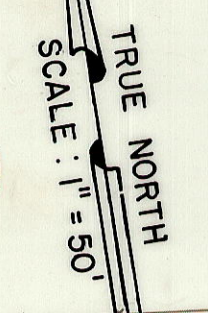
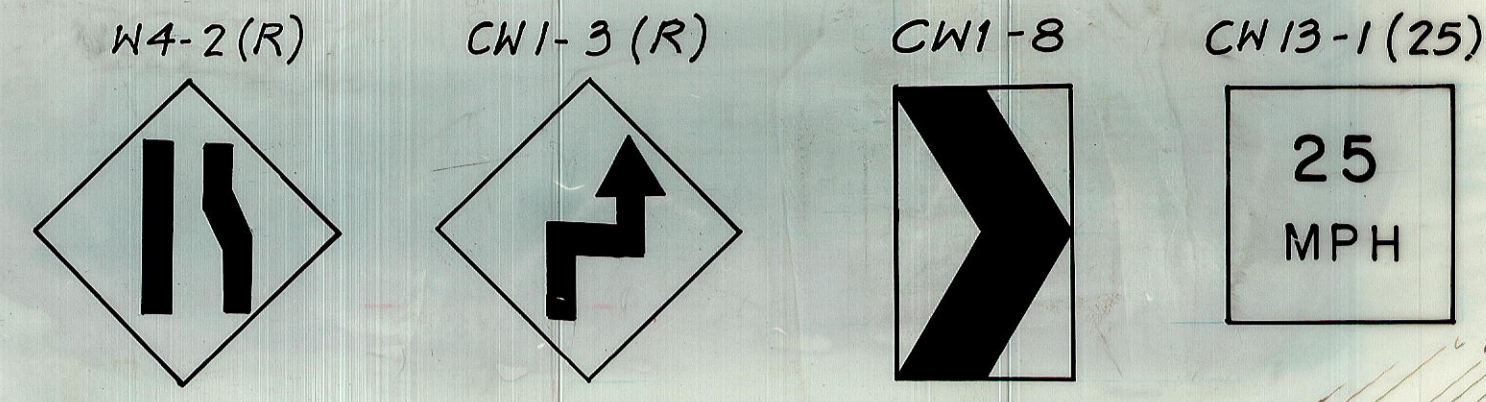


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H-1(63)-17	1983	13	280



N. I. C.
 ALL WORK ON THIS SHEET WILL BE PERFORMED BY OTHERS

- NOTES**
1. For Legend, see Sheet No. P-3
 2. For General Notes see Sheet No. P-5
 3. For Location of Portable Concrete Guard Rails see Detour Construction Plan, Sheet No. C-1.

LEGEND

→ Traffic Lane

→ Yellow Adhesive Tape on both Concrete Guard Rails (2'-0" above Pavement)

→ Portable Concrete Guard Rail

→ Adh. Tape

REGISTERED PROFESSIONAL ENGINEER
 No. 3383-E
 HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

FOR INFORMATION ONLY,
 NOT FOR CONSTRUCTION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

SIGNING & PAVEMENT MARKINGS
 (TRAFFIC PATTERN ©)

TO BE CONSTRUCTED UNDER:
 INTERSTATE ROUTE H-1
 PROJECT NO. I-HI-1(86) 17

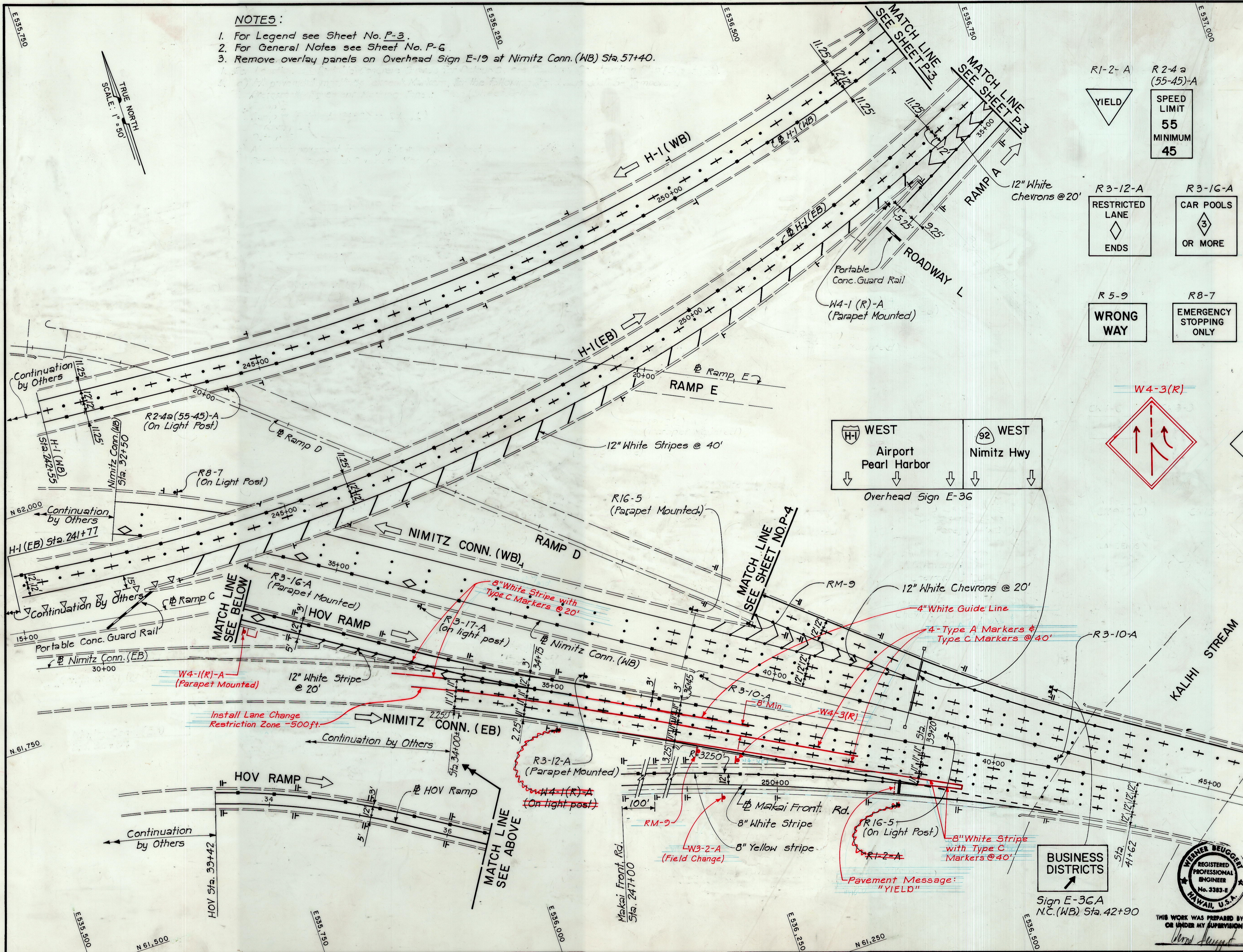
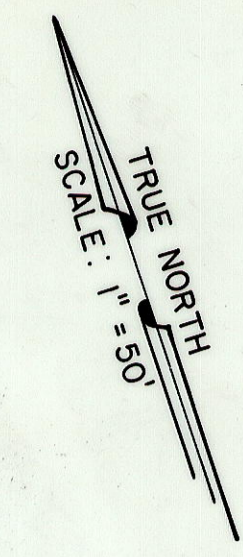
SCALE: 1" = 50' DATE: 6/15/81
 SHEET No. P-1 OF 35 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

"AS-BUILT"

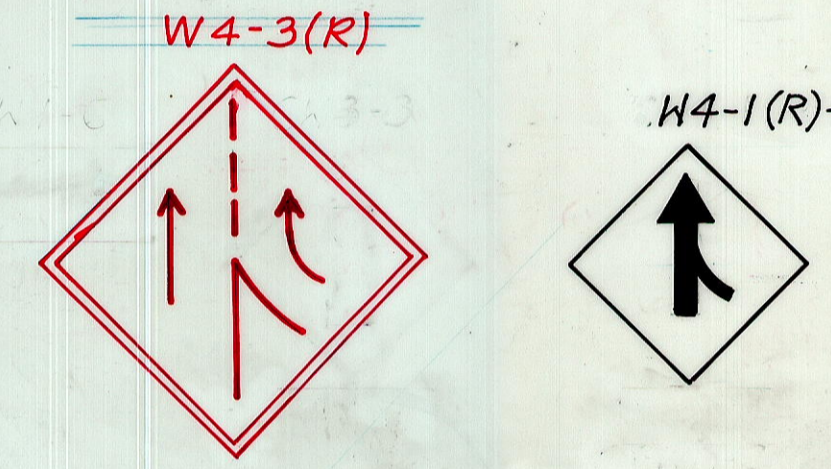
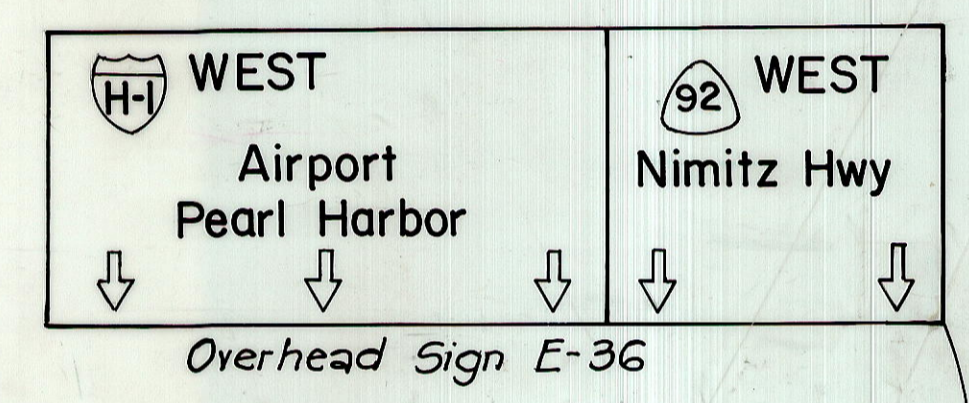
NOTES:
 1. For Legend see Sheet No. P-3.
 2. For General Notes see Sheet No. P-6.
 3. Remove overlay panels on Overhead Sign E-19 at Nimitz Conn. (WB) Sta. 57+40.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(169)-17	1983	74	280



Legend of Traffic Signs:

- R1-2-A: YIELD
- R2-4a (55-45)-A: SPEED LIMIT 55 MINIMUM 45
- R3-3-A: NO TURNS
- R3-10-A: RESTRICTED LANE AHEAD
- R3-12-A: RESTRICTED LANE ENDS
- R3-16-A: CAR POOLS 3 OR MORE
- R3-17-A: LEFT LANE BUSES AND CAR POOLS ONLY (6-8:30AM, 3:30-5:30PM, EXCEPT SAT SUN & HOL)
- R5-1: DO NOT ENTER
- R5-9: WRONG WAY
- R8-7: EMERGENCY STOPPING ONLY
- R10-6: STOP HERE ON RED
- R16-5: UNLICENSED VEHICLES BICYCLES, CYCLES UNDER 5 HP PEDESTRIANS KEEP OUT FREEWAY



DATE	REVISION
4/23/86	Changed pavement markings on Nimitz Conn. (EB)

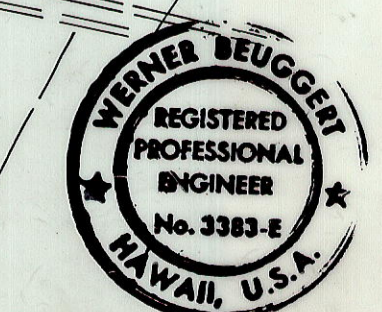
DATE	.....
SURVEY PLOTTED BY	.....
DRAWN BY	.....
TRACED BY	.....
DESIGNED BY	.....
CHECKED BY	.....
NO.	.....

