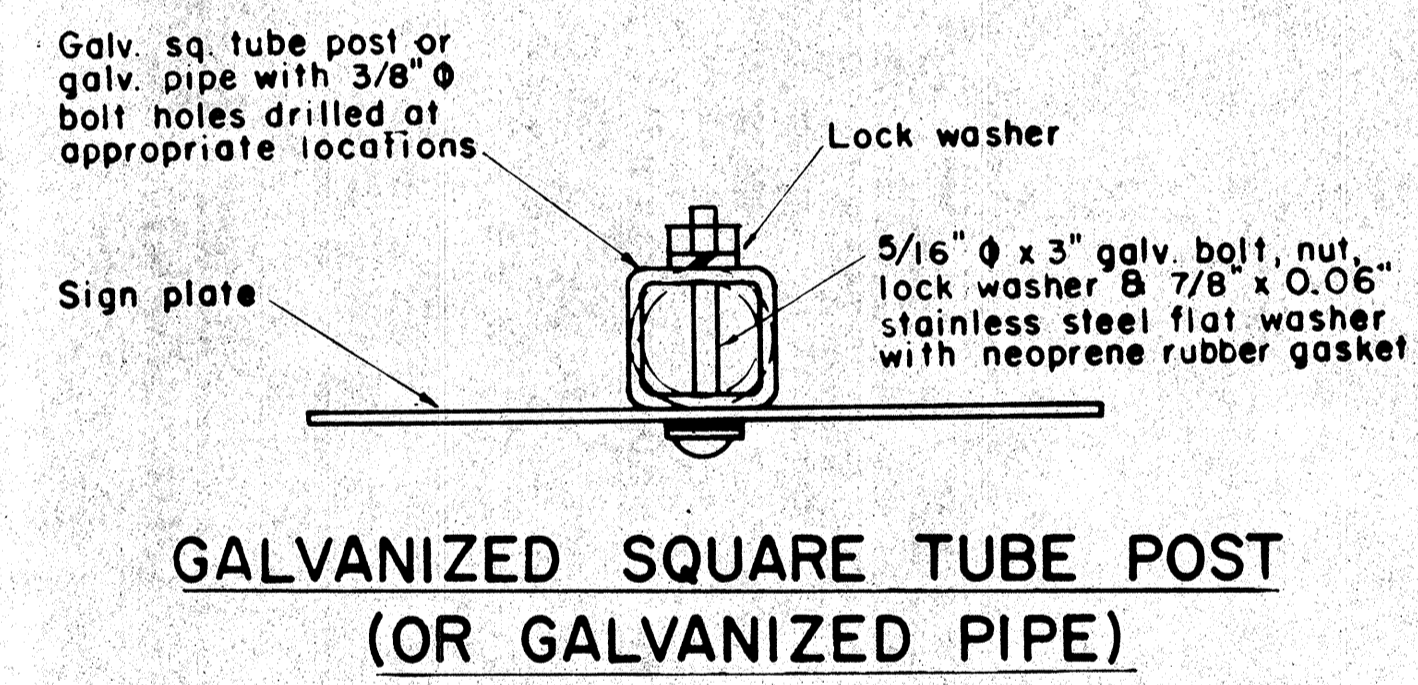
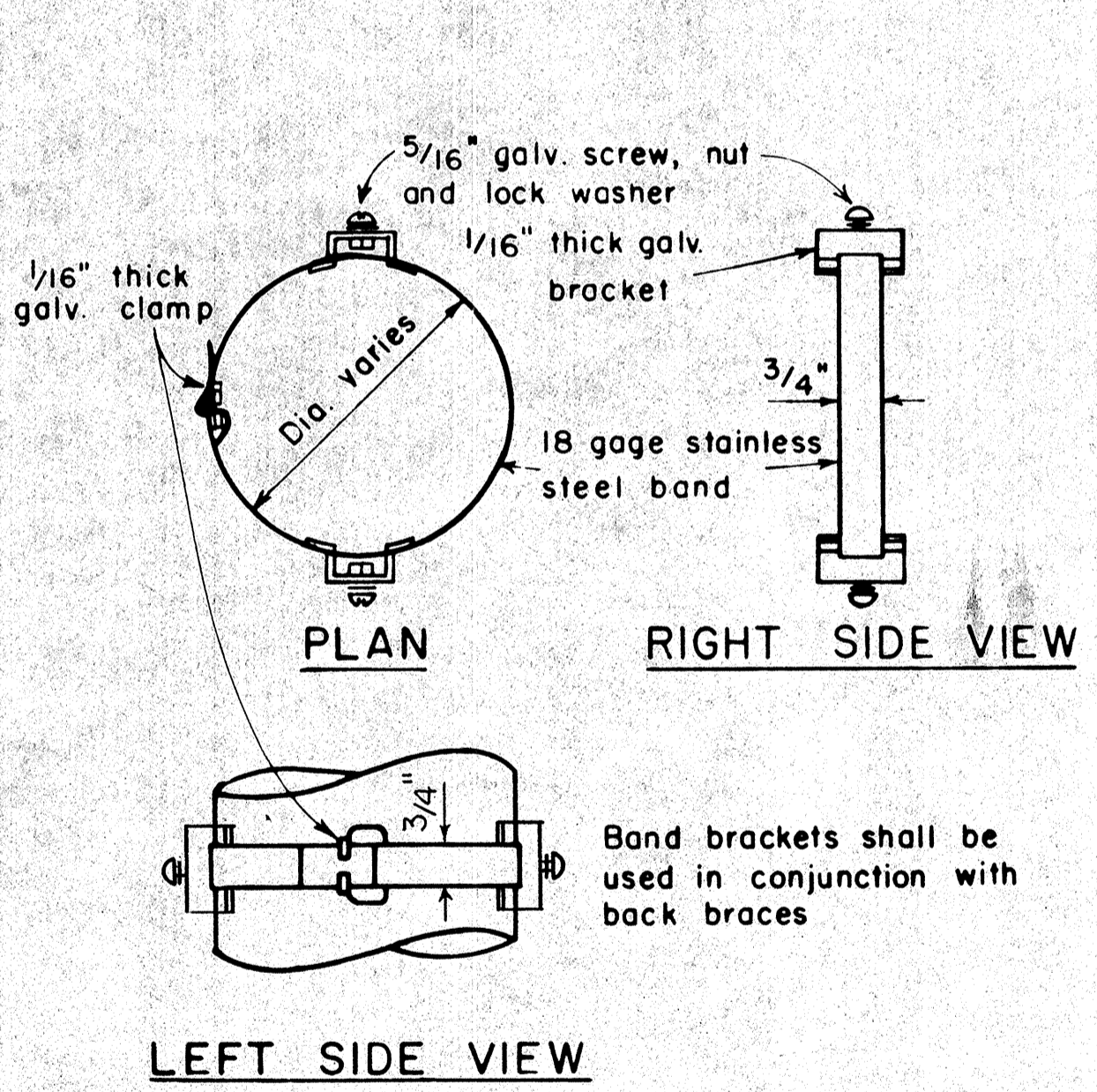
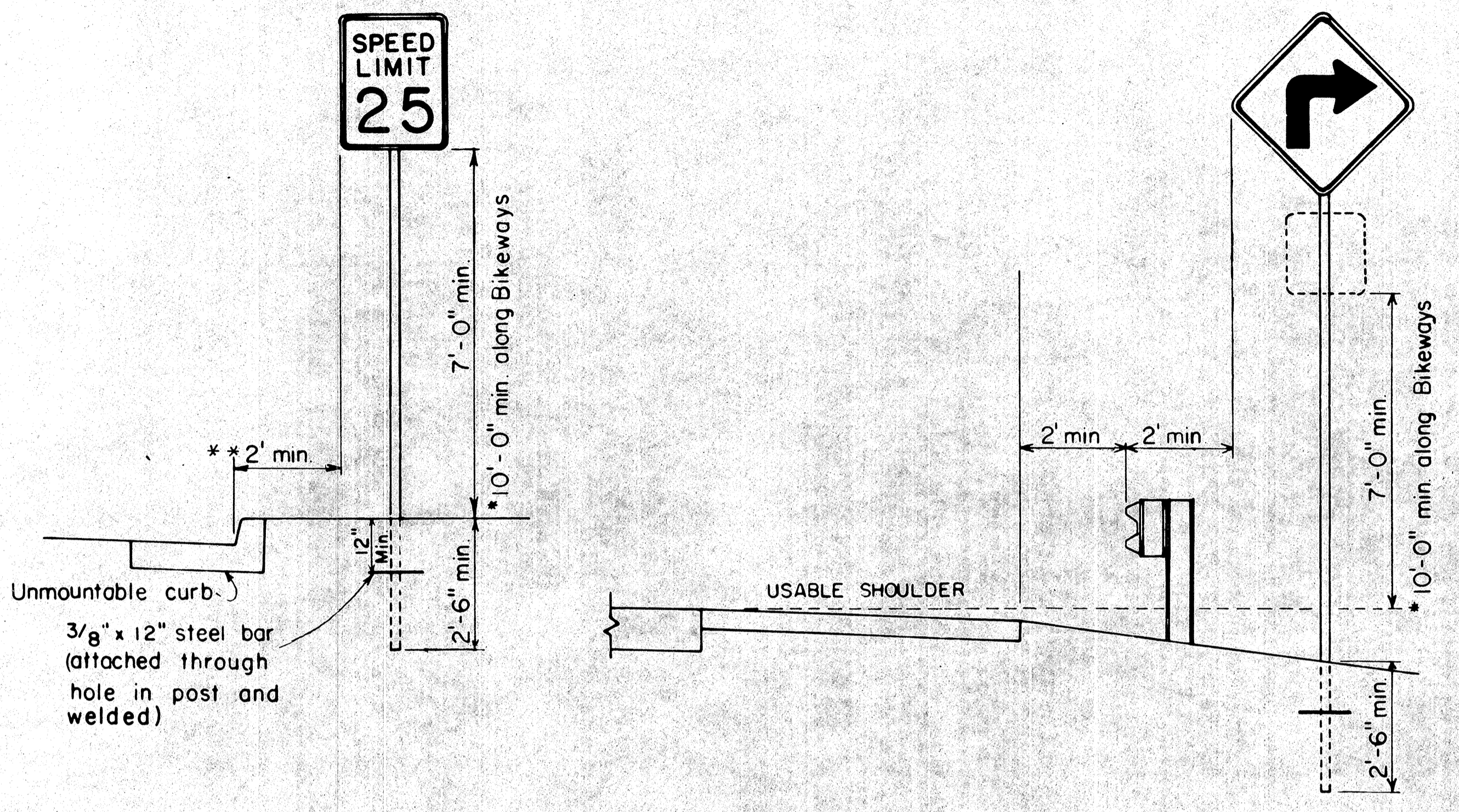
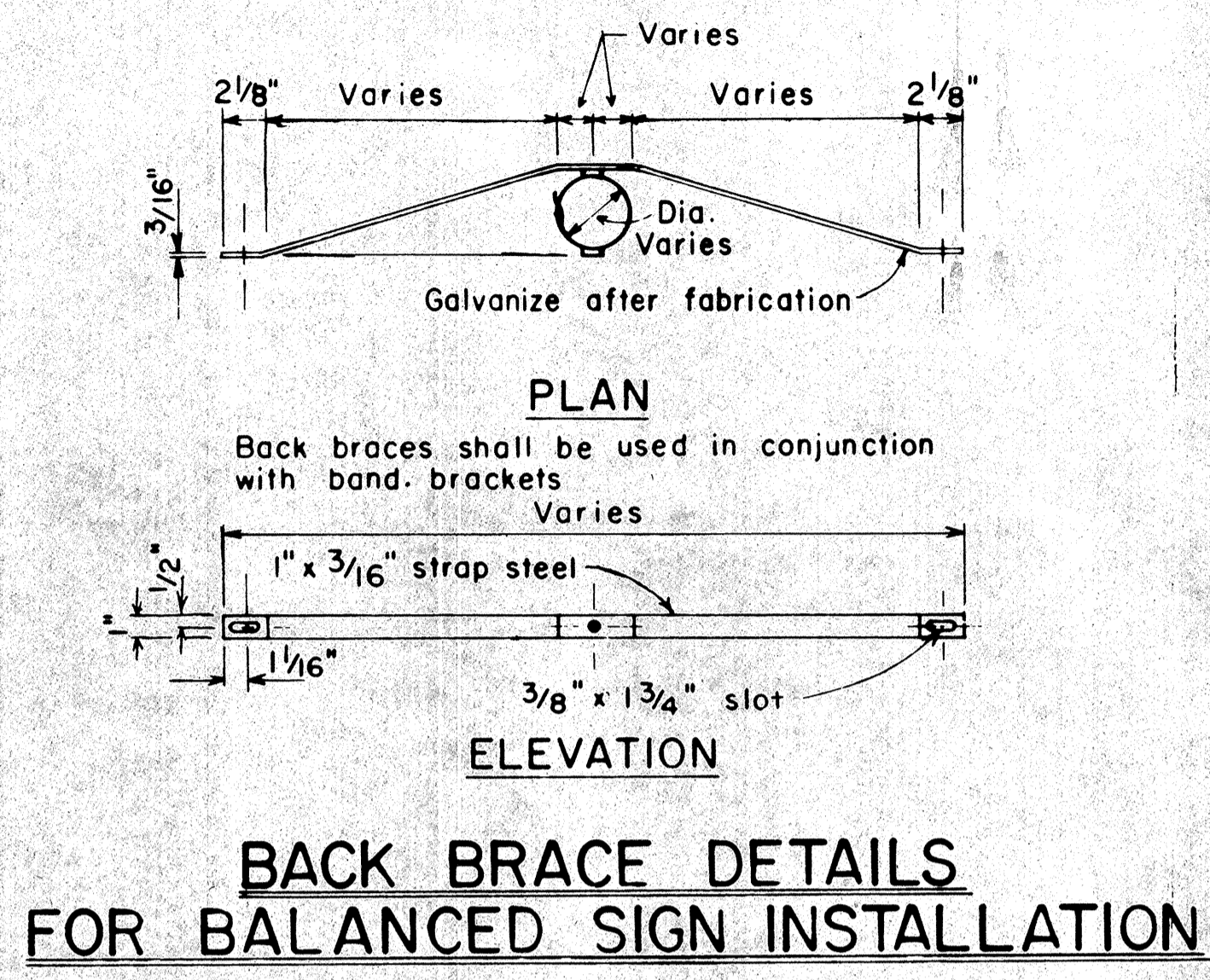


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	107516	1983	33	191

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.
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts except as noted below.
- Signs 48" and wider or larger than 10 sq. ft. in area may be mounted on other than two sign posts (i.e. on highway lighting poles)
 - 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 brackets 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 shall be shown on the plans.
- See plans for special details.
- 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.



TYPICAL MOUNTING DETAILS

NOT TO SCALE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT-100 approved 12/30/69	H.T.	11/15/11
2	Revised depth of signpost	H.T.	5/8/19
3	Added Notes No. 8 & No. 9	H.T.	5/15/19
4	Revised Gen. Note #4 & Mounting Details	H.T.	4/23/80
5	Revised General Notes, Lateral Sign Locations and Mounting Details	H.T.	5/15/81

APPROVAL RECOMMENDED:
Eishi Tanaka 11/10/11
 TRAFFIC ENGINEER DATE

APPROVED:
Harbert S. Sakai 11/15/11
 ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 MISCELLANEOUS SIGN DETAILS

Not to scale

SHEET NO. OF SHEETS DT 100

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

HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(175):16	1983	33A	191

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 x B x H
Therefore, if sign area (A x B) is known,
Maximum H = $\frac{\text{Factor}}{\text{sign area (A x B)}}$
and if H is known,
Maximum sign area (A x B) = $\frac{\text{Factor}}{H}$

APPROVAL RECOMMENDED:

Eushi Tanaka 9/2/82
TRAFFIC ENGINEER DATE

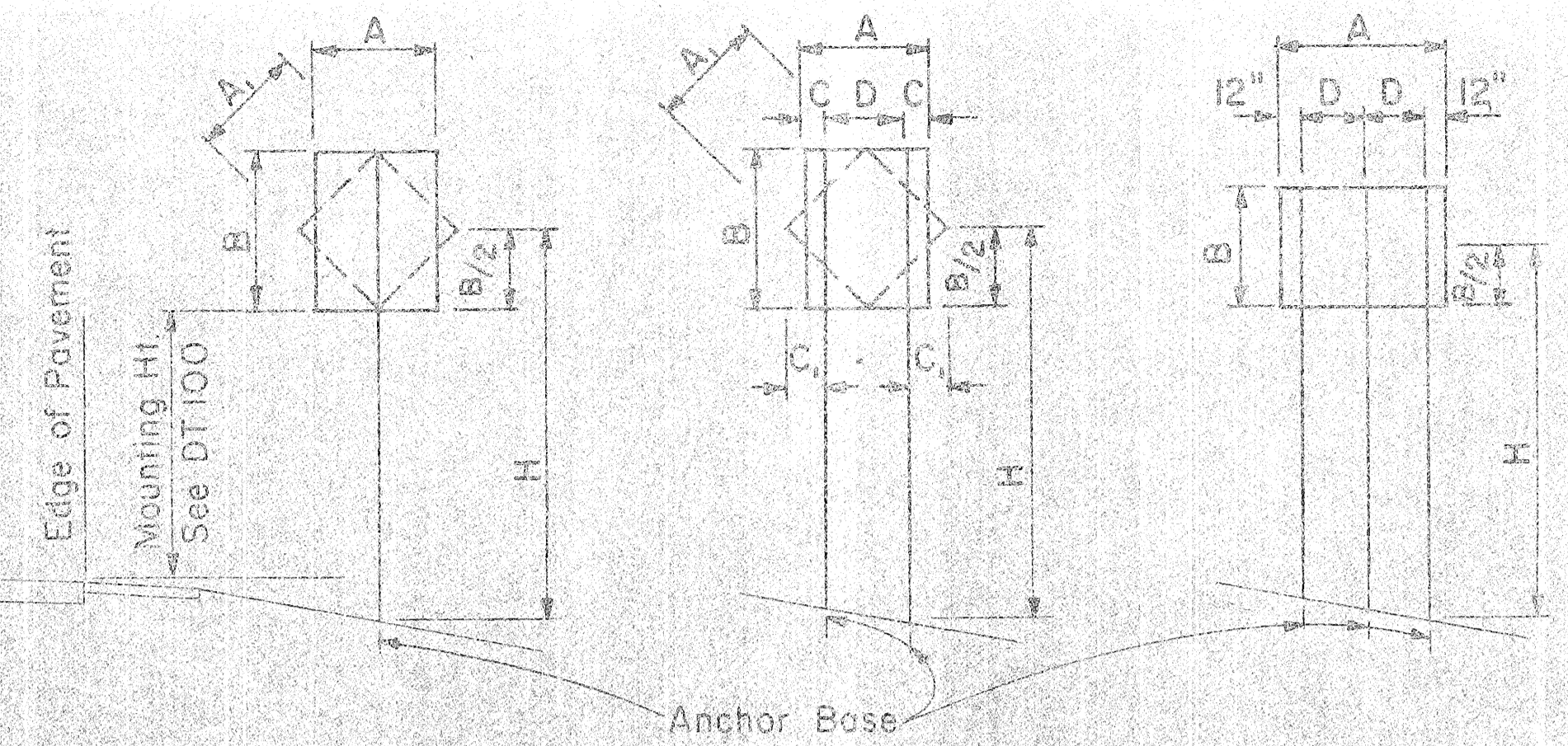
APPROVED:

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 01/004



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

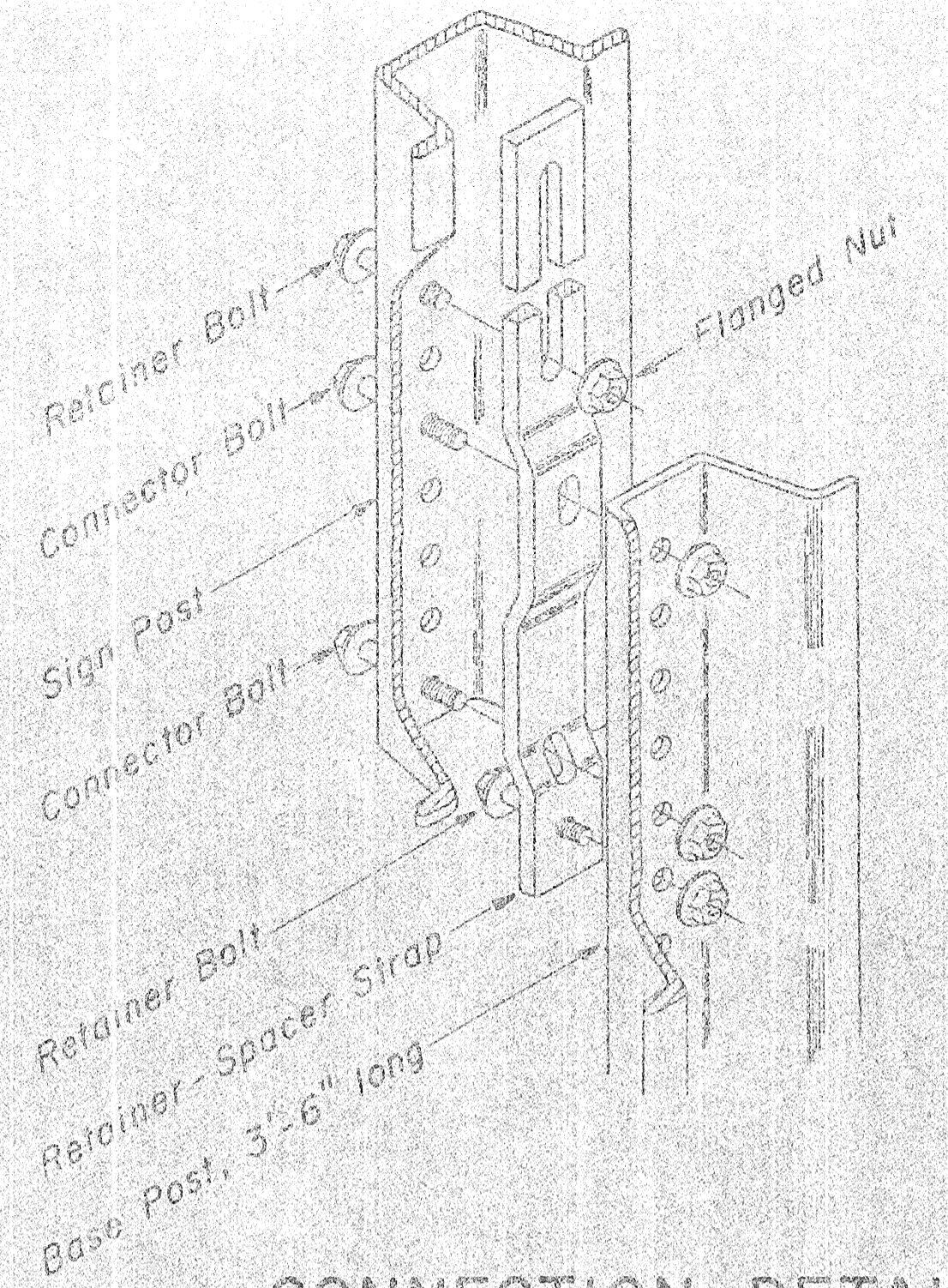
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)						A x B (Area sq. ft.)
		7	8	9	10	11	12	
2.50 lbs./ft.	57	8.14	7.13	6.33	5.70	5.18	4.75	A x B (Area sq. ft.)
4.00 lbs./ft.	112	-	-	-	-	-	9.33	

