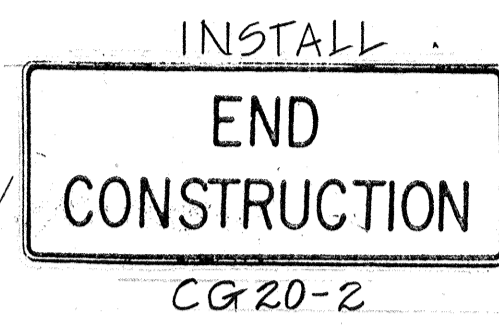
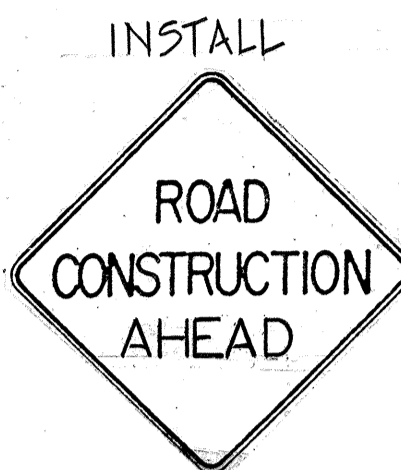


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-ROS-083-1(12)	1984	45	63



INSTALL
CW-20-1d

INSTALL
CG 20-2

INSTALL

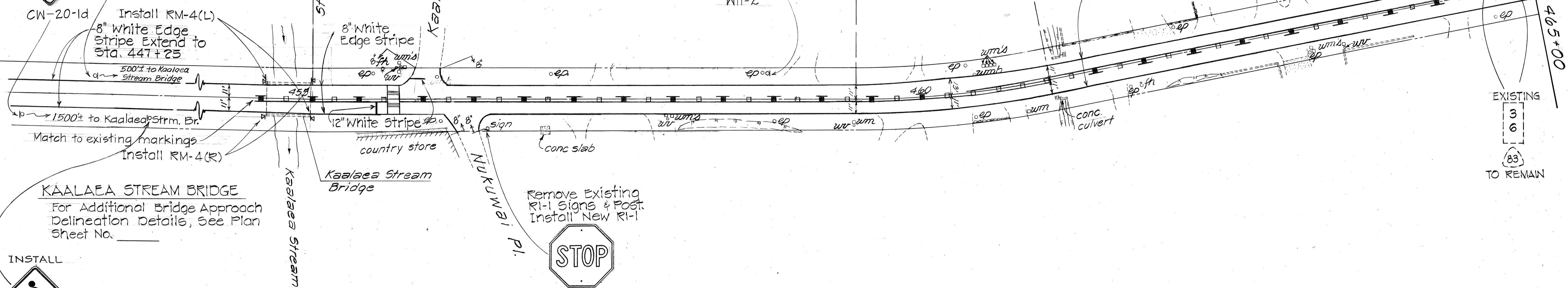
W11-2

P.C. Sta. 459+48.20
R=800'

TRUE NORTH
Scale: 1"=40'

P.T. Sta. 461+05.23

M.L. STA. 465+00



EXISTING
3
6
83
TO REMAIN

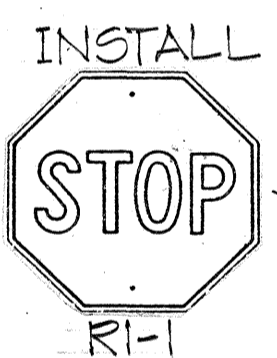
KAAALAEA STREAM BRIDGE
For Additional Bridge Approach Delineation Details, See Plan Sheet No. _____

Remove Existing R1-1 Signs & Post. Install New R1-1



INSTALL
W11-2
120± to Kaalaea Stream Bridge

TRUE NORTH
Scale: 1"=40'



INSTALL
R1-1

Install Type II Object Marker

Install Type II Object Marker

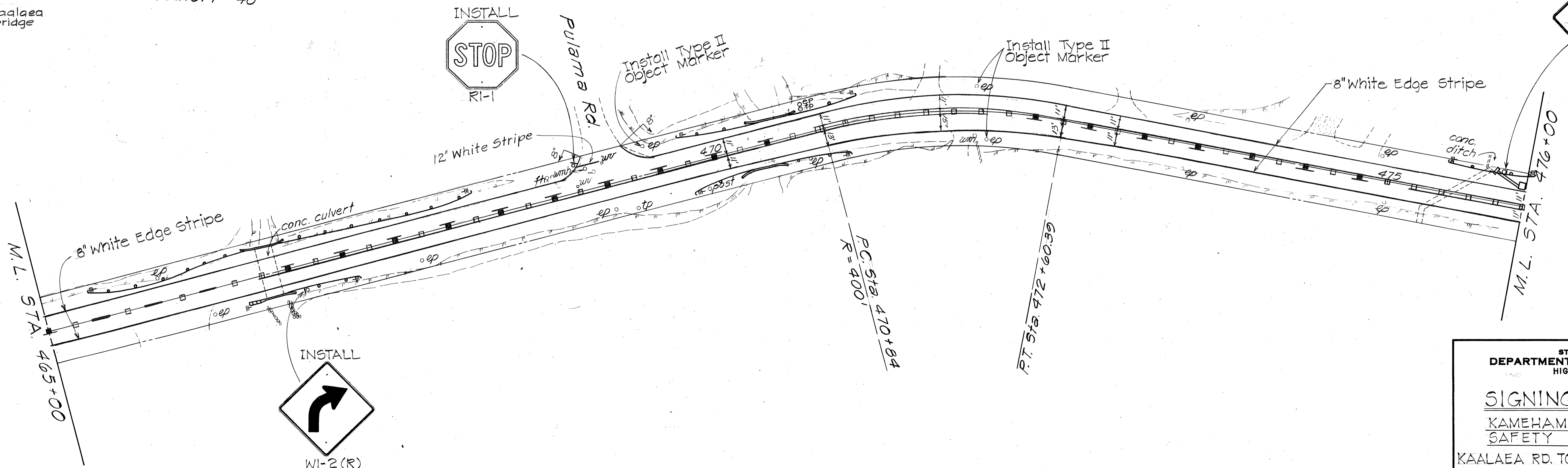


INSTALL
W1-2(L)

P.C. Sta. 470+84
R=400'

P.T. Sta. 472+60.53

M.L. STA. 476+00



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

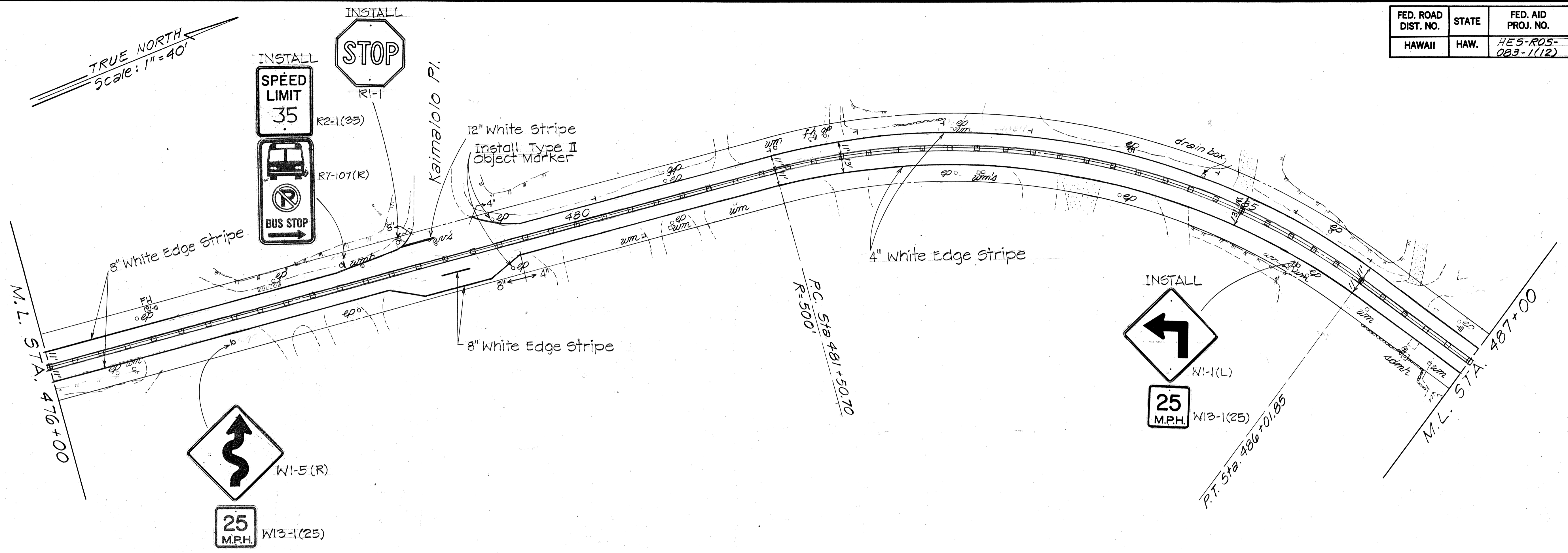
SIGNING & MARKING
KAMEHAMEHA HIGHWAY
SAFETY IMPROVEMENTS

KAAALAEA RD. TO WAIHOLE VALLEY RD.
F.A. PROJ. NO. HES-ROS-083-1(12)
Scale: 1"=40' Date: Mar. 1983

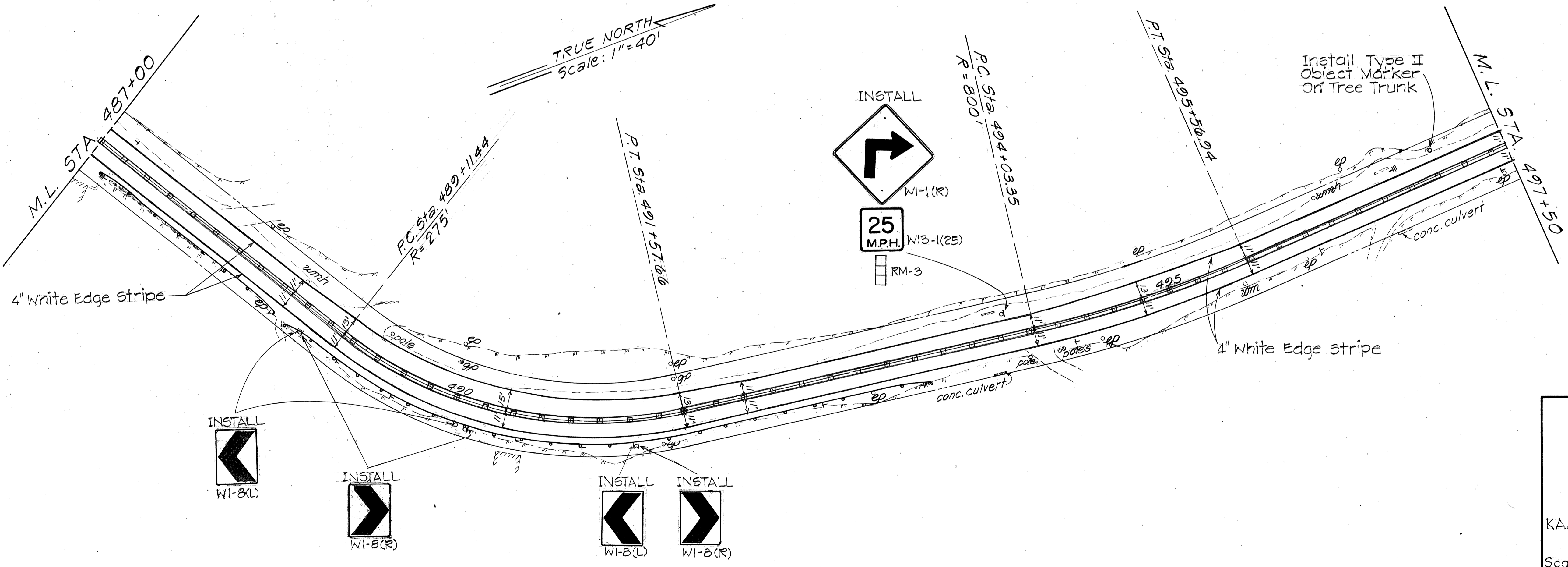
SHEET NO. / OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HE 5-ROS-083-1(12)	1984	46	63

TRUE NORTH
Scale: 1"=40'



TRUE NORTH
Scale: 1"=40'



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

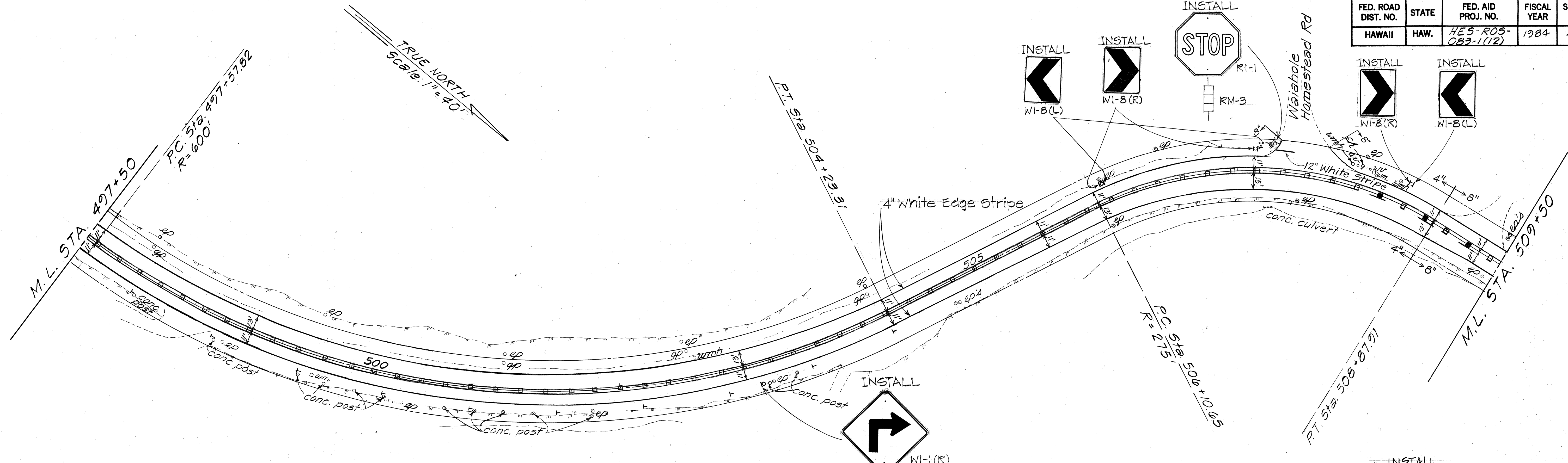
SIGNING & MARKING
KAMEHAMEHA HIGHWAY
SAFETY IMPROVEMENTS

KAALAEA RD TO WAIHOLE VALLEY RD.
F.A. PROJ. NO. HES-ROS-083-1(12)

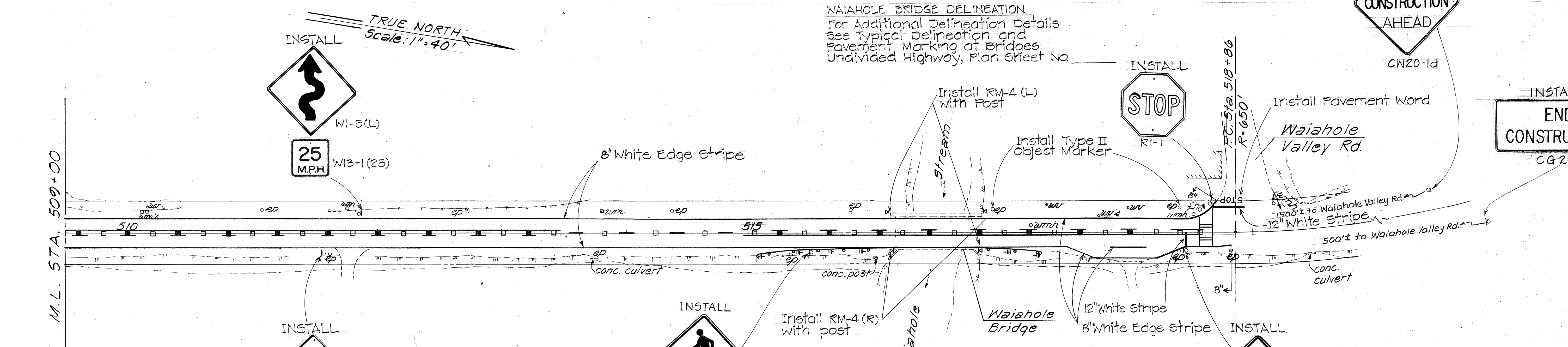
Scale: 1"=40' Date: Mar. 1983

SHEET NO. 2 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HE-5-R05-083-1(12)	1984	47	63



WAIHOLE BRIDGE DELINEATION
 For Additional Delineation Details
 See Typical Delineation and
 Pavement Marking at Bridges
 Undivided Highway, Plan Sheet No.



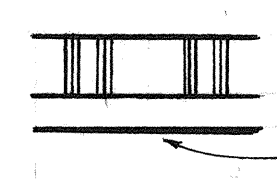



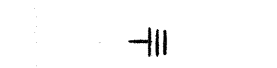

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
SIGNING & MARKING
 KAMEHAMEHA HIGHWAY
 SAFETY IMPROVEMENTS
 KAALAEA RD. TO WAIHOLE VALLEY RD.
 F.A. PROJ. NO. HES-ROS-083-1(12)
 Scale: 1"=40' Date: Mar. 1983
 SHEET NO. 3 OF 4 SHEETS

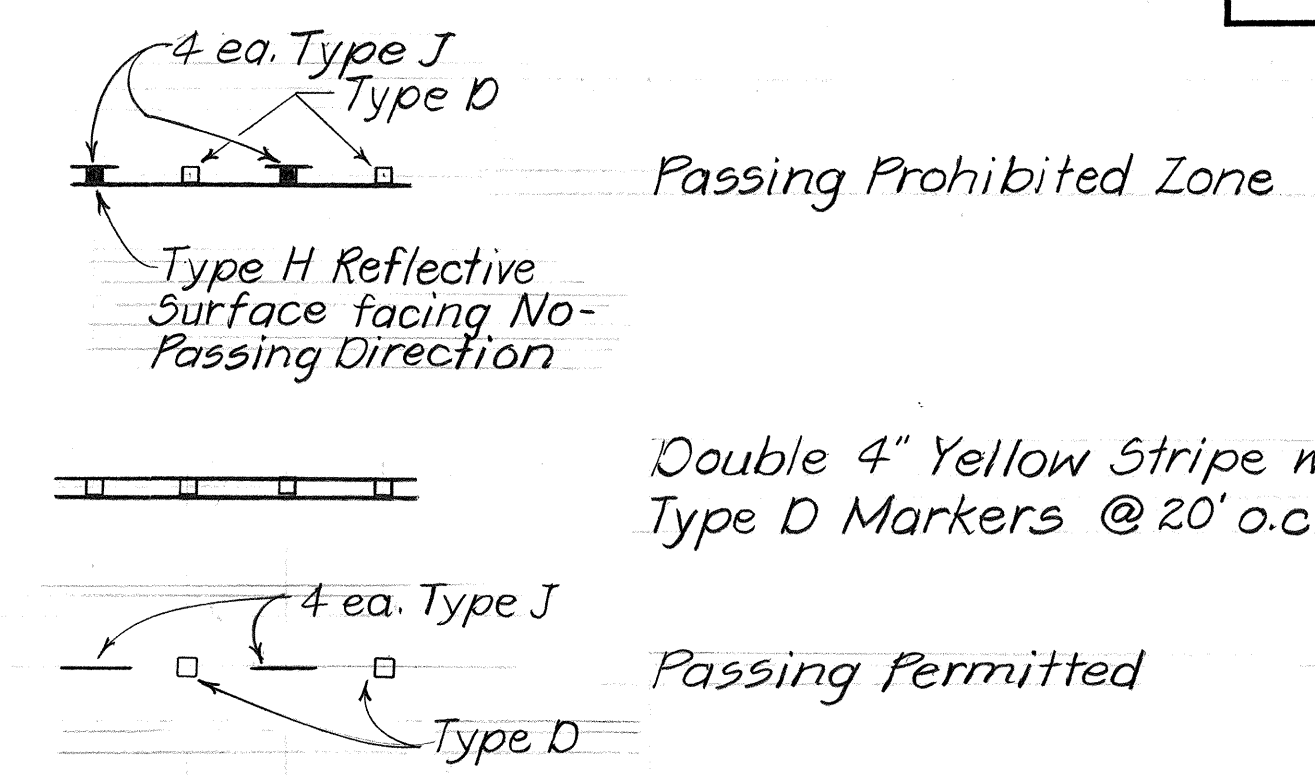
DATE	.....
SURVEY PLOTTED BY	.....
DESIGNED BY	.....
TRACED BY	.....
NOTE BOOK	.....
QUANTITIES BY	.....
CHECKED BY	.....
No.	.....

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HE5-R05-083-1(12)	1984	48	63

DESCRIPTION	QUANTITY
4" White Edge Stripe (Paint)	5,400 L.F.
8" White Edge Stripe (Paint)	6,000 L.F.
12" Pavement Stripe (Tape)	110 L.F.
Crosswalk Marking (Tape)	4 Lanes
Pavement Word (Tape)	1 Each
Temporary Transverse Markings	170 L.F.
4" Yellow Stripe (Tape)	2600 L.F.
Double 4" Yellow Stripe (Tape)	3500 L.F.

LEGEND

-  Crosswalk and Stop Line (All stop lines 10'-0" from Crosswalk unless otherwise noted)
-  12" Stop Line
-  4" White Edge Stripe or 8" White Edge Stripe (Paint)
-  Reflector Marker RM-1
-  Reflector Marker RM-3
-  Reflector Marker RM-4



TYPE	DESCRIPTION	QUANTITY	
		w/POST	w/o POST
R1-1	Stop Sign	5	
R2-1(35)	Speed Limit Sign		1
RT-107	No Parking - Bus Stop	1	
WI-1(R)	Turn Sign	2	
WI-1(L)	" "	1	
WI-2(R)	Curve Sign	1	
WI-2(L)	" "	1	
WI-5(R)	Winding Road Sign	1	
WI-5(L)	" "	1	
WI-8(R)	Chevron Alignment Sign	7	
WI-8(L)	" "		5
W11A-2	Crossing Sign	1	
W13-1(25)	Advisory Speed Plate		5
CW20-1d	Road Construction Sign	2	
CG20-2	End Construction Sign	2	
W11-2	Advance Crossing Sign	3	

GENERAL NOTES

- All existing Regulatory and Warning Signs and Posts and Markers not to be incorporated in the completed project shall be removed unless otherwise noted or directed by the Engineer. Costs shall be incidental to the various contract items.
- Existing signs shall not be removed until new signs are installed as replacements or the messages are no longer applicable.
- Existing Pavement Striping and Markings not incorporated in the final traffic pattern shall be removed as directed by the Engineer. Costs shall be incidental to the various contract items.
- Locations of all new Pavement Striping and Markings shall be staked out in the field by the Contractor for approval by the Engineer prior to installation.
- Backing for all new Regulatory and Warning Signs shall not be spliced.
- All Pavement Striping and Markings shall be of preformed marking tape except for the Edge Striping which shall be paint.
- All Reflector Marker Posts shall be flexible except those that are installed behind guardrails which should be metal posts. Also, RM-4's should be installed on metal posts.
- The installation of pavement striping and pavement markers shall be a part of the resurfacing project.

TYPE	DESCRIPTION	QUANTITY		
		w/Flexible Post	w/Metal Post	w/o Post
RM-1	Reflector Marker	29	7	
RM-3	Reflector Marker	10	17	2
RM-4	Reflector Marker		8	
Type II	Object Marker			8

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

SUMMARY, LEGEND & GENERAL NOTES

KAMEHAMEHA HIGHWAY
 SAFETY IMPROVEMENTS

KAALAEA RD. TO WAIHOLE VALLEY RD.
 F.A. PROJ. NO. HE5-R05-083-1(12)

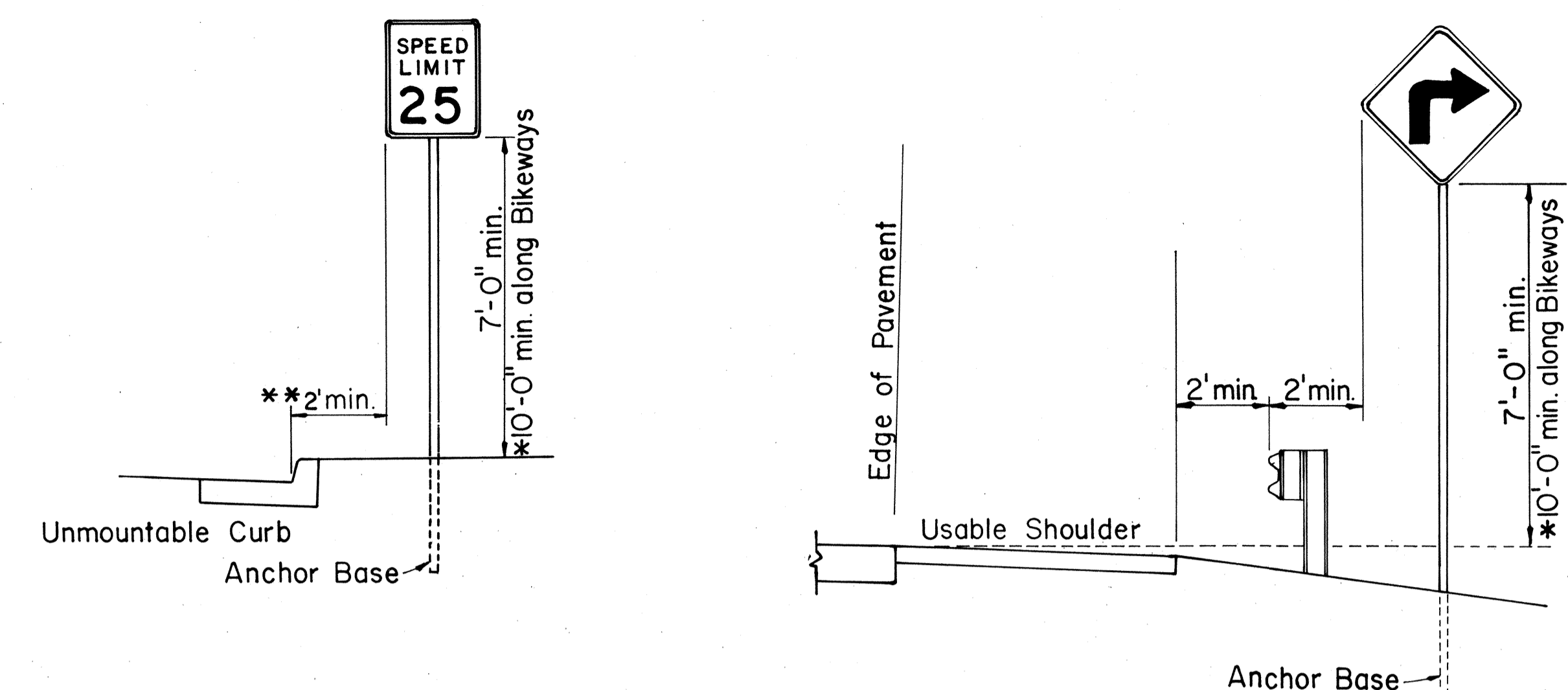
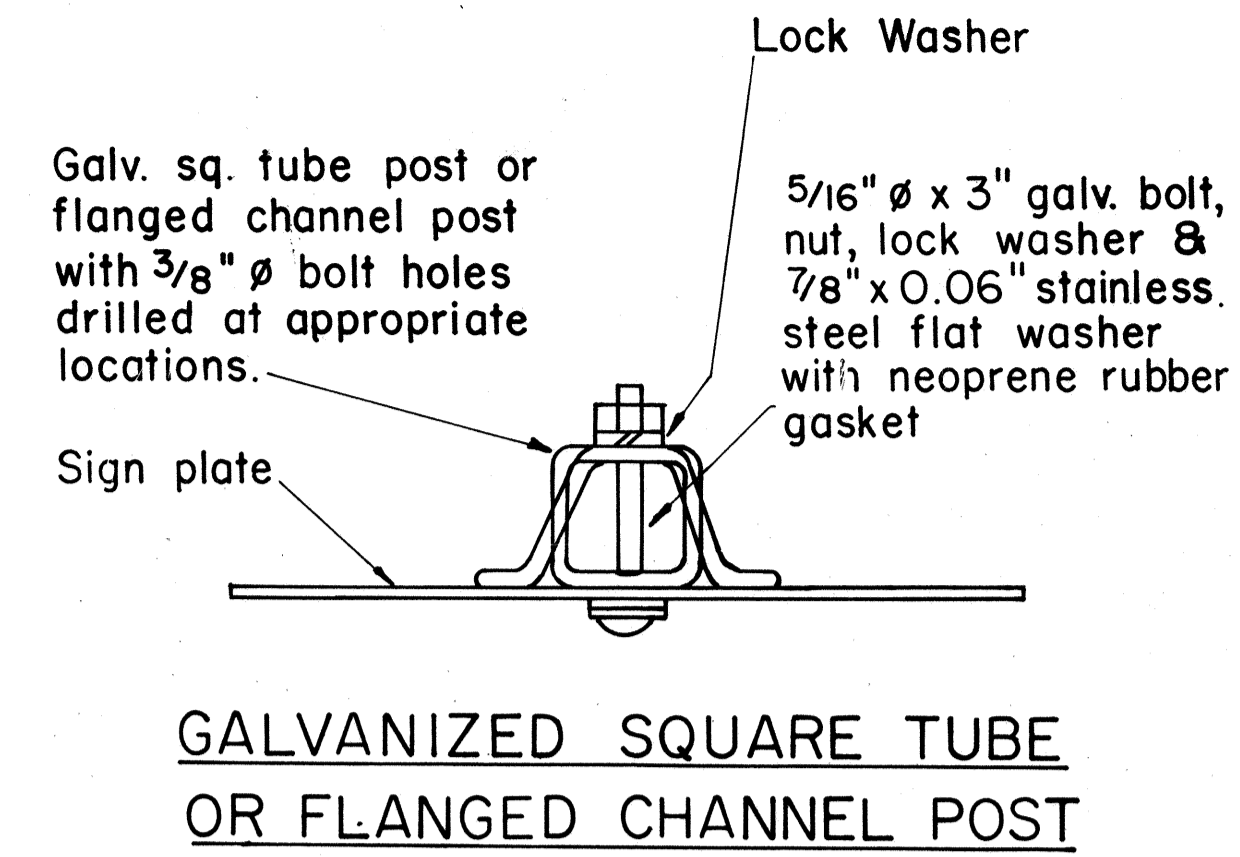
Scale: 1"=40' Date: Mar. 1983