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

**SIGNING & PAVEMENT MARKINGS
 PHASE III
 (TRAFFIC PATTERN ①)**

INTERSTATE ROUTE H-1
 PROJECT NO. I-IR-HI-1(169)-17

SCALE: 1" = 50' DATE: 3/15/82
 SHEET No. P-2 OF 35 SHEETS

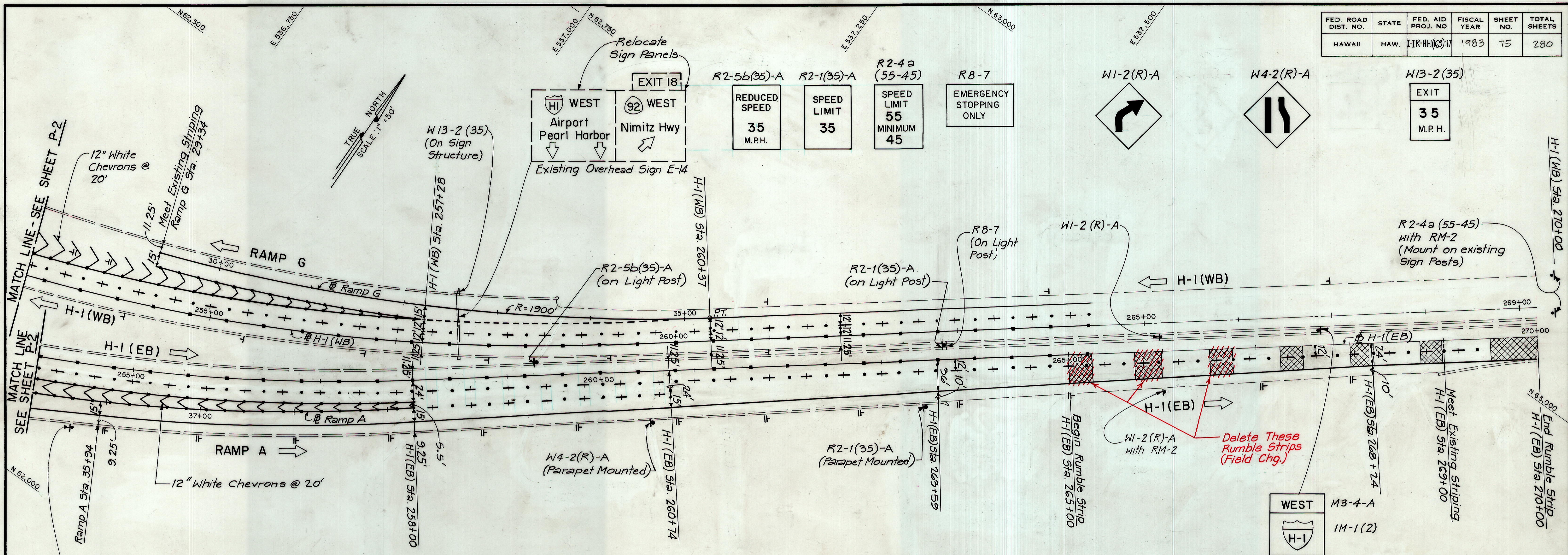


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION,
 Werner Beugert

"AS-BUILT"

C.O. 74

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI(169):17	1983	75	280



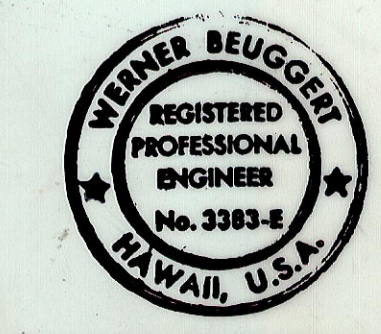
LEGEND

- 4" White Stripe (unless shown otherwise)
- 8" White Stripe with Type C Markers @ 20'
- 4" Yellow Stripe with Type H Markers @ 40'
- 4" Double Yellow Stripe with Type H Markers @ 20'
- . - . 4" White Stripe, 10' long, with Type C Markers @ 40'
- + . + . 4 Type A Markers & Type C Markers @ 40'
- • • • Type C Markers @ 40'
- 12" White Stop Line
- - - - 4" White Guide Line (unless shown otherwise)
- ◇ Pavement Diamond
- Standard Pavement Arrows
- ▬ Crosswalk & Stop Line
- ┆ Reflector Marker, Type RM-1 (See Note 10, Sheet P-6)
- ┆ Reflector Marker, Type RM-2 (See Note 10, Sheet P-6)
- △ Traffic Delineator (Tube)
- TT Type III Barricade
- Portable Concrete Guard Rail
- ← Direction of Traffic
- ▨ Rumble Strip (See Detail Sheet No. P-7)
- ┆ Existing Sign
- ┆ Existing Sign

NOTES :

1. For General Notes see Sheet No. P-6

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



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

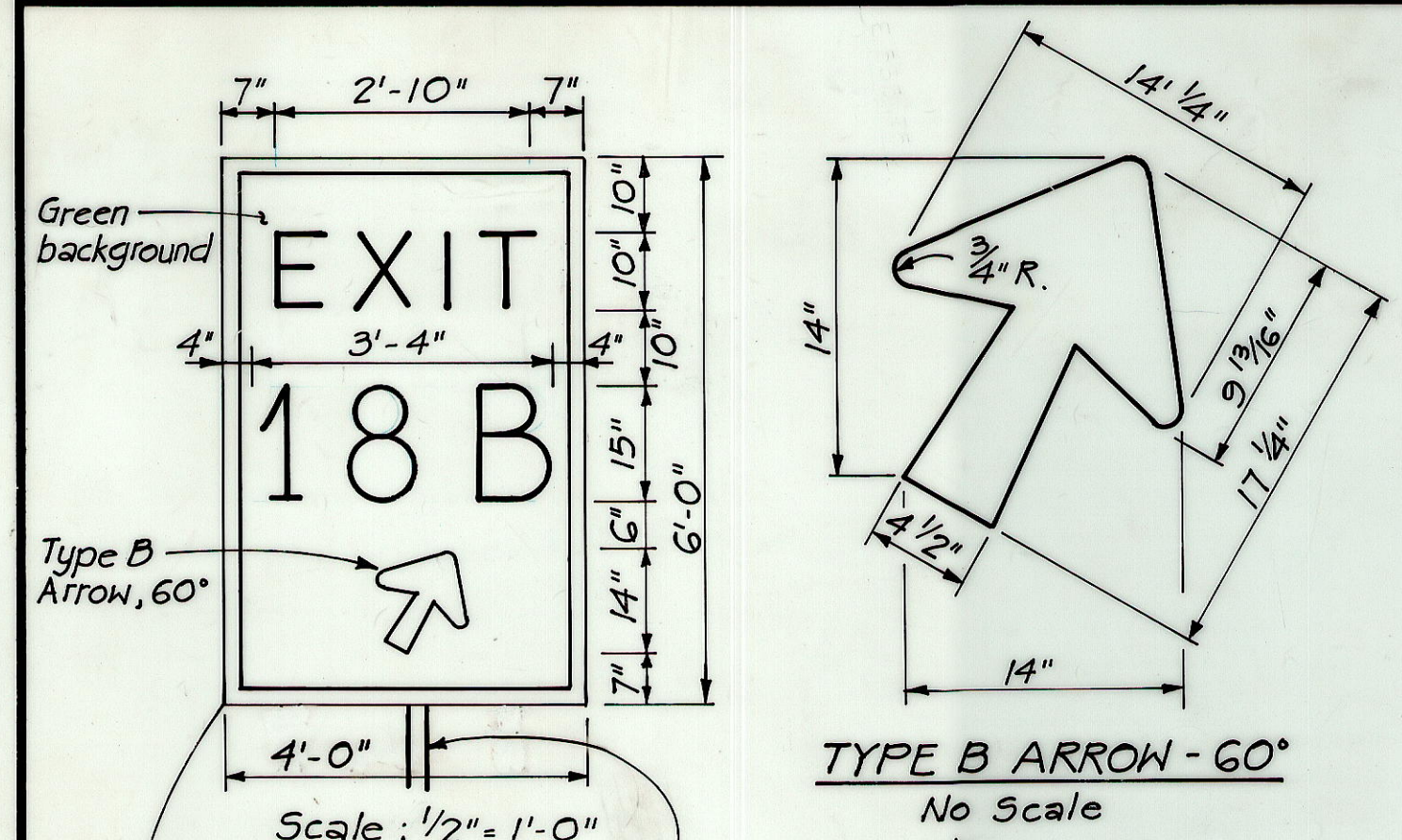
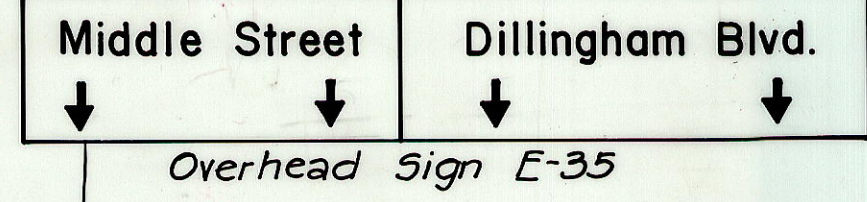
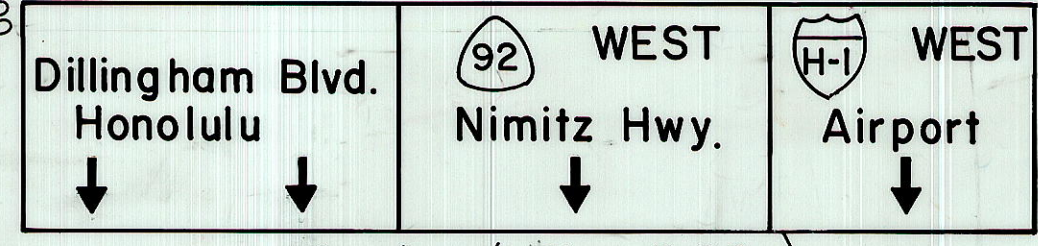
**SIGNING & PAVEMENT MARKINGS
PHASE III**
(TRAFFIC PATTERN ②)
INTERSTATE ROUTE H-1
PROJECT NO. I-IR-HI-1(169):17

SCALE: 1"=50' DATE: 3/15/82
SHEET No. P-3 OF 35 SHEETS

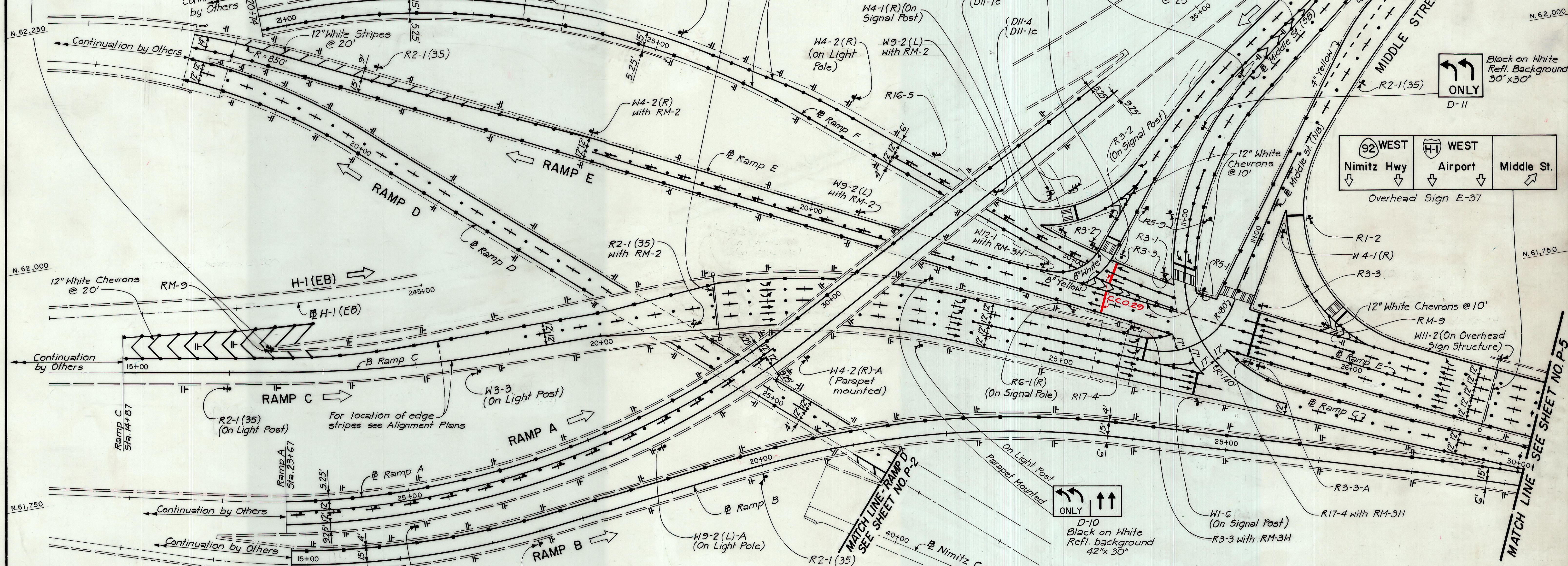
"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-169-17	1983	76	280