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	A x B (Area sq. ft.)
4.00 lbs./ft.	241	34.43	30.13	26.78	24.10	21.91	20.08	

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	A x B (Area sq. ft.)
4.00 lbs./ft.	362	51.71	45.25	40.22	36.20	32.91	30.17	

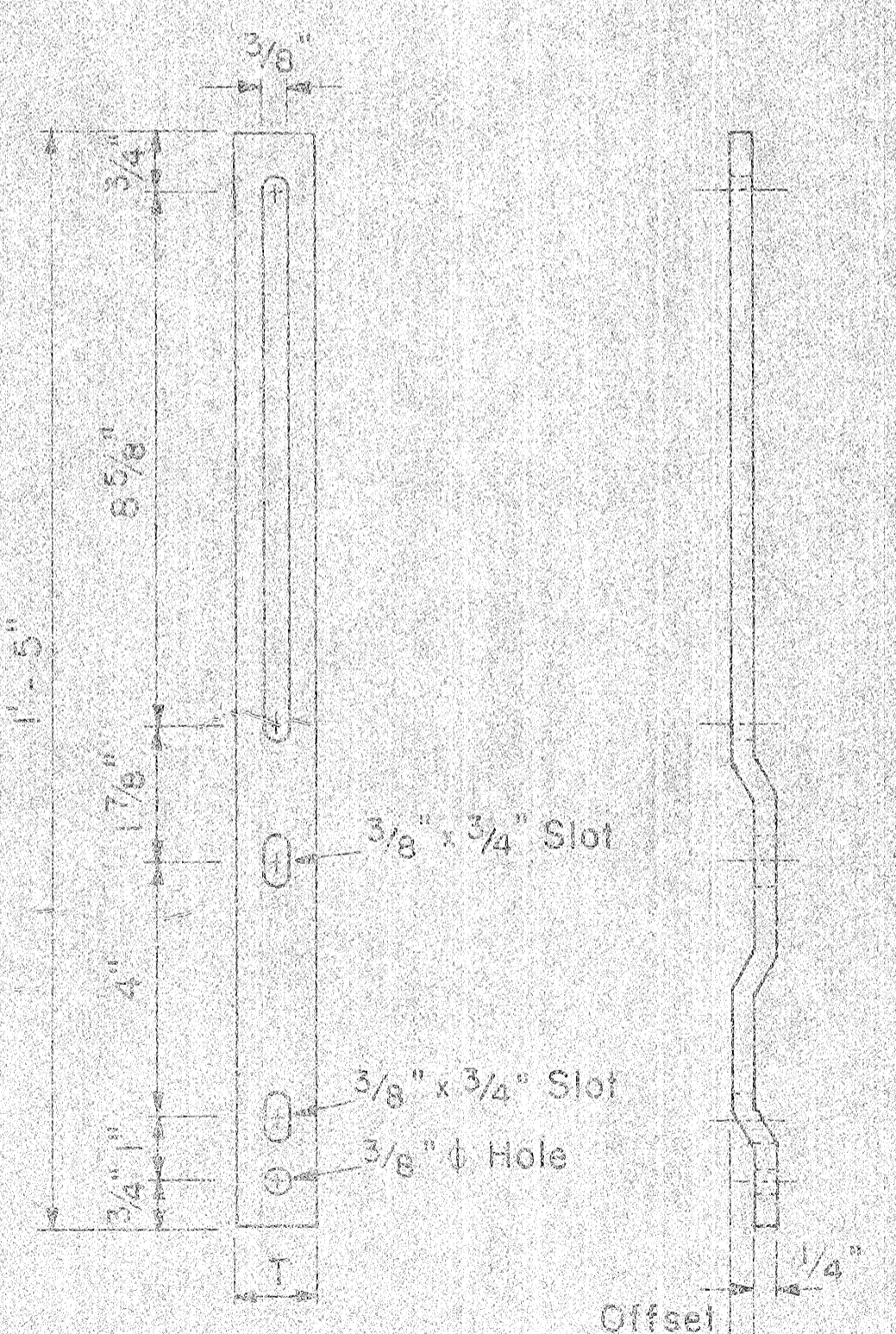
WINDLOAD CHARTS

NO.	REVISION	APPROVED BY	DATE
7/27/83	ADDED SHEET		
DATE	REVISION		



CONNECTION DETAIL

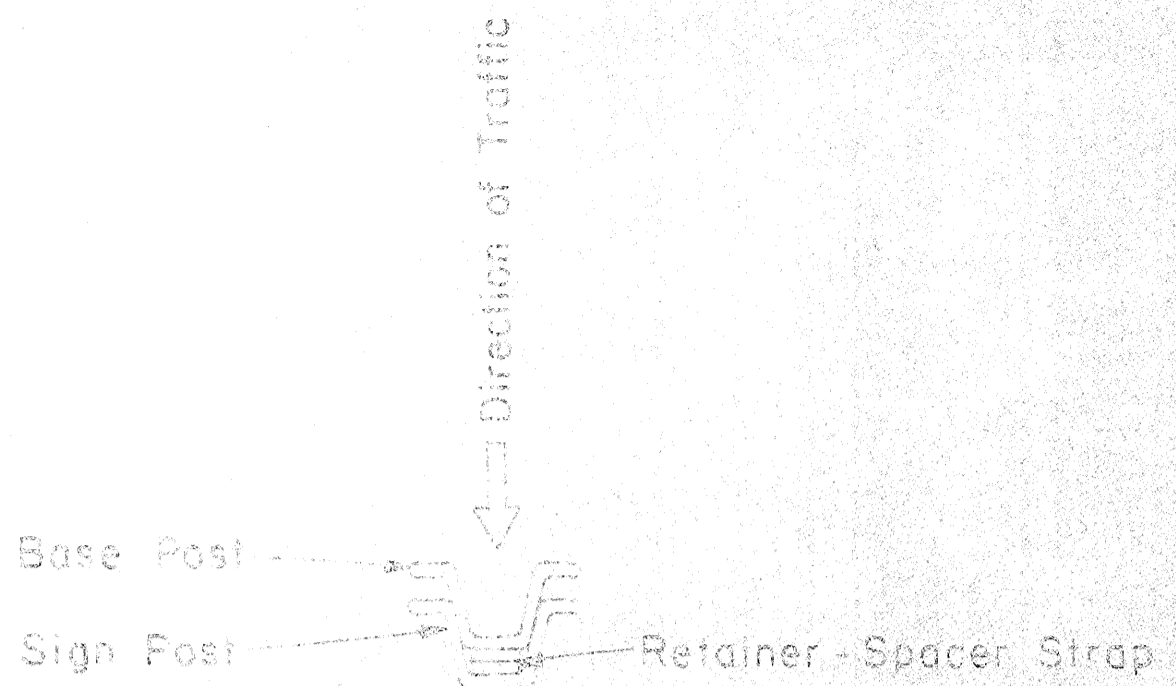
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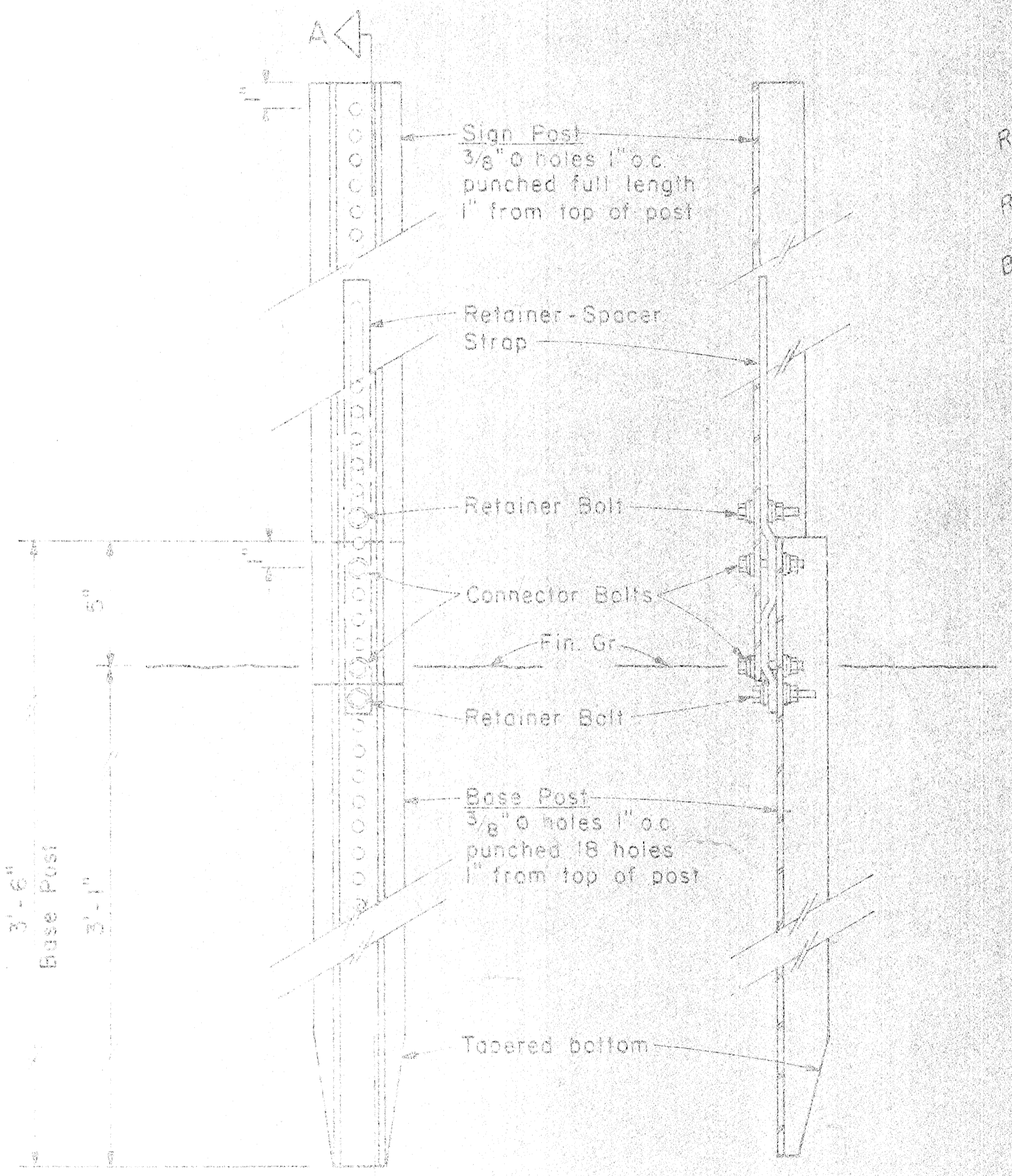
RETAINER-SPACER STRAP

Not to Scale

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"

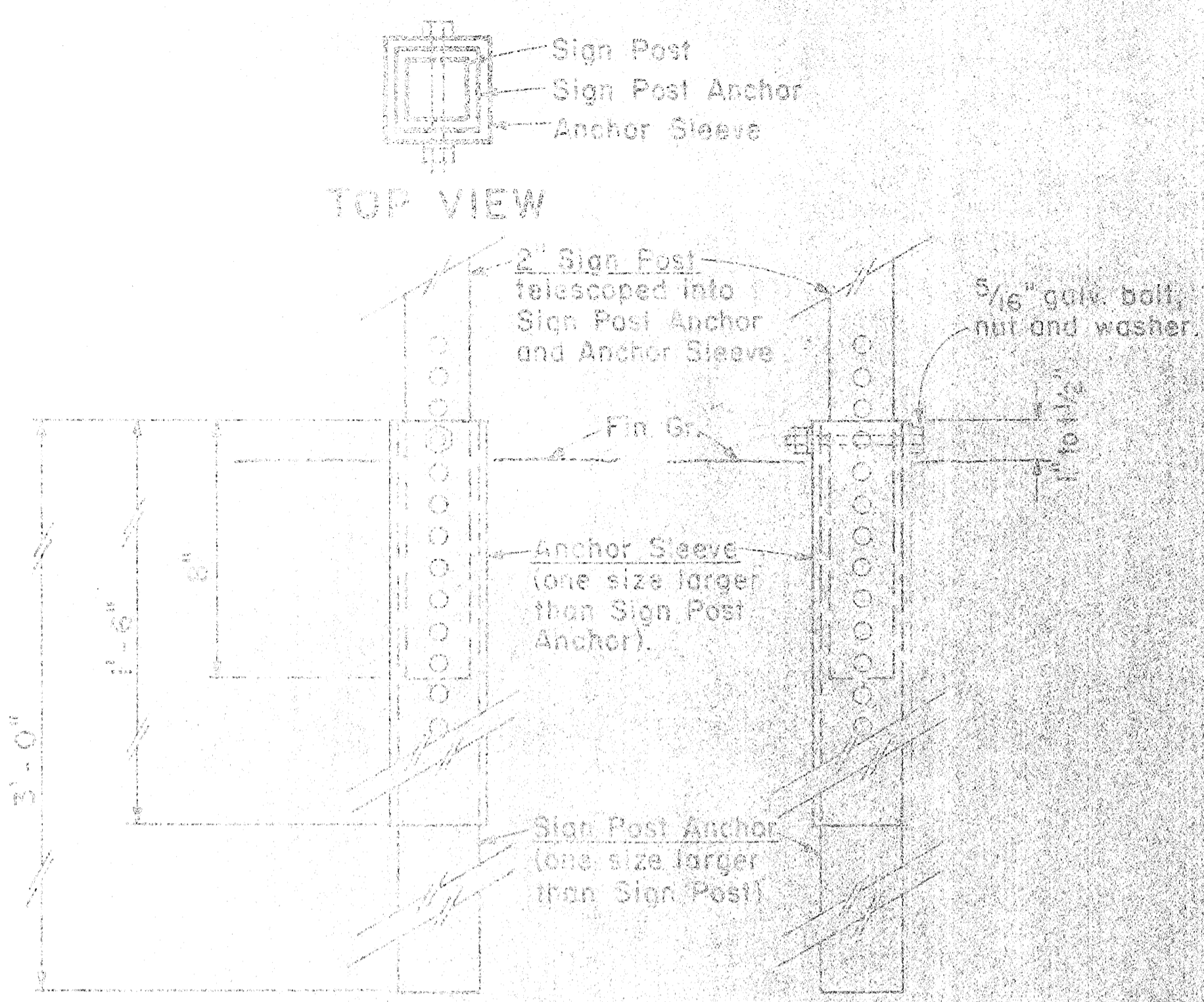
REVISIONS
 1. 7/27/83
 2. 9/2/82
 3. 9/2/82
 4. 9/2/82
 5. 9/2/82
 6. 9/2/82
 7. 9/2/82
 8. 9/2/82
 9. 9/2/82
 10. 9/2/82
 11. 9/2/82
 12. 9/2/82
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 32. 9/2/82
 33. 9/2/82
 34. 9/2/82
 35. 9/2/82
 36. 9/2/82
 37. 9/2/82
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 44. 9/2/82
 45. 9/2/82
 46. 9/2/82
 47. 9/2/82
 48. 9/2/82
 49. 9/2/82
 50. 9/2/82

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

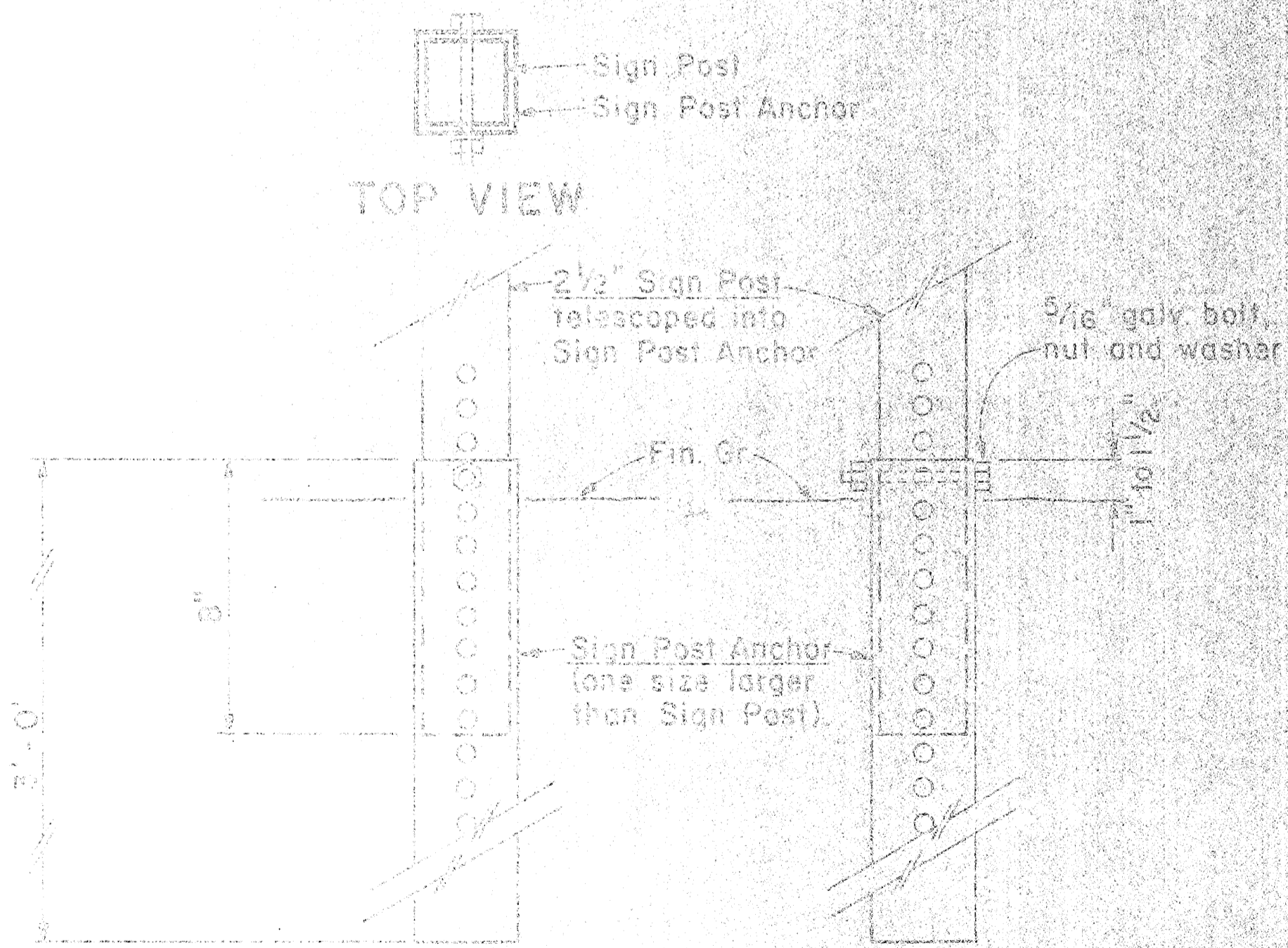
NOTE: Frame stiffeners are required when D is greater than 24". See Gen. Note 2.