SHEET NO. 4 OF 4 SHEETS

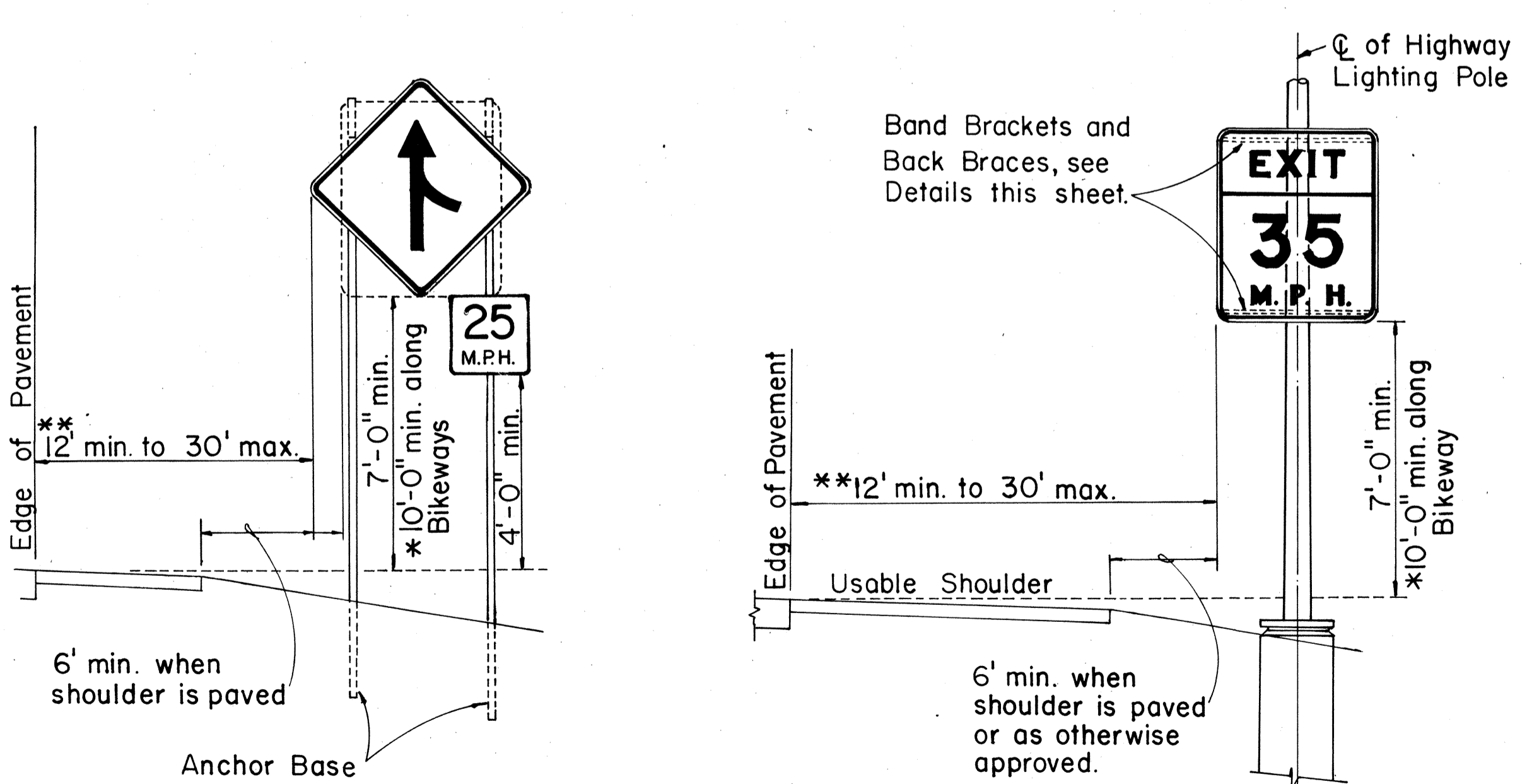
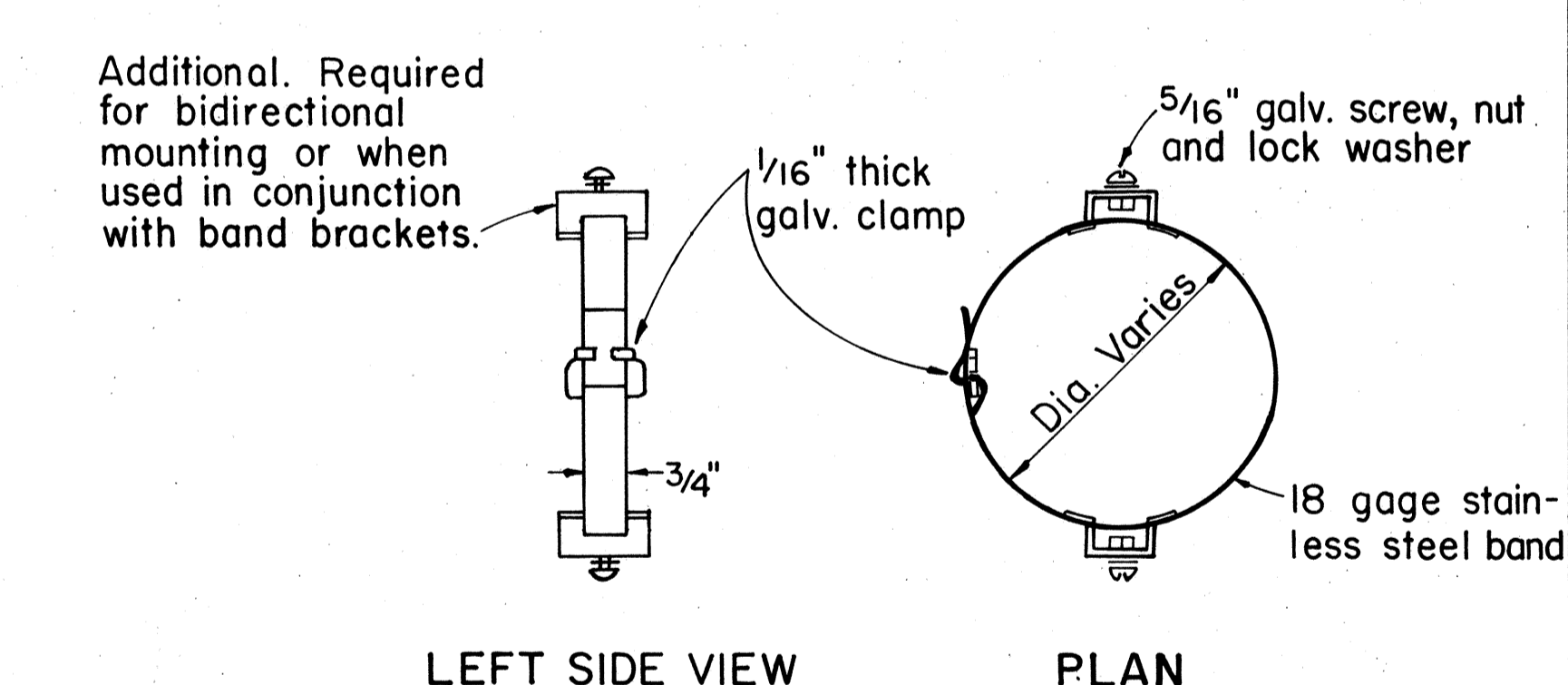
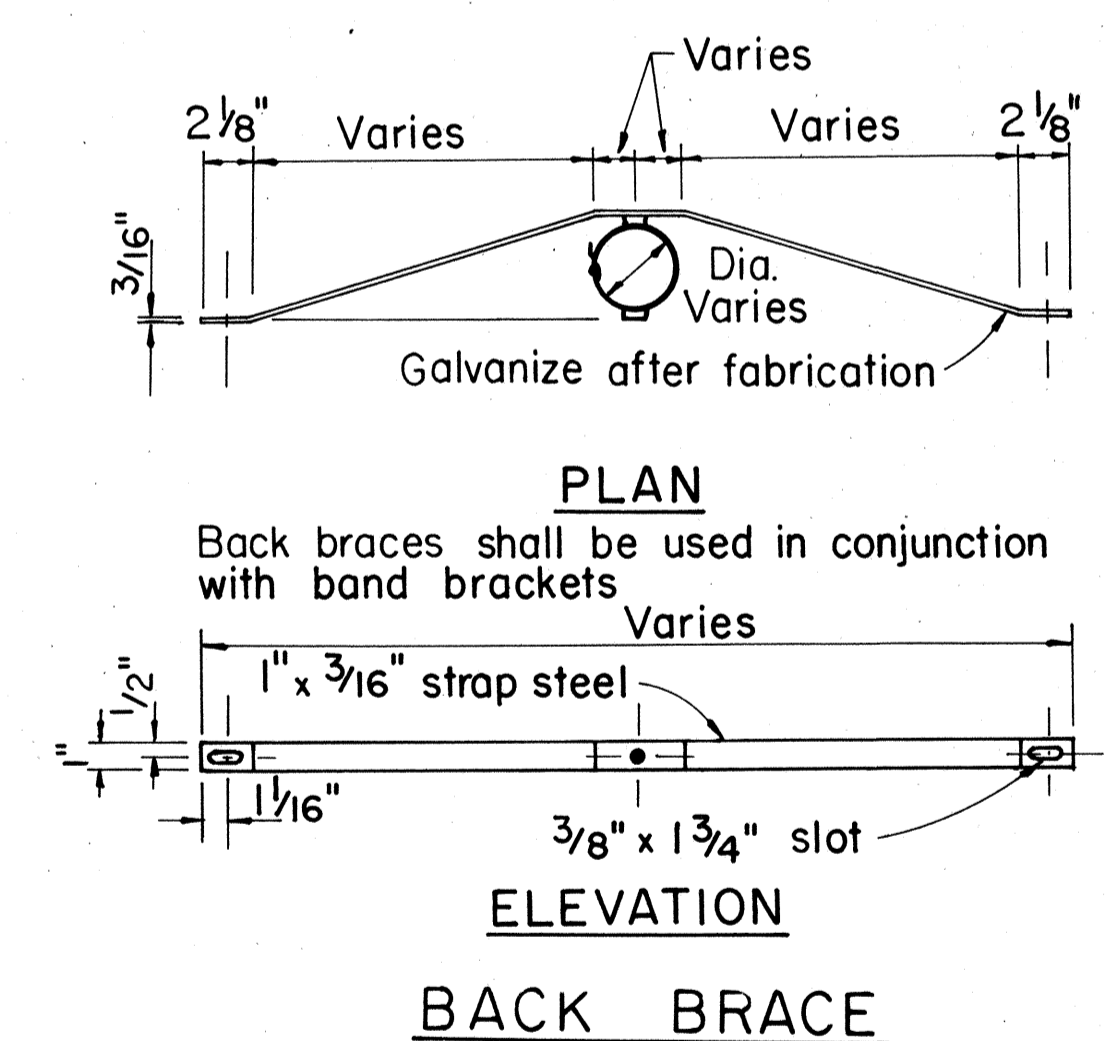
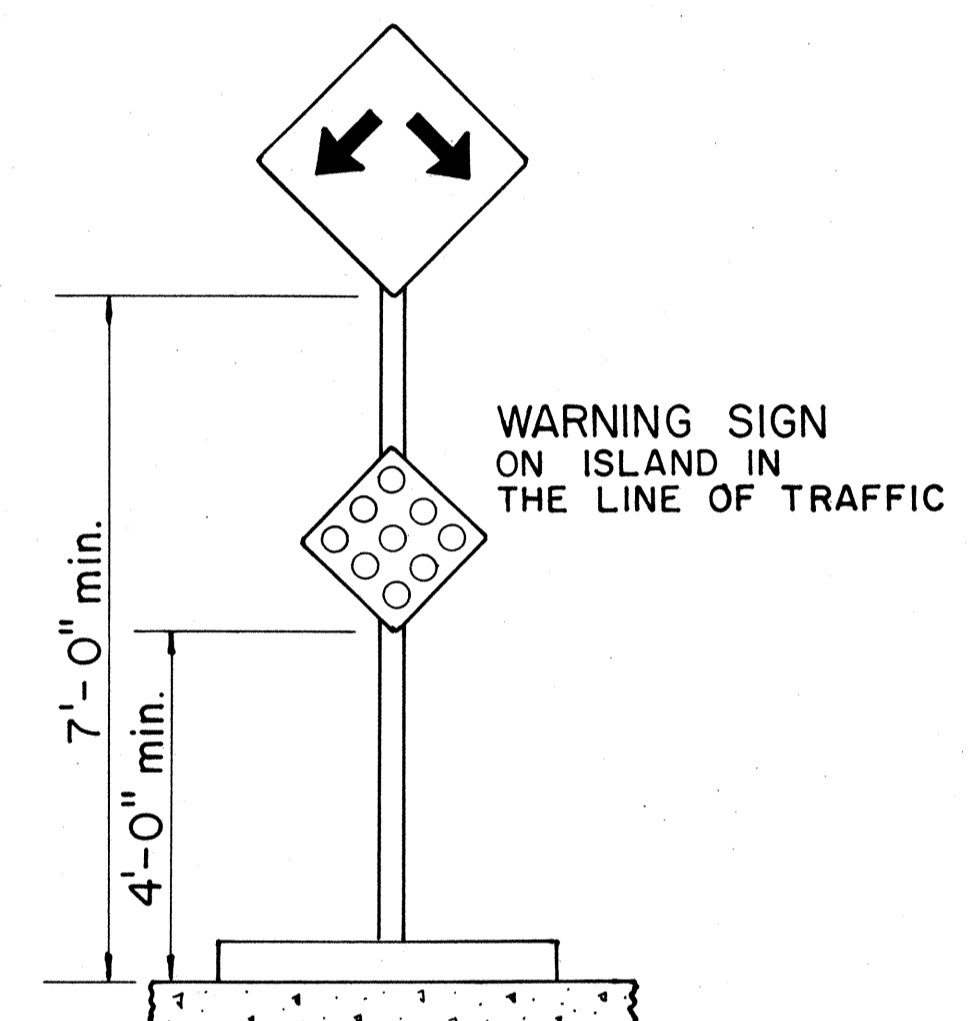
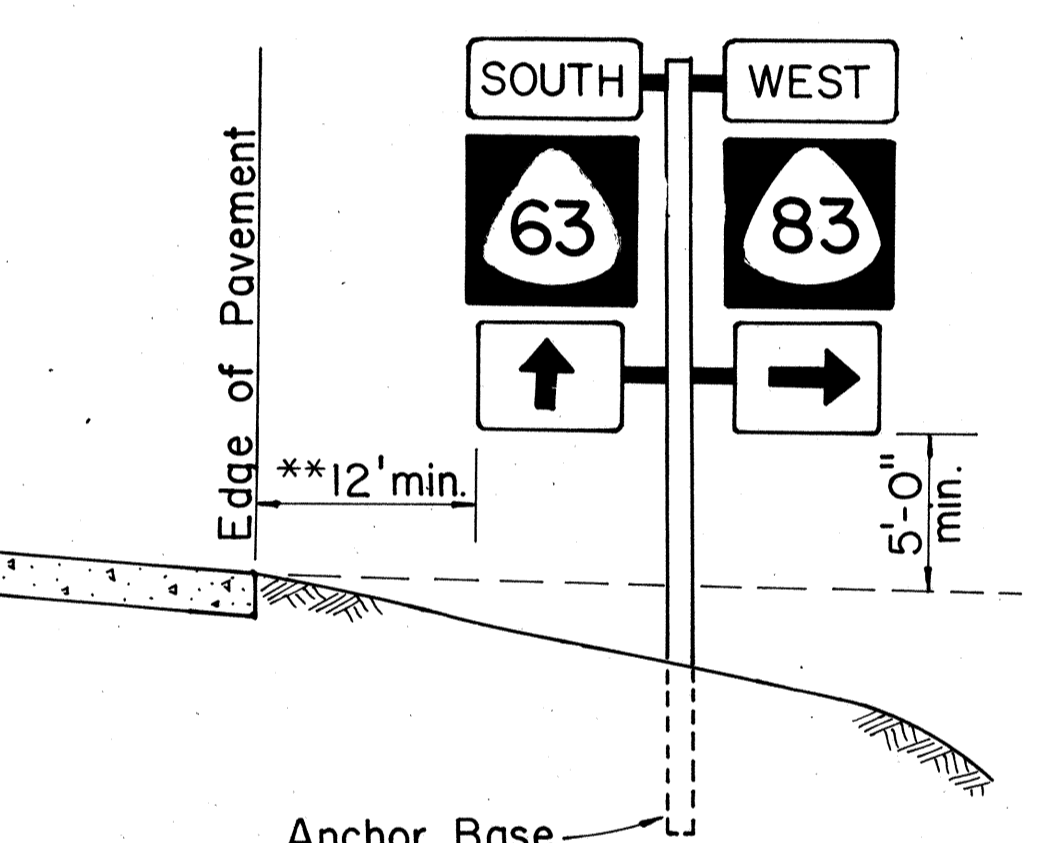
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HE6-R05 083-1(12)	1984	49	63

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.



ROADSIDE ASSEMBLY RURAL DISTRICT



TYPICAL MOUNTING DETAILS

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

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

APPROVED:
P. 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. 1 OF 15 SHEETS DT 100

DATE	_____
SURVEY PLOTTED BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
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.	HES-ROS-083-(1,2)	1984	50	63

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 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:

Eishi Tanaka 9/21/82
TRAFFIC ENGINEER DATE

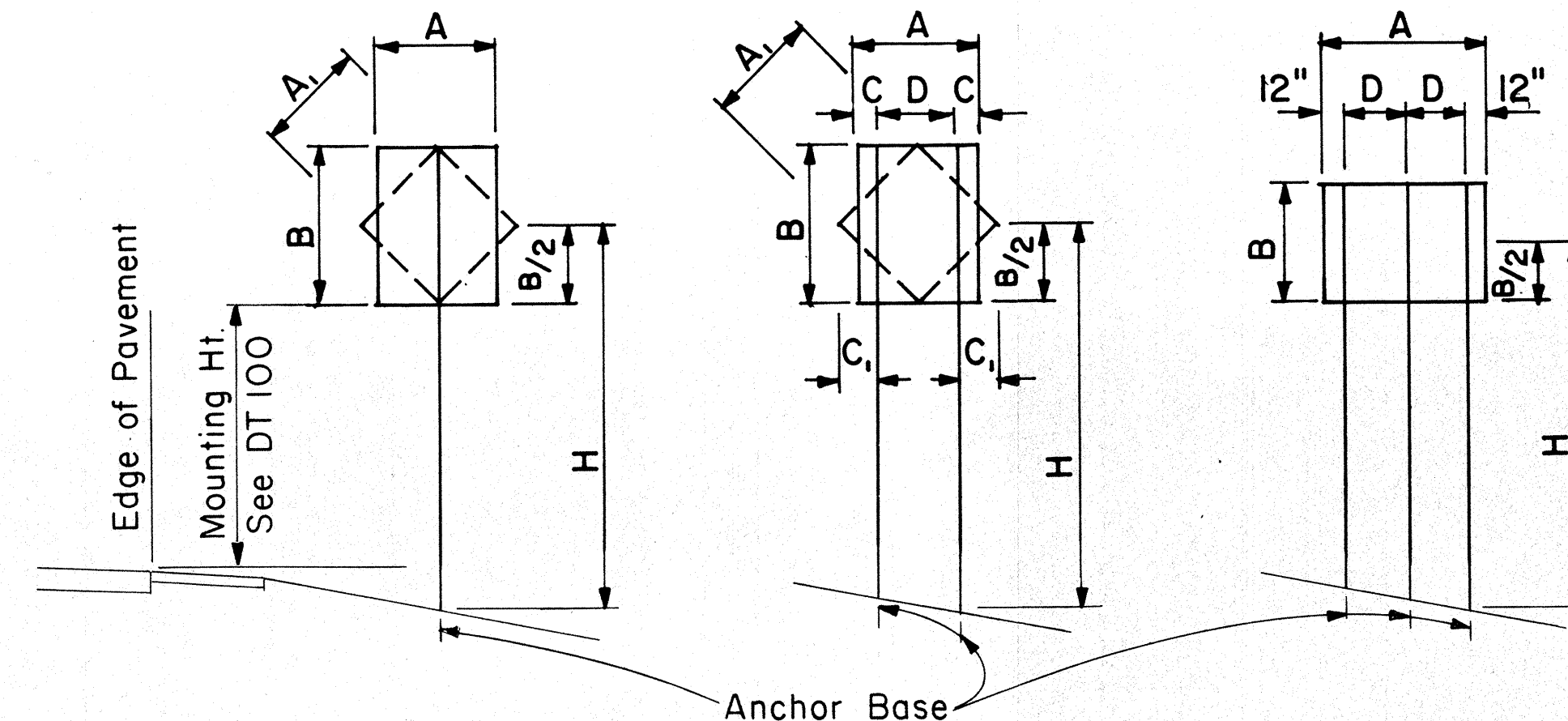
APPROVED:

Robert S. 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. 2. OF 15 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.)					
		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

A x B (Area, sq.ft.)

FLANGED CHANNEL: 2-POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (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

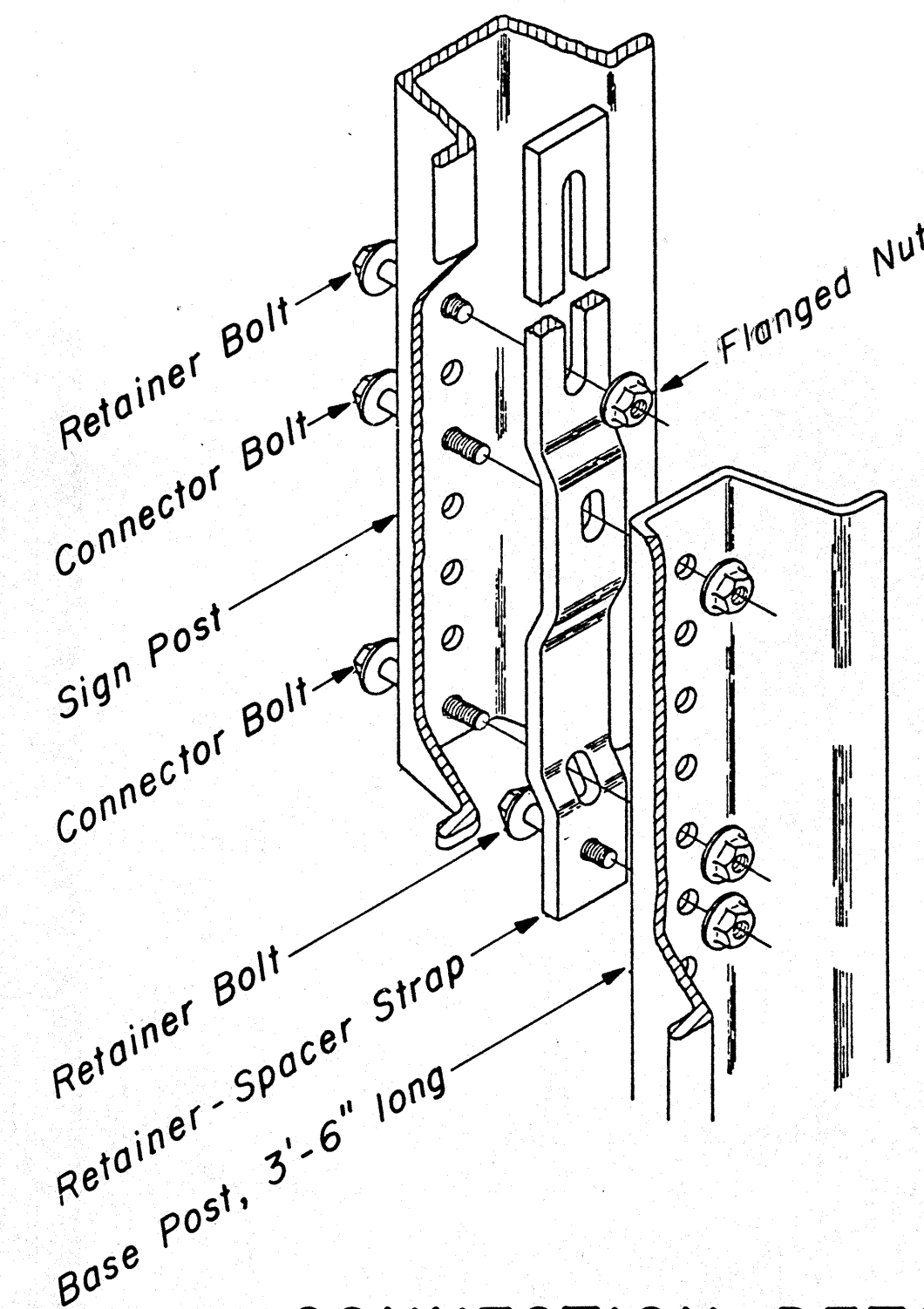
A x B (Area, sq.ft.)

FLANGED CHANNEL: 3-POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (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

A x B (Area, sq.ft.)