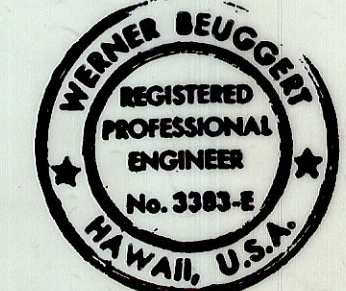
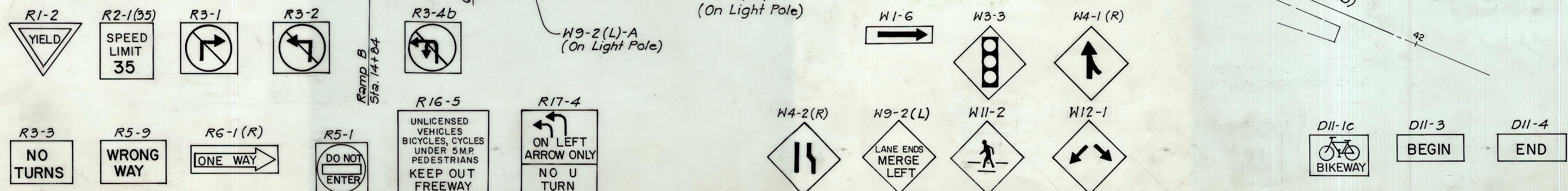
- NOTES:
- For Legend see Sheet No. P-3.
 - For General Notes see Sheet No. P-6.
 - The following facilities shown on this sheet shall be considered part of Traffic Pattern (D):
 - Ramp B
 - Ramp C (from Sta. 26+00 to End)
 - Ramp E
 - Ramp F
 - Middle Street Intersection.
 - The following facilities shown on this sheet shall be considered part of Traffic Pattern (E):
 - Ramp A
 - Ramp C (Sta. 14+87 to Sta. 26+00)
 - Middle Street (See Sheet CP-1, Construction Phase IV)



Scale: 1/2" = 1'-0"
For Sign Support Detail see Sheet No. P-7.



DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 TRACED BY: _____
 ORIGINAL PLAN NO. _____
 NOTE BOOK NO. _____
 CHECKED BY: _____



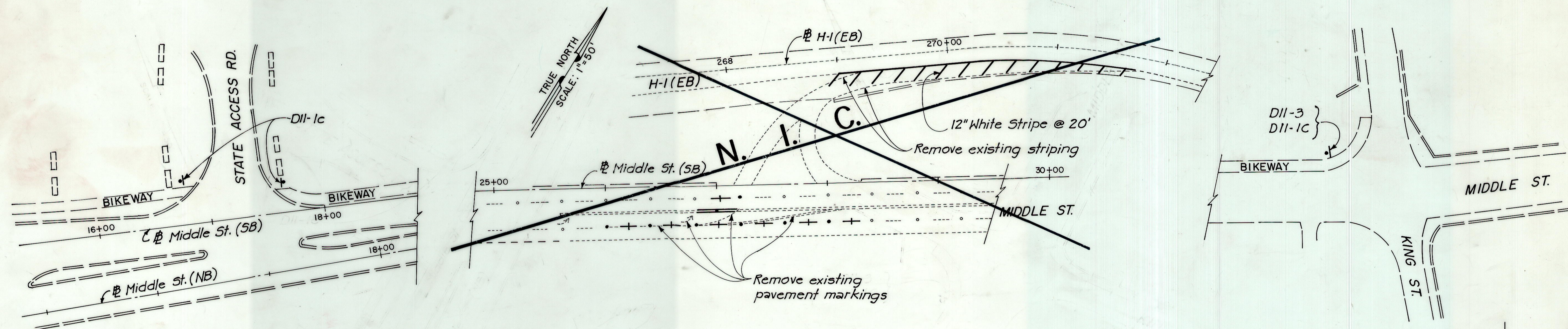
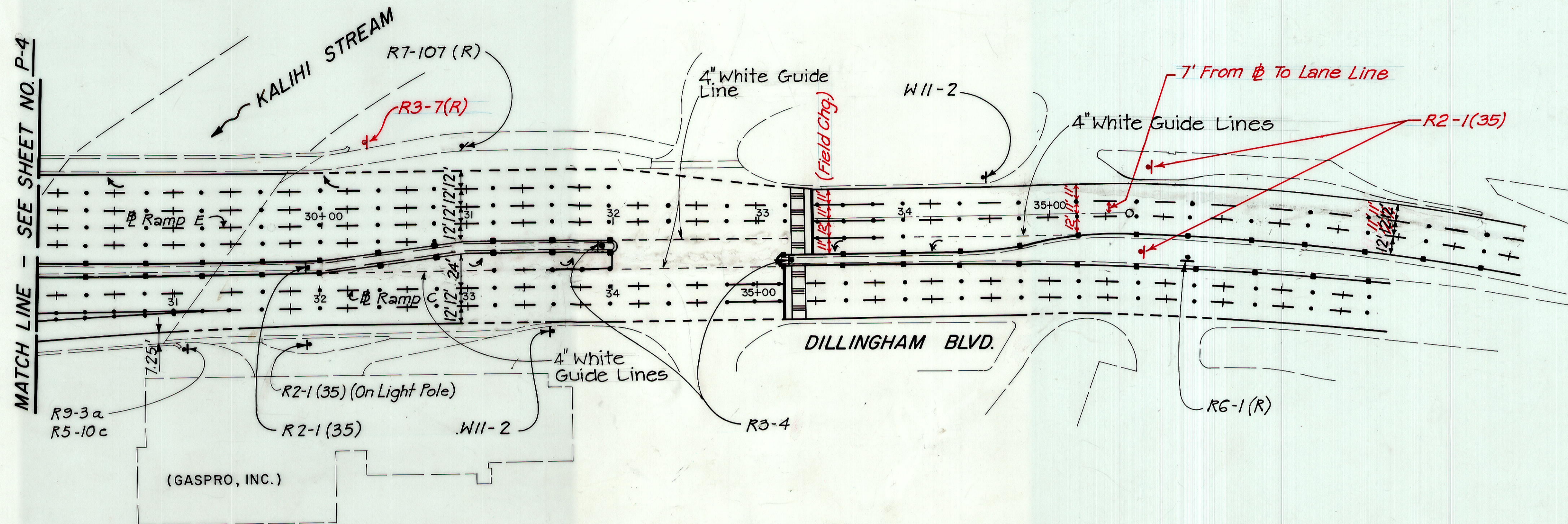
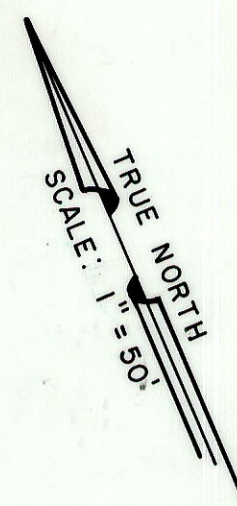
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
SIGNING & PAVEMENT MARKINGS
 PHASE IV
 (TRAFFIC PATTERNS (D) & (E))
 INTERSTATE ROUTE H-1
 PROJECT NO. I-IR-HI-169-17
 SCALE: 1" = 50' DATE: 3/15/82
 SHEET No. P-4 OF 35 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(169):17	1983	77	280

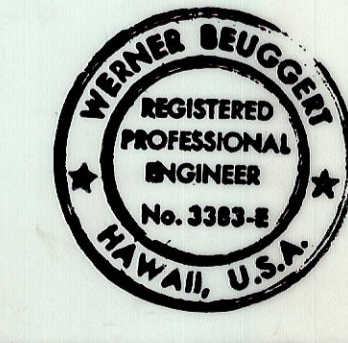
NOTES :

1. For Legend See Sheet No. P-3
2. For General Notes see Sheet No. P-6



DATE	.....
SURVEY PLOTTED BY	.....
ORIGINAL PLAN	.....
TRACED BY	.....
QUANTITIES BY
CHECKED BY
NO.

D11-1C 	D11-3 	R2-1(35) 	R3-4 	R7-107(R) 	W11-2 	RG-1(R) 	R5-10c 	R9-3a
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THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Werner Bruggier

2/5/86	Install Left Turn Median Lane Ramp E Sta. 30+00 to 32+00 & Install Pavement Arrows & Guide Lines
Date	Revision

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

**SIGNING & PAVEMENT MARKINGS
PHASE II
(TRAFFIC PATTERN ②)**

INTERSTATE ROUTE H-1
PROJECT NO. I-IR-HI-1(169):17

SCALE: 1" = 50' DATE: 3/15/82
SHEET NO. P-5 OF 35 SHEETS

"AS-BUILT"

C.O.77

SIGNING SUMMARY

TYPE	MESSAGE	QUANTITY		
		W/P	WO/P	W/P ON PARAPET
R1-2	YIELD	1	—	—
R2-1(35)	SPEED LIMIT 35 MPH	5	4	—
R2-1(35)-A	SPEED LIMIT 35 MPH	—	1	1
R2-4(55)	SPEED LIMIT 55 MPH, 45 MPH MINIMUM	—	2	—
R2-4(55)-A	SPEED LIMIT 55 MPH, 45 MPH MINIMUM	—	1	—
R2-5b(35)-A	REDUCED SPEED 35 MPH	—	1	—
R3-1	NO RIGHT TURN	—	1	—
R3-2	NO LEFT TURN	—	1	—
R3-3	NO TURNS	3	—	—
R3-3A	NO TURNS	2	—	—
R3-4b		4	—	—
R3-10-A	RESTRICTED LANE AHEAD	2	—	—
R3-12-A	RESTRICTED LANE ENDS	—	—	1
R3-16-A	CAR POOL 3 OR MORE	—	—	1
R3-17-A	LEFT LANE BUS AND CAR POOLS ONLY, 24 HOURS	—	1	—
R4-7	KEEP RIGHT	2	—	—
R5-9	WRONG WAY	3	—	—
R5-10c	PEDESTRIANS PROHIBITED	—	1	—
R6-1(R)	ONE WAY	1	1	—
R7-107(R)	BUS STOP	1	—	—
R8-7	EMERGENCY STOPPING ONLY	—	3	—
R9-3a		1	—	—
R16-5	UNLICENSED VEHICLES, BICYCLES UNDER 5HP, PEDESTRIANS KEEP OUT FREEWAY	1	1	1
R17-4	ON LEFT ARROW ONLY NO U TURN	2	—	—
W1-2(R)-A		2	—	—
W1-6		—	1	—
W3-3		—	3	—
W4-1(R)		1	1	—
W4-1(R)-A		—	—	1
W4-2(R)		1	1	—
W4-2(R)-A		—	—	2
W9-2(L)	LANE ENDS MERGE LEFT	2	—	—
W9-2(L)-A	LANE ENDS MERGE LEFT	—	2	—
W11-2		2	1	—
W12-1		2	—	—
W13-2(35)	EXIT 35 MPH	—	1	—
D10		—	1	1
D11		1	—	—
D11-1c	BIKEWAY	3	1	—
D11-3, D11-1c	BEGIN, BIKEWAY	3	—	—
D11-4, D11-1c	END, BIKEWAY	—	2	—

SUMMARY OF MISCELLANEOUS ITEMS

ITEM	QUANTITY				
	SHEET P-2	SHEET P-3	SHEET P-4	SHEET P-5	TOTAL
Type A Pavement Marker	536	1737	584	428	3285
Type C Pavement Marker	337	145	387	137	1006
Type D Pavement Marker	21	—	10	1	32
Type H Pavement Marker	162	58	177	49	446
Reflector Marker, Type RM-1, w/post	—	3	—	—	3
Reflector Marker, Type RM-1, Parapet, Barrier or Railing Mounted	34	6	—	—	40
Reflector Marker, Type RM-2	—	3	5	—	8
Reflector Marker, Type RM-2, with post	18	6	58	—	82
Reflector Marker, Type RM-2, Parapet, Barrier or Railing Mounted	15	9	75	—	99
Reflector Marker, Type RM-3H	—	—	6	—	6
Reflector Marker, Type RM-9	—	—	1	—	1
Reflector Marker, Type RM-9, w/post	1	—	1	—	2
Traffic Delineators	9	—	—	—	9
Interstate (I2) Route Marker Assembly	—	1	—	—	1
Interstate (I1) Route Marker Assembly w/Post	—	—	1	—	1

NOTE :

Shown quantities of signs, and traffic delineators are for bidding purposes only. Contractor shall establish the actual number to be furnished based on reuseable material available from site and storage, and as directed by the Engineer.