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 x B) is known,
 $Maximum\ H = \frac{Factor}{sign\ area\ (A \times B)}$
and if H is known,
 $Maximum\ sign\ area\ (A \times B) = \frac{Factor}{H}$



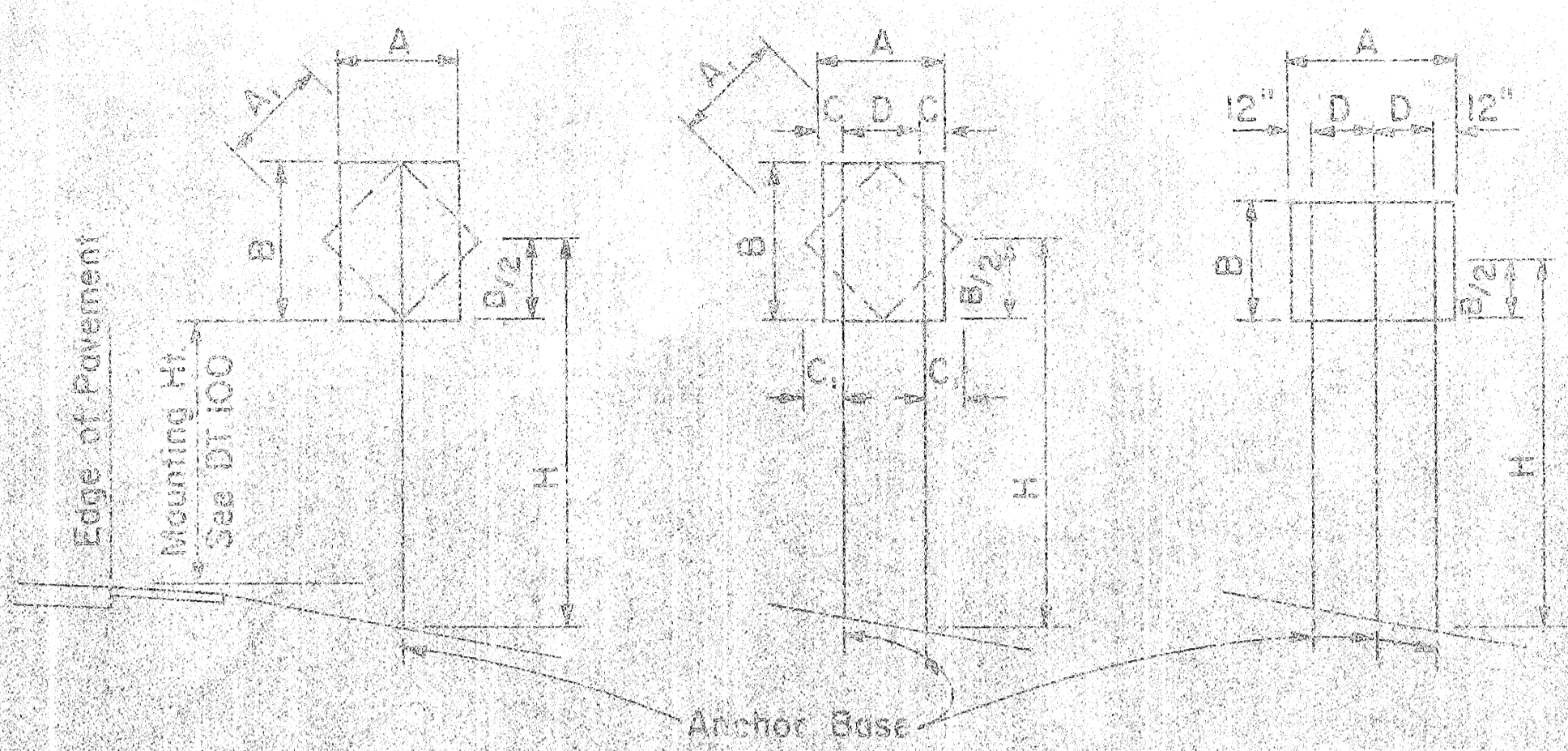
2" SIGN POST INSTALLATION



2 1/2" SIGN POST INSTALLATION

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"



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 80"

TYPICAL INSTALLATION

Not to Scale

SQUARE TUBE: 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"	62	8.8	7.7	6.8	6.1	5.6	4.8	28
2 1/2"	107	-	-	-	-	9.6	8.8	39

SQUARE TUBE: 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"	122	17.4	15.2	13.5	12.2	11.0	10.1	56
2 1/2"	212	30.2	26.5	23.5	2.1	19.2	17.6	81
2 1/2", 10 ga.	260	37.0	32.0	28.6	26.0	23.5	21.5	101

SQUARE TUBE: 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"	183	26.0	22.8	20.3	18.2	16.6	15.2	84
2 1/2"	318	45.4	39.5	35.2	31.5	28.8	26.5	121
2 1/2", 10 ga.	388	55.0	48.5	43.0	38.5	35.0	32.0	144

WINDLOAD CHARTS

7/27/83	ADDED SHEET
DATE	REVISION

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
Eric Torada 9/21/82
TRAFFIC ENGINEER DATE

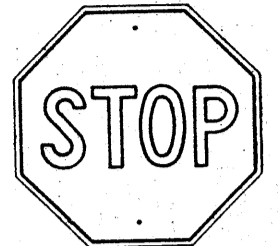
APPROVED:
Robert Salas 9/21/82
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

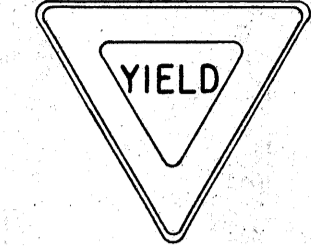
STANDARD DETAILS
GALVANIZED SQUARE TUBE
SIGN POST MOUNTING

Scale: As Shown Date: Sept 1982
SHEET NO. OF SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-1075-116	1983	34	191



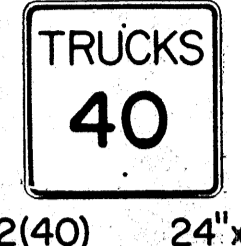
R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"



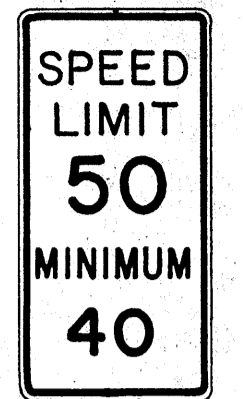
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



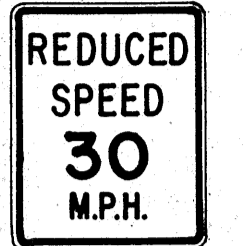
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



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"



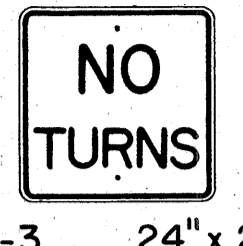
R2-5b(30) 24" x 30"
R2-5b(30)-A 48" x 60"



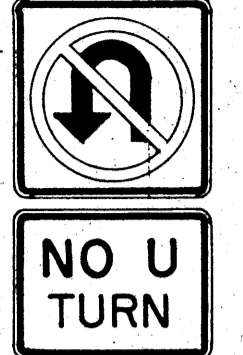
R3-1 24" x 24"
R3-1-A 48" x 48"
24" x 18"
48" x 36"



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



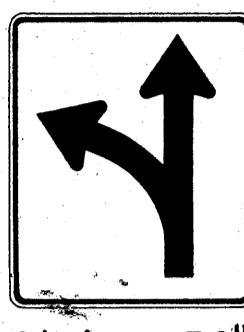
R3-3 24" x 24"
R3-3-A 48" x 48"



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



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



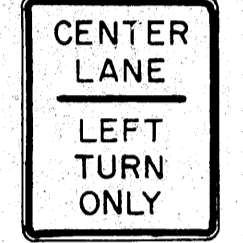
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



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"



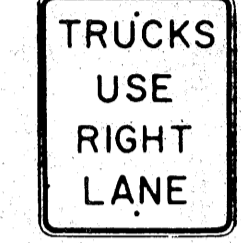
R4-1 24" x 30"



R4-2 24" x 30"



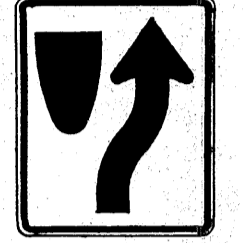
R4-3 24" x 30"
R4-3-A 48" x 60"



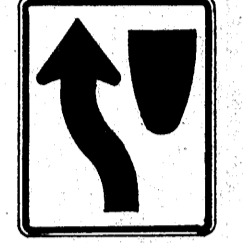
R4-5 24" x 30"



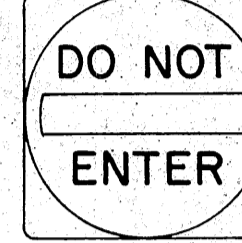
R4-6(500) 24" x 30"



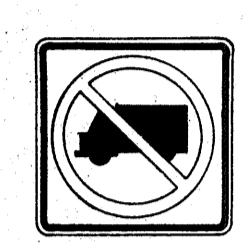
R4-7 24" x 30"
24" x 18"



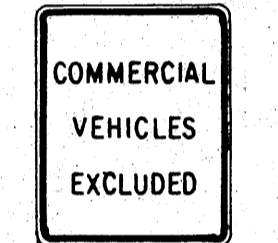
R4-8 24" x 30"
24" x 18"



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"



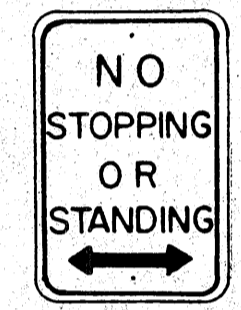
R6-1(R) 36" x 12"



R6-2(R) 18" x 24"



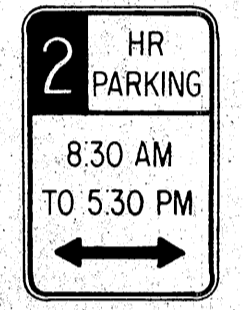
R7-1 12" x 18"
R7-1-A 24" x 30"



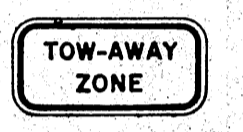
R7-4 12" x 18"
R7-4-A 24" x 30"



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



R7-10B 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"



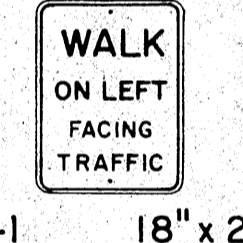
R8-5 24" x 30"



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"



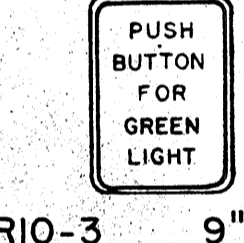
R9-4 18" x 24"



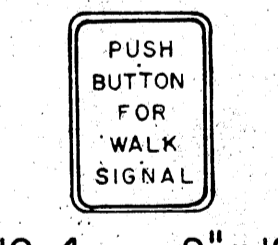
R10-1 12" x 18"



R10-2 12" x 18"



R10-3 9" x 12"



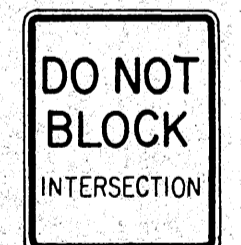
R10-4 9" x 12"



R10-5 24" x 30"



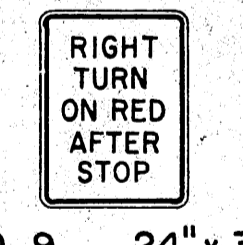
R10-6 24" x 36"



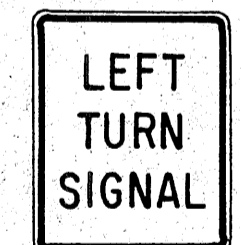
R10-7 24" x 30"



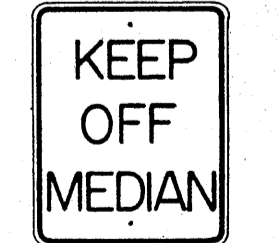
R10-8 24" x 30"



R10-9 24" x 30"



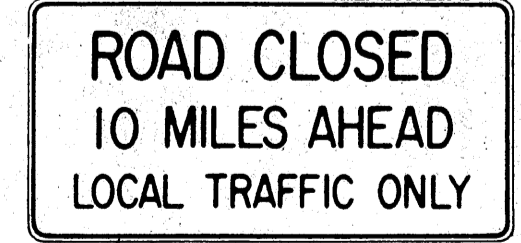
R10-10 24" x 30"



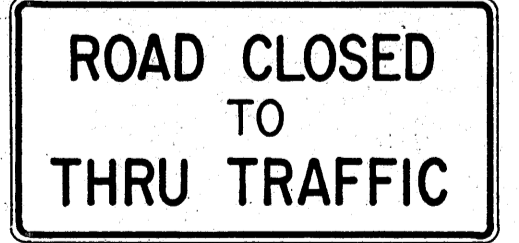
R11-1 24" x 30"



R11-2 48" x 30"



R11-3(10) 60" x 30"



R11-4 60" x 30"



R12-1(10) 24" x 30"

GENERAL NOTES

1. 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.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.
4. Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
5. All signs shall be erected without educational plaques unless called for in the plans.

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

APPROVED:
Robert Zetser 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.	8/9/77

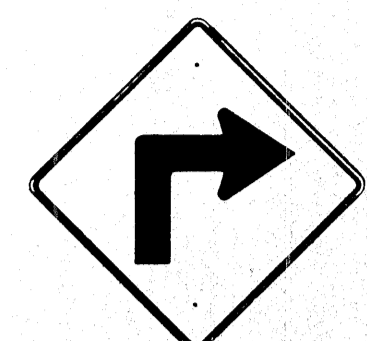
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
REGULATORY SIGNS

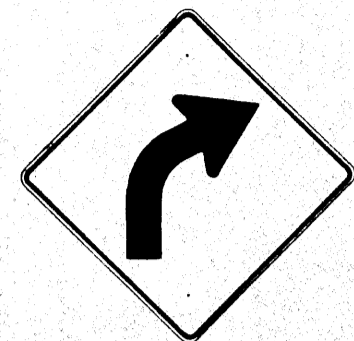
NOT TO SCALE

DATE: _____
SURVEY PLOTTED BY: _____
DRAWN BY: _____
DESIGNED BY: _____
NOTE BOOK: _____
QUANTITIES BY: _____
CHECKED BY: _____

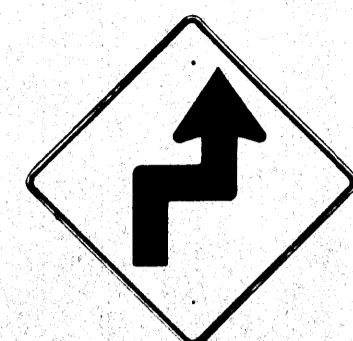
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII*	HAW.	HI-1(175)16	1983	35	191



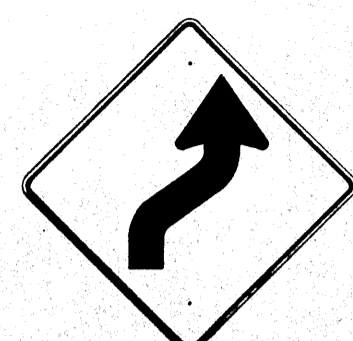
WI-1(R) 30"x30"
WI-1(R)-A 48"x48"



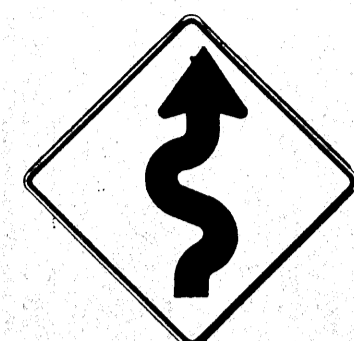
WI-2(R) 30"x30"
WI-2(R)-A 48"x48"



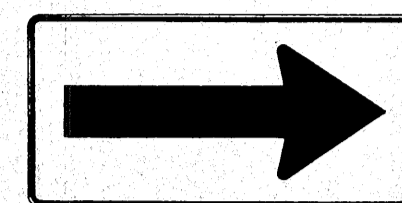
WI-3(R) 30"x30"
WI-3(R)-A 48"x48"



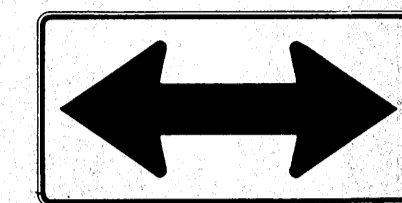
WI-4(R) 30"x30"
WI-4(R)-A 48"x48"



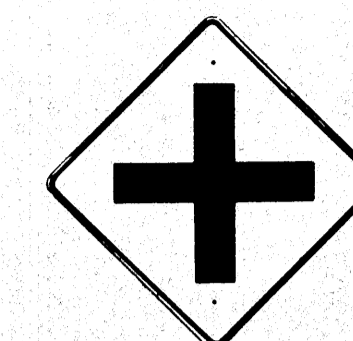
WI-5(R) 30"x30"
WI-5(R)-A 48"x48"



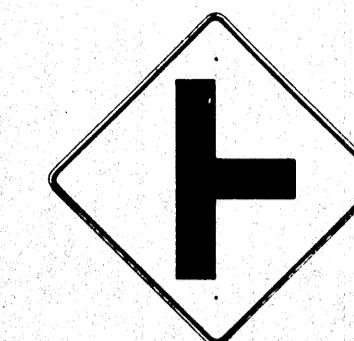
WI-6 48"x24"



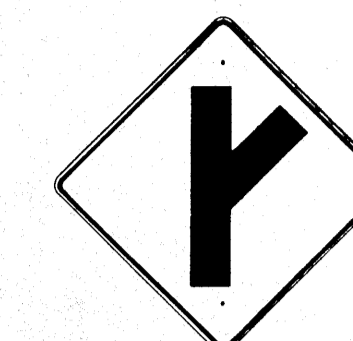
WI-7 48"x24"



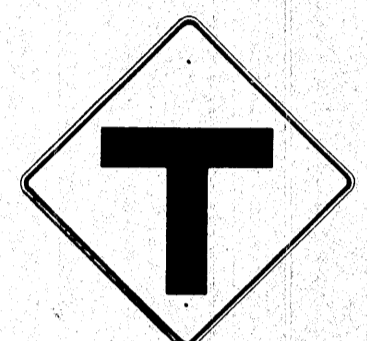
W2-1 30"x30"
W2-1-A 48"x48"



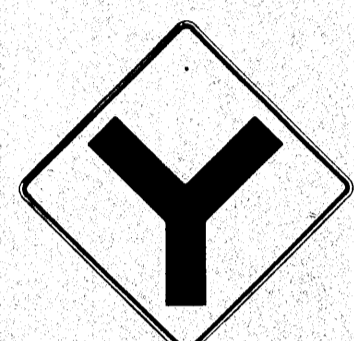
W2-2 30"x30"
W2-2-A 48"x48"



W2-3(R) 30"x30"
W2-3(R)-A 48"x48"



W2-4 30"x30"
W2-4-A 48"x48"



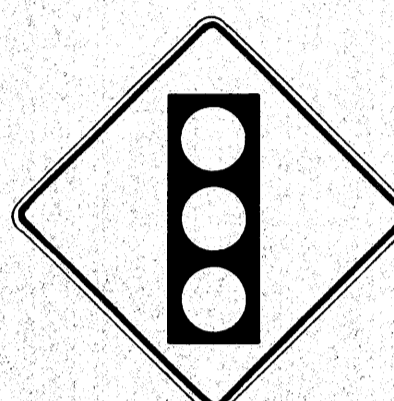
W2-5 30"x30"
W2-5-A 48"x48"



W3-1 30"x30"
W3-1-A 36"x36"



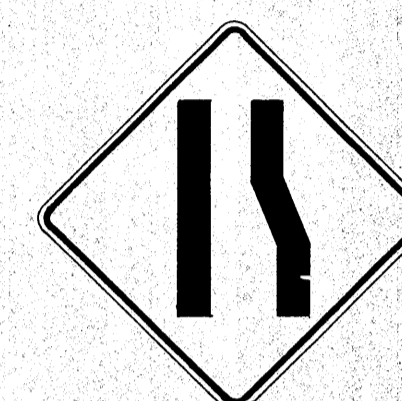
W3-2 30"x30"
W3-2-A 36"x36"



W3-3 36"x36"
24"x18"



W4-1(R) 30"x30"
24"x18"
W4-1(R)-A 48"x48"
24"x18"



W4-2(R) 36"x36"
W4-2(R)-A 48"x48"



W5-1 36"x36"



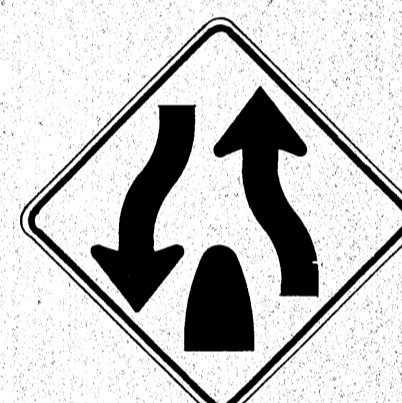
W5-2 30"x30"
W5-2-A 36"x36"



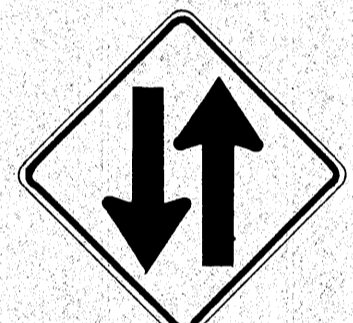
W5-3 36"x36"



W6-1 36"x36"
24"x18"



W6-2 36"x36"
24"x18"



W6-3 30"x30"
24"x18"
W6-3-A 36"x36"
24"x18"
W6-3-B 48"x48"
24"x18"



W7-1 30"x30"
24"x18"
W7-1-A 36"x36"
24"x18"



W7-2 24"x18"



W8-1 30"x30"
W8-1-A 36"x36"



W8-2 30"x30"
W8-2-A 36"x36"



W8-3 30"x30"
W8-3-A 36"x36"



W8-4 30"x30"
W8-4-A 36"x36"



W8-5 30"x30"
24"x18"
W8-5-A 36"x36"
24"x18"



W9-1(R) 30"x30"
W9-1(R)-A 36"x36"
W9-1(R)-B 48"x48"



W9-2(L) 36"x36"
W9-2(L)-A 48"x48"



W10-1 36" Diameter



W11-1 30"x30"
24"x18"
W11-1-A 36"x36"
24"x18"



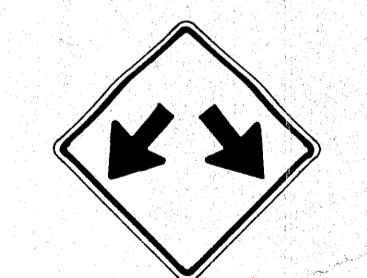
W11-2 30"x30"
24"x18"
W11-2-A 36"x36"
24"x18"



W11-4 30"x30"
24"x18"
W11-4-A 36"x36"
24"x18"



W11-5 30"x30"
24"x18"
W11-5-A 36"x36"
24"x18"



W12-1 24"x24"
W12-1-A 36"x36"
W12-1-B 48"x48"



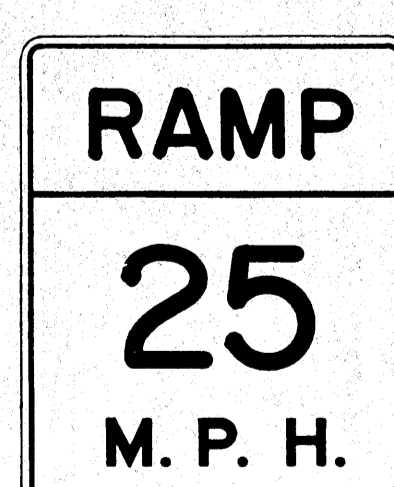
W12-2 (12'-6") 36"x36"
24"x18"



W13-1(25) 18"x18"
W13-1(25)-A 24"x24"



W13-2(25) 48"x60"



W13-3(25) 48"x60"



W14-1 30"x30"



W14-3 36"x48"x48"

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:
Eisaku Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
Richard D. Sisk 3-20-72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1	H.T.	10/16/72
3	Revised General Note 5	MF	9-16-75
4	Revised General Note 5	H.T.	9-14-76
5	Added Note 1	H.T.	11-9-77

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE

DATE _____
SURVEY PLOTTED BY _____
DRAWN BY _____
CHECKED BY _____
NOTE BOOK _____
QUANTITIES BY _____
CHECKED BY _____

NOTE
1. All signs shall be erected without educational plaques unless called for in the plans.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-107536	1985	37	191



CW20-1a 48" x 48"



CW20-2d 48" x 48"



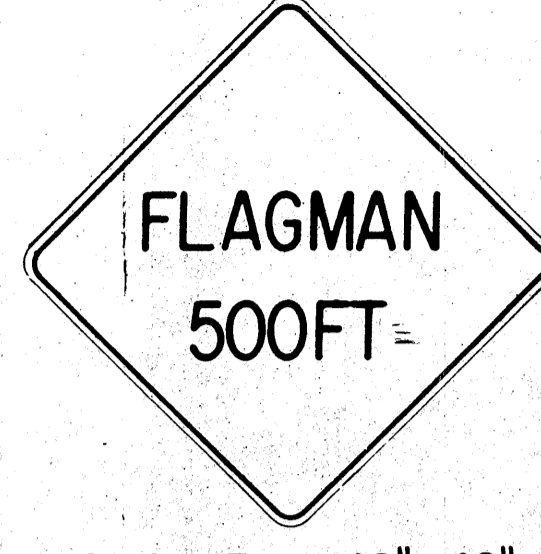
CW20-3b 48" x 48"



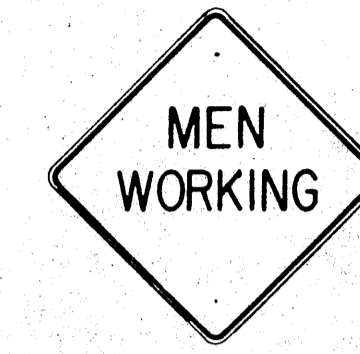
CW20-4d 48" x 48"



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



CW20-7c 48" x 48"



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"



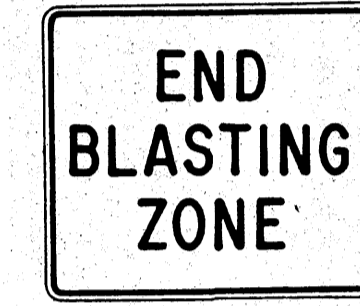
CW21-6 30" x 30"



CW22-1b 48" x 48"



CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



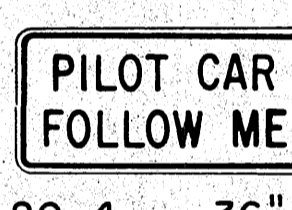
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



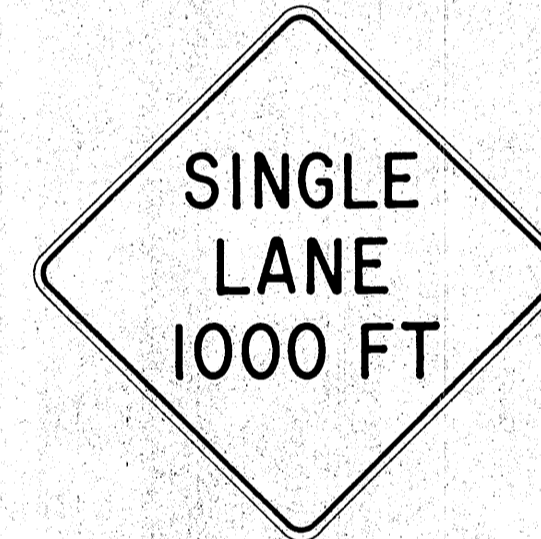
CM4-10(R) 48" x 18"



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 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.

