

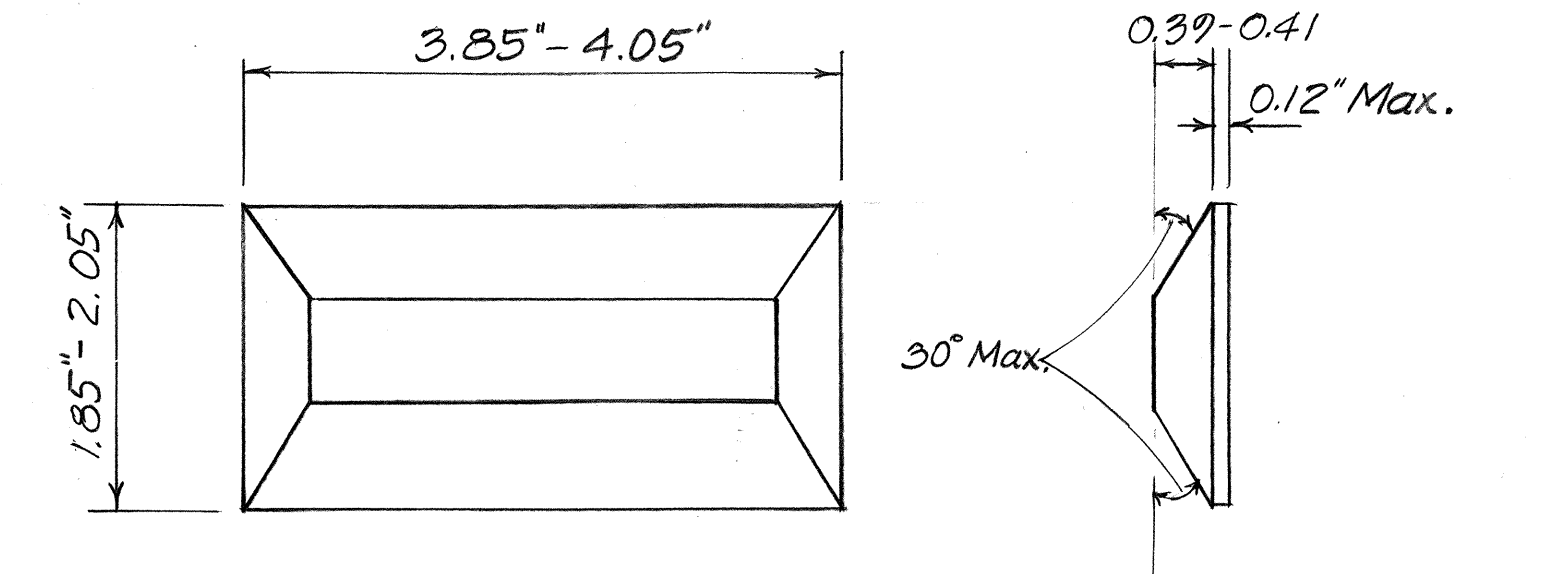
NOTES

1. Location of all new pavement markings shall be staked out by the Contractor for approval by the Engineer prior to installation.
2. Existing pavement 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.
3. Raised pavement markings shall not be placed within crosswalks.
4. Existing signs not shown on these plans shall remain as posted unless otherwise directed by the Engineer. Removal of existing signs shall be incidental to the various contract items.
5. Final locations of all signs shall be approved by the Engineer.
6. Details of Type C, Type D and Type H Markers on Plan Sht. No. 55 shall be deleted and replaced with details of Type CL, Type DL and Type HL Markers as shown on this sheet. All references to Type C, Type D and Type H Markers in the plans shall mean Type CL, Type DL and Type HL Markers.

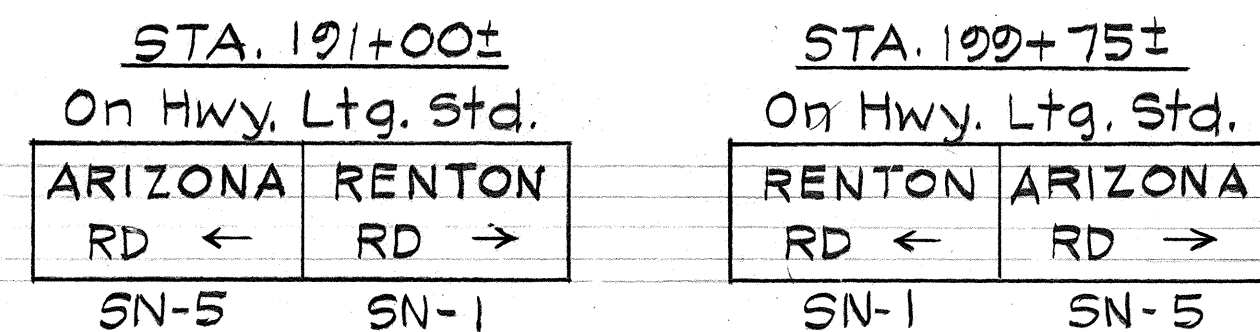
LEGEND

- 4 Each Type A Raised Pavement Markers
- Type C Raised Pavement Markers @ 40' o.c.
-
-
- Pavement Arrow (Tape)
-
-

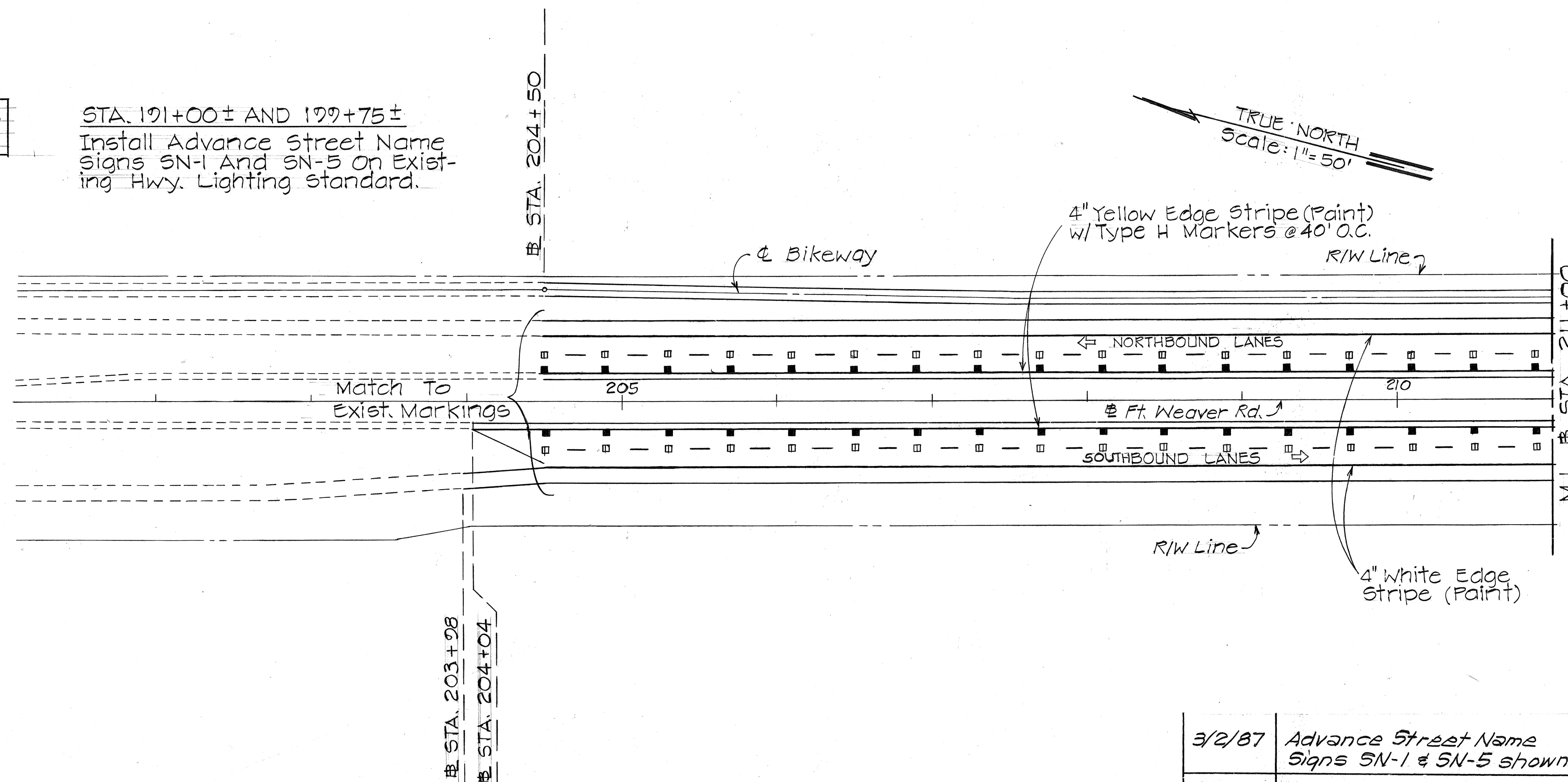
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	38	121



TYPE CL, TYPE DL, TYPE HL MARKERS
 RED-CLEAR REFLECTIVE MARKER (CL)
 or
 TWO-WAY YELLOW REFLECTIVE MARKER (DL)
 or
 ONE-WAY YELLOW REFLECTIVE MARKER (HL)



STA. 191+00± AND 199+75±
 Install Advance Street Name Signs SN-1 And SN-5 On Existing Hwy. Lighting Standard.



DATE	REVISION
3/2/87	Advance Street Name Signs SN-1 & SN-5 shown.

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**SIGNING & STRIPING
 PLAN & NOTES**

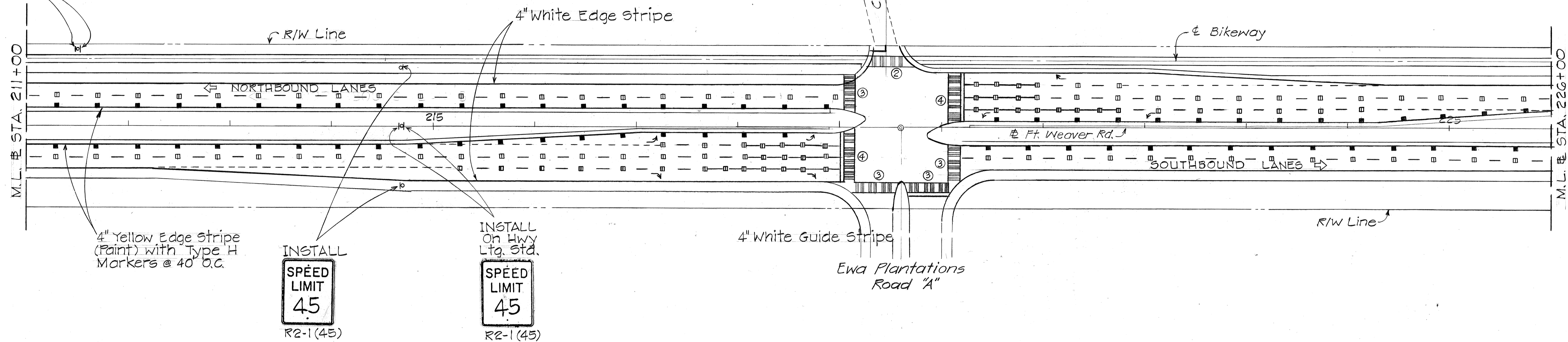
FORT WEAVER ROAD
 Renton Road To Hanakahi Street
 F.A.P. Proj. No. F-076-1(1)
 Scale: 1"=50' Date: Aug. 1985

SHEET No. 71 OF 22 SHEETS

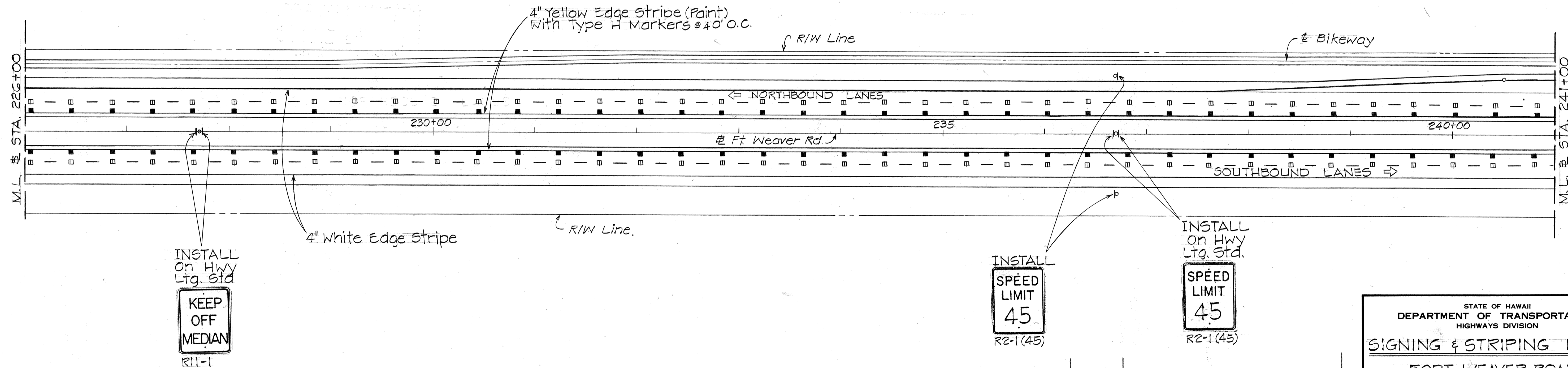
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	39	121

TRUE NORTH
Scale: 1"=50'



TRUE NORTH
Scale: 1"=50'



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

DATE	REVISION
1-6-86	Revised Pavement Markings for Road 'A' Intersection.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & STRIPING PLAN

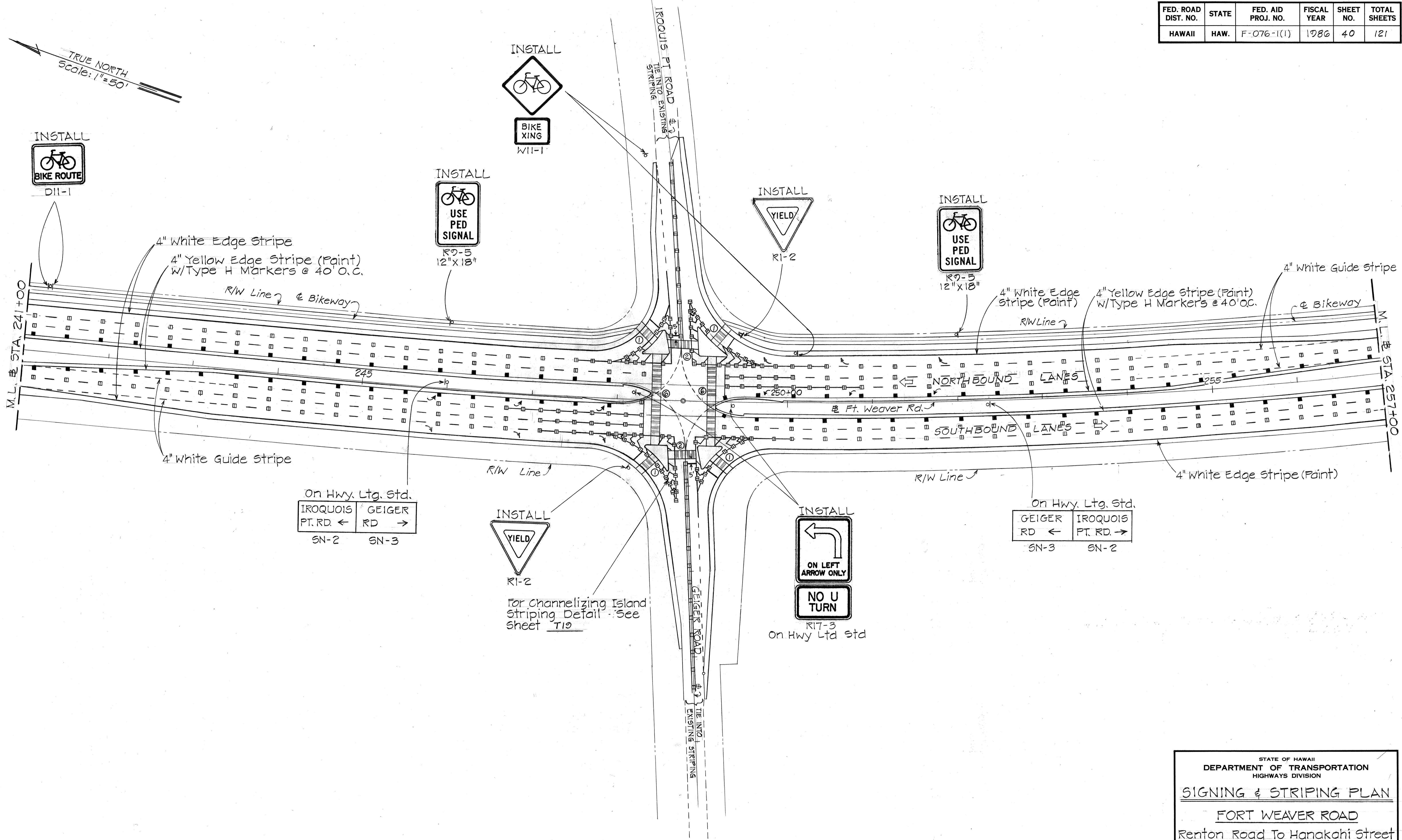
FORT WEAVER ROAD
Renton Road To Hanakahi Street

F.A.P. Proj. No. F-076-1(1)

Scale: 1"=50' Date: Aug. 1985

SHEET No. 72 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1985	40	121



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

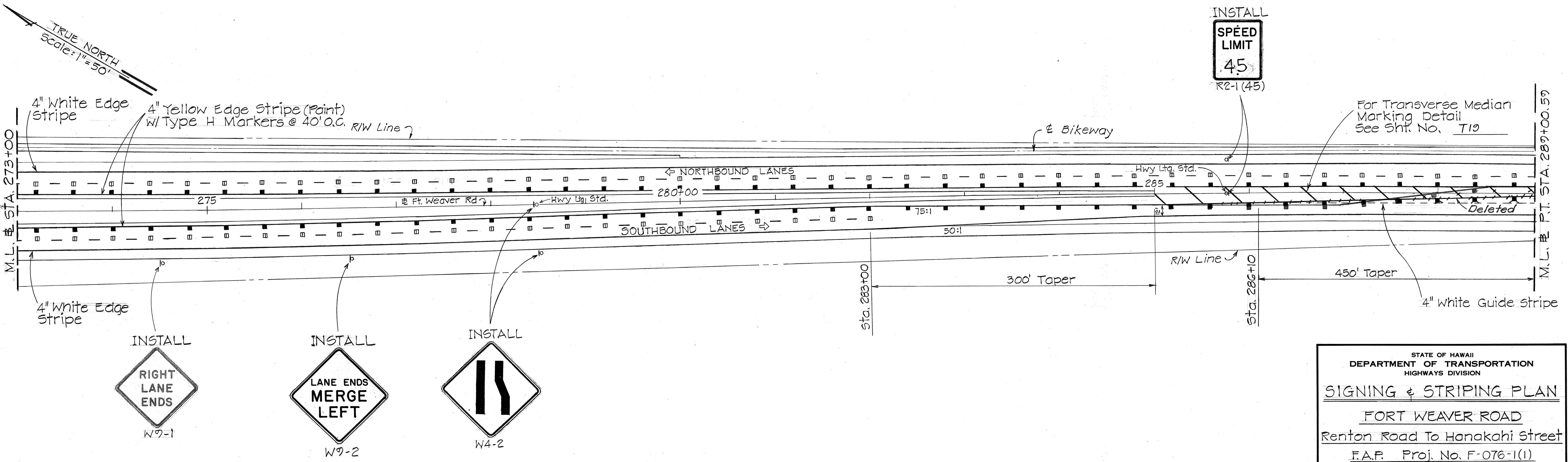
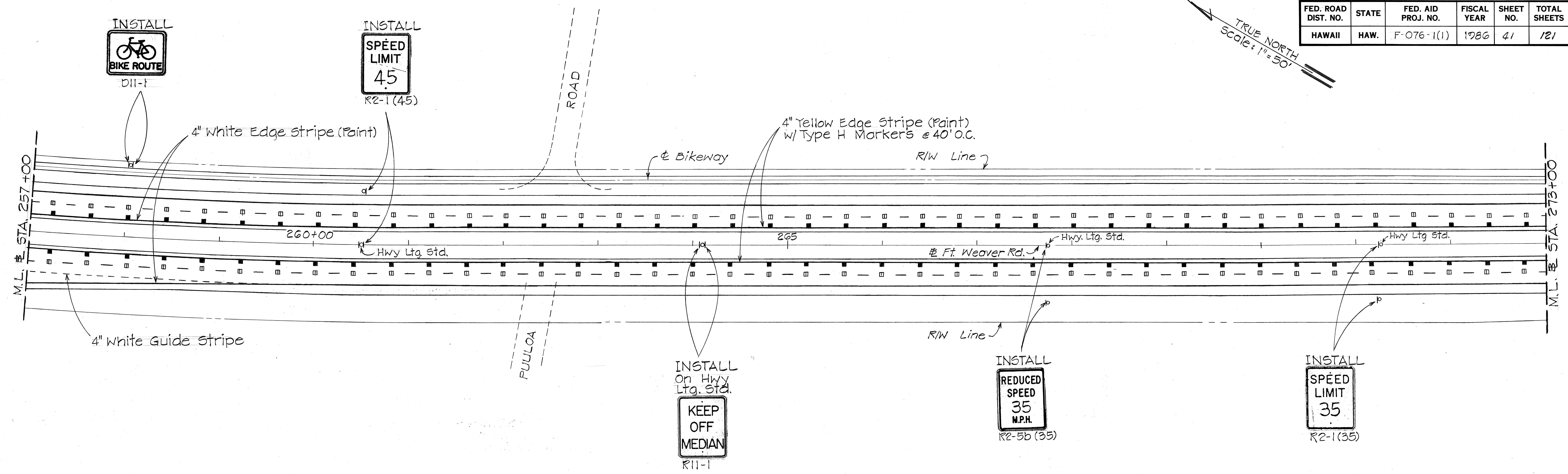
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING & STRIPING PLAN

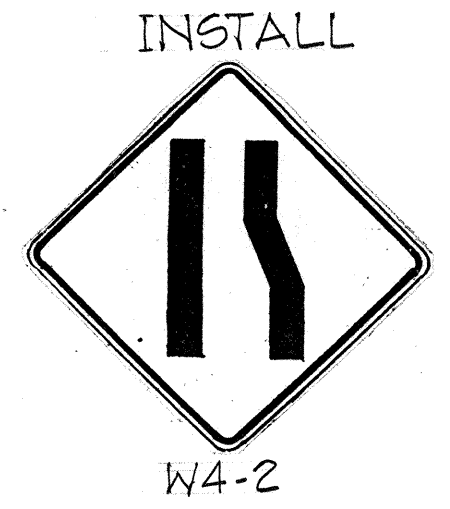
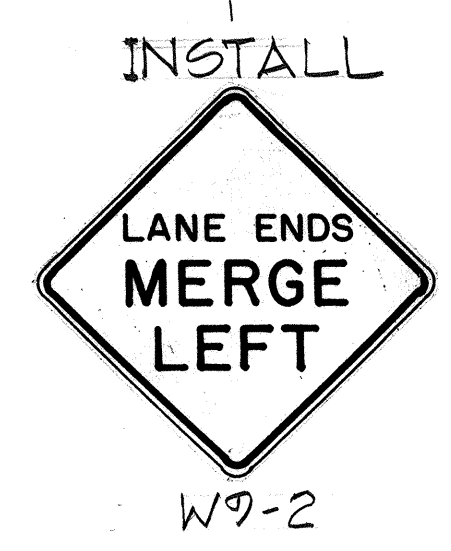
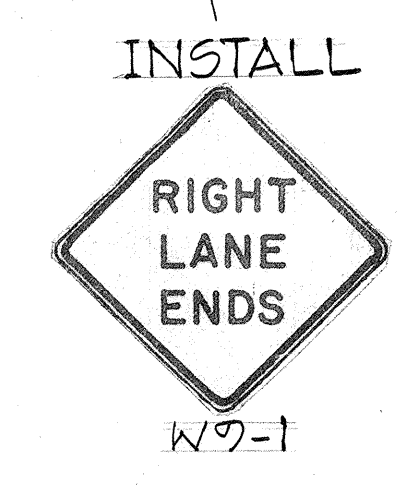
FORT WEAVER ROAD
Renton Road To Hanakahi Street
F.A.P. Proj. No. F-076-1(1)
Scale: 1"=50' Date: Aug. 1985
SHEET No. 73 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	41	121

TRUE NORTH
Scale: 1"=50'



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



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

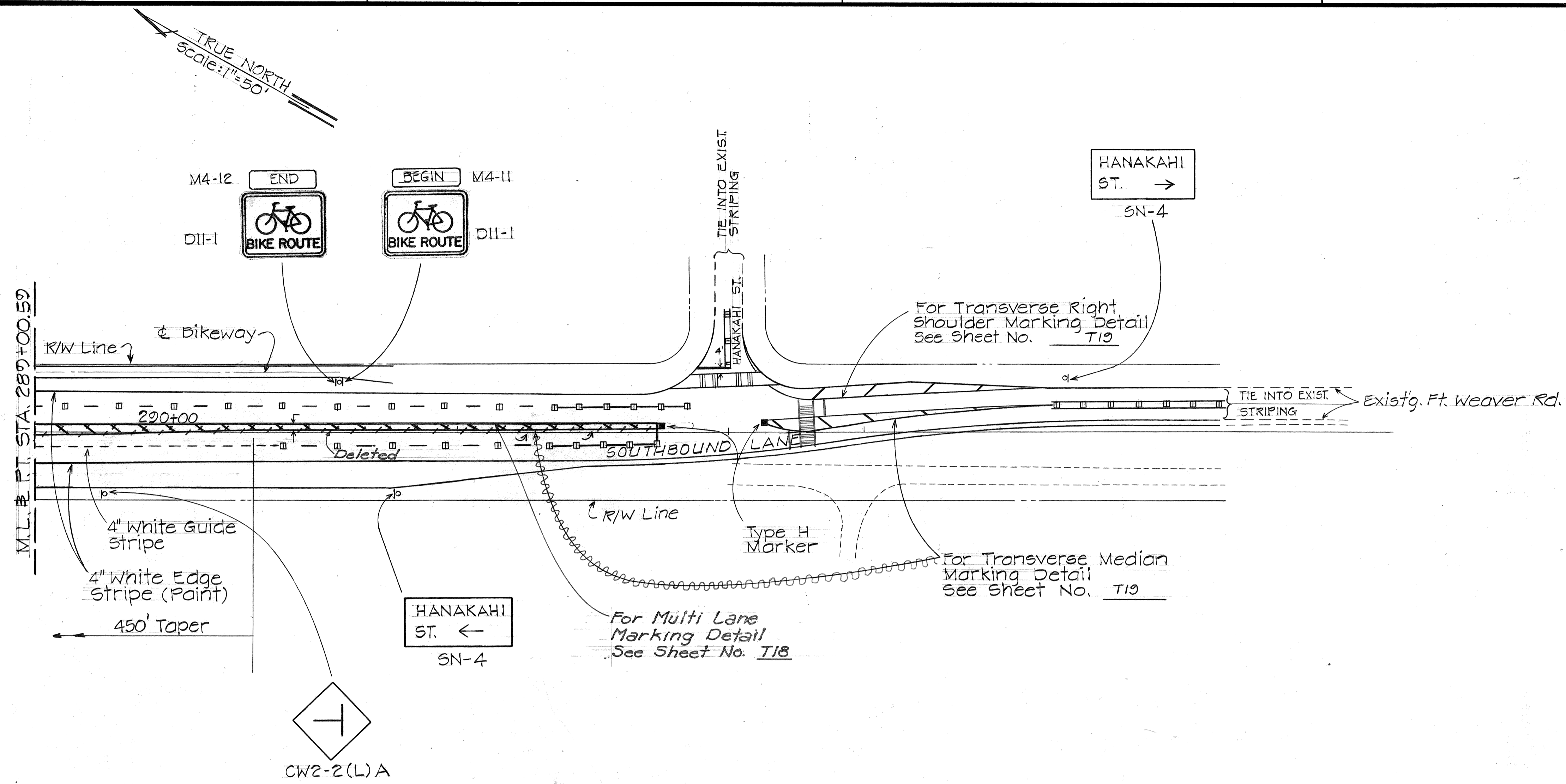
SIGNING & STRIPING PLAN

FORT WEAVER ROAD
Renton Road To Hanakahi Street
F.A.P. Proj. No. F-076-1(1)

Scale: 1"=50' Date: Aug. 1985

SHEET No. 74 OF 22 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	42	121



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

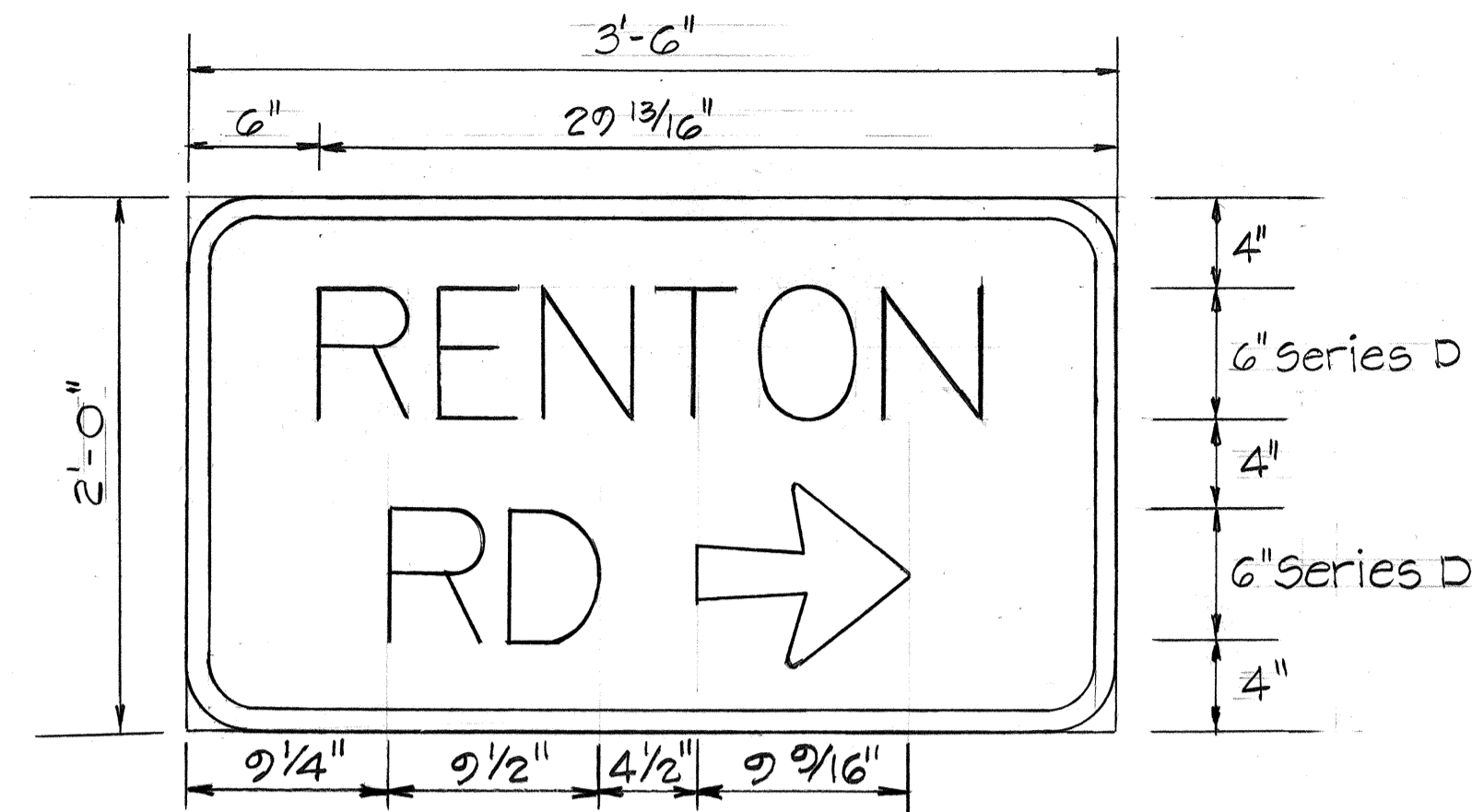
SIGNING & STRIPING PLAN

FORT WEAVER ROAD
Renton Road To Honakahi Street
F.A.P. Proj. No. F-076-1(1)
Scale: 1" = 50' Date: Aug. 1985
SHEET No. 15 OF 22 SHEETS

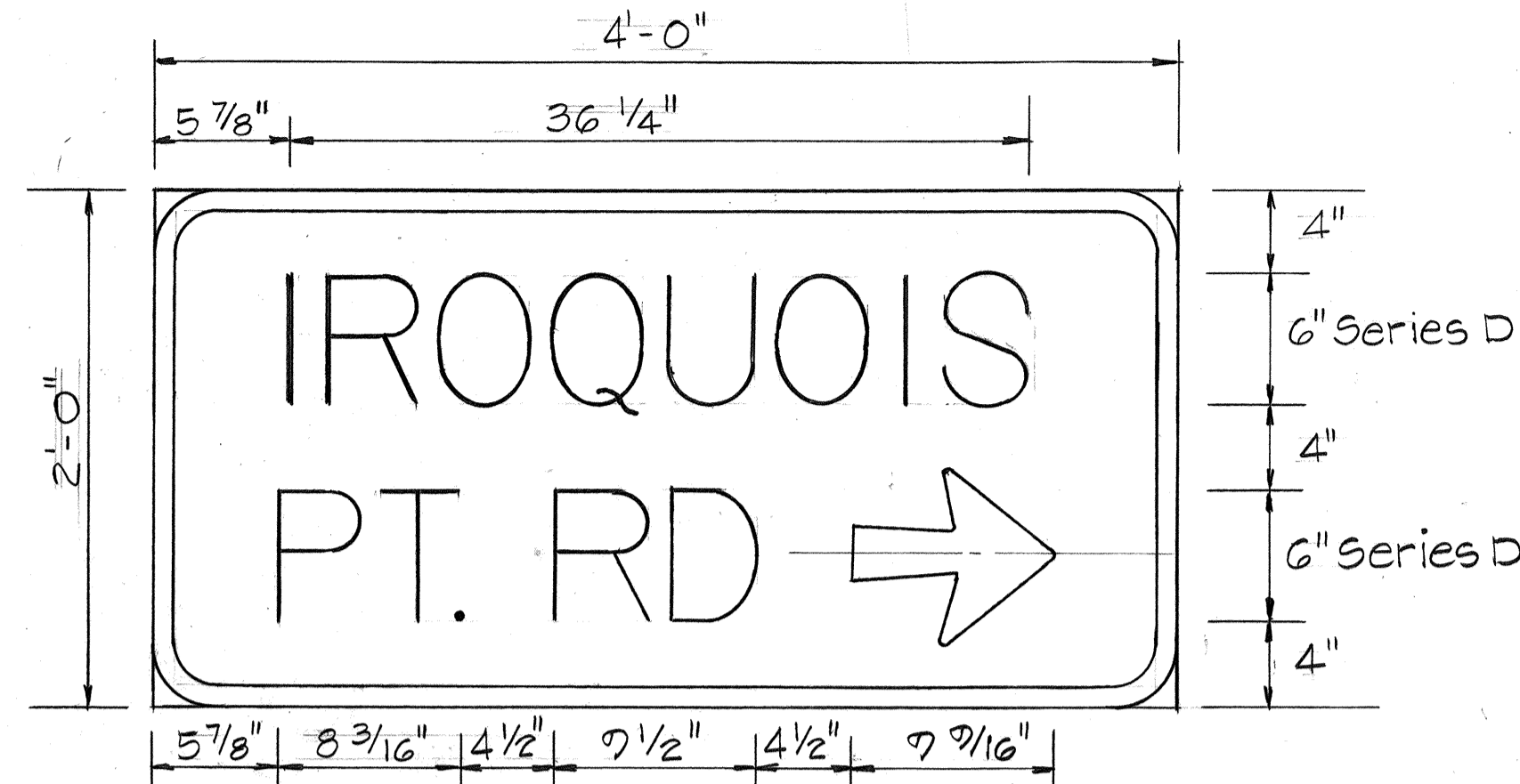
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	43	121

STREET NAME SIGN NOTES

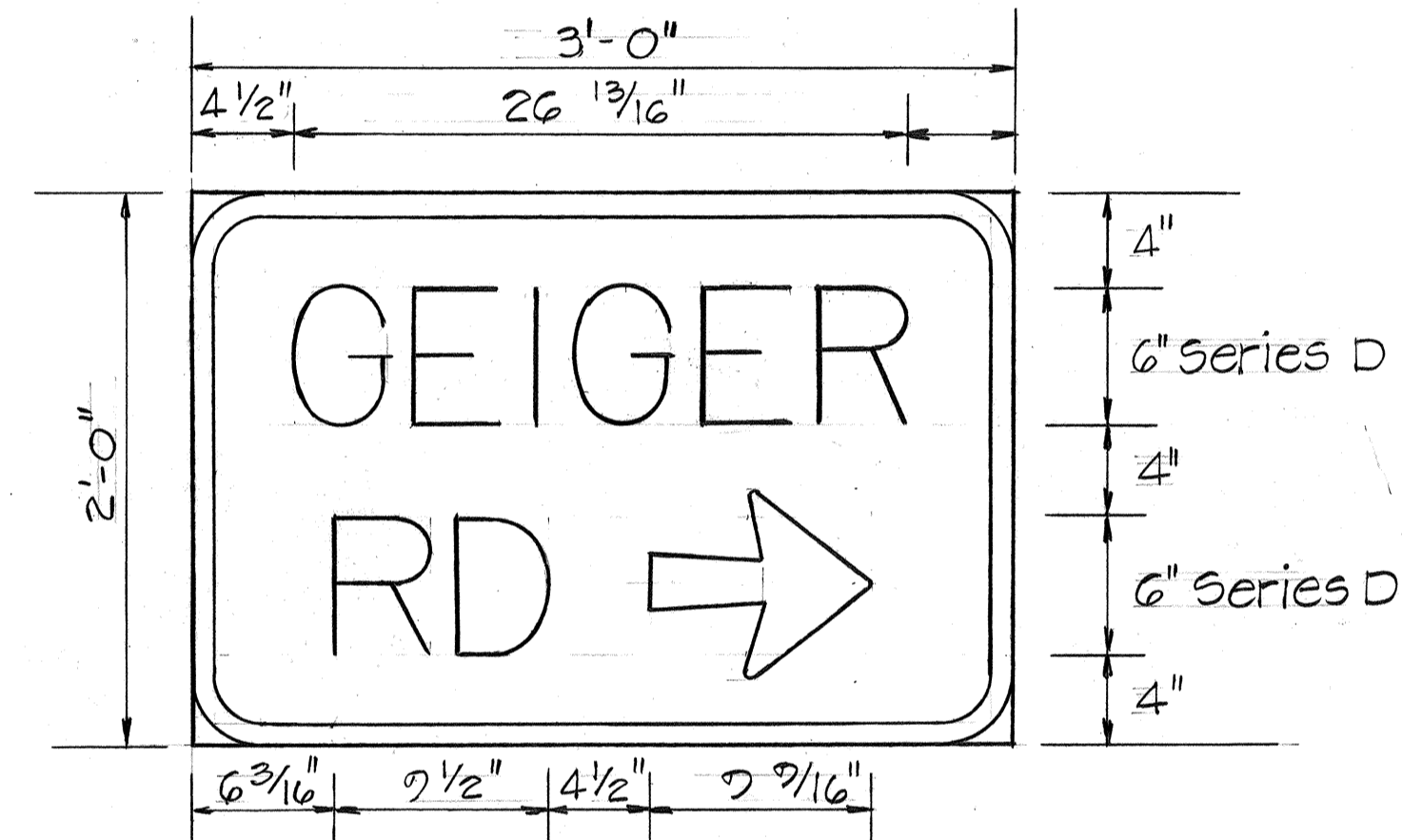
- Street name signs () shall conform to the latest FHWA publications: "Manual on Uniform Traffic Control Devices for Streets & Highways" and as amended "Standard Alphabets for Highway Signs".
- Letters:
 Series D Upper Case
 Color: Letters } White Reflective Sheeting on Demountable Aluminum Cut-Outs
 Borders } fastened to Sign Panel with Aluminum Blind Rivets.
 Arrows }
 Background Green Reflective Sheeting
 Sign Panel:
 0.100" TH. Sheet Aluminum.
- If splicing of Sign Panel is Necessary, Contractor shall submit splice details to Engineer for approval.
- For Typical Frame Layout and Mounting Details, See Plan Sht. 17 "Unbalanced Sign Installation".