GENERAL PAVEMENT MARKING NOTES

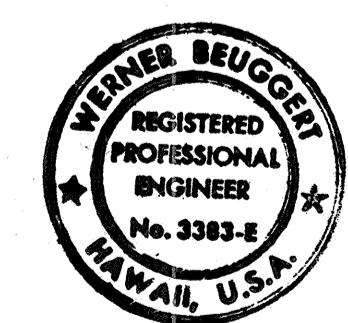
- All pavement marking stripes, arrows, diamonds and words shown on Sheets P-2 thru P-5 shall be of Permanent Preformed Pavement Marking Tape, Type I.
- Temporary pavement marking stripes on final roadway surface shall be of Temporary Preformed Pavement Marking Tape.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-HI-1(169):17	1983	78	280

GENERAL SIGNING NOTES

- Signs, Traffic Delineators, and Barricade Warning Lights shall conform to FHWA publications, "Manual on Uniform Traffic Control Devices", 1978 and "Standard Highway Signs", 1972 and as amended.
- Unless noted otherwise, exact locations of Signs, Barricades, and Delineators will be determined by the Engineer.
- Contractor may substitute portable or temporary mountings for post mountings for construction signs with the approval of the Engineer.
- Existing and reusable Signs, Signs from storage, Barricades and Traffic Delineators shall be reset at locations shown on the plans, and as directed by the Engineer. All additional materials required shall be furnished by the Contractor. Payment for resetting Barricades and Traffic Delineators shall be considered incidental to various contract items.
- Contractor is responsible for maintaining new and existing signs, barricades and delineators in good condition during Life of Project.
- Superfluous signs, barricades, delineators and portable concrete guard rails shall be removed and stored at the State's Baseyard, Lehua Ave., Pearl City upon completion of construction work, as directed by the Engineer. Payment will be considered incidental to various Contract Items, except for portable concrete guard rails. Temporary destination signs and overlay panels shall be removed and disposed of by the Contractor; payment will be considered incidental to various Contract Items.
- Necessary traffic control devices required for the temporary closure of lanes, detours during working day and any other work that may temporarily obstruct any portion of the roadway shall be considered incidental to various contract items.
- Payment for Signs D-10 & D-11 will be made under "Regulatory and Warning Sign, (.....)"
- Bikeway supplementary plates will not be paid separately, but will be considered incidental to Bikeway Sign.
- Post for Reflector Markers shall be "Flexible Delineator Post."

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Werner Deuggel

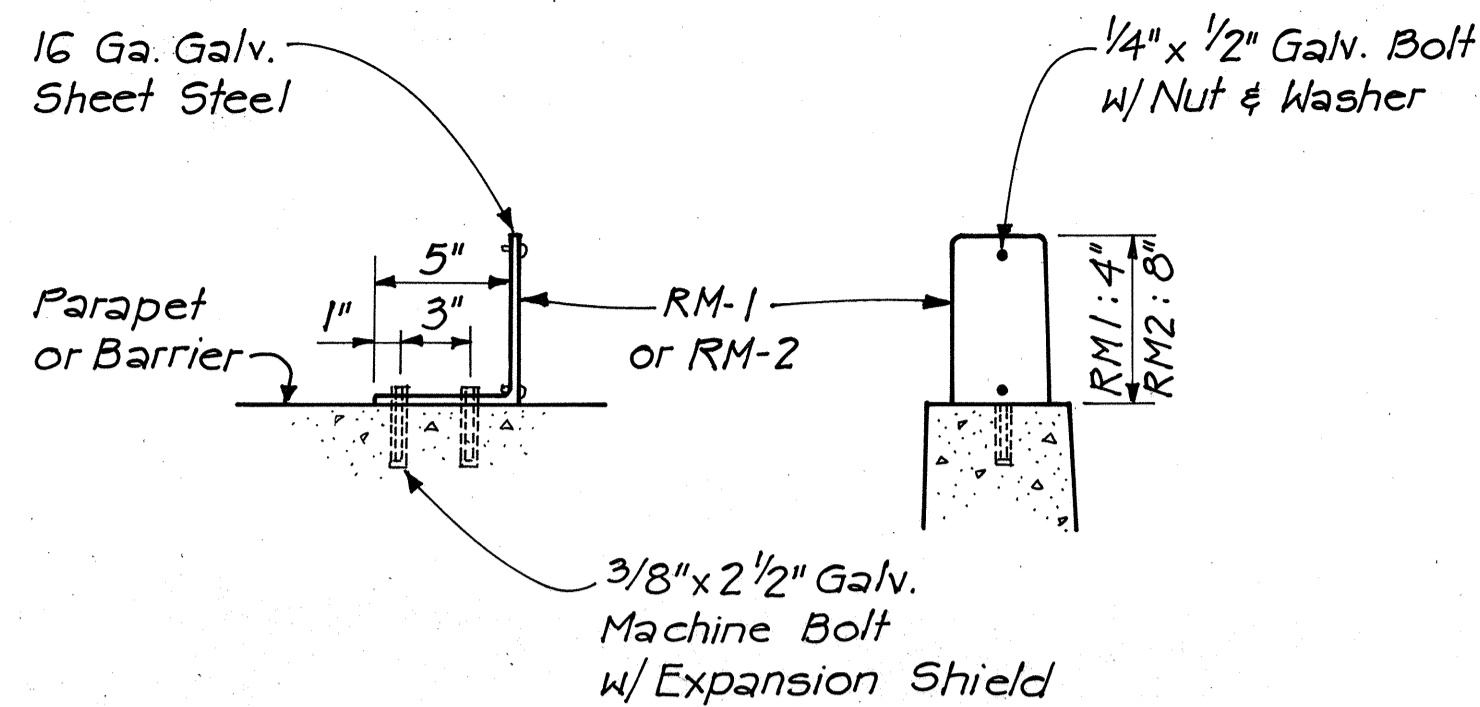
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

SUMMARY & NOTES

INTERSTATE ROUTE H-1
 PROJECT NO. I-IR-HI-1(169):17

SCALE: AS SHOWN DATE: 3/15/82
 SHEET No. P-6 OF 35 SHEETS

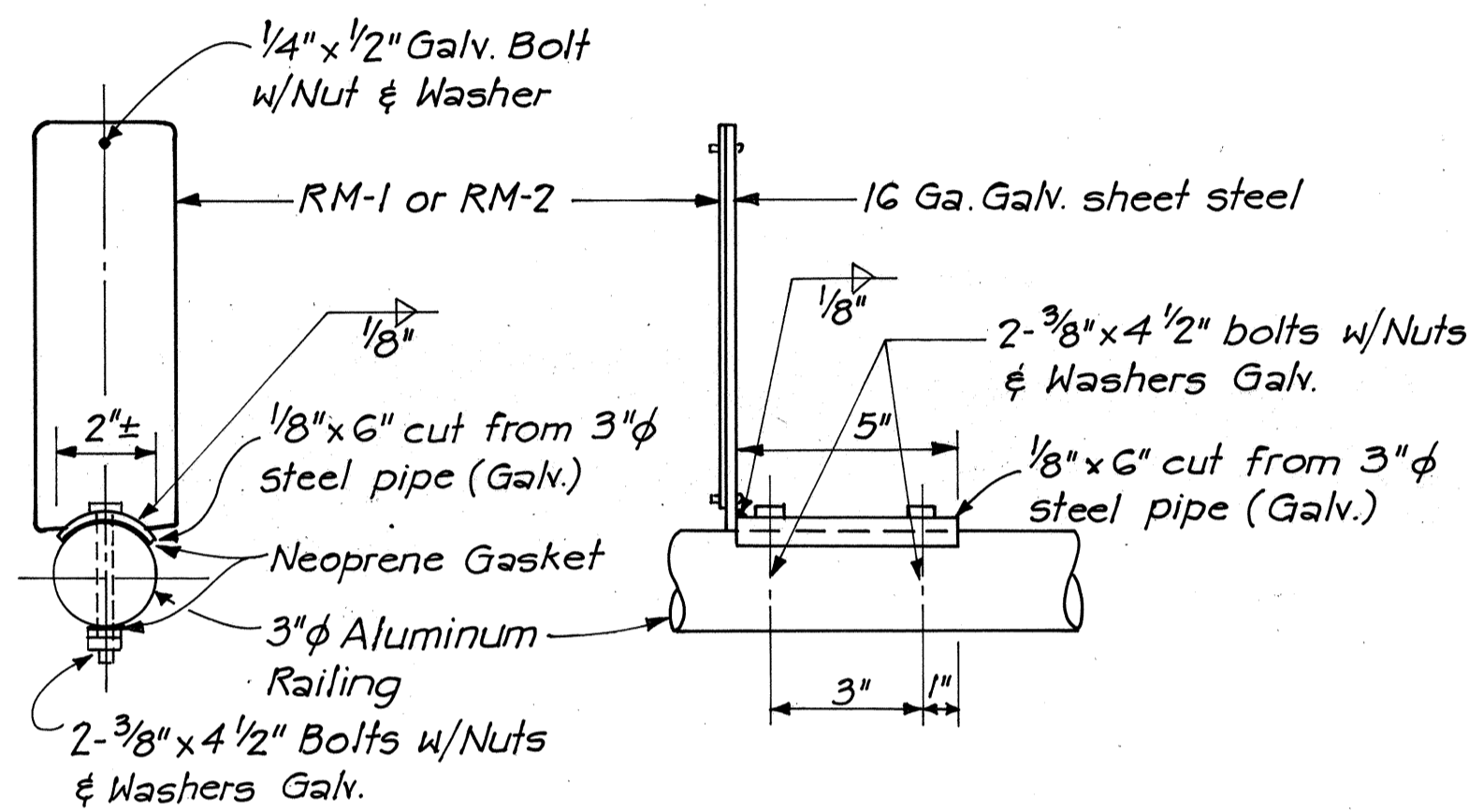
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-HI-1(169):17	1983	79	280