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

APPROVED:
Walter Salsich 3/23/72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 104 Approved 12-30-69	H.T.	3/25/72
2	Revised General Note 1	H.T.	10/16/74
3	Revised General Note 2	Mt	9-16-75
4	Revised General Note 2 and sign CG20-1(5)	H.T.	9-14-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

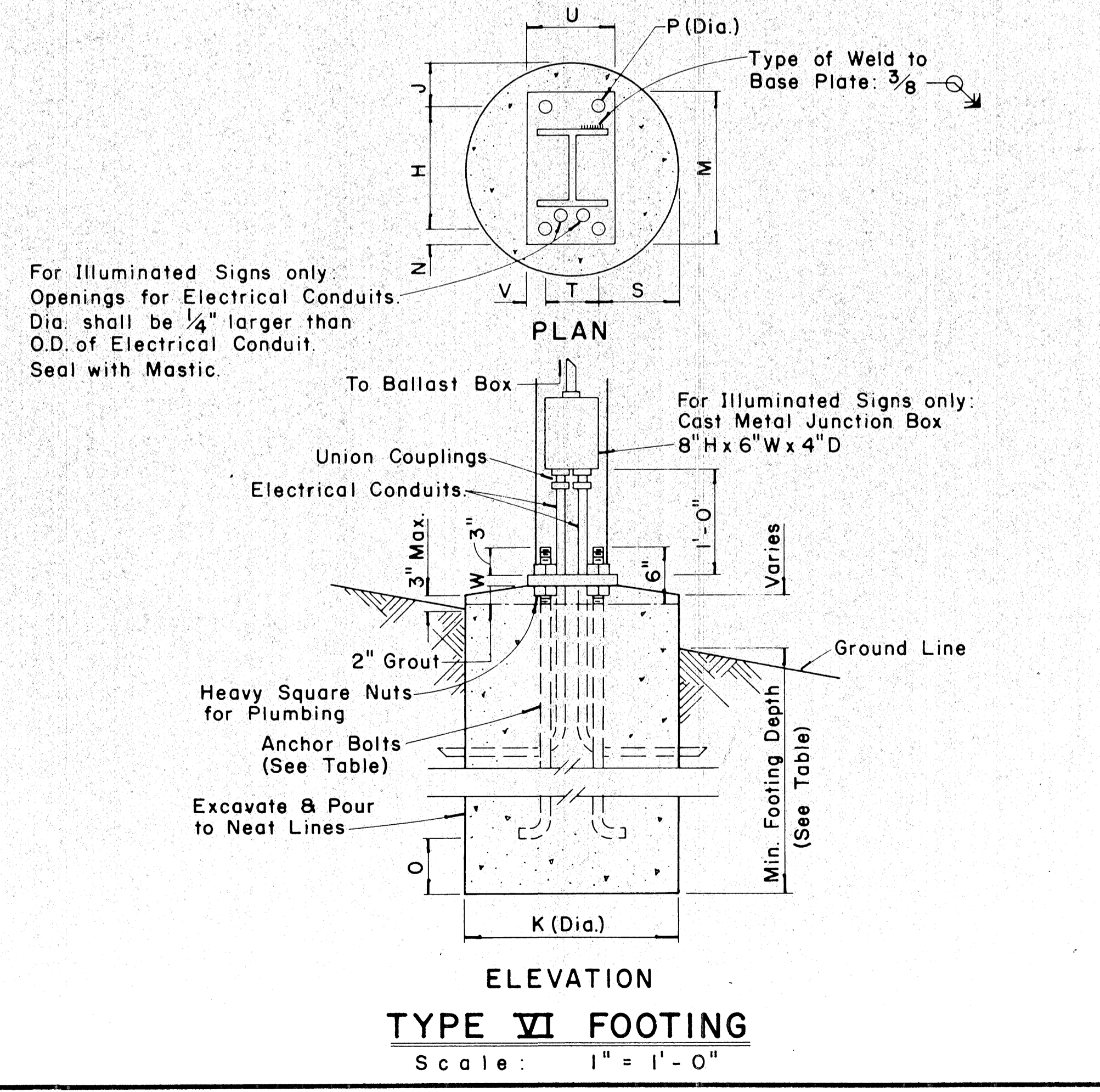
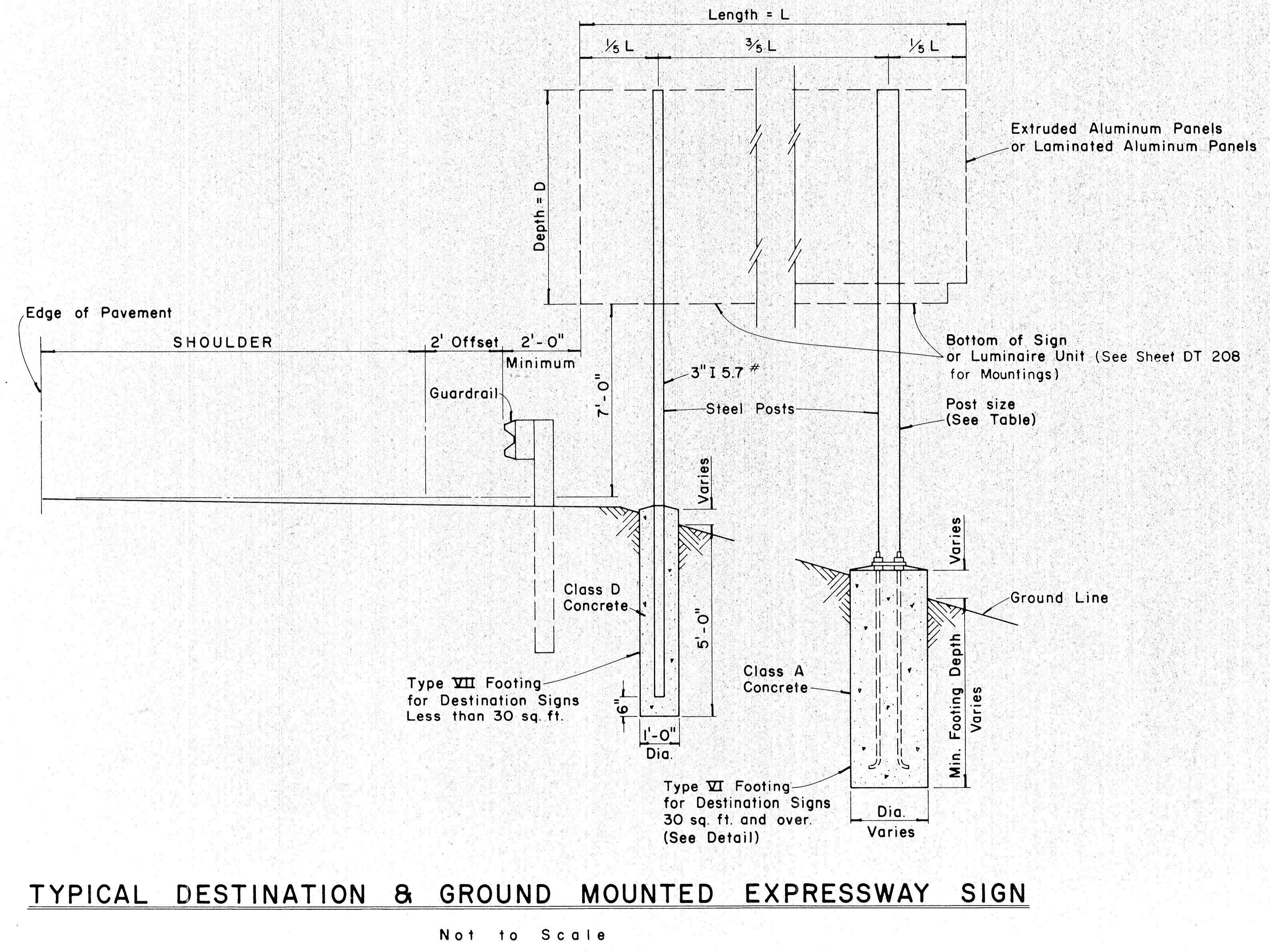
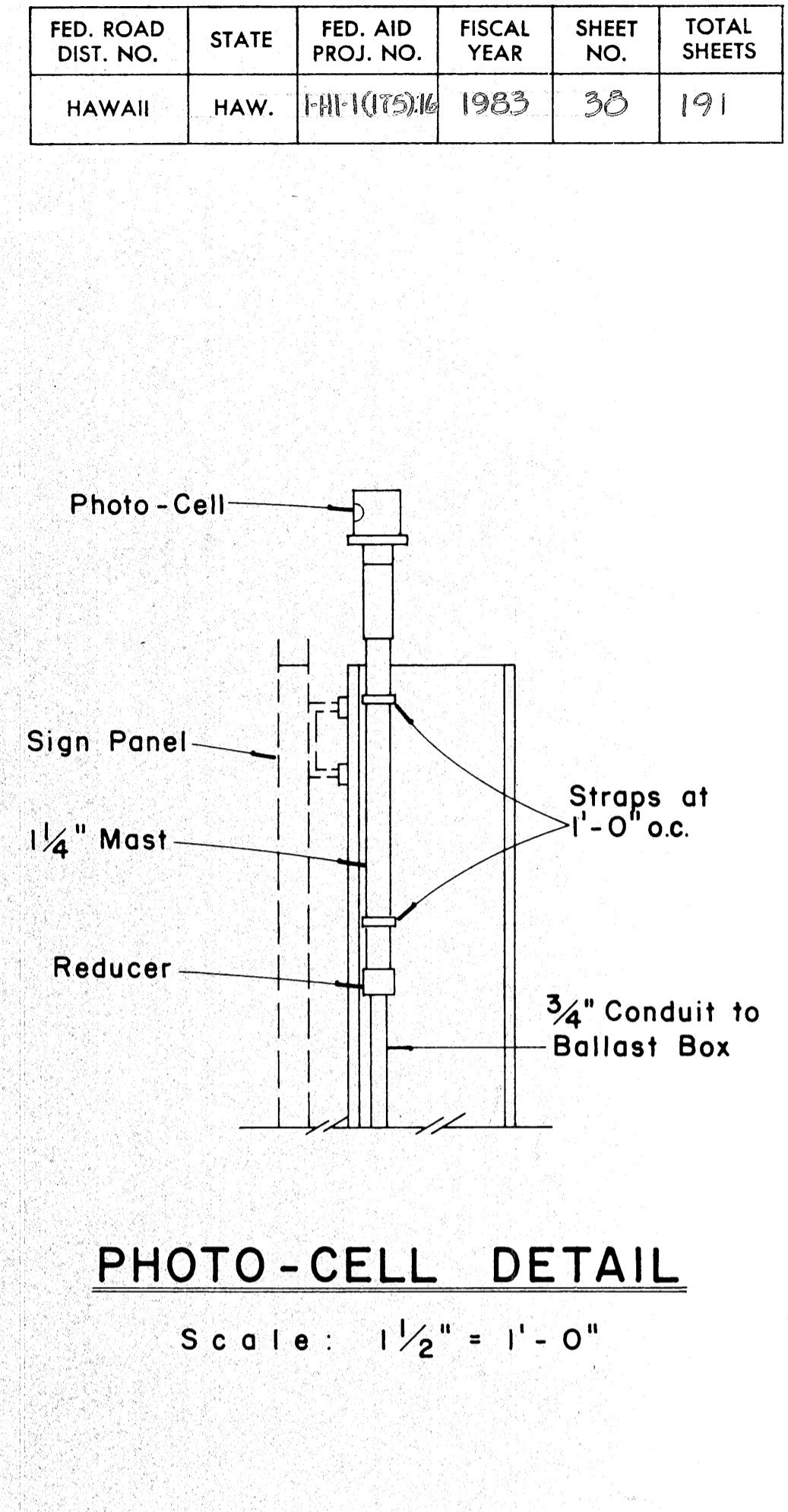
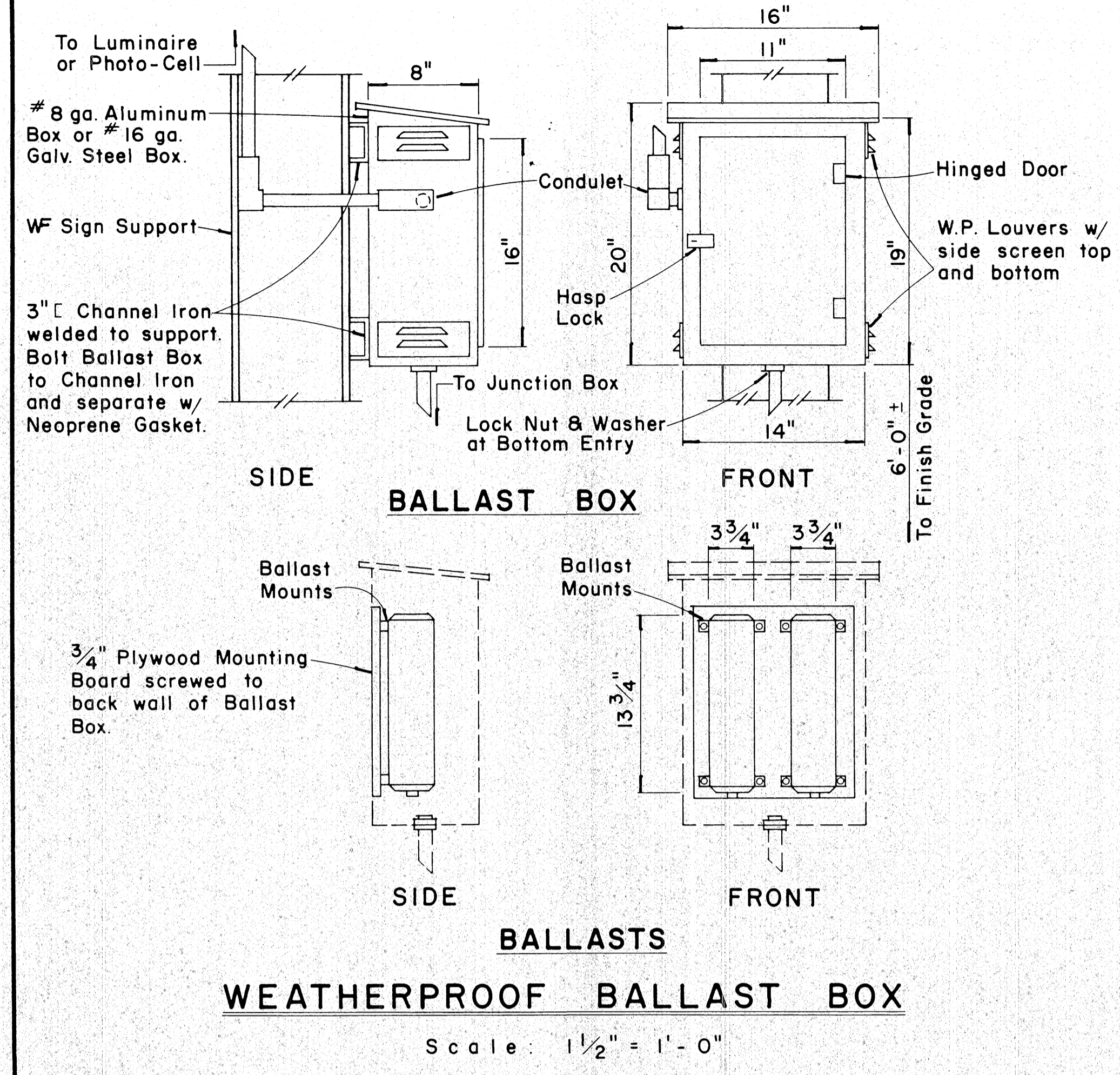
STANDARD DETAILS
CONSTRUCTION SIGNS

NOT TO SCALE

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

* For moment calculations only. Post shall be from top of foundation to top of sign.
 ** For fills with side slopes flatter than 4:1, Minimum Footing Depth shall be 4 1/2 feet.

DATA TABLE FOR TYPE VI FOOTING																	
POST SIZE	MAXIMUM SIGN AREA	POST HEIGHT TOP OF FOUNDATION TO CENTER OF SIGN *	DIMENSIONS											ANCHOR BOLT DIA.	MINIMUM FOOTING DEPTH		
			H	J	K	M	N	O	P	S	T	U	V		W	CUT	FILL**
8 J10	50 sq. ft.	14'	14"	5"	24"	17 1/4"	1 5/8"	6"	1 1/4"	9"	6"	10"	2"	1"	1 1/8" ø	4 1/2'	4 1/2'
8 WF24	90 sq. ft.	21'															5'
8 WF35	190 sq. ft.	15'	16 1/2"	6 3/4"	30"	20"	1 3/4"	6"	1 3/8"	11 3/4"	6 1/2"	10"	1 3/4"	1"	1 1/4" ø	6'	7'
10 WF45	190 sq. ft.	25'															
10 WF45	200 sq. ft.	25'															
12 WF50	230 sq. ft.	25'														7'	
12 WF50	250 sq. ft.	23'															



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

APPROVED:
Andy S. Salas 12-30-69
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Add note for luminaire mounting.	H.F.	6/3/50

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
DESTINATION & GROUND MOUNTED EXPRESSWAY SIGNS

Scale: As Shown
 SHEET No. OF SHEETS DT 203

DESIGNED BY: _____
 CHECKED BY: _____
 DATE: _____

TYPICAL DESTINATION & GROUND MOUNTED EXPRESSWAY SIGN

Not to Scale

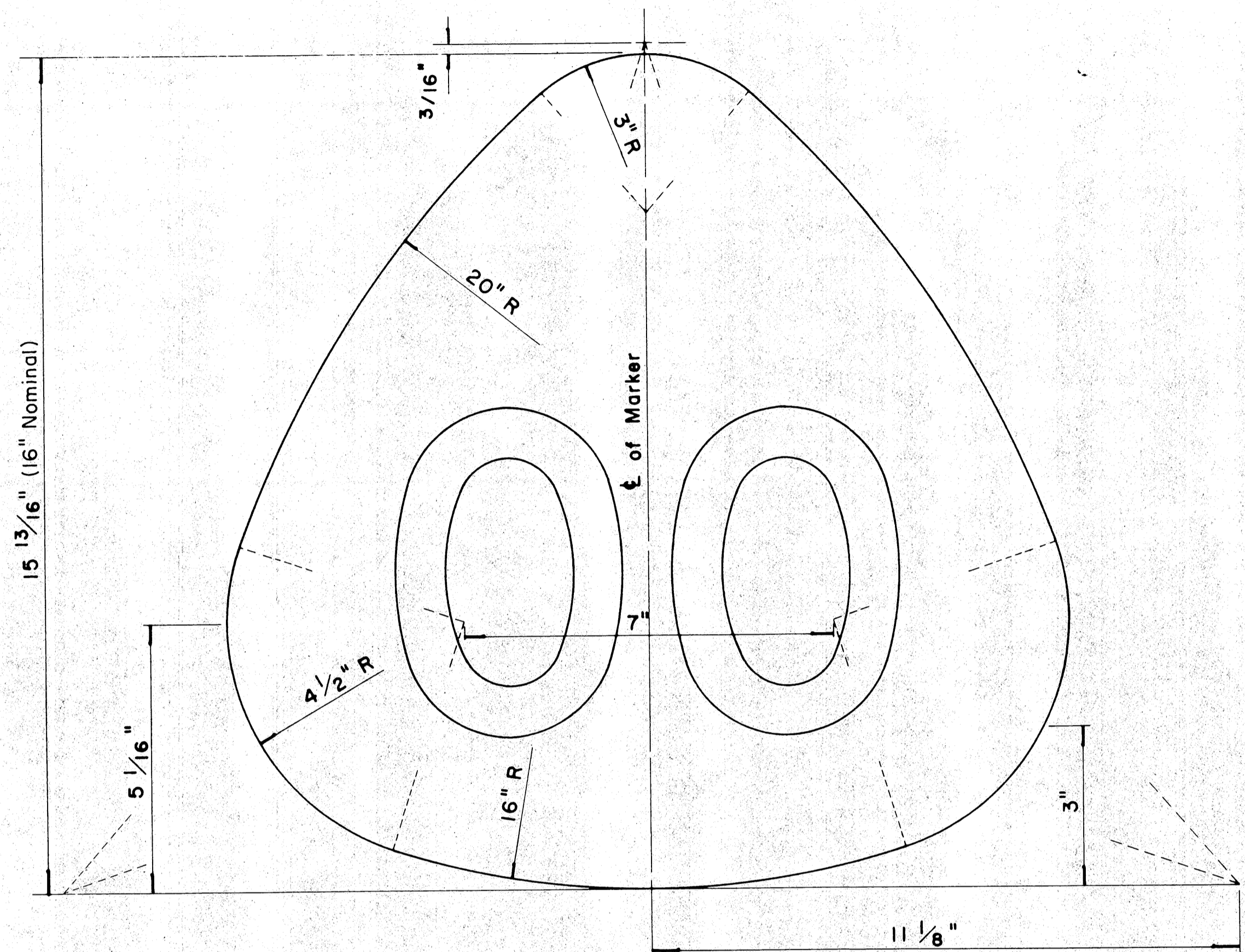
TYPE VI FOOTING

Scale: 1" = 1'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H-10-16	1983	39	191