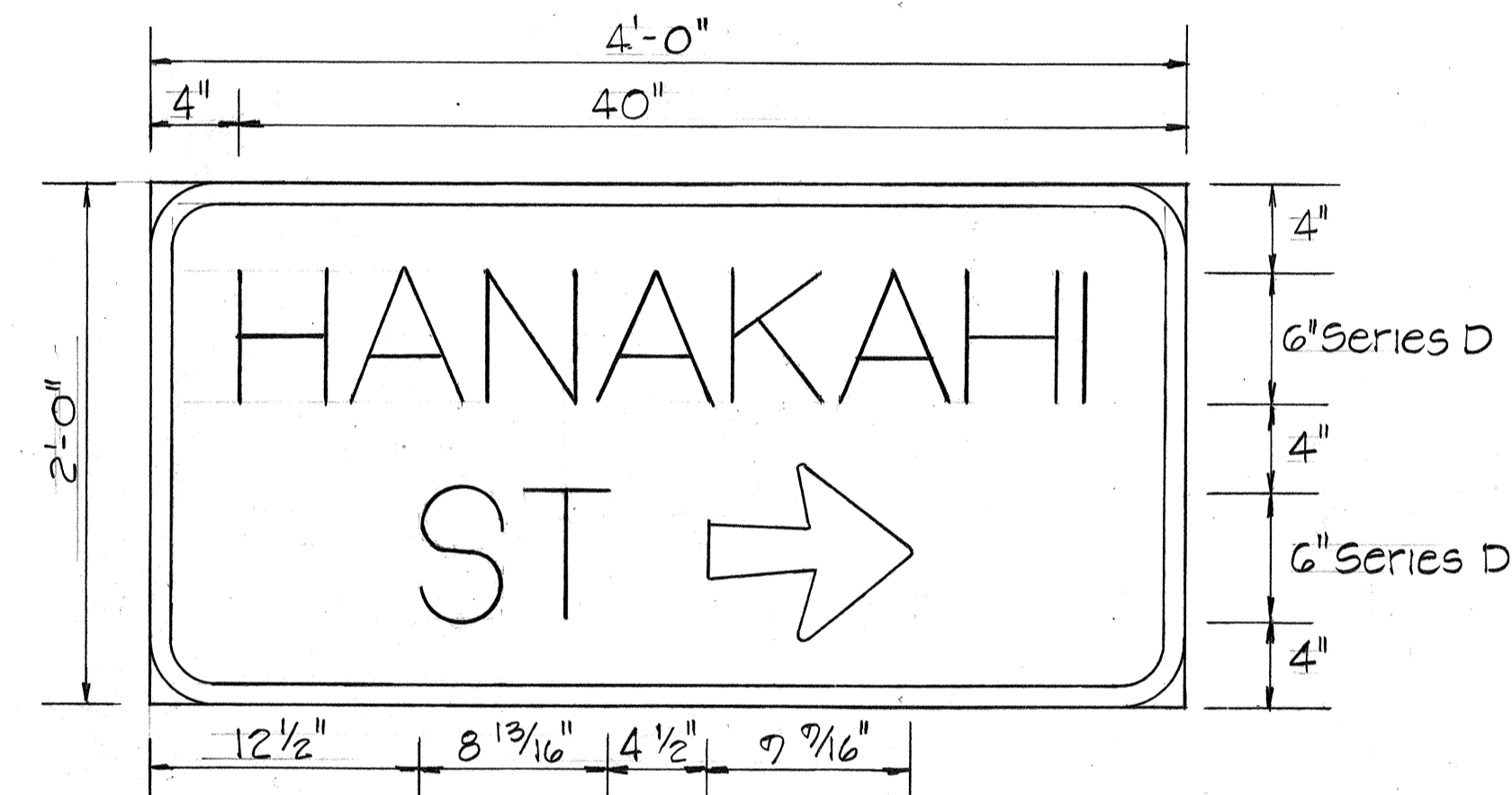
SN-1
1 1/2" = 1'-0"



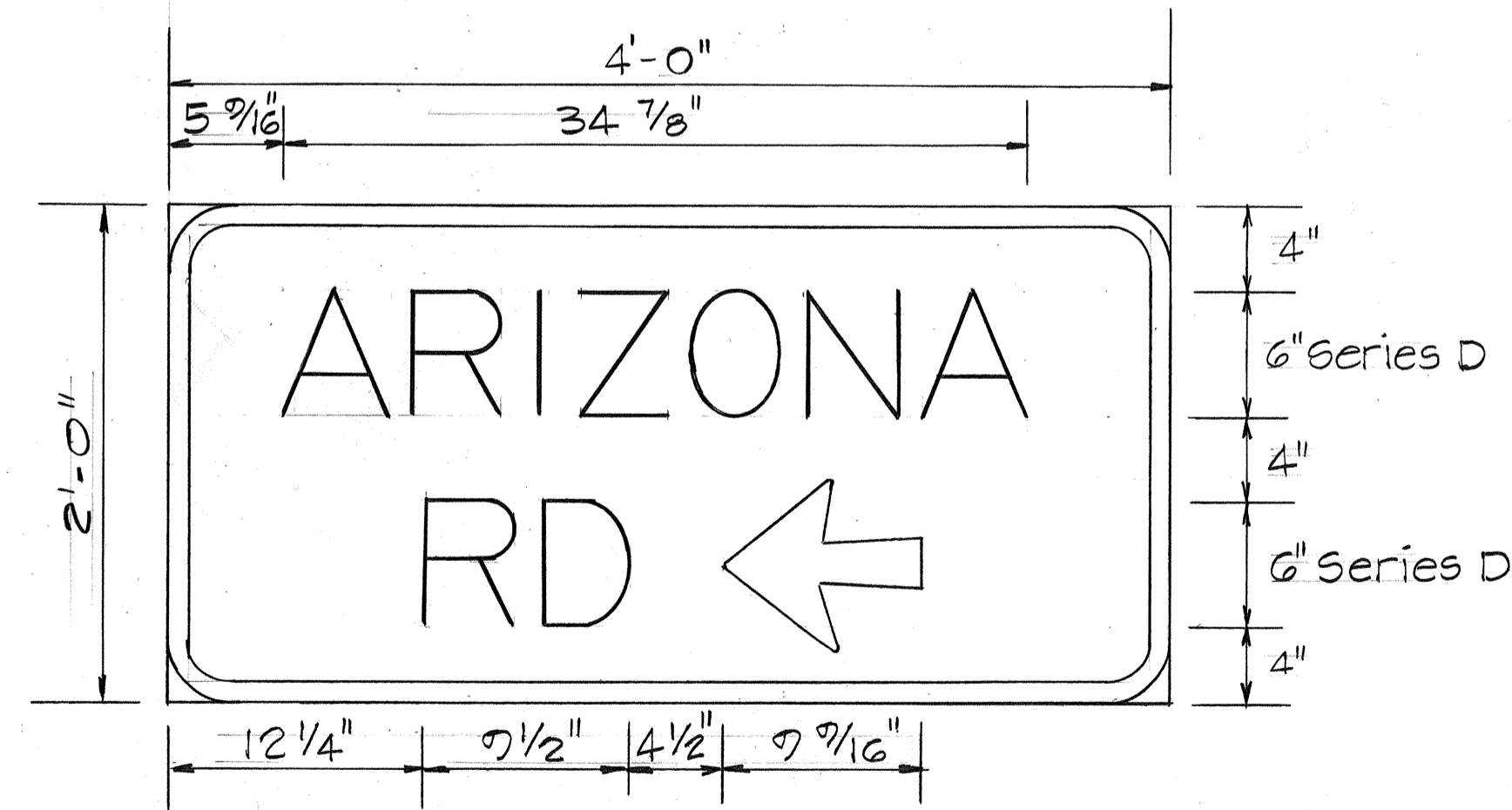
SN-2
1 1/2" = 1'-0"



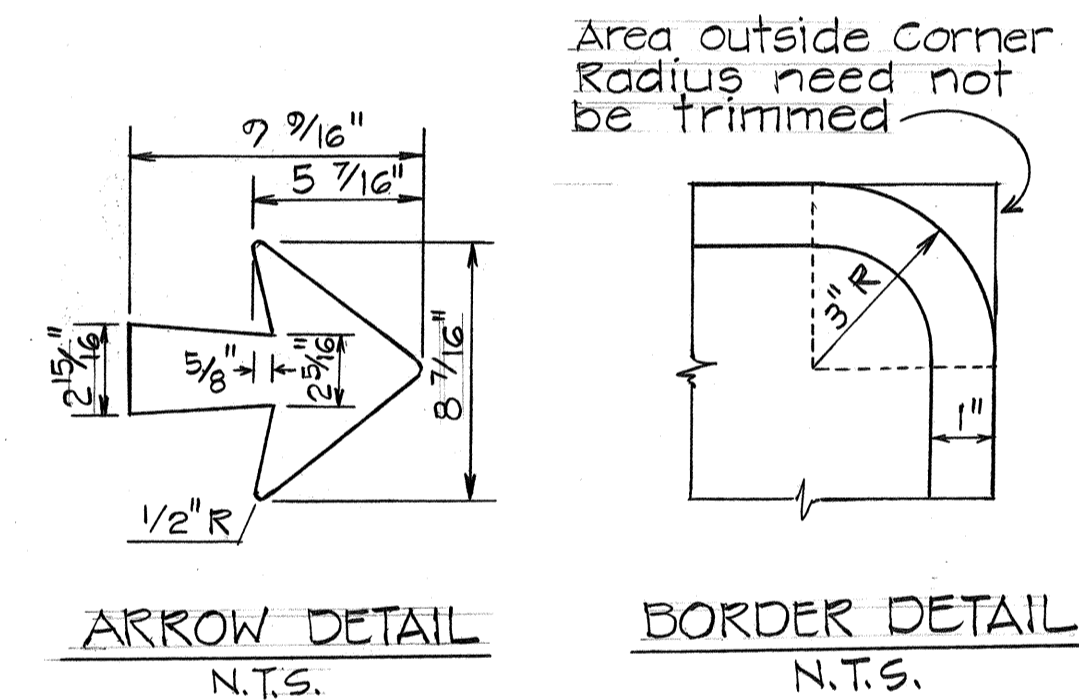
SN-3
1 1/2" = 1'-0"



SN-4
1 1/2" = 1'-0"



SN-5
1 1/2" = 1'-0"



ARROW DETAIL
N.T.S.

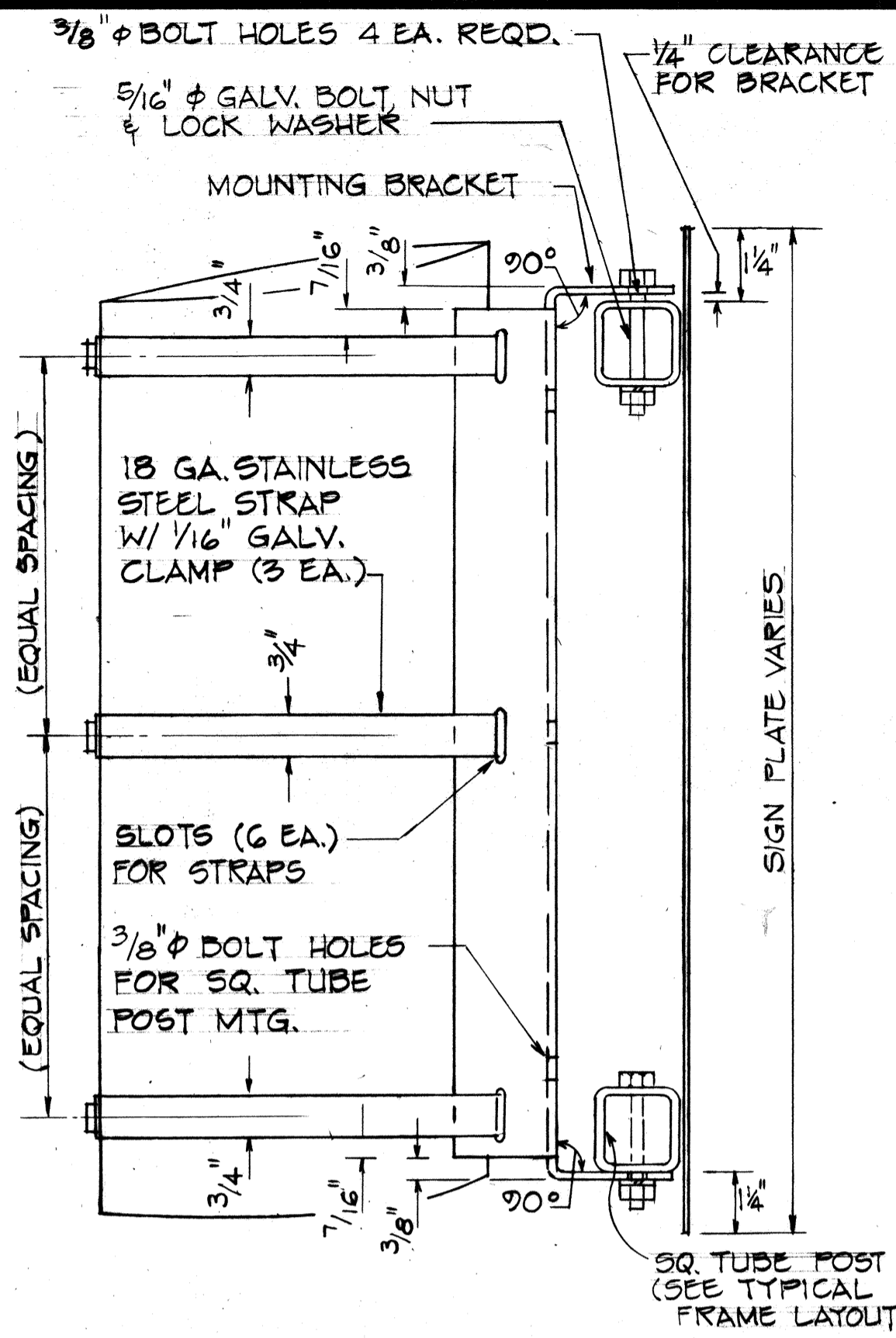
BORDER DETAIL
N.T.S.

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

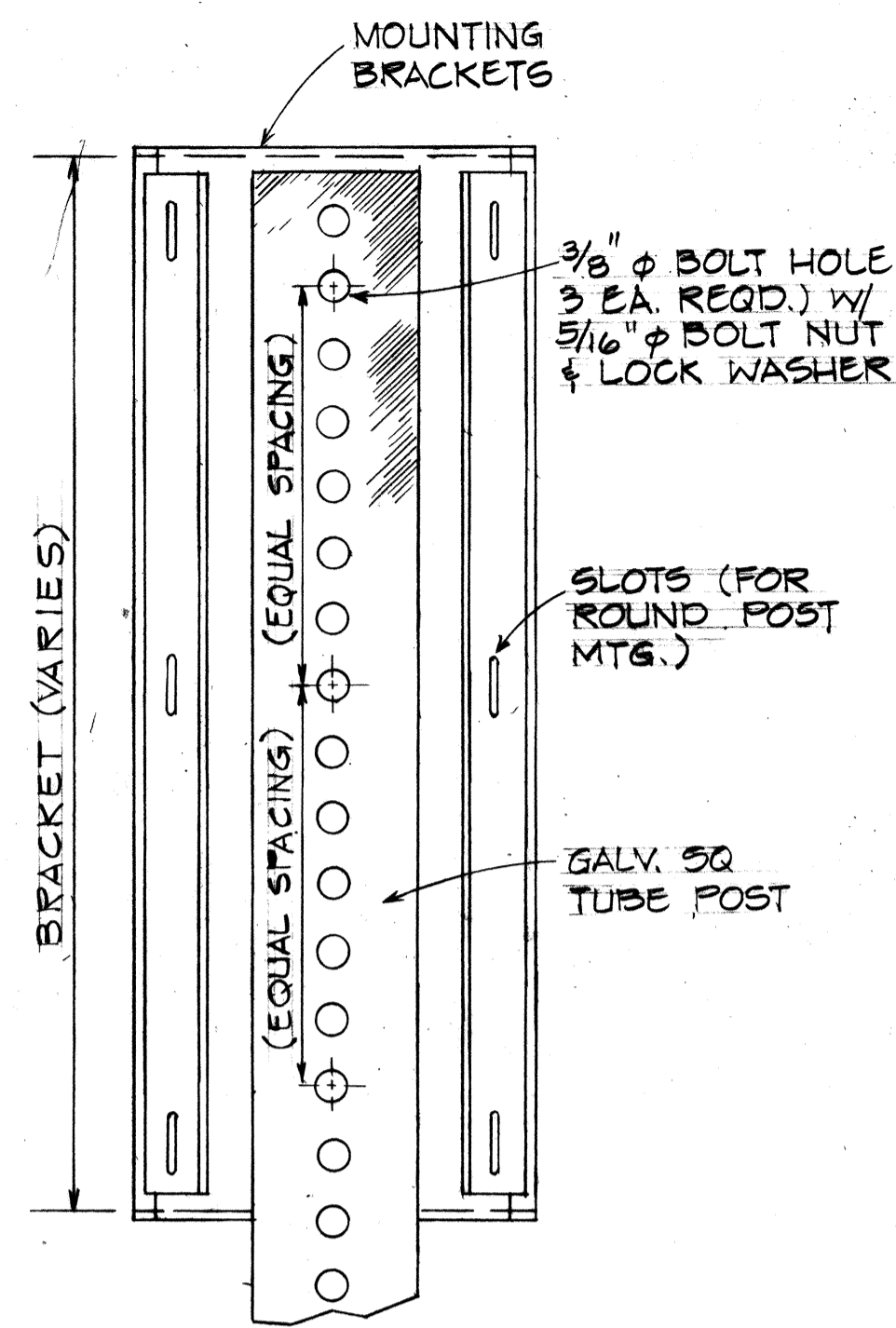
3/2/87	Arrow added to Sign SN-1 Detail
DATE	REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
MISCELLANEOUS SIGN DETAIL
 FORT WEAVER ROAD
 Renton Road To Hanakahi Street
 F.A.P. Proj. No. F-076-1(1)
 Scale: 1" = 50' Date: Aug. 1985
SHEET NO. 16 OF 22 SHEETS

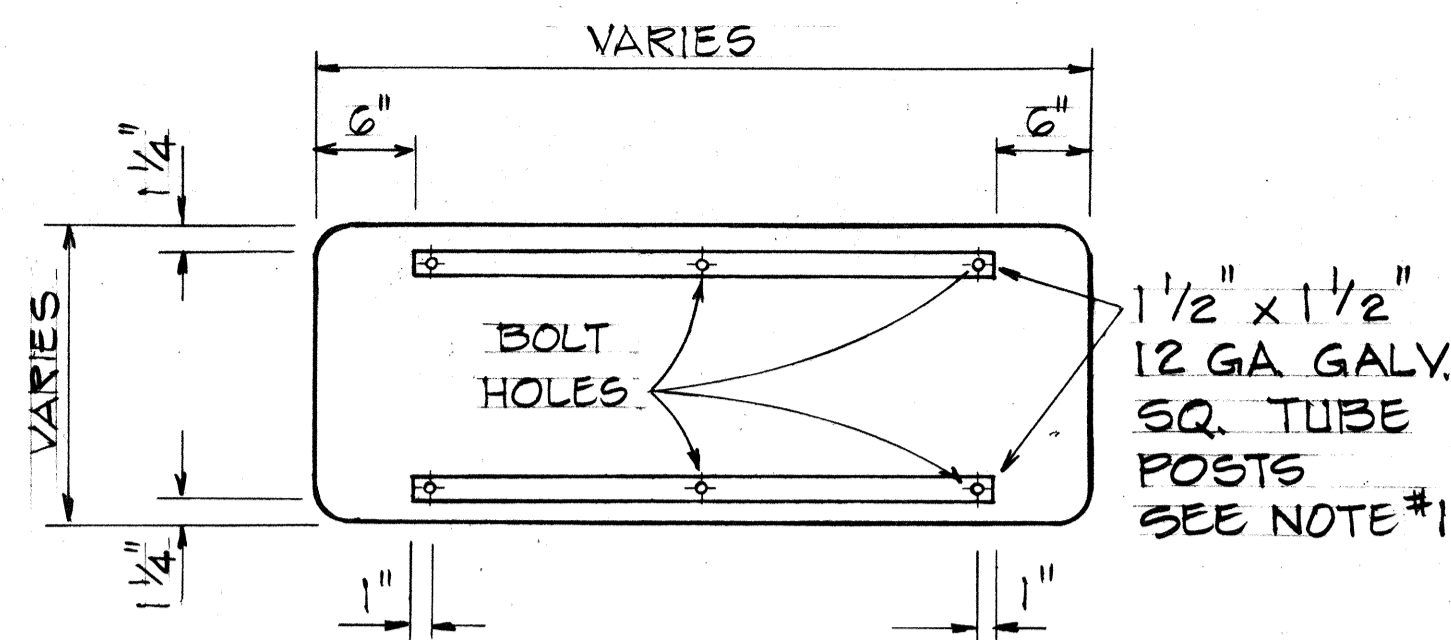
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	44	121



SIDE VIEW



SQ. TUBE POST MOUNTING
BACK VIEW



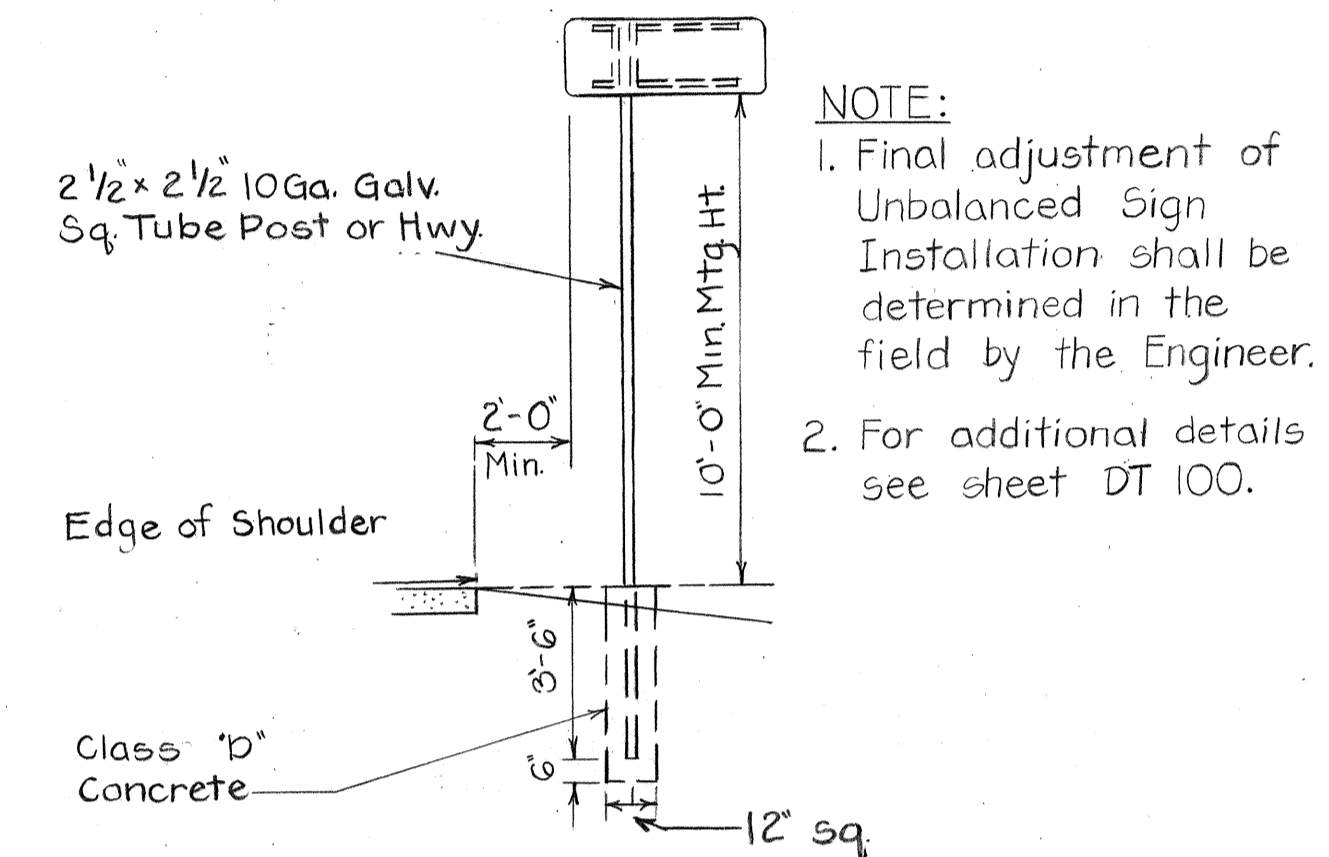
TYPICAL FRAME LAYOUT

Scale: 1"=1'-0"

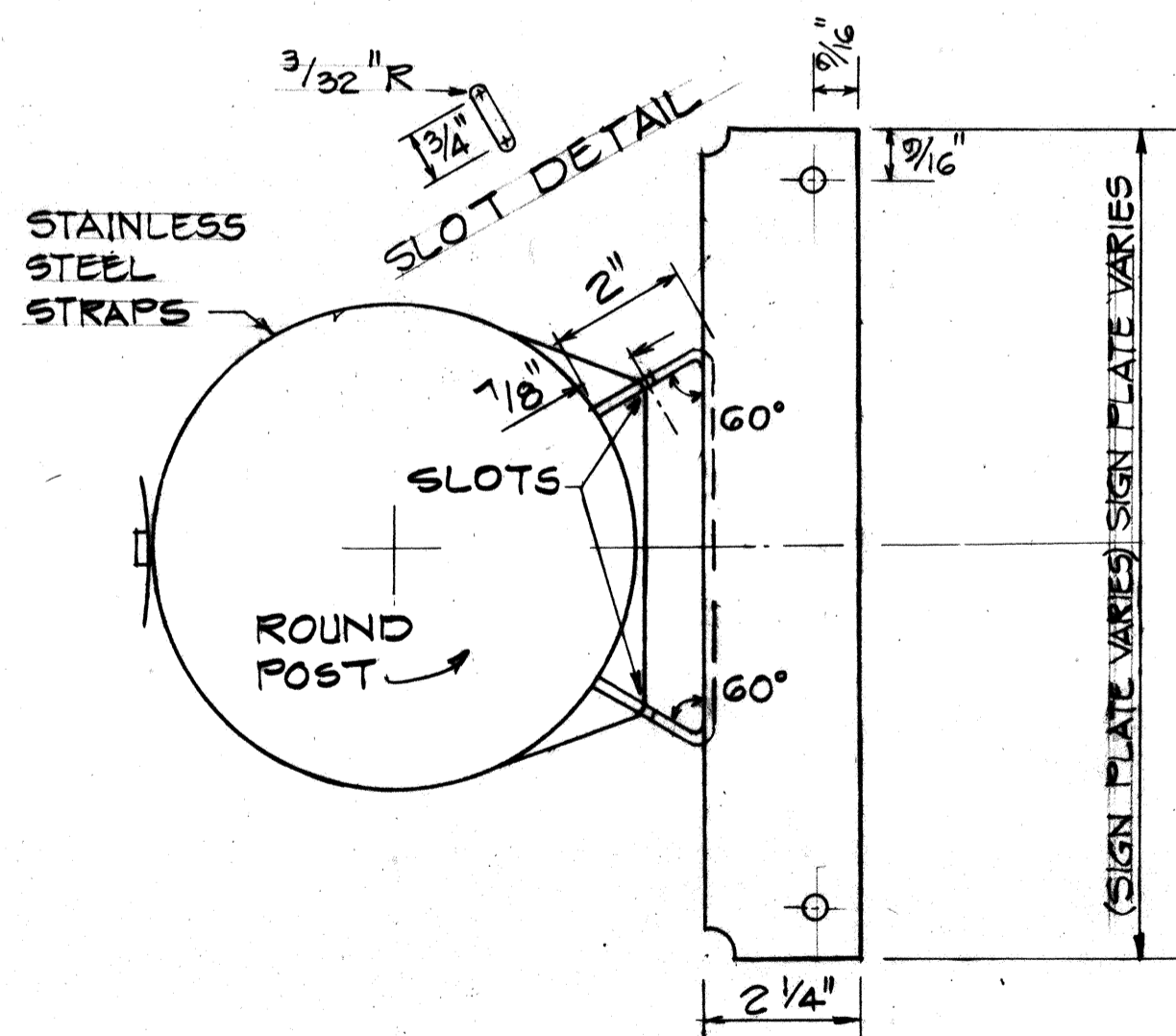
1. SQ. TUBE POSTS SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.
2. SIGN PANEL SHALL BE ATTACHED TO SQ. TUBE POST WITH 5/16" GALV. BOLT, NUT, LOCK WASHER & 7/8" x 0.06" STAINLESS STEEL FLAT WASHER WITH NEOPRENE RUBBER GASKET.

NOTE:

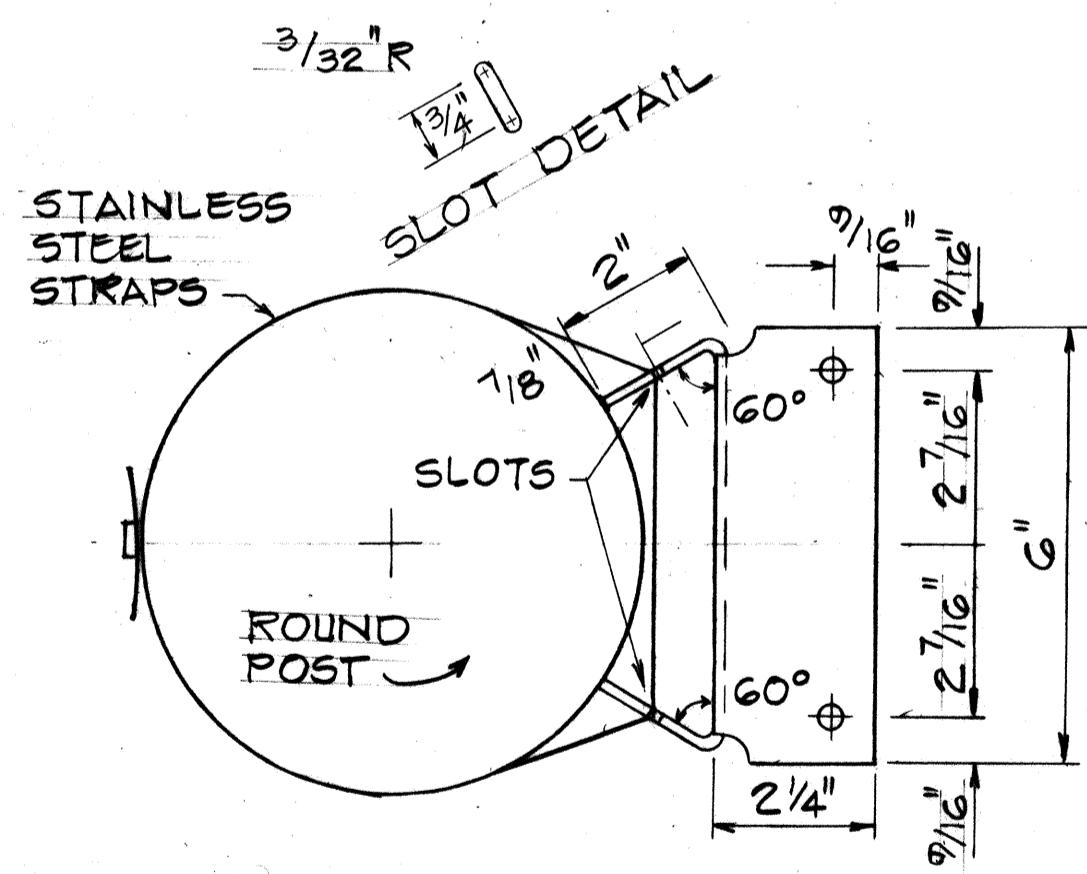
1. MATERIAL TO BE 12 GA. HOT ROLLED STEEL SHEET, LOW CARBON, COMMERCIAL QUALITY, SPECIFICATIONS QQ5-636, GRADE 1010.
2. BRACKET TO BE HOT DIPPED GALV. AFTER FABRICATION PER SPECIFICATION ASTM-A-123-68.
3. ALL BEND RADIUS TO BE 1/8".
4. DEBURR ALL SHARP EDGES.
5. TOLERANCES: DIMENSIONS, $\pm 1/32"$
ANGLES, $\pm 0^\circ-30'$



TYPICAL UNBALANCED
SIGN MOUNTING
N.T.S.

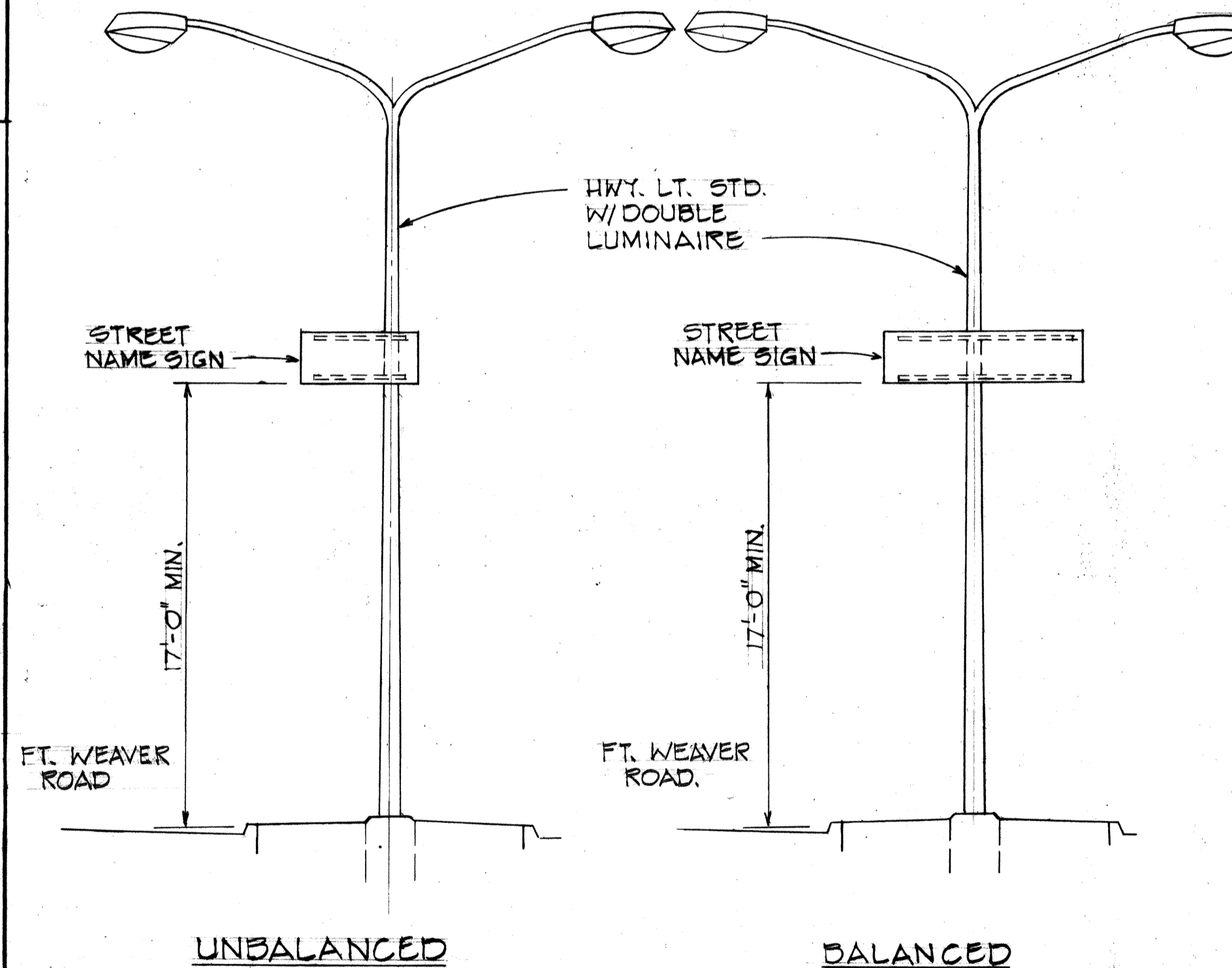


TOP VIEW
BALANCED SIGN

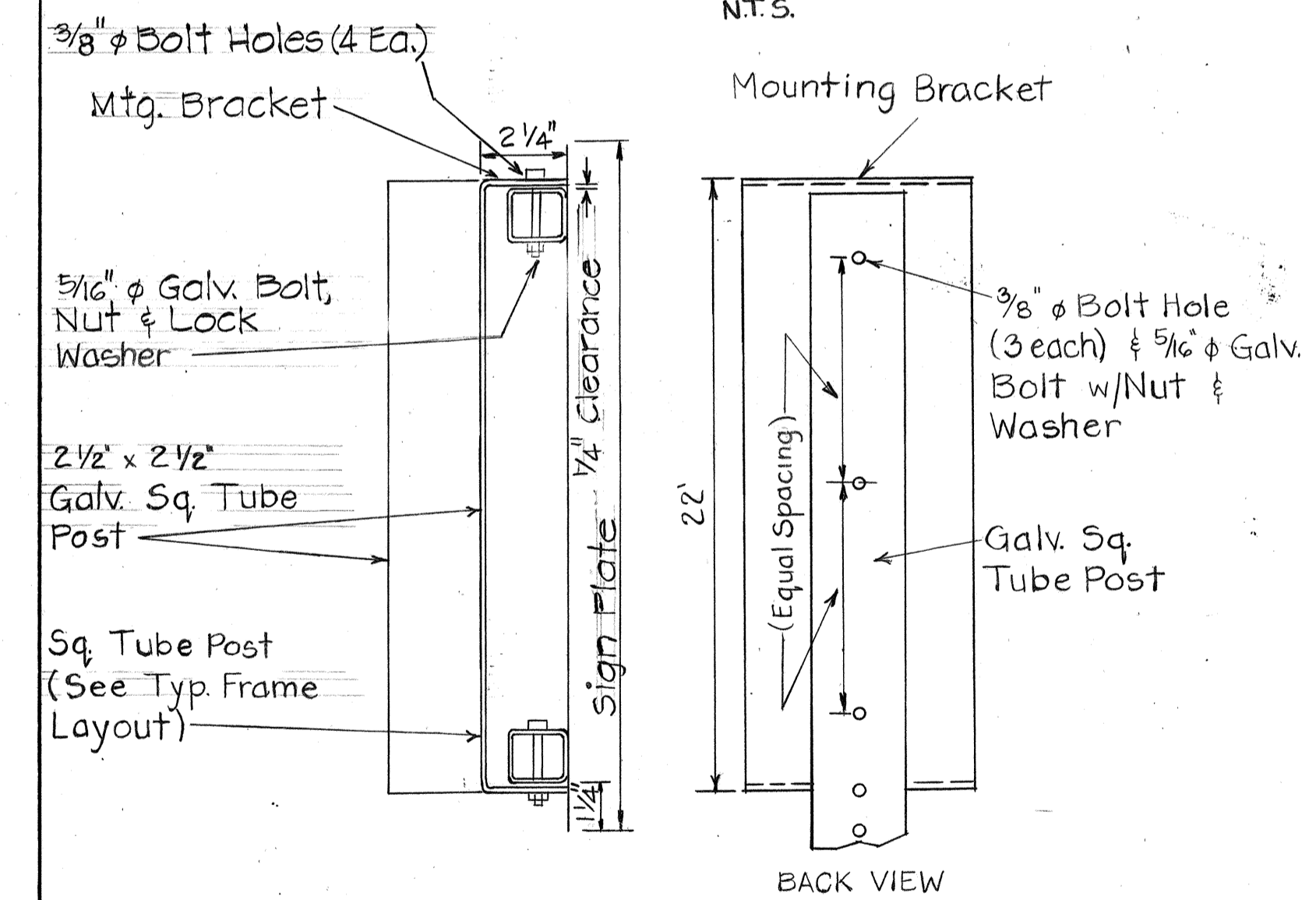


TOP VIEW
UNBALANCED SIGN

ROUND POST MOUNTING
NOT TO SCALE



SIGN MOUNTING
NOT TO SCALE



BACK VIEW
MOUNTING BRACKET FOR
UNBALANCED SIGN INSTALLATION
N.T.S.