SIDE VIEW FRONT VIEW

PARAPET OR BARRIER MOUNTED REFLECTOR MARKER

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

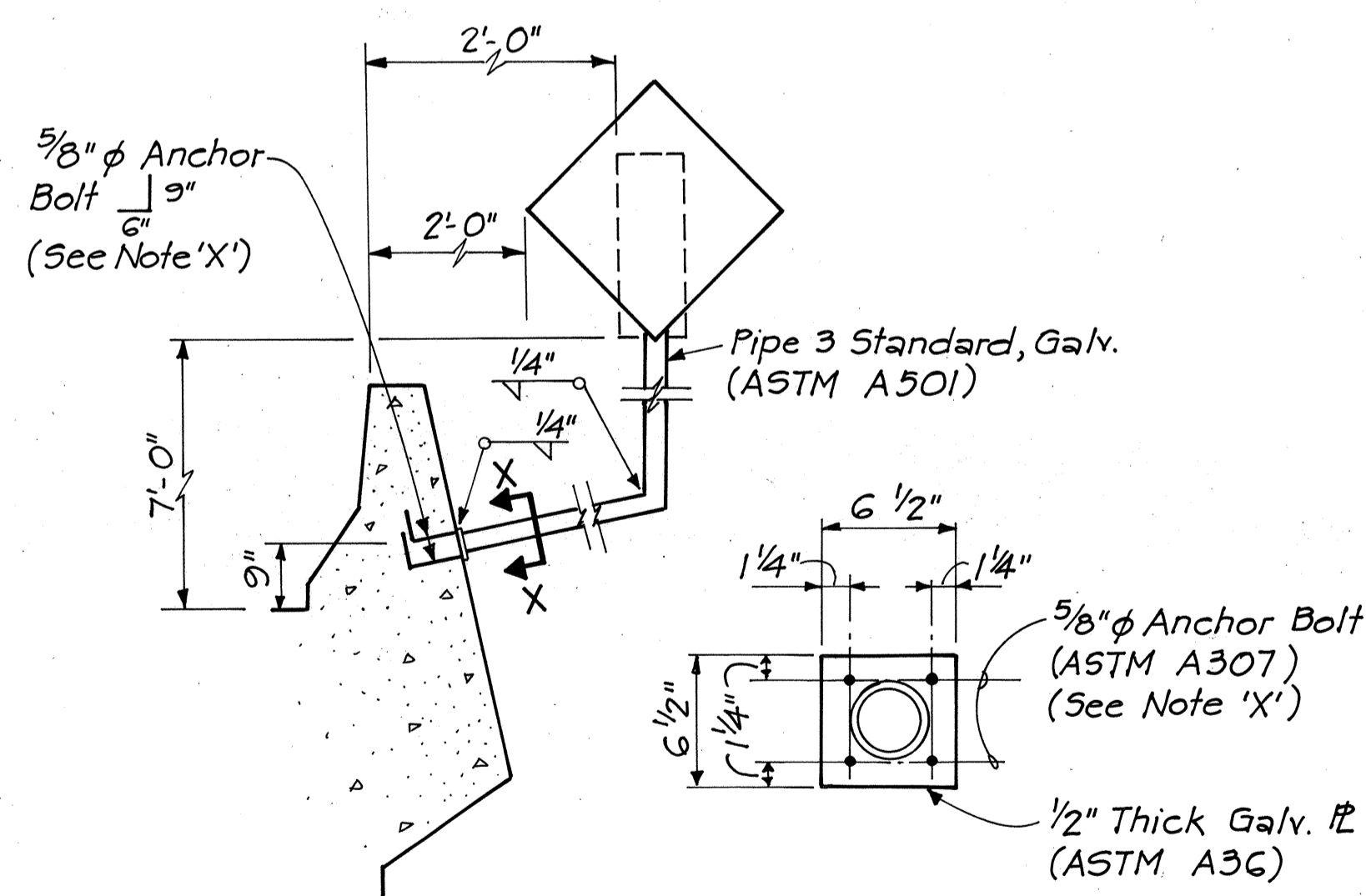


NOTE: Contractor has the option to install 3/4" wide, 18 gage stainless steel bands with 1/16" thick stainless steel clamp in lieu of 3/8" x 4 1/2" bolts

BACK ELEVATION SIDE ELEVATION

RAILING MOUNTED REFLECTOR MARKER

N.T.S.

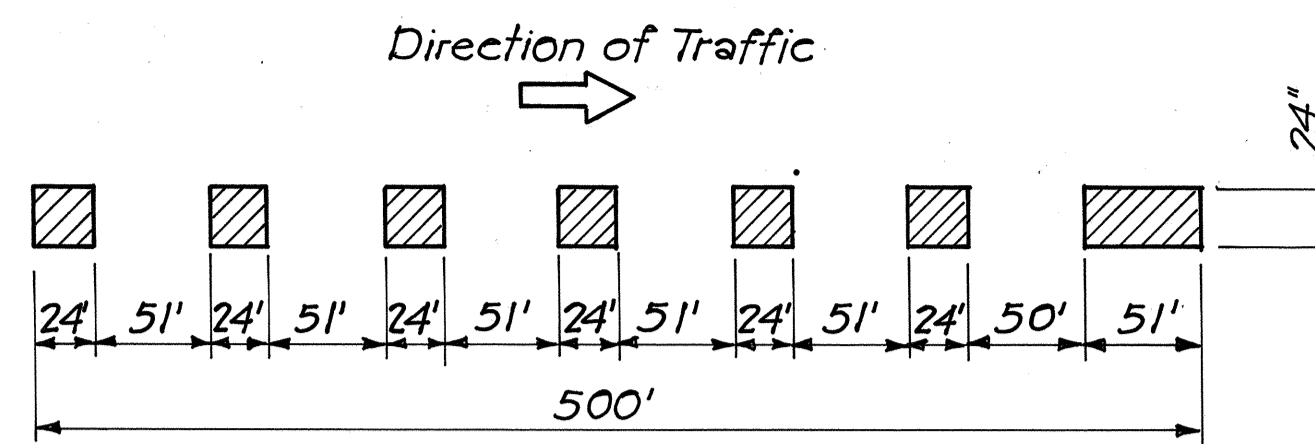


ELEVATION SECTION X-X

NOTE 'X': Use 5/8" x 5" long Wedge Anchor Type Expansion Bolts for sign mounting on existing structures

PARAPET MOUNTED SIGN

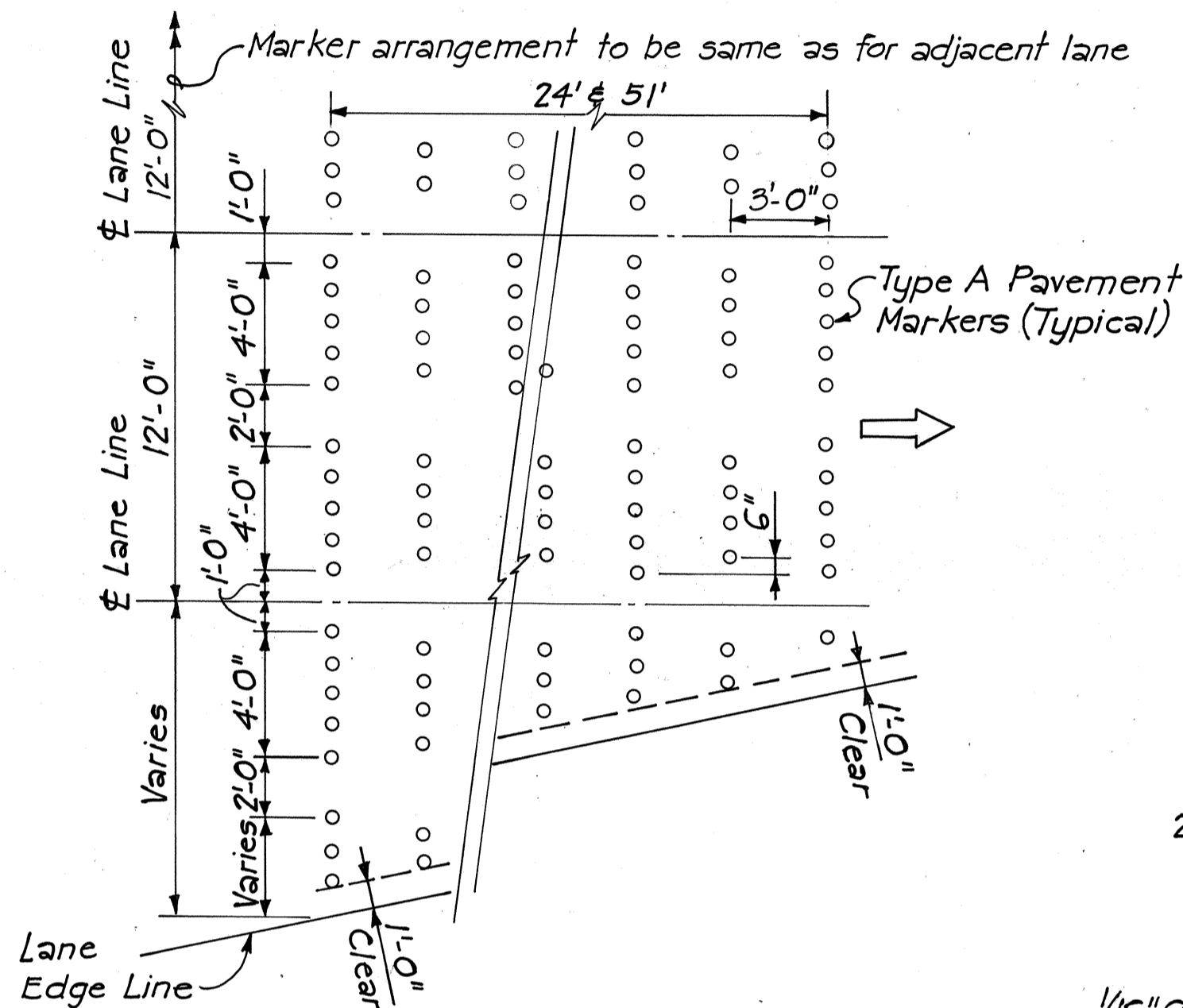
N.T.S.



NOTE: Rumble Strip will be paid under "Type A Pavement Markers."