MARKER SIZE	MULTIPLY DIMENSIONS BY	NUMERAL SIZE
21"	1.3	8"
32"	2.0	12"
42"	2.63	16"

RADI FOR SIGNS		
Least Dimension of Sign	W	R
2' - 0" to 4' - 6"	2"	3"
4' - 9" to 5' - 6"	2"	6"
5' - 9" to 7' - 6"	2"	9"
7' - 9" and greater	2"	12"

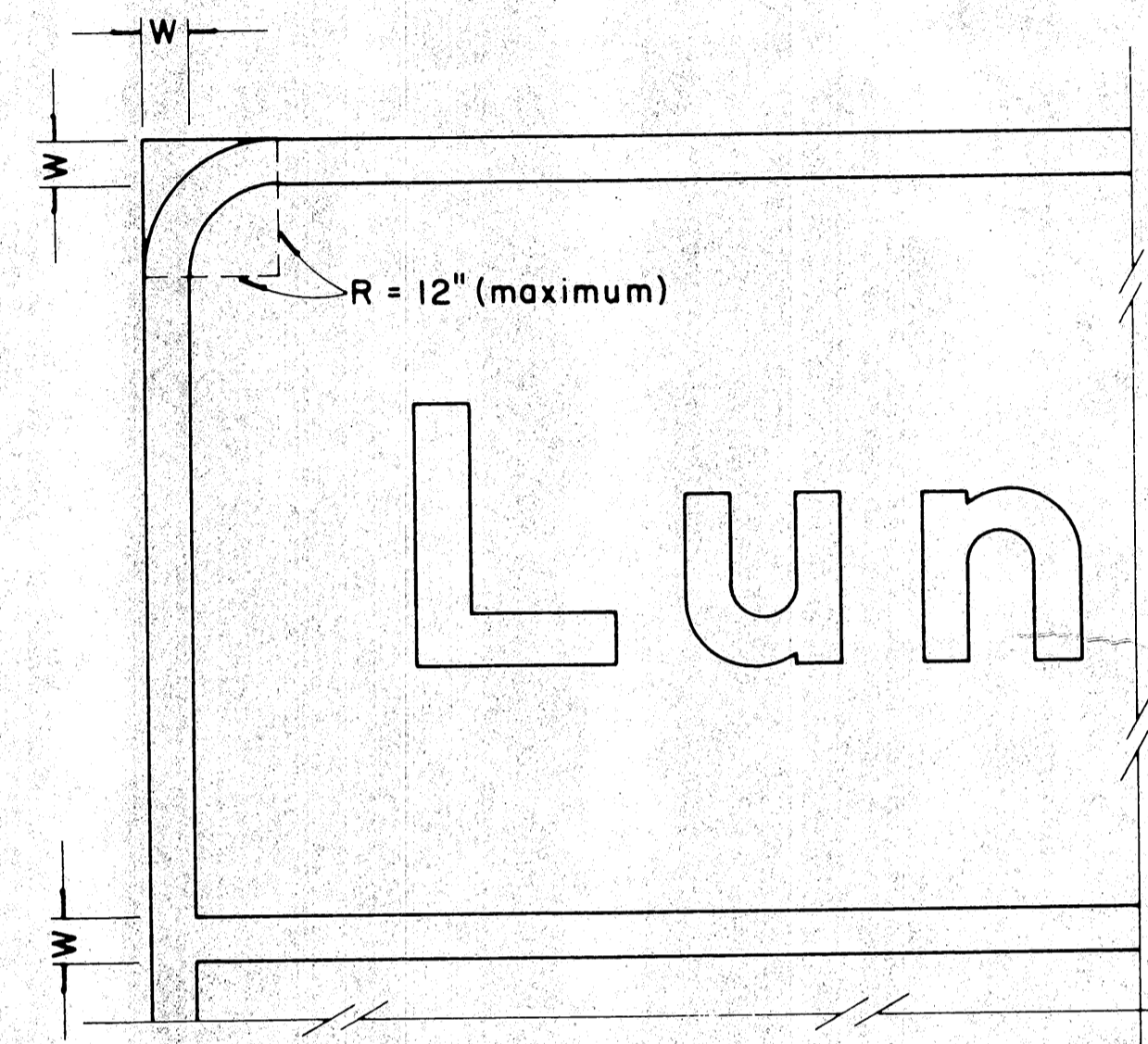


**STATE ROUTE MARKER
FOR GUIDE SIGNS**

Scale: Half Size

NOTE:

1. State Route Markers on Guide signs shall have black numerals on a white reflectorized background mounted on a flat aluminum cut-out.
2. Numerals shall conform to the FHWA publication "Standard Alphabets for Highway Signs," 1966.
3. Cut-outs shall be fastened on sign panel with aluminum blind rivets. See Standard Specifications.



**BORDER DETAIL
FOR GUIDE SIGNS**

Not to Scale

NOTE:

1. Area outside corner radius need not be trimmed.
2. All borders shall be white reflectorized cut-outs.
3. All Guide signs shall have borders.

APPROVAL RECOMMENDED:

Eishi Tanaka 4/11/72
TRAFFIC ENGINEER DATE

APPROVED:

Walter S. Sakai 4/12/72
ASSISTANT CHIEF, ENGINEERING DATE

NO	REVISION	APPROVED BY	DATE
1	Supersedes Shf. DT 209 Approved 12-30-69	H.T.	4/12/72
2	Revised Notes and Schedules	H.T.	9-14-70

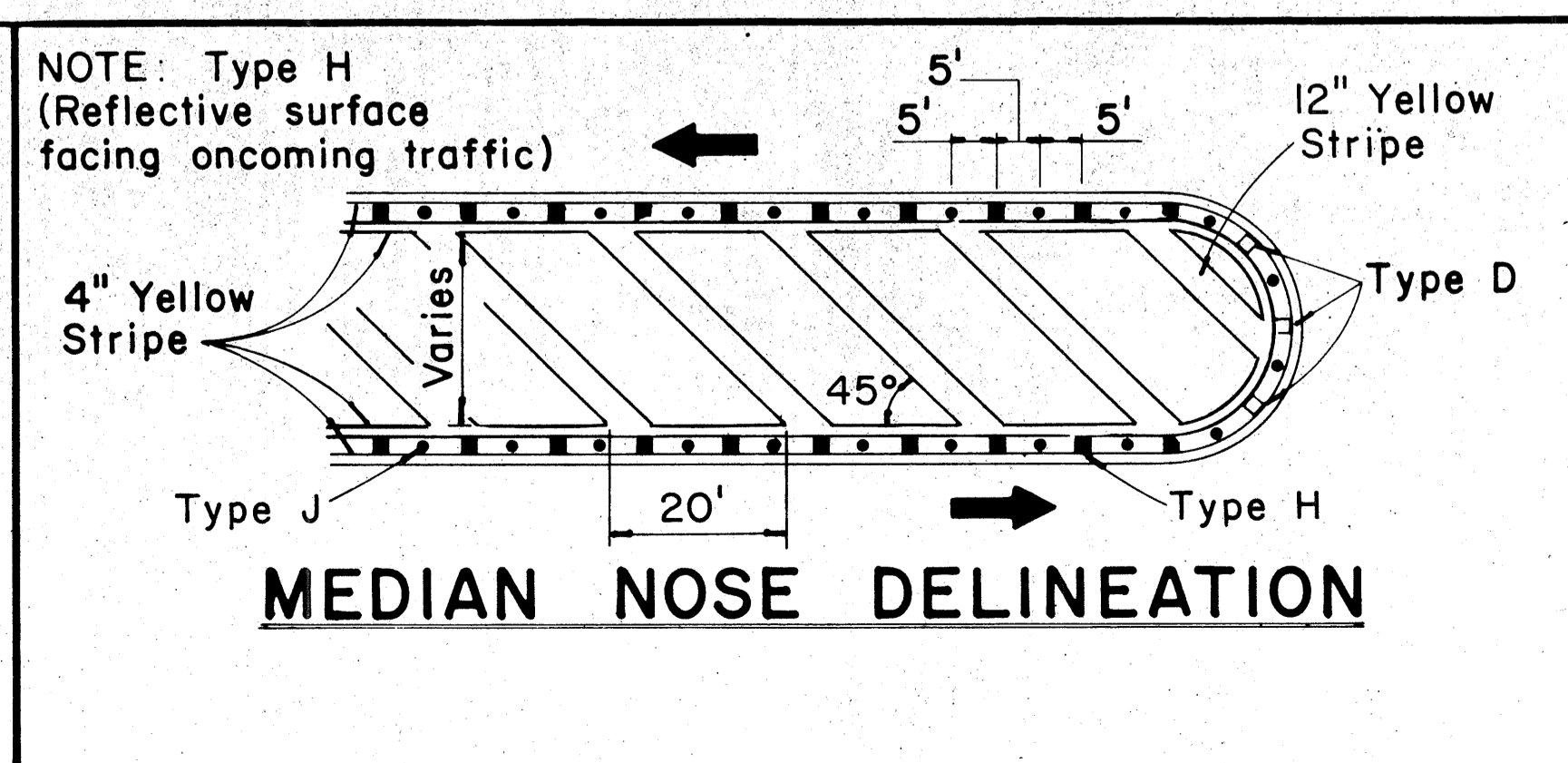
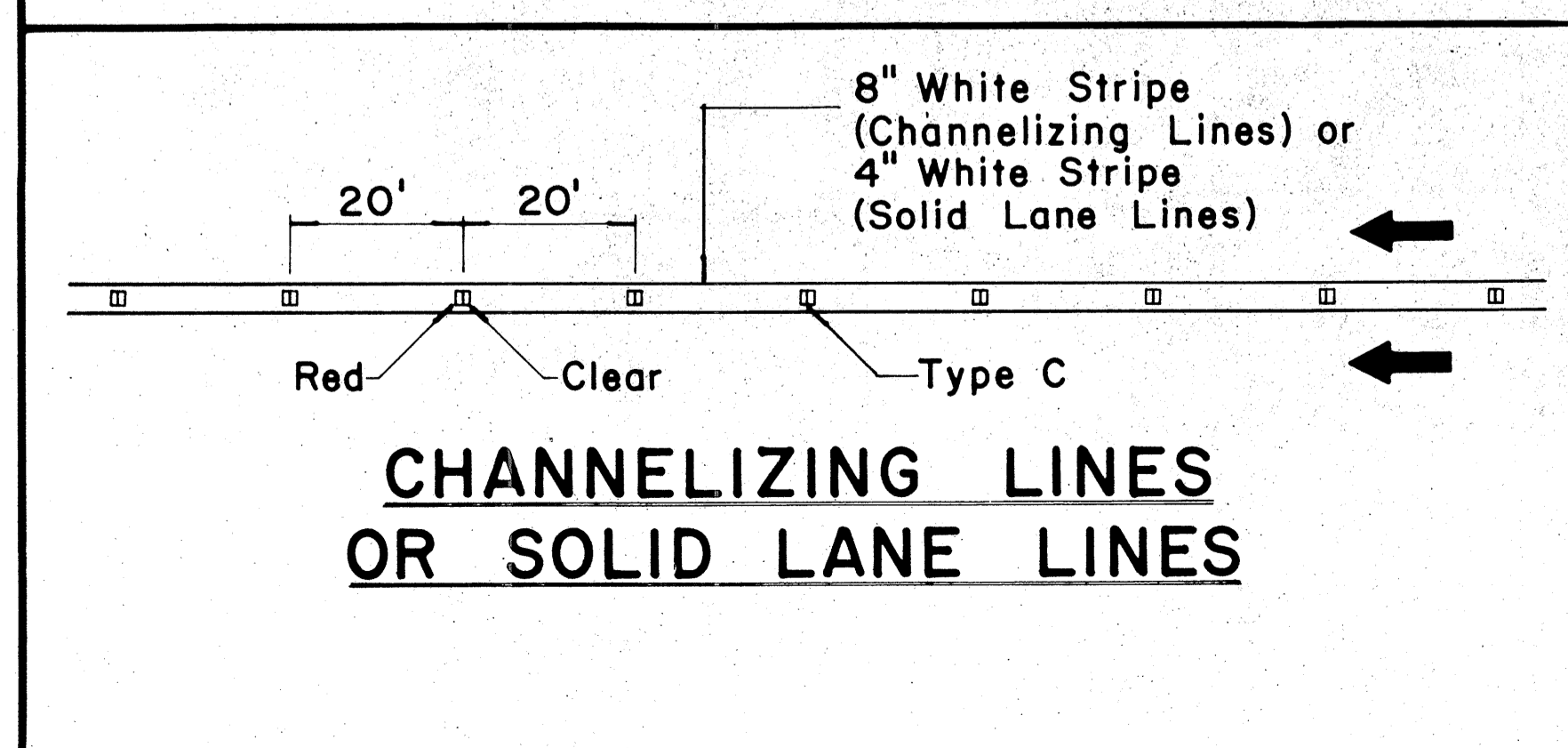
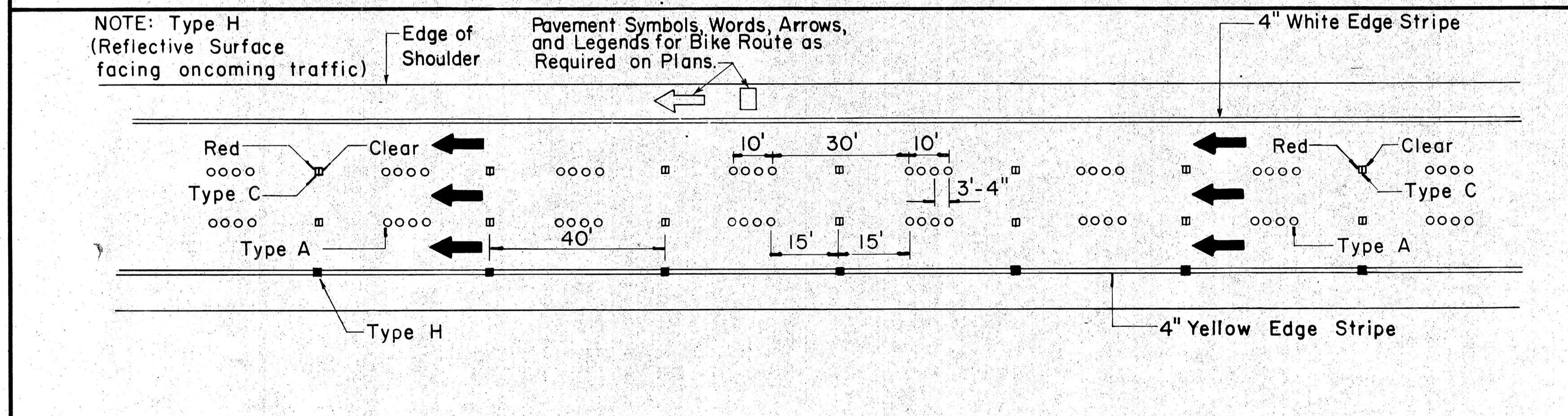
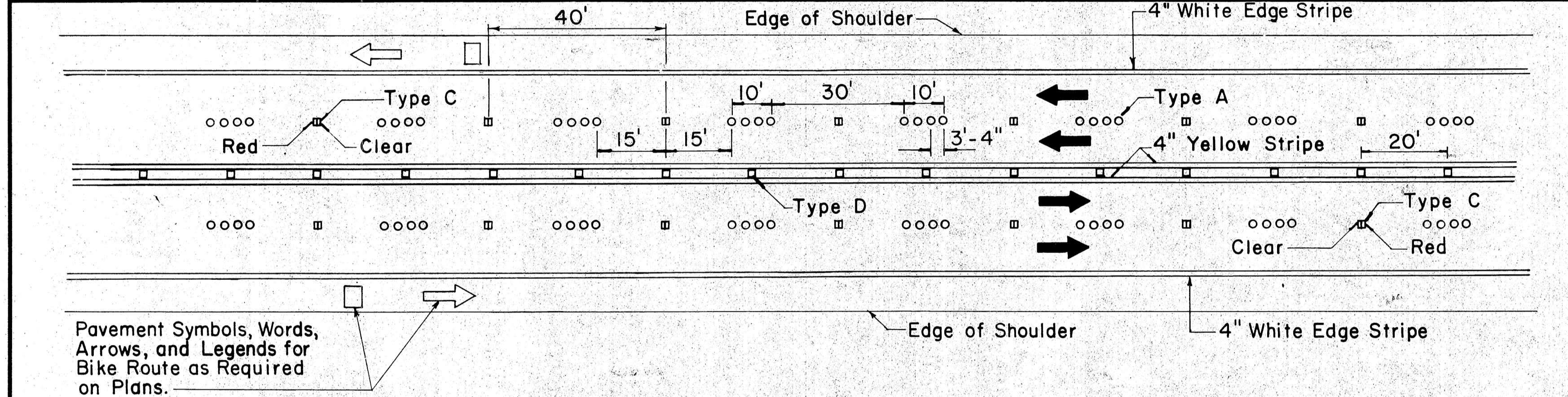
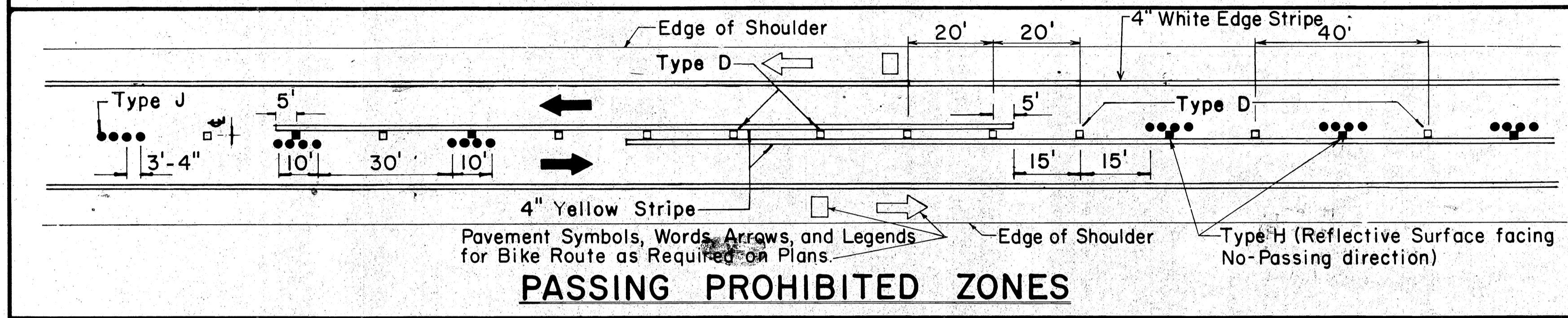
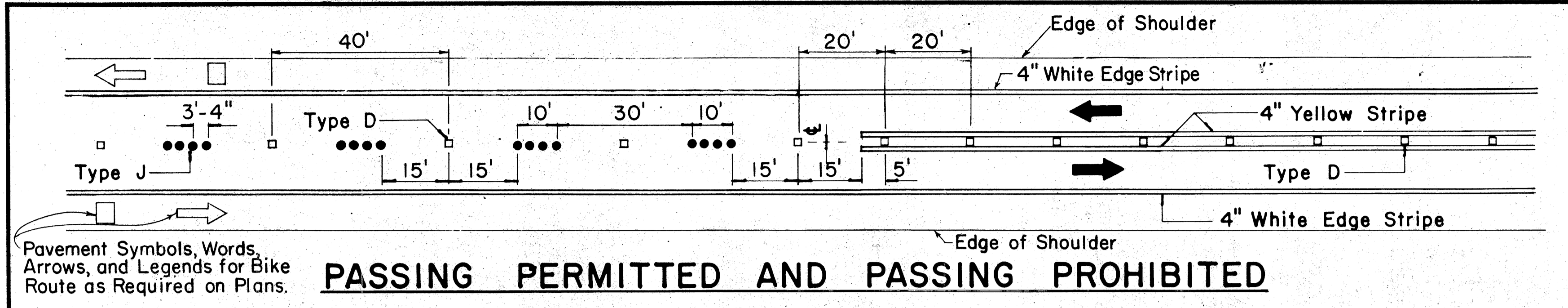
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
**STATE ROUTE MARKER
AND BORDER DETAIL
FOR GUIDE SIGNS**

Scale: As Shown

SHEET No. OF SHEETS DT 209

DATE _____
SURVEY PLATTED BY _____
DRAWN BY _____
DESIGNED 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.	HA11(175)16	1983	40	191

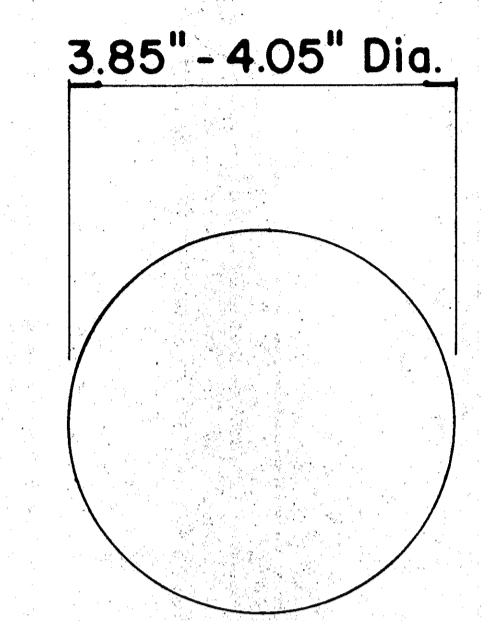


TWO - LANE

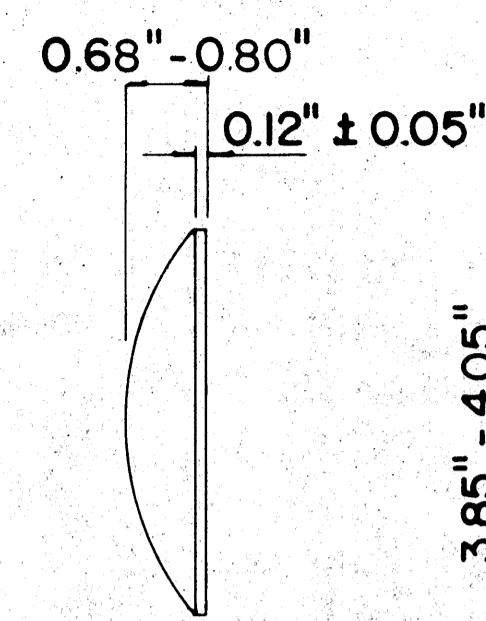
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