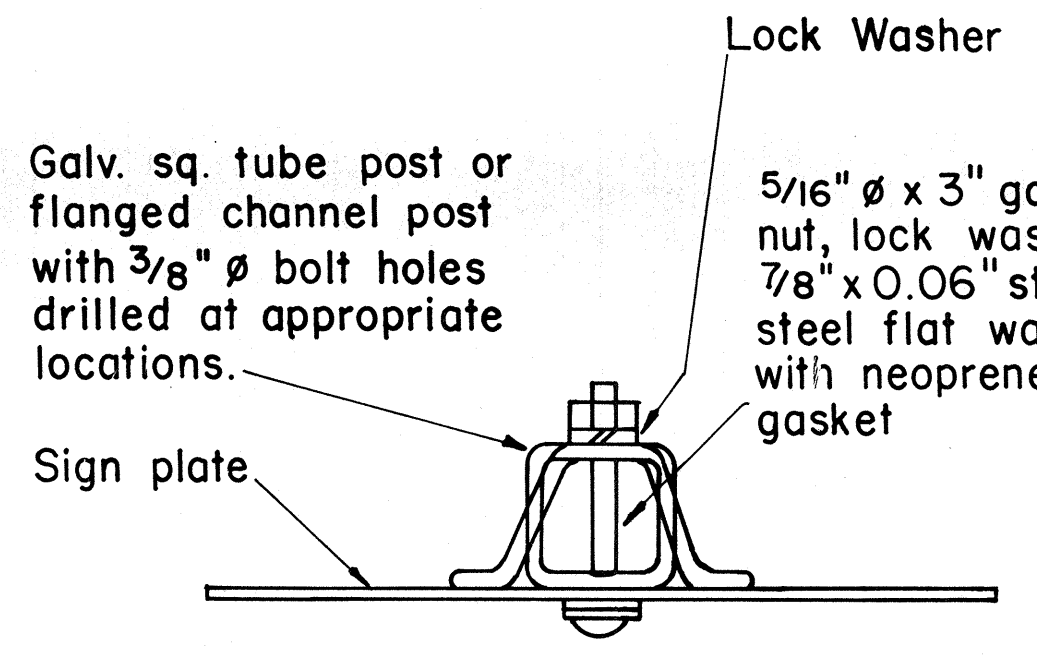
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**BALANCED, UNBALANCED
SIGN INSTALLATION**
FORT WEAVER ROAD
Renton Road To Hanakahi Street
F.A.P. Proj. No. F-076-1(1)
Scale: As Noted Date: Aug. 1985
SHEET NO. 77 OF 22 SHEETS

DATE _____
DESIGNED BY _____
CHECKED BY _____
ORIGINAL PLAN _____
NOTE BOOK _____
QUANTITIES BY _____

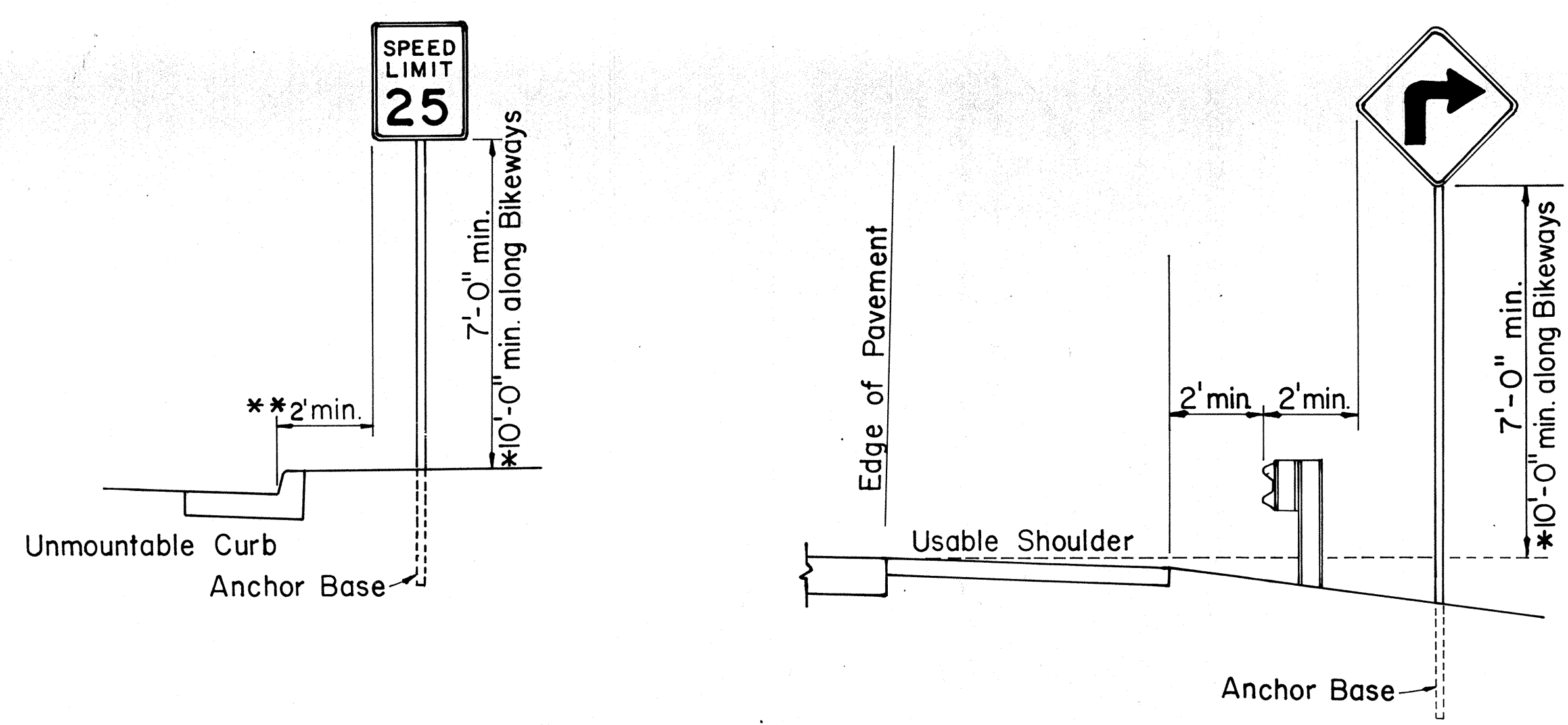
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1983	45	121

GENERAL NOTES

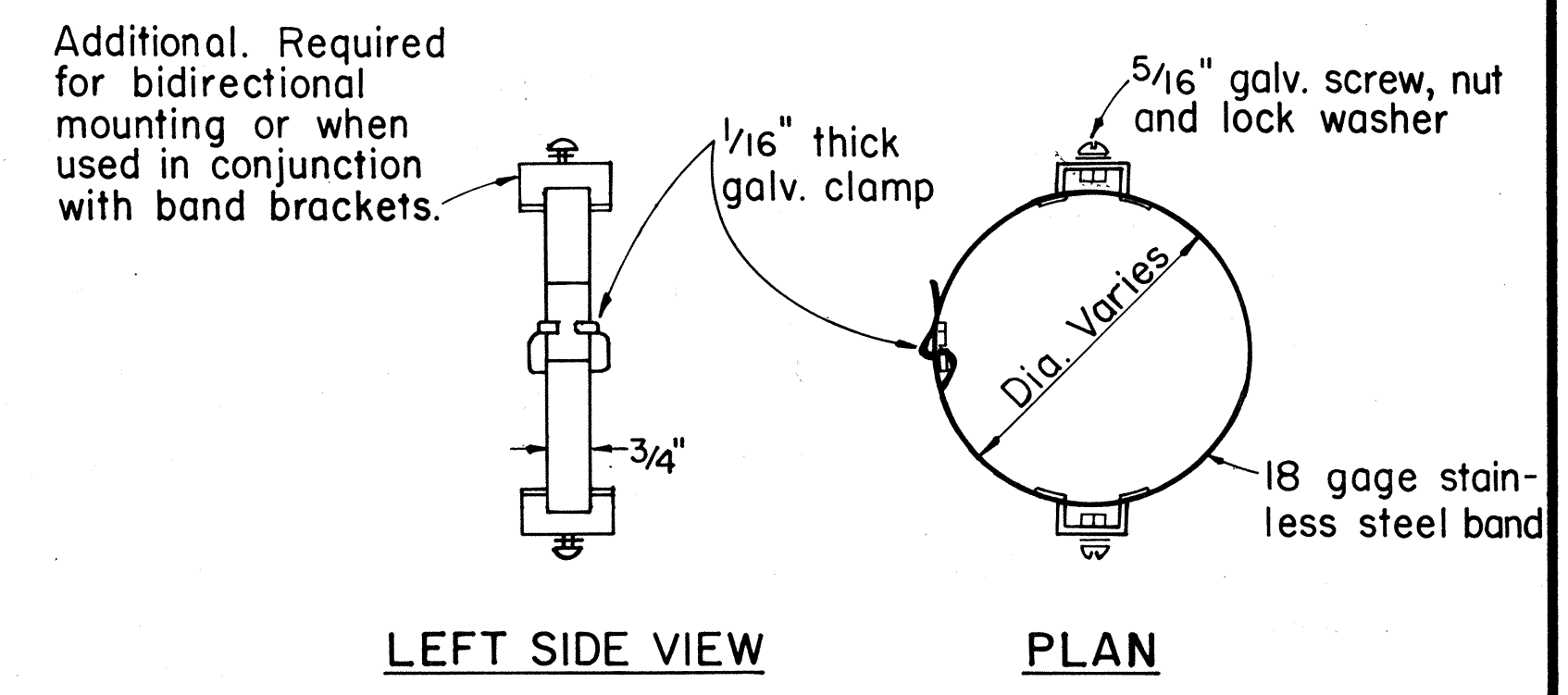
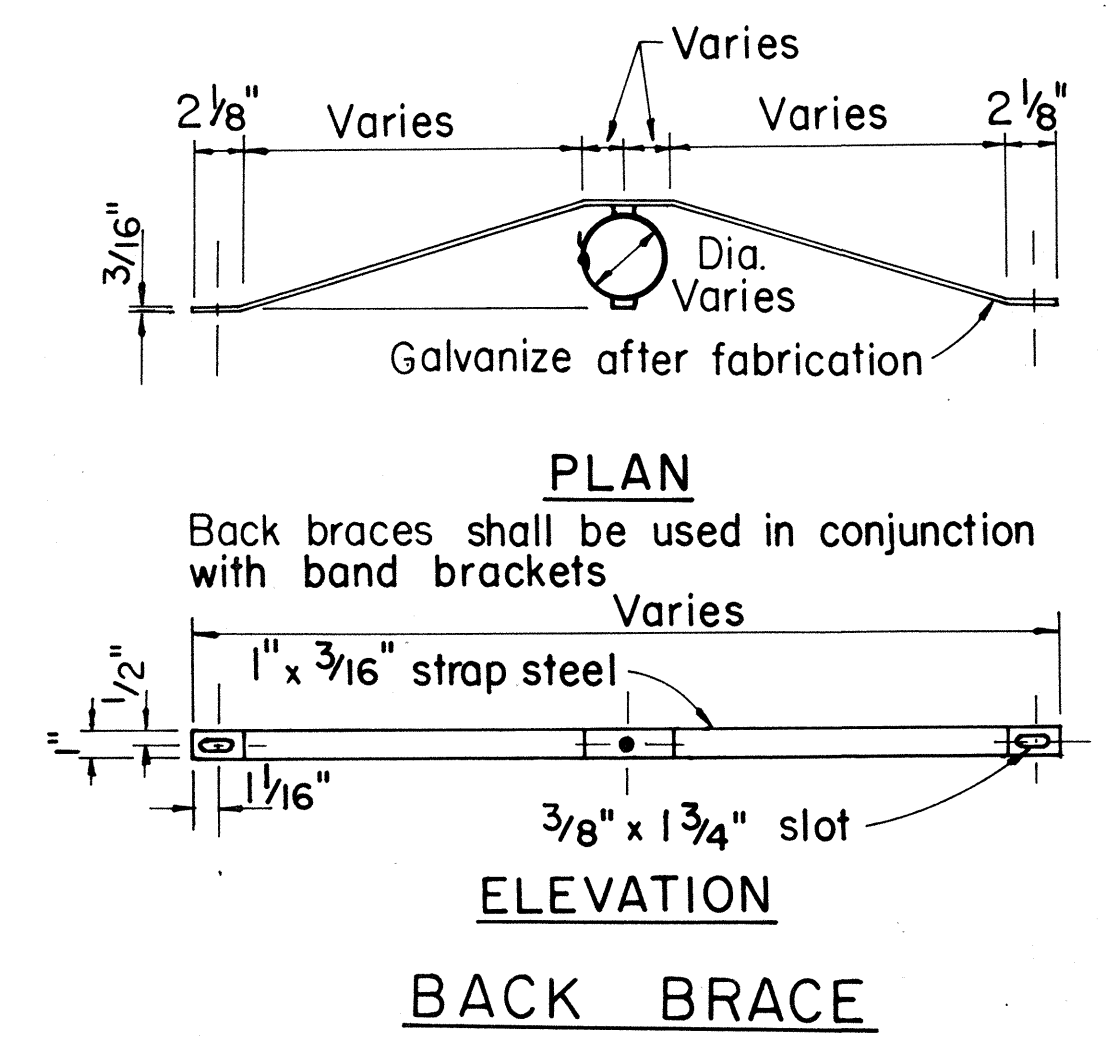
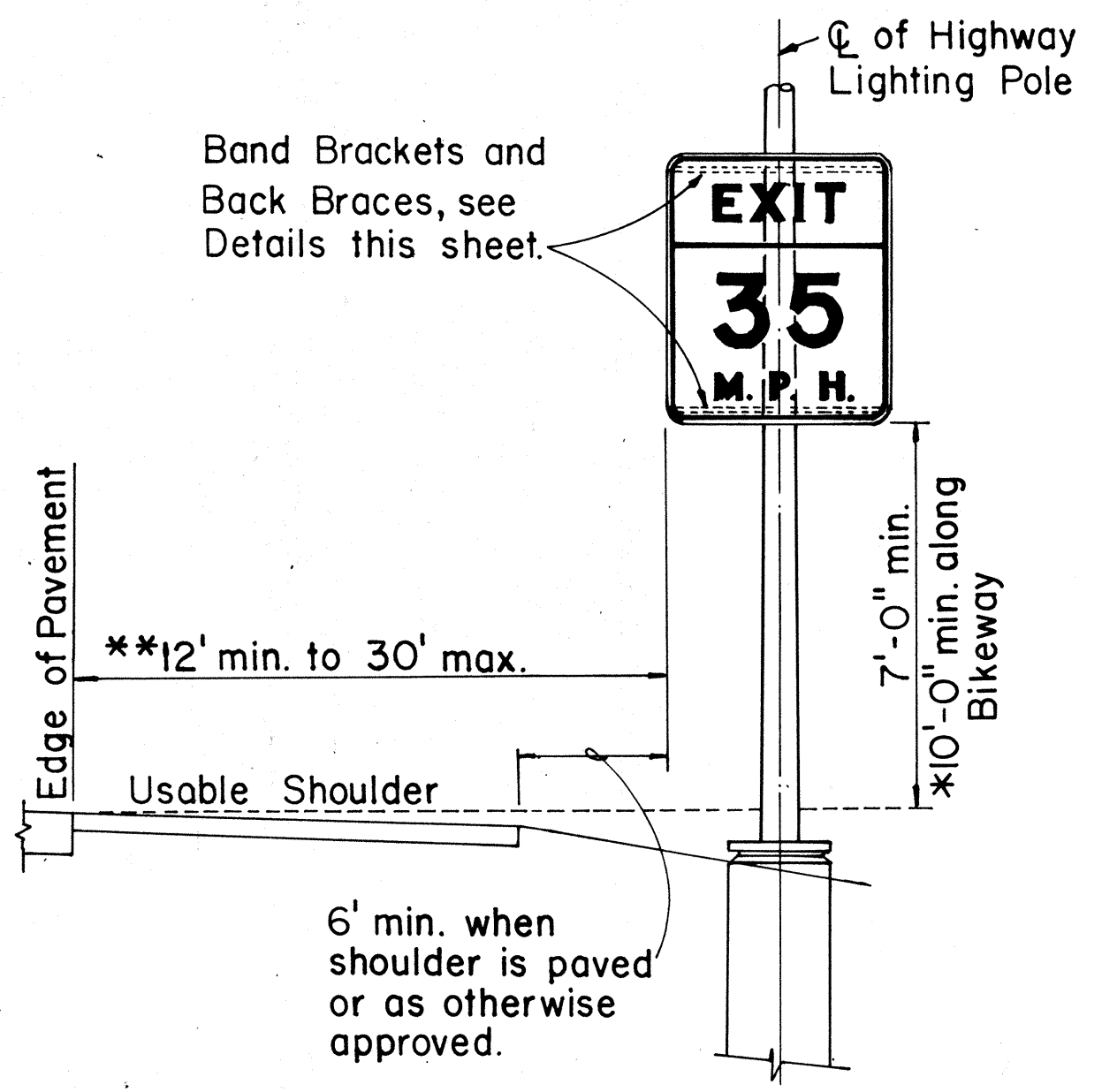
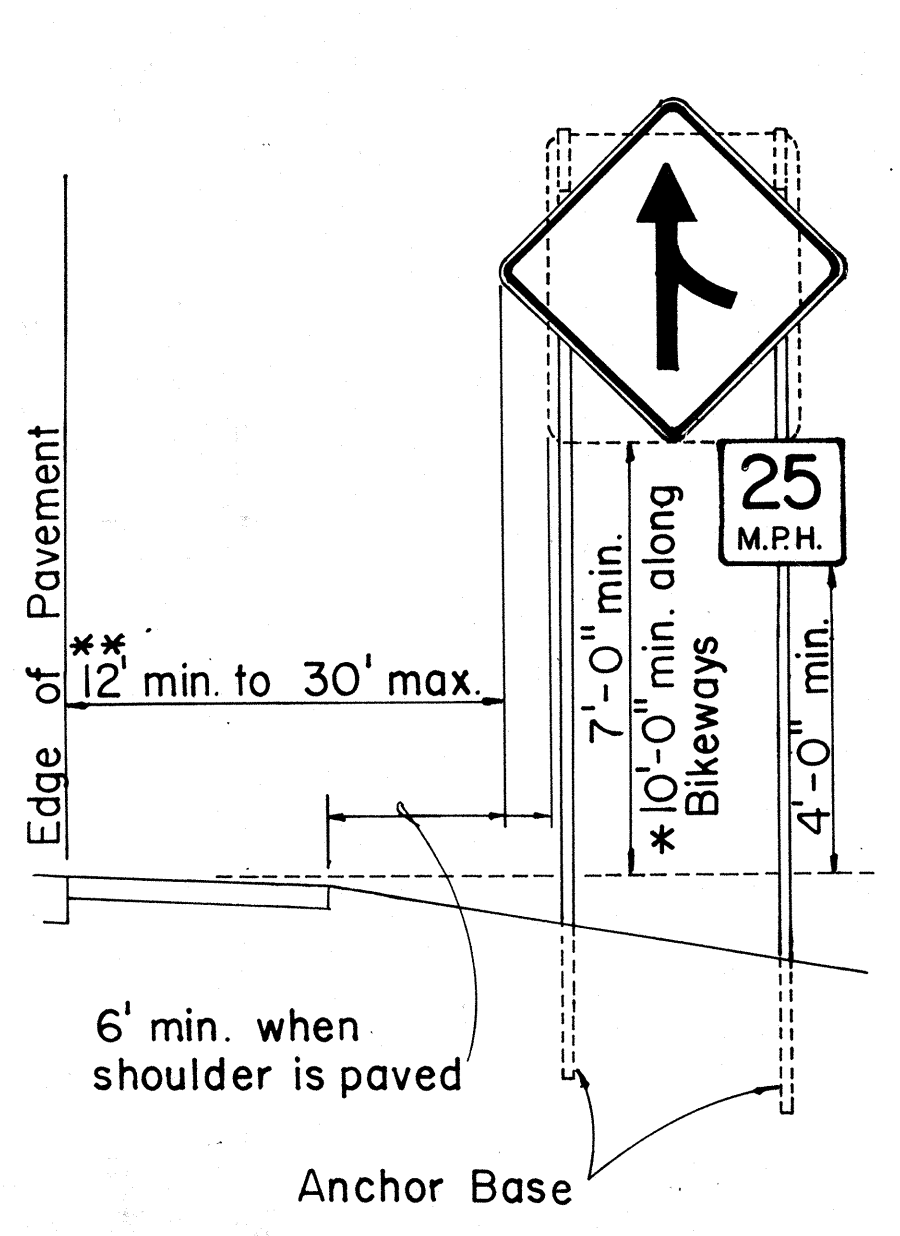
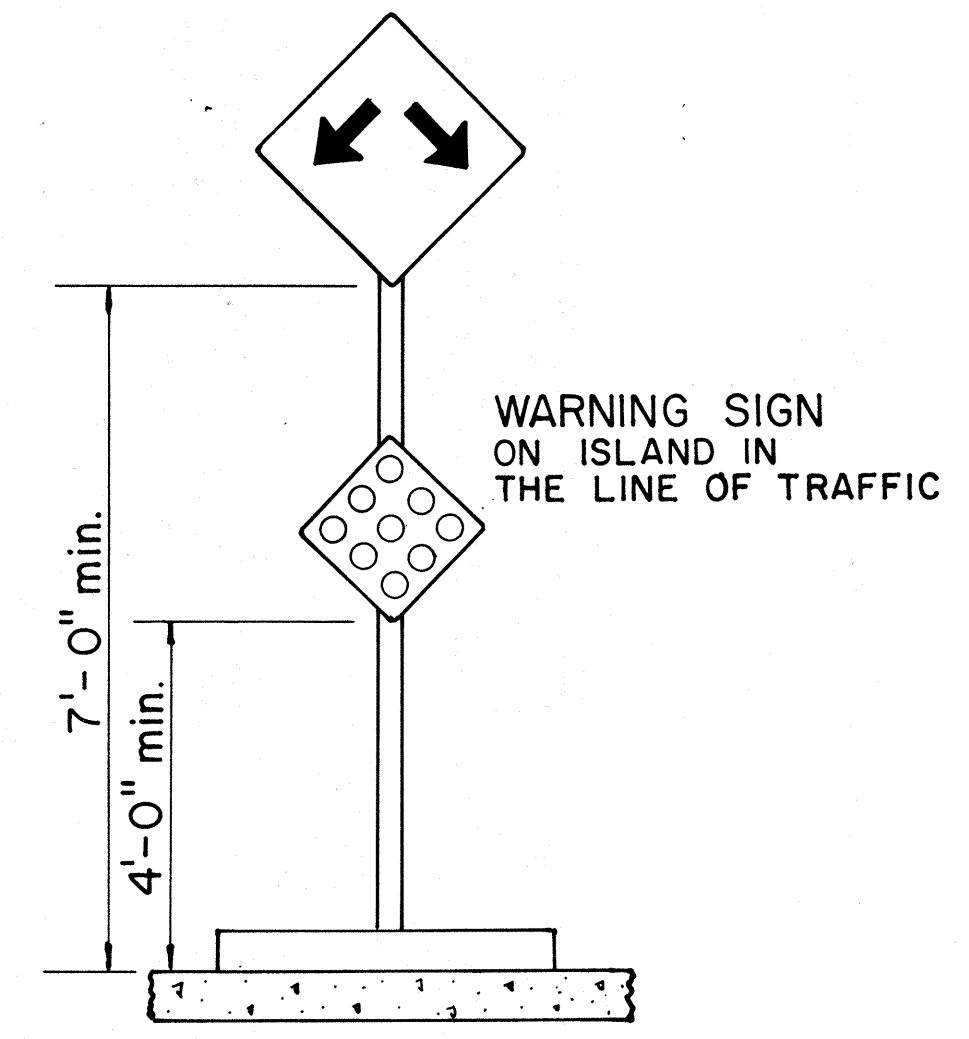
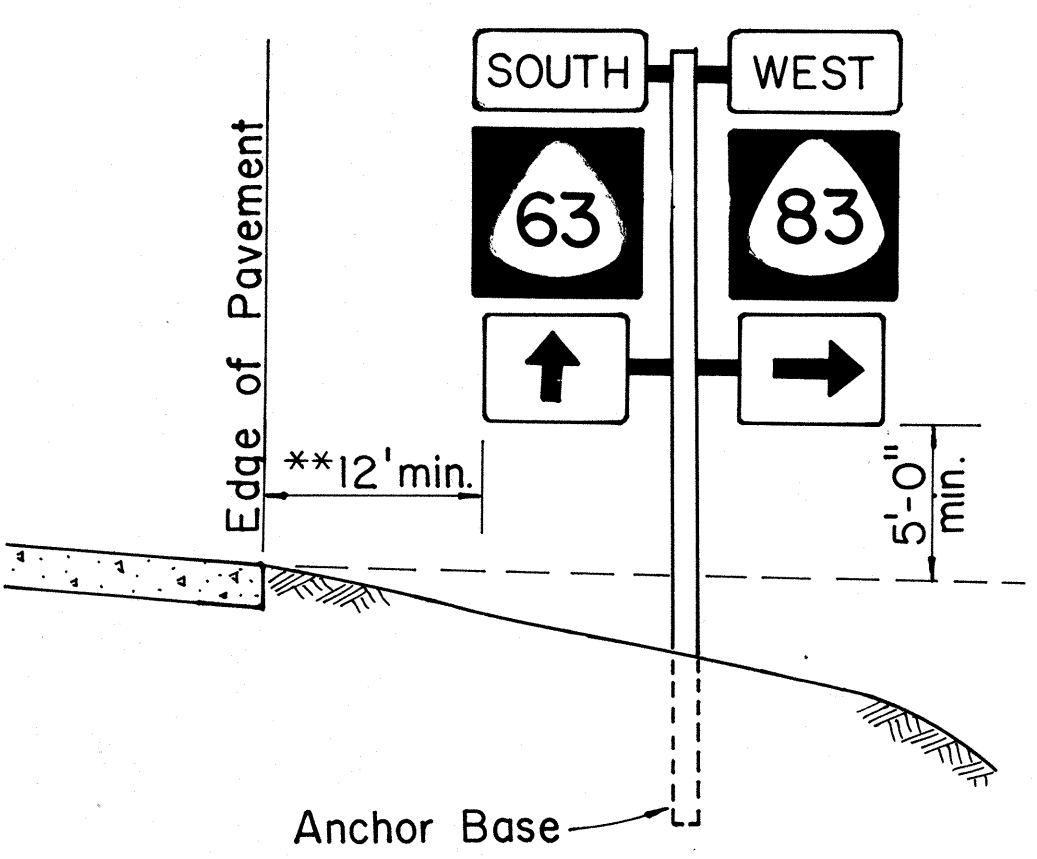
- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Sign 48" and wider or larger than 10 sq. ft. in area shall be mounted on two or 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.
- See plans for special details of signs along bikeways.
- The minimum lateral distances shown are guidelines and shall be exceeded whenever possible. The Contractor shall place signs at the maximum practical lateral distance from the edge of the traveled way up to 30 feet and shall utilize protected locations whenever possible. Final locations of all signs shall be approved by the Engineer.
- Signs in medians shall be placed at midpoint of median up to a maximum distance of 30 feet from the edge of traveled way. When appropriate, signs for opposing directions shall be placed back to back.
- Anchor bases shall be installed for all signpost installations, unless otherwise shown or directed. See sheets DT 100A and DT 100B.



GALVANIZED SQUARE TUBE OR FLANGED CHANNEL POST



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 10/17/83
TRAFFIC ENGINEER DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
MISCELLANEOUS SIGN DETAILS

Not to Scale: Oct. 1983
SHEET No. 18 OF 22 SHEETS DT 100

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED 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.	F-076-1(1)	1986	46	121

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

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

GENERAL NOTES

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

APPROVAL RECOMMENDED:

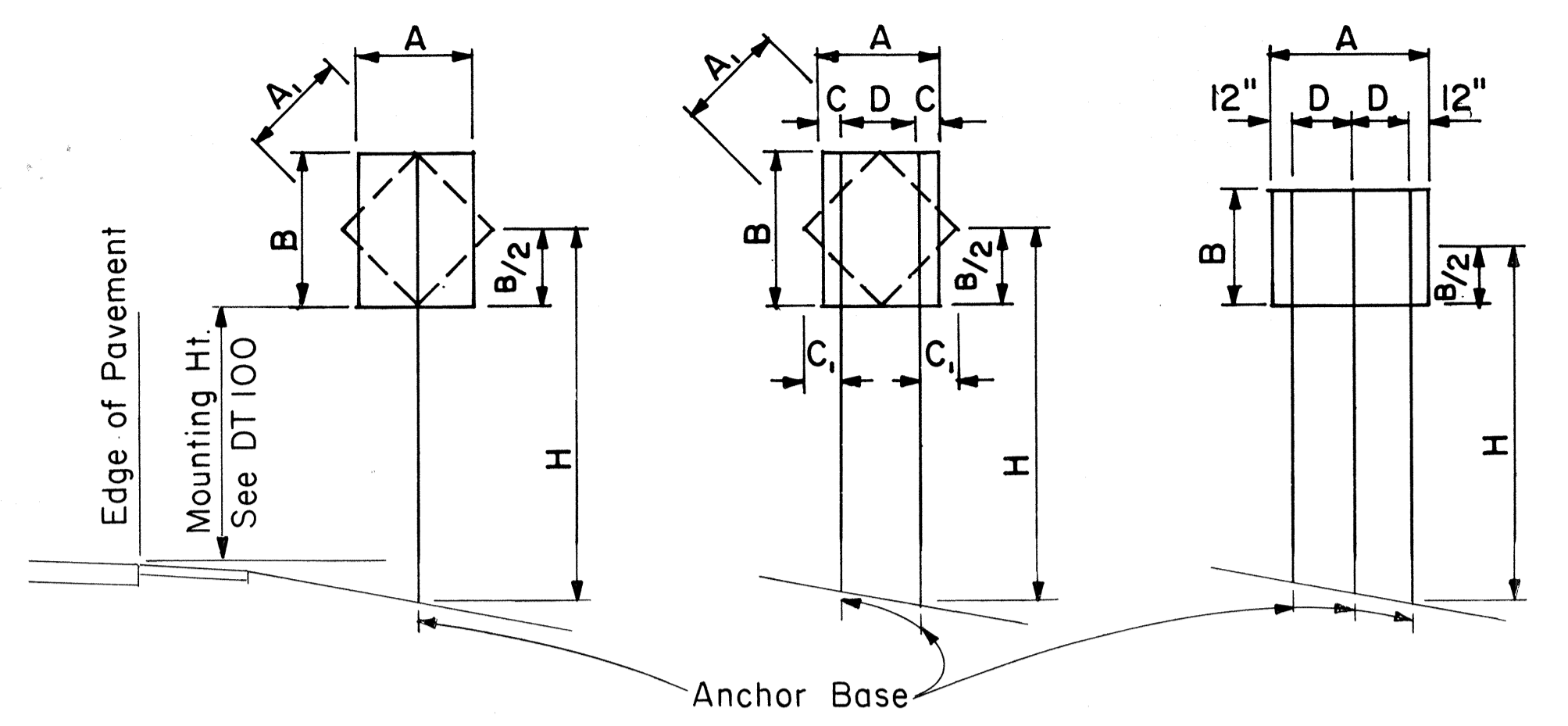
Eichi Tanaka 9/21/82
 TRAFFIC ENGINEER DATE

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. 19 OF 22 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

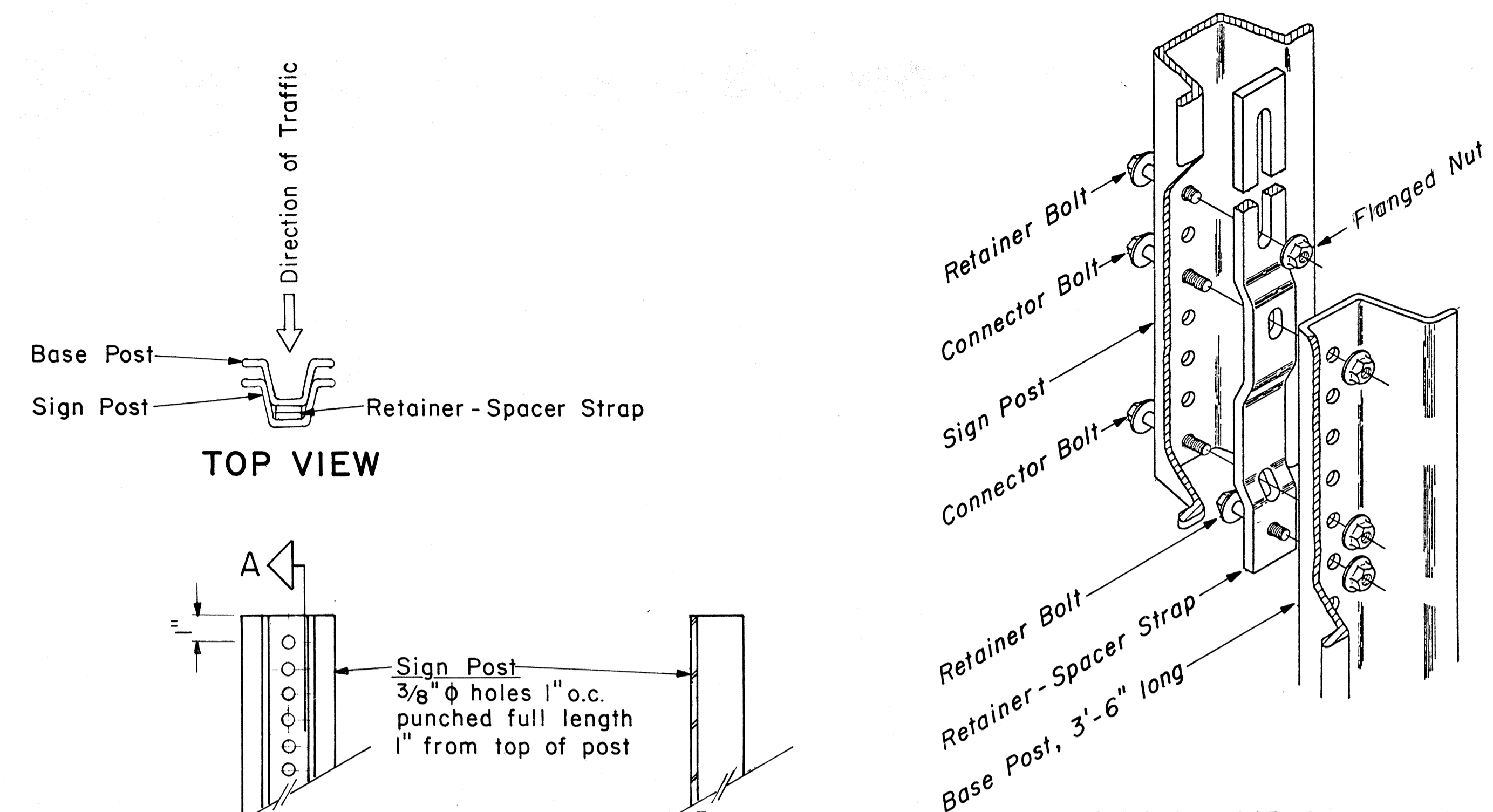
FLANGED CHANNEL: 1-POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2.50 lbs./ft.	57	8.14	7.13	6.33	5.70	5.18	4.75
4.00 lbs./ft.	112	-	-	-	-	-	9.33

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

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

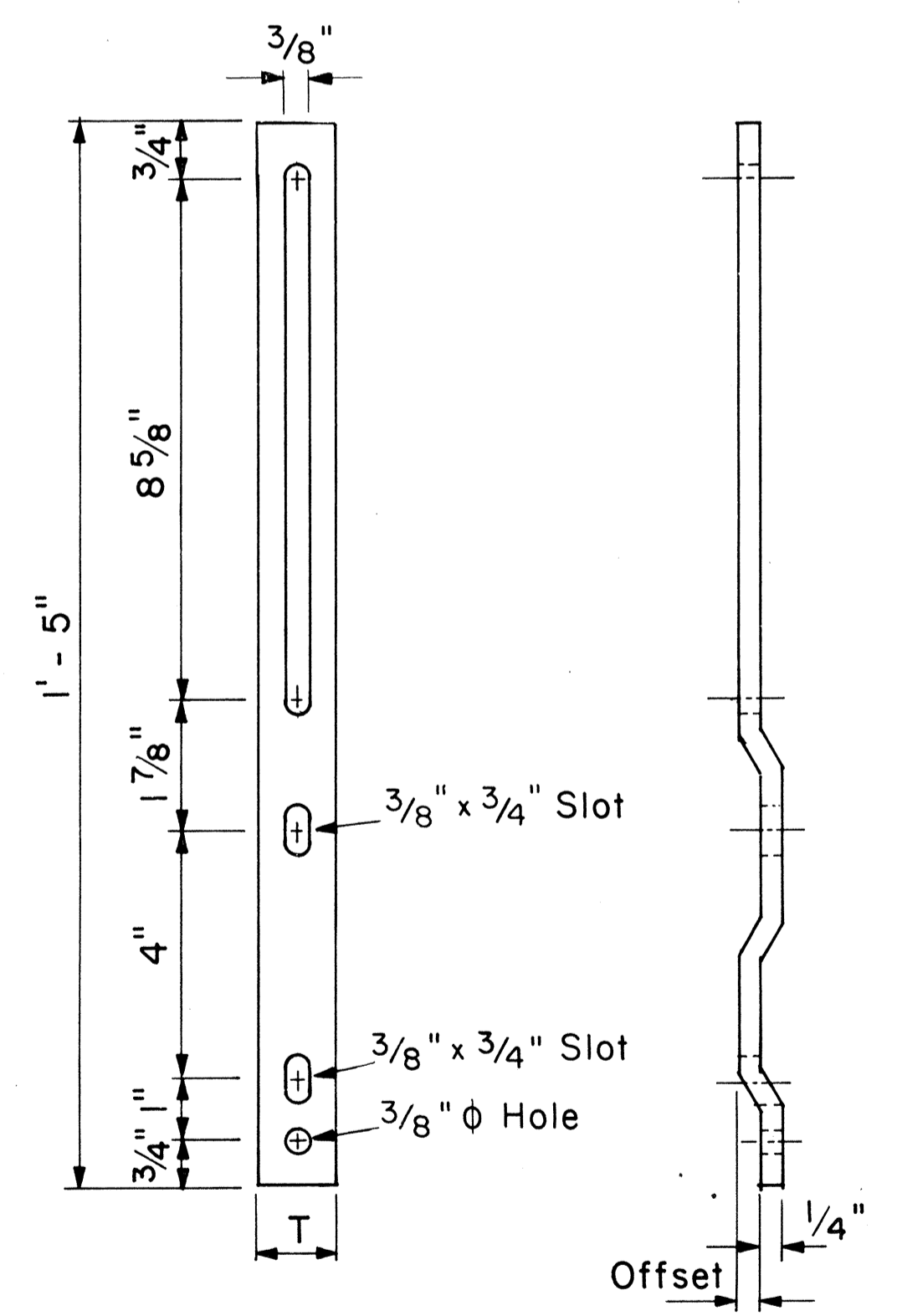
WINDLOAD CHARTS

NO.	REVISION	APPROVED BY	DATE



CONNECTION DETAIL

Not to Scale

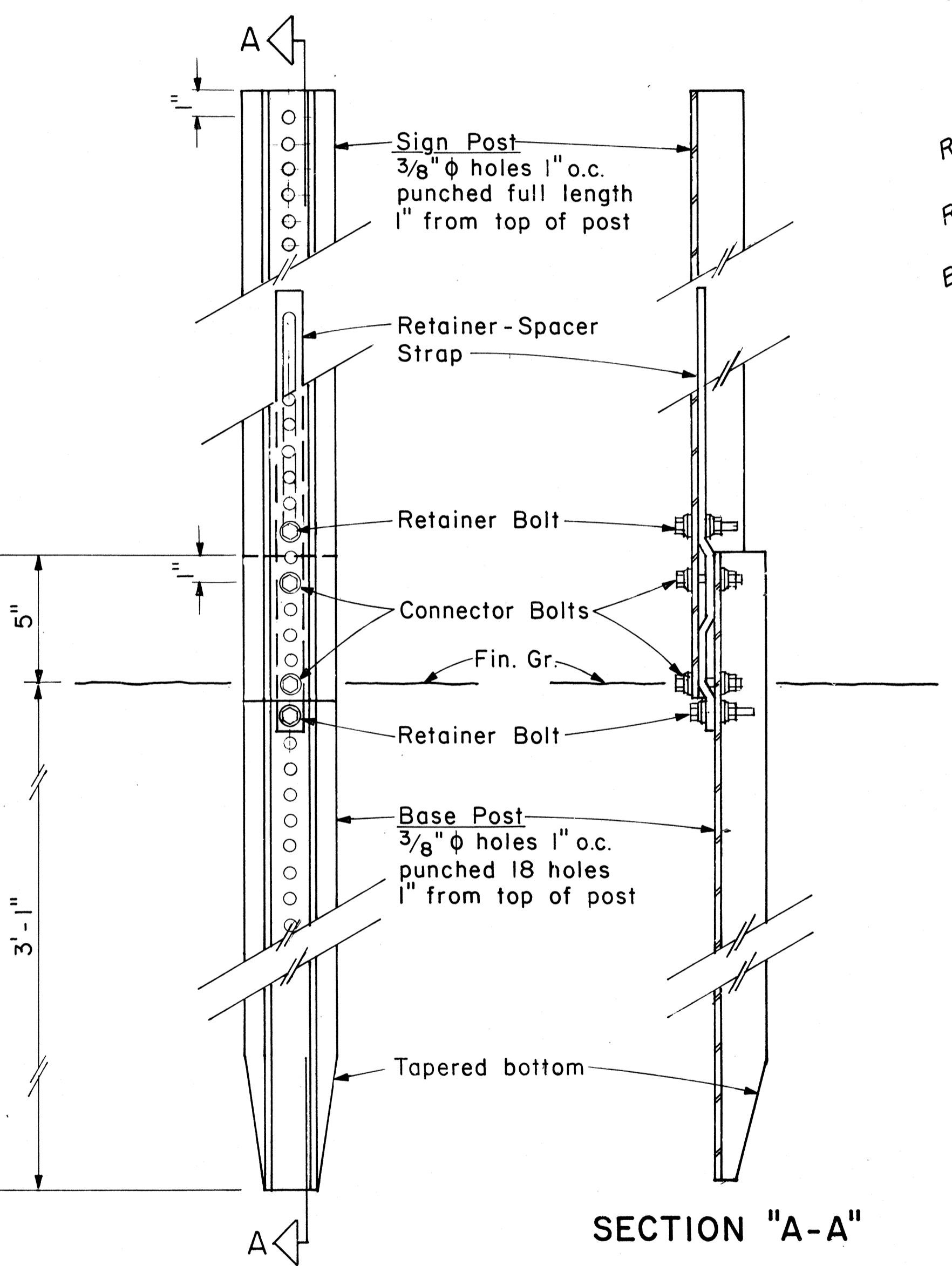


RETAINER-SPACER STRAP

Not to Scale

RETAINER-SPACER STRAP		
Post Size	T	Offset
2.50 lbs./ft.	1.00"	0.145"
4.00 lbs./ft.	1.12"	0.280"

TOP VIEW



SECTION "A-A"

BACK VIEW

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"

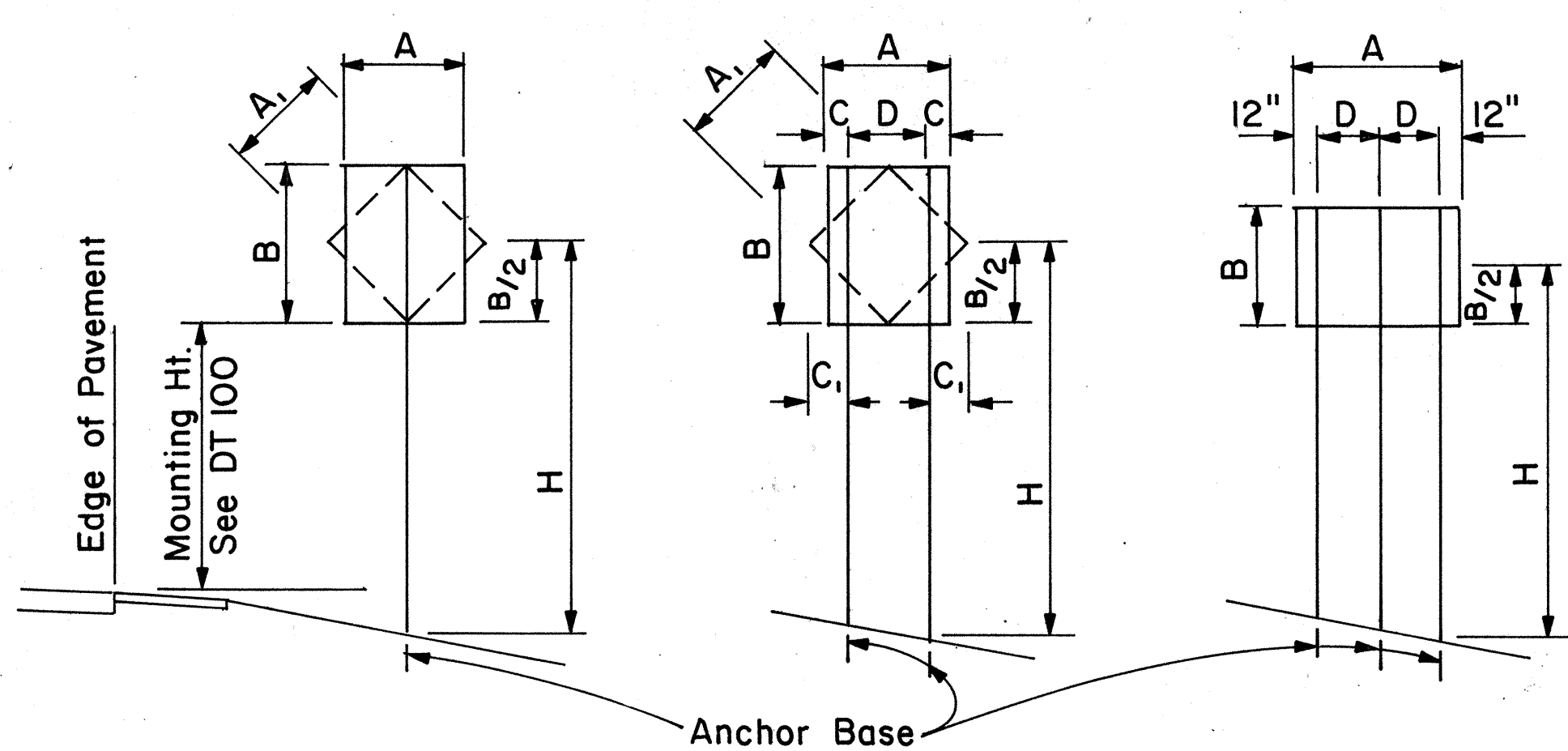
ORIGINAL PLAN
 SURVEY PLOTTED BY: DATE: _____
 DRAWN BY: _____
 TRACED BY: _____
 NOTE BOOK DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 No. _____

GENERAL NOTES

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

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

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



1 - POST 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

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

A x B (Area, sq. ft.)