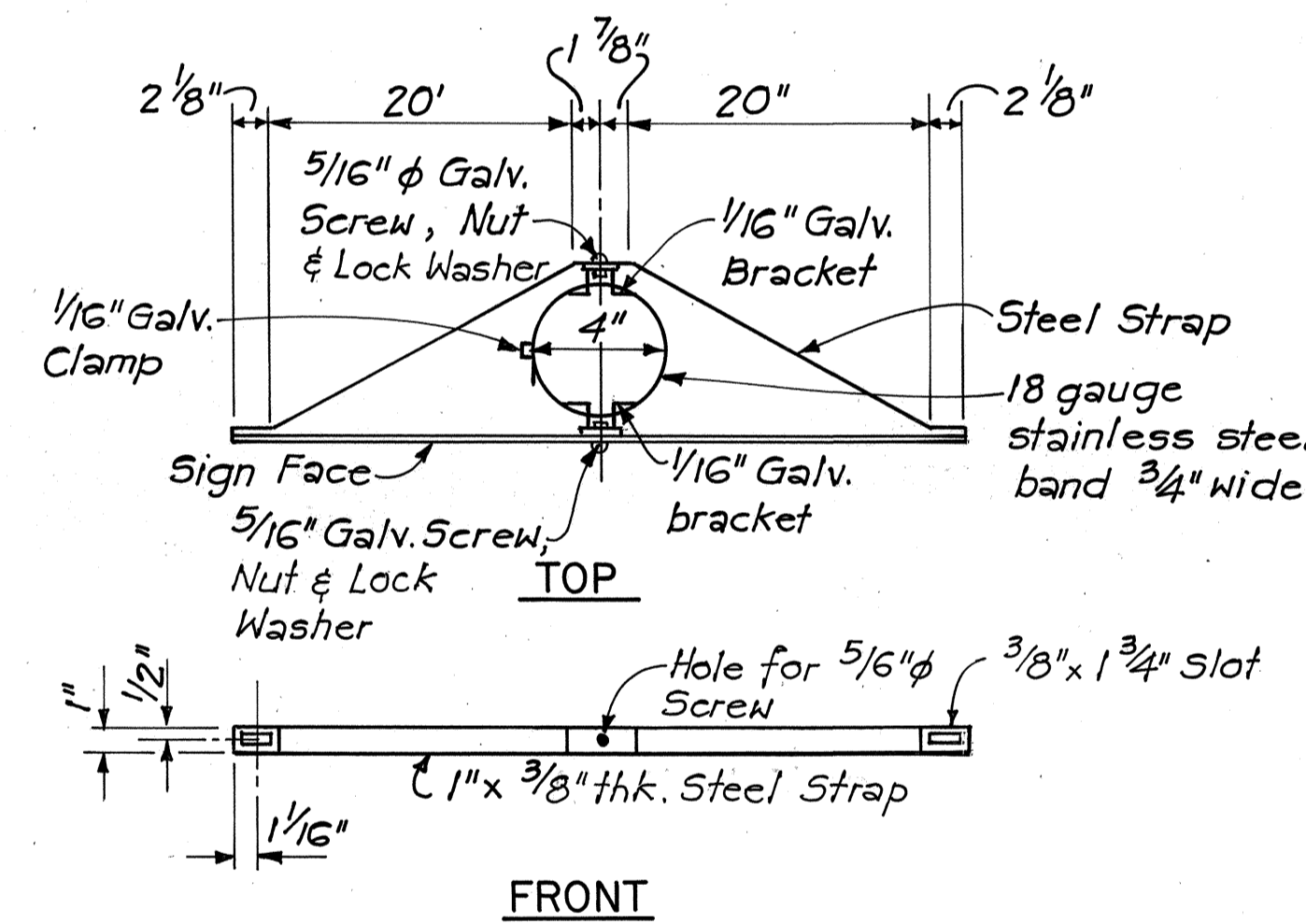
RUMBLE STRIP - LAYOUT

No Scale

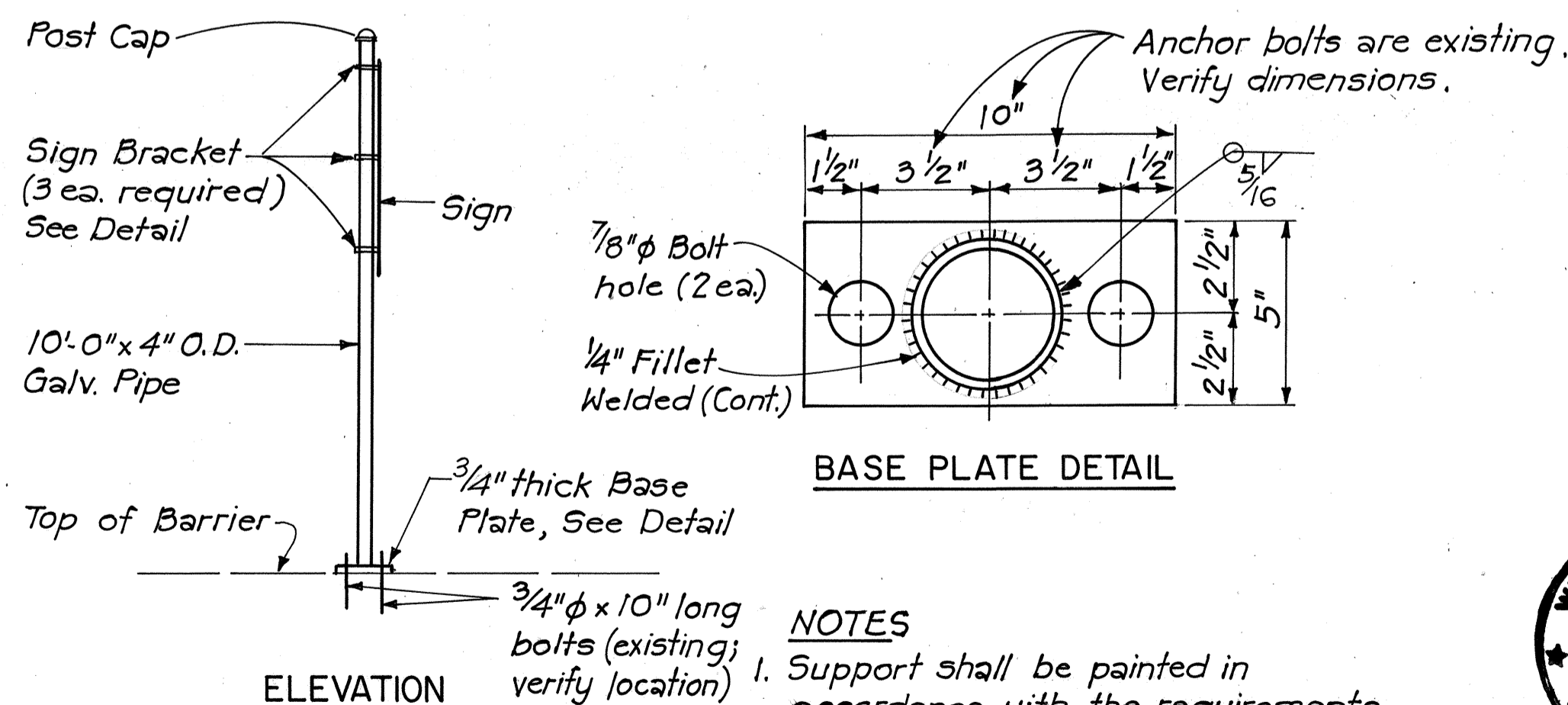


RUMBLE STRIP - DETAIL

No Scale



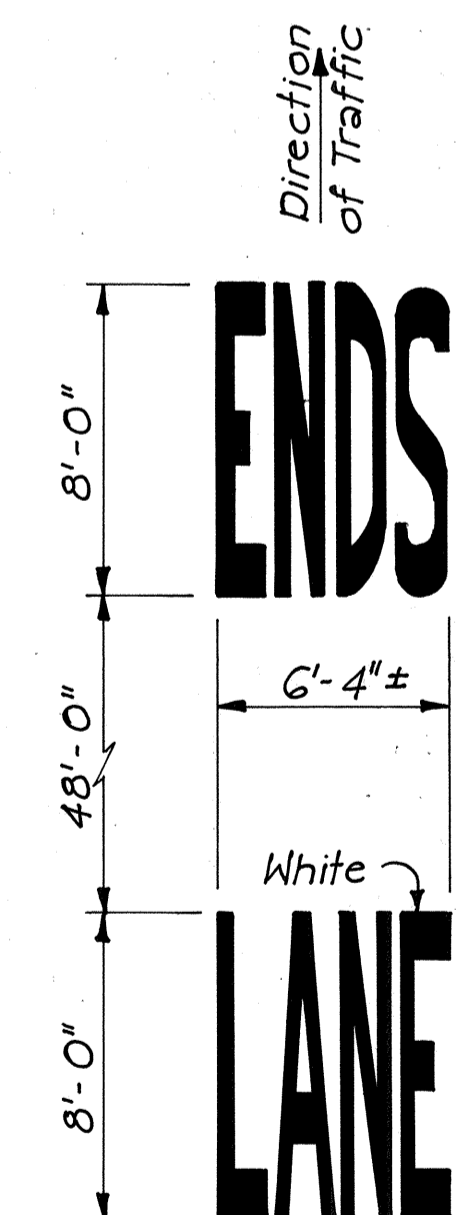
SIGN BRACKET DETAIL



ELEVATION

SUPPORT FOR SIGN "EXIT 18B"

N.T.S.



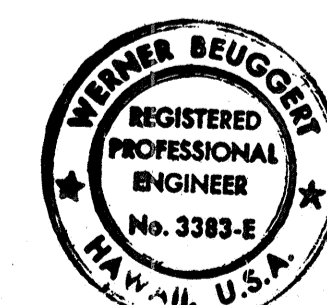
NOTE: Letters shall be in conformance with Standard Detail Sheet Nos. DT 307 & DT 308.

PAVEMENT WORDS

Scale: 1" = 5'

NOTES

- Support shall be painted in accordance with the requirements for Overhead Sign Supports.
- Sign "EXIT 18B" will be paid under "Regulatory and Warning Sign (Greater than 10 Square Feet) with Post on Parapet"