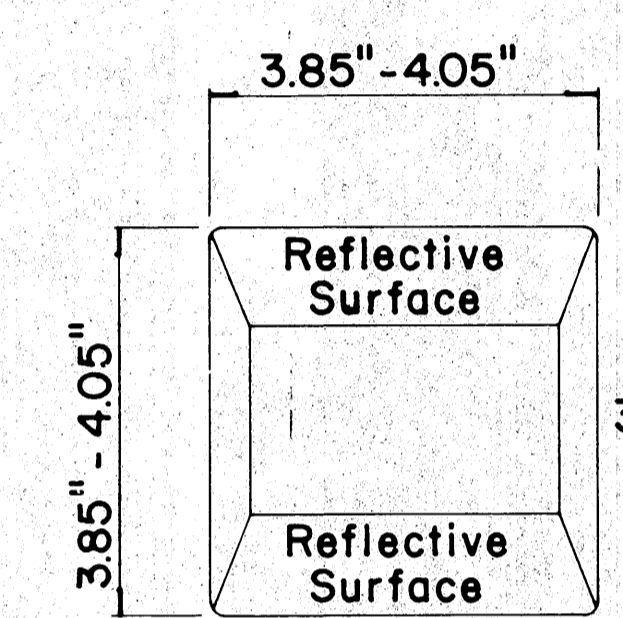
MISCELLANEOUS



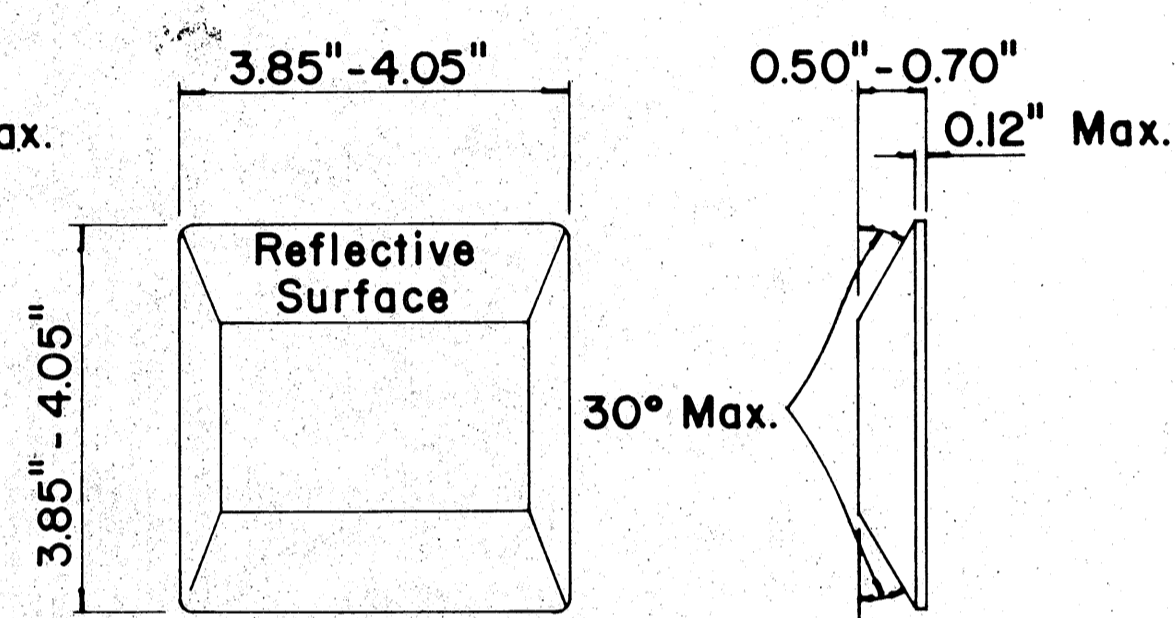
TYPE A
NON-REFLECTIVE WHITE MARKER
TYPE J
NON-REFLECTIVE YELLOW MARKER



TYPE C
RED-CLEAR REFLECTIVE MARKER



TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER



TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER

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.

LEGEND

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

APPROVAL RECOMMENDED:
Erich Tanaka 7/21/78
TRAFFIC ENGINEER DATE

APPROVED:
Robert J. Zekich 1/24/78
ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	Hf	1/24/78
2	Delete Type A Markers from Bike Route Delineation.	Hf	10/15/79

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

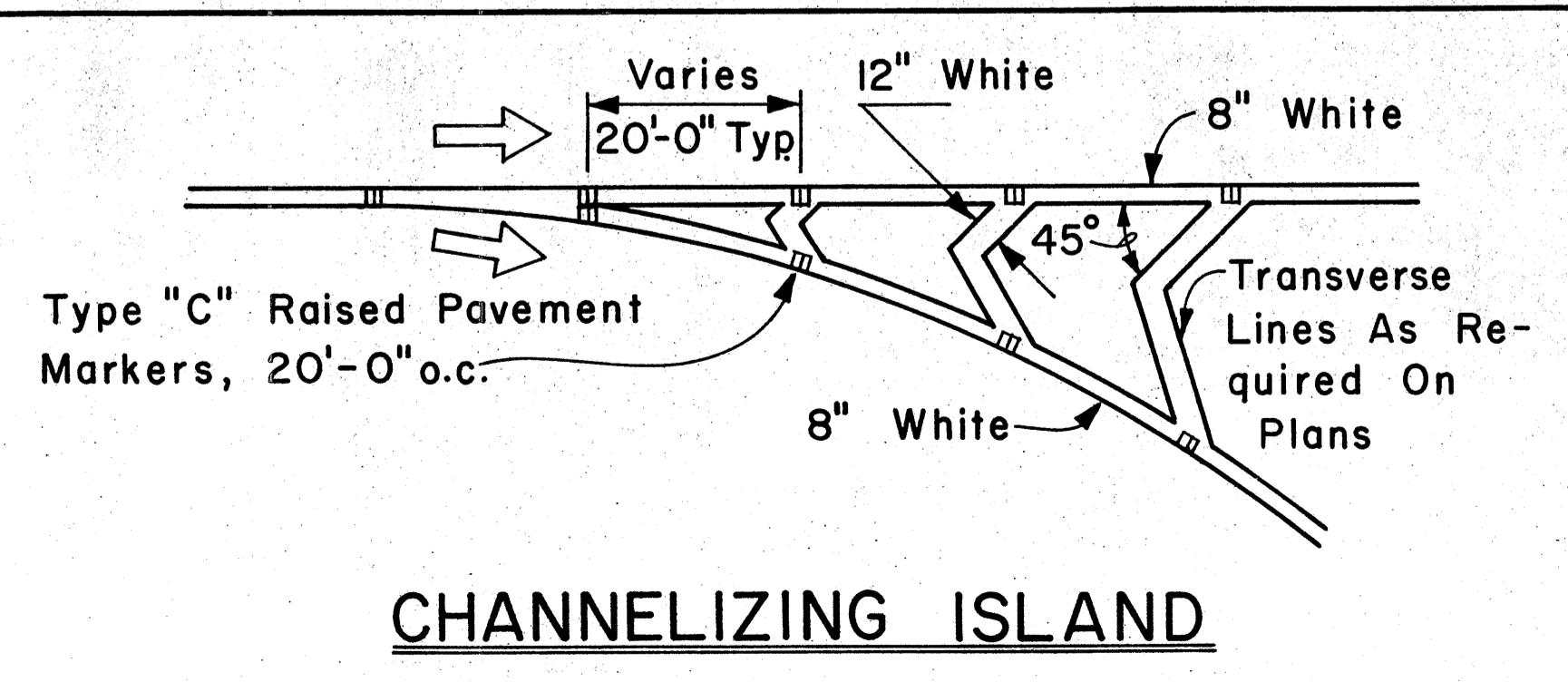
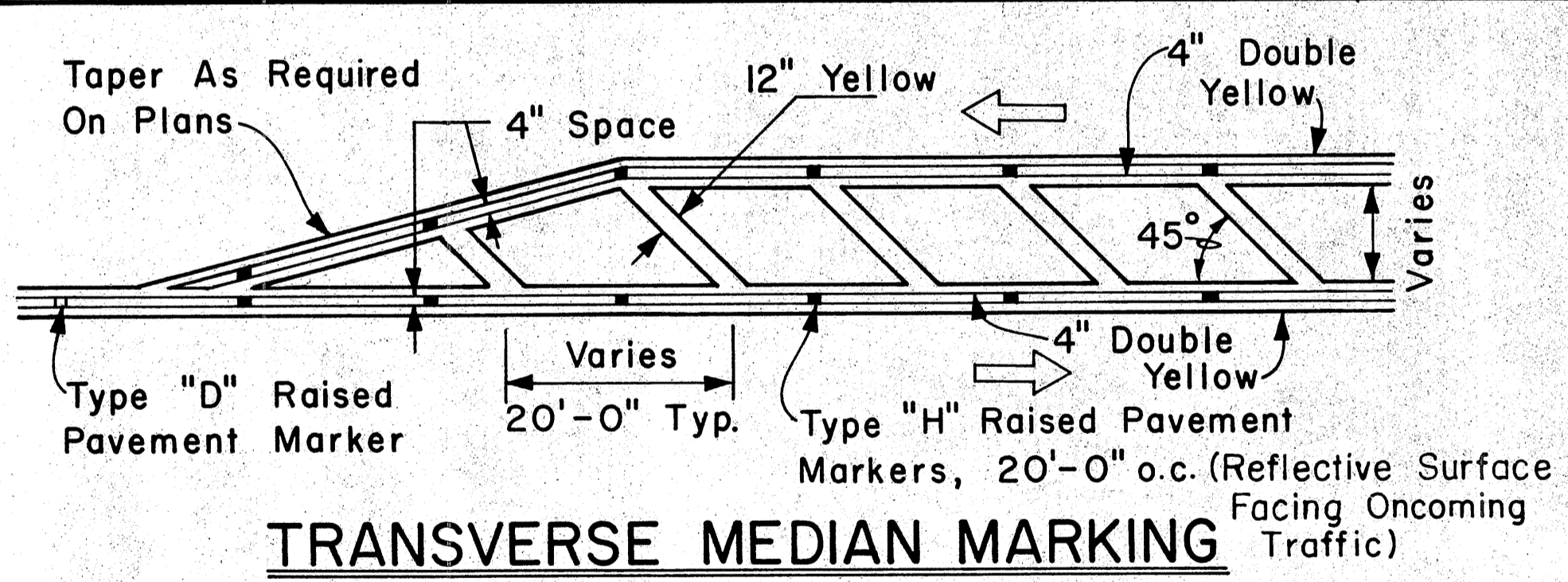
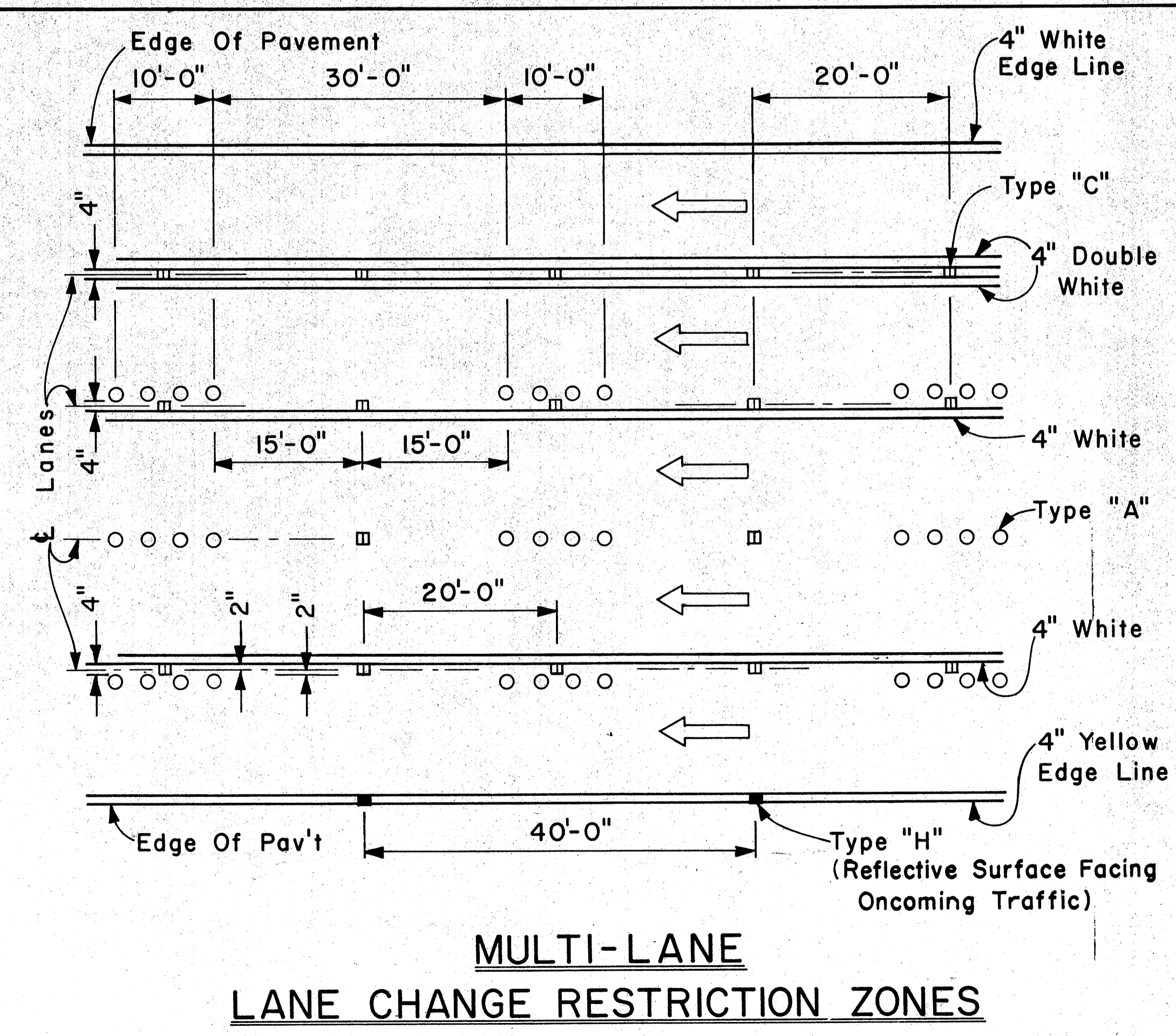
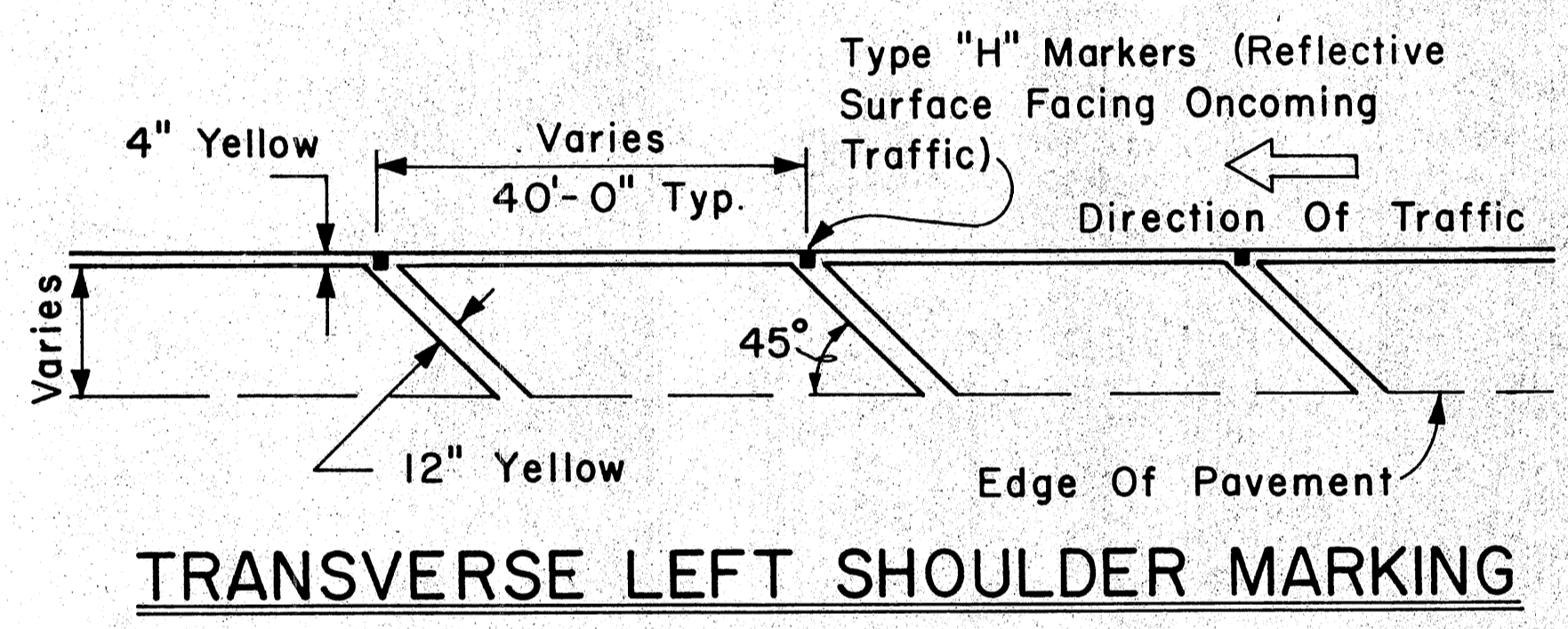
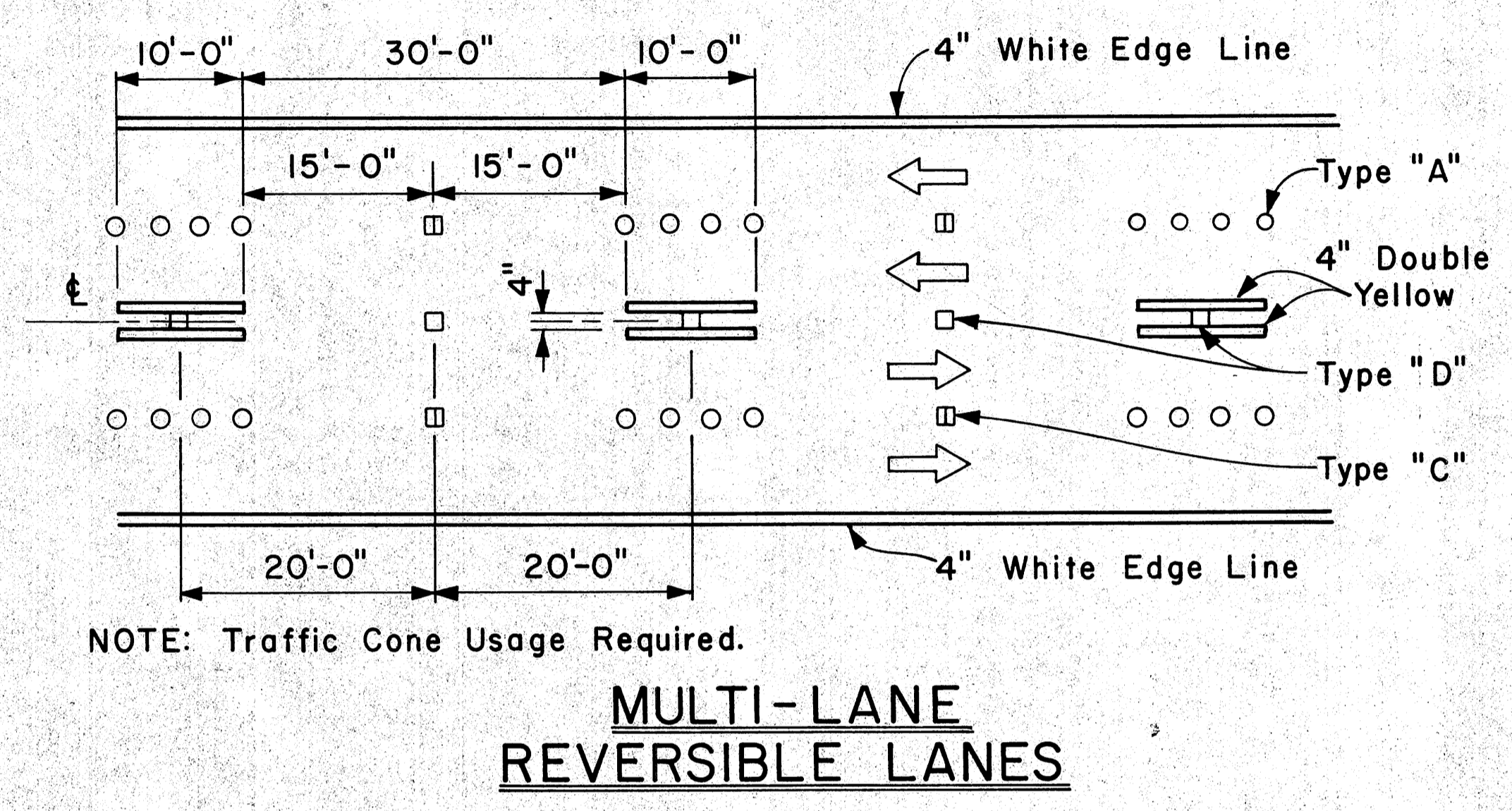
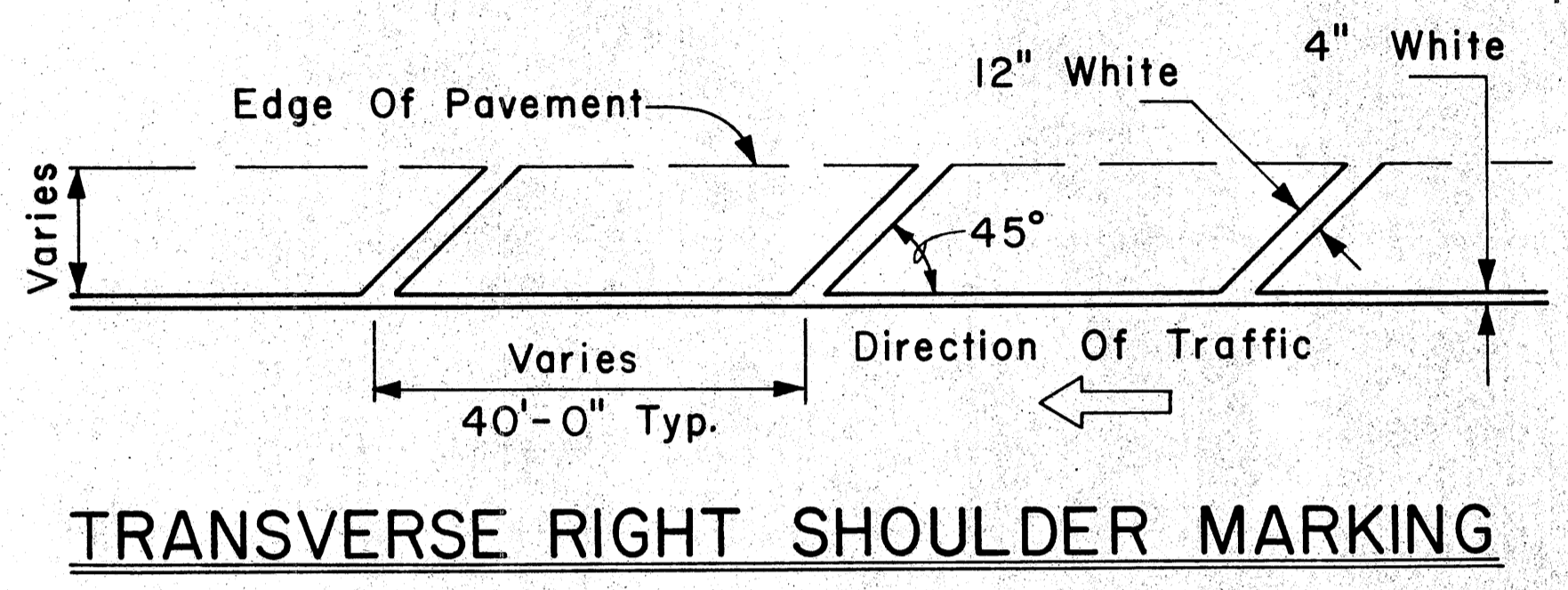
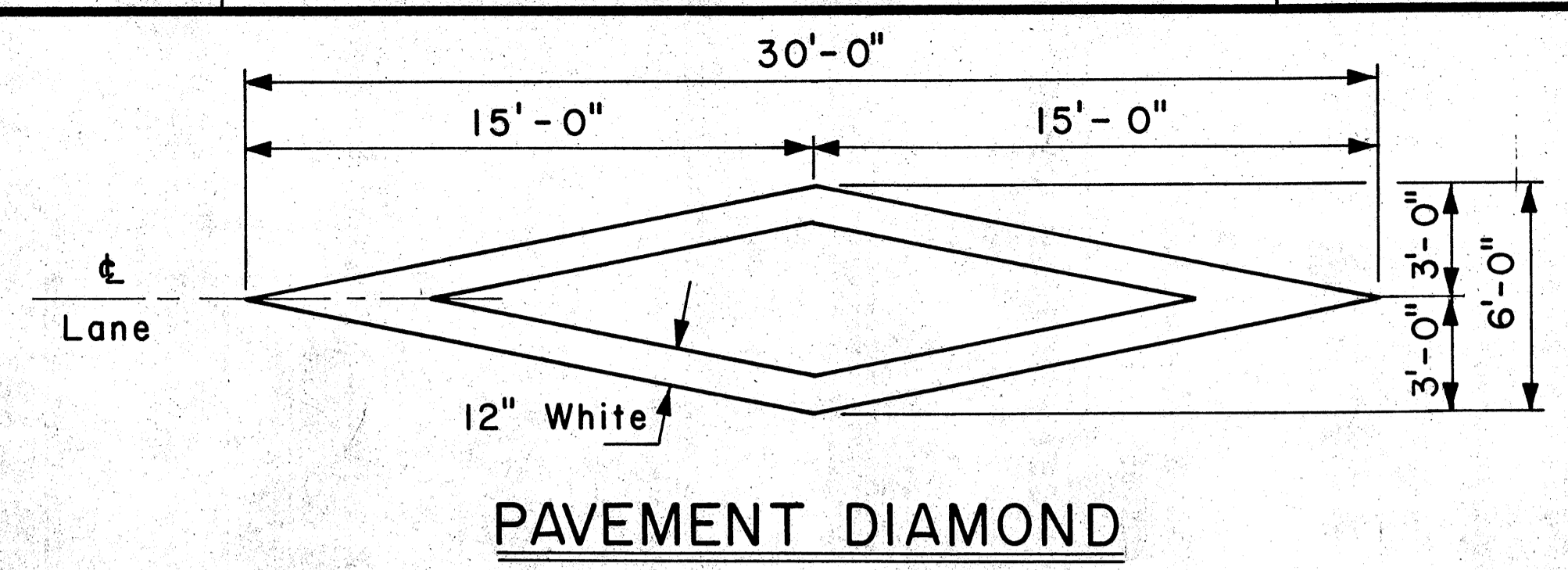
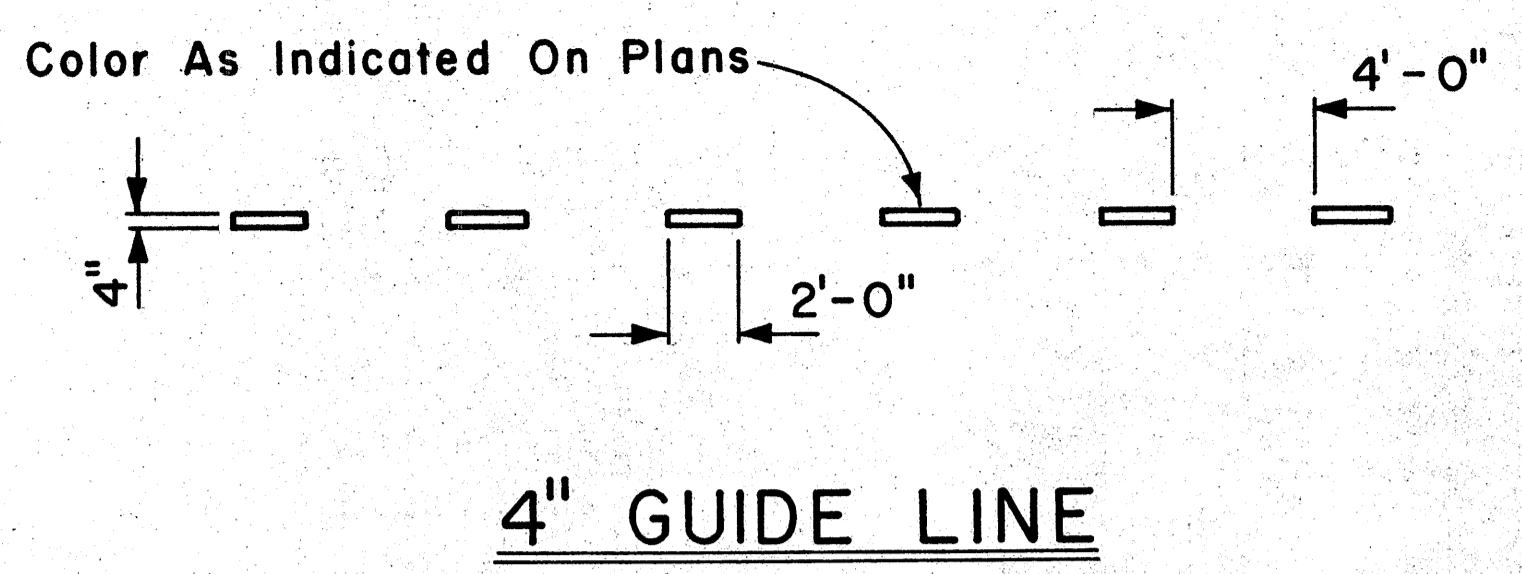
Not to Scale
SHEET No. OF SHEETS DT 300