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

A x B (Area, sq. ft.)

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

A x B (Area, sq. ft.)

WINDLOAD CHARTS

NO.	REVISION	APPROVED BY	DATE

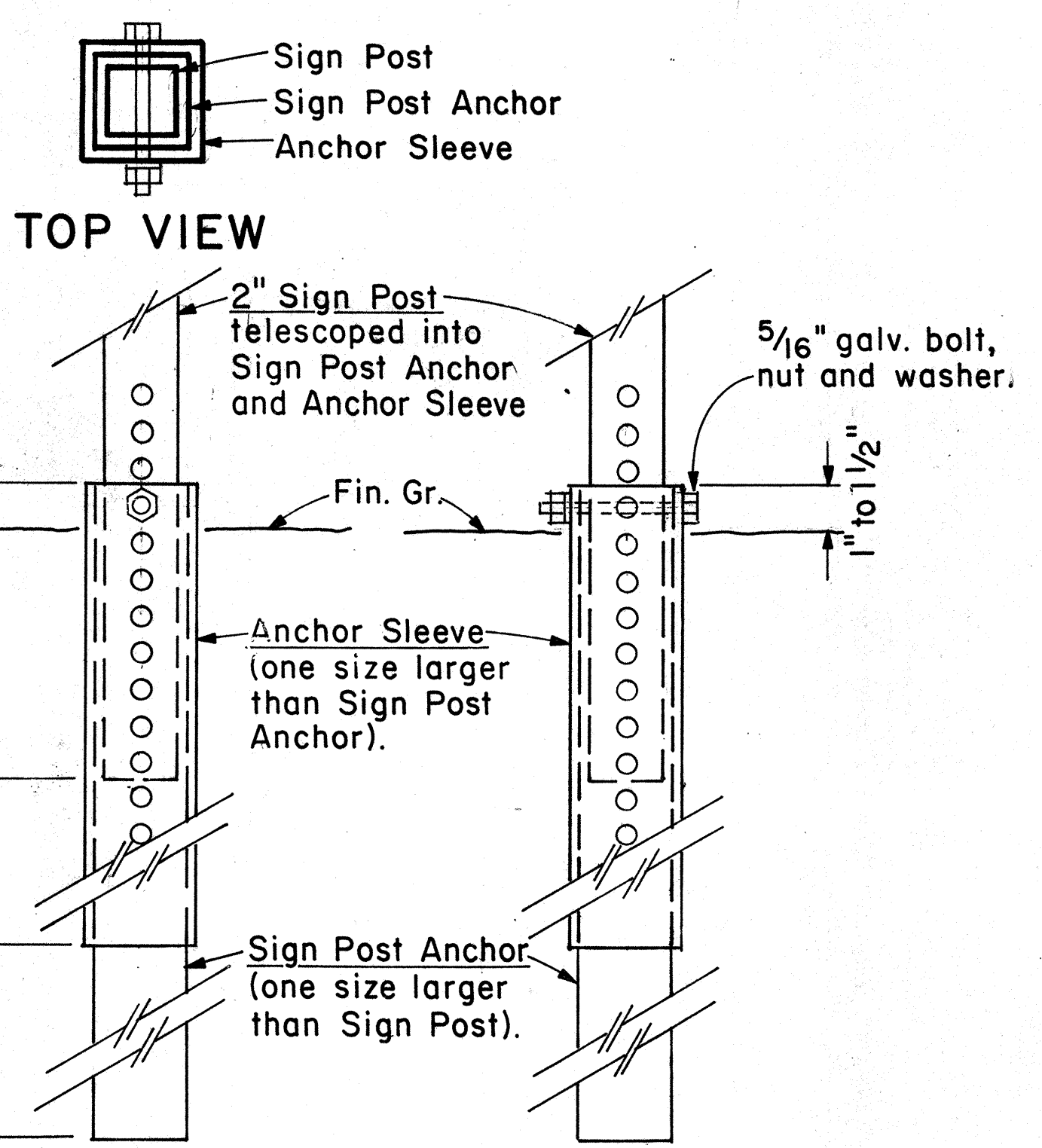
APPROVAL RECOMMENDED:
Eishi Tanaka 9/21/82
TRAFFIC ENGINEER DATE

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

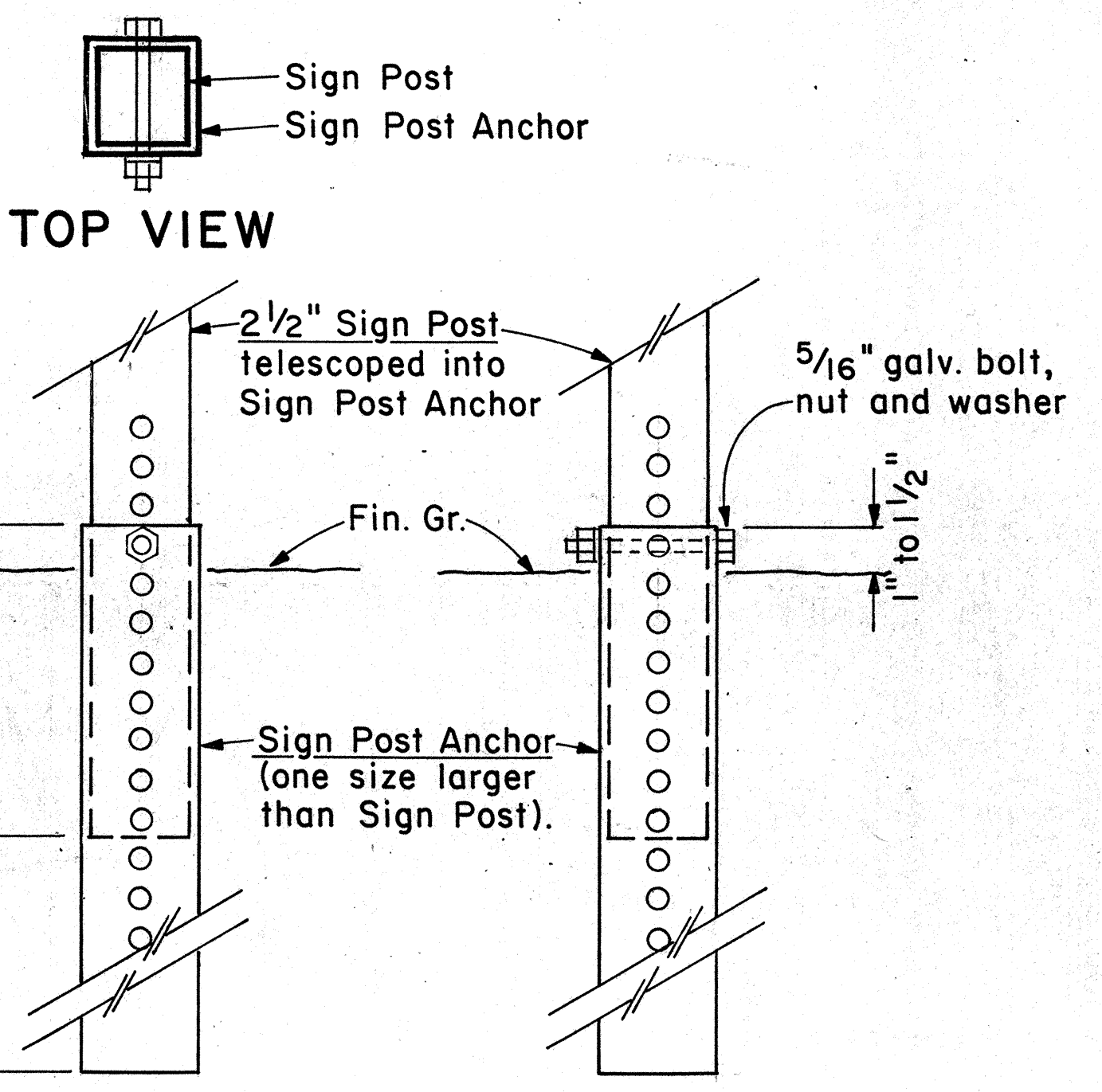
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
GALVANIZED SQUARE TUBE
SIGN POST MOUNTING

Scale: As Shown Date: Sep 1982



2" SIGN POST INSTALLATION



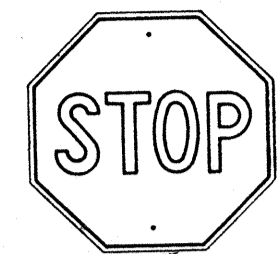
2 1/2" SIGN POST INSTALLATION

ANCHOR BASE DETAIL

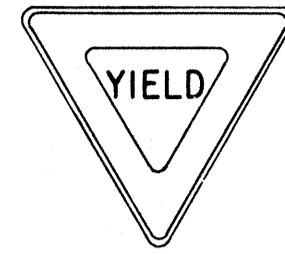
Scale: 3" = 1'-0"

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

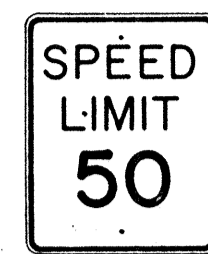
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	48	121



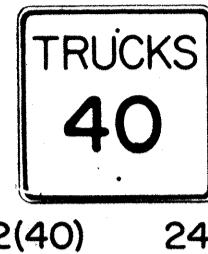
R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"



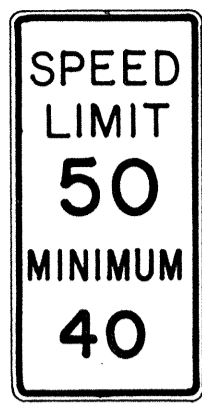
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



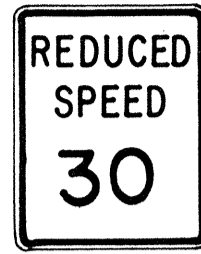
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



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



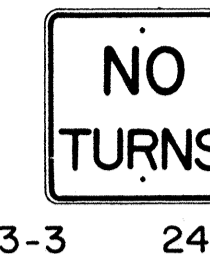
R2-4a(50/40) 24" x 48"
R2-4a(50/40)-A 48" x 96"
R2-5b(30) 24" x 30"
R2-5b(30)-A 48" x 60"



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"



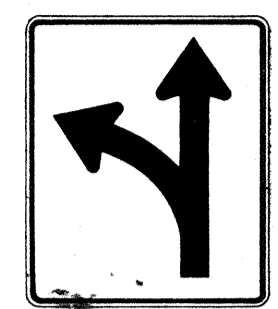
R3-3 24" x 24"
R3-3-A 48" x 48"



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



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



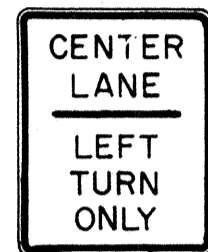
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



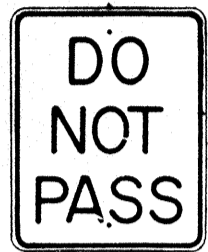
R3-7(R) 30" x 30"
R3-7(R)-A 48" x 48"



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



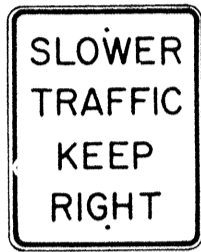
R3-9 24" x 30"



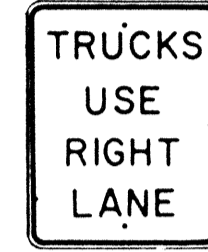
R4-1 24" x 30"
R4-1-A 48" x 60"



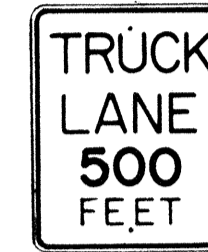
R4-2 24" x 30"
R4-2-A 48" x 60"



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



R4-5 24" x 30"
R4-5-A 48" x 60"



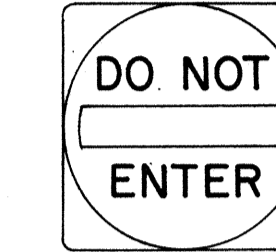
R4-6(500) 24" x 30"
R4-6(500)-A 48" x 60"



R4-7 24" x 30"
24" x 18"
R4-7-A 48" x 60"



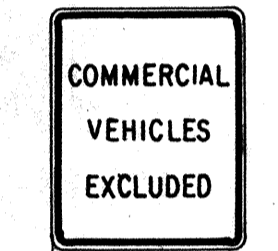
R4-8 24" x 30"
24" x 18"
R4-8-A 48" x 60"



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



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



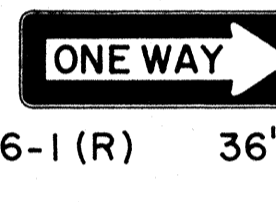
R5-4 24" x 30"
R5-4-A 48" x 60"



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



R5-9 36" x 24"



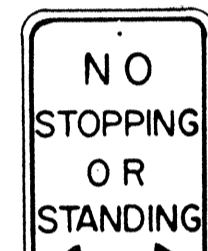
R6-1(R) 36" x 12"



R6-2(R) 18" x 24"



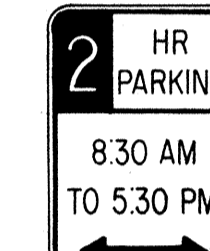
R7-1 12" x 18"
R7-1-A 24" x 30"



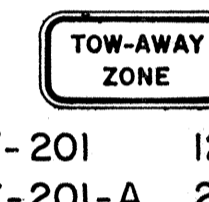
R7-4 12" x 18"
R7-4-A 24" x 30"



R7-107(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"
R8-1-A 48" x 60"



R8-2 24" x 30"
R8-2-A 48" x 60"



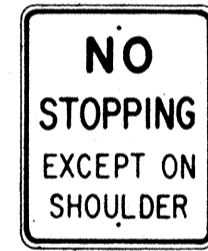
R8-3 24" x 30"
R8-3-A 48" x 48"



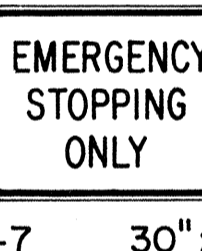
R8-4 30" x 24"
R8-4-A 48" x 36"



R8-5 24" x 30"
R8-5-A 48" x 60"



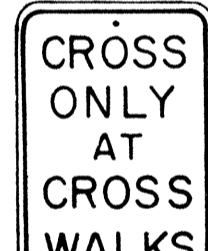
R8-6 24" x 30"
R8-6-A 48" x 60"



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



R9-1 18" x 24"



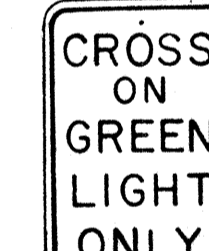
R9-2 12" x 18"



R9-3 12" x 18"



R9-4 18" x 24"



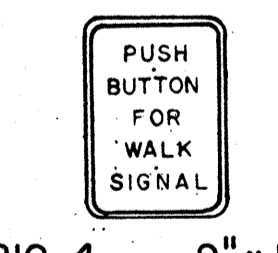
R10-1 12" x 18"



R10-2 12" x 18"



R10-3 9" x 12"



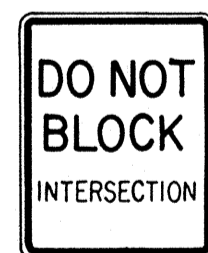
R10-4 9" x 12"



R10-5 24" x 30"



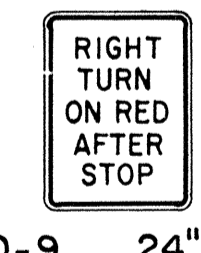
R10-6 24" x 36"



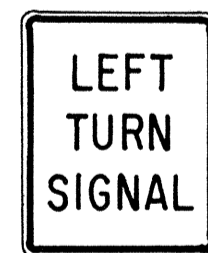
R10-7 24" x 30"



R10-8 24" x 30"



R10-9 24" x 30"



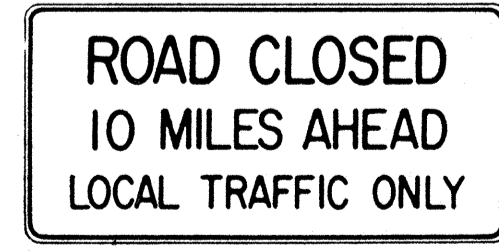
R10-10 24" x 30"



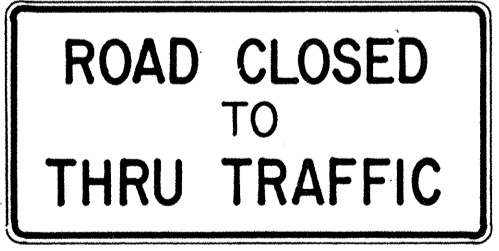
R11-1 24" x 30"



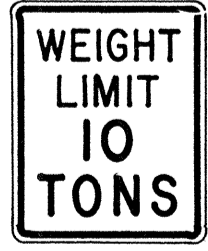
R11-2 48" x 30"



R11-3(10) 60" x 30"



R11-4 60" x 30"



R12-1(10) 24" x 30"

GENERAL NOTES

- Sign details shall conform to the latest editions of FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," "Standard Alphabets for Highway Signs," and "Standard Highway Signs," and as amended.
- All regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- All signs shall be erected without educational plaques unless called for in the plans.

APPROVAL RECOMMENDED:
Etsuki Tanaka
TRAFFIC ENGINEER
DATE 3/17/72

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

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.	8/2/79
4	Revised Signs and General Note 1	E.T.	9/1/85

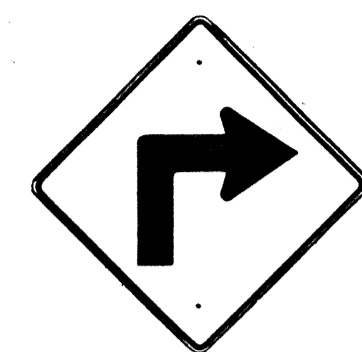
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE
SHEET No. 7/1 OF 22 SHEETS DT 101

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

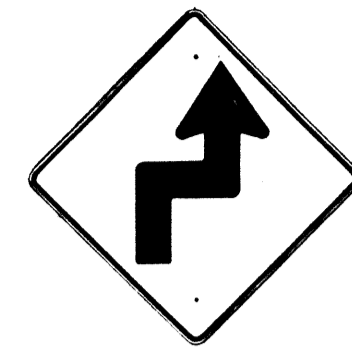
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII*	HAW.	F-076-1(1)	1986	47	121



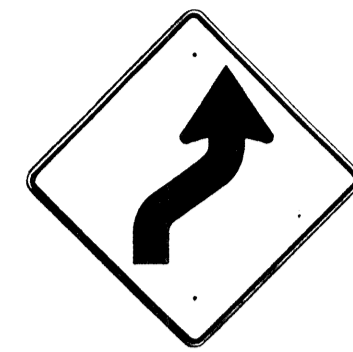
W1-1(R) 30"x30"
W1-1(R)-A 48"x48"



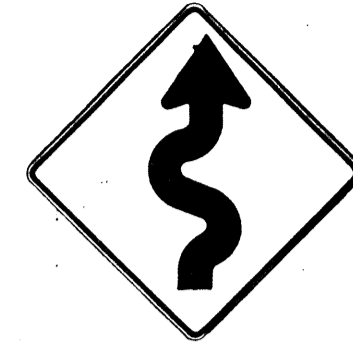
W1-2(R) 30"x30"
W1-2(R)-A 48"x48"



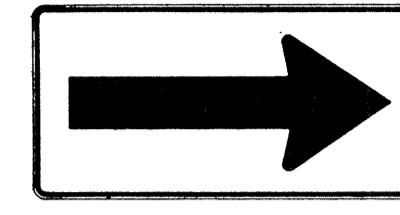
W1-3(R) 30"x30"
W1-3(R)-A 48"x48"



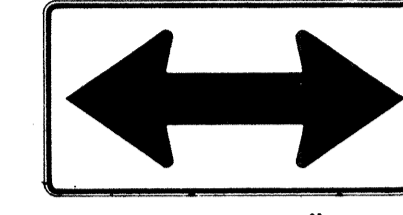
W1-4(R) 30"x30"
W1-4(R)-A 48"x48"



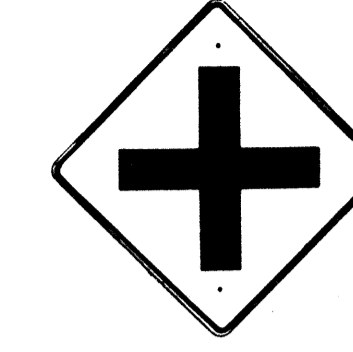
W1-5(R) 30"x30"
W1-5(R)-A 48"x48"



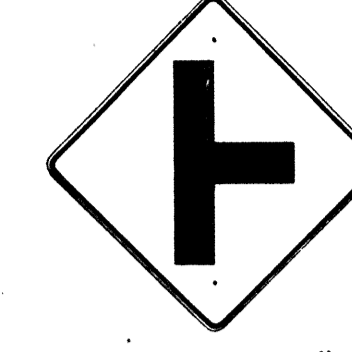
W1-6 48"x24"



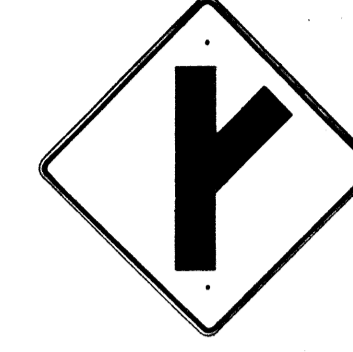
W1-7 48"x24"



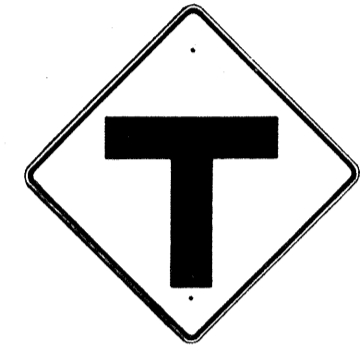
W2-1 30"x30"
W2-1-A 48"x48"



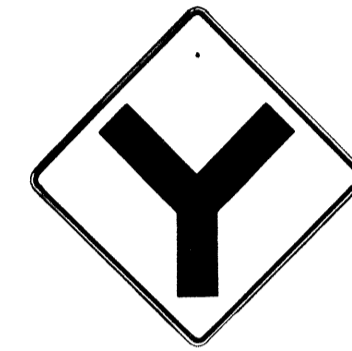
W2-2 30"x30"
W2-2-A 48"x48"



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



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



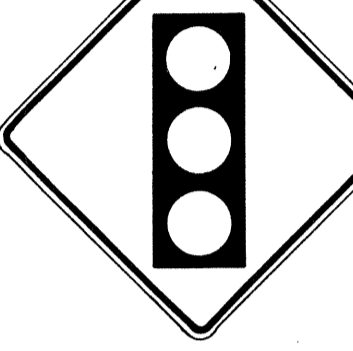
W2-5 30"x30"
W2-5-A 48"x48"



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



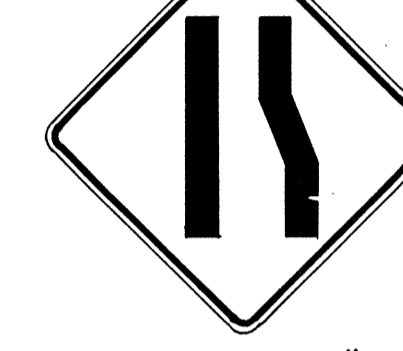
W3-2 30"x30"
W3-2-A 36"x36"



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"
W5-1-A 48"x48"



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



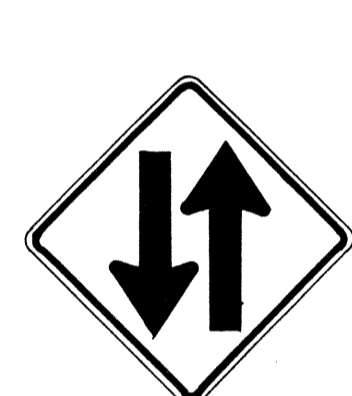
W5-3 36"x36"
W5-3-A 48"x48"



W6-1 36"x36"
24"x18"
W6-1-A 48"x48"
24"x18"



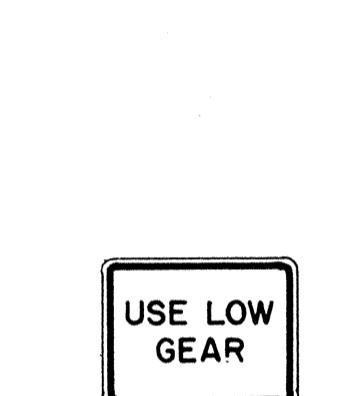
W6-2 36"x36"
24"x18"
W6-2-A 48"x48"
24"x18"



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 48"x48"
24"x18"



W7-2 24"x18"



W8-1 30"x30"
W8-1-A 36"x36"
W8-1-B 48"x48"



W8-2 30"x30"
W8-2-A 36"x36"
W8-2-B 48"x48"



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



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



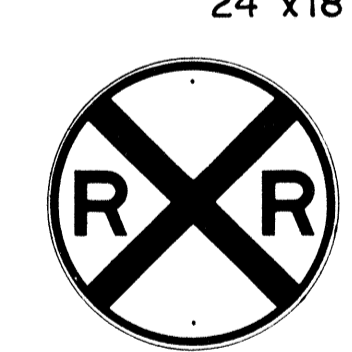
W8-5 30"x30"
24"x18"
W8-5-A 36"x36"
24"x18"



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"
W11-1-B 48"x48"
24"x18"



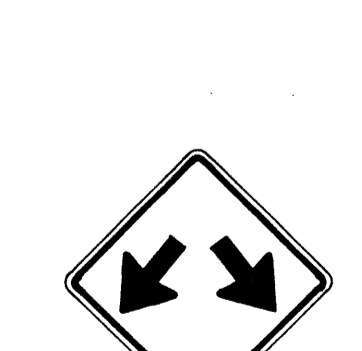
W11A-2 30"x30"
24"x18"
W11A-2-A 36"x36"
24"x18"
W11A-2-B 48"x48"
24"x18"



W11-4 30"x30"
24"x18"
W11-4-A 36"x36"
24"x18"
W11-4-B 48"x48"
24"x18"



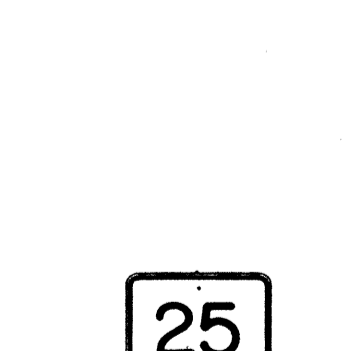
W11-5 30"x30"
24"x18"
W11-5-A 36"x36"
24"x18"
W11-5-B 48"x48"



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



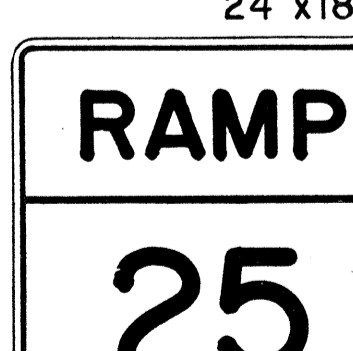
W12-2(12'-6") 36"x36"
24"x18"
W12-2(12'-6")-A 48"x48"



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



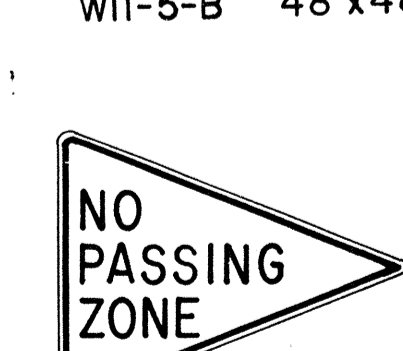
W13-2(25) 48"x60"



W13-3(25) 48"x60"



W14-1 30"x30"
W14-1-A 36"x36"



W14-3 36"x48"x48"
W14-3-A 48"x64"x64"

GENERAL NOTES

1. Sign details shall conform to the latest editions of FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways", "Standard Alphabet for Highway Signs", and "Standard Highway Signs", 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 3/17/82
TRAFFIC ENGINEER DATE

APPROVED:
Shelton Salsido 3-20-82
ASSISTANT CHIEF, ENGINEERING DATE

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
6	Revised Signs & General Note 1	E.T.	9/23/85

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE

SHEET No. 7/12 OF 22 SHEETS DT 102

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.	F-076-1(1)	1986	50	121

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 AHEAD
R2-5a 24" x 30"
R2-5a-A 48" x 60"

SPEED LIMIT ENFORCED BY RADAR
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 12" x 24"

RESERVED PARKING
R7-8 12" x 18"
R7-8-A 24" x 30"

NO PARKING ANY TIME
- 4" Series C
- 1 1/2"
R8-3a 24" x 24"
24" x 18"
R8-3a-A 48" x 48"

NO PEDESTRIAN CROSSING
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"

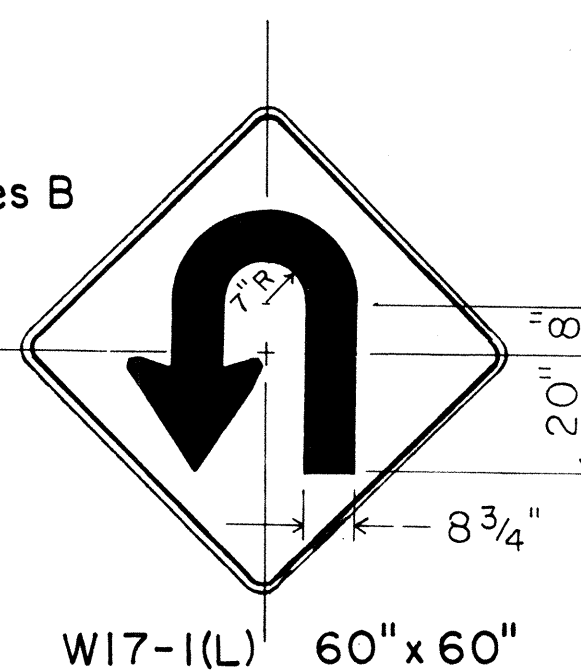
NO RIGHT TURN ON RED
R16-4 18" x 24"

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"



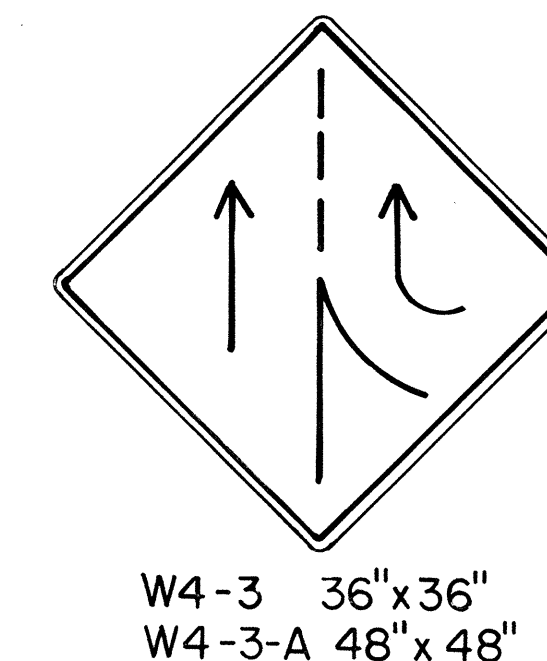
STOP AHEAD
W3-1a 36" x 36"
24" x 18"
W3-1a-A 48" x 48"
24" x 18"

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"
W8-6-B 48" x 48"

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"

WHEELCHAIR ACCESSIBLE
W11-9 36" x 36"
W11-9-A 48" x 48"

LIMITED SIGHT DISTANCE
W14-4 36" x 36"
W14-4-A 48" x 48"

DELAYED GREEN
- 4" Series C -
W15-1 24" x 24"

ADVANCE GREEN
W15-2 24" x 24"

END FREEWAY 1/2 MI
8" Series E
CW16-1(1/2) 60" x 60"

RIGHT LANE EXIT ONLY
8" Series E
W18-1 48" x 60"

SCHOOL BUS STOP AHEAD
S1-1 36" x 36"
S1-1-A 48" x 48"

SCHOOL BUS STOP AHEAD
S2-1 36" x 36"
S2-1-A 48" x 48"

SCHOOL BUS STOP AHEAD
S3-1 30" x 30"
S3-1-A 36" x 36"

8:00 AM TO 3:30 PM
S4-1 24" x 10"

SCHOOL
S4-3 24" x 8"
WHEN FLASHING
S4-4 24" x 10"

SIDEWALK CLOSED
7" Series D
CW23-4 48" x 48"

USE SIDEWALK
4" Series C
R18-1 24" x 18"

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

APPROVED:
Harbert S. Dakechis 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT103 approved 3/20/72	H.T.	5/3/78
2	Added General Note 6	H.T.	11/9/78
3	Revised Signs and added Sign W4-3	E.T.	9/18/80

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978
SHEET No. 713 OF 22 SHEETS DT 103

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.	F-076-1(1)	1986	51	121



CW20-1a 48" x 48"



CW20-2d 48" x 48"



CW20-3b 48" x 48"



CW20-4d 48" x 48"



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



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



CW21-1 30" x 30"



CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



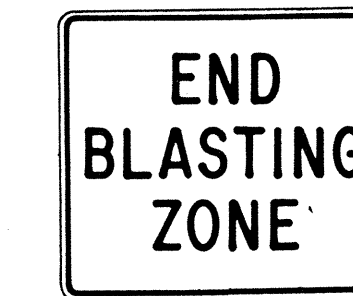
CW21-6 30" x 30"



CW22-1b 48" x 48"



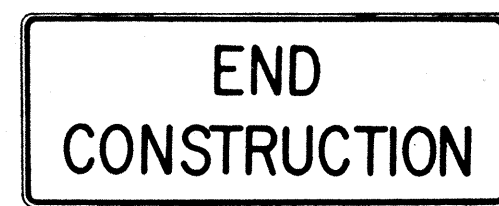
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



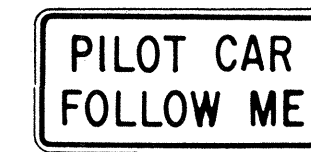
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



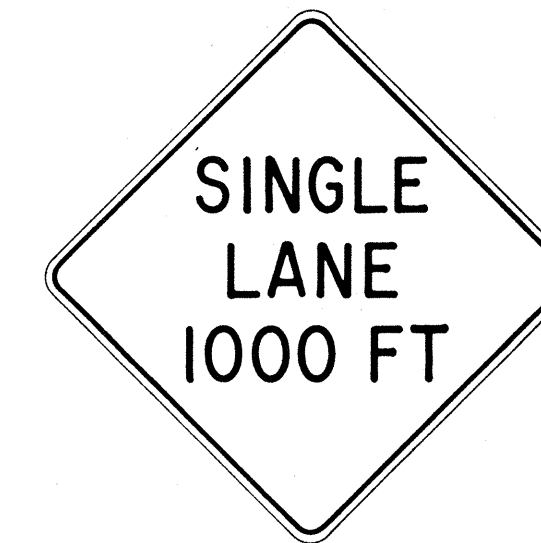
CM4-10(R) 48" x 18"



CG20-4 36" x 18"



CW23-1 36" x 36"



CW23-2b 48" x 48"



CW23-3(R) 48" x 48"