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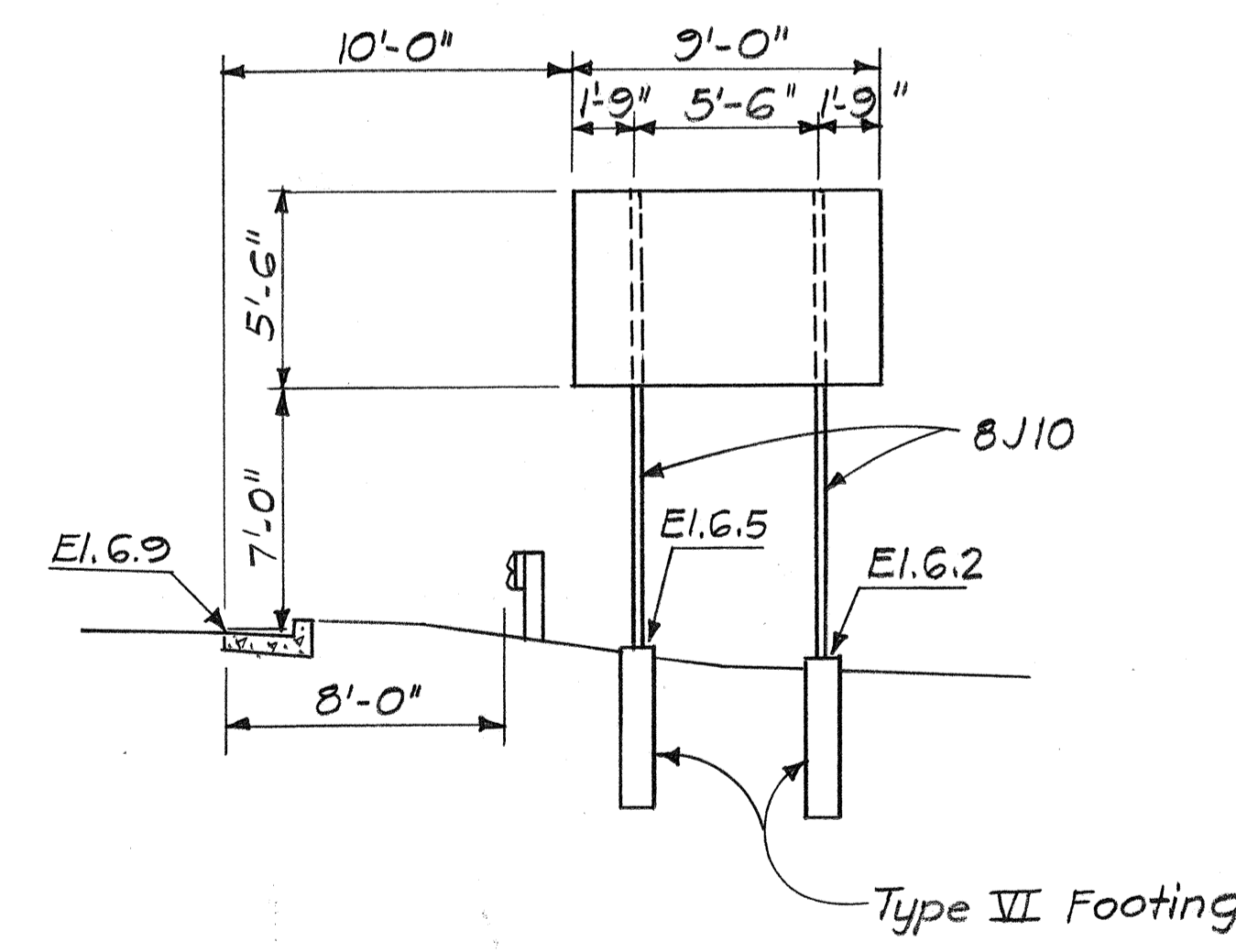
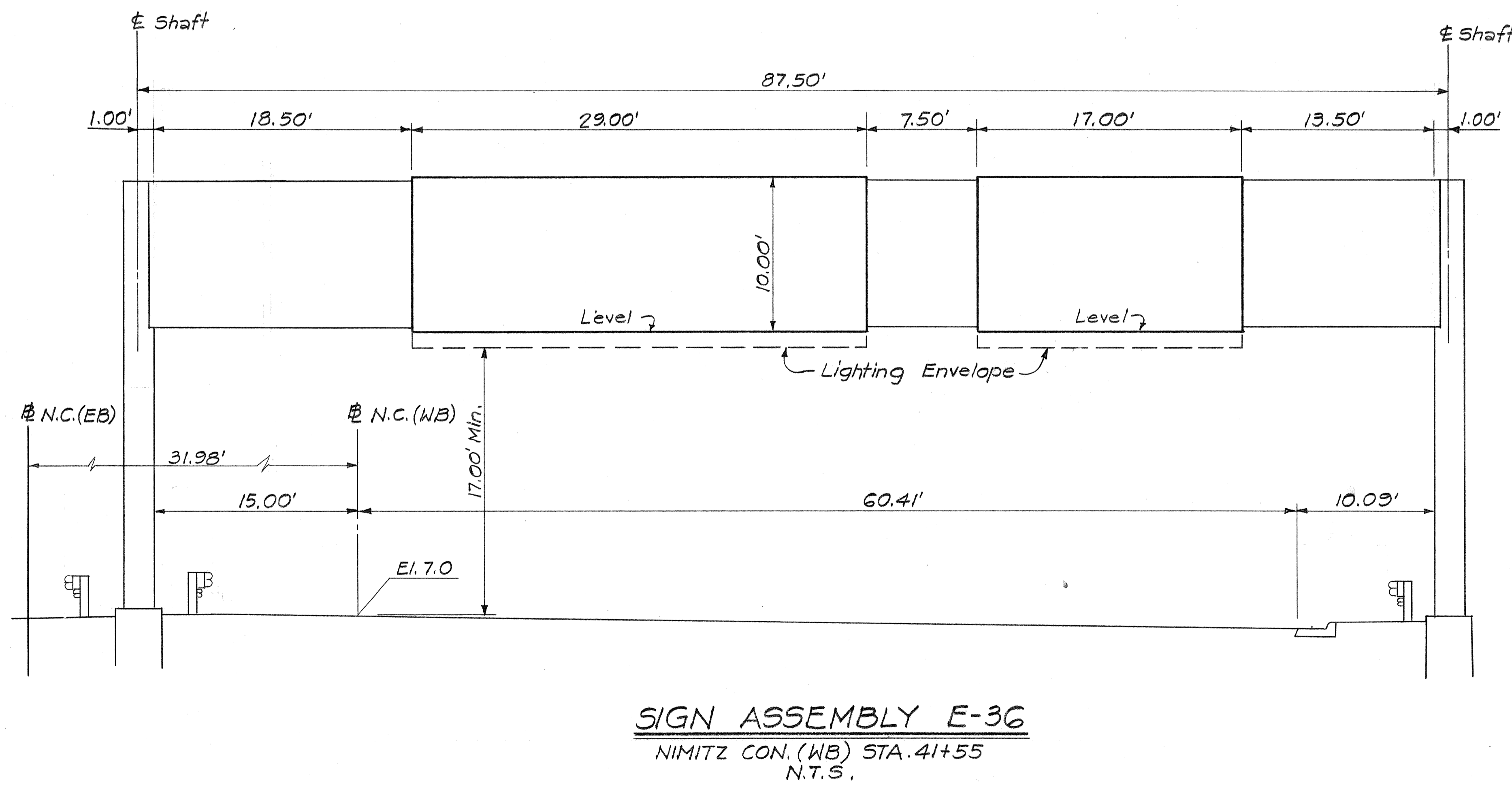
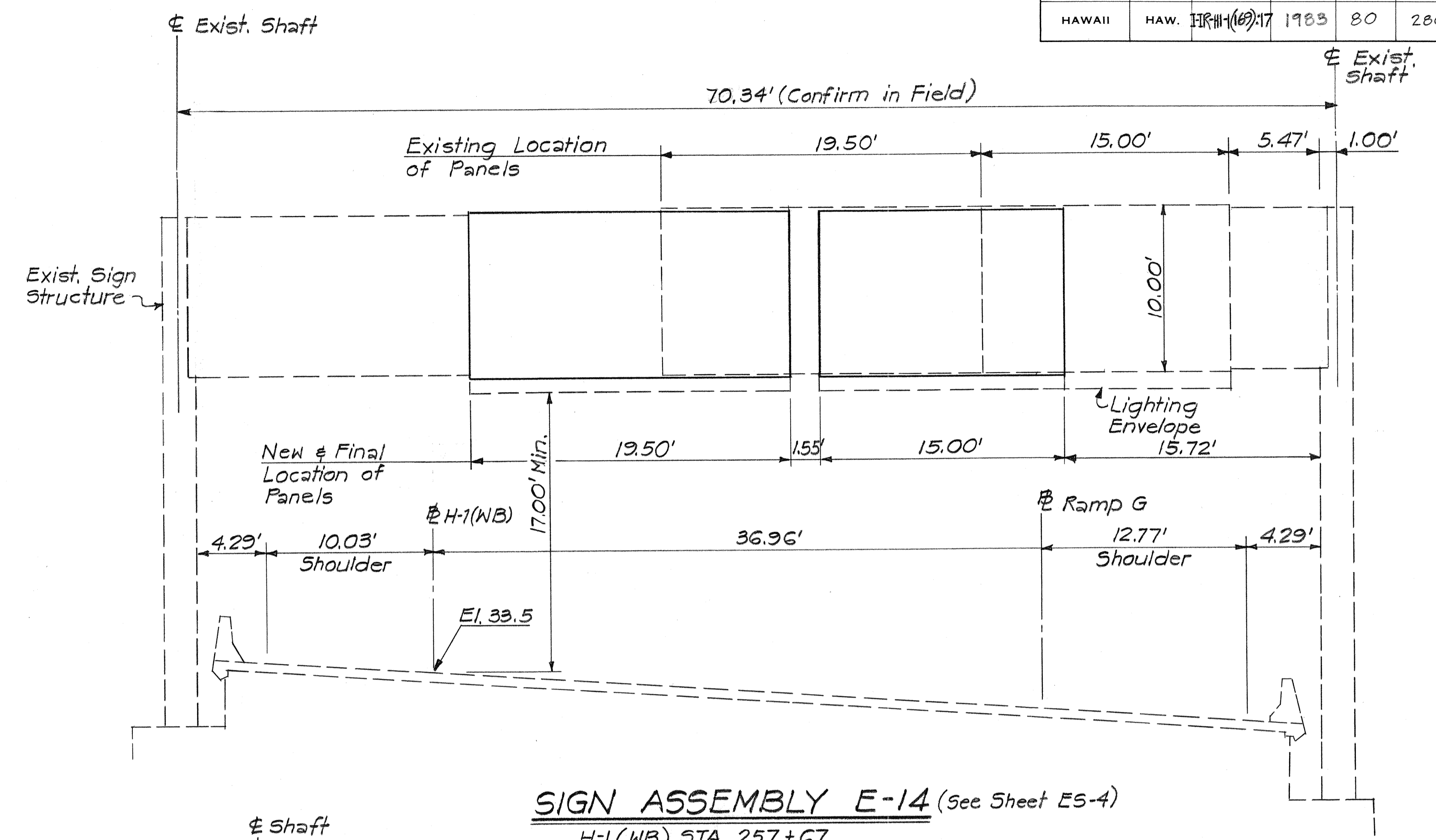
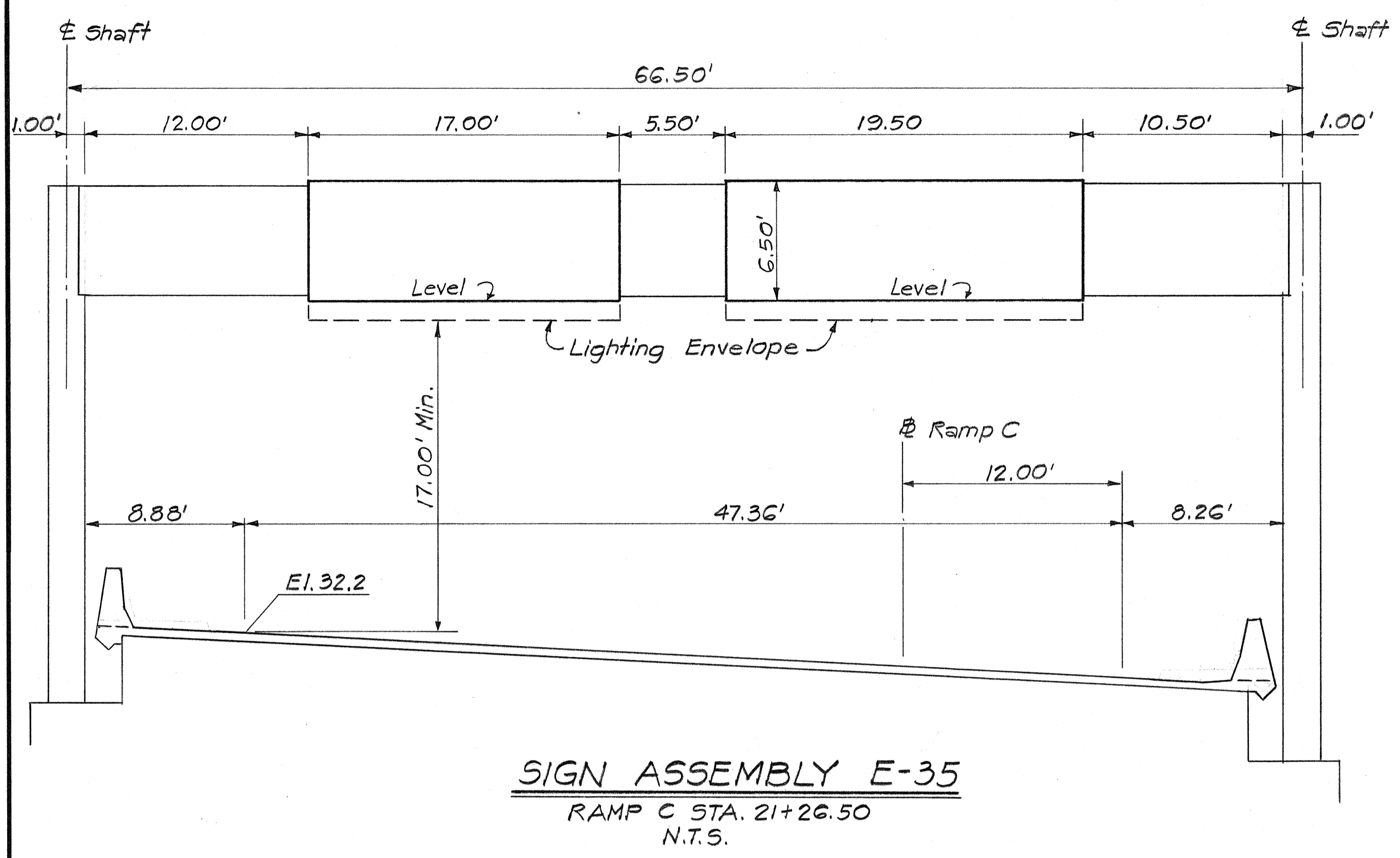
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

MISCELLANEOUS DETAILS

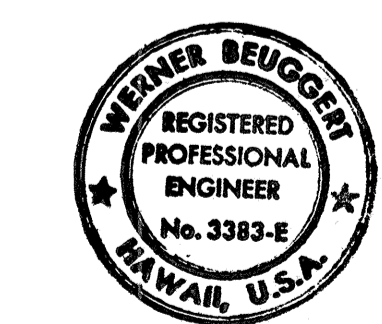
INTERSTATE ROUTE H-1
PROJECT NO. I-IR-HI-1(169):17

SCALE: AS SHOWN DATE: 3/15/82
SHEET No. P-7 OF 35 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-11(169)-17	1983	80	280