DATE _____
SURVEY PLOTTED BY _____
ORIGINAL PLAN _____
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.	1-HI-1075(14)	1983	41	191

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.



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

APPROVED:
Herbert S. Sakai 5/2/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

MISCELLANEOUS
 PAVEMENT MARKINGS

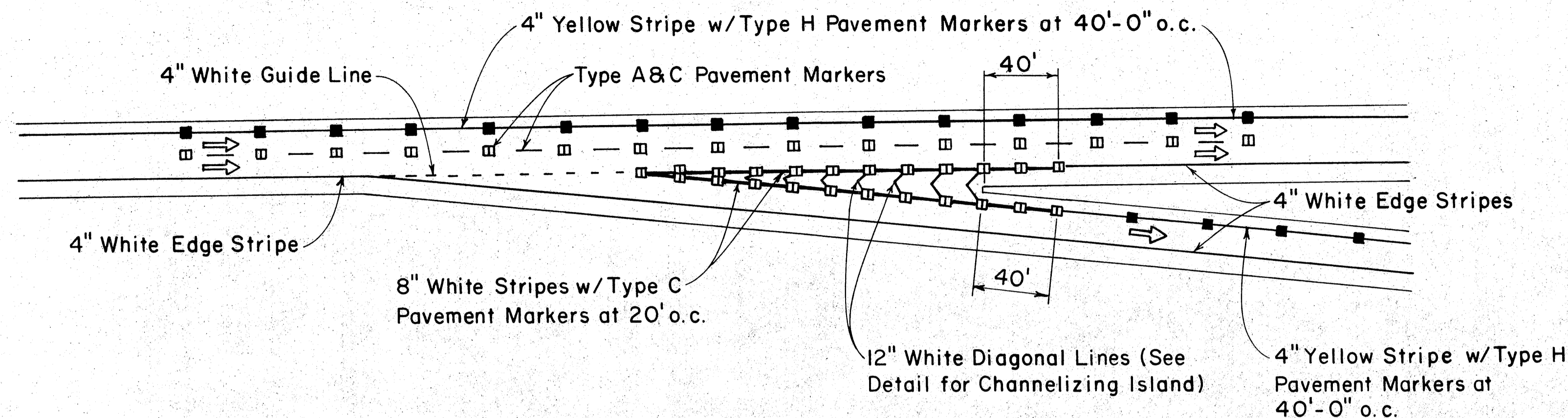
Scale: Not to Scale Date: _____
 SHEET NO. OF SHEETS DT 302

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-1(15)16	1983	42	191

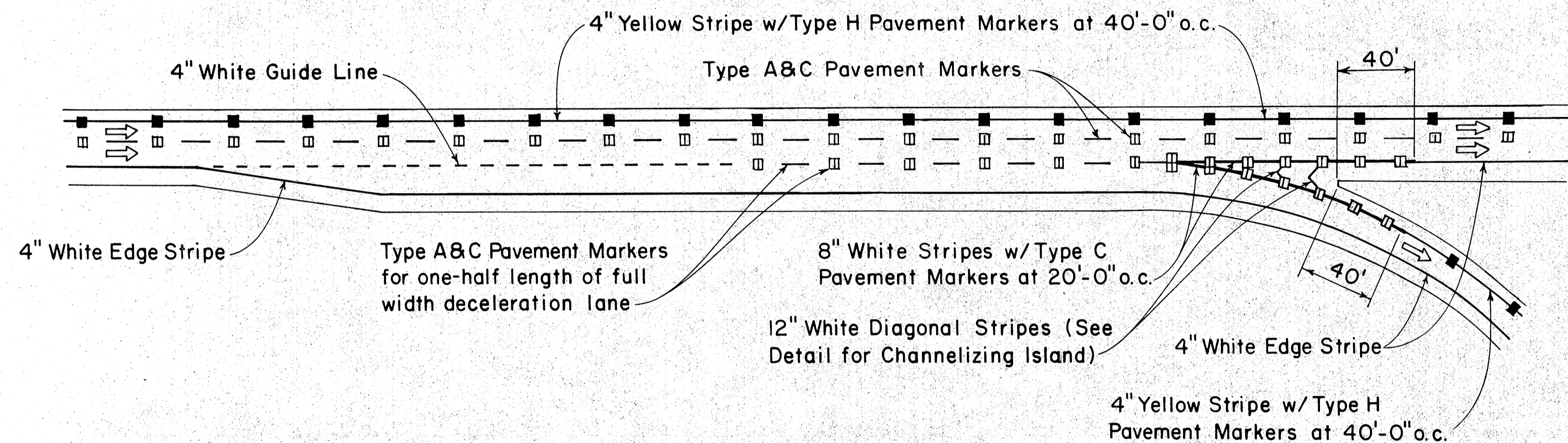
GENERAL NOTES:

1. Pavement Markings 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 details, see sheet DT 300.



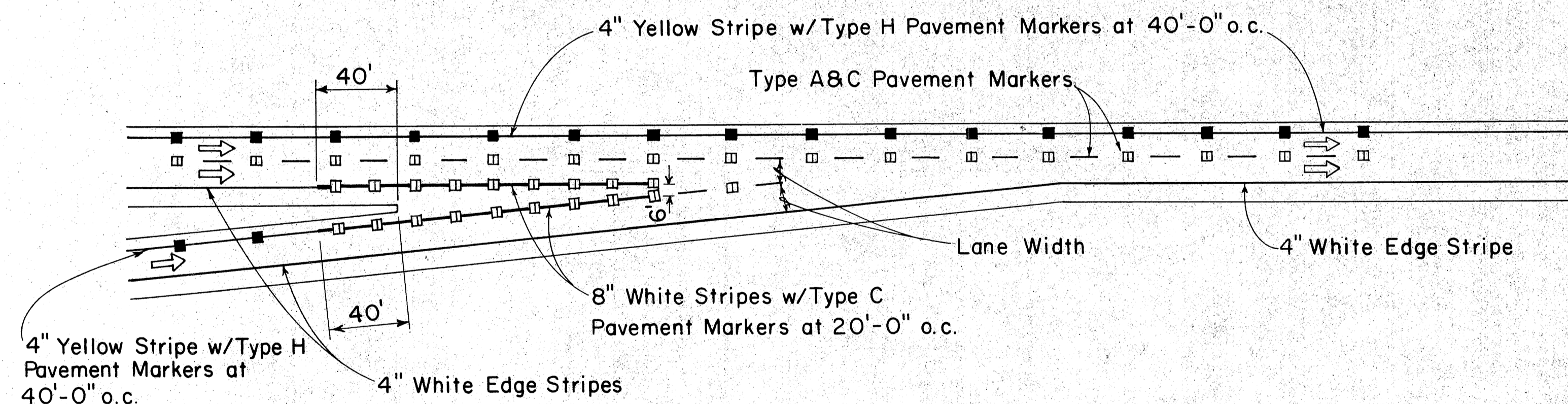
TAPERED DECELERATION LANE

TYPICAL ROADWAY EXIT MARKINGS



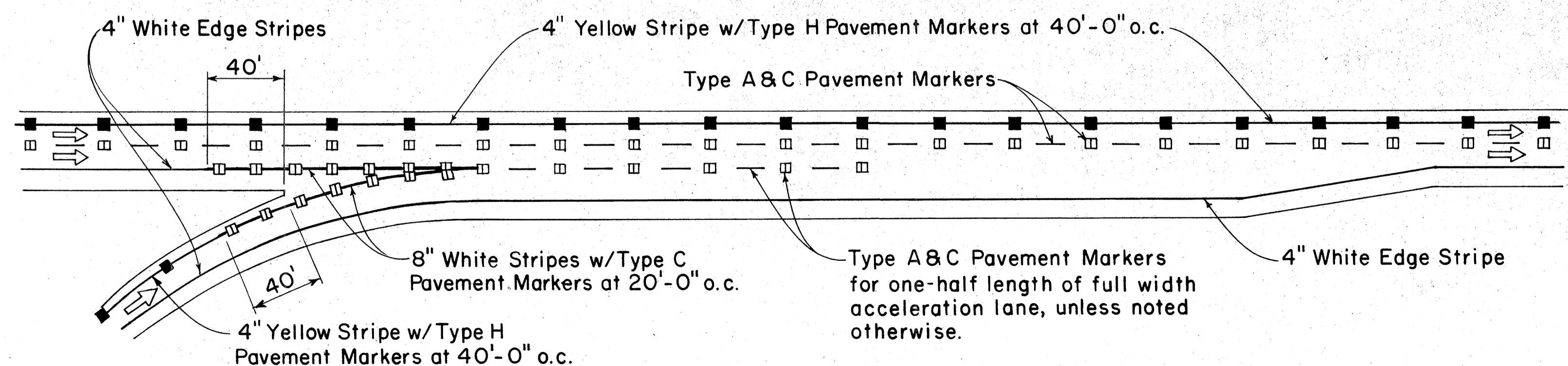
PARALLEL DECELERATION LANE

TYPICAL ROADWAY ENTRANCE MARKINGS



TAPERED ACCELERATION LANE

TYPICAL ROADWAY ENTRANCE MARKINGS



PARALLEL ACCELERATION LANE

TYPICAL ROADWAY ENTRANCE MARKINGS

APPROVAL RECOMMENDED:
Eiichi Tanaka 7/21/78
 TRAFFIC ENGINEER DATE

APPROVED:
Robert D. Rakeishi 7/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

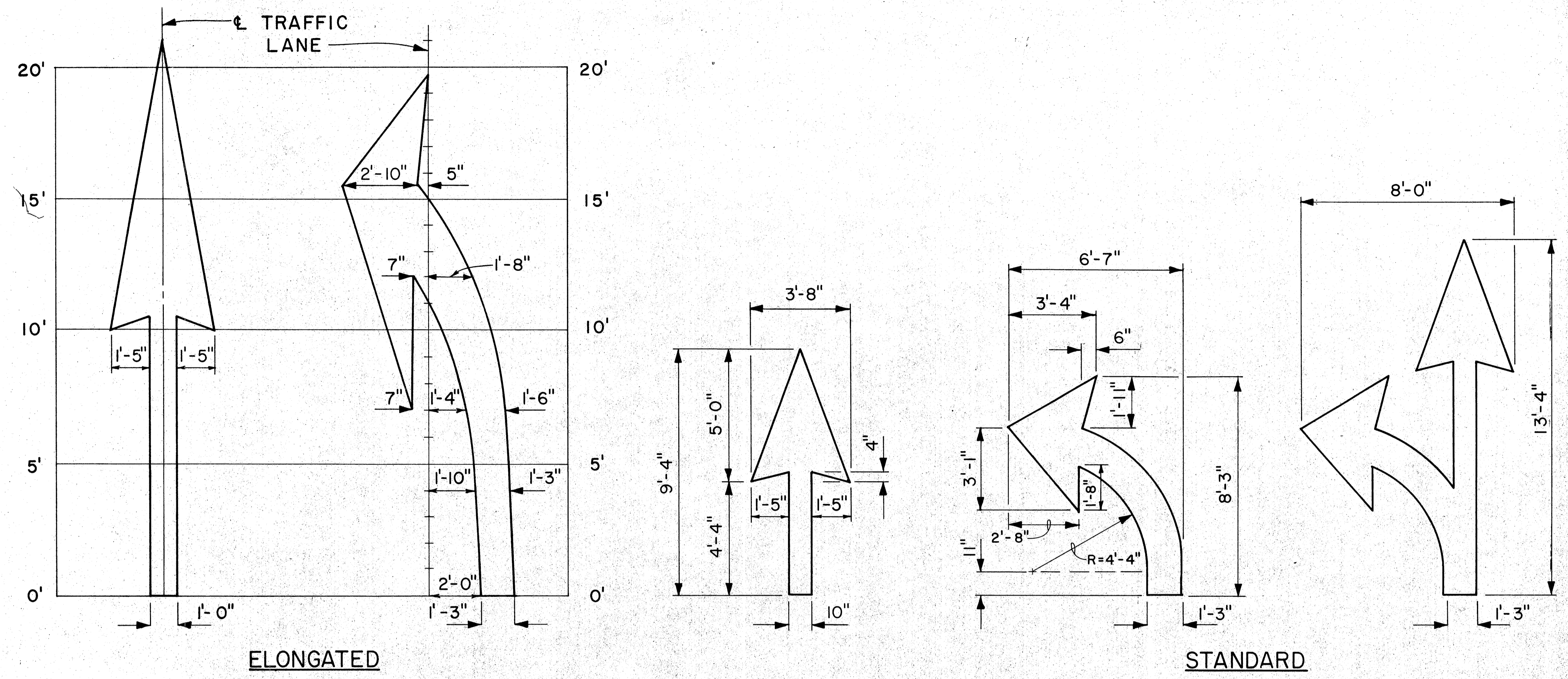
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Not to Scale
 SHEET NO. OF SHEETS DT 304

DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 TRACED BY: _____
 DESIGNED BY: _____
 NOTE BOOK: _____
 QUANTITIES BY: _____
 CHECKED BY: _____