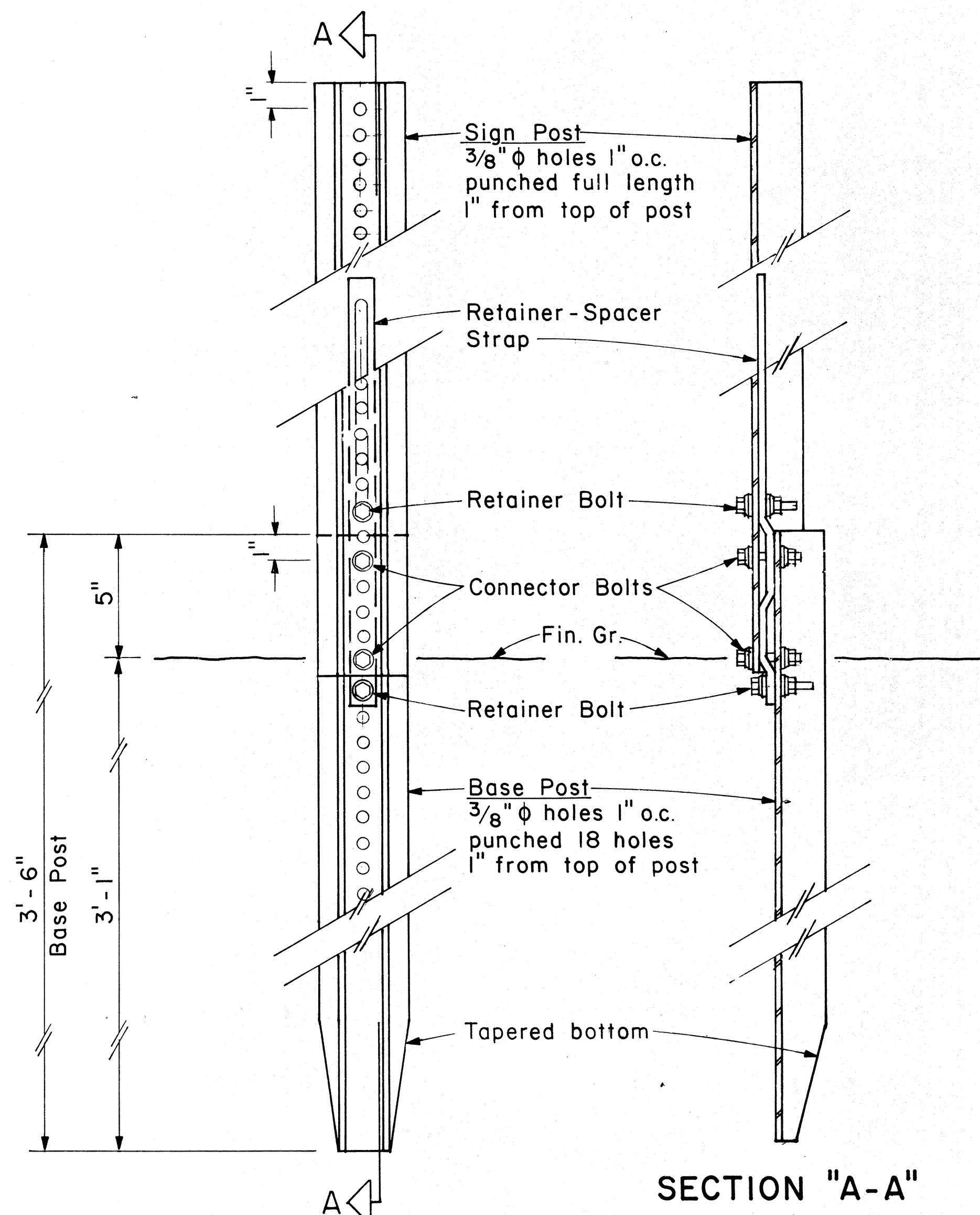
WINDLOAD CHARTS

NO.	REVISION	APPROVED BY	DATE



CONNECTION DETAIL

Not to Scale

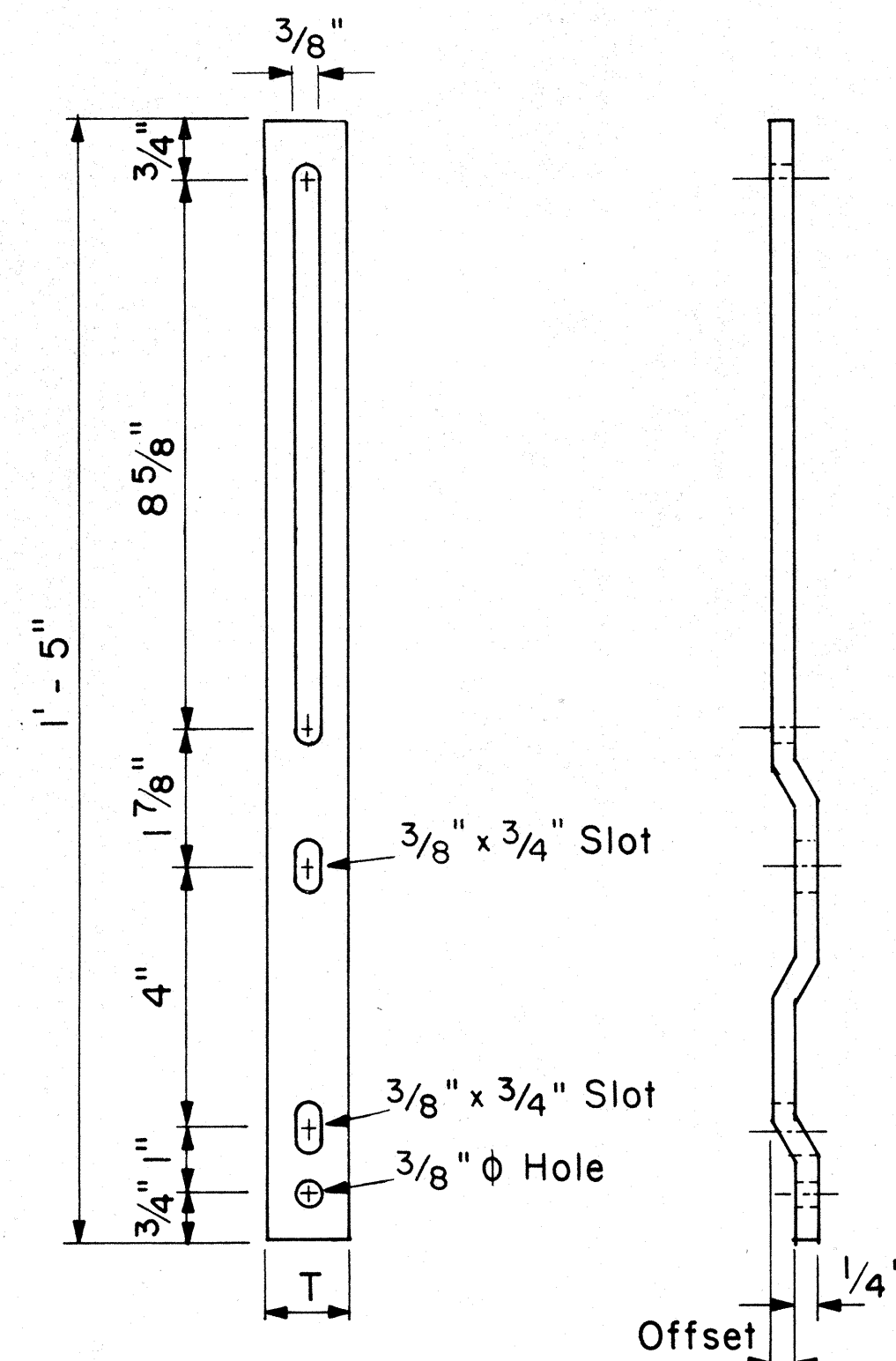


SECTION "A-A"

BACK VIEW

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"



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"

DATE: _____
SURVEY PLOTTED BY: _____
DESIGNED BY: _____
CHECKED BY: _____
NOTE BOOK NO. _____

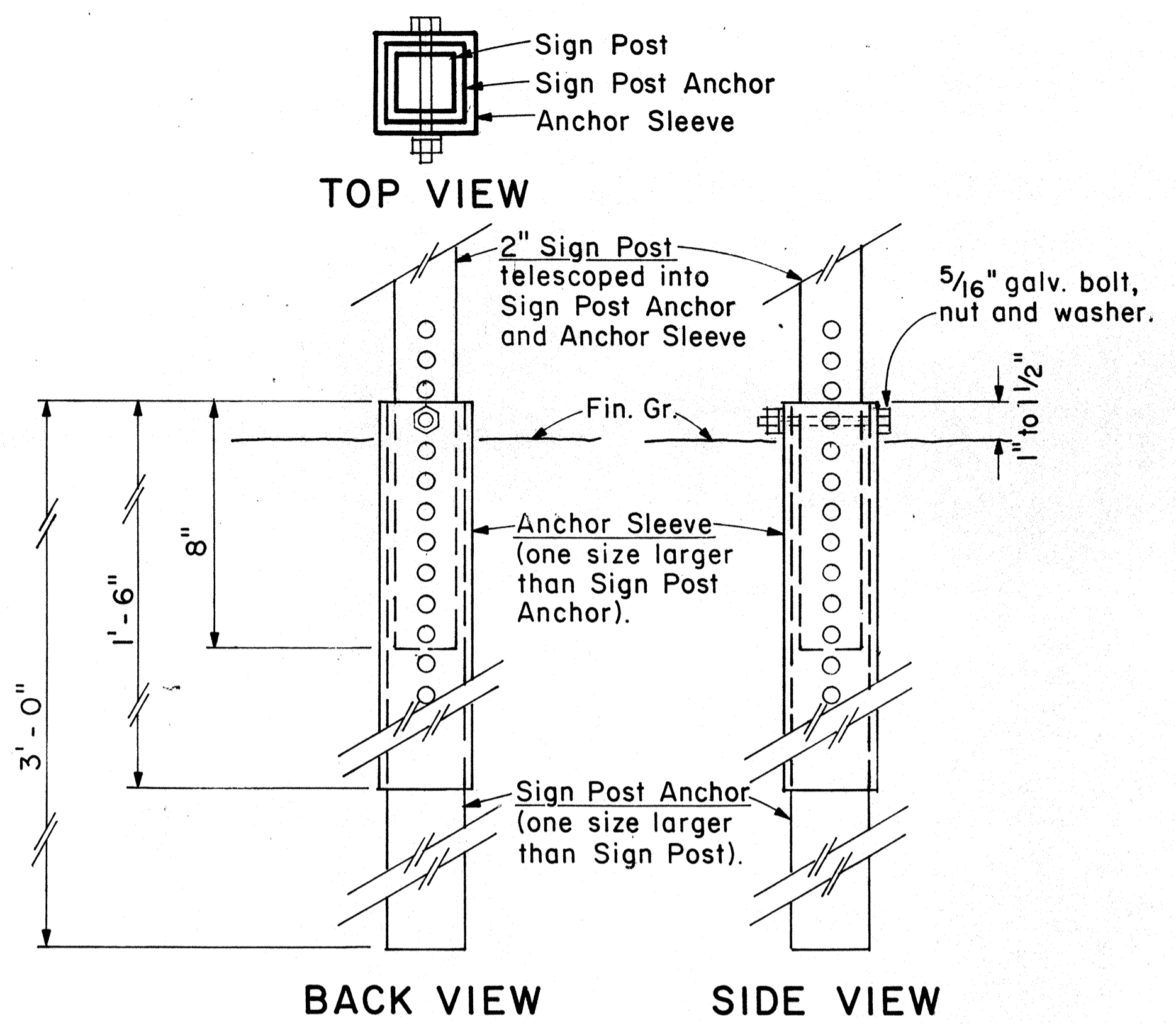
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HAWAII	HAW.	HES-ROS-083-1121	1984	51	63

GENERAL NOTES

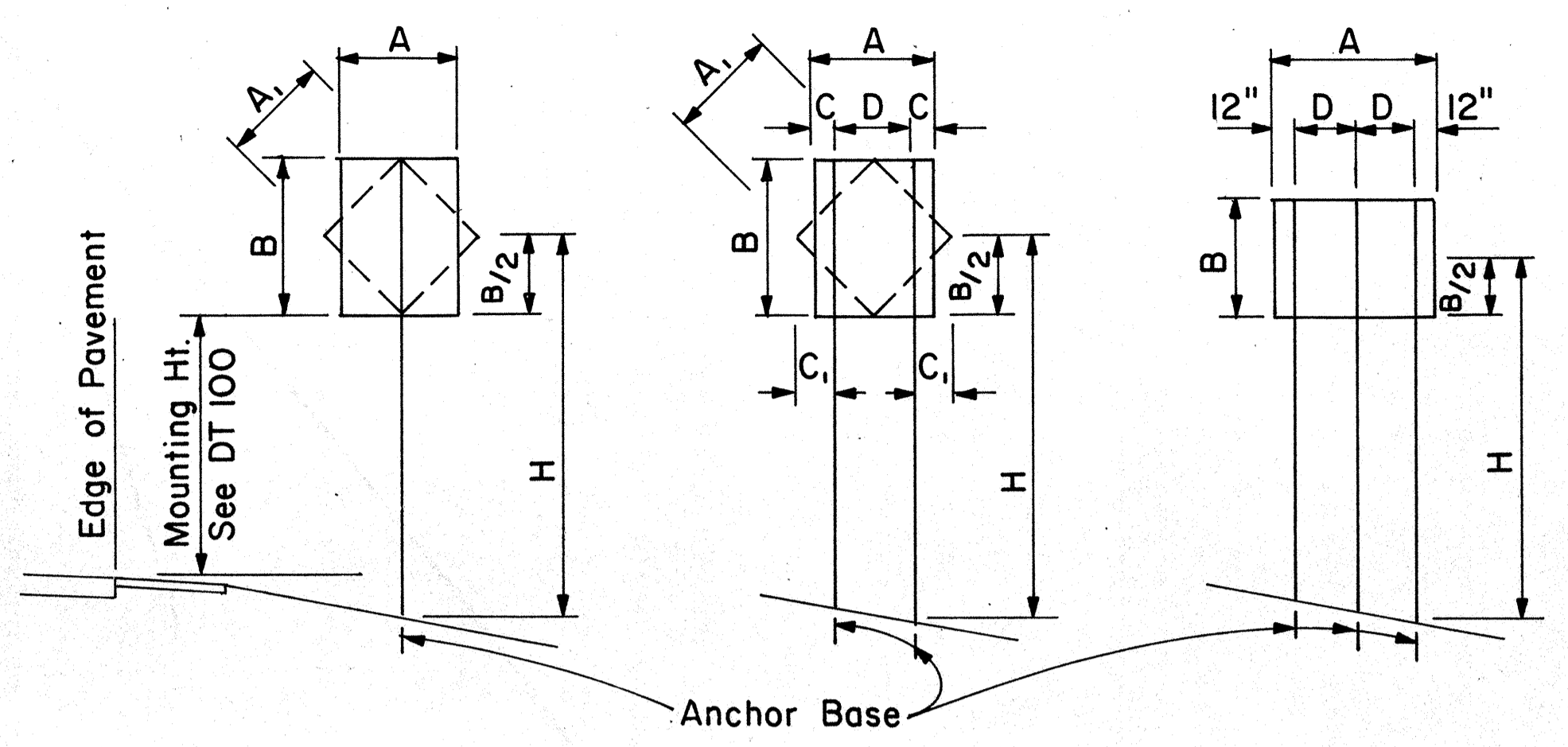
- Square tube sign posts shall conform to Subsection 713.11(C) Square Tube Posts of the Specifications.
- All accessories, fittings and stiffener details (as required) shall be submitted to Engineer for approval 20 days prior to installation.
- Square tube posts shall be perforated with 7/16" ϕ holes, 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 $H = \frac{\text{Factor}}{\text{sign area } (A \times B)}$
 and if H is known,
 Maximum sign area ($A \times B$) = $\frac{\text{Factor}}{H}$

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 2.



2" SIGN POST INSTALLATION



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.)

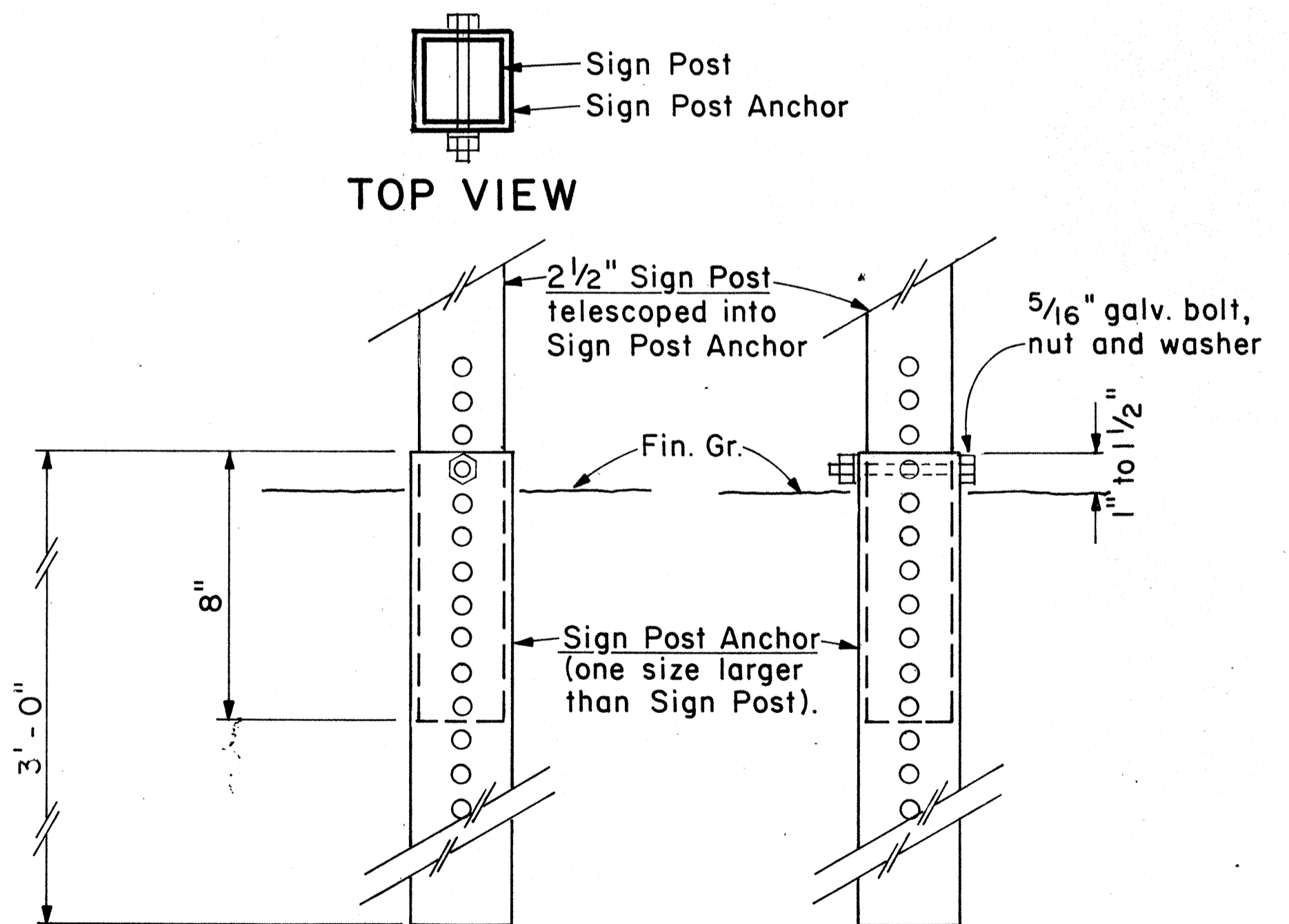
SQUARE TUBE: 2- POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2"	122	17.4	15.2	13.5	12.2	11.0	10.1
2 1/2"	212	30.2	26.5	23.5	21.1	19.2	17.6
2 1/2", 10 ga.	260	37.0	32.0	28.6	26.0	23.5	21.5

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



2 1/2" SIGN POST INSTALLATION

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"

APPROVAL RECOMMENDED:
Eishi Tanaka 9/21/82
 TRAFFIC ENGINEER DATE

APPROVED:
Herbert Ralshiki 9/22/82
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

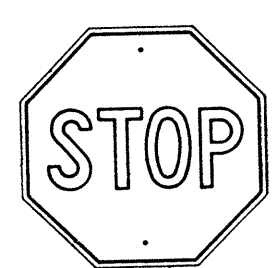
STANDARD DETAILS
GALVANIZED SQUARE TUBE
SIGN POST MOUNTING

Scale: As Shown Date: Sept. 1982

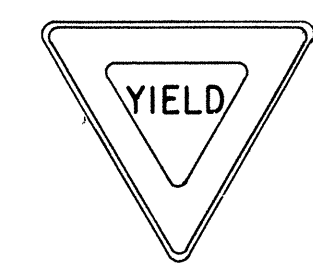
SHEET NO. 3 OF 15 SHEETS DT 100B

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

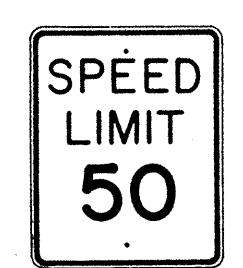
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-R05-085-1(12)	1984	52	63



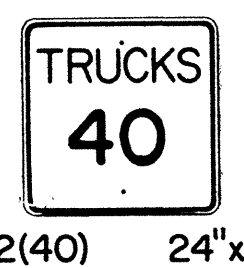
R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"



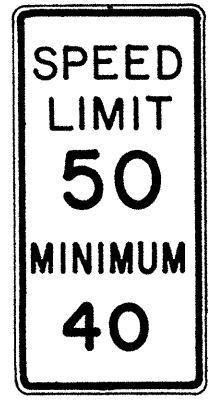
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



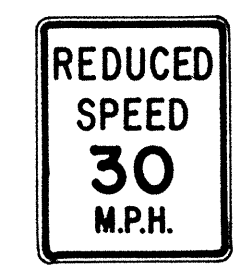
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



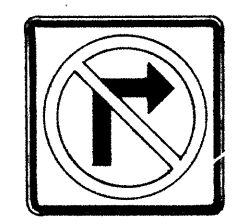
R2-2(40) 24" x 24"
R2-2(40)-A 48" x 48"



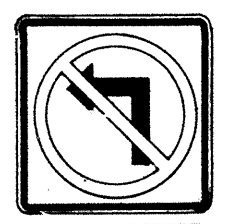
R2-4a(50/40) 24" x 48"
R2-4a(50/40)-A 48" x 96"



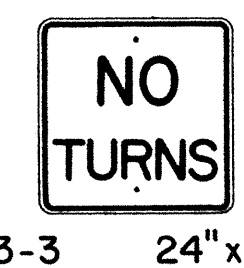
R2-5b(30) 24" x 30"
R2-5b(30)-A 48" x 60"



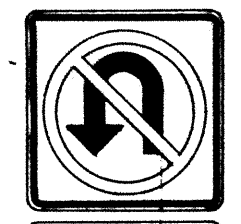
R3-1 24" x 24"
24" x 18"
R3-1-A 48" x 48"
48" x 36"



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



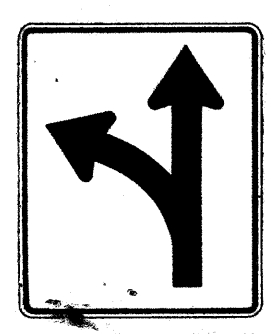
R3-3 24" x 24"
R3-3-A 48" x 48"



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



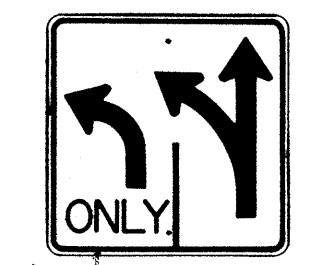
R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"



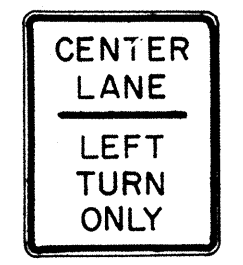
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



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"



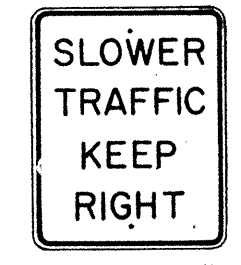
R3-9 24" x 30"



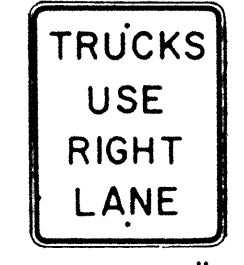
R4-1 24" x 30"



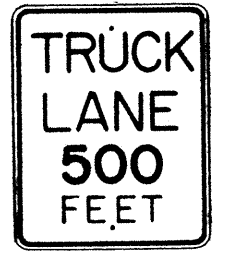
R4-2 24" x 30"



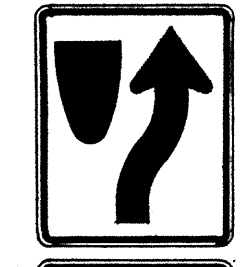
R4-3 24" x 30"
R4-3-A 48" x 60"



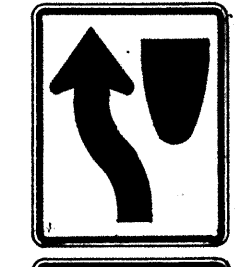
R4-5 24" x 30"



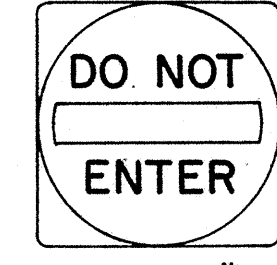
R4-6(500) 24" x 30"



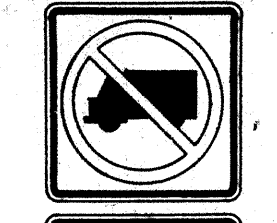
R4-7 24" x 30"
24" x 18"



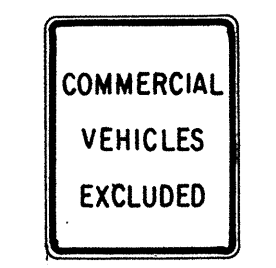
R4-8 24" x 30"
24" x 18"



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



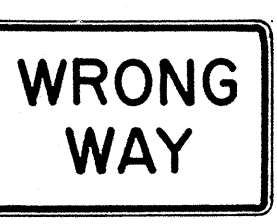
R5-2 24" x 24"
24" x 18"



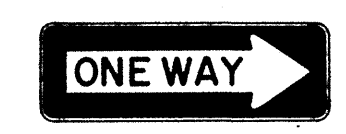
R5-4 24" x 30"



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



R5-9 36" x 24"



R6-1(R) 36" x 12"



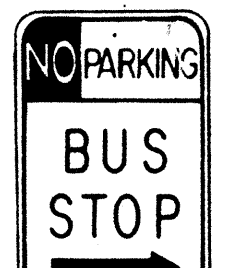
R6-2(R) 18" x 24"



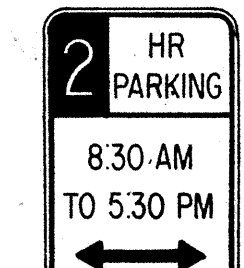
R7-1 12" x 18"
R7-1-A 24" x 30"



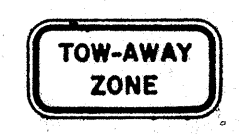
R7-4 12" x 18"
R7-4-A 24" x 30"



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"



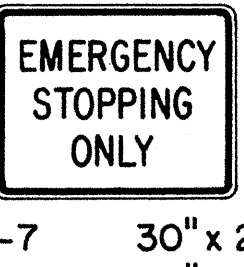
R8-4 30" x 24"
R8-4-A 48" x 36"



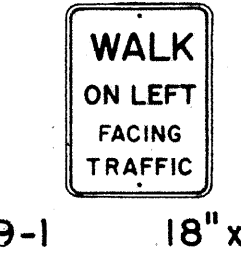
R8-5 24" x 30"



R8-6 24" x 30"



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



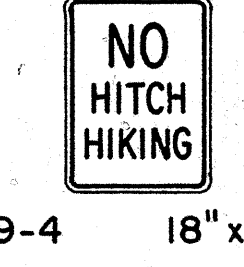
R9-1 18" x 24"



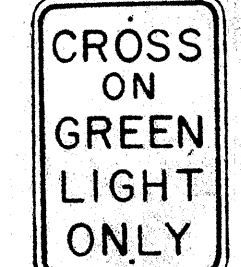
R9-2 12" x 18"



R9-3 12" x 18"



R9-4 18" x 24"



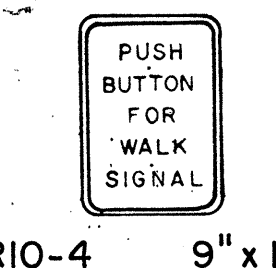
R10-1 12" x 18"



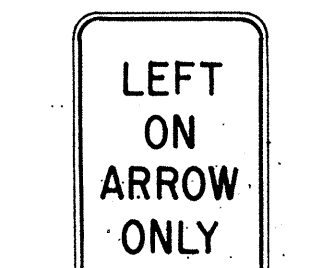
R10-2 12" x 18"



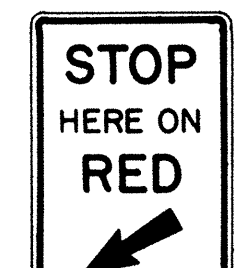
R10-3 9" x 12"



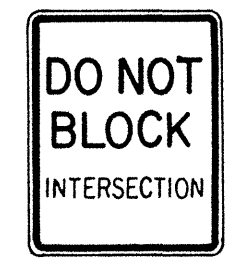
R10-4 9" x 12"



R10-5 24" x 30"



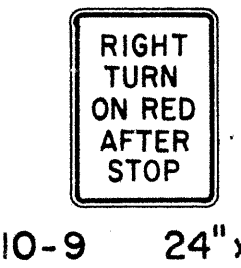
R10-6 24" x 36"



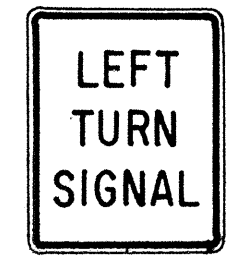
R10-7 24" x 30"



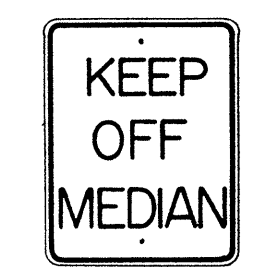
R10-8 24" x 30"