GENERAL NOTES

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

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

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

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

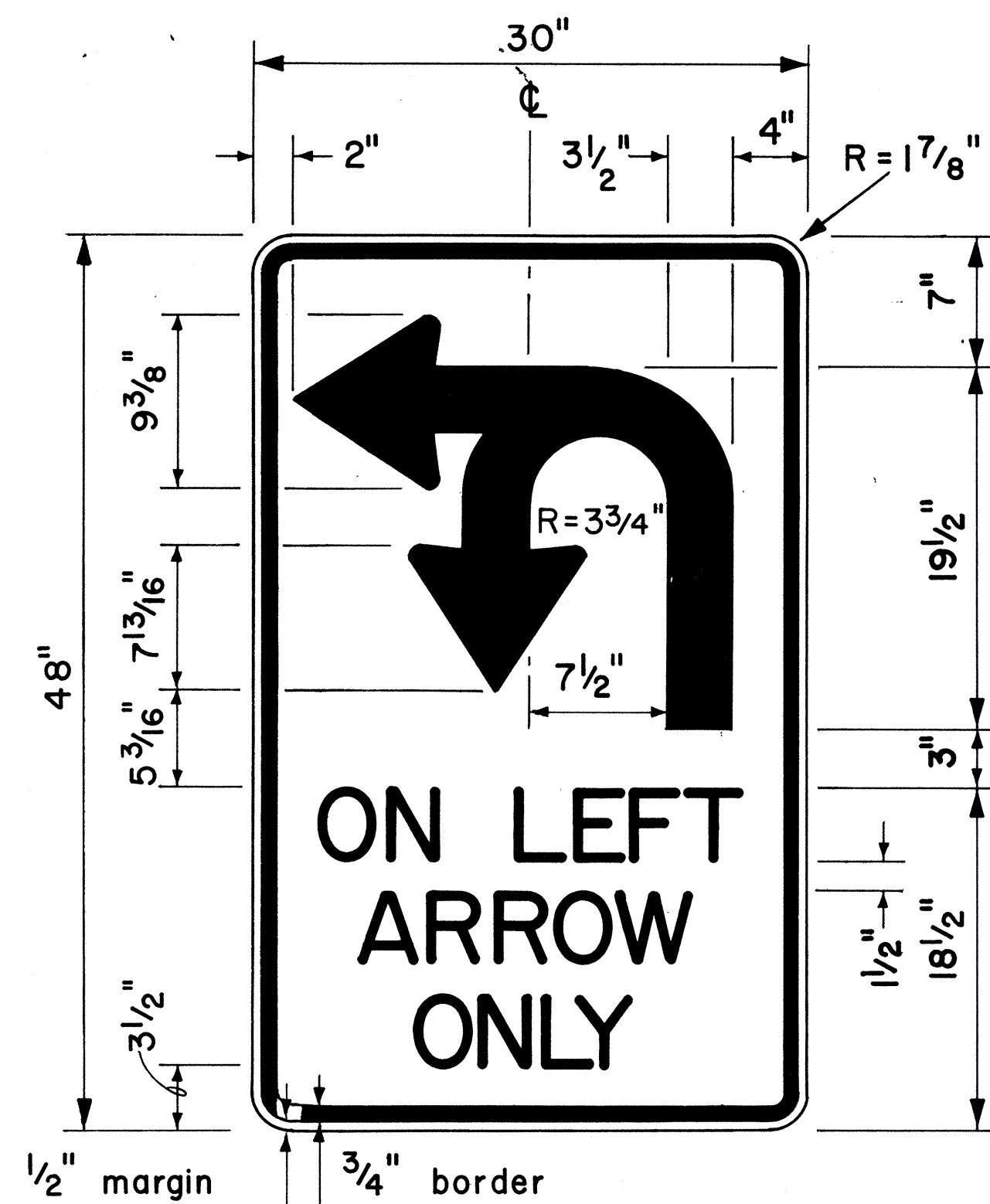
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CONSTRUCTION SIGNS

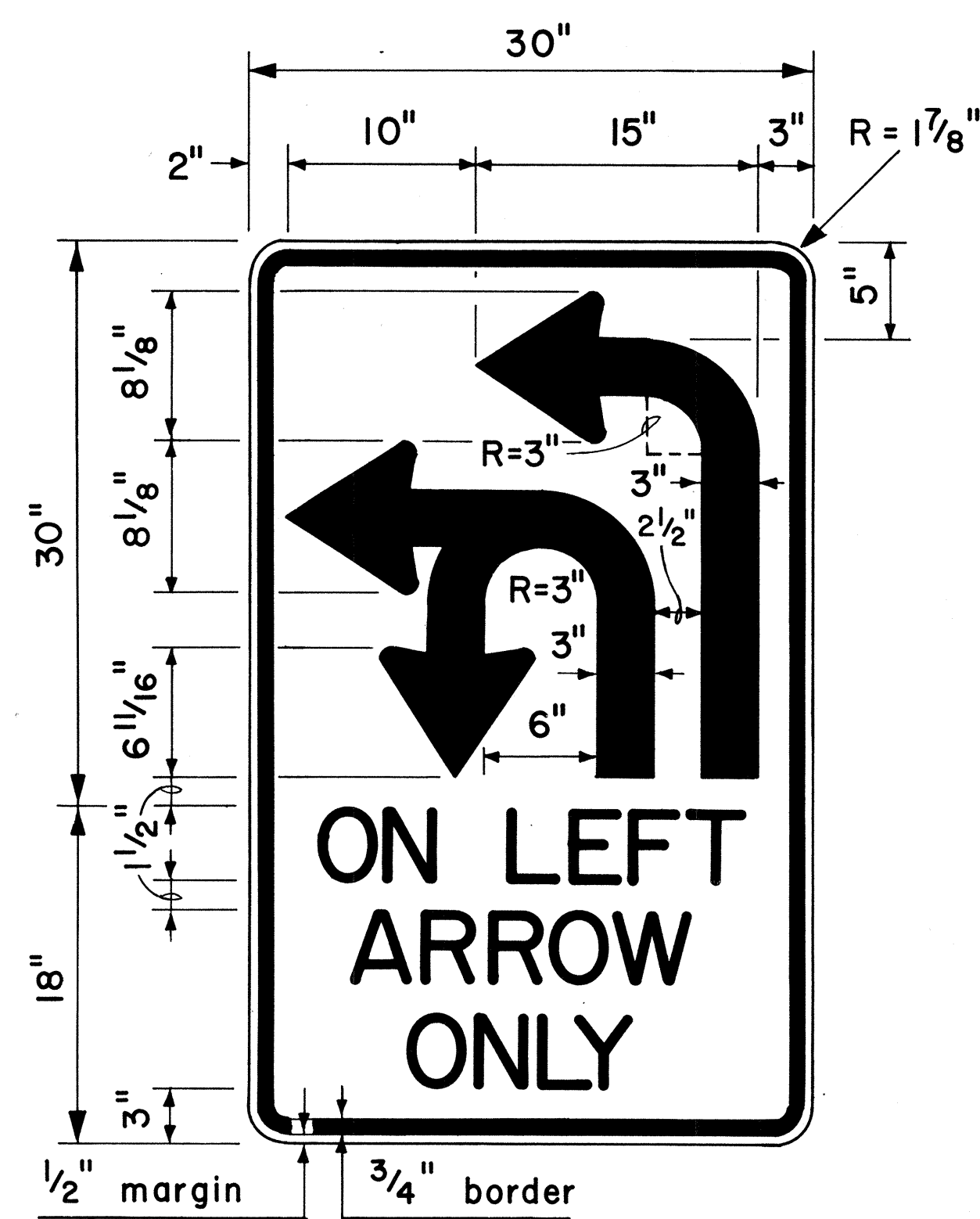
NOT TO SCALE

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

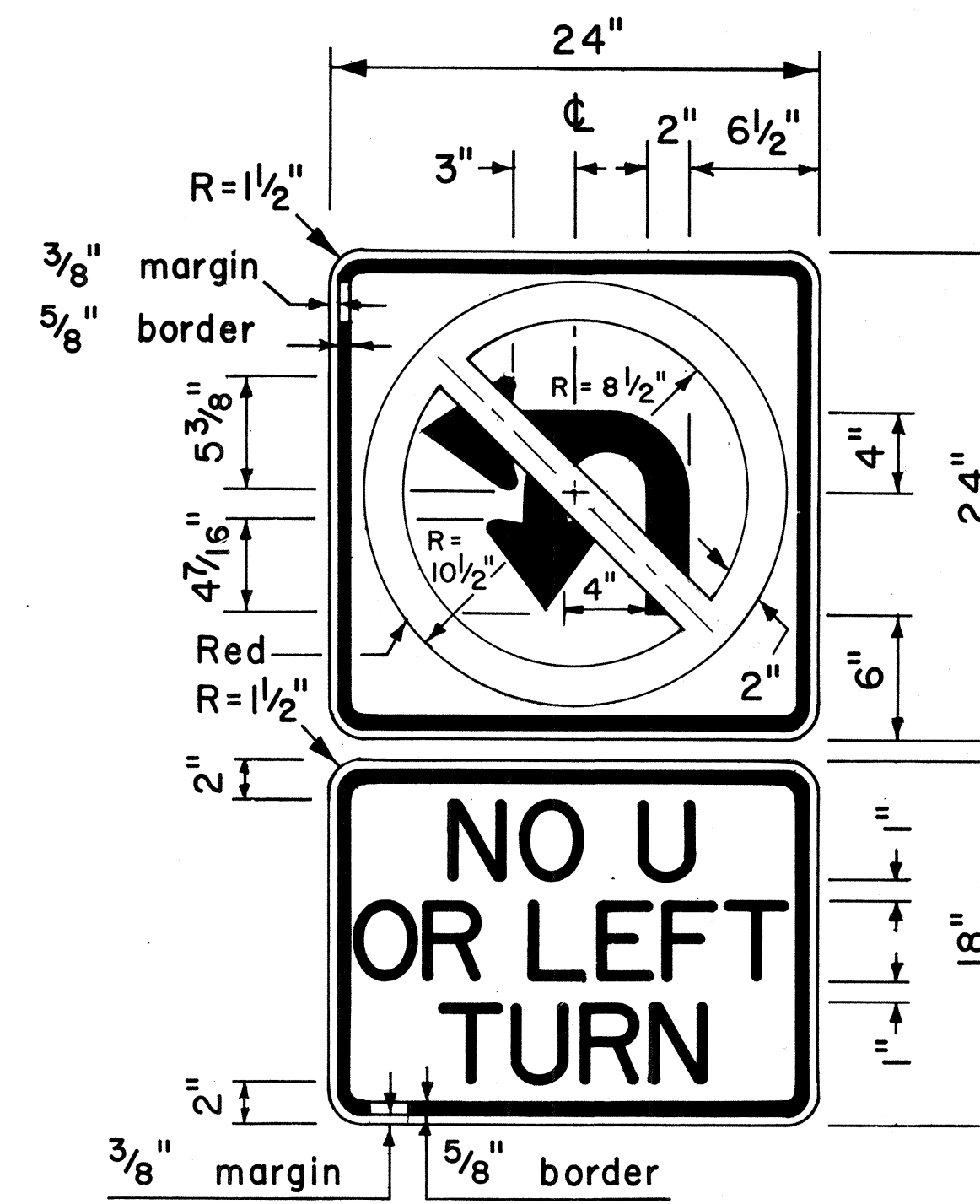
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	52	121



4" Series D Letters
R17-1



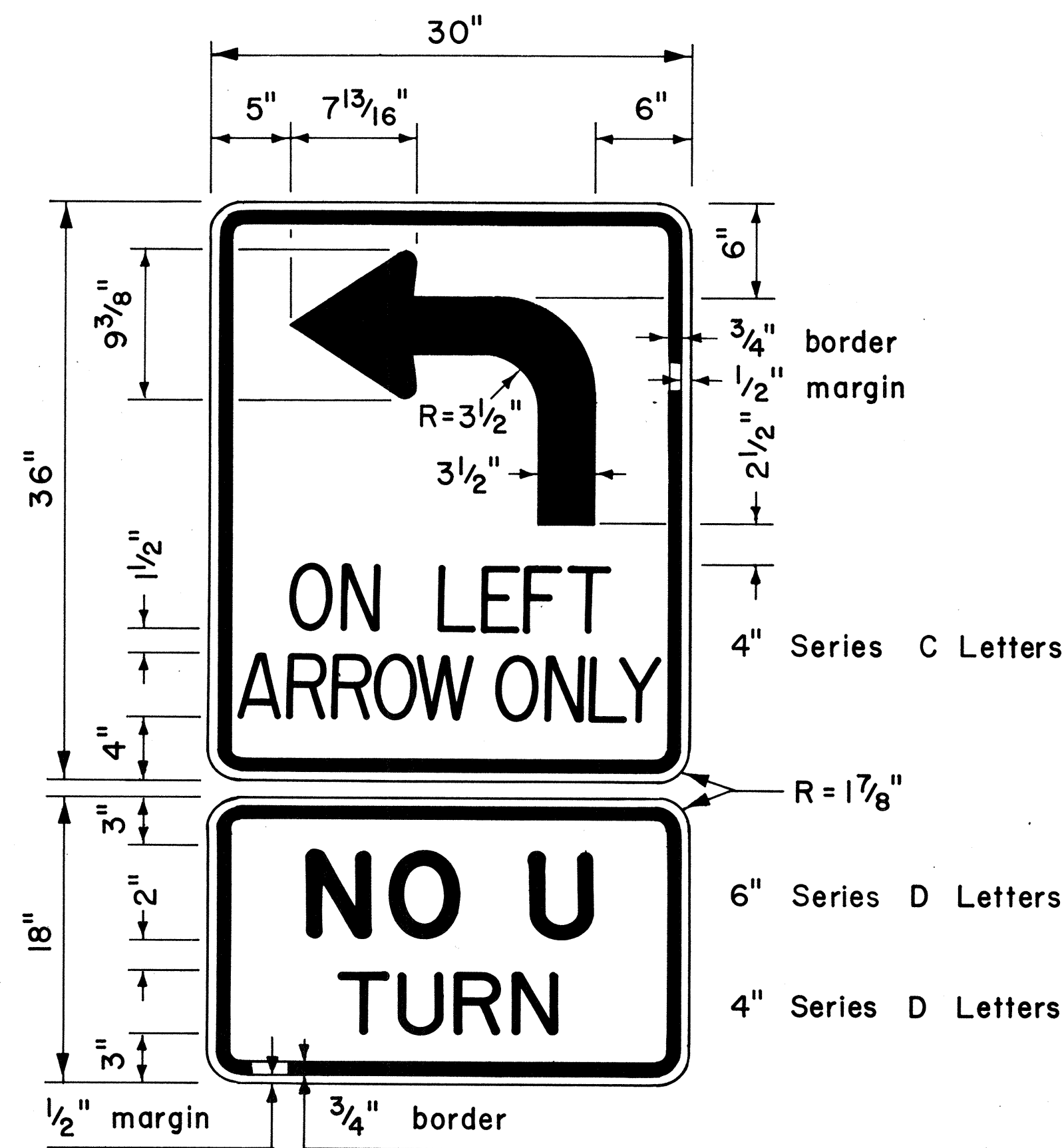
4" Series D Letters
R17-2



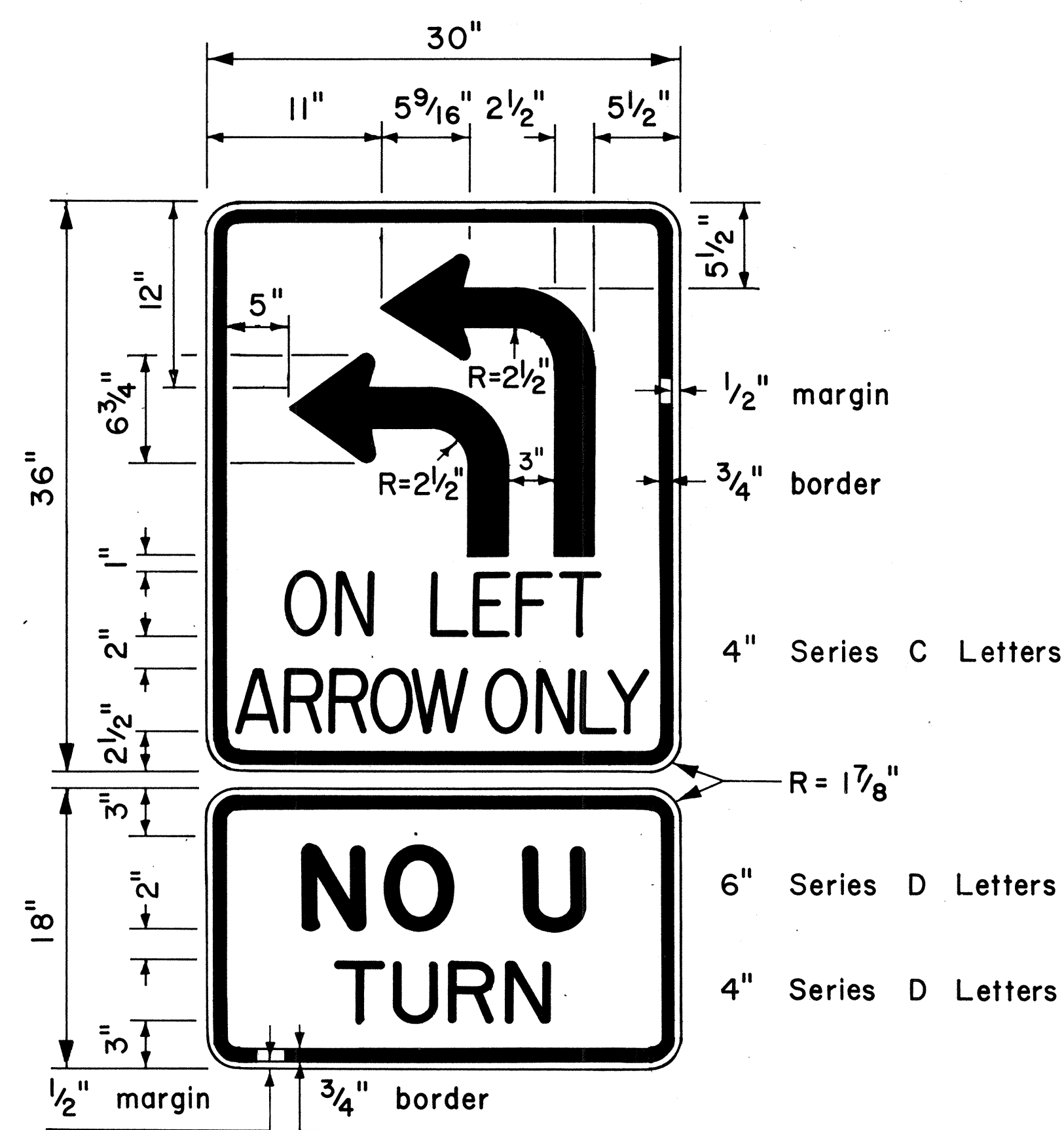
4" Series D Letters
R3-4b

GENERAL NOTES

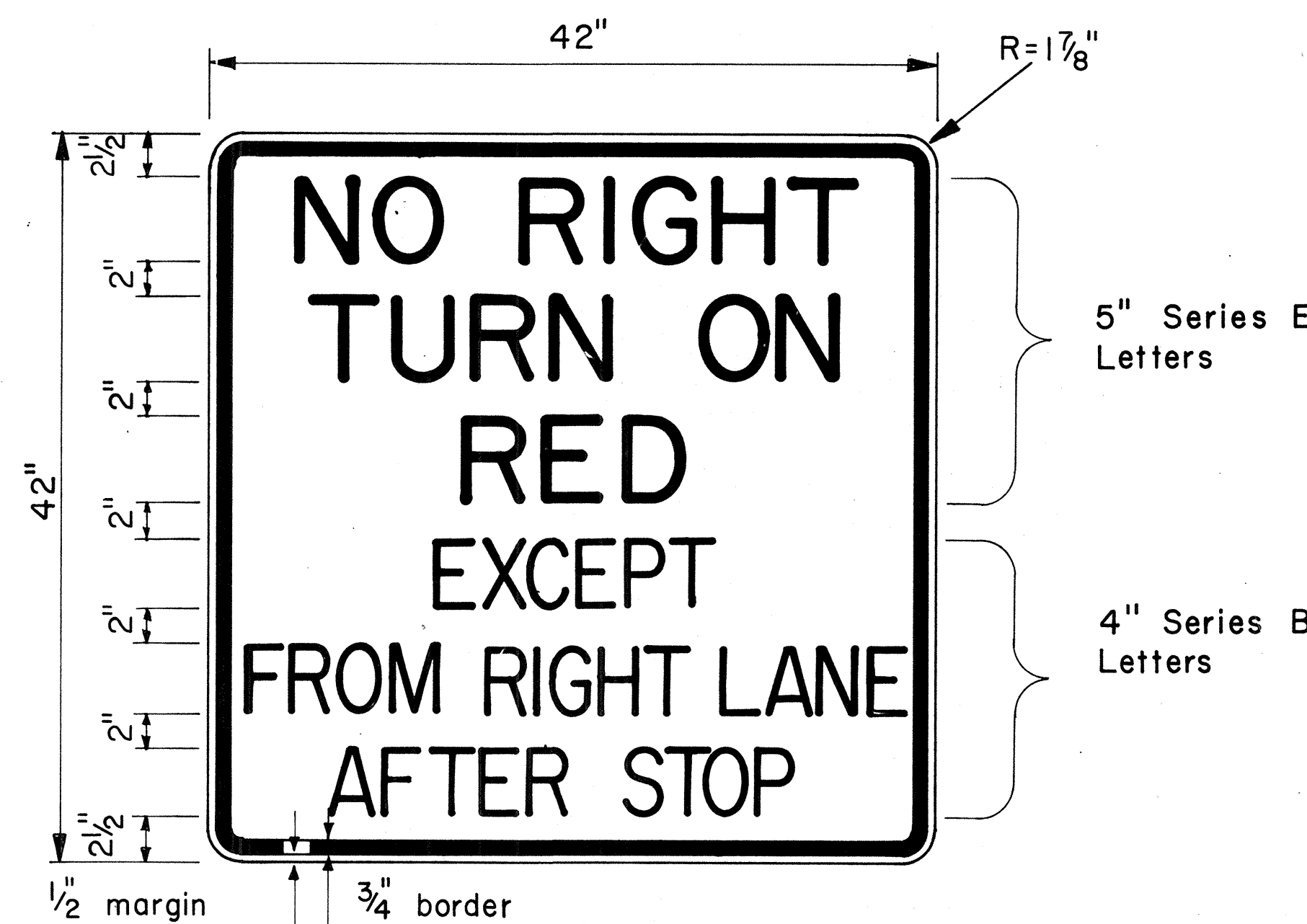
1. Sign details shall conform to the latest editions of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and "Standard Highway Signs," and as amended.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.



R17-3



R17-4



R10-11d

APPROVAL RECOMMENDED:
Eishi Tanaka 8/1/77
TRAFFIC ENGINEER DATE

APPROVED:
Harbert Palcish 8/16/77
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

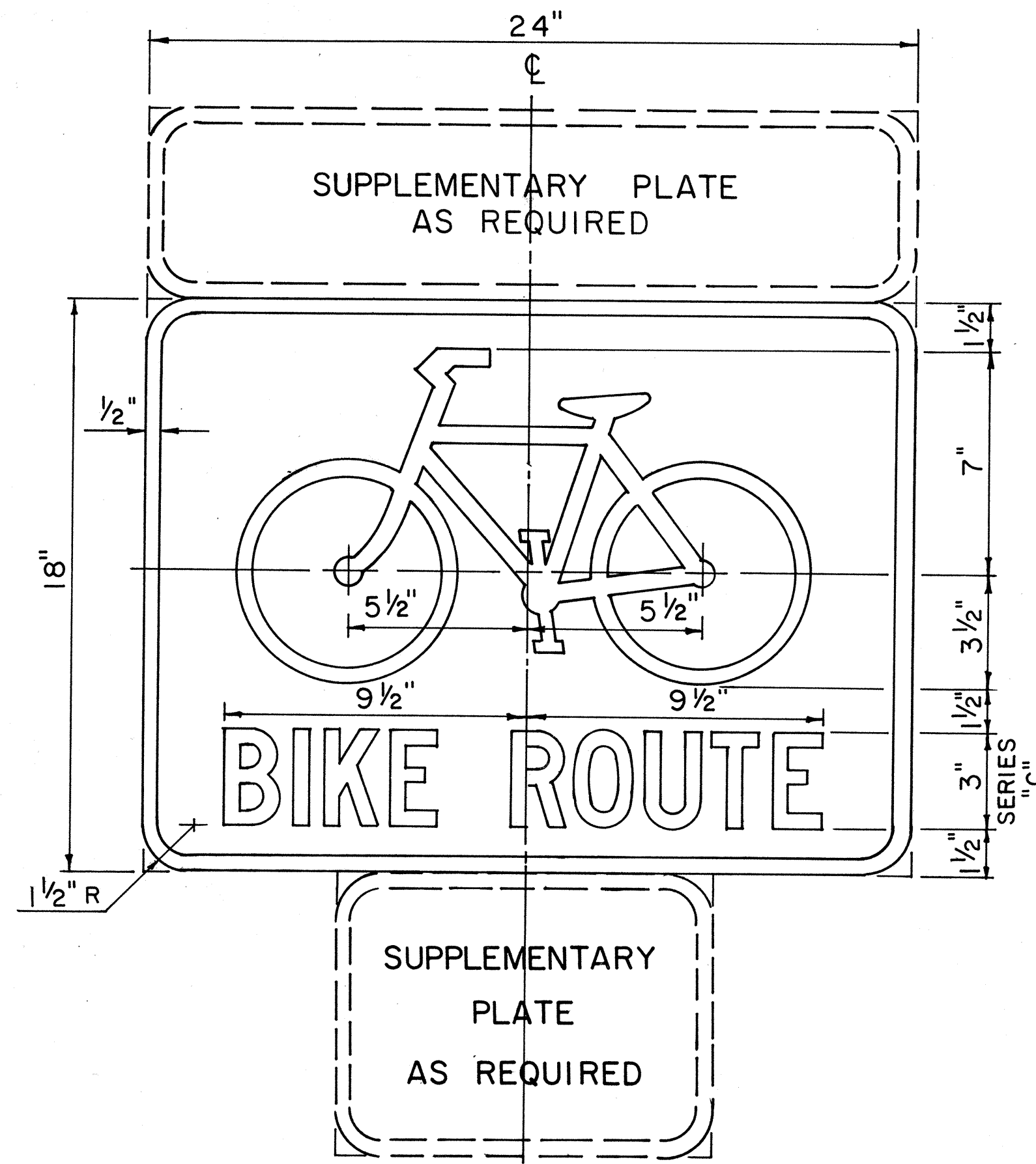
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS
INTERSECTION SIGNS

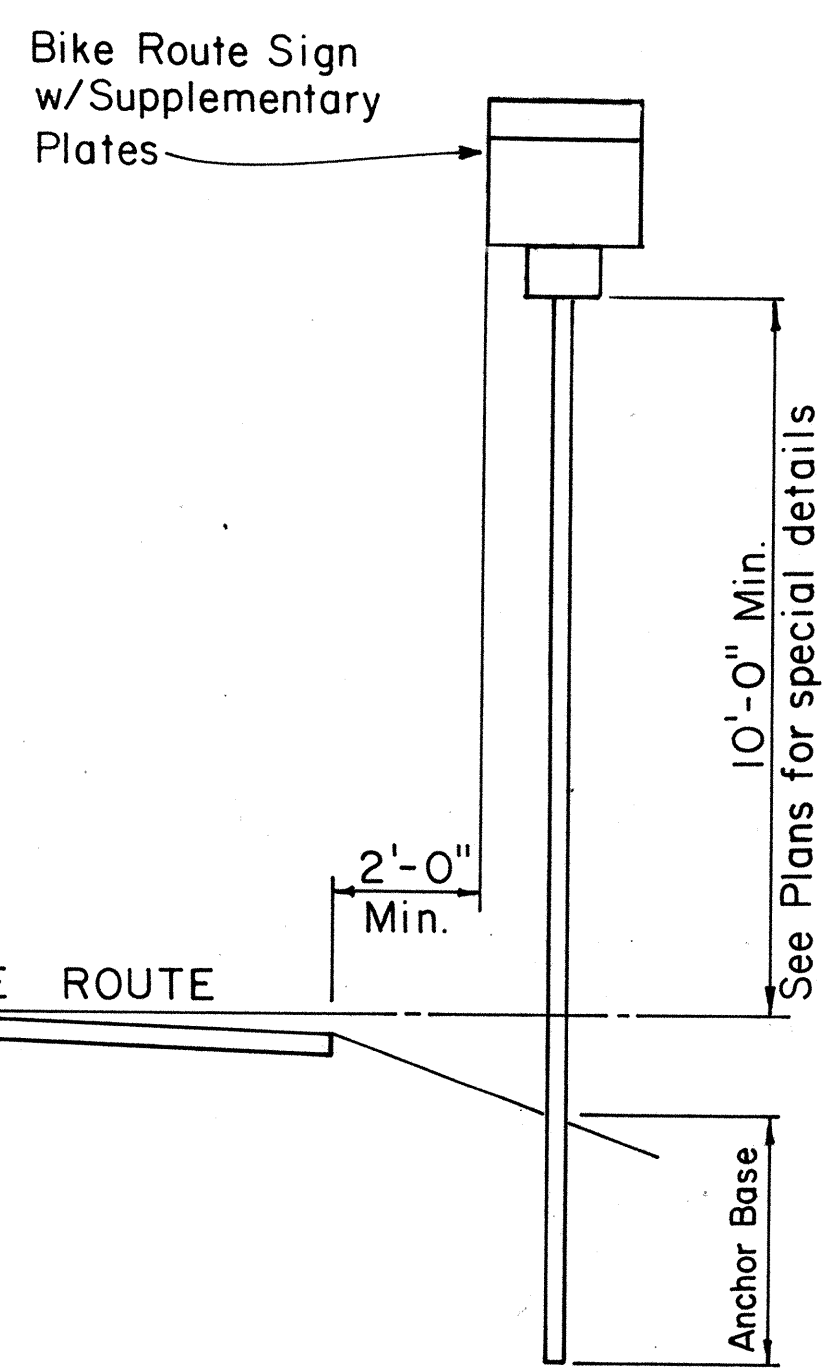
Scale: 1/2" = 1'-0" Date: Aug., 1977
SHEET NO. 115 OF 22 SHEETS DT 112

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

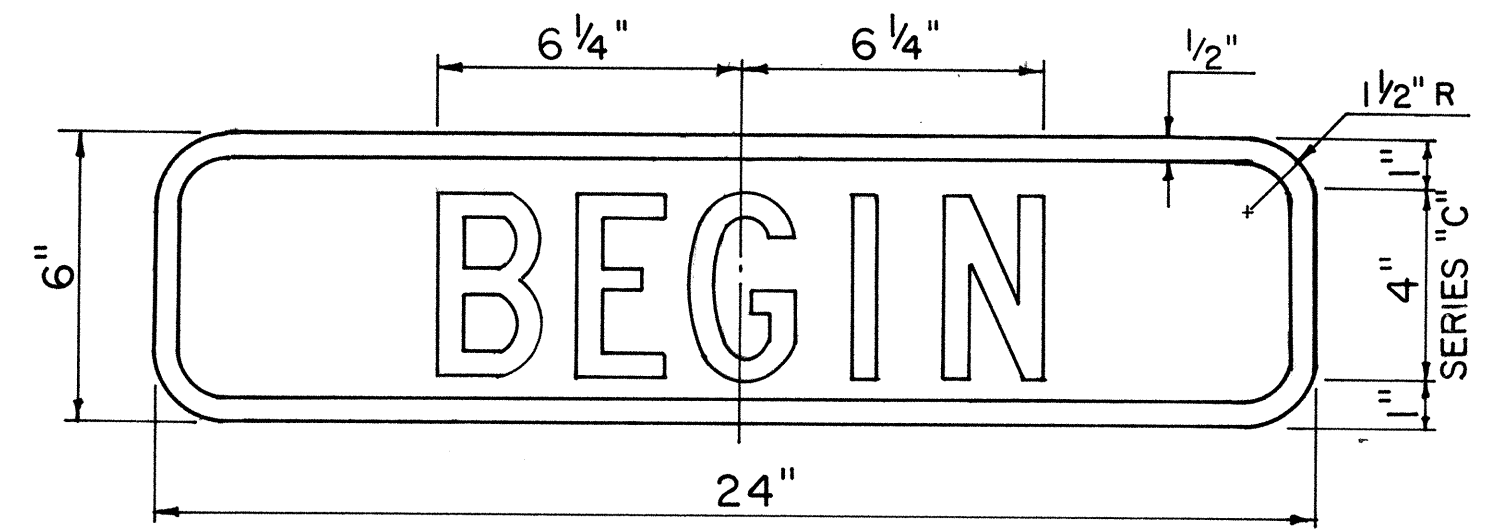
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	53	121



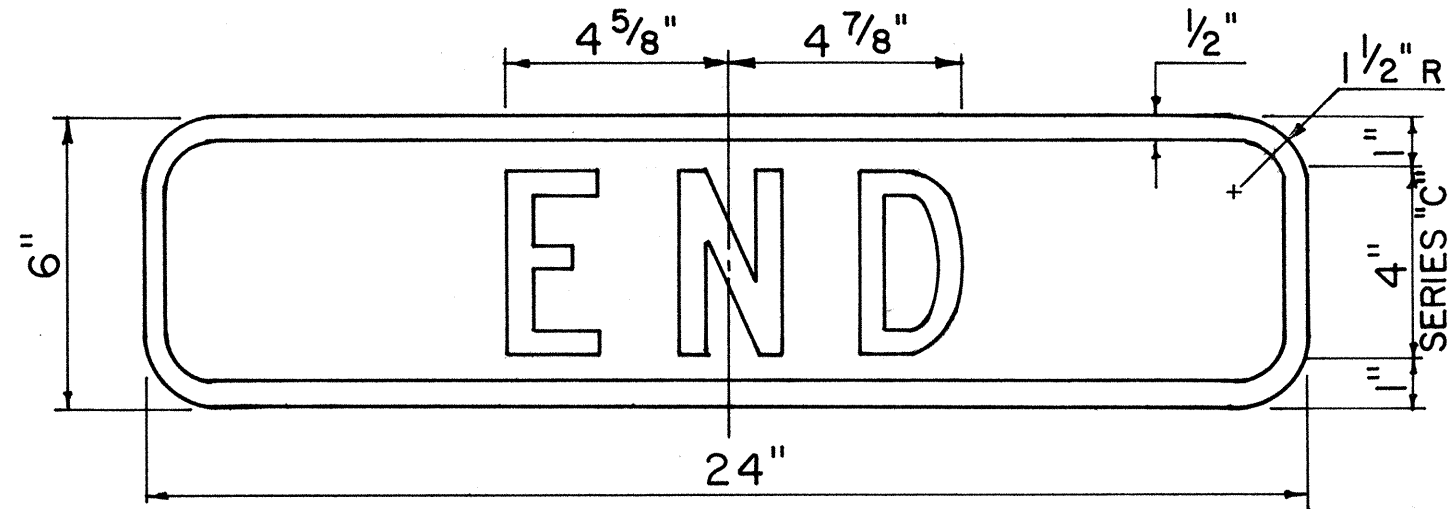
BIKE ROUTE SIGN
Scale: 3" = 1'-0"



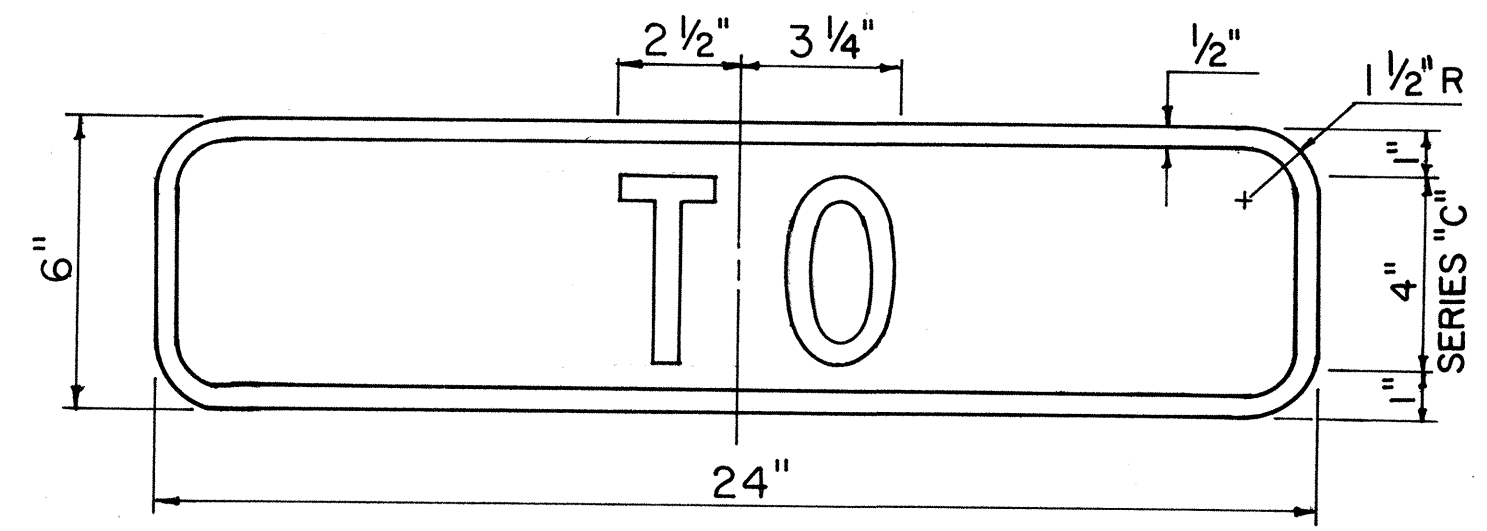
TYPICAL INSTALLATION
Scale: Not to Scale