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



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
Werner Beugert

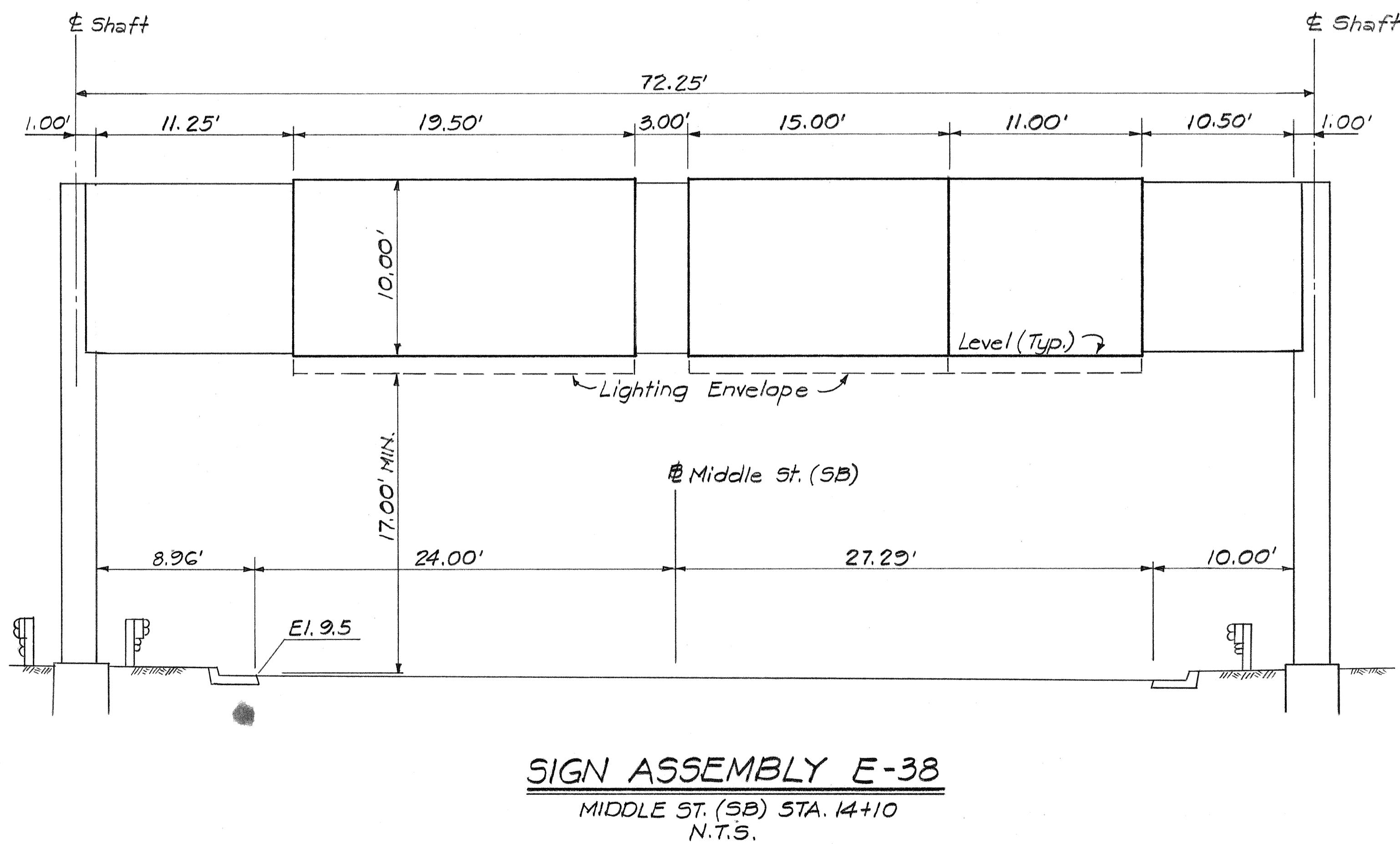
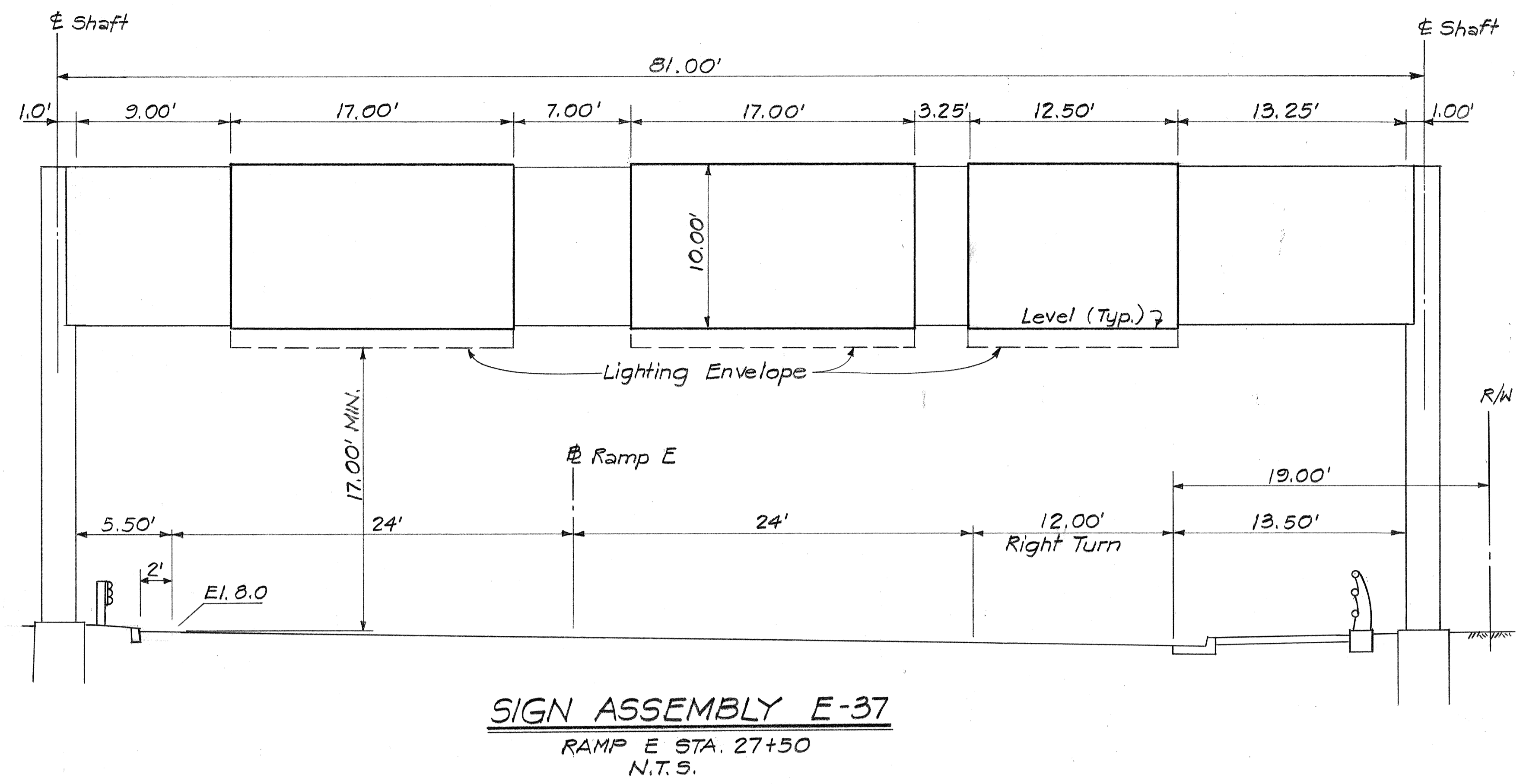
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN PANEL LOCATION

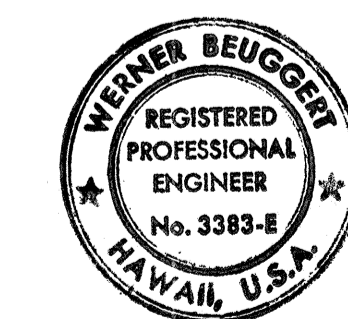
INTERSTATE ROUTE H-1
PROJECT NO. I-IR-HI-1 (169):17

SCALE: AS SHOWN DATE: 3/15/82
SHEET No. P-8 OF 35 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-IR-HI-1(169)	1983	81	280



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



THIS WORK WAS PREPARED BY ME-
 OR UNDER MY SUPERVISION.
 Werner Beigger

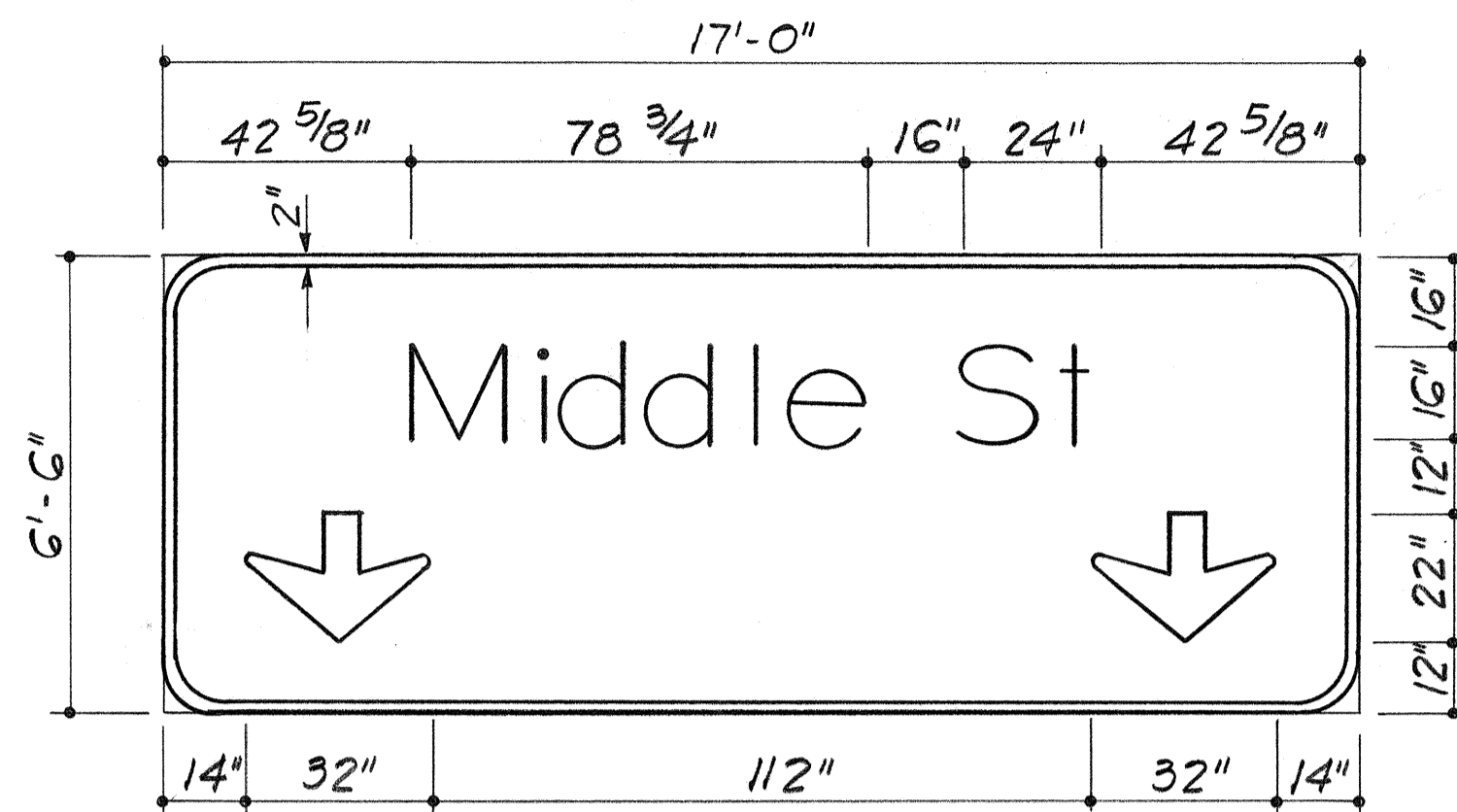
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

SIGN PANEL LOCATION