R10-9 24" x 30"



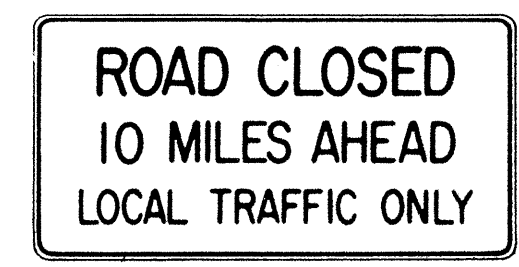
R10-10 24" x 30"



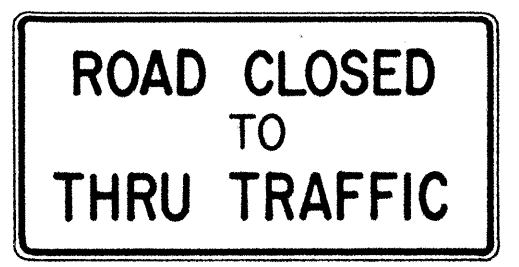
R11-1 24" x 30"



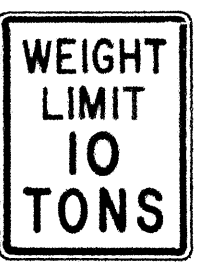
R11-2 48" x 30"



R11-3(10) 60" x 30"



R11-4 60" x 30"



R12-1(10) 24" x 30"

GENERAL NOTES

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 3/17/72
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.	8/20/72
2	Revised General Note 1.	H.T.	10/10/74
3	Added General Note 5	H.T.	6/9/78

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

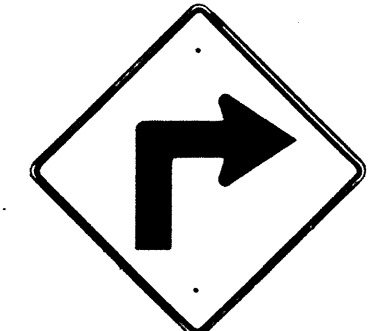
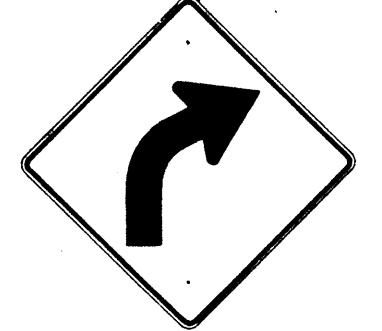
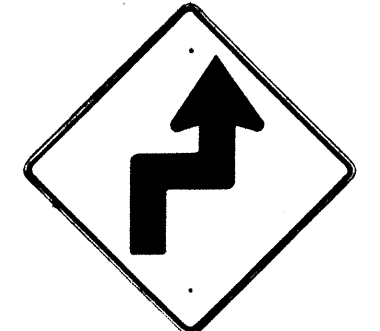
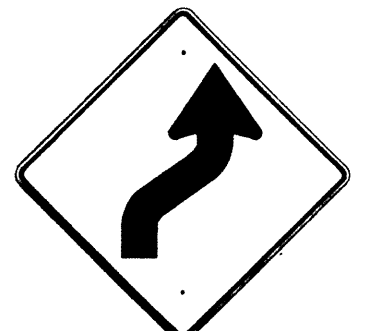
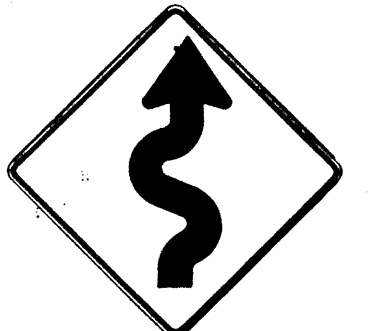
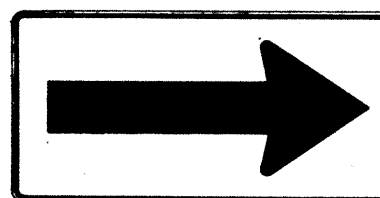
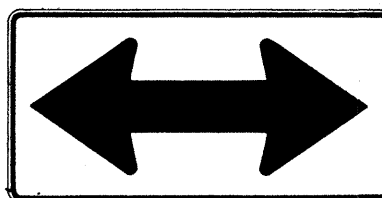
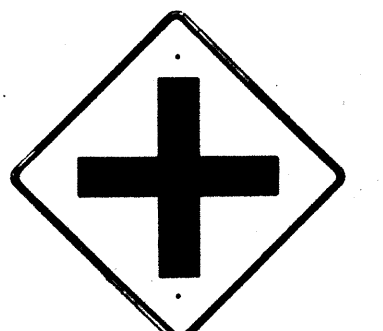
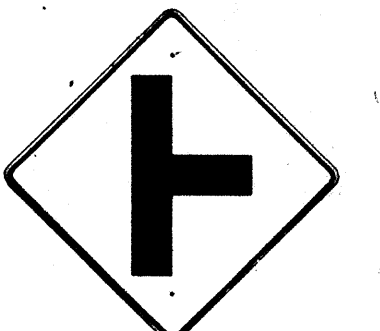
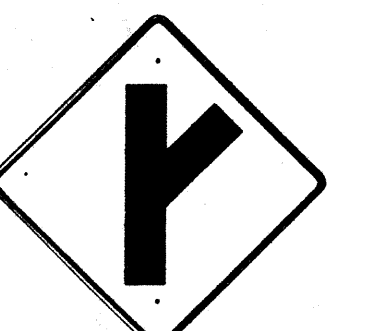
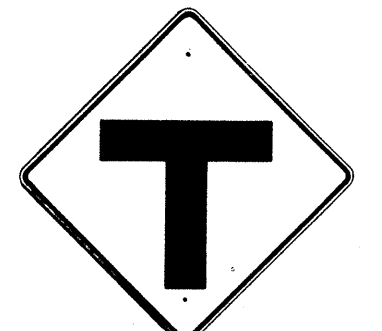
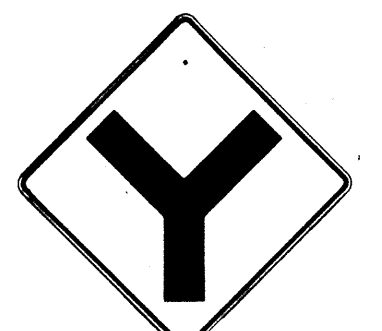


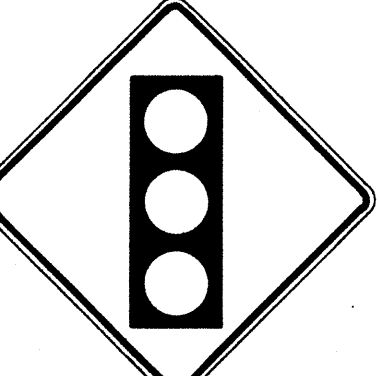

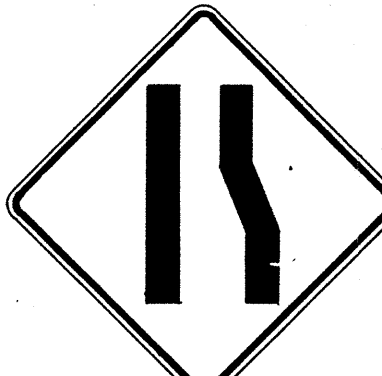




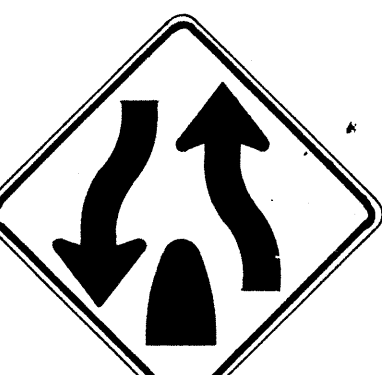

















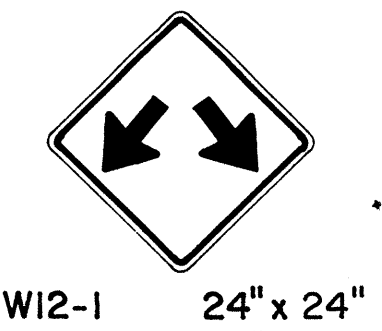


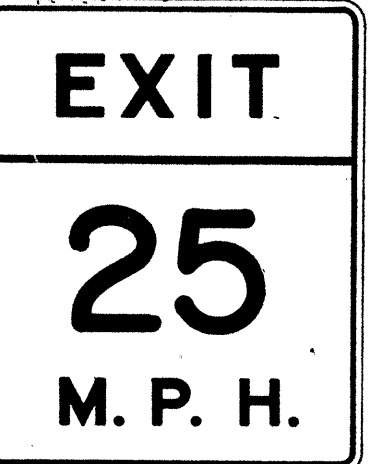
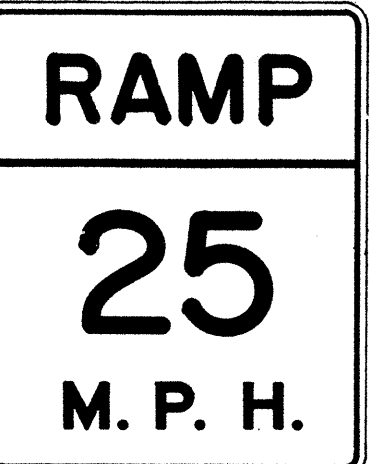
STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE
SHEET No. 4 OF 15 SHEETS DT 101

DATE
DRAWN BY
DESIGNED BY
CHECKED BY
No.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII*	HAW.	HES-R05-083-1(12)	1984	53	63

DATE	_____
SURVEY PLATTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTED BY	_____
CHECKED BY	_____
NO.	_____

 W1-1(R) 30"x30" W1-1(R)-A 48"x48"	 W1-2(R) 30"x30" W1-2(R)-A 48"x48"	 W1-3(R) 30"x30" W1-3(R)-A 48"x48"	 W1-4(R) 30"x30" W1-4(R)-A 48"x48"	 W1-5(R) 30"x30" W1-5(R)-A 48"x48"	 W1-6 48"x24"	 W1-7 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"	 W14-1 30"x30"	 W14-3 36"x48"x48"	
 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"					

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 warning signs shall be reflectorized unless otherwise specified.
3. All warning 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. Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized.

APPROVAL RECOMMENDED:
E. J. Tanaka
 TRAFFIC ENGINEER
 DATE 3/17/82

APPROVED:
Robert R. Sisk
 ASSISTANT CHIEF, ENGINEERING
 DATE 3-20-82

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/82
2	Revised General Note 1	H.T.	10/16/84
3	Revised General Note 5	M.H.	9-16-75
4	Revised General Note 5	H.T.	9-14-76
5	Added Note 1	H.T.	11-9-79

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE
 SHEET No. 5 OF 15 SHEETS DT 102

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.	HES-ROS-083-1(12)	1984	54	63

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
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"

U 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"

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"

SI-1 36"x 36"

S2-1 36"x 36"

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"

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.	11/9/78

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
MISCELLANEOUS SIGNS
NOT TO SCALE DATE: MAY, 1978
SHEET No. 6 OF 15 SHEETS DT 103

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-ROS-083-1(12)	1984	55	63



CW20-1a 48"x48"



CW20-2d 48"x48"



CW20-3b 48"x48"



CW20-4d 48"x48"



CW20-5d(L) 48"x48"



CW20-7c 48"x48"



CW21-1 30"x30"



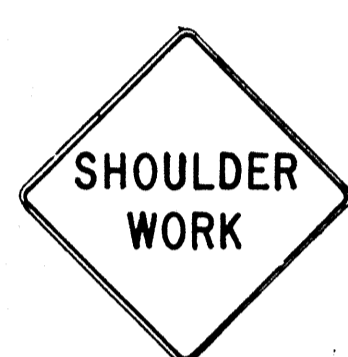
CW21-2 30"x30"



CW21-3 36"x36"



CW21-4 36"x36"



CW21-5 30"x30"



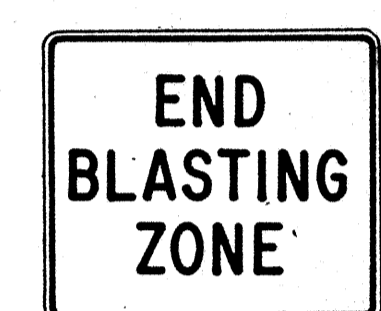
CW21-6 30"x30"



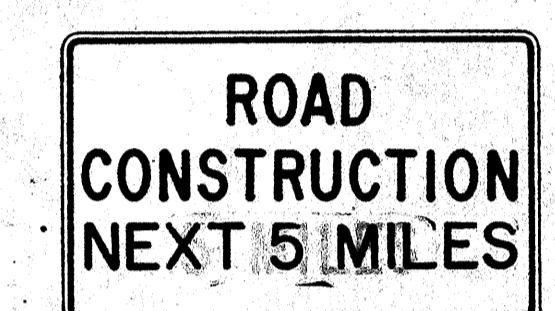
CW22-1b 48"x48"



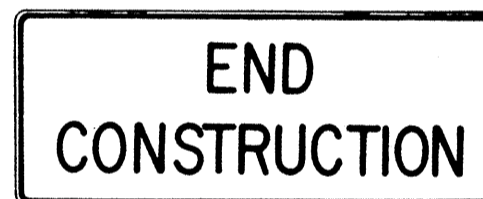
CW22-2 42"x36"



CW22-3 42"x36"



CG20-1(5) 60"x36"



CG20-2 60"x24"



CM4-9(R) 30"x24"



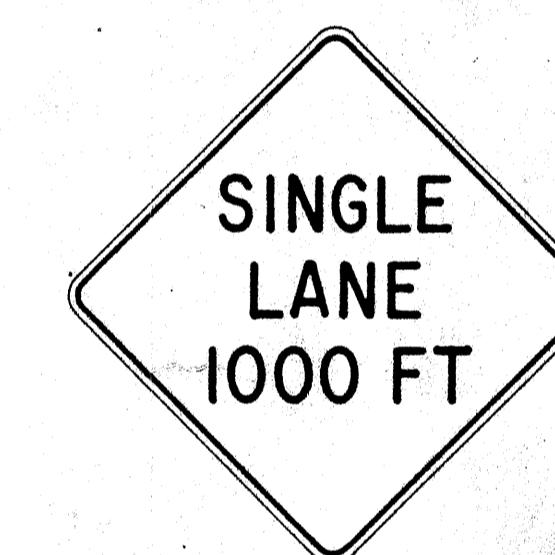
CM4-10(R) 48"x18"



CG20-4 36"x18"



CW23-1 36"x36"



CW23-2b 48"x48"



CW23-3(R) 48"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 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 3/21/12
TRAFFIC ENGINEER DATE

APPROVED:
Shuler Saleish 2/23/12
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 104 Approved 12-30-69	H.C.	2/23/12
2	Revised General Note 1	H.C.	10/16/14
3	Revised General Note 2	M	9-16-75
4	Revised General Note 2 and sign CG20-1(5)	H.C.	9-14-16

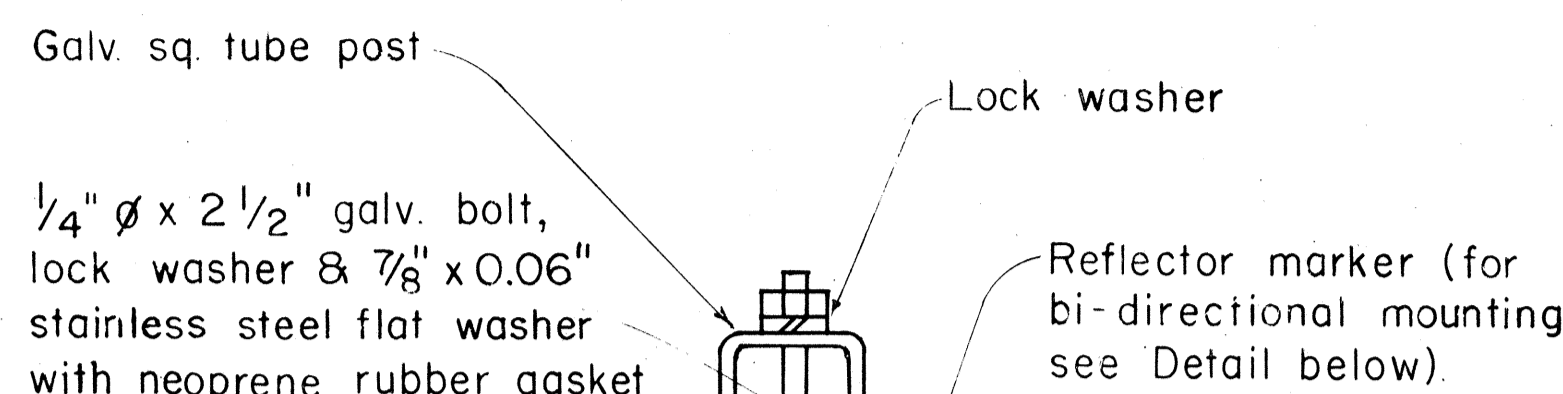
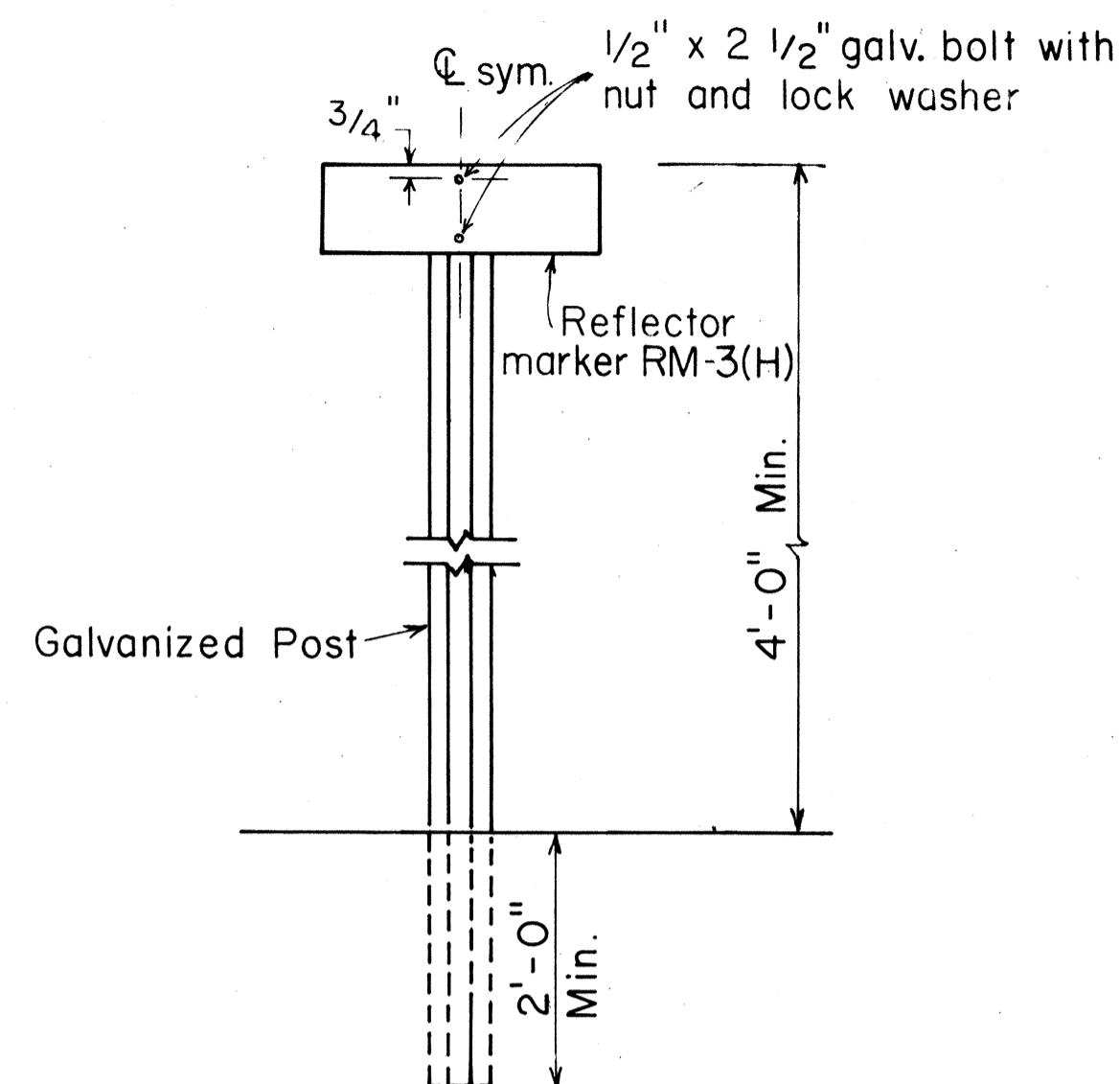
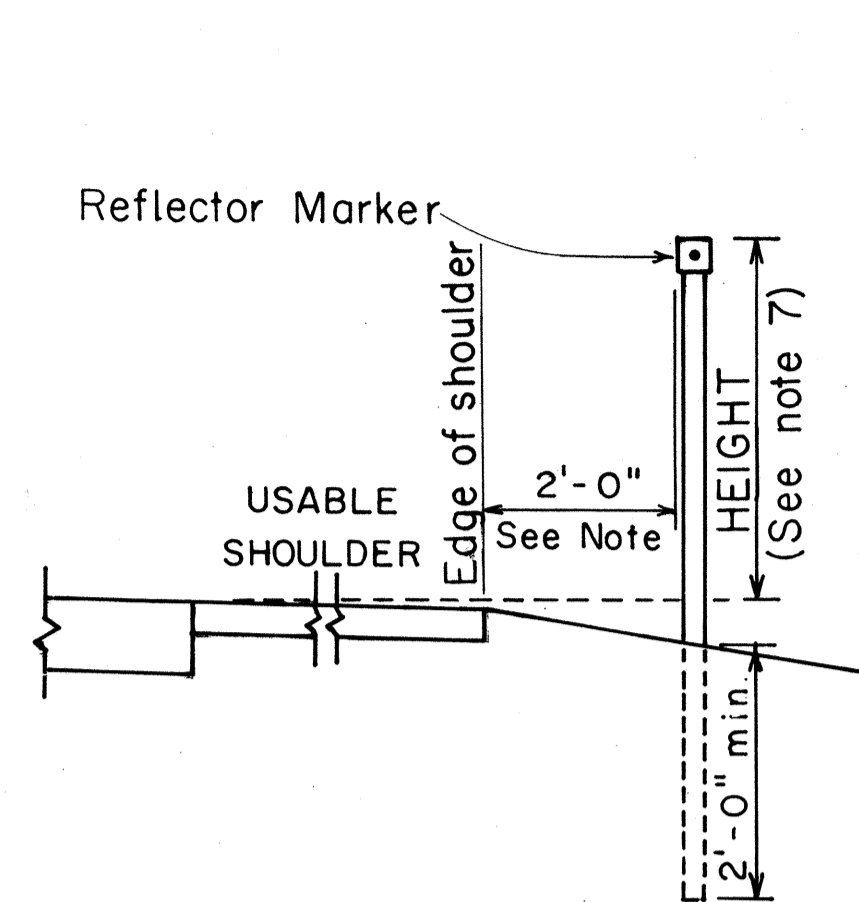
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CONSTRUCTION SIGNS

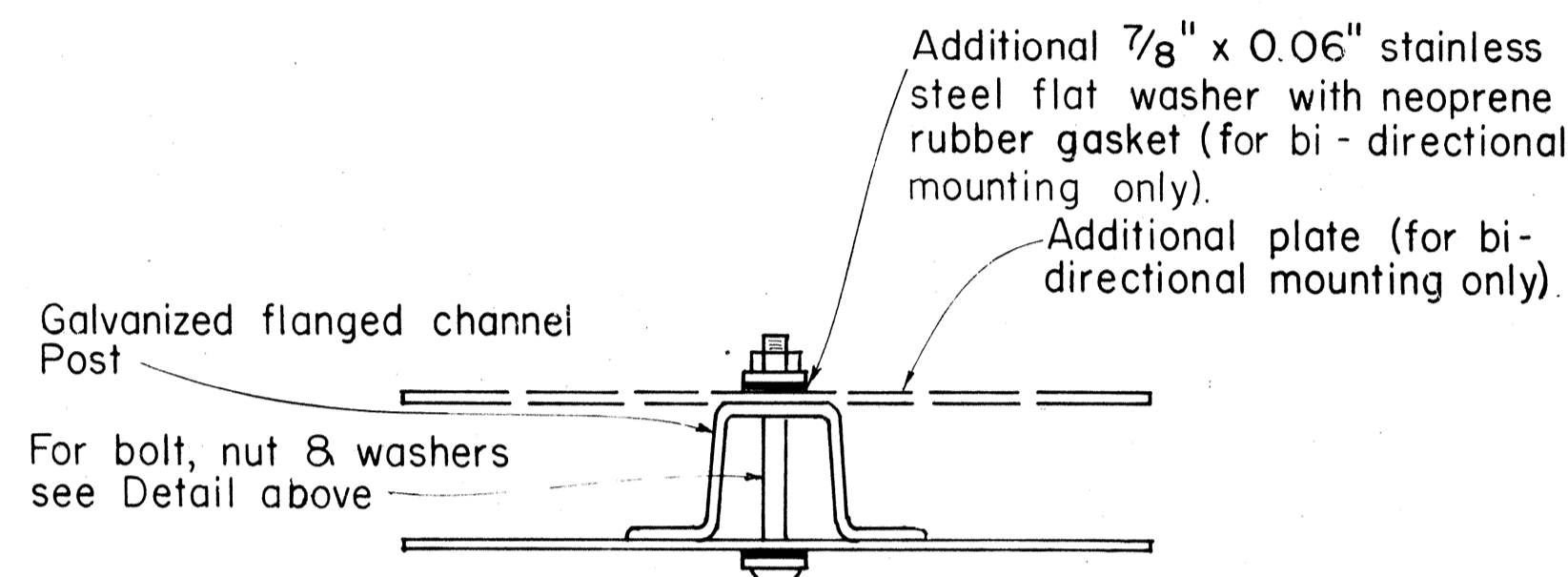
NOT TO SCALE

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-R08 083-1(12)	1984	56	63



GALVANIZED SQUARE TUBE POST



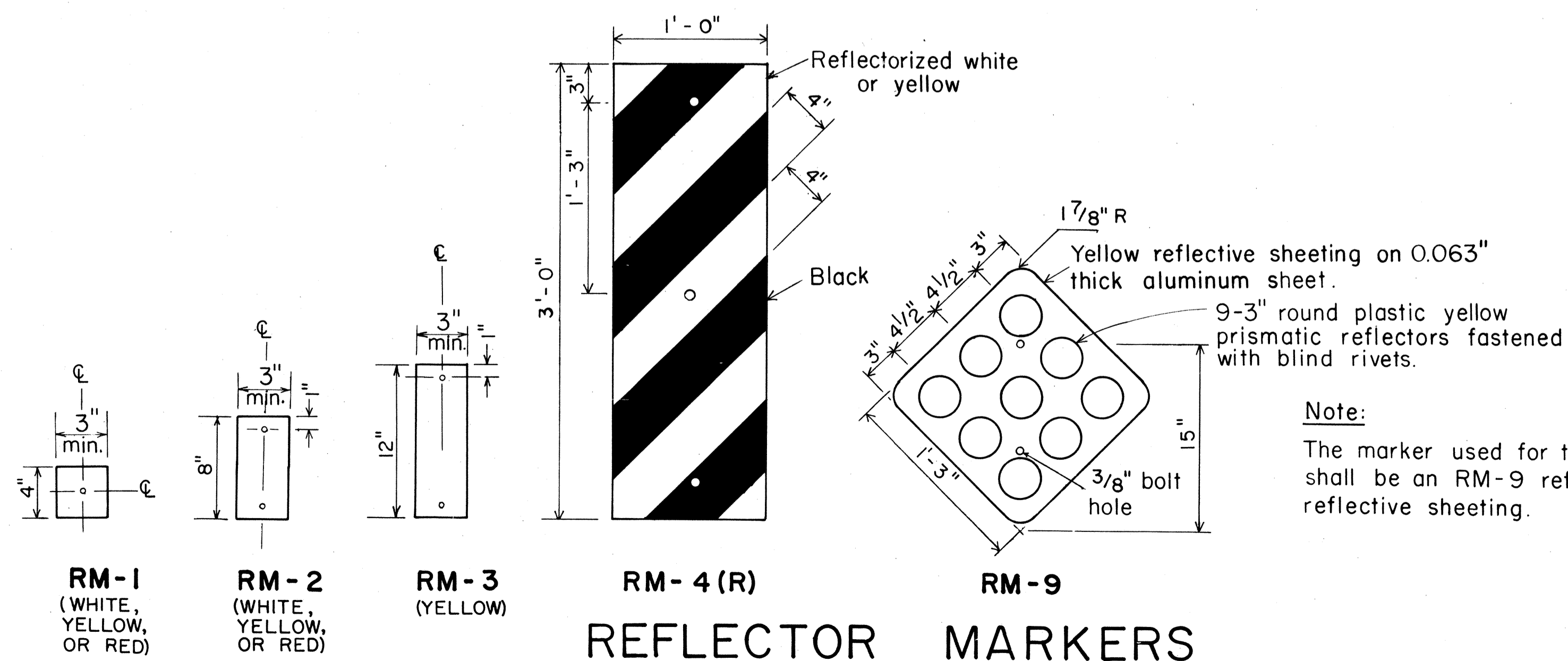
GALVANIZED FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS

REFLECTOR MARKER MOUNTING DETAIL

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.