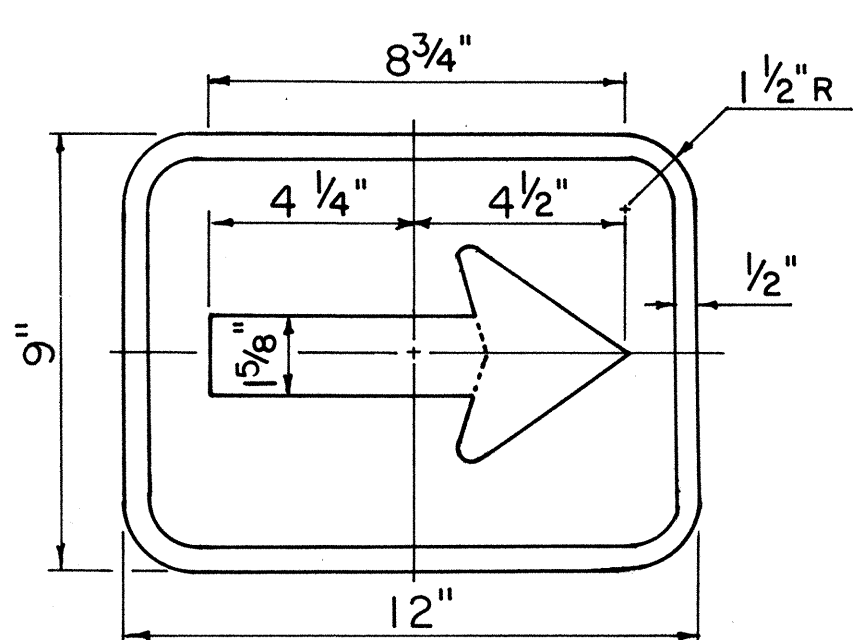
M4-11



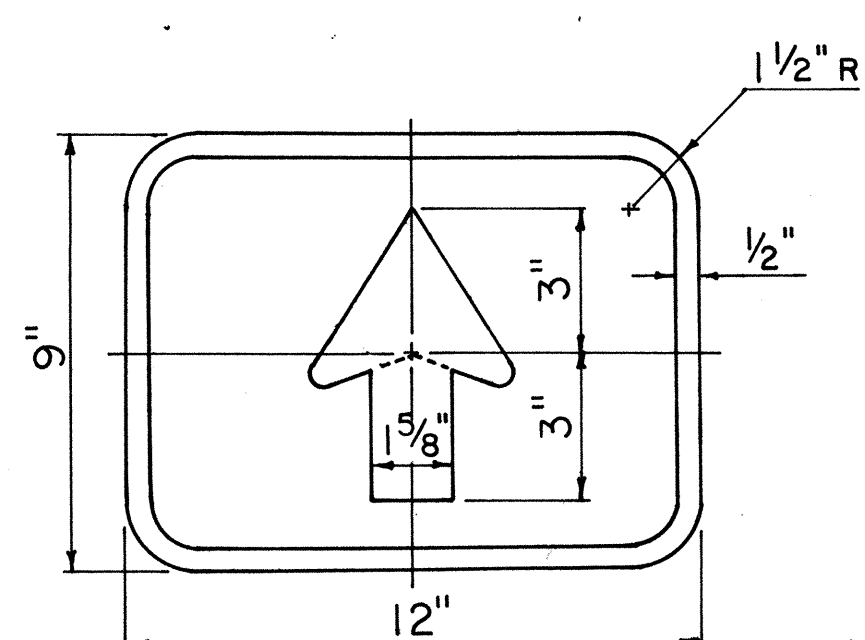
M4-12



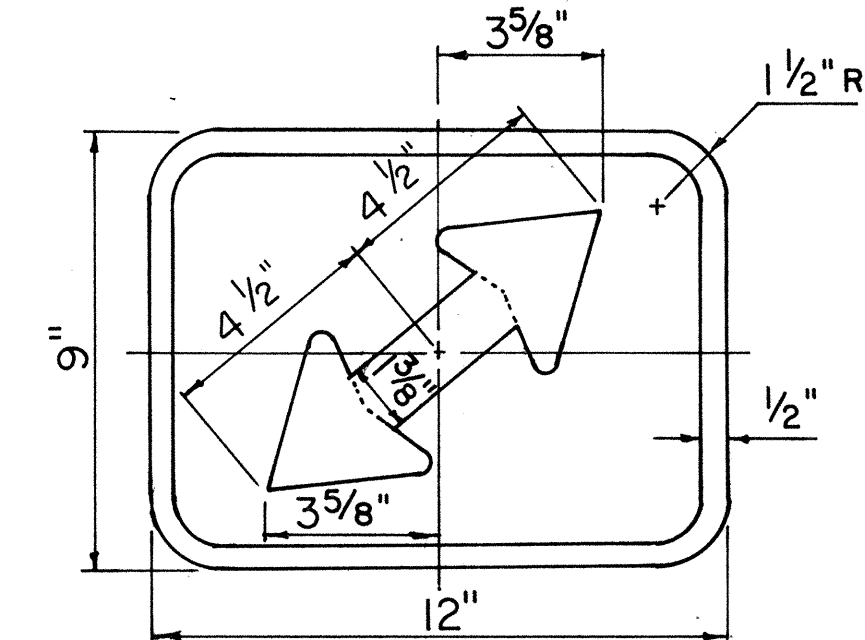
M4-13



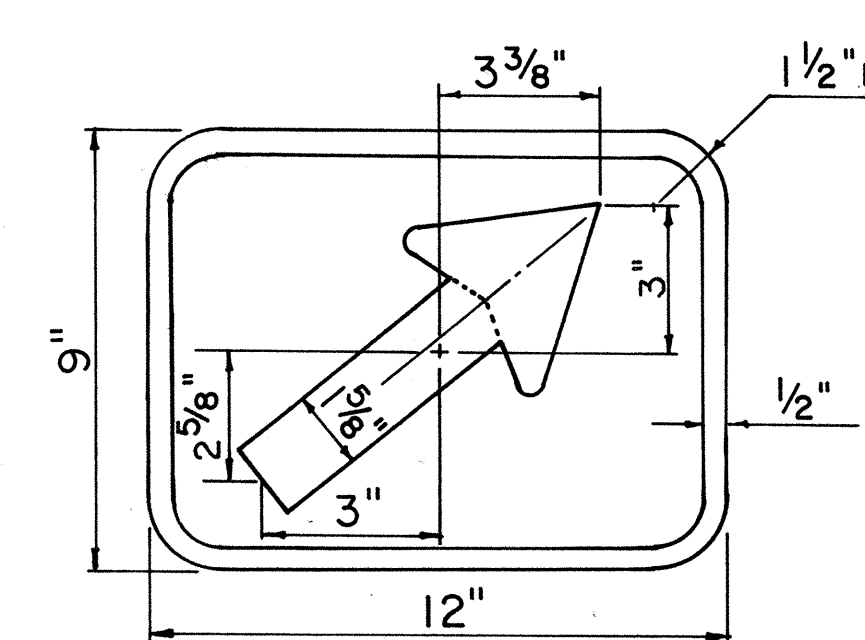
M7-1



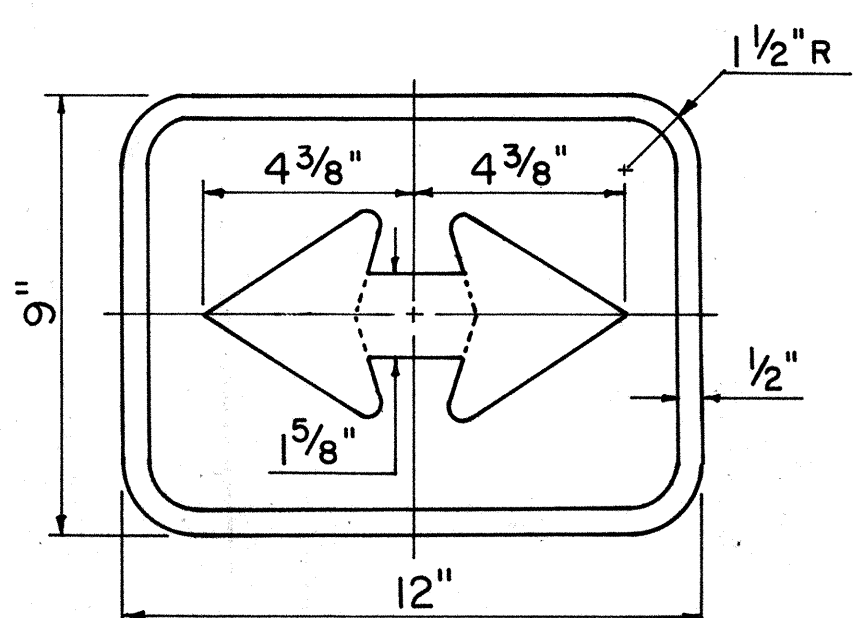
M7-2



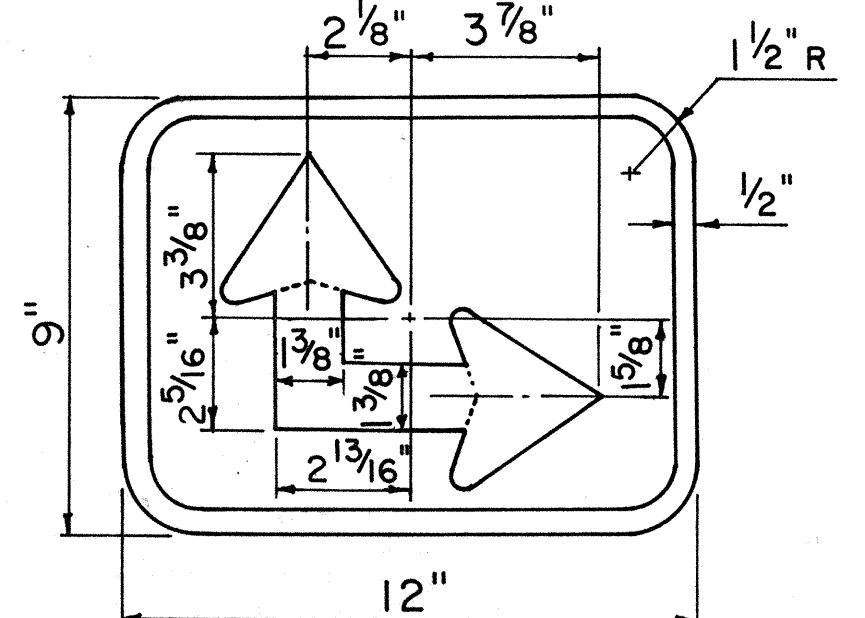
M7-3



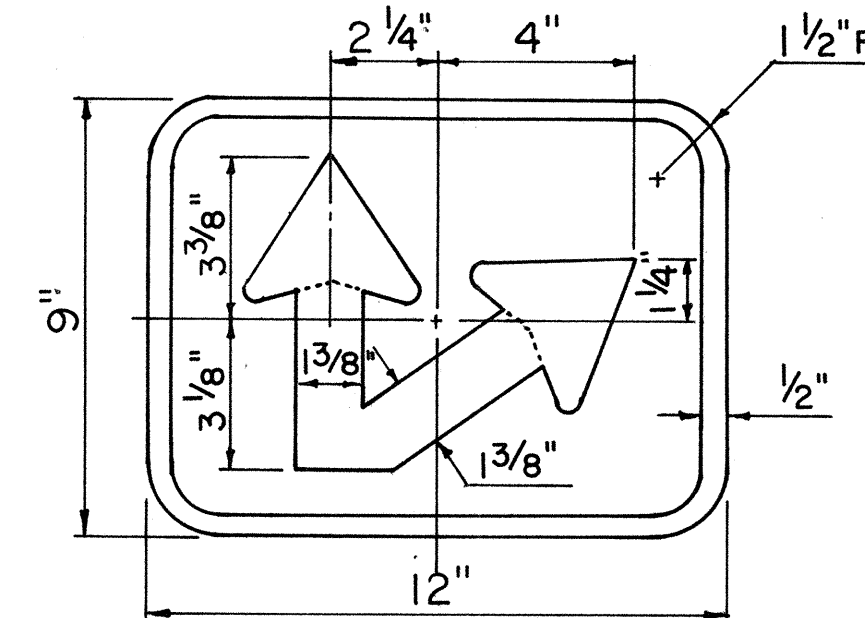
M7-4



M7-5

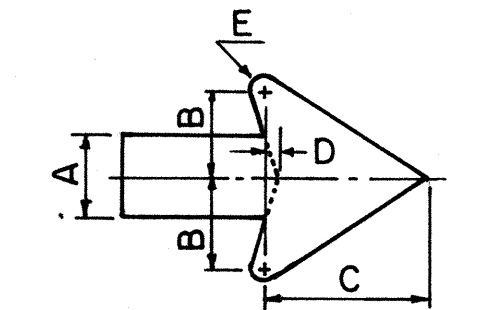


M7-6



M7-7

SUPPLEMENTARY PLATES
Scale: 3" = 1'-0"



A	B	C	D	E
1 3/8"	1 9/16"	2 13/16"	3/16"	1/4"
1 5/8"	1 7/8"	3 5/16"	1/4"	5/16"

ARROW DETAILS

NO.	REVISION	APPROVED BY	DATE
1	Supersedes DT 114 Approved 11/7/77	H.T.	9/22/82

GENERAL NOTES

- Sign details shall conform to the latest editions and amendments of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways", "Standard Highway Signs" and "Standard Alphabets for Highway Signs".
- Legend and borders shall be white (reflectORIZED) on a green (reflectORIZED) background.
- Drill 3/8" φ bolt holes (for mounting) at appropriate locations.
- Sign panel backing shall be sheet aluminum conforming to the requirements specified in Subsection 712.20(B)(1) Sheet Aluminum.
- Corners of sign panels shall be rounded to fit the border.
- See shts. DT 100, DT 100A and DT 100B for additional signpost installation and anchor base details.

APPROVAL RECOMMENDED:

Eichi Tanaka 9/1/82
TRAFFIC ENGINEER DATE

APPROVED:

Shirley Salsich 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

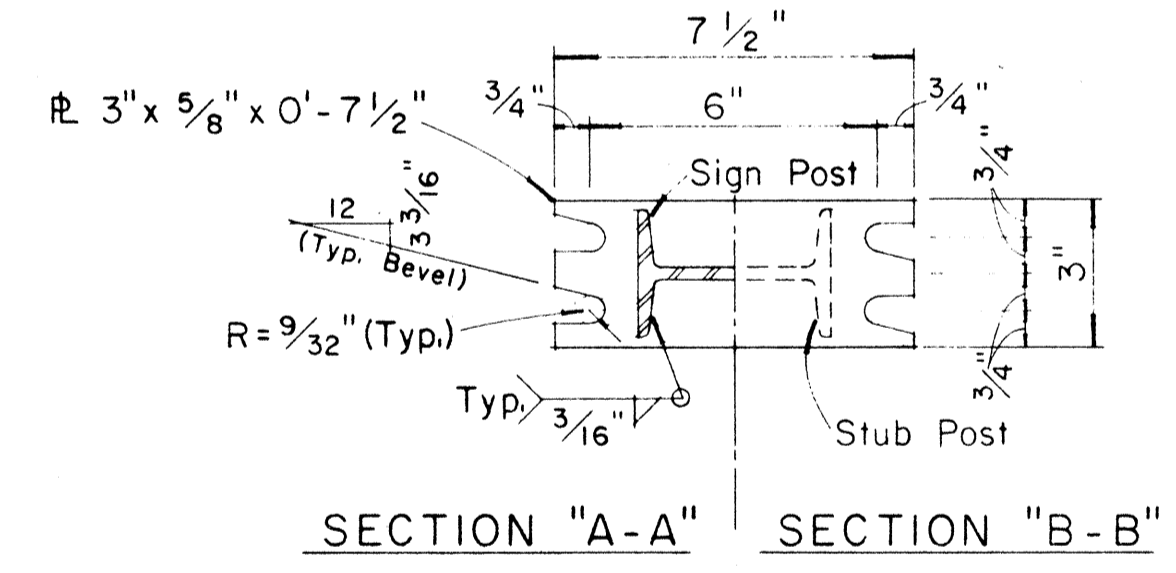
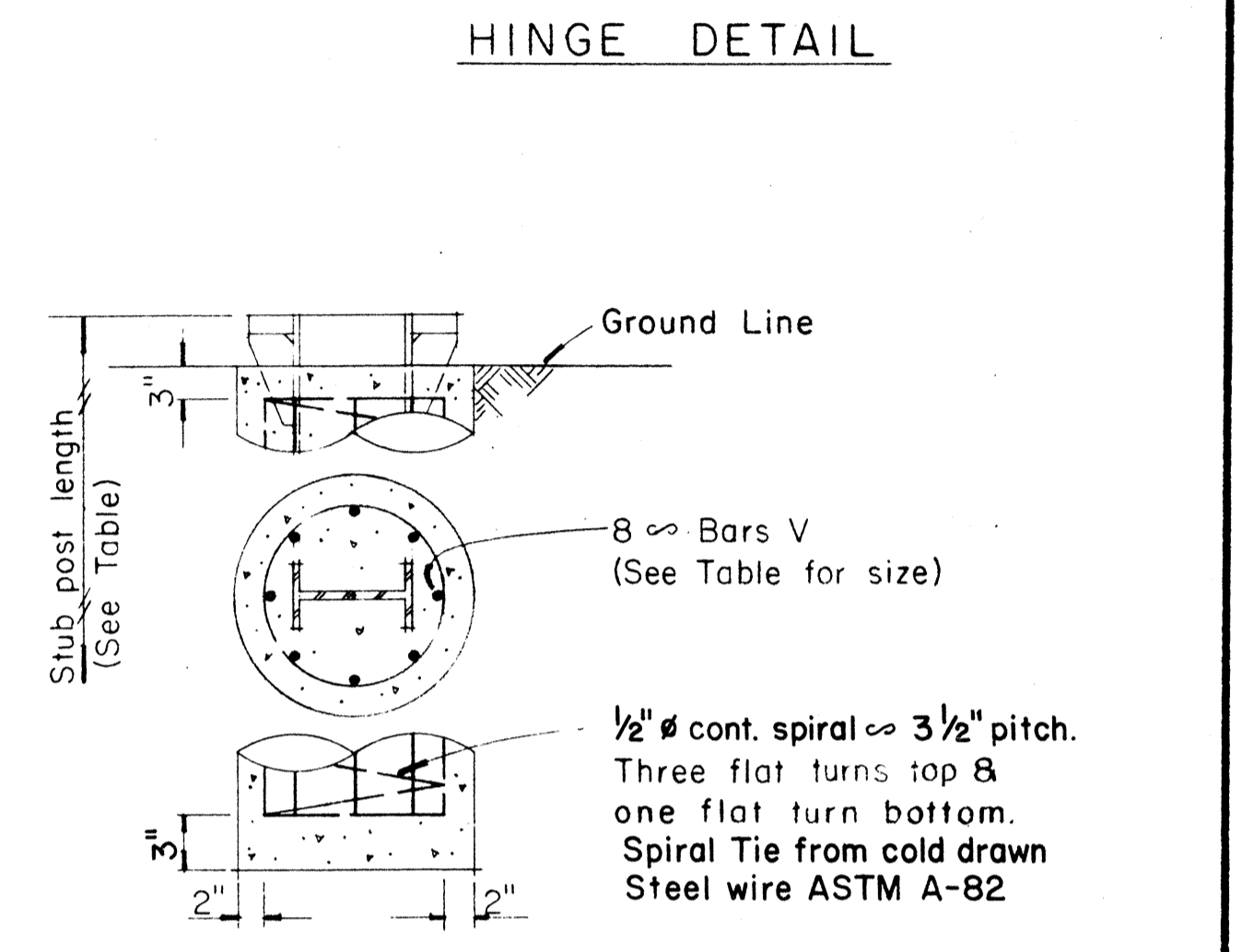
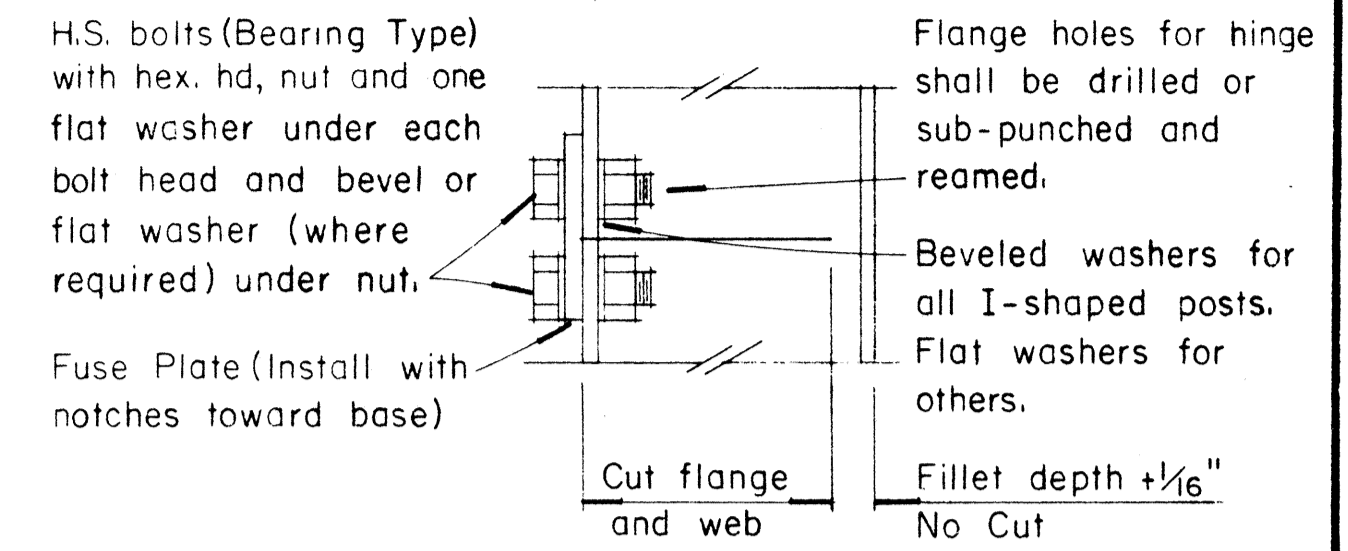
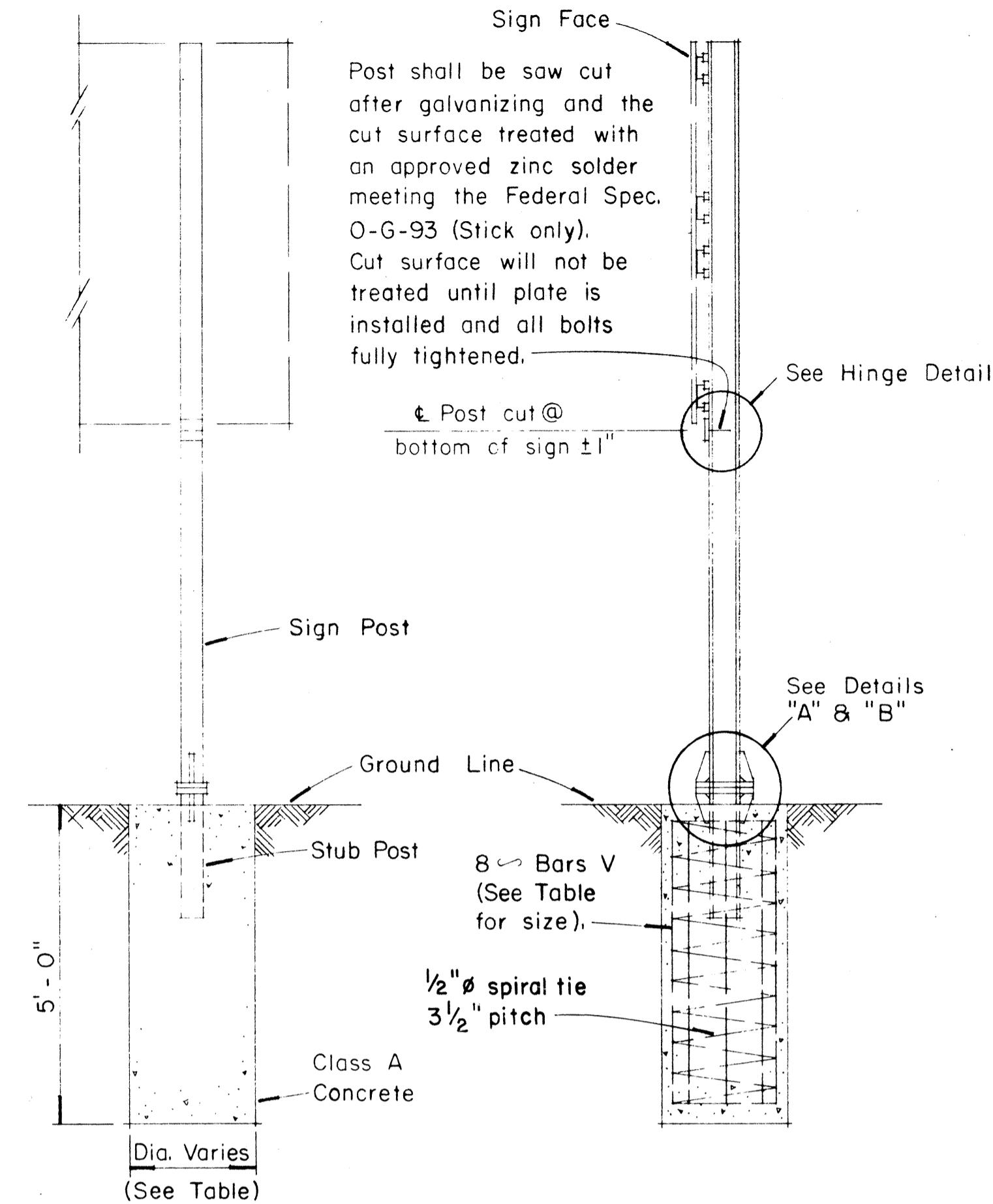
STANDARD DETAILS
BIKE ROUTE SIGN
& SUPPLEMENTARY PLATES

Scale: As Shown July 1982
SHEET No. 116 OF 22 SHEETS DT 114

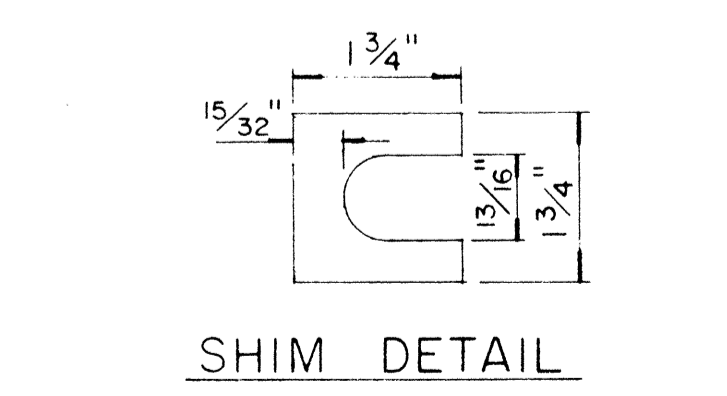
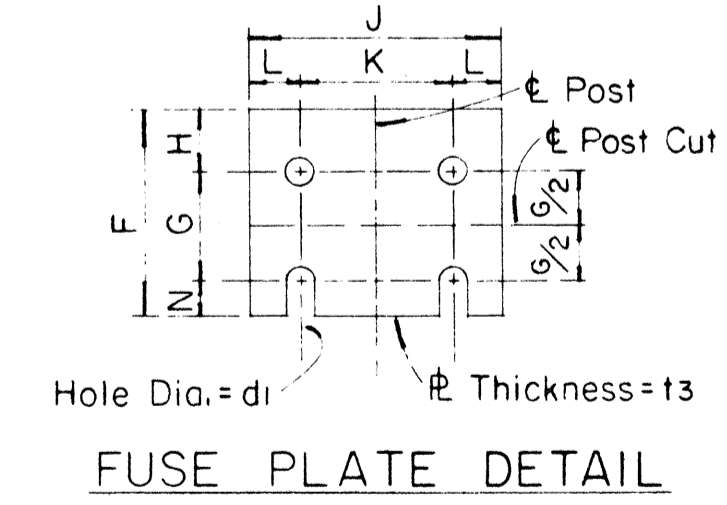
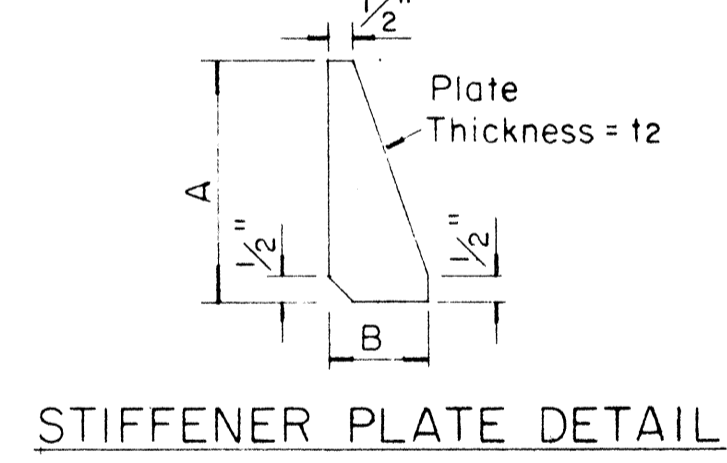
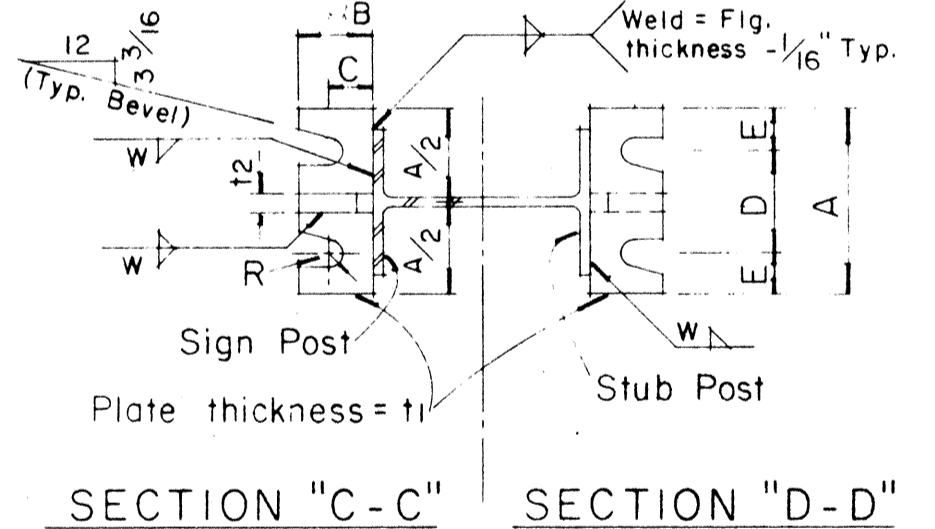
DATE	
SURVEY PLOTTED BY	
DRAWN BY	
TRACED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	54	121

Post Size	Bolt Size & Torque	BASE CONNECTION DATA TABLE										FUSE PLATE DATA TABLE										FOUNDATION DATA				
		A	B	C	D	E	t1	t2	W	R	F	G	H	J	K	L	N	d1	t3	Bolt Dia.	Wt. of each Fuse Pl.	Stub Length	Stub Projection	Footing Diameter	Bars V Size	
W6x9																				1.09*	2'-0"	3"	2'-0"	#7		
W6x12	5/8" ϕ x 2 3/4" Torque = 450**	5"	2"	1 1/4"	2 3/4"	1 1/8"	3/4"	1/2"	1/4"	1 1/32"	3 3/8"	2"	1 1/8"	4"	2 1/4"	7/8"	5/8"	1 1/16"	3/8"	5/8" ϕ	1.60*	2'-0"	3"	2'-0"	#7	
W6x16											4 1/2"	2 1/2"	1 1/4"	6"	3 1/2"	1 1/4"	3/4"	1 3/16"	1/2"	3/4" ϕ	3.75*	2'-6"	3"	2'-0"	#7	
W8x18											4 1/2"	2 1/2"	1 1/4"	5 1/4"	2 3/4"	1 1/4"	3/4"	1 3/16"	1/2"	3/4" ϕ	3.27*	2'-6"	3"	2'-0"	#7	
W8x21											4 7/8"	2 1/2"	1 1/2"	5 1/4"	2 3/4"	1 1/4"	7/8"	1 5/16"	9/16"	7/8" ϕ	3.93*	3'-0"	2 1/2"	2'-0"	#8	
W10x22	3/4" ϕ x 3 1/2" Torque = 750**	6"	2 1/4"	1 3/8"	3 1/2"	1 1/4"	1"	3/4"	5/16"	1 3/32"	5 3/8"	3"	1 1/2"	5 3/4"	2 3/4"	1 1/2"	7/8"	1 5/16"	9/16"	7/8" ϕ	4.75*	3'-0"	2 1/2"	2'-0"	#9	
W10x26											5 3/8"	3"	1 1/2"	5 3/4"	2 3/4"	1 1/2"	7/8"	1 5/16"	9/16"	7/8" ϕ	4.79*	3'-0"	2 1/2"	2'-0"	#10	
W12x30											5 3/8"	3"	1 1/2"	6 1/2"	3 1/2"	1 1/2"	7/8"	1 5/16"	9/16"	7/8" ϕ	5.42*	3'-0"	2 1/2"	2'-0"	#11	
S3x5.7	1/2" ϕ x 2 1/2" Torque = 200**	SEE DETAIL "A"										3 1/8"	1 1/2"	1 1/8"	2 5/8"	1 1/2"	9/16"	1/2"	9/16"	1/4"	1/2" ϕ	0.64*	1'-6"	3 1/2"	1'-6"	#5
S4x7.7		SEE DETAIL "A"										3 1/8"	1 1/2"	1 1/8"	2 5/8"	1 1/2"	9/16"	1/2"	9/16"	1/4"	1/2" ϕ	0.64*	1'-6"	3 1/2"	1'-6"	#5



NOTE:
Sections shown are for installations on right shoulder and in gore. Reverse plate slot bevels for installations on left shoulder.



GENERAL NOTES

- Design shall conform with AASHTO Specifications for the design and Construction of Structural Supports for Highway Signs, Luminaires and Traffic Signals.
- Materials and Fabrication shall conform to the requirements of the Standard Specifications and Special Provisions.
- All holes shall be drilled. All plate cuts shall preferably be saw cuts, however; flame cutting will be permitted provided all edges are ground. Metal projecting beyond the plane of the plate face will not be tolerated.
- Tighten the high strength bolts in the base connection only to the torque shown, do not overtighten. All bolts other than high strength bolts shall conform to ASTM A 307, Class A.
- All structural steel, bolts, nuts and washers shall be galvanized as per the Standard Specifications and Special Provisions. Structural steel to be galvanized after fabrication except as noted.
- Structural steel shall conform to the requirements of ASTM A 441.
- Galvanize all of the post projecting above the concrete plus 6 inches- minimum.
- All friction fuse bolts shall be tightened in the shop following a method approved by the Engineer. Tightening shall be to such a degree as to obtain the following minimum residual tension in each bolt:

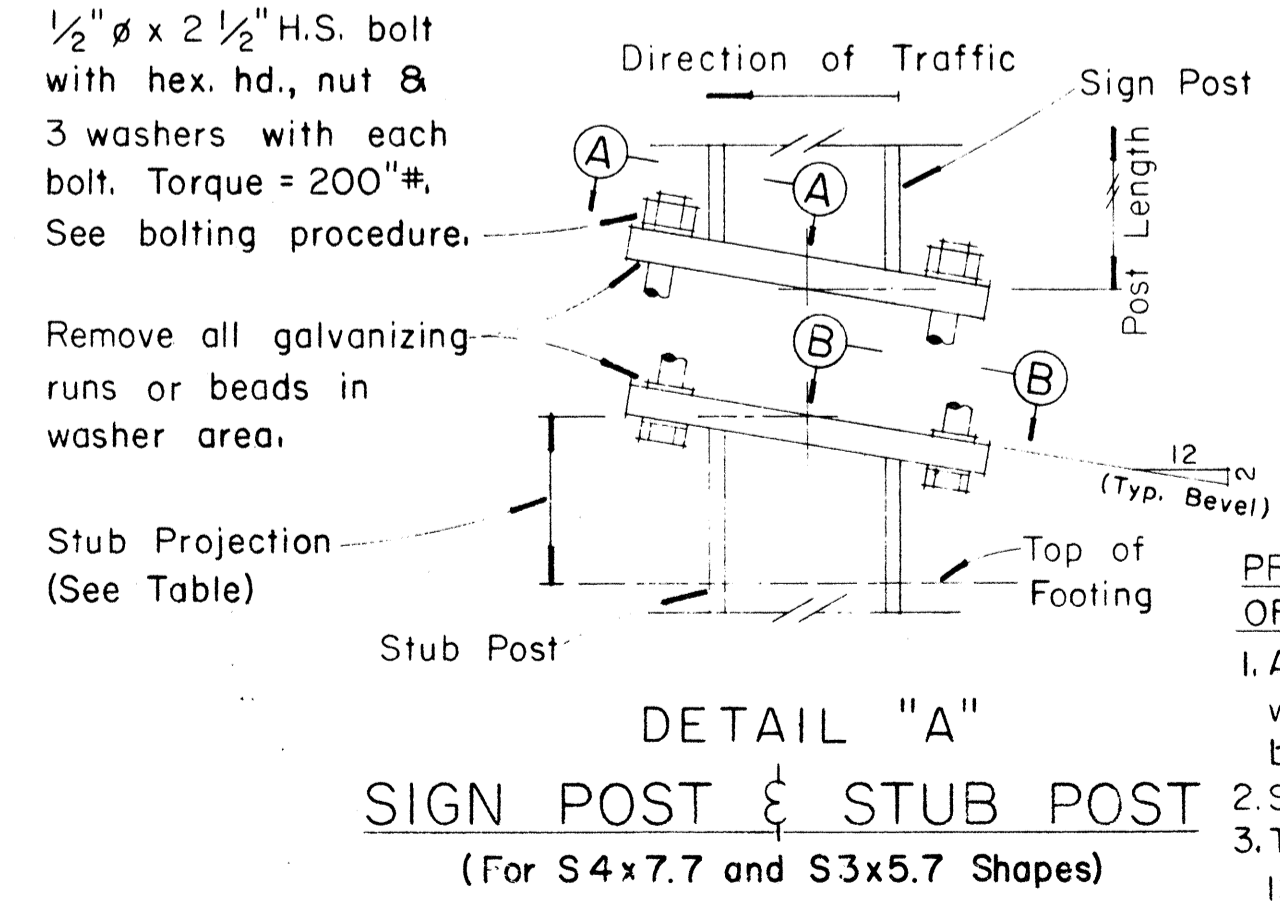
Bolt Size	Min. Tension	Bolt Size	Min. Tension
1/2" ϕ	12050 Lbs.	3/4" ϕ	28400 Lbs.
5/8" ϕ	19200 Lbs.	7/8" ϕ	36050 Lbs.
- Supplemental Sign shall not be installed below the Breakaway Hinges.