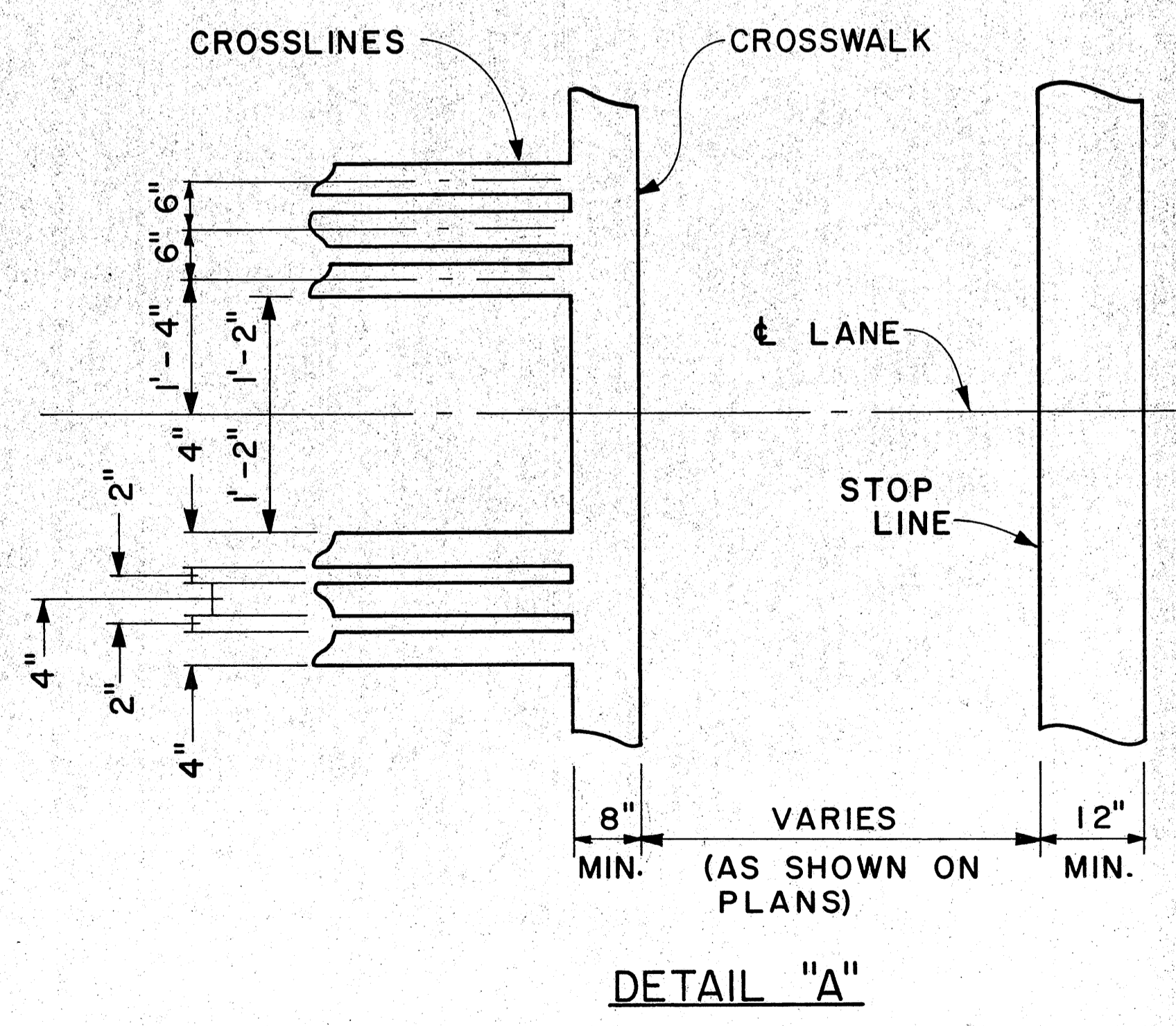
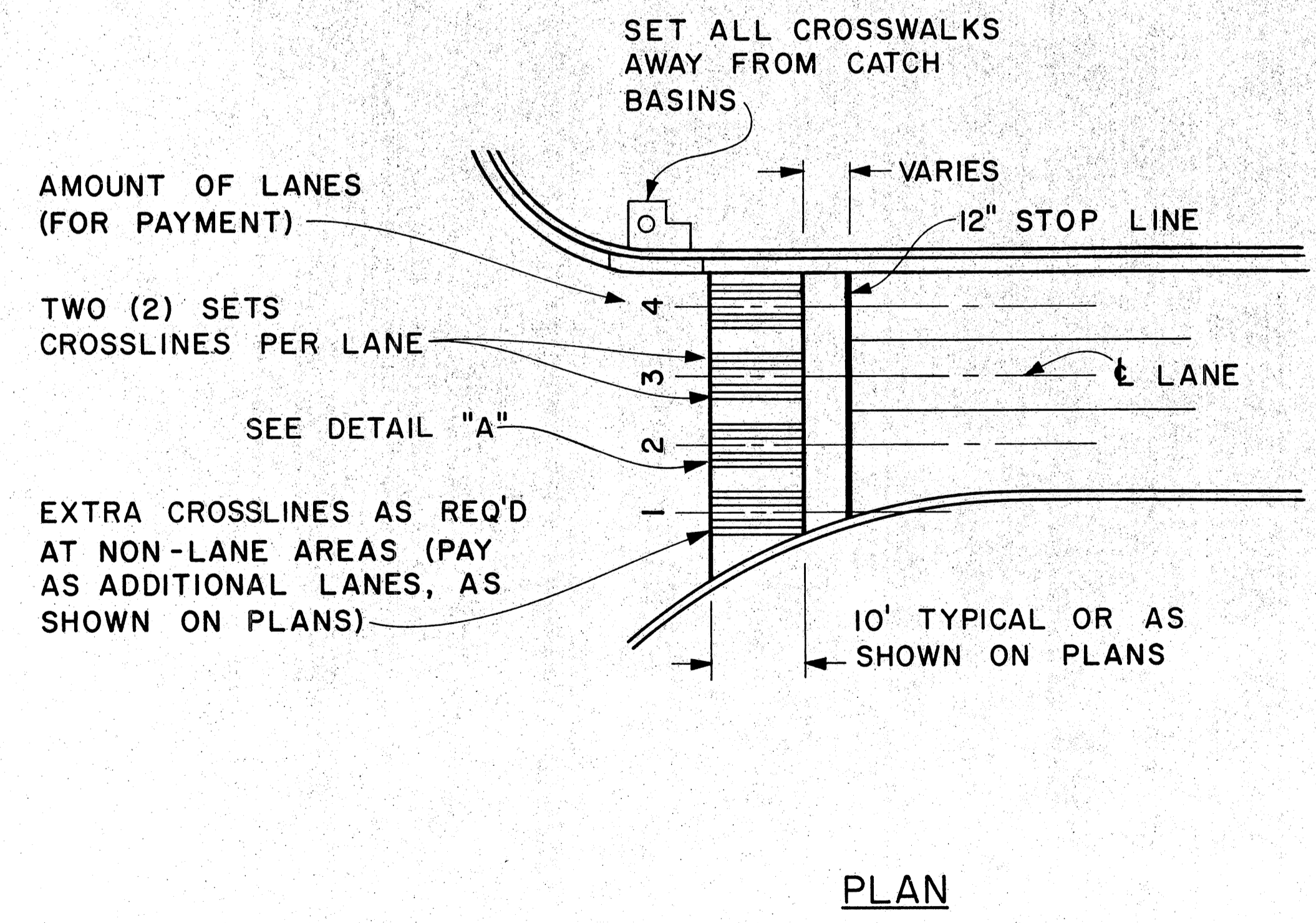
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	111-1075-12	1983	13	191



PAVEMENT ARROWS
Scale: 3/8" = 1'

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.



CROSSWALK & STOP LINE
Scale: Not to Scale

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

APPROVED:
Harbor 2. Sakai 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

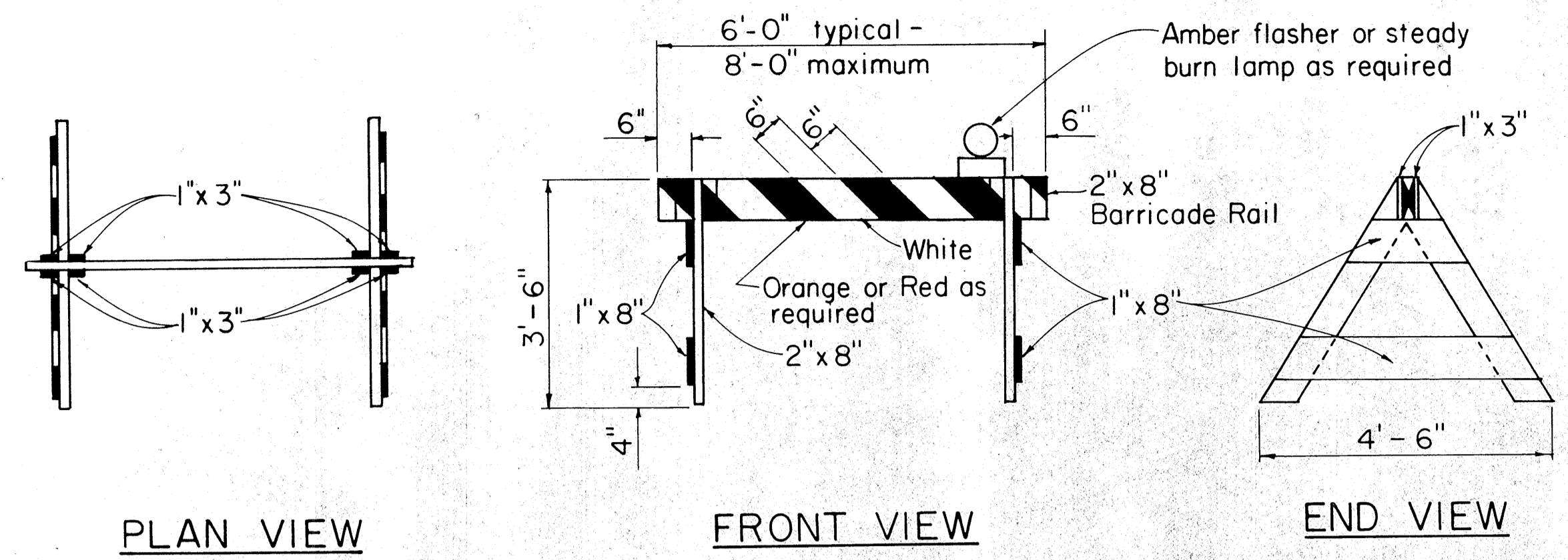
STANDARD DETAILS

MISCELLANEOUS
PAVEMENT MARKINGS

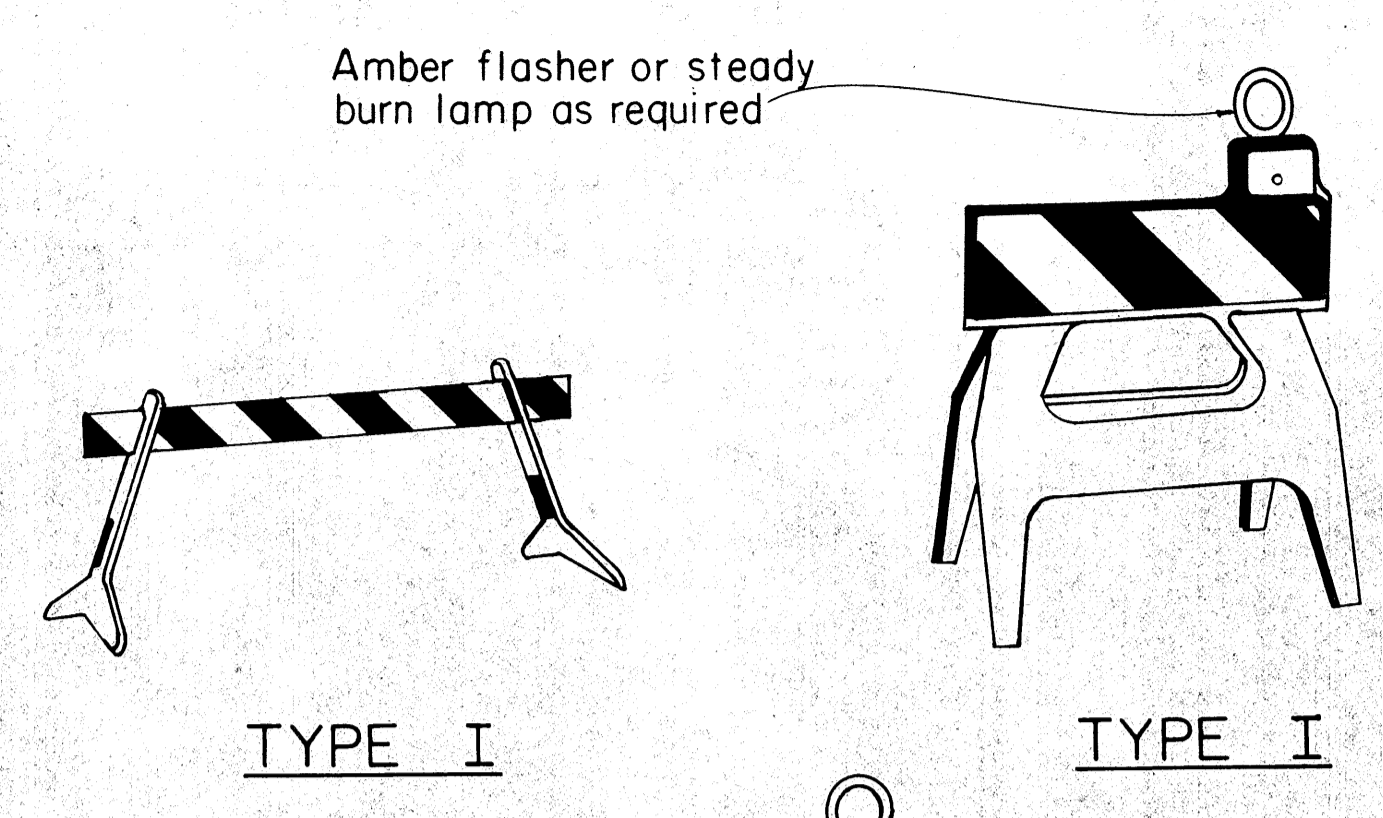
Scale: As Shown Date: _____
SHEET NO. OF SHEETS DT 306

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

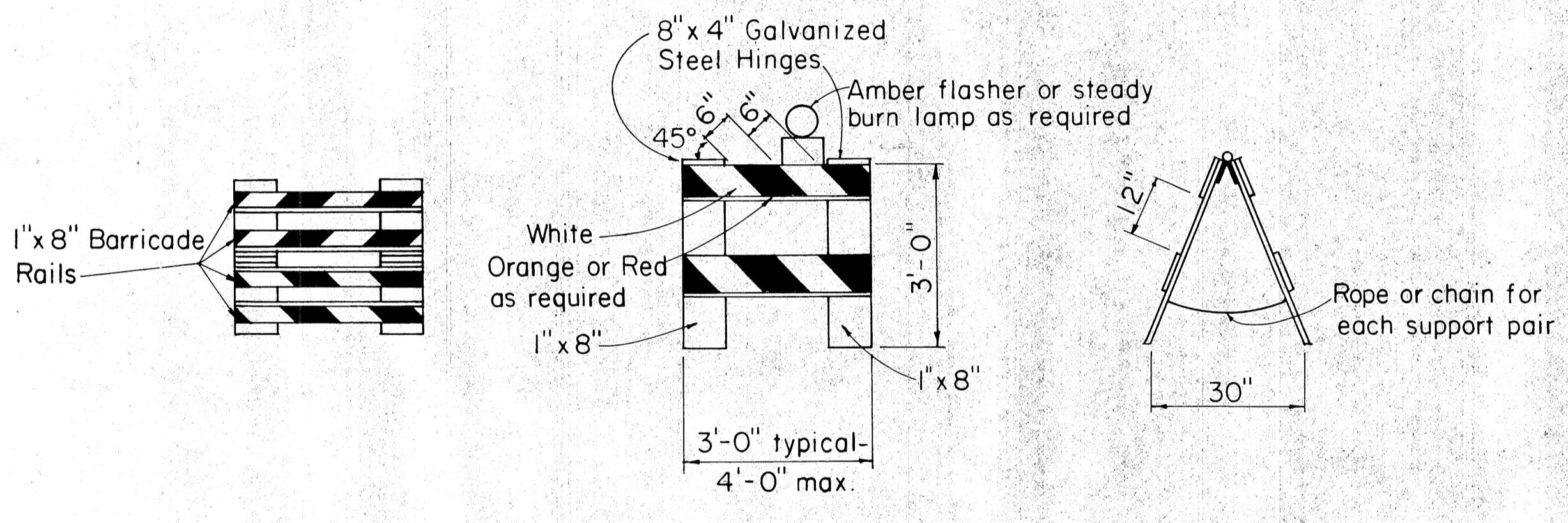
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-(15)16	1983	44	191



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

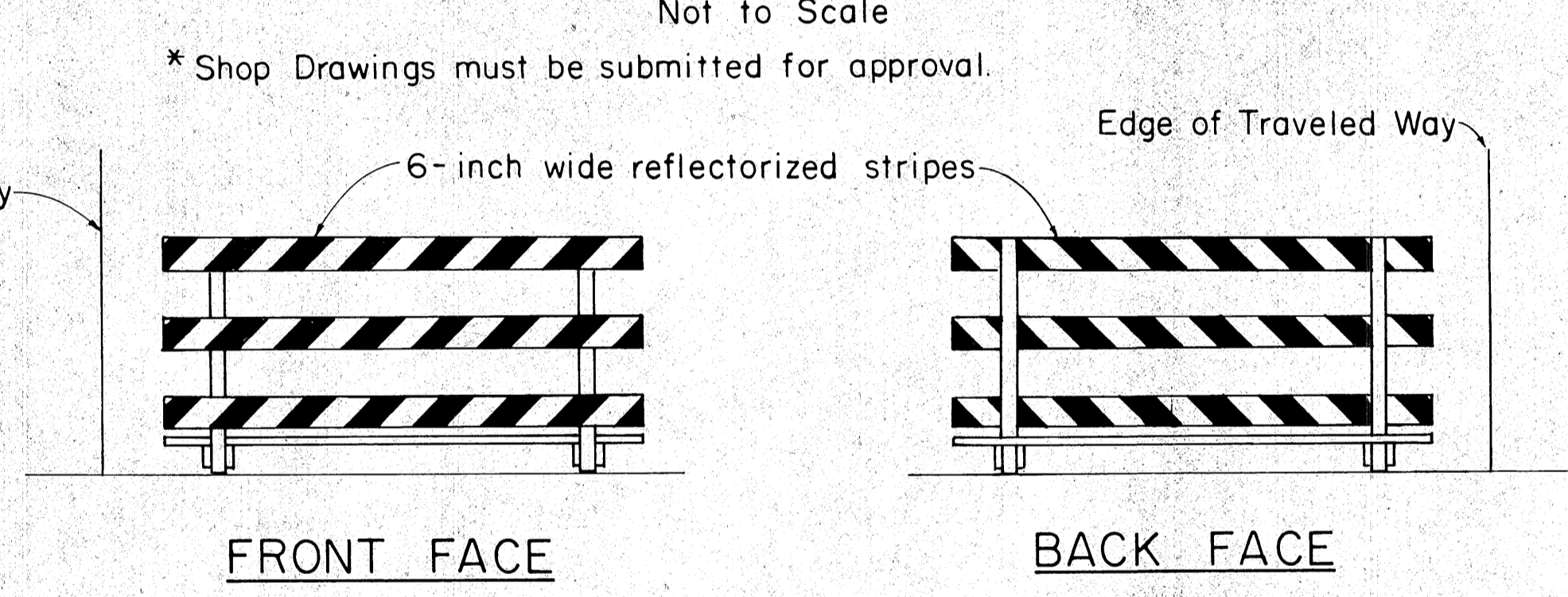


TYPE I **TYPE I**

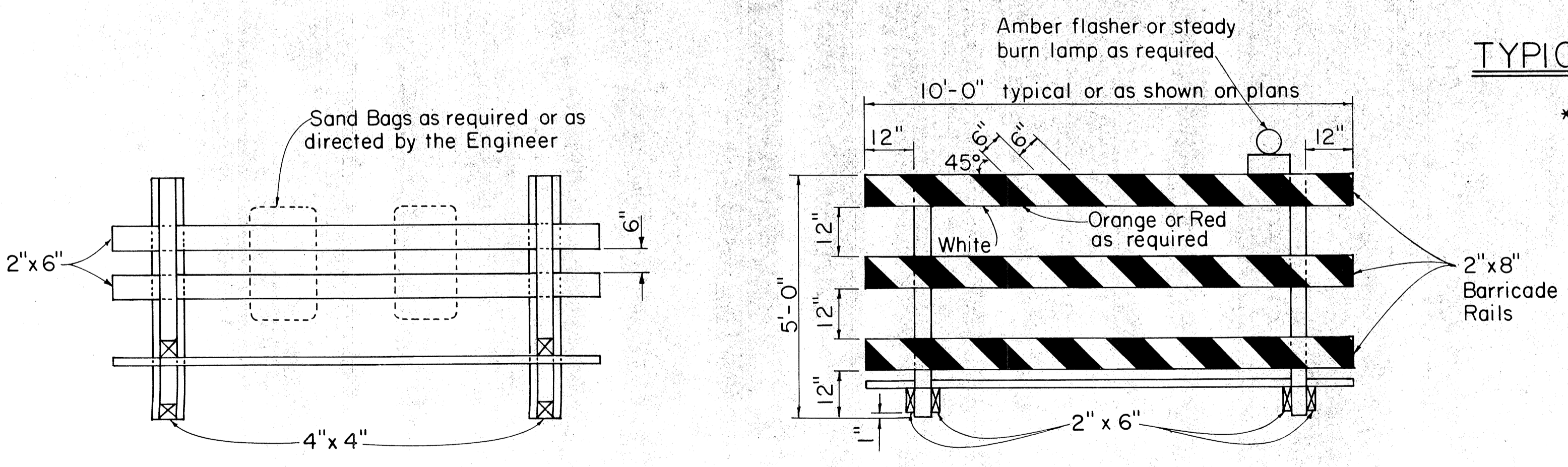
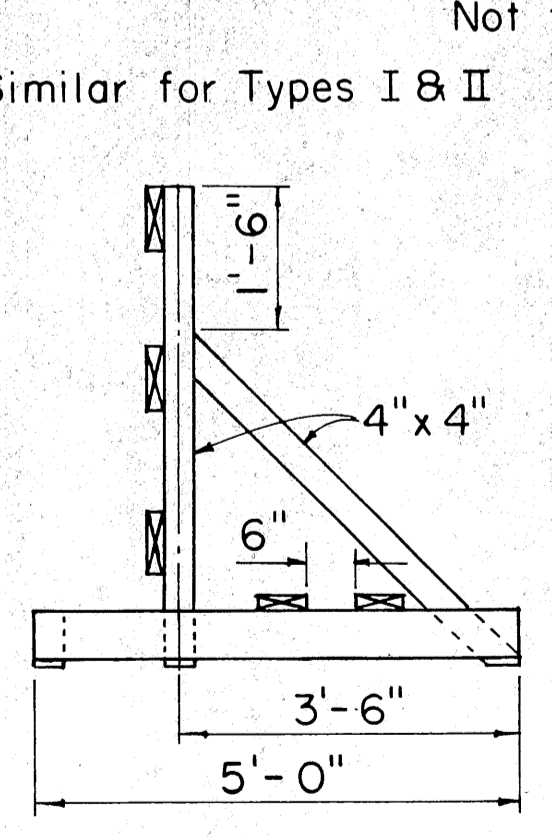


TYPE II BARRICADE
Scale: 1/2" = 1'-0"

PLASTIC MOLDED BARRICADE OPTIONS*



TYPICAL BARRICADE STRIPING DETAILS**



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.

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

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

APPROVED:
Hubert P. P. P. P. 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