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

REFLECTOR MARKERS

APPROVAL RECOMMENDED:
Eishi Tanaka 11/2/77
TRAFFIC ENGINEER DATE

APPROVED:
Herbert S. Sakemoto 11/15/77
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised Mounting Details	H.H.	4/25/80
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

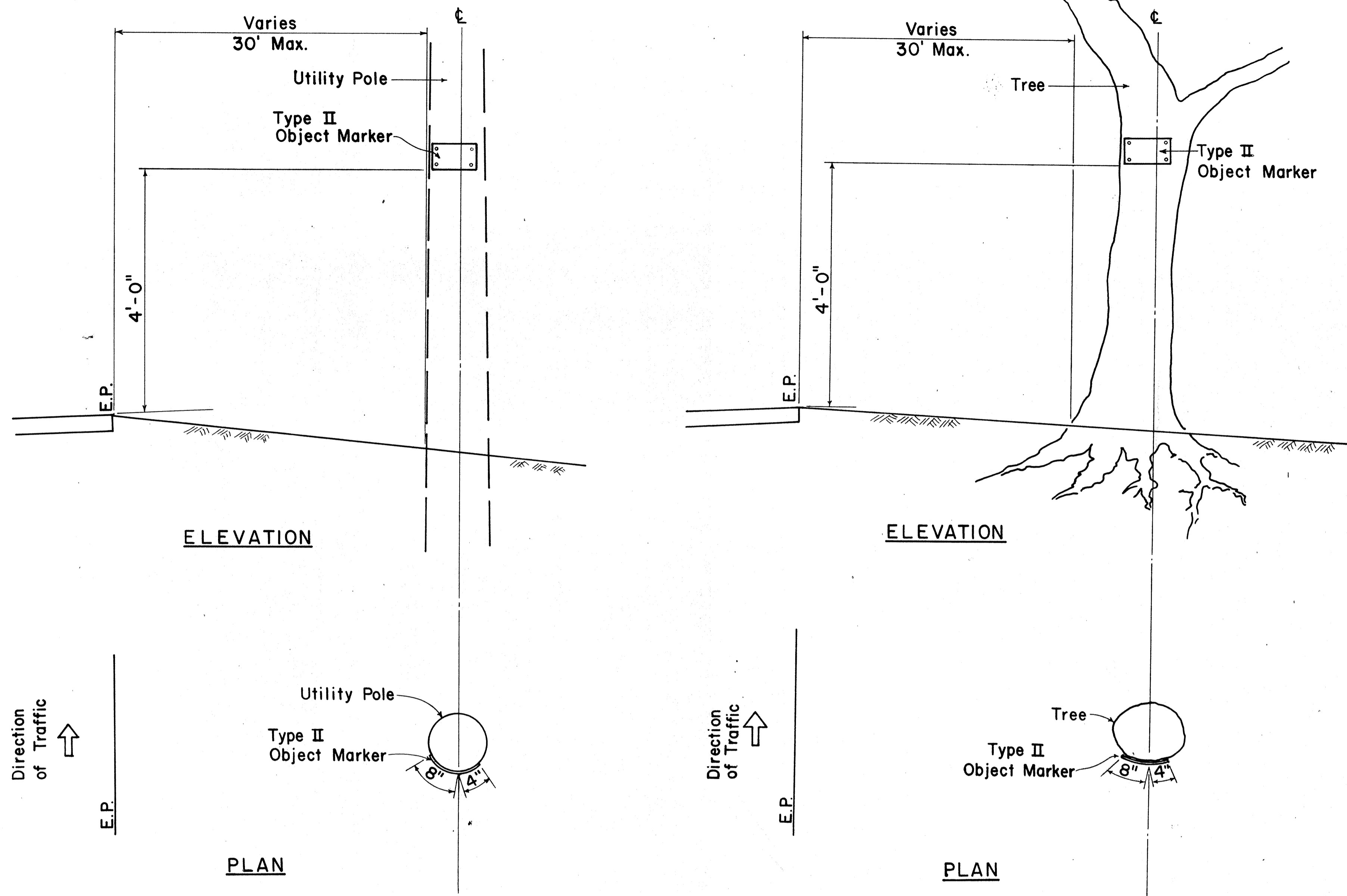
Not to scale June, 1977

SHEET No. 8 OF 15 SHEETS DT 110

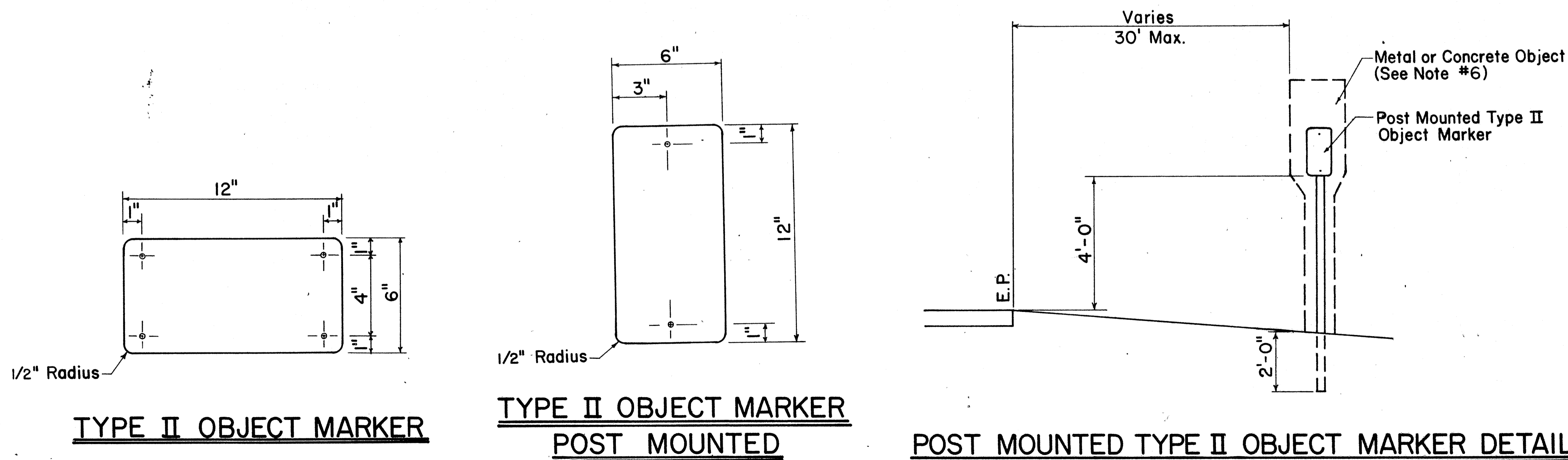
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-ROS-063-1(12)	1984	57	63

GENERAL NOTES

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



TYPICAL TYPE II OBJECT MARKER MOUNTING DETAIL



APPROVAL RECOMMENDED:
Eishi Tanaka 3/30/83
 TRAFFIC ENGINEER DATE

APPROVED:
H. Fujiyama 3-31-83
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

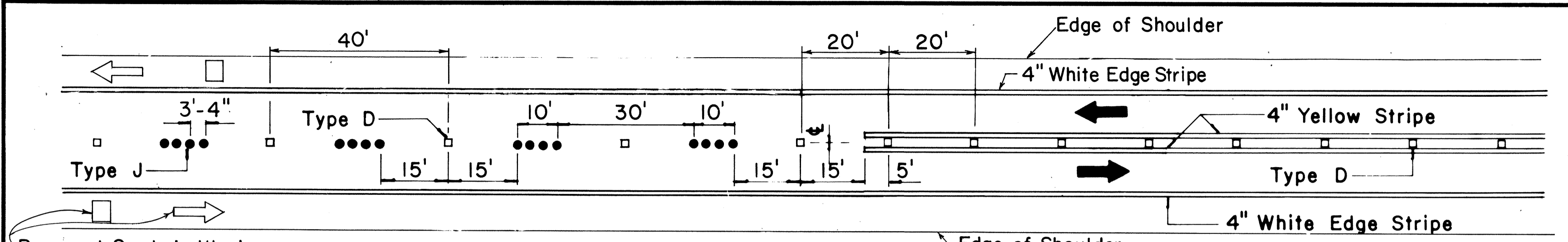
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
TYPE II OBJECT MARKERS

Scale: Not to scale Date: March 1983
 SHEET NO. 9 OF 15 SHEETS DT 111

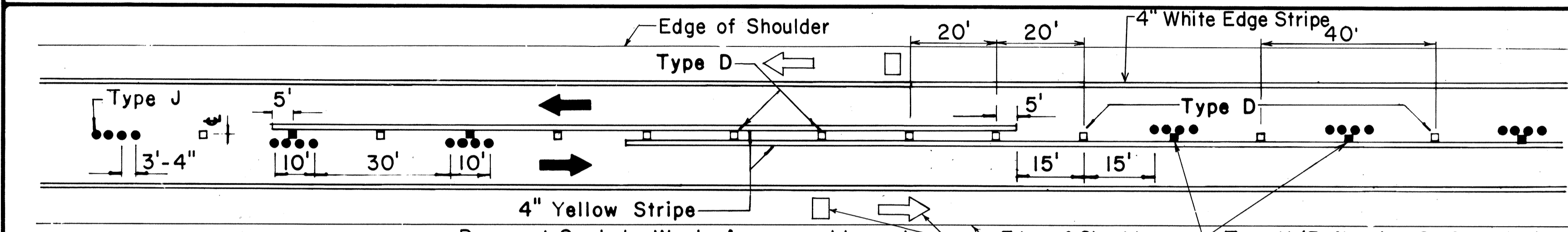
ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NOTE BOOK NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-ROS 083-1(12)	1984	58	63



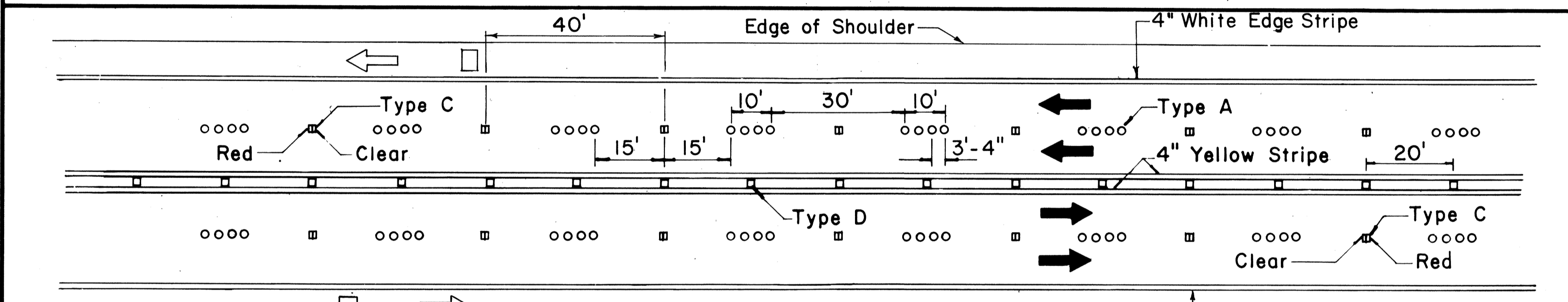
PASSING PERMITTED AND PASSING PROHIBITED

Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.



PASSING PROHIBITED ZONES

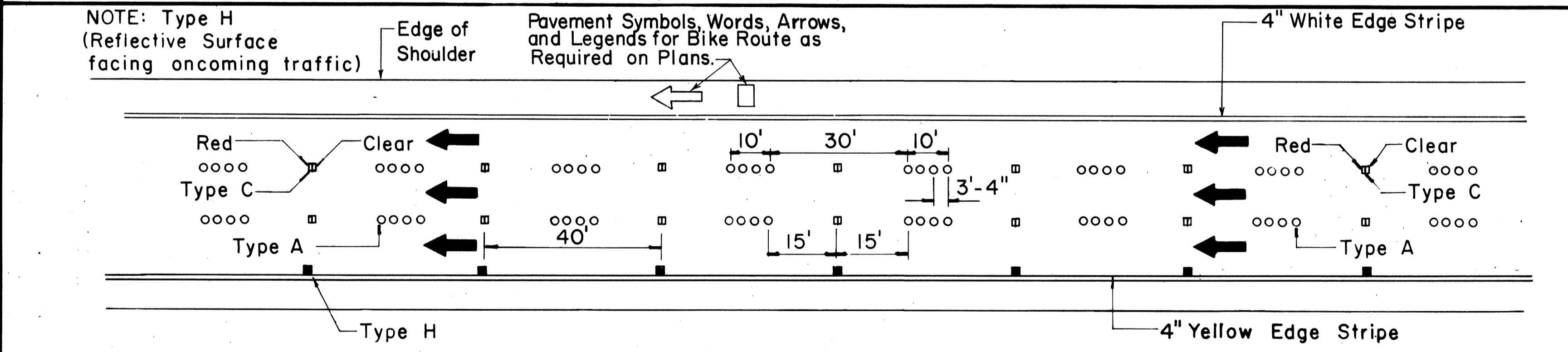
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.



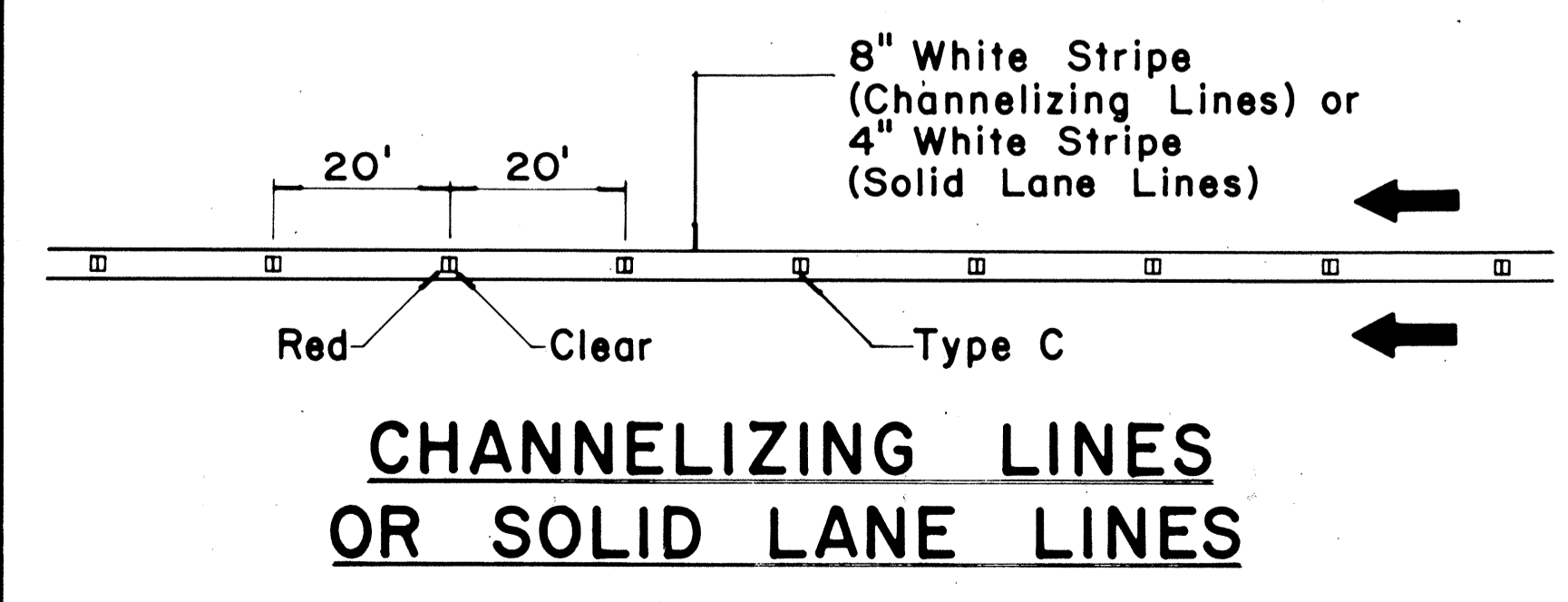
TWO - LANE

MULTI - LANE

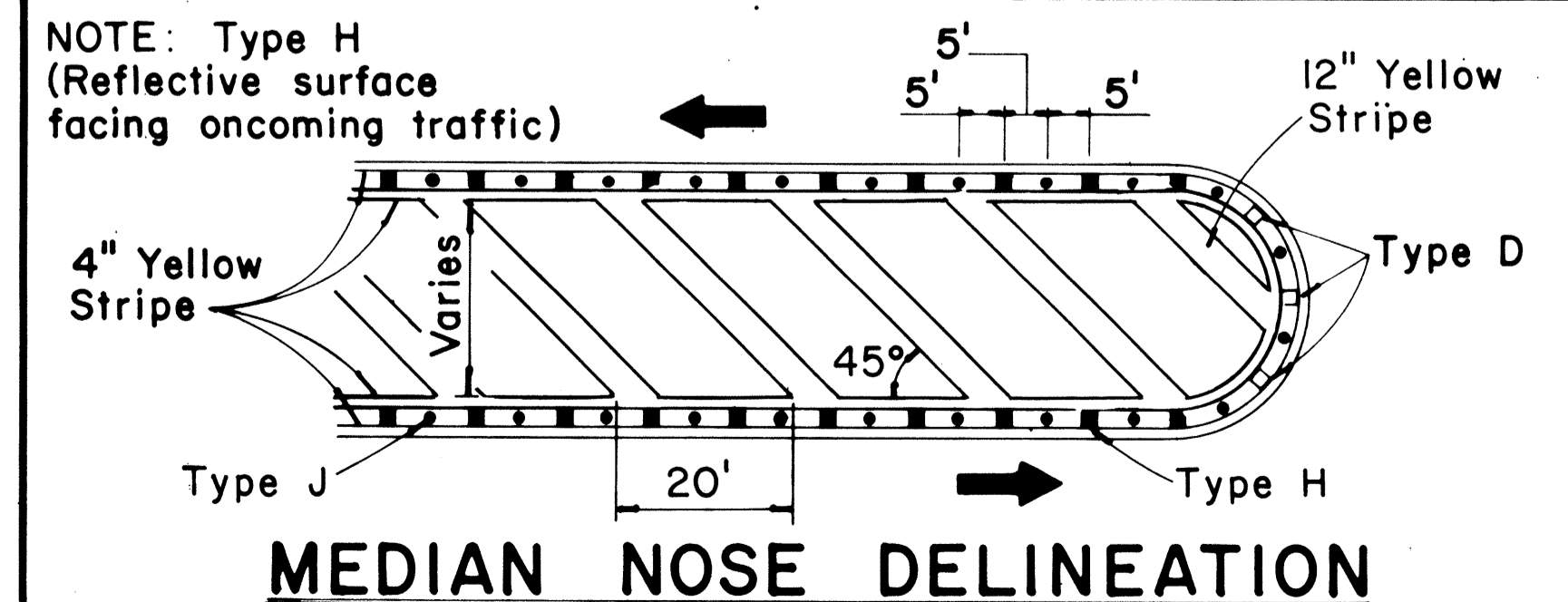
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.



DIVIDED HIGHWAY AND FREEWAY

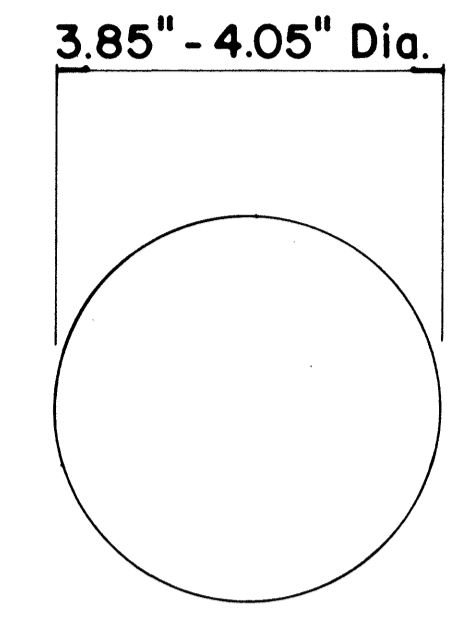


CHANNELIZING LINES OR SOLID LANE LINES

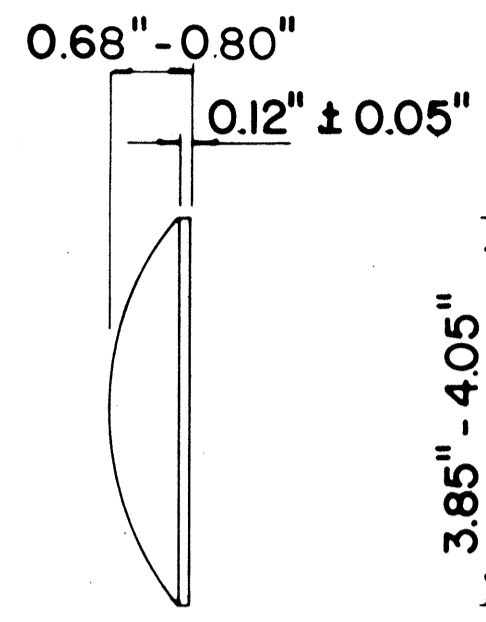


MEDIAN NOSE DELINEATION

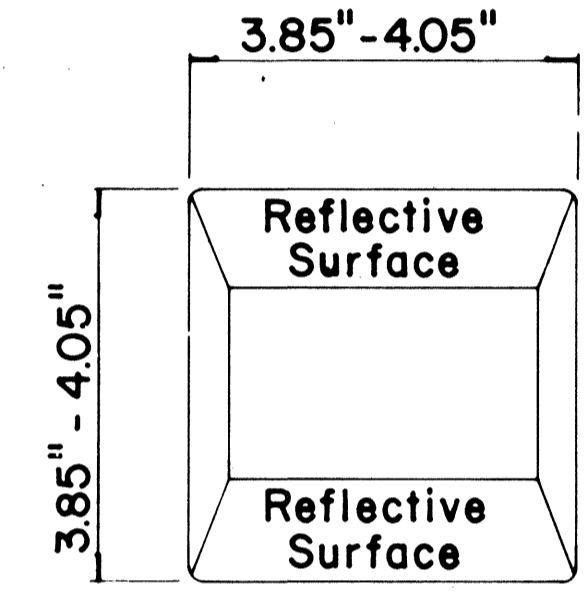
MISCELLANEOUS



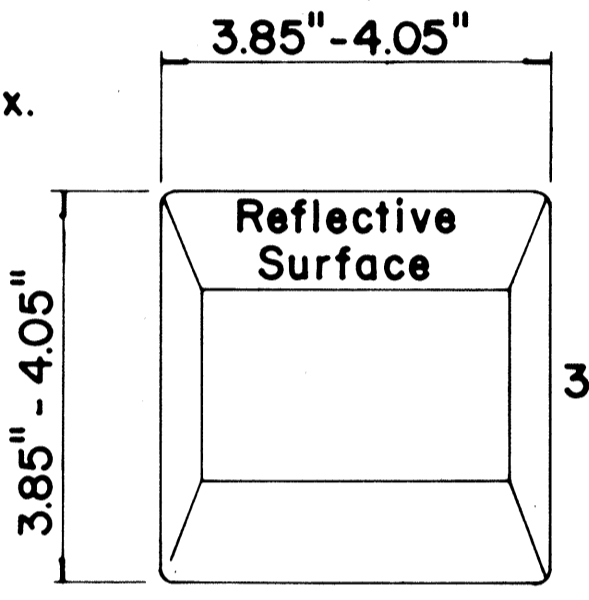
TYPE A
NON-REFLECTIVE WHITE MARKER
TYPE J
NON-REFLECTIVE YELLOW MARKER



TYPE C
RED-CLEAR REFLECTIVE MARKER



TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER



TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER

GENERAL NOTES

1. Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
2. 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.
3. 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:
Ericki Tanaka 7/21/78
TRAFFIC ENGINEER DATE

APPROVED:
Robert S. DeKish 7/24/78
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
3	Added General Note 3. Revised left edge stripe.	Hf.	9-28-83

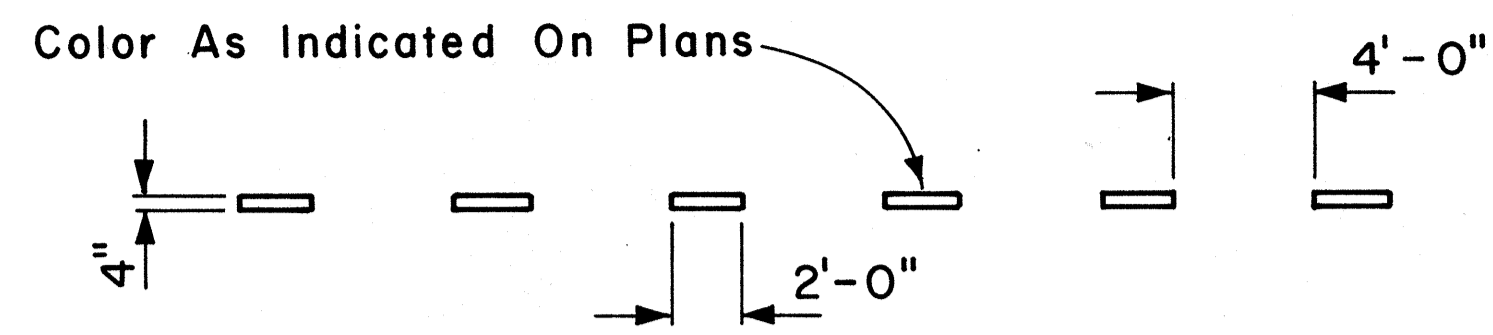
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

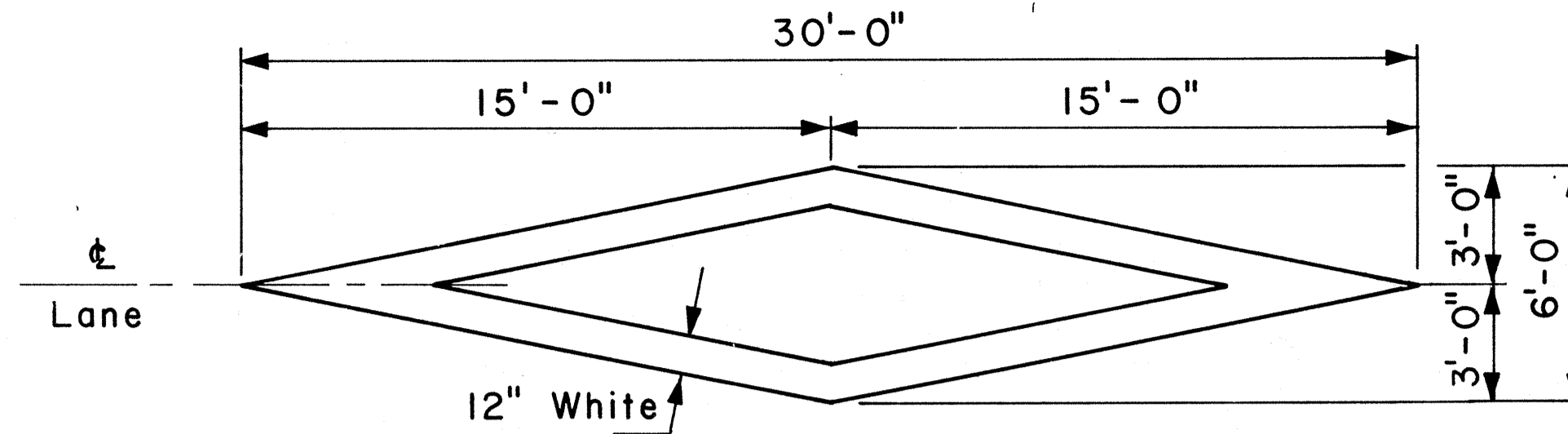
Not to Scale July 1978
SHEET No. 10 OF 15 SHEETS DT 300