APPROVAL RECOMMENDED:
Eiichi Tanaka
 TRAFFIC ENGINEER 12/29/69 DATE
 APPROVED:
John J. [Signature]
 ASSISTANT CHIEF, ENGINEERING 12-30-69 DATE

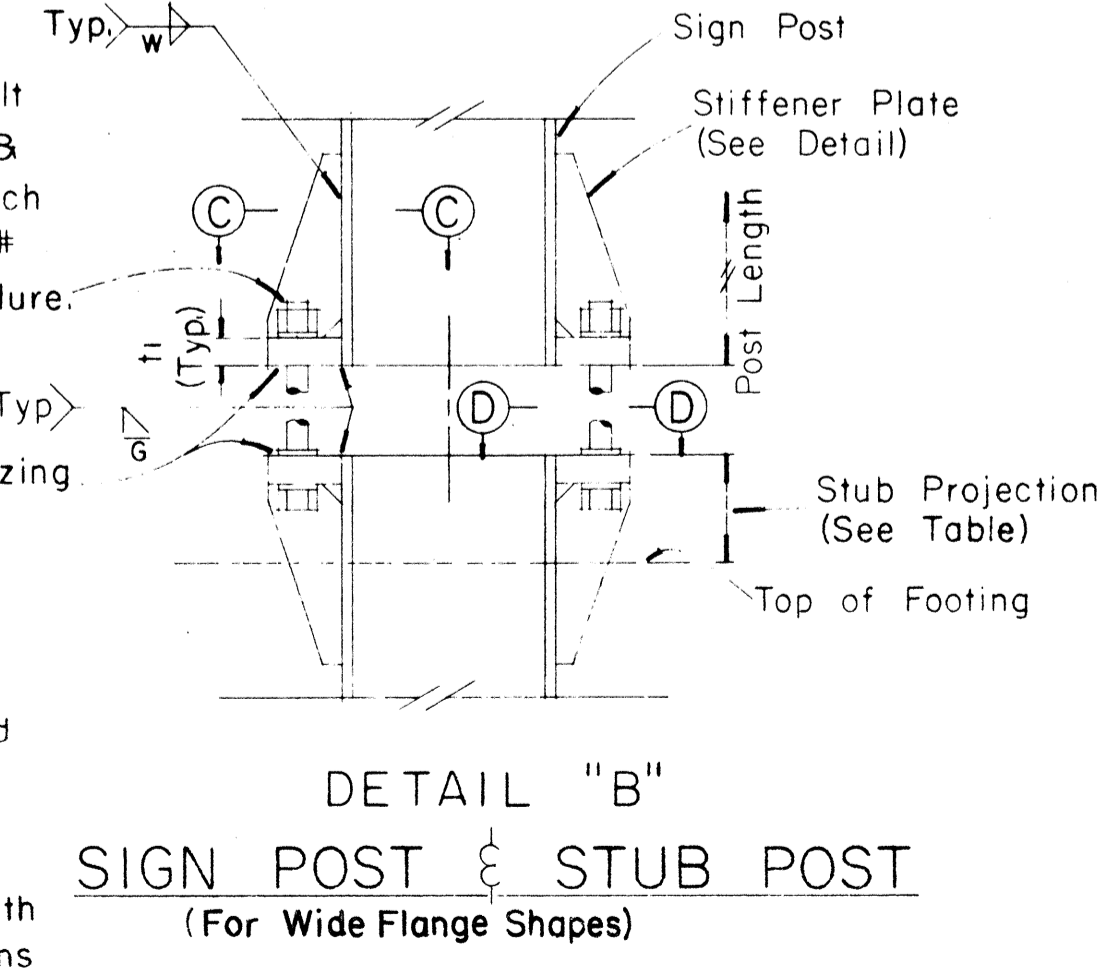
NO.	REVISION	APPROVED BY	DATE
1	Added General Note No. 9	H.T.	6/3/80
2	Revised description of Post Size and Foundation Detail.	JTC	10/21/85

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
STANDARD DETAILS
BREAK-AWAY SIGN SUPPORTS
FOR
GROUND MOUNTED GUIDE SIGNS
 Not to Scale
 SHEET No. 717 OF 22 SHEETS DT204

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

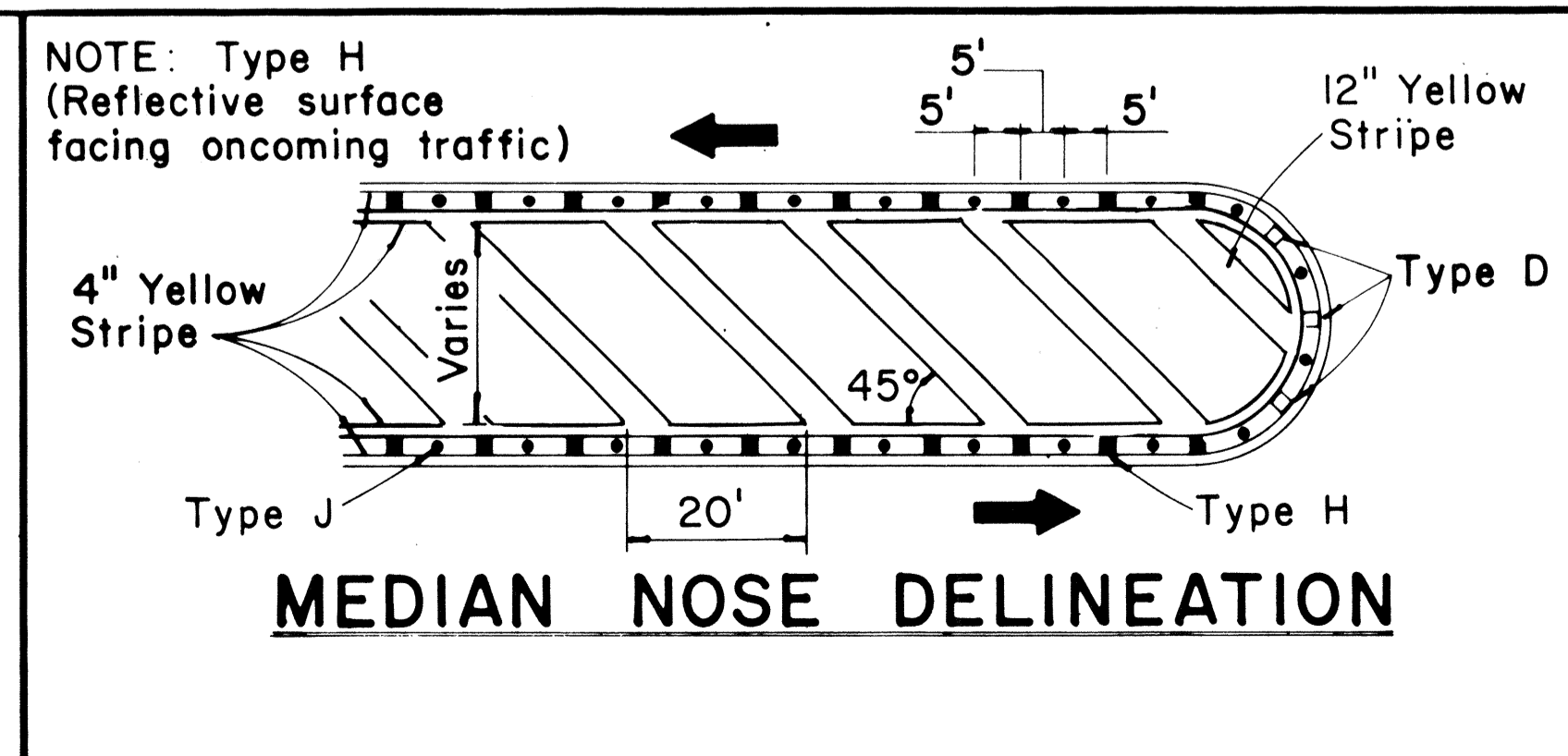
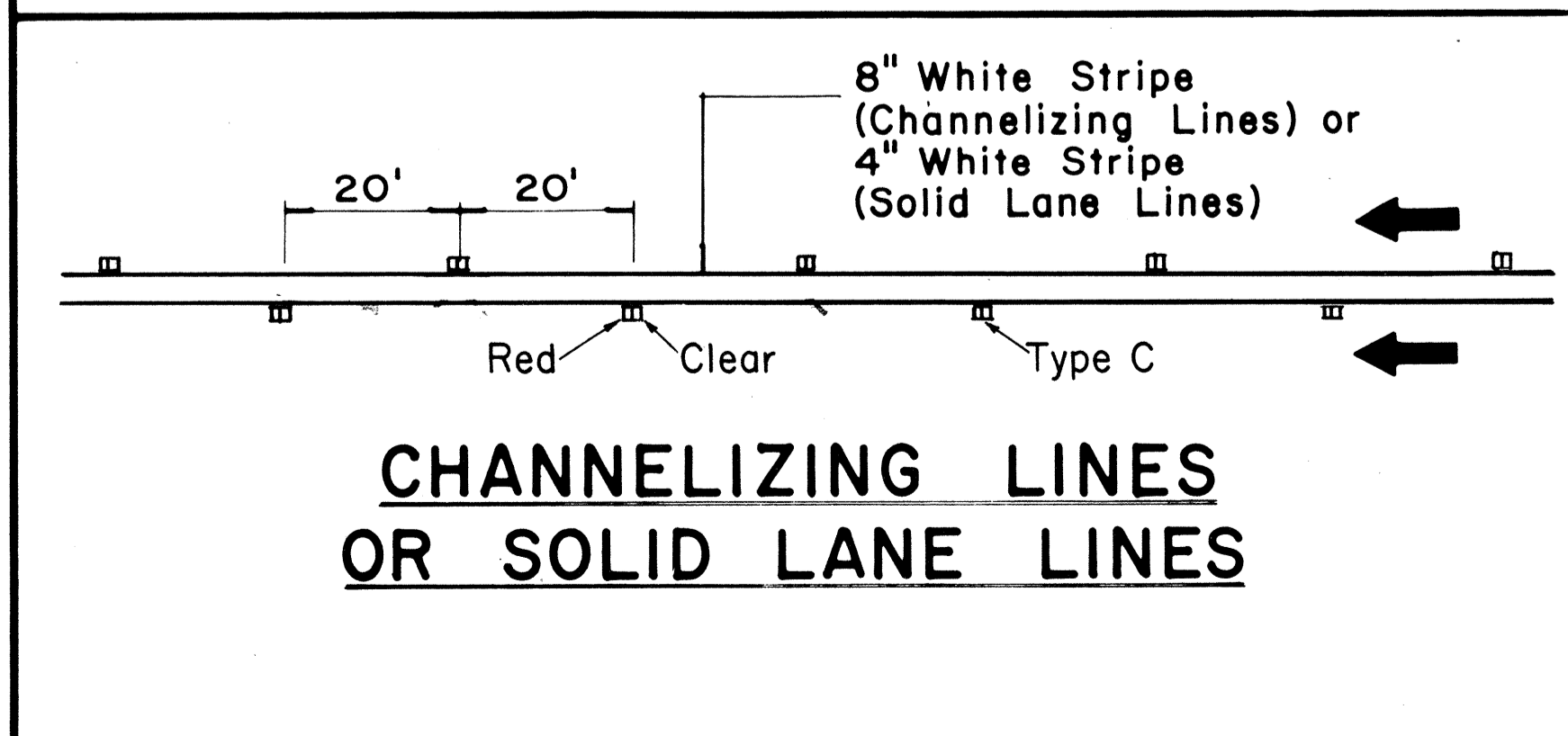
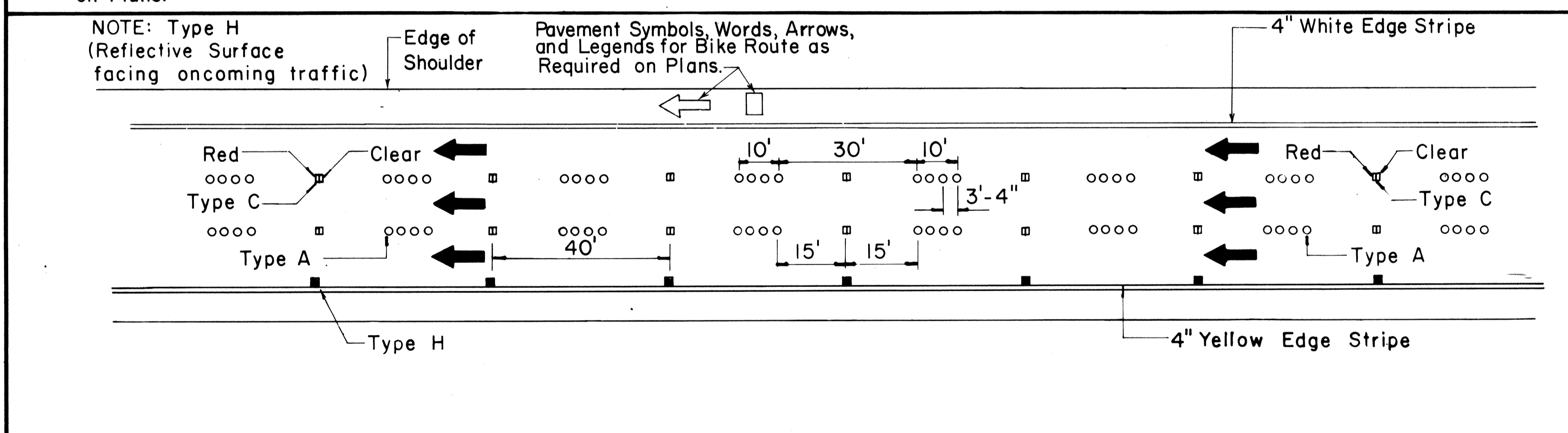
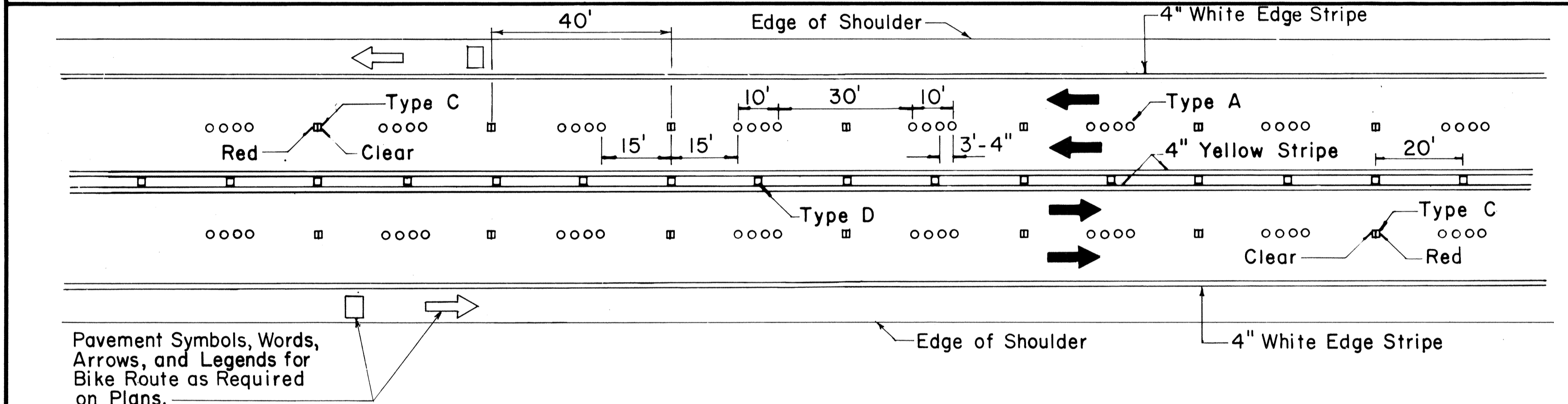
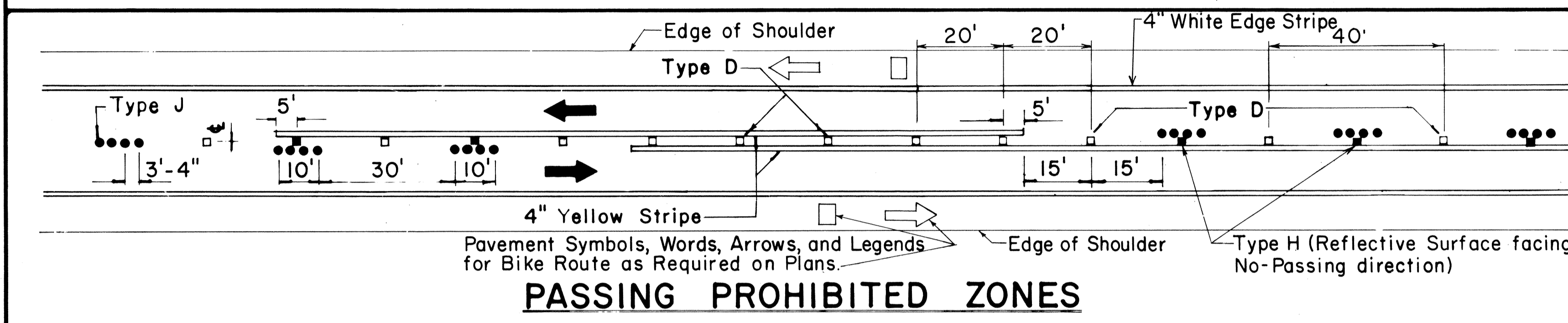
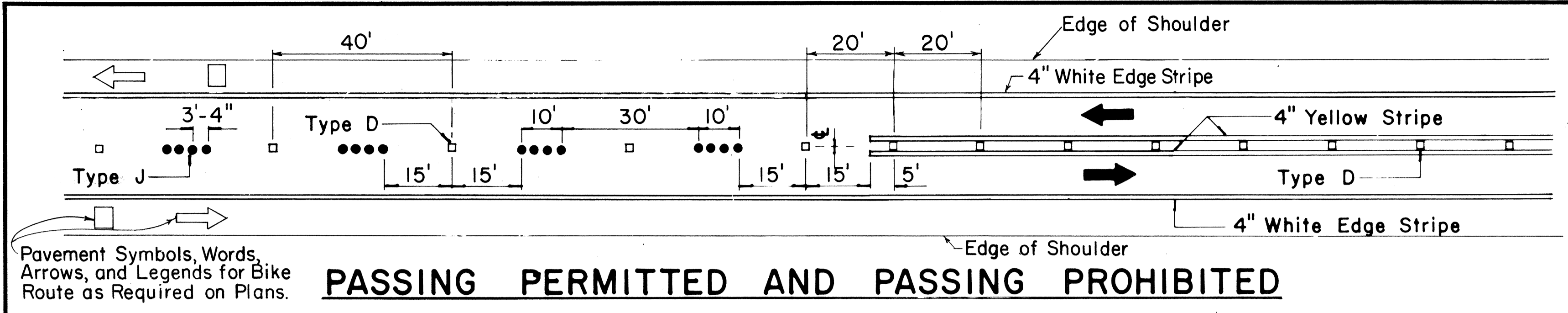


PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:
 1. Assemble post to stub with bolts and with one flat washer on each bolt between plates.
 2. Shim as required to plumb post.
 3. Tighten all bolts the max. possible with 12" to 15" wrench to bed washers & shims and to clean bolt threads then loosen each bolt in turn & retighten bolts in systematic order to prescribed torque. (See Table)
 4. Burr threads at junction with nut using a center punch to prevent nut loosening.



Furnish 2-0.012" ± thick and 2-0.032" ± thick shims per post. Shims shall be fabricated from brass shim stock or strip conforming to ASTM - B 36.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	55	121

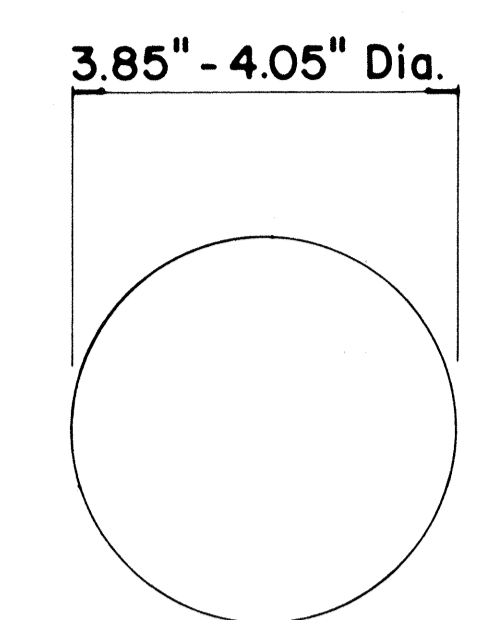


TWO - LANE

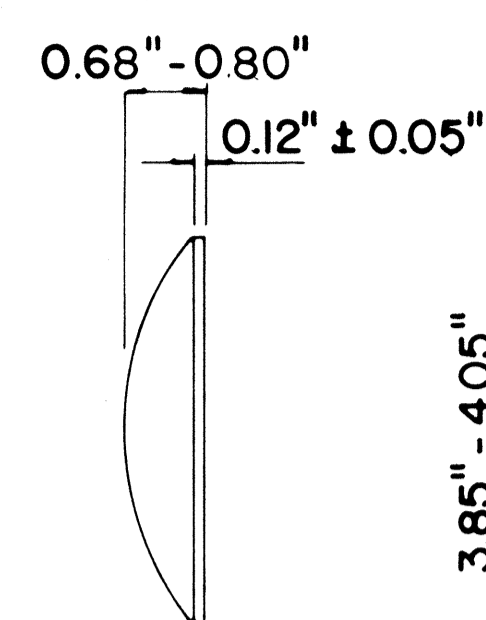
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

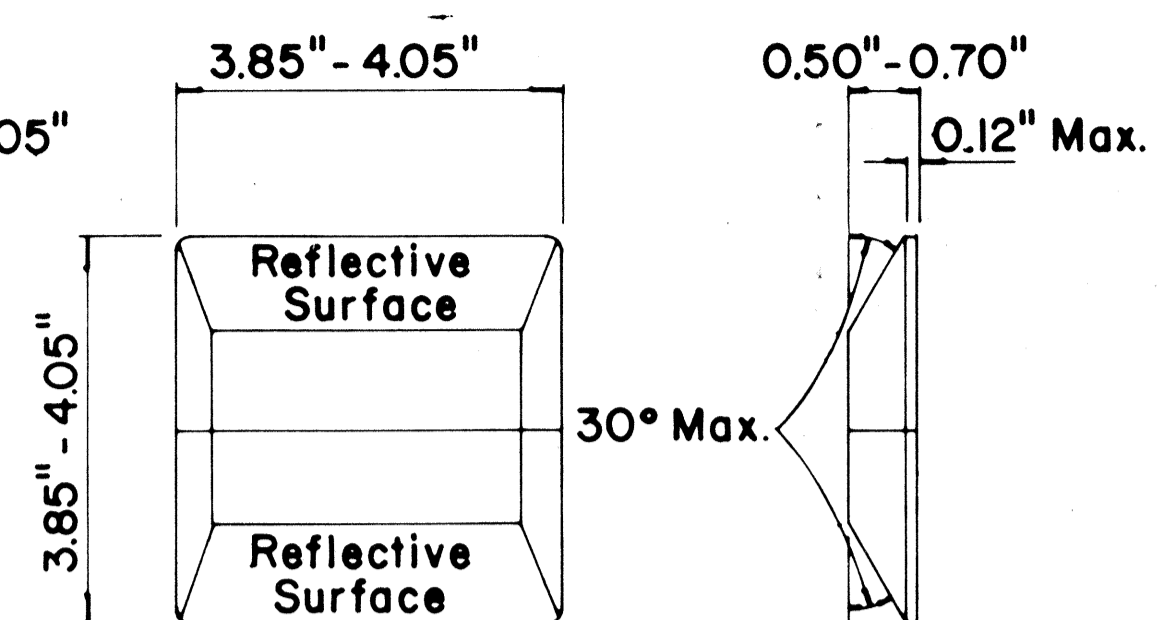
MISCELLANEOUS



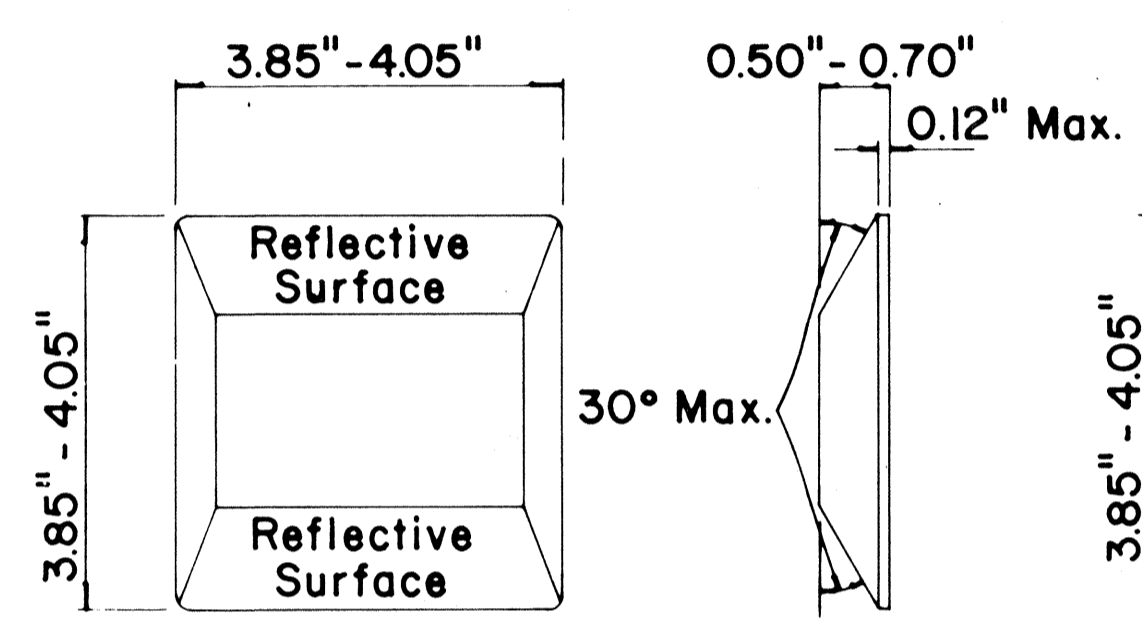
TYPE A
NON-REFLECTIVE WHITE MARKER



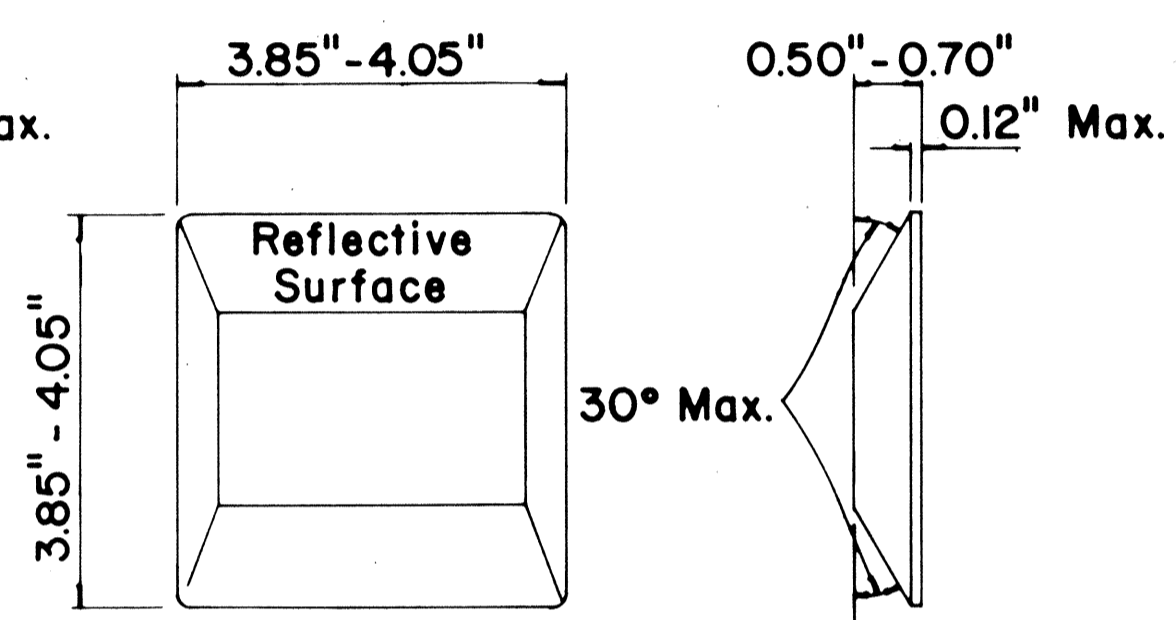
TYPE J
NON-REFLECTIVE YELLOW MARKER



TYPE C
RED-CLEAR REFLECTIVE MARKER



TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER



TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER

GENERAL NOTES

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:
Eiichi Tanaka 7/21/78
TRAFFIC ENGINEER DATE

APPROVED:
Harbert J. Zaleski 7/24/78
ASSISTANT CHIEF, ENGINEERING DATE

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

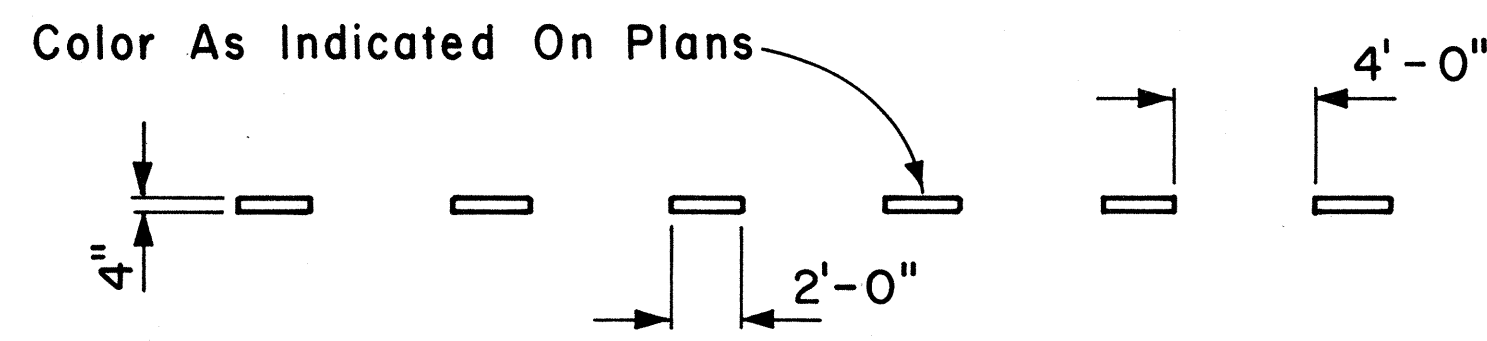
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

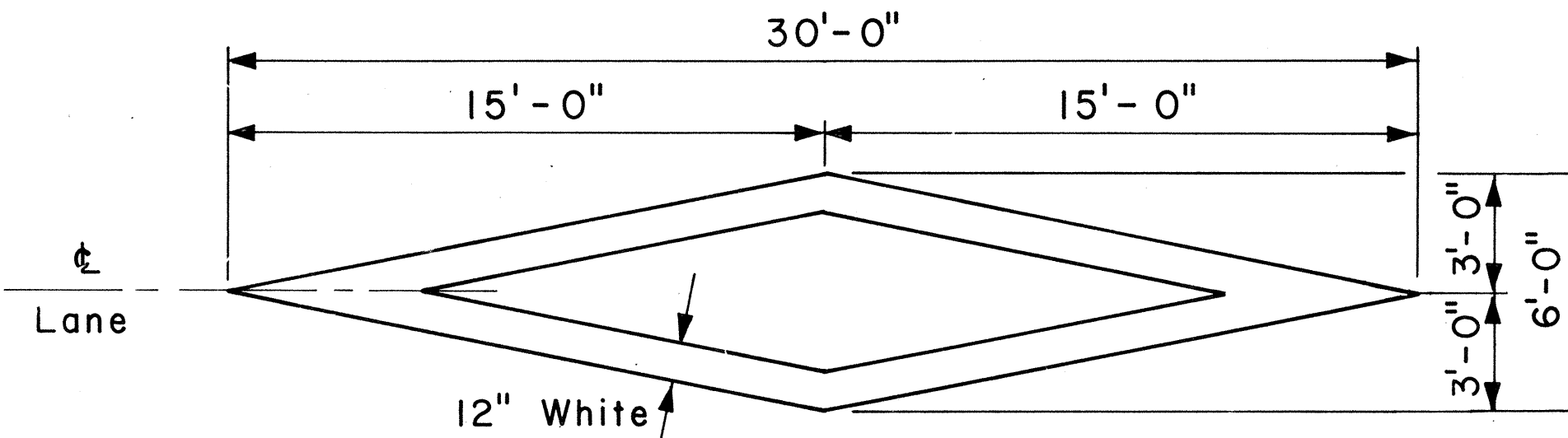
Not to Scale July 1978.
SHEET No. 718 OF 22 SHEETS DT 300

DATE _____
SURVEY PLOTTED BY _____
DRAWN BY _____
TRACED BY _____
NOTED BY _____
CHECKED BY _____
No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	56	121



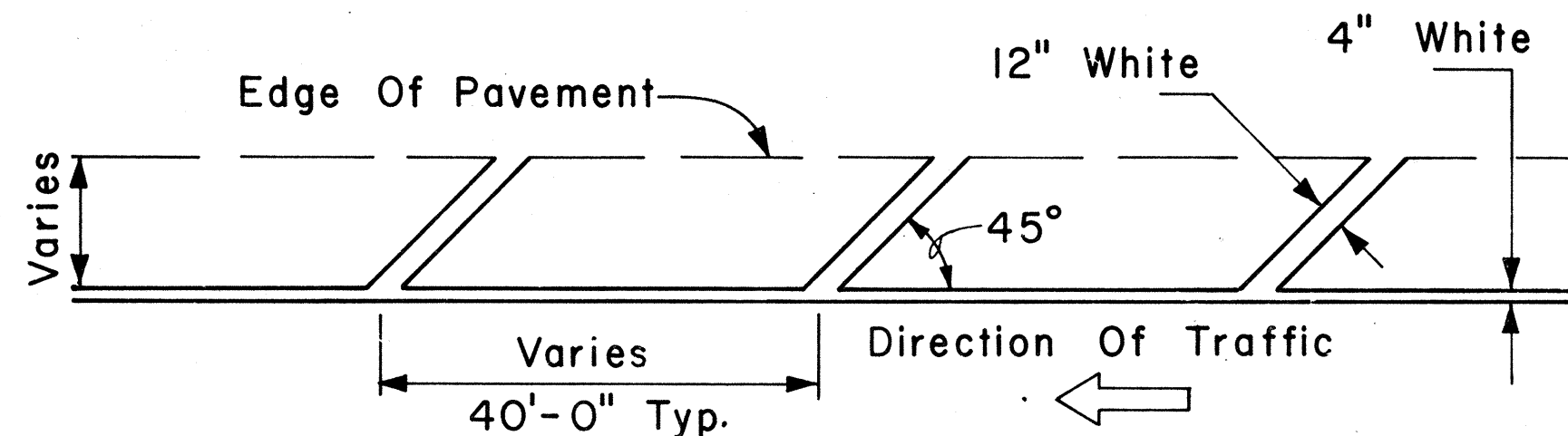
4" GUIDE LINE



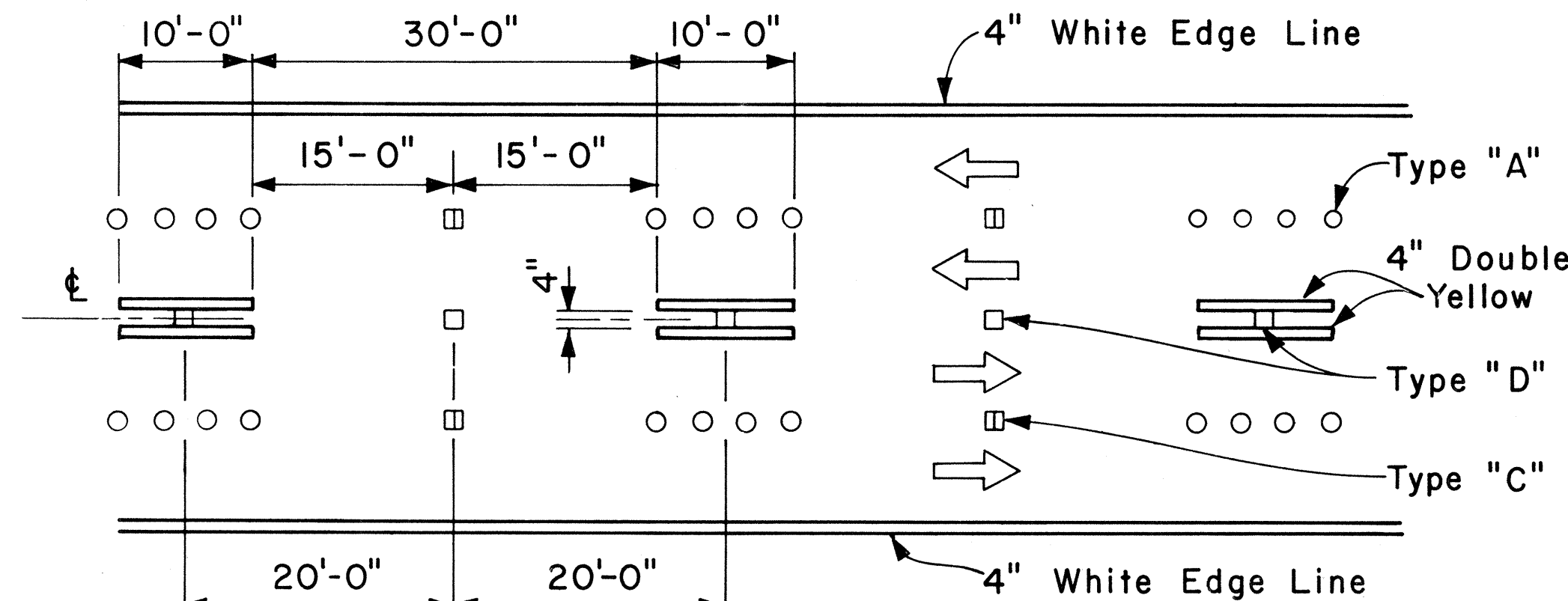
PAVEMENT DIAMOND

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.

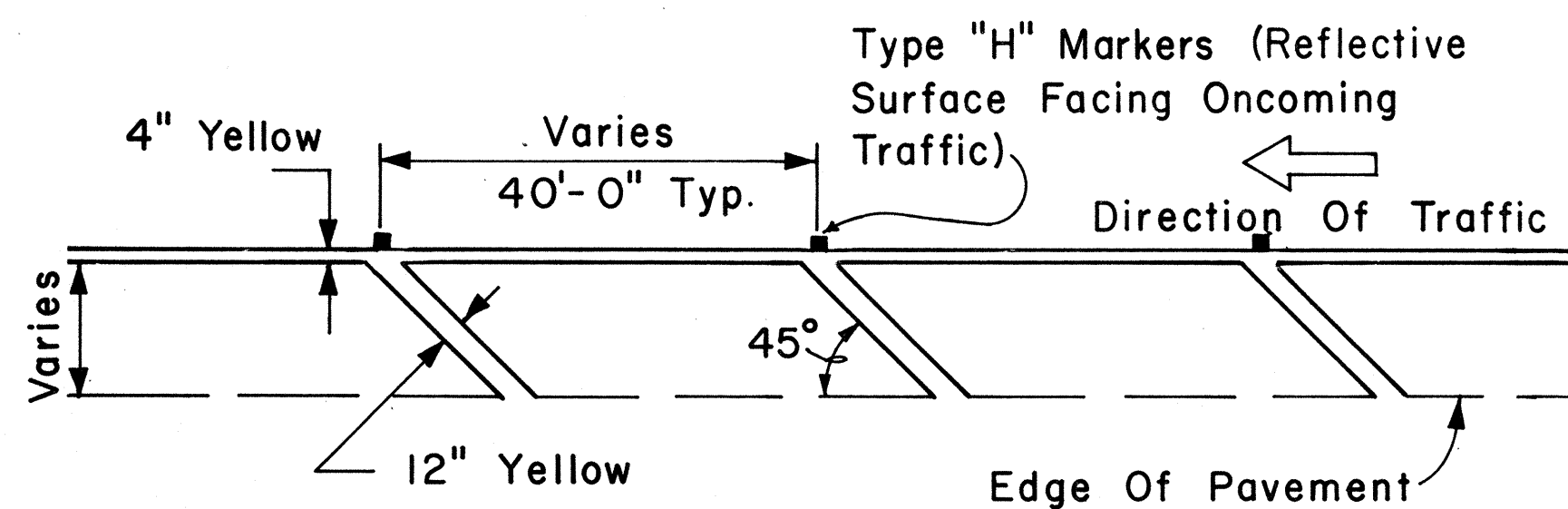


TRANSVERSE RIGHT SHOULDER MARKING

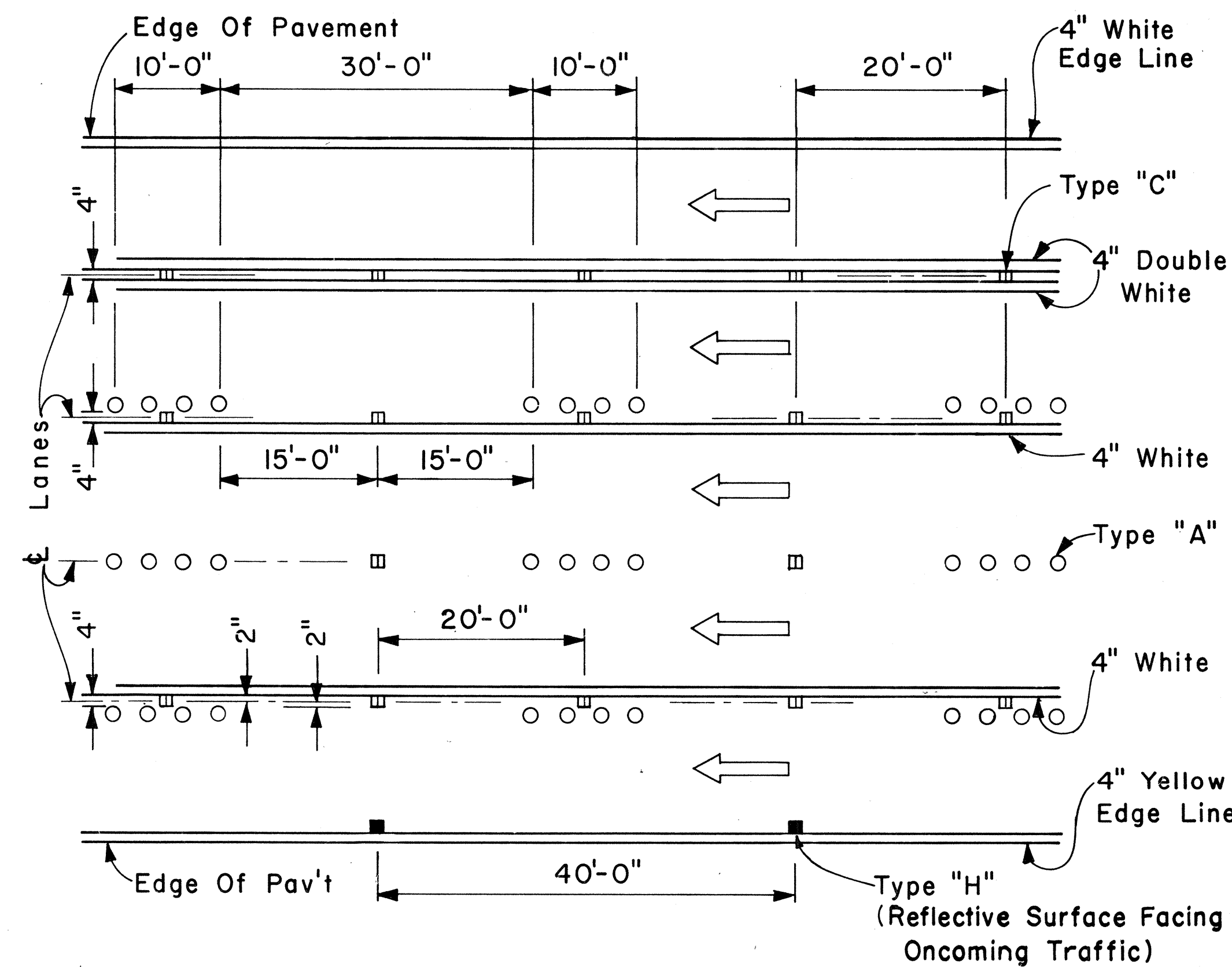


NOTE: Traffic Cone Usage Required.