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-ROS-083-1(12)	1984	59	63



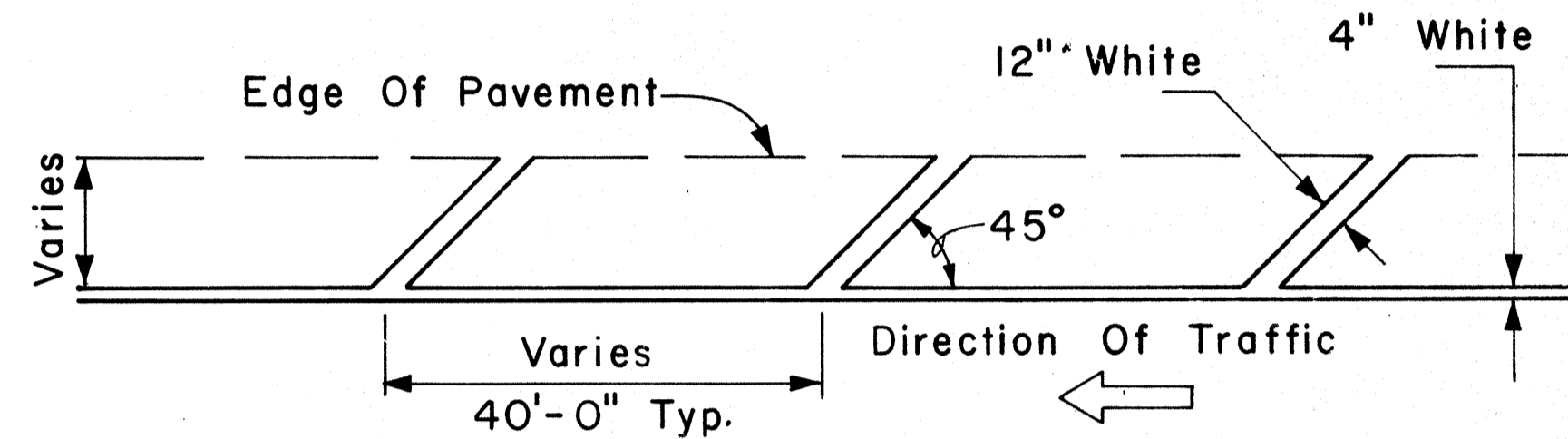
4" GUIDE LINE



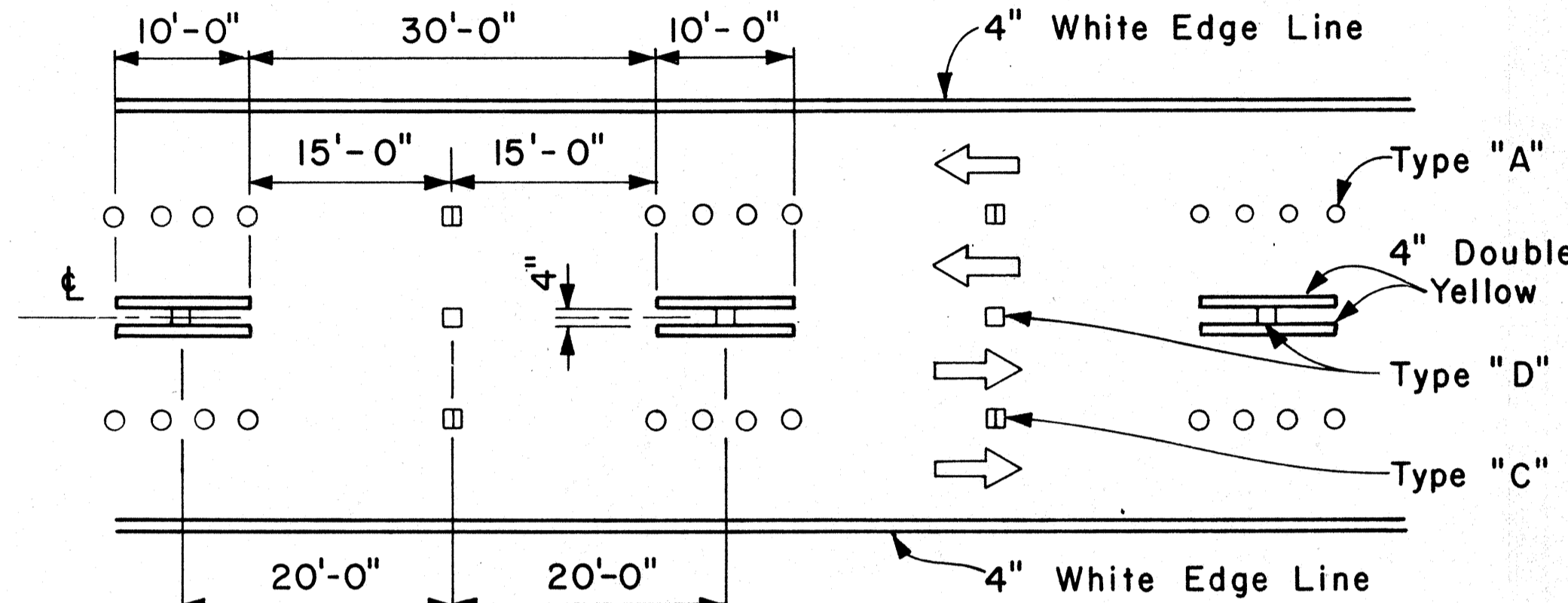
PAVEMENT DIAMOND

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.

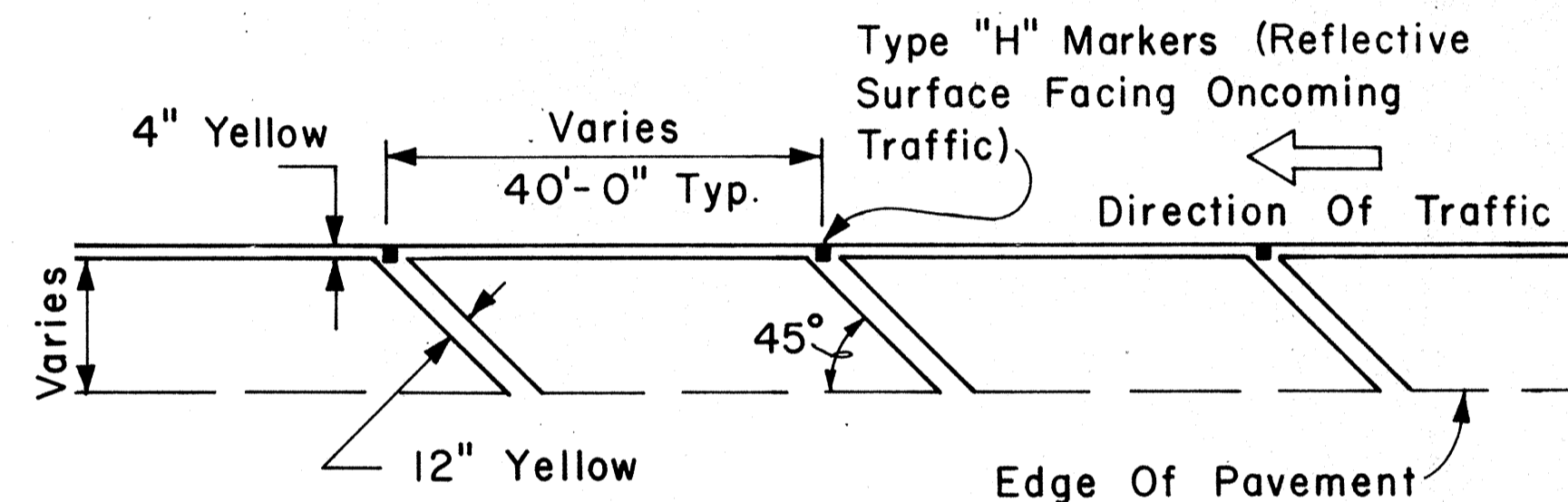


TRANSVERSE RIGHT SHOULDER MARKING

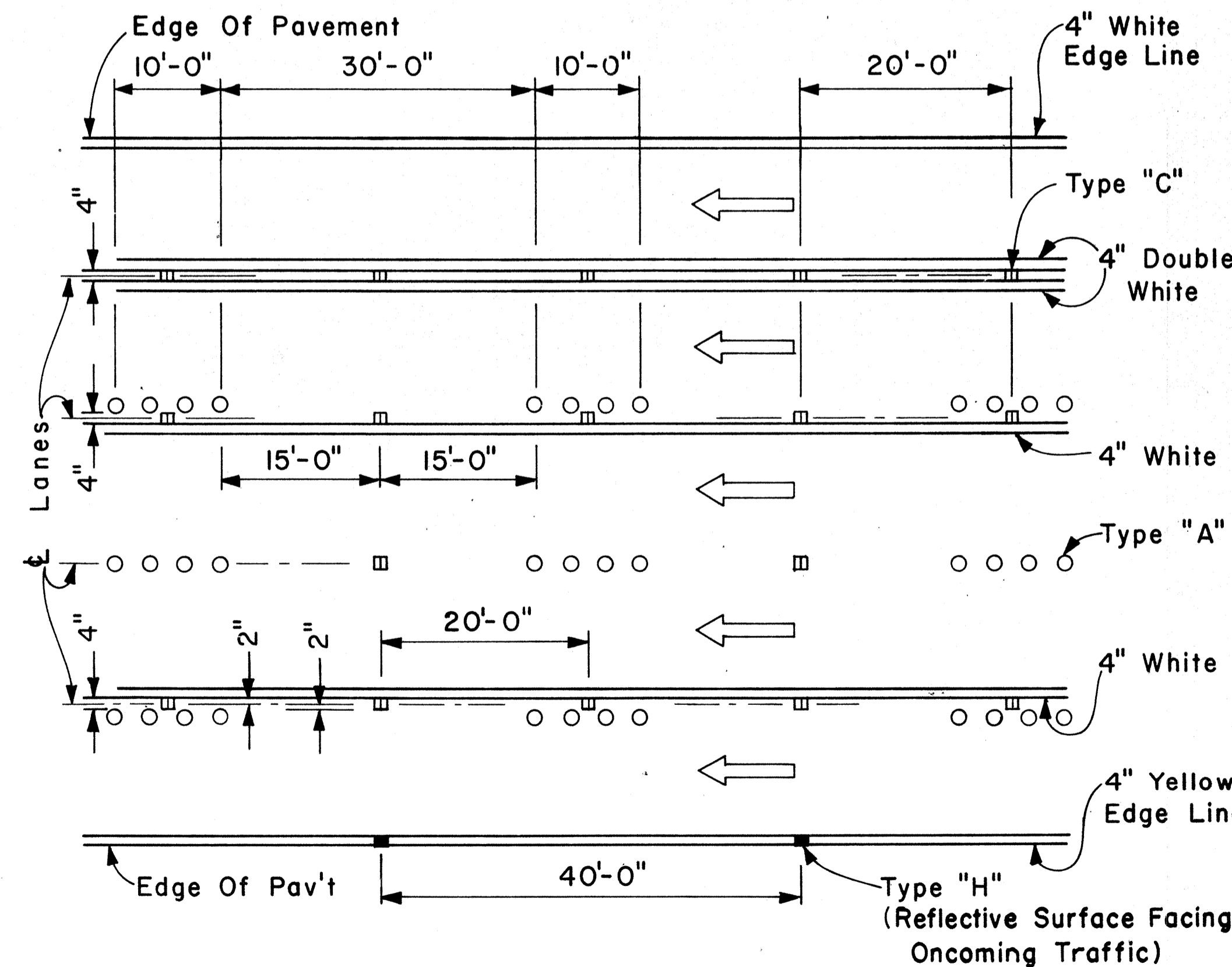


MULTI-LANE REVERSIBLE LANES

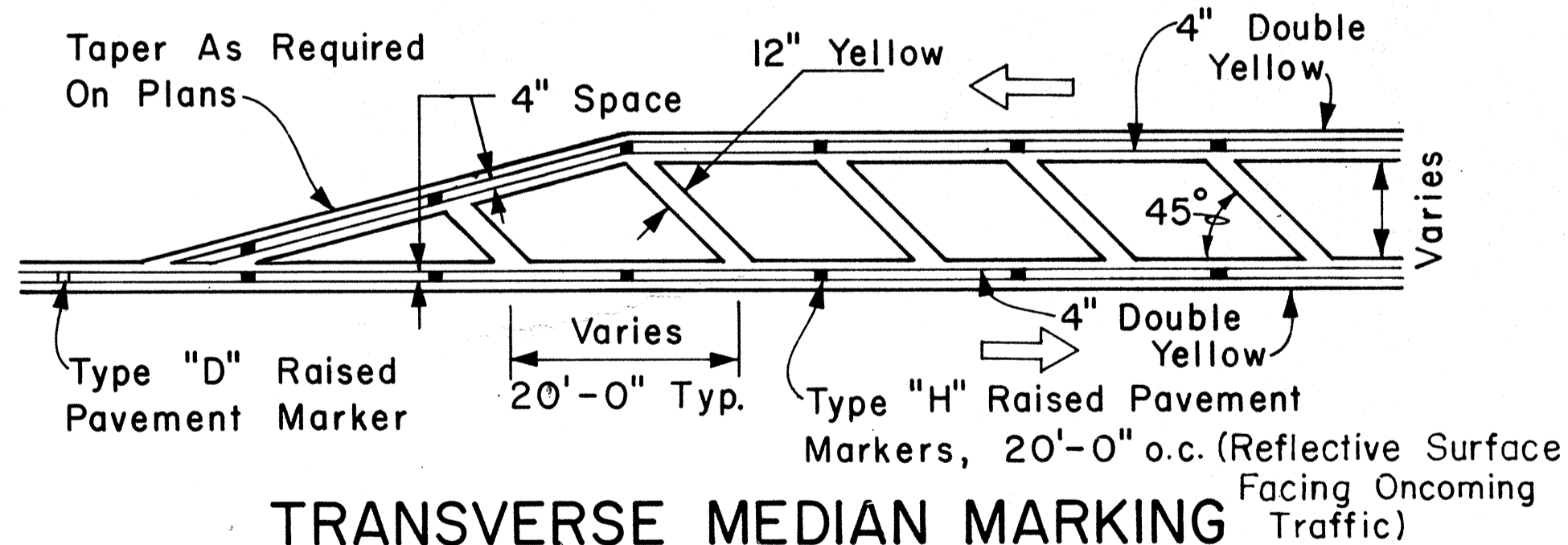
NOTE: Traffic Cone Usage Required.



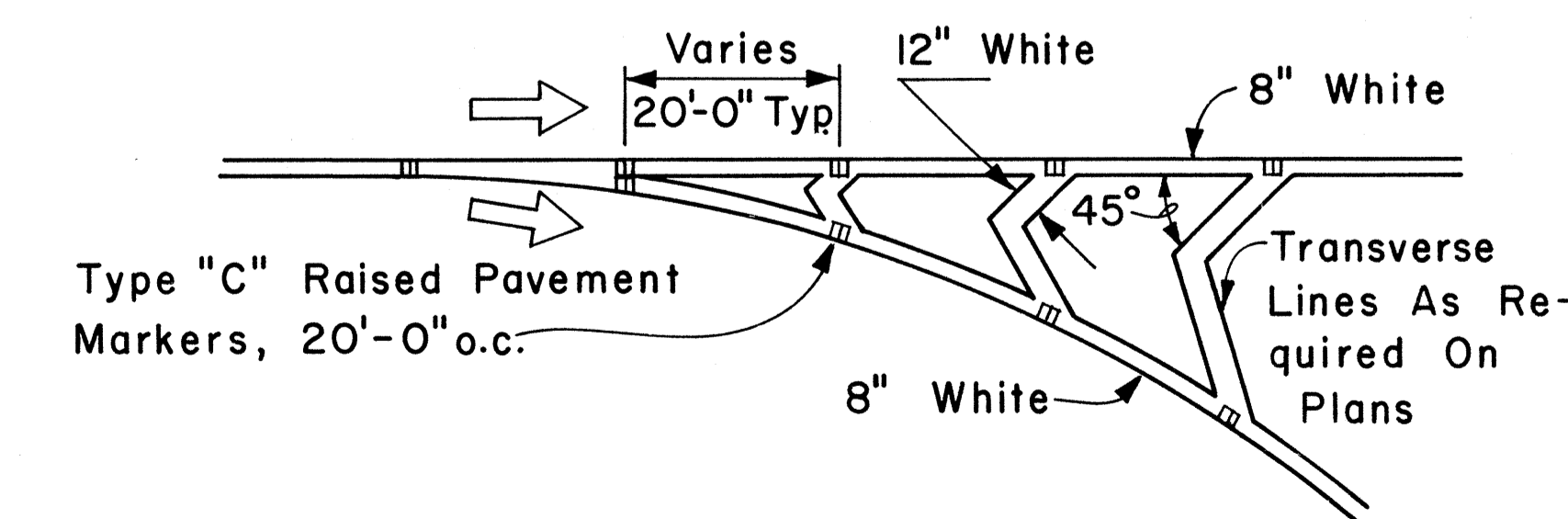
TRANSVERSE LEFT SHOULDER MARKING



MULTI-LANE LANE CHANGE RESTRICTION ZONES



TRANSVERSE MEDIAN MARKING



CHANNELIZING ISLAND

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

APPROVED:
Herbert S. Zaksch 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: April, 1978

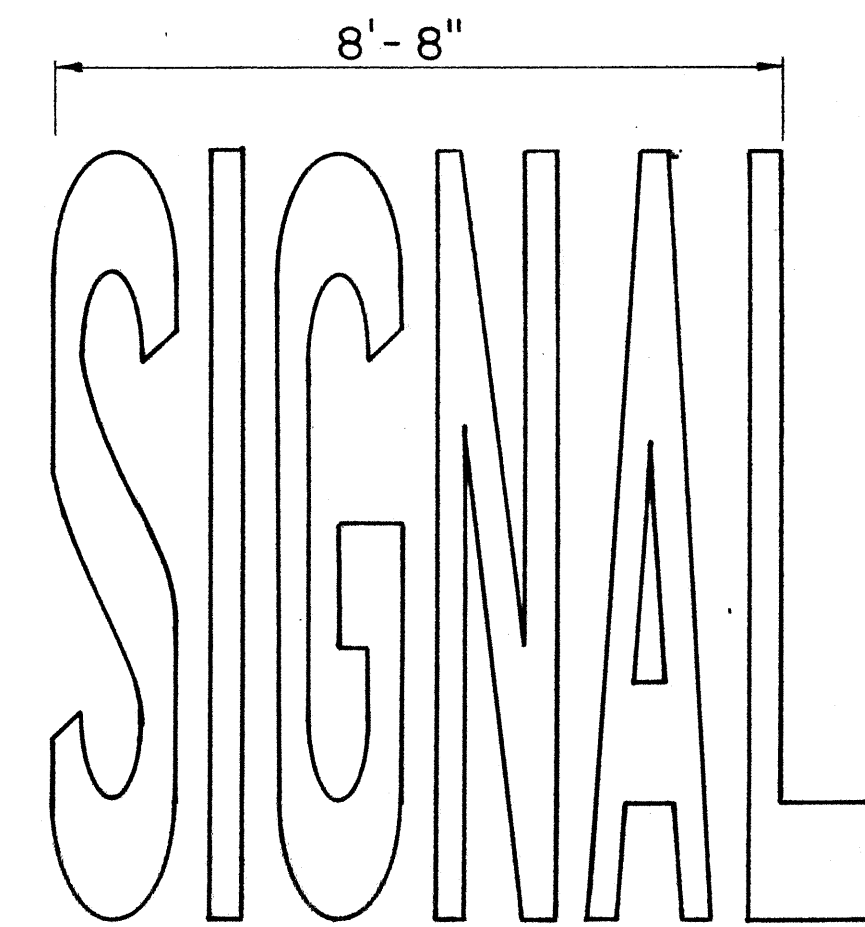
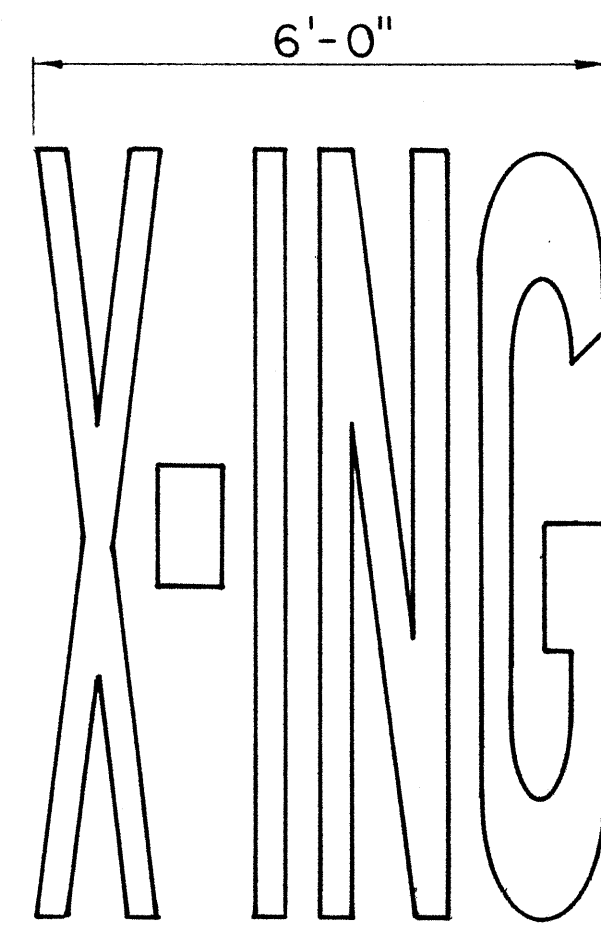
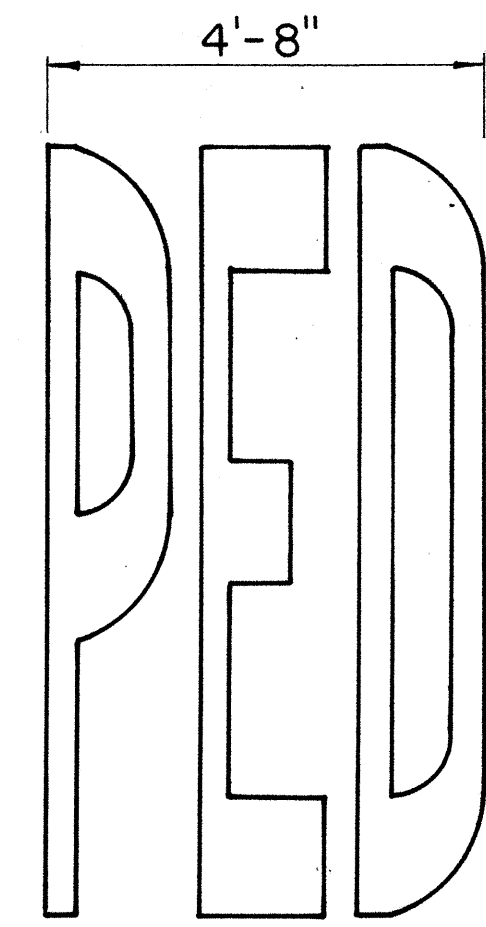
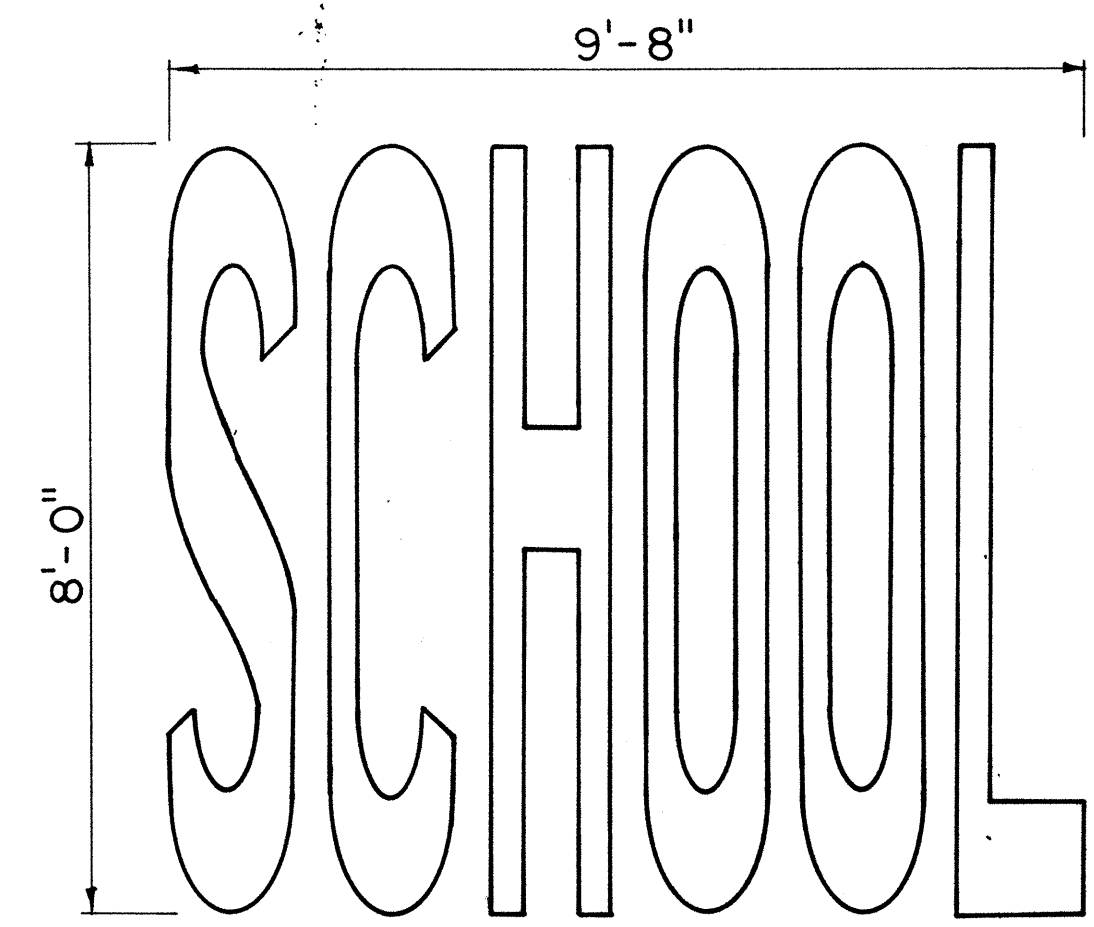
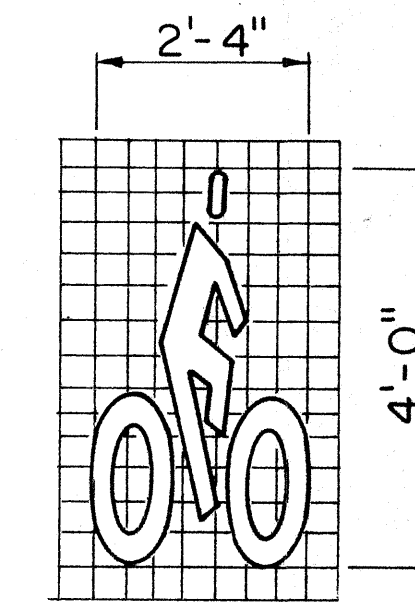
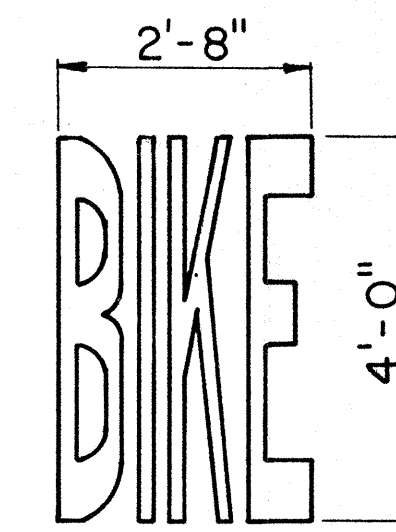
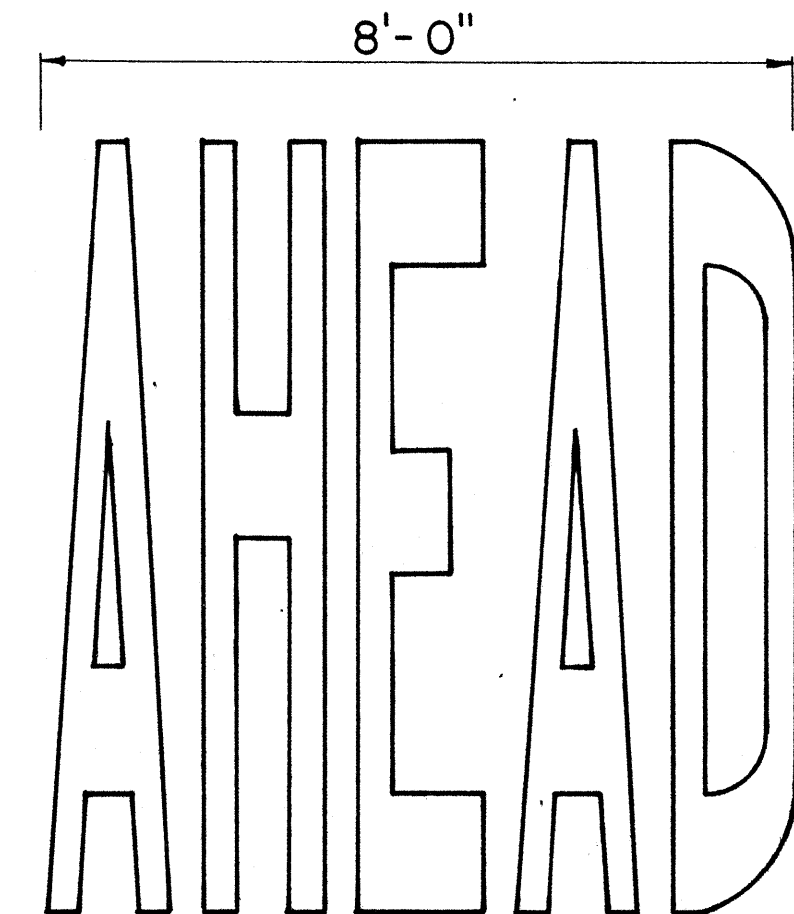
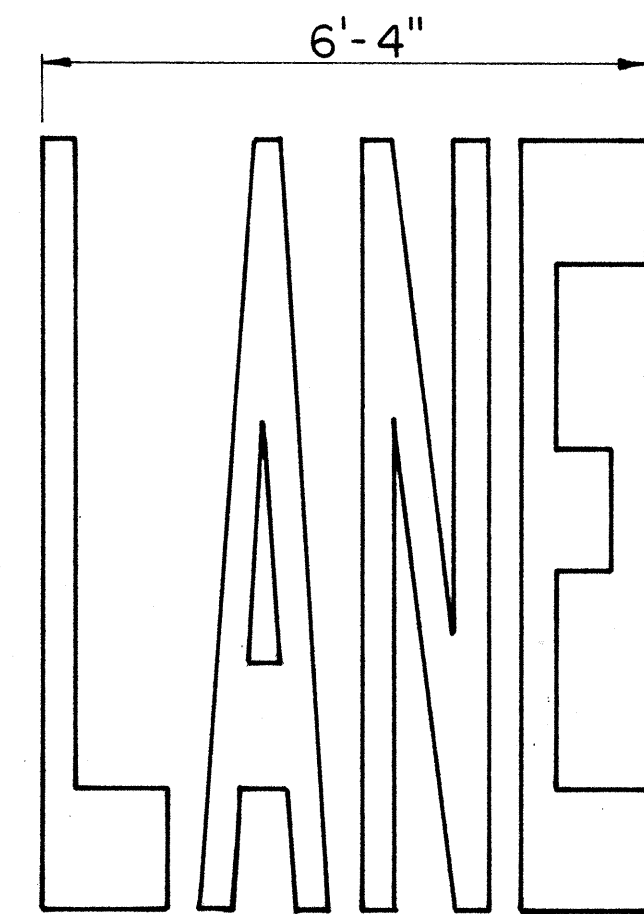
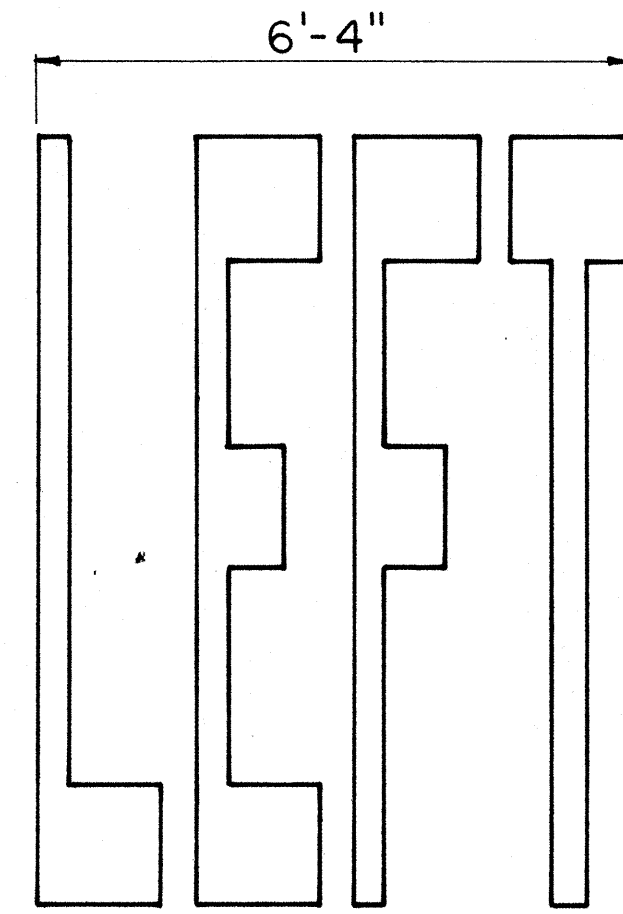
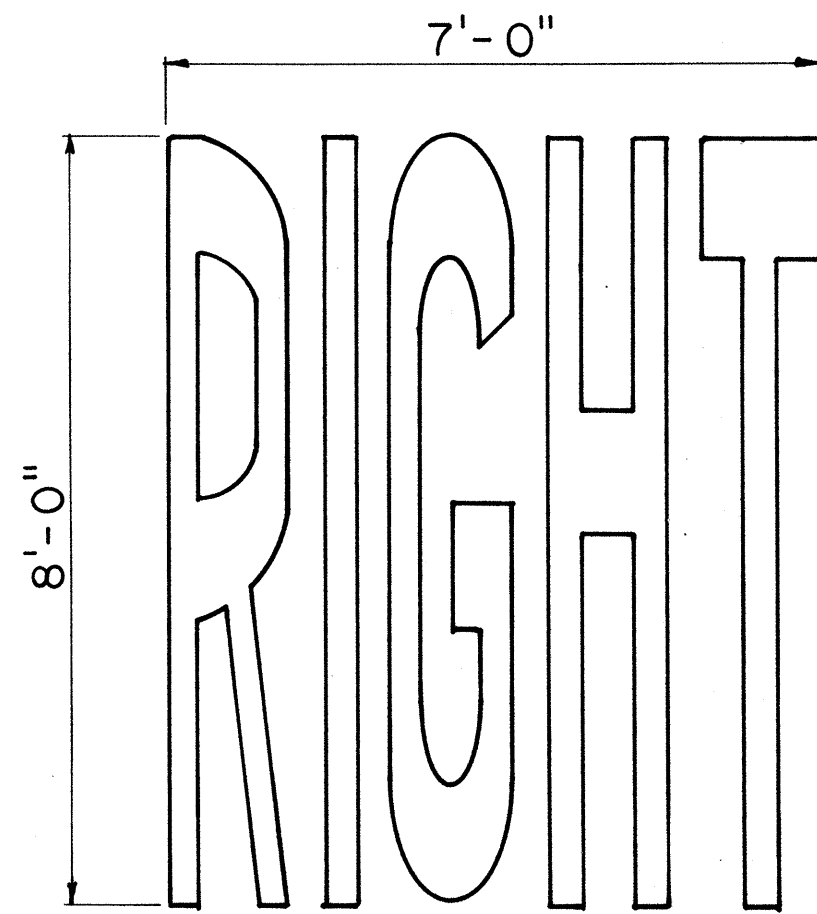
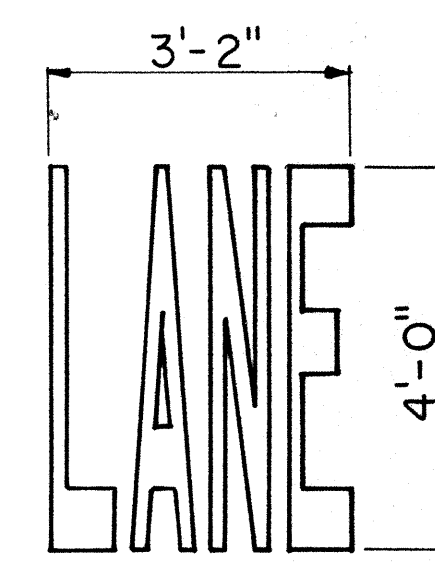
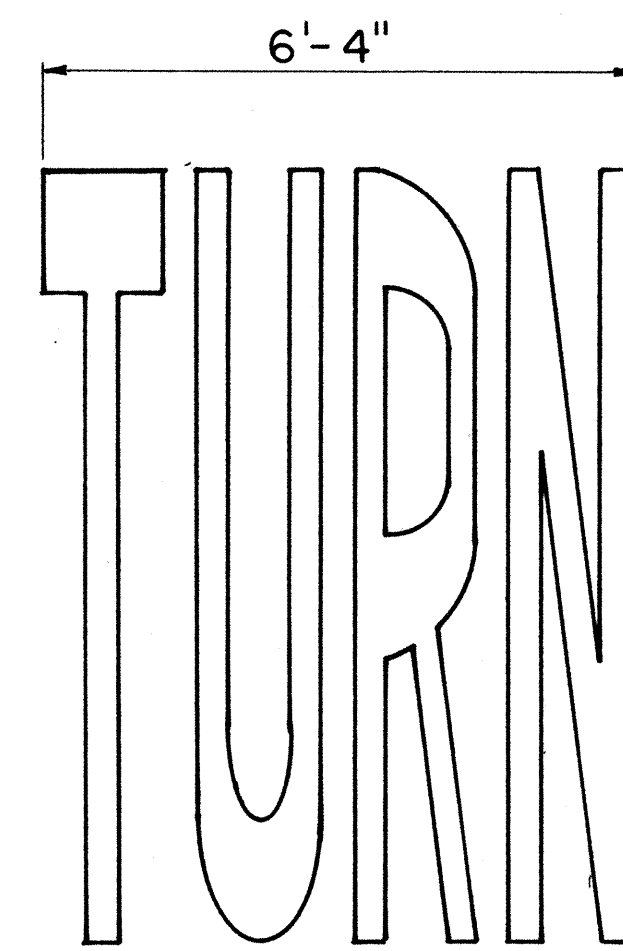
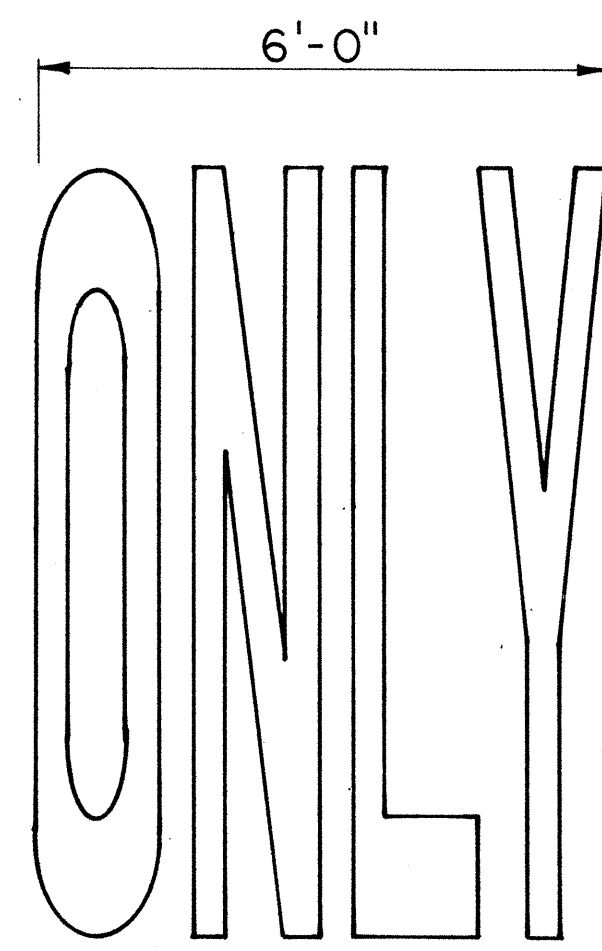
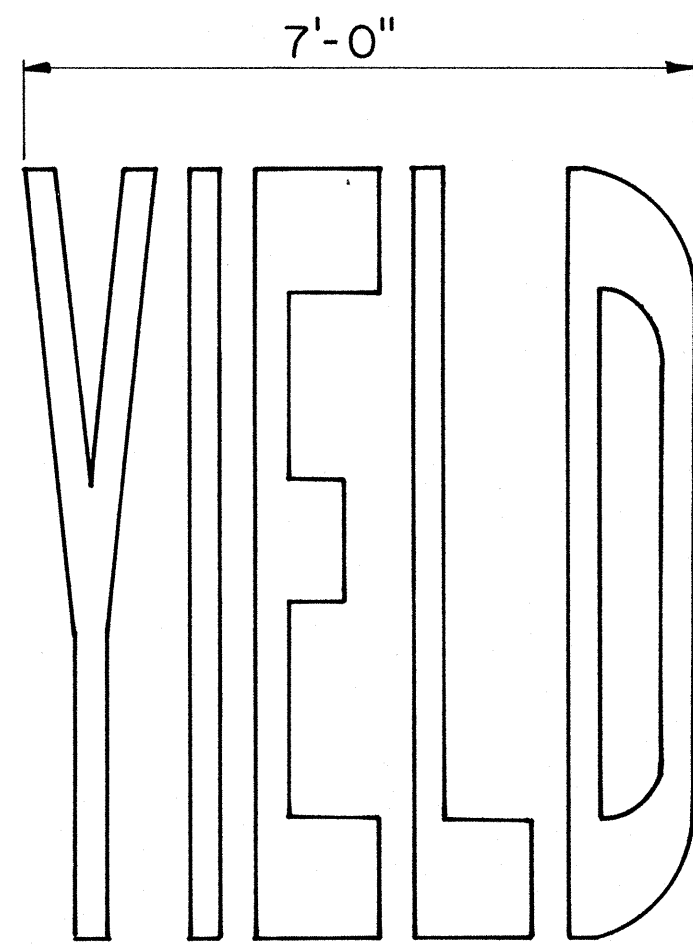
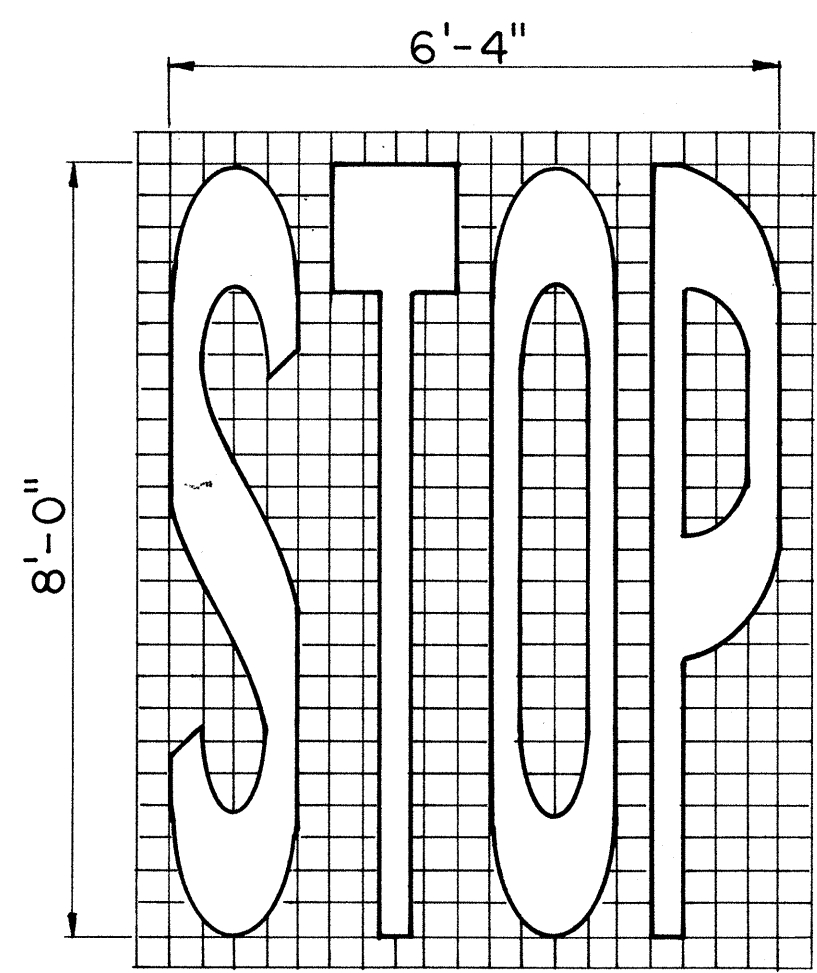
SHEET No. 11 OF 15 SHEETS DT 302

DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN 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.	HES-ROS-083-K(12)	1984	60	63

GENERAL NOTES

1. All messages not shown must be approved by the Engineer prior to installation.
2. The space between characters in a message shall be 1 grid unit unless otherwise shown or directed.
3. All pavement messages shall be white in color.



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

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:
Eichi Tanaka
 TRAFFIC ENGINEER 1/28/83
 DATE

APPROVED:
J. D. Dujyama
 ASSISTANT CHIEF, ENGINEERING 1-31-83
 DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS

**PAVEMENT ALPHABETS,
 NUMBERS & SYMBOLS**

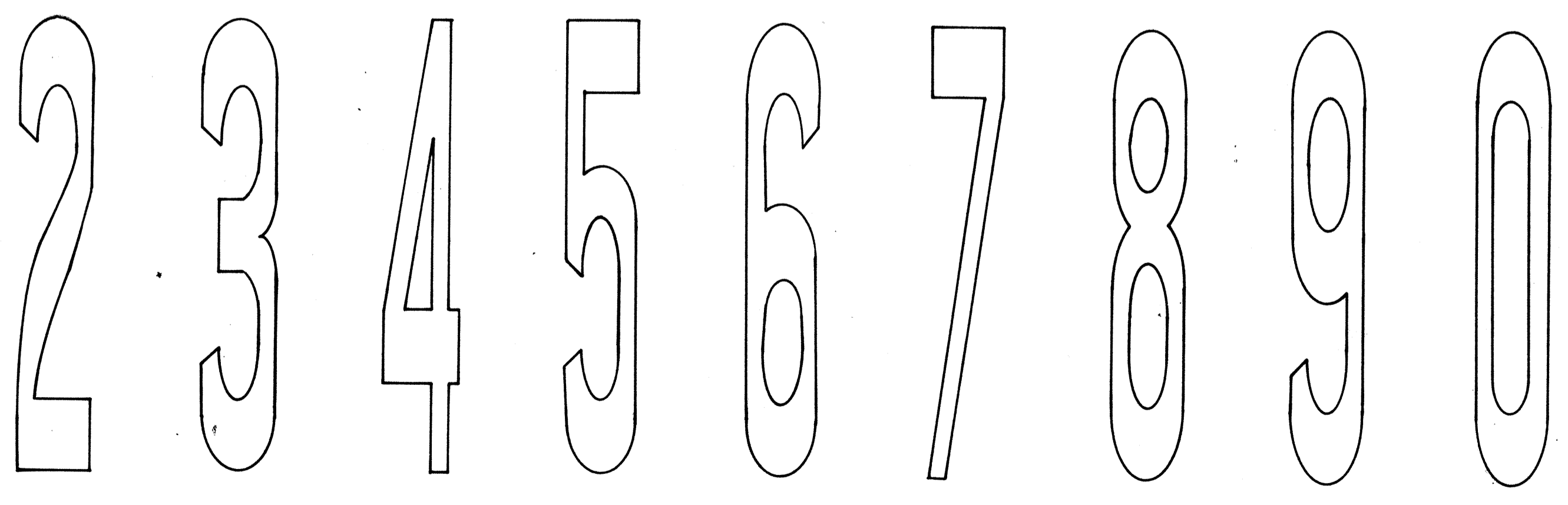
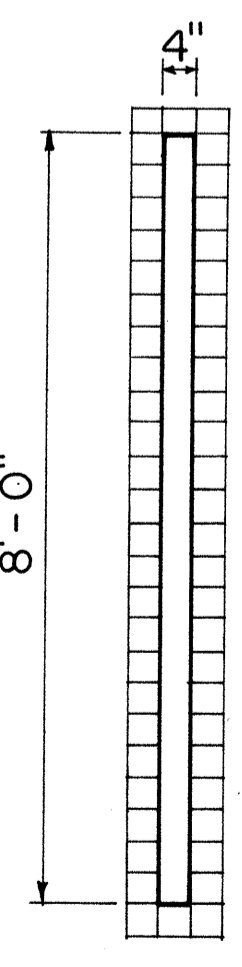
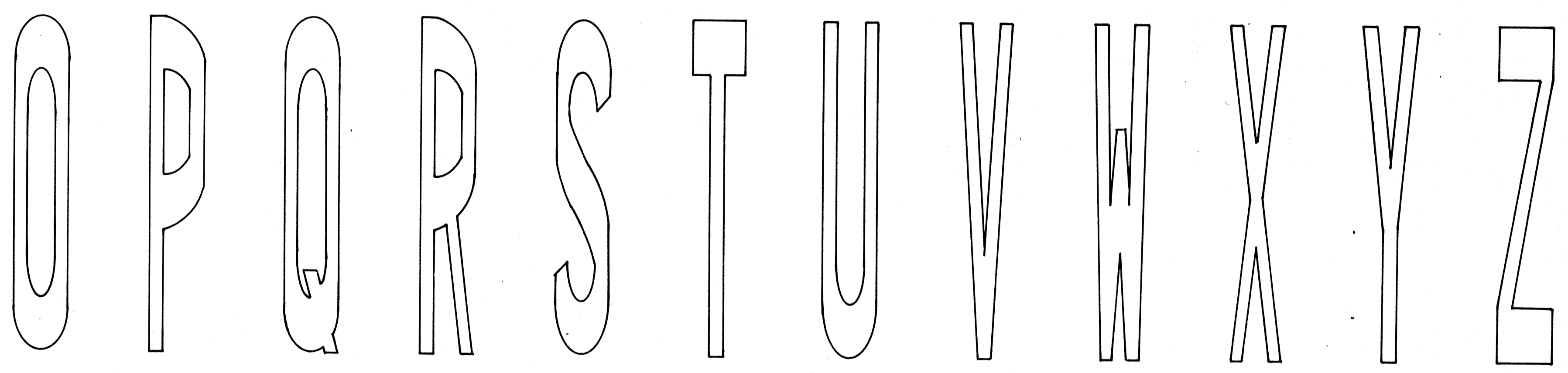
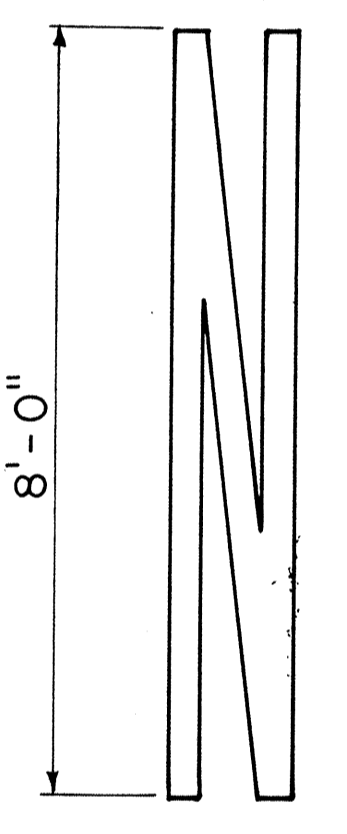
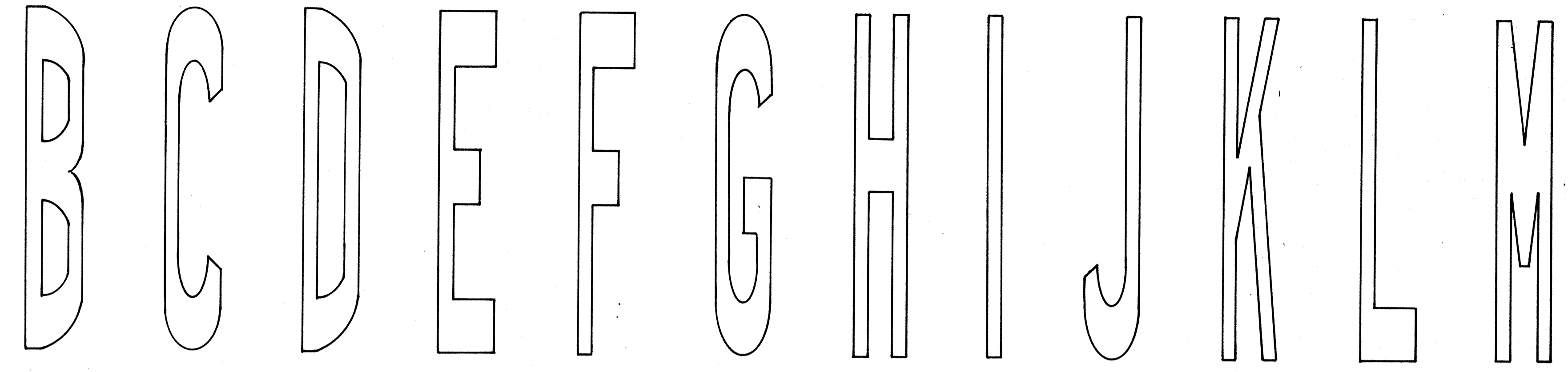
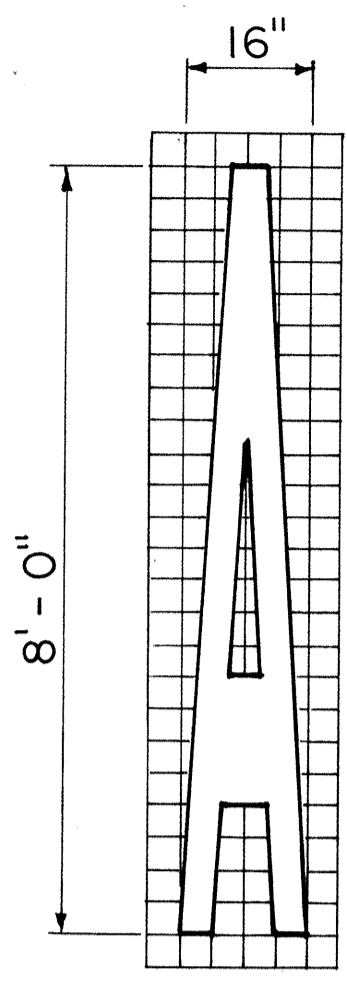
Not to Scale

SHEET No. 12 OF 15 SHEETS DT 308

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-ROS-083-1(12)	1984	01	03

GENERAL NOTES

1. Pavement Alphabets, Numbers and Symbols shall conform to the latest edition of the FHWA publication, "Manual on Uniform Traffic Control Devices for Streets and Highways" and its amendments.
2. The characters are based on a 24x4 (height x width) grid system to facilitate enlarging. Horizontal strokes are 4 units high and verticle strokes are 1 unit wide.
3. Unless otherwise noted, the typical height and width of each character shall respectively be 8'-0" and 1'-4". The horizontal strokes shall be 16" high and the vertical strokes shall be 4" wide.
4. All pavement messages and symbols shall be laid out by the Contractor and approved by the Engineer prior to installation.