MULTI-LANE REVERSIBLE LANES



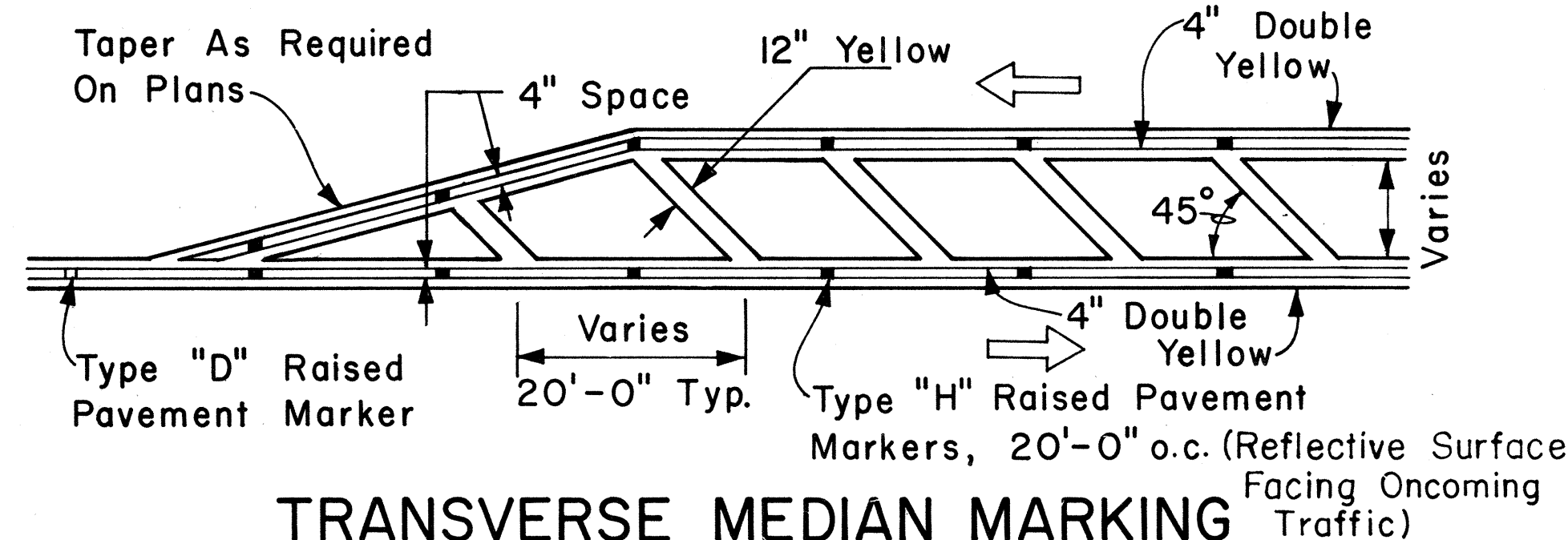
TRANSVERSE LEFT SHOULDER MARKING



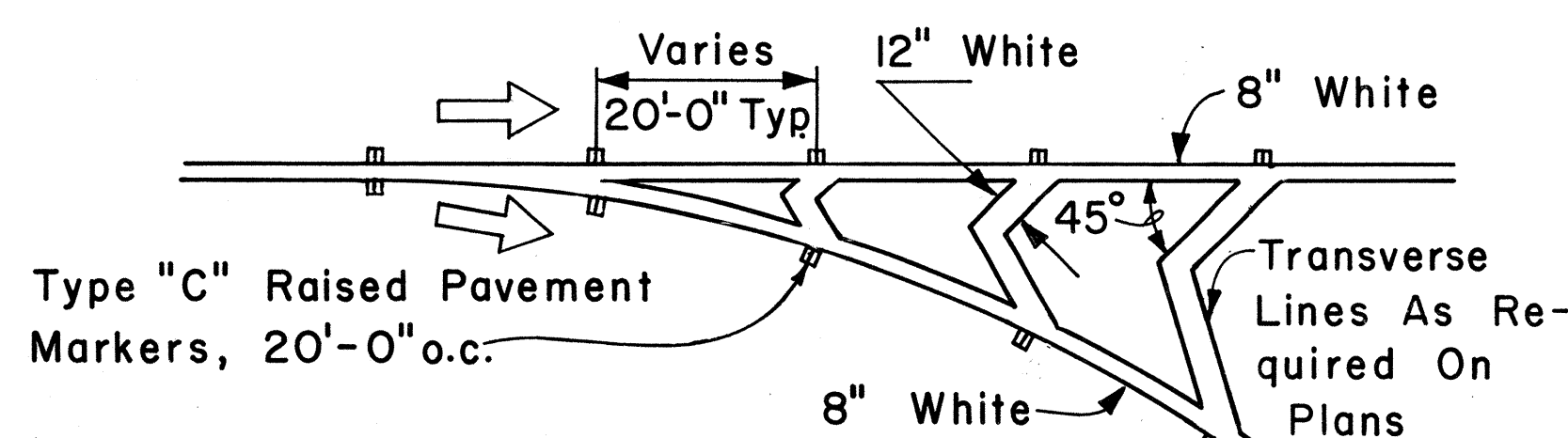
MULTI-LANE LANE CHANGE RESTRICTION ZONES

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

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



TRANSVERSE MEDIAN MARKING



CHANNELIZING ISLAND

NO.	REVISION	APPROVED BY	DATE
1	Revised Transverse left Shoulder Marking, Channelizing Island & Lane Change Restriction Zones.	<i>E.T.</i>	5/18/78

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
STANDARD DETAILS
 MISCELLANEOUS
 PAVEMENT MARKINGS

Scale: Not to Scale Date: April, 1978

SHEET NO. 719 OF 22 SHEETS DT 302

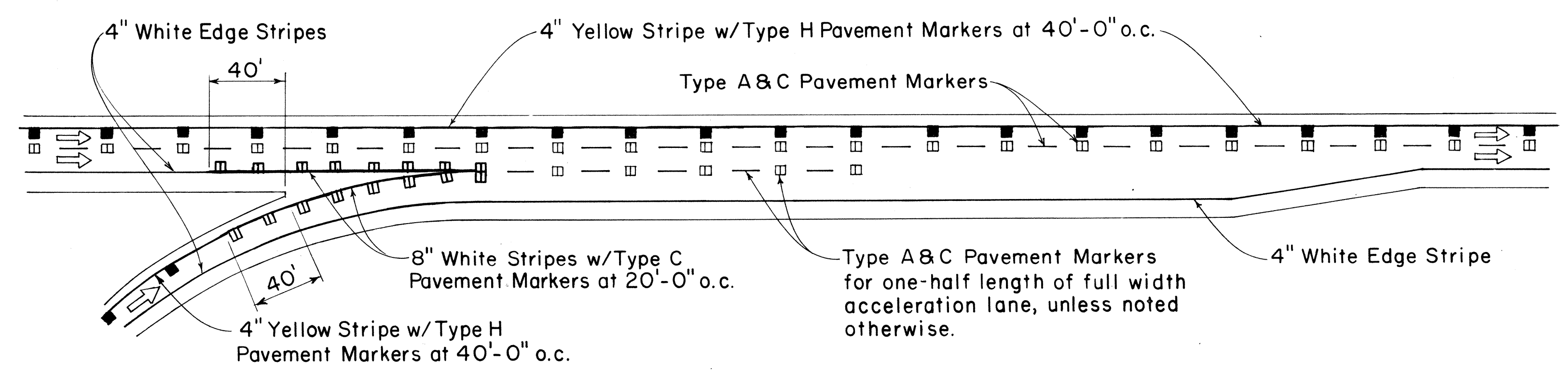
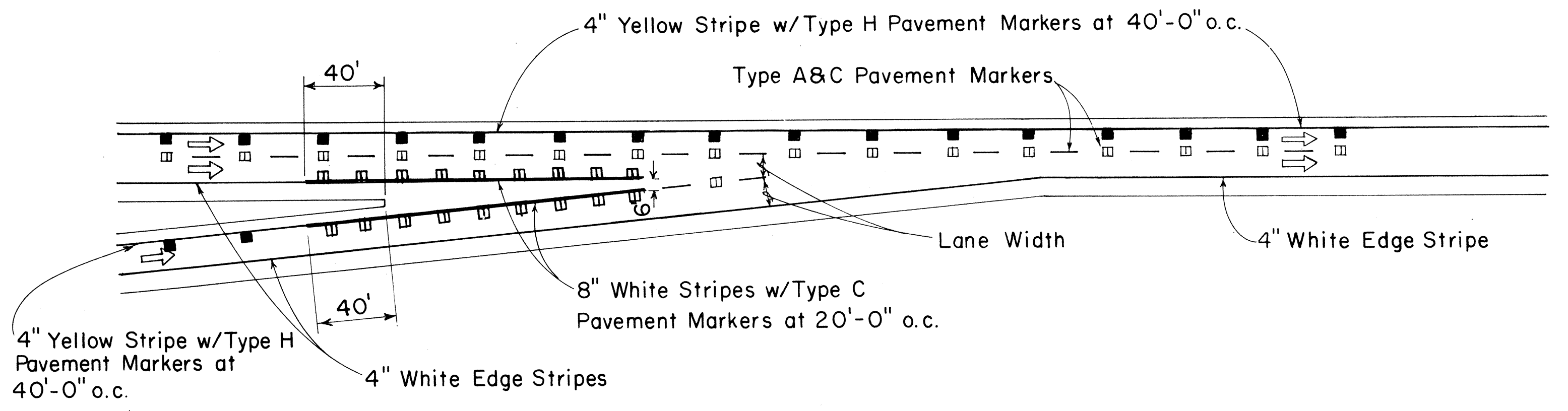
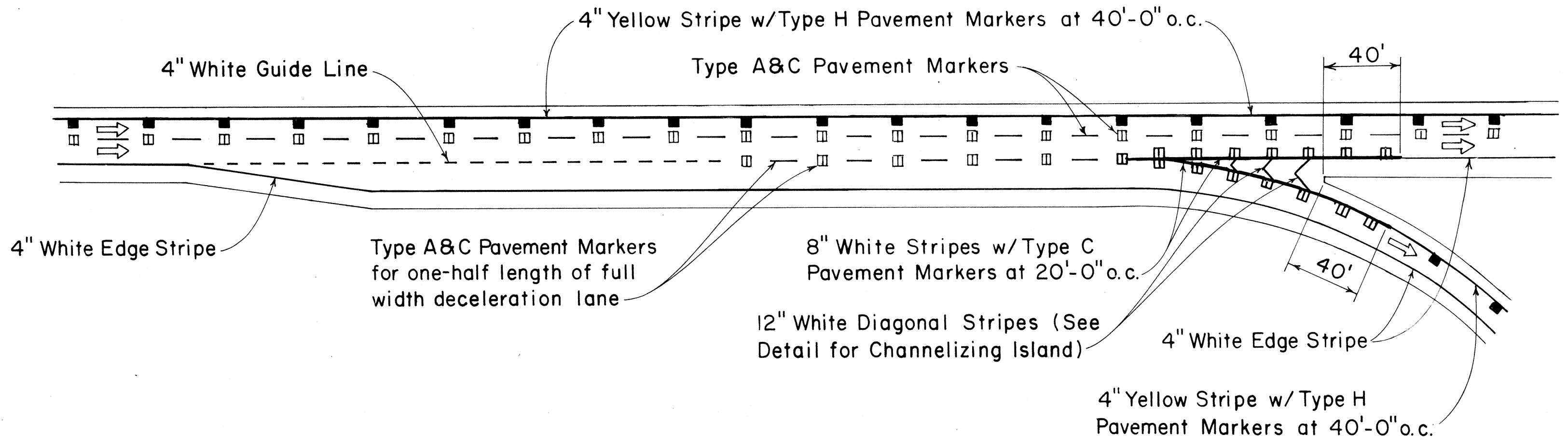
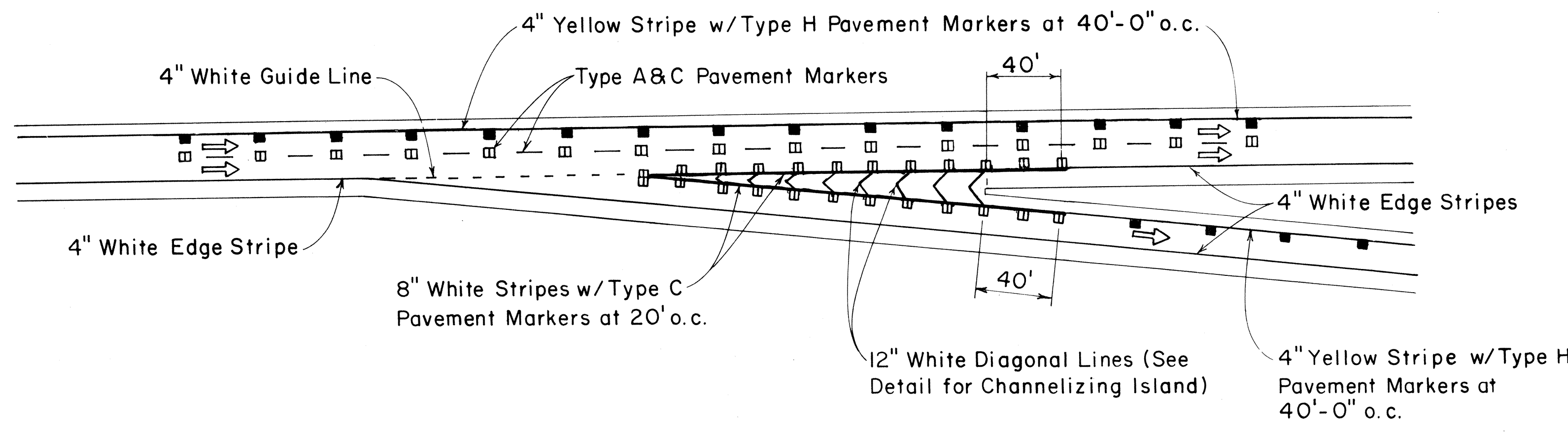
ORIGINAL PLAN
 SURVEY PLOTTED BY
 DRAWN BY
 TRACED BY
 NOTE BOOK
 DESIGNED BY
 QUANTITIES BY
 CHECKED BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	57	121

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
 PARALLEL DECELERATION LANE
 TAPERED ACCELERATION LANE
 PARALLEL ACCELERATION LANE
 TYPICAL ROADWAY EXIT MARKINGS
 TYPICAL ROADWAY ENTRANCE MARKINGS



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

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

APPROVED:
Robert S. Rakeish 7/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised Typical Roadway Entrance Markings and Typical Roadway Exit Markings.	E.T.	9/18/85

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

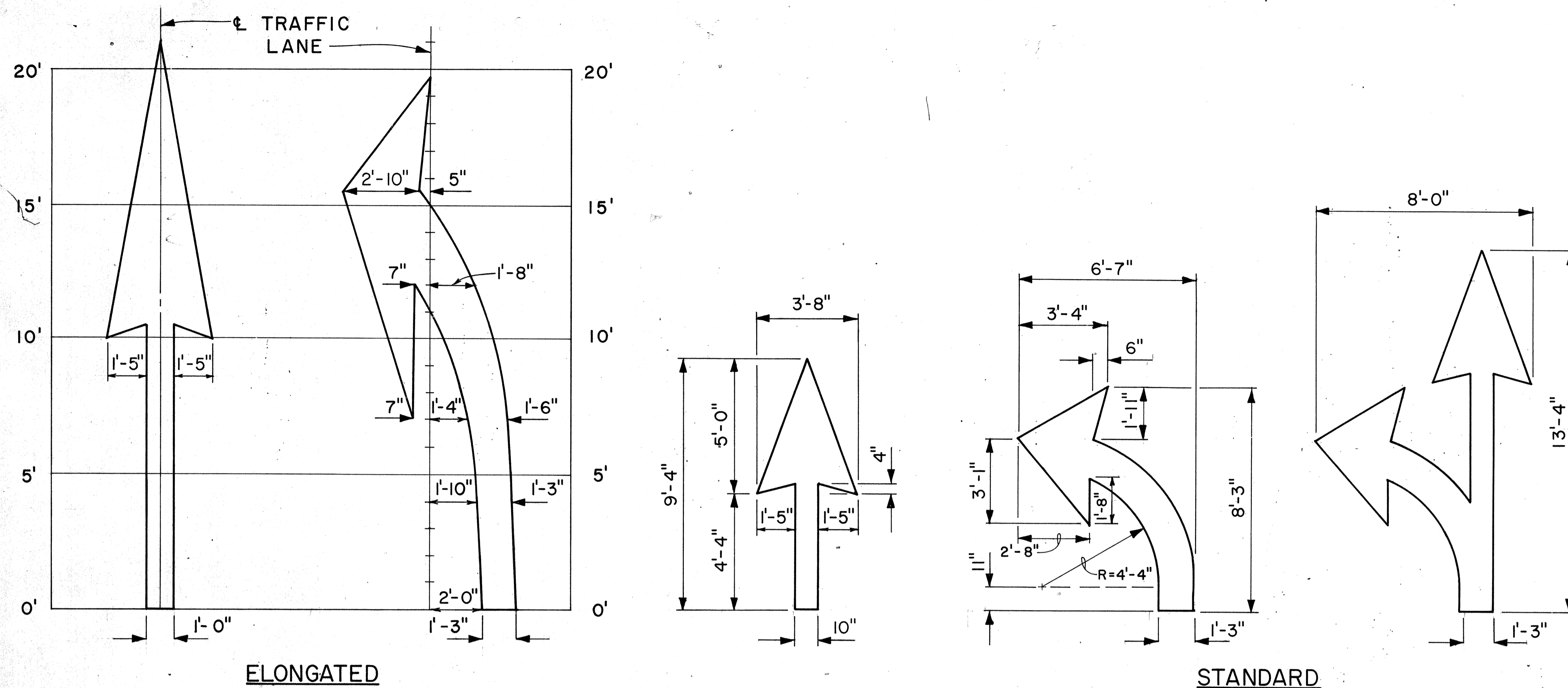
STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Not to Scale July 1978
 SHEET No. 720 OF 22 SHEETS DT 304

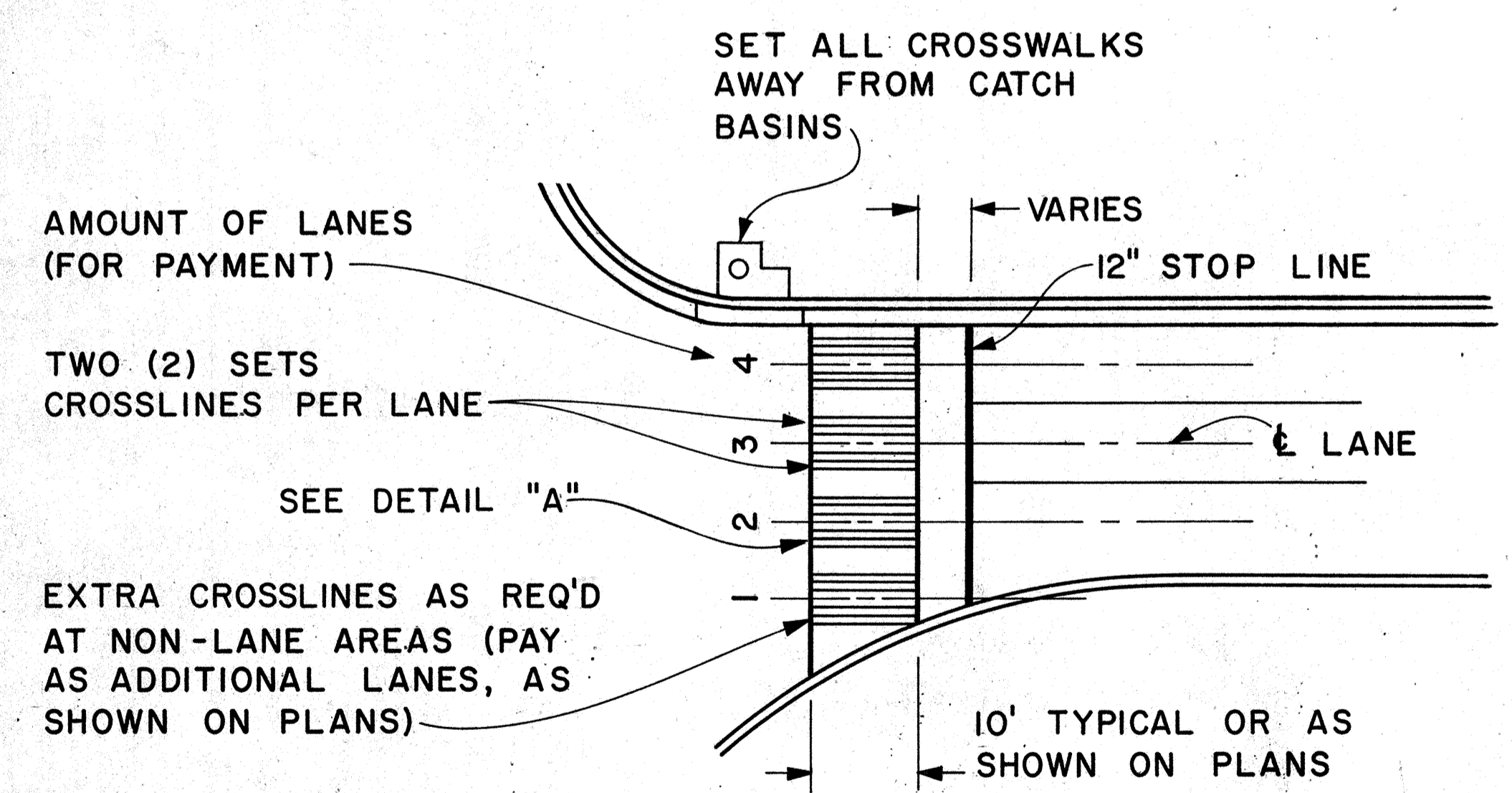
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	58	121

GENERAL NOTES:

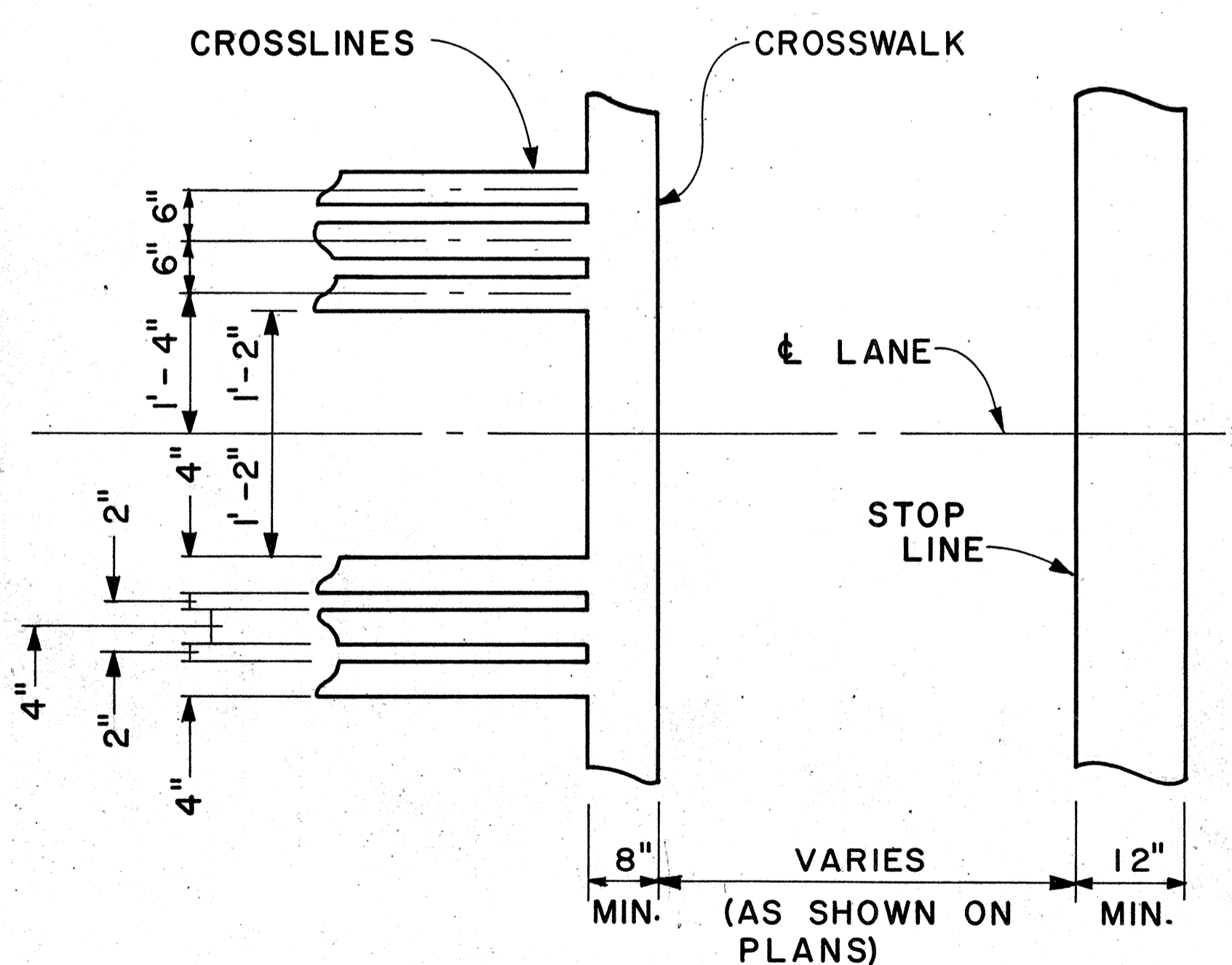
1. Pavement marking and striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of pavement markings and striping shall be done by the Contractor. The Contractor shall check layout of markings and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



PAVEMENT ARROWS
Scale: 3/8" = 1'



PLAN



DETAIL "A"

CROSSWALK & STOP LINE

Scale: Not to Scale

DATE
SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
CHECKED BY
NO.

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

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

NO.	REVISION	APPROVED BY	DATE

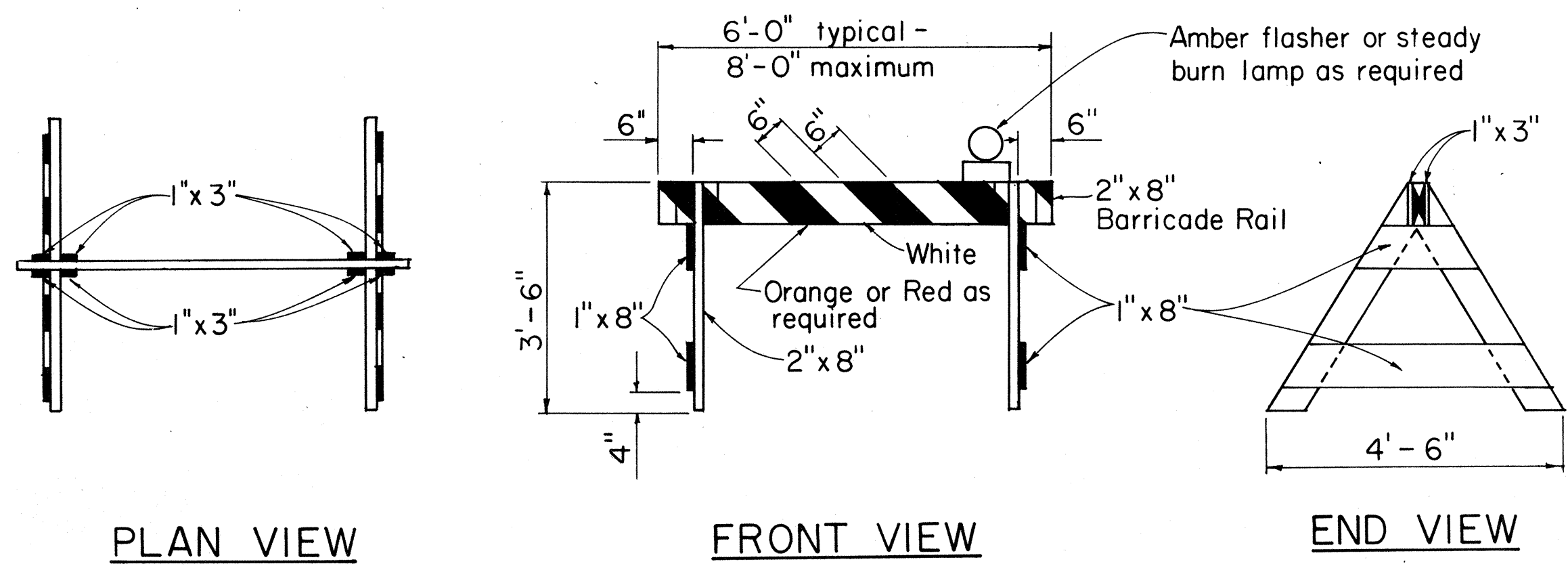
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

MISCELLANEOUS
PAVEMENT MARKINGS

Scale: As Shown Date: March, 1978
SHEET NO. 721 OF 22 SHEETS DT 306

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-076-1(1)	1986	59	121

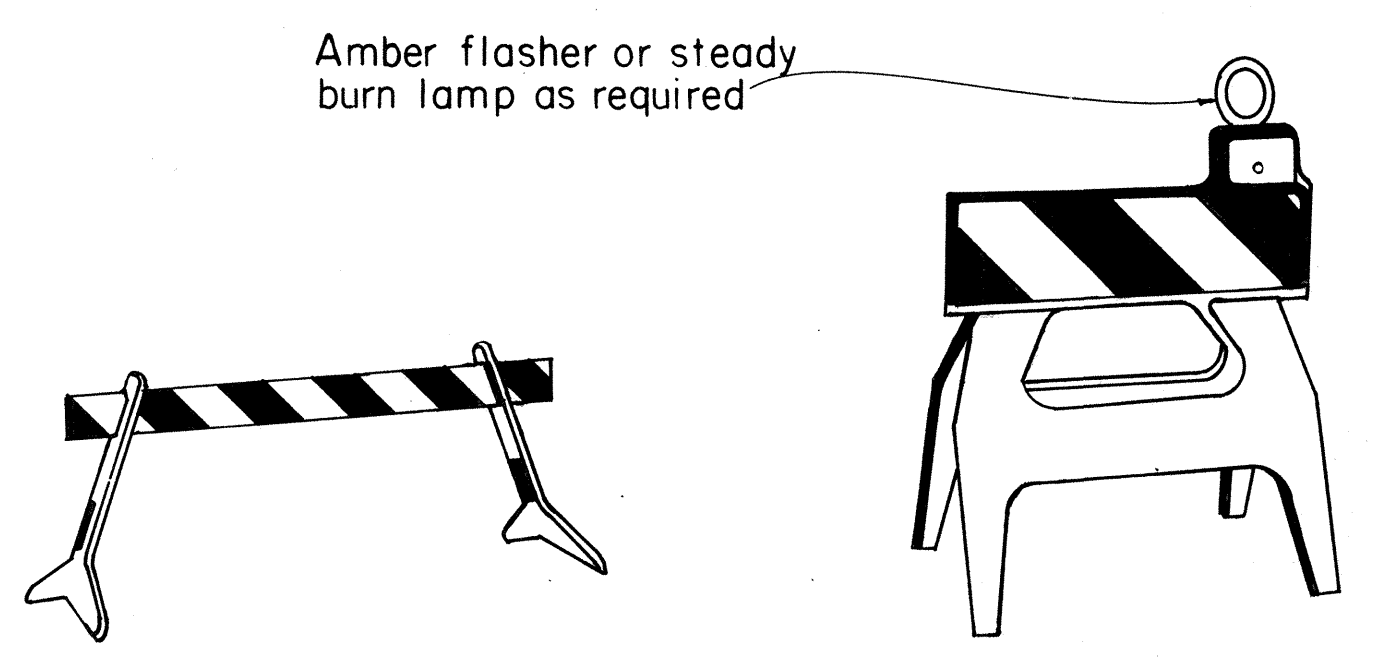


PLAN VIEW

FRONT VIEW

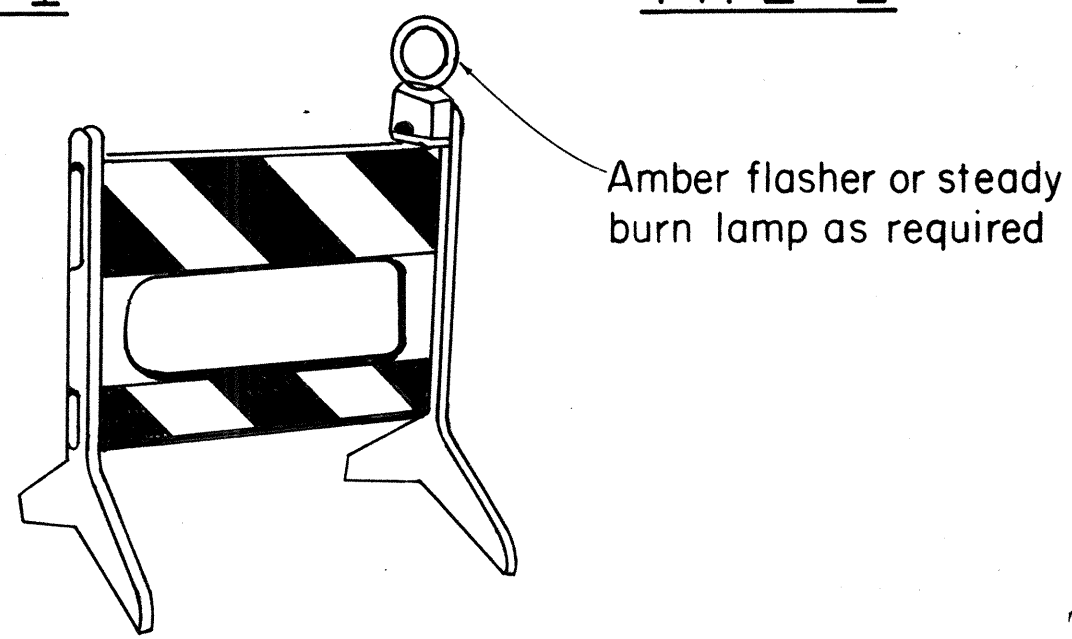
END VIEW

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



TYPE I

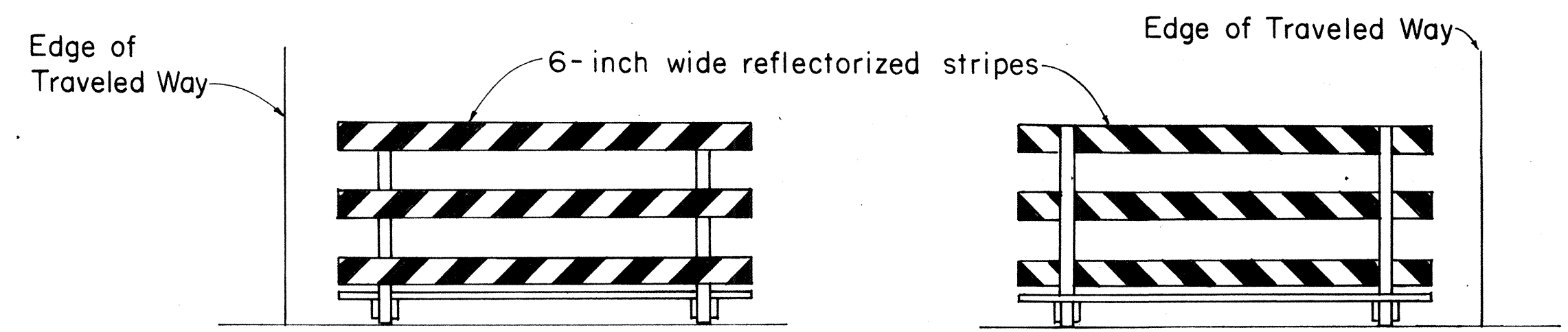
TYPE I



TYPE II

PLASTIC MOLDED BARRICADE OPTIONS*
Not to Scale

* Shop Drawings must be submitted for approval.

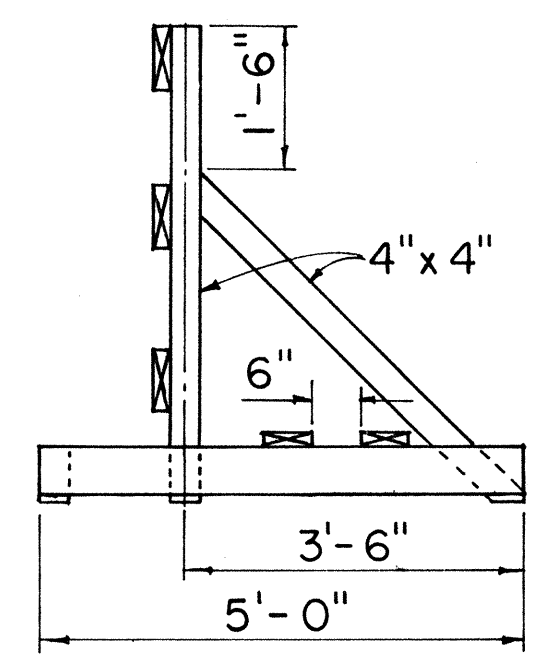


FRONT FACE

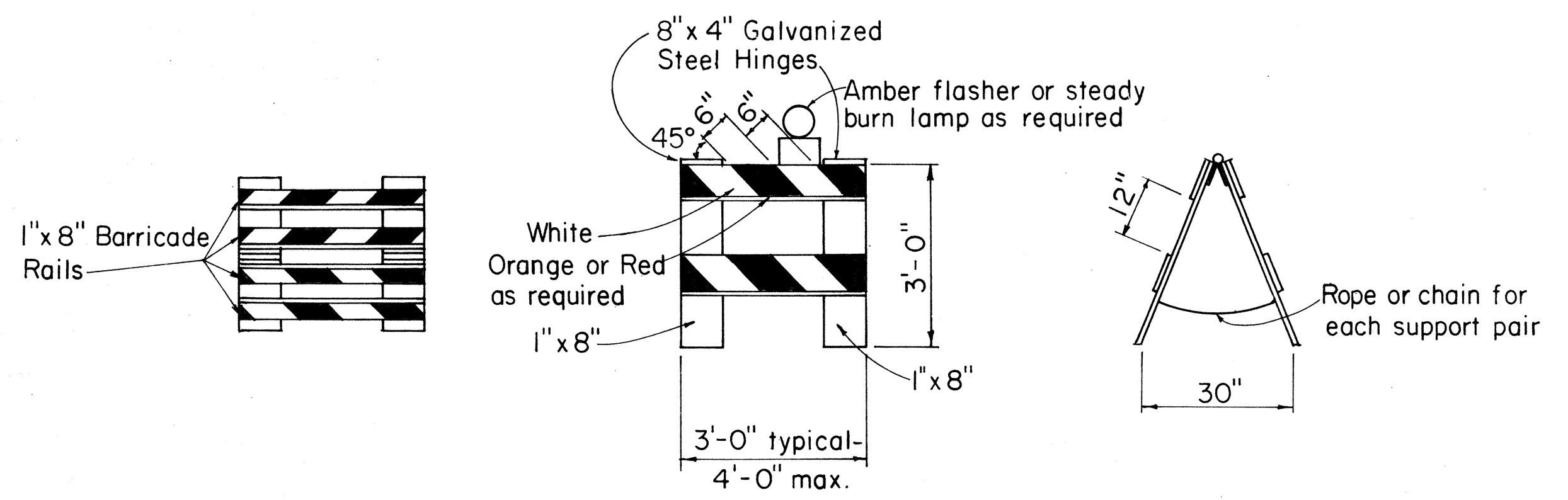
BACK FACE

TYPICAL BARRICADE STRIPING DETAILS**
Not to Scale

** Similar for Types I & II



END VIEW

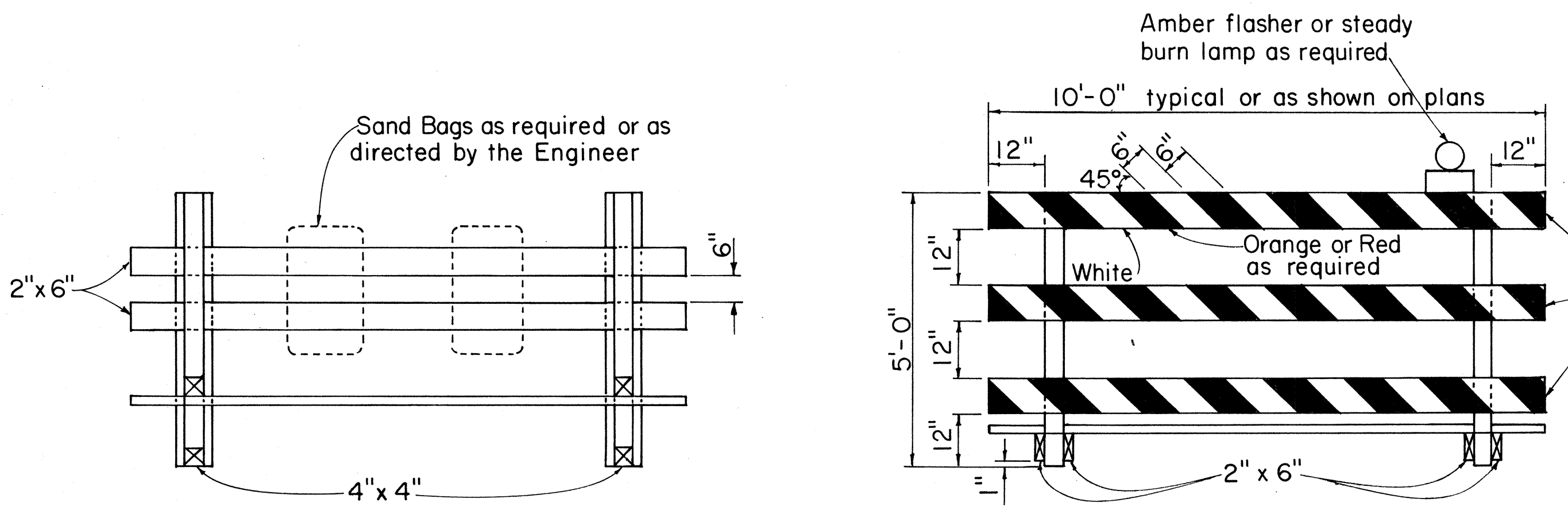


PLAN VIEW

FRONT VIEW

END VIEW

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



PLAN VIEW

FRONT VIEW

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

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

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

APPROVED:
Robert S. Sato 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. T22 OF 22 SHEETS DT 800