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

APPROVAL RECOMMENDED:
Eishi Tanaka 1/28/83
 TRAFFIC ENGINEER DATE

APPROVED:
S. Fujiyama 1-31-83
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

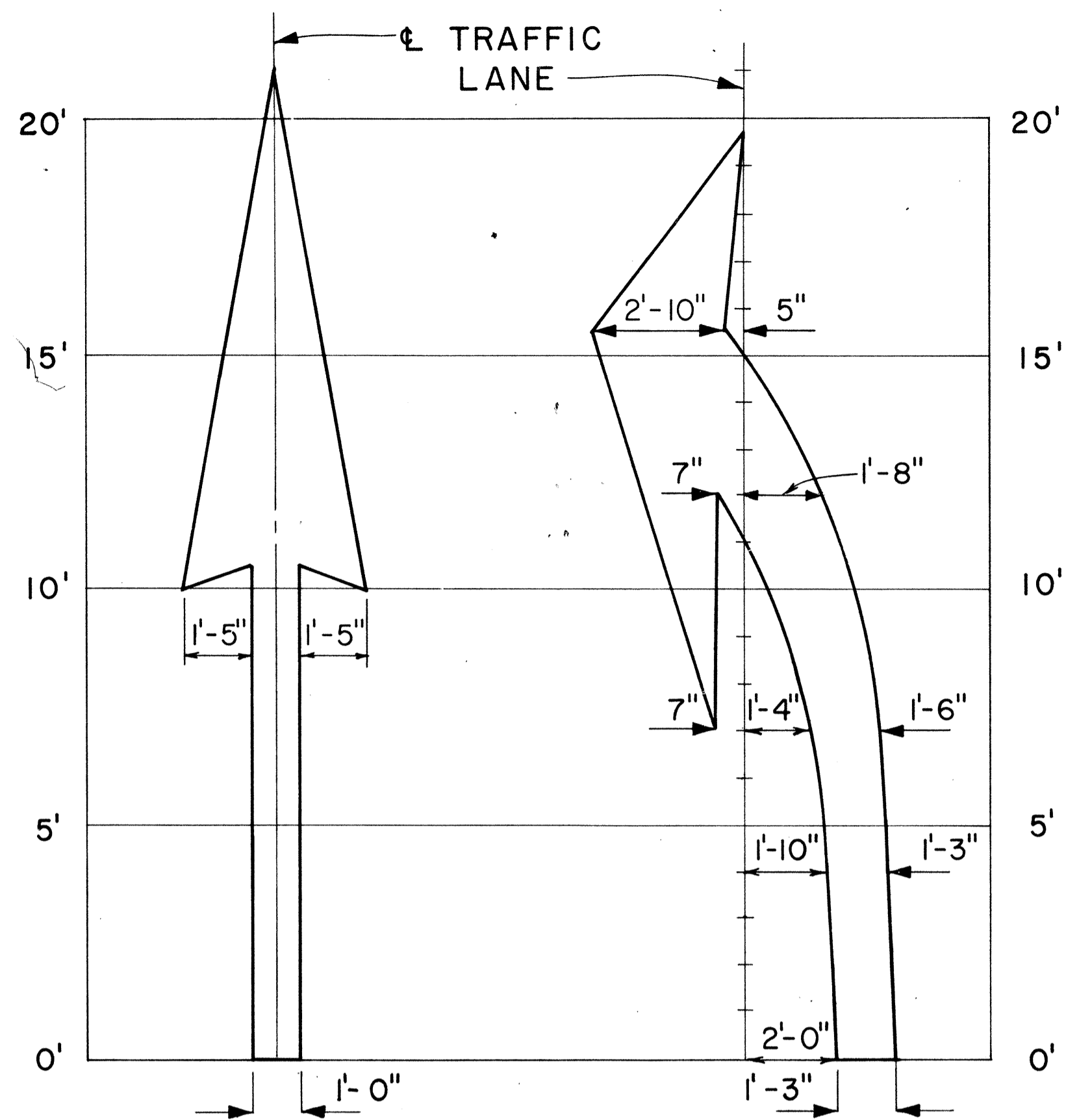
STANDARD DETAILS

**PAVEMENT ALPHABETS,
 NUMBERS & SYMBOLS**

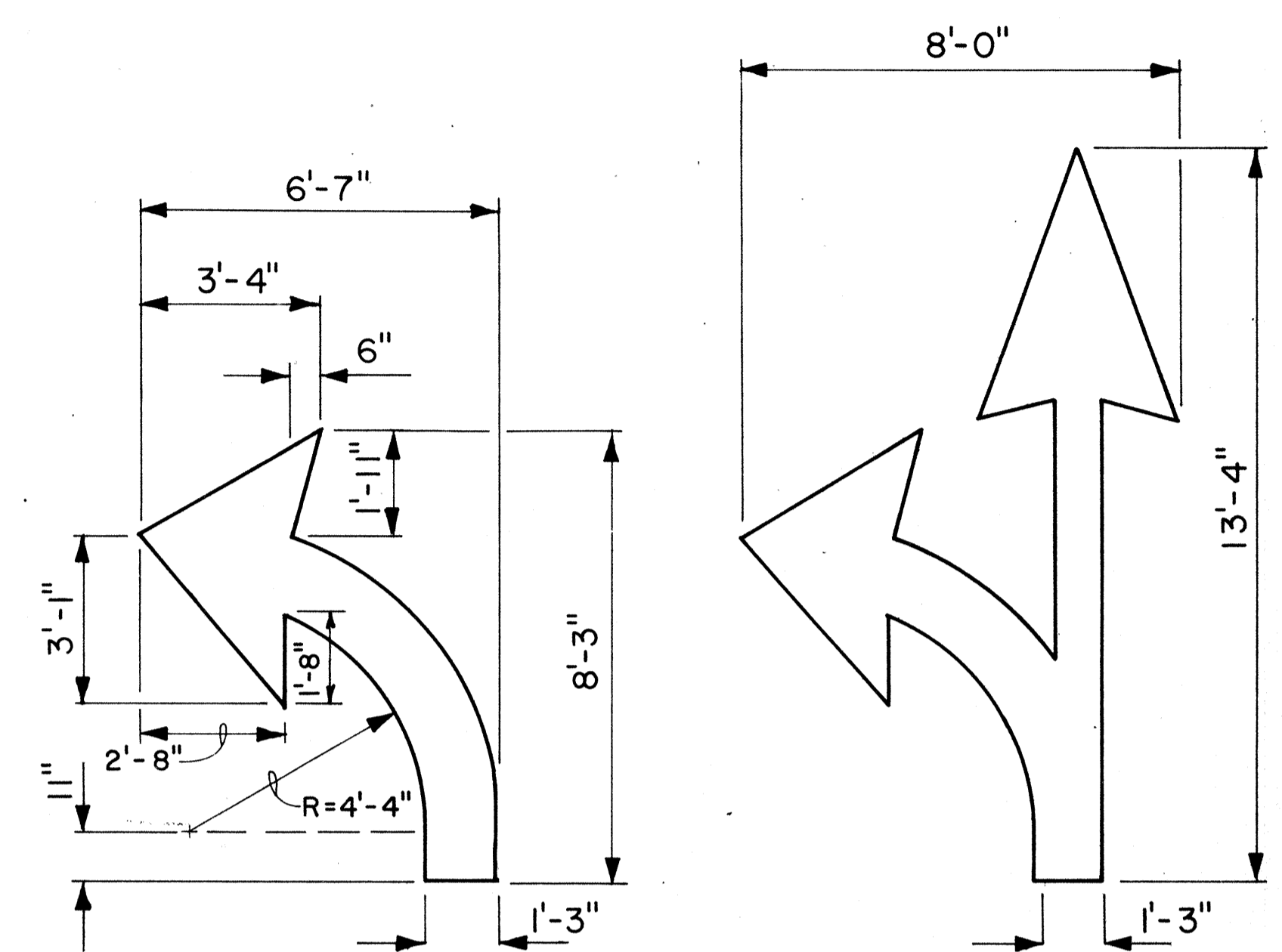
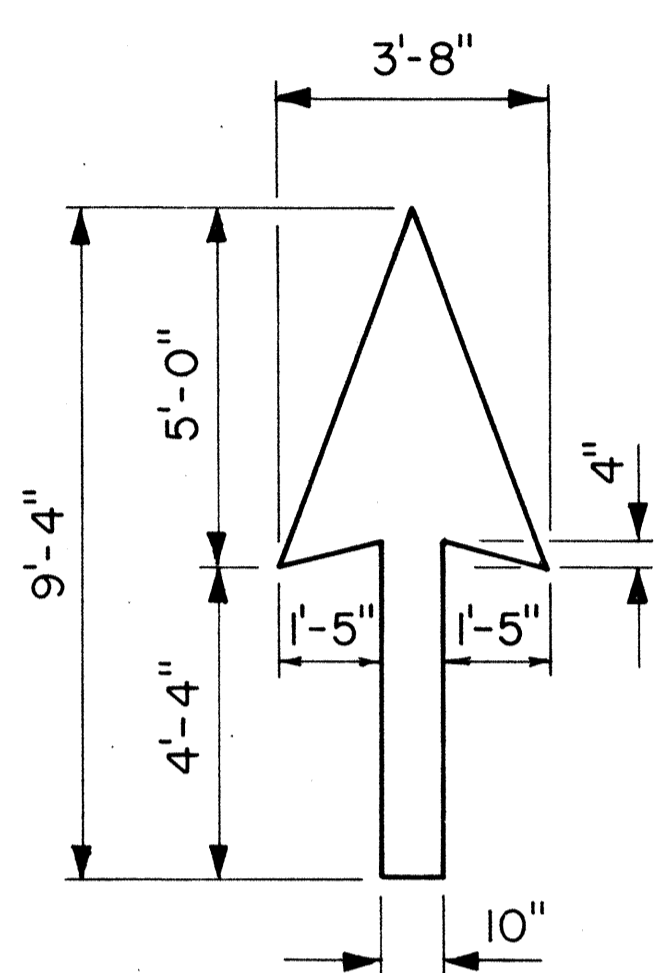
Not to Scale

SHEET No. 13 OF 15 SHEETS DT 307

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-ROS 033-1(12)	1984	62	63



ELONGATED



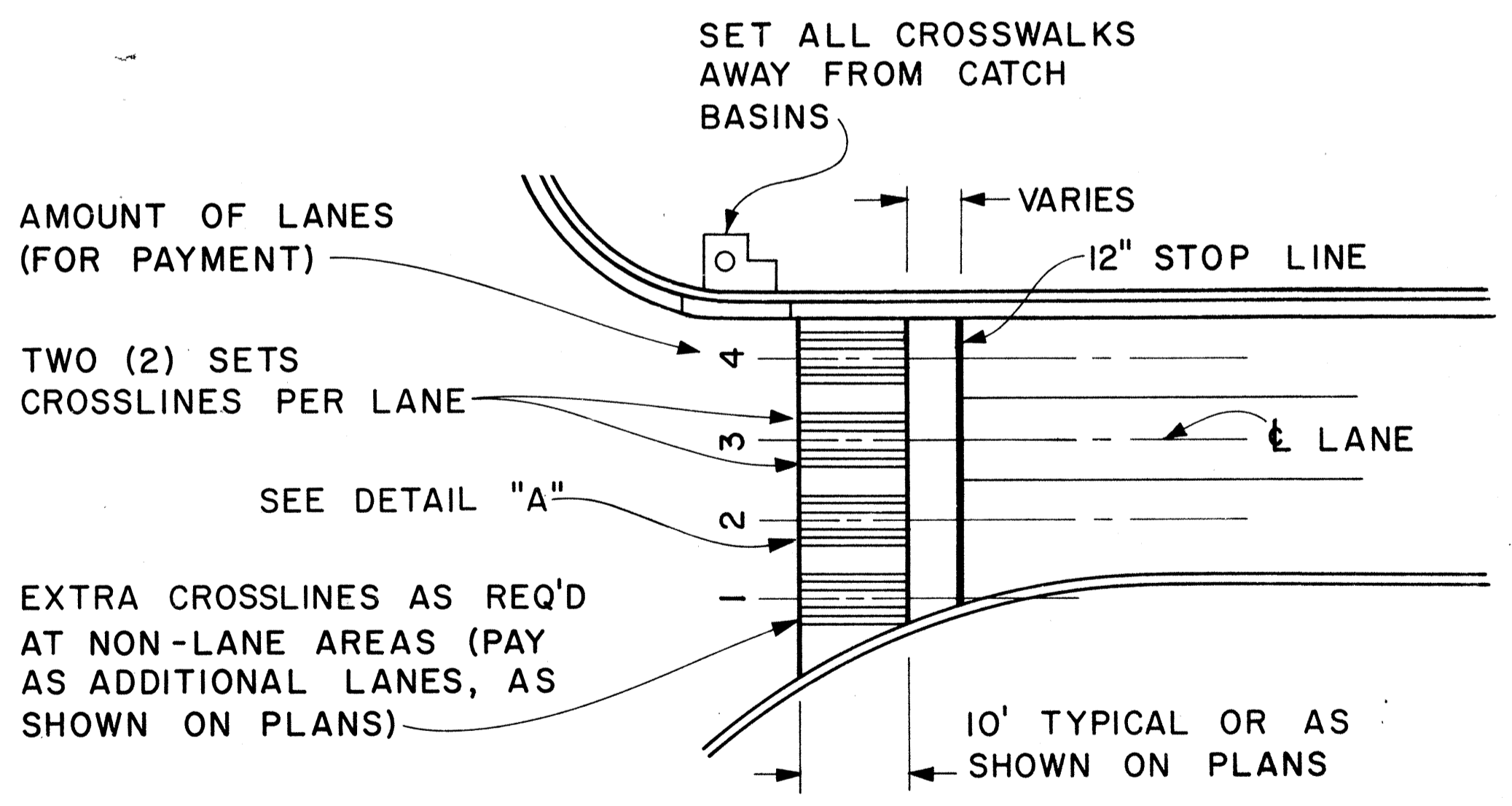
STANDARD

PAVEMENT ARROWS

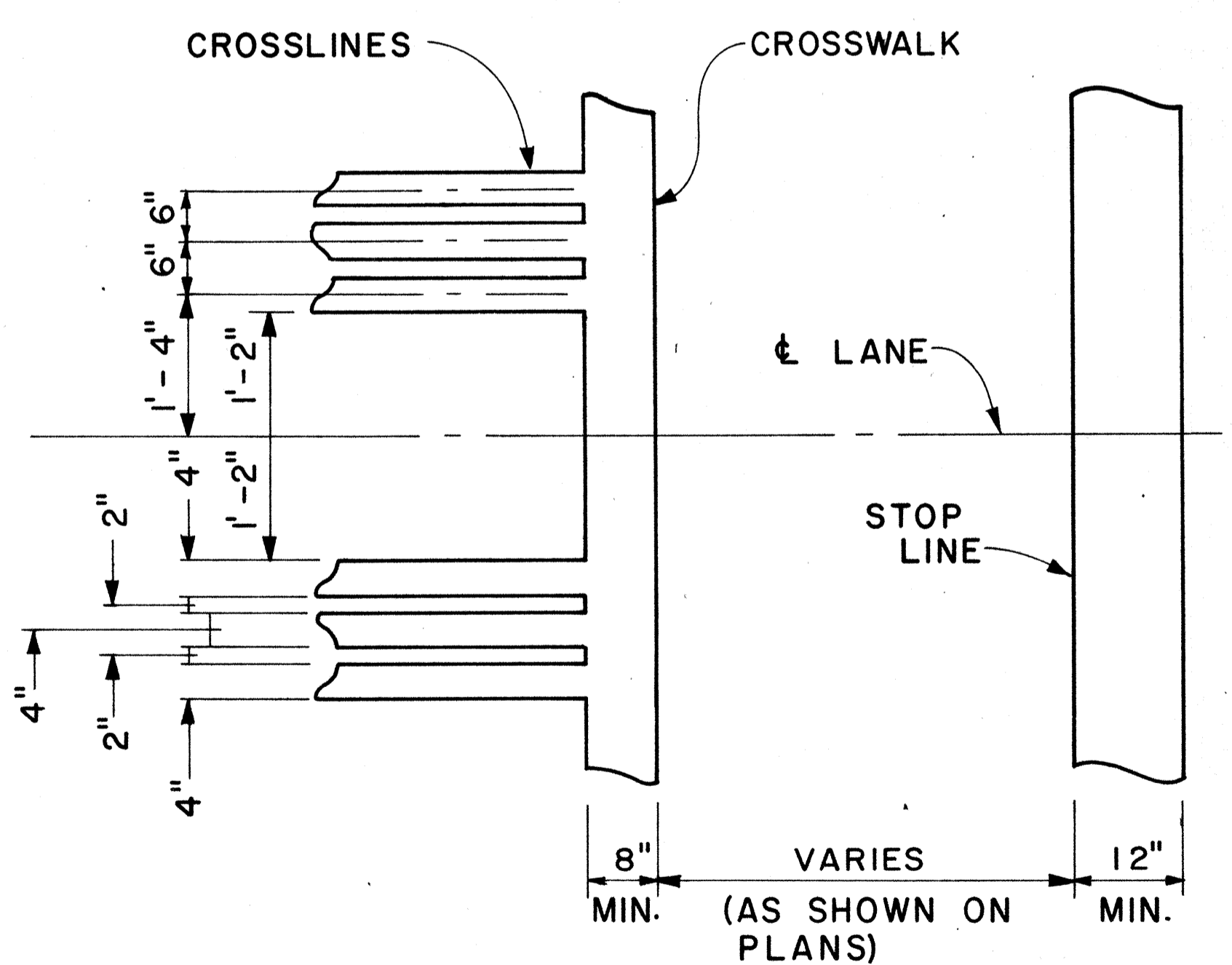
Scale: 3/8" = 1'

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.



PLAN



DETAIL "A"

CROSSWALK & STOP LINE

Scale: Not to Scale

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

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

APPROVED:
Robert S. Sakai 5/3/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

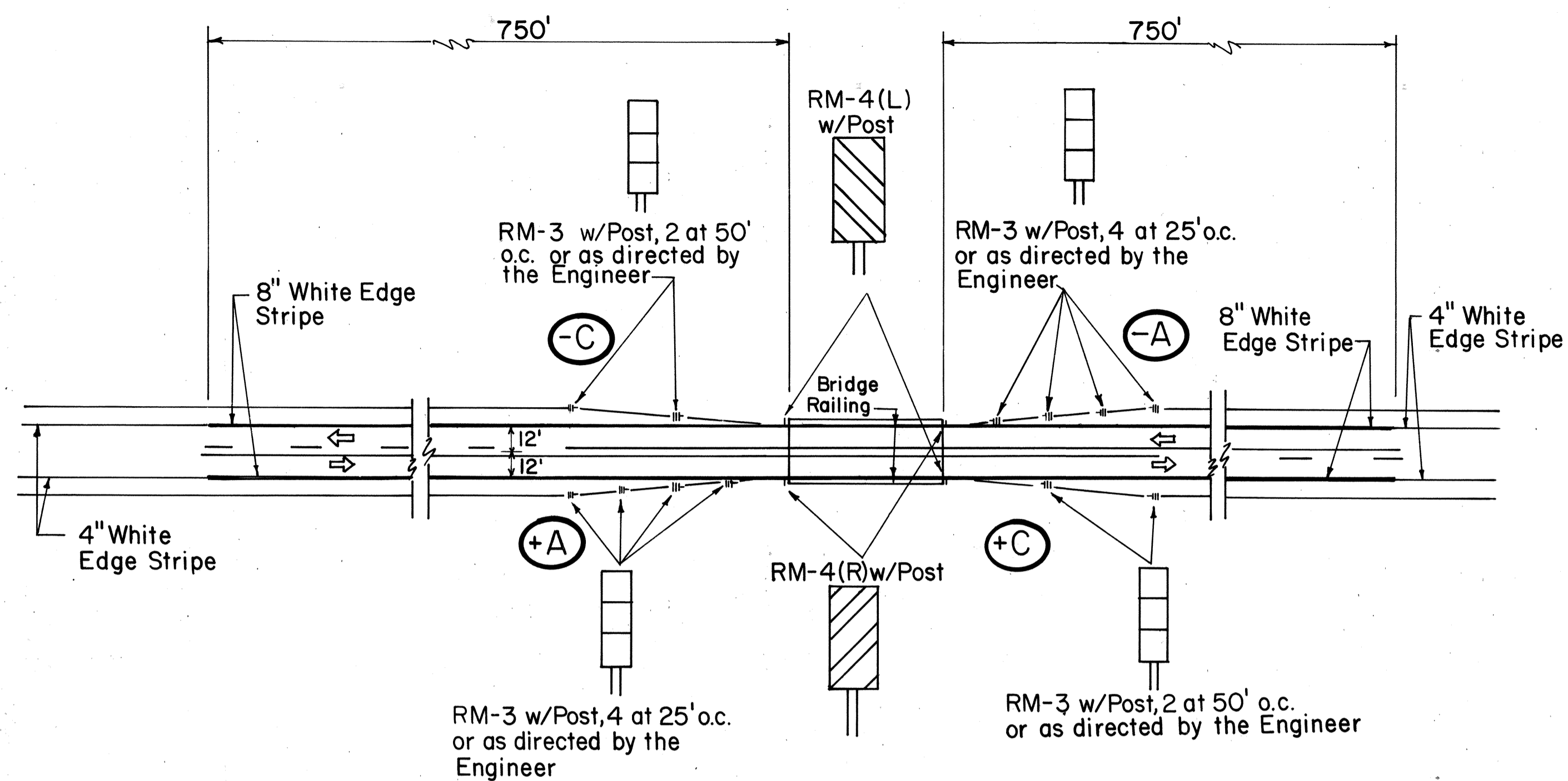
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

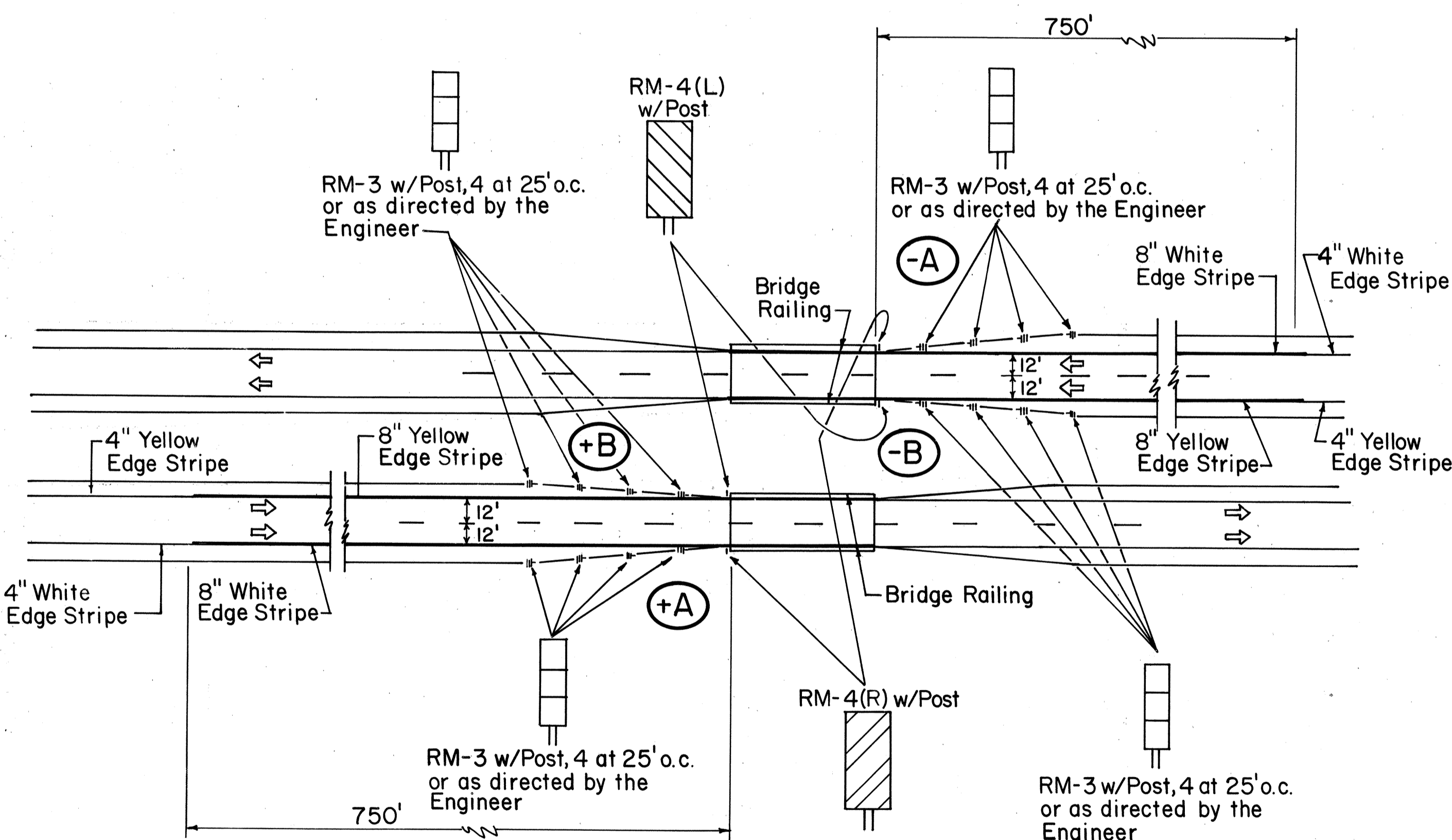
MISCELLANEOUS
 PAVEMENT MARKINGS

Scale: As Shown Date: March, 1978
 SHEET No. 14 OF 15 SHEETS DT 306

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HES-R05-083-1(12)	1984	63	63

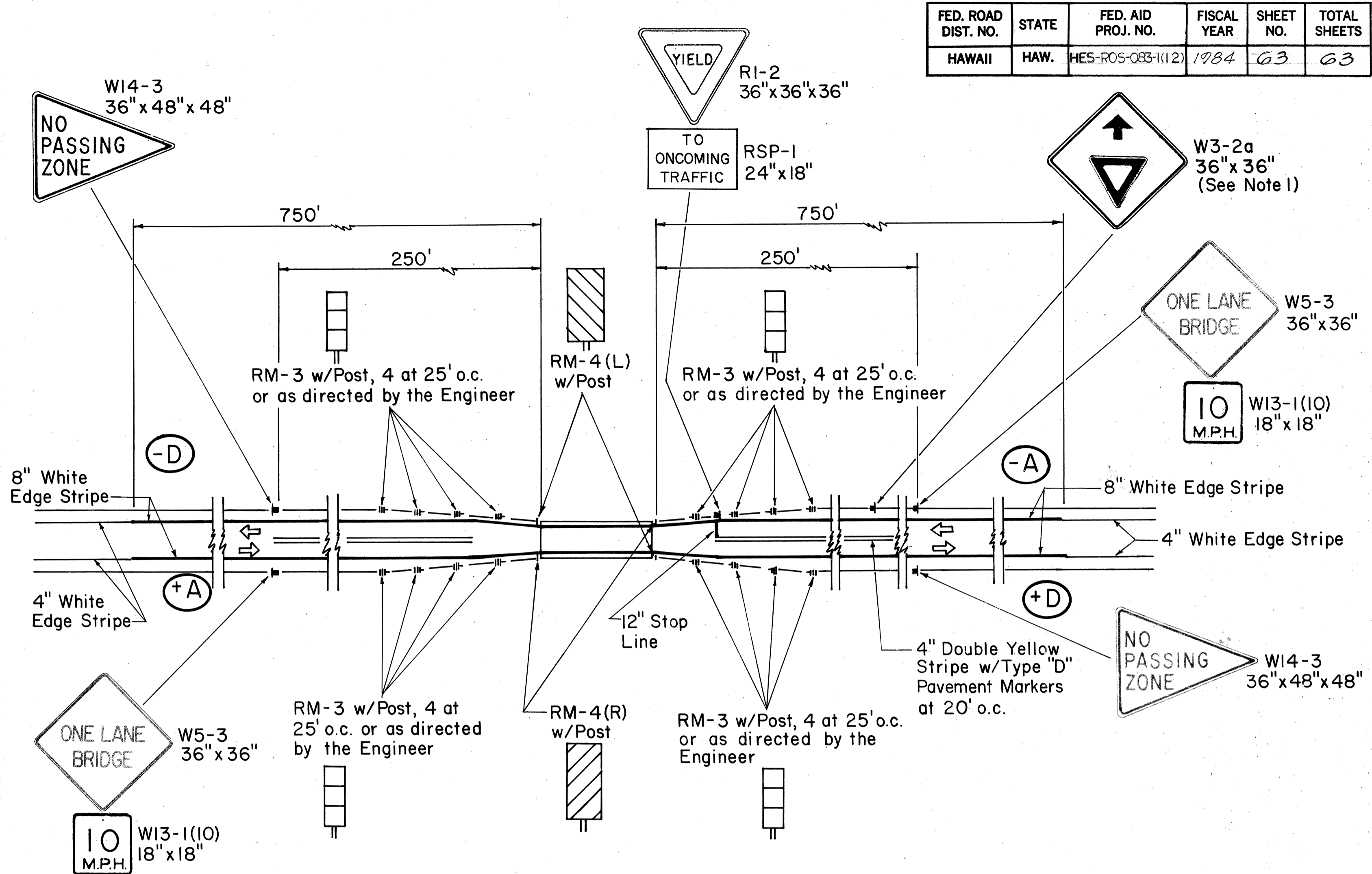


UNDIVIDED HIGHWAY



DIVIDED HIGHWAY

TYPICAL NARROW BRIDGE DELINEATION



TYPICAL ONE LANE BRIDGE DELINEATION

NOTES:

1. YIELD AHEAD sign (W3-2a) shall be installed only on approaches to a YIELD sign (R1-2) that is not visible for a sufficient distance to permit a driver to bring his vehicle to a stop at the YIELD sign. Final location will be determined in the field by the Engineer.
2. Stop line and YIELD signs shall be installed on the approach that has the longer or better sight distance. Final location will be determined in the field by the Engineer.
3. Signs shall be spaced a minimum of 125 feet apart in the same direction of traffic.

LEGEND

- Direction of traffic
- + Increasing Log Miles
- Decreasing Log Miles
- +A Type of reflector marker treatment

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

**TYPICAL DELINEATION AND
PAVEMENT MARKINGS AT BRIDGES**

Scale: N.T.S.
SHEET NO. 15 OF 15 SHEETS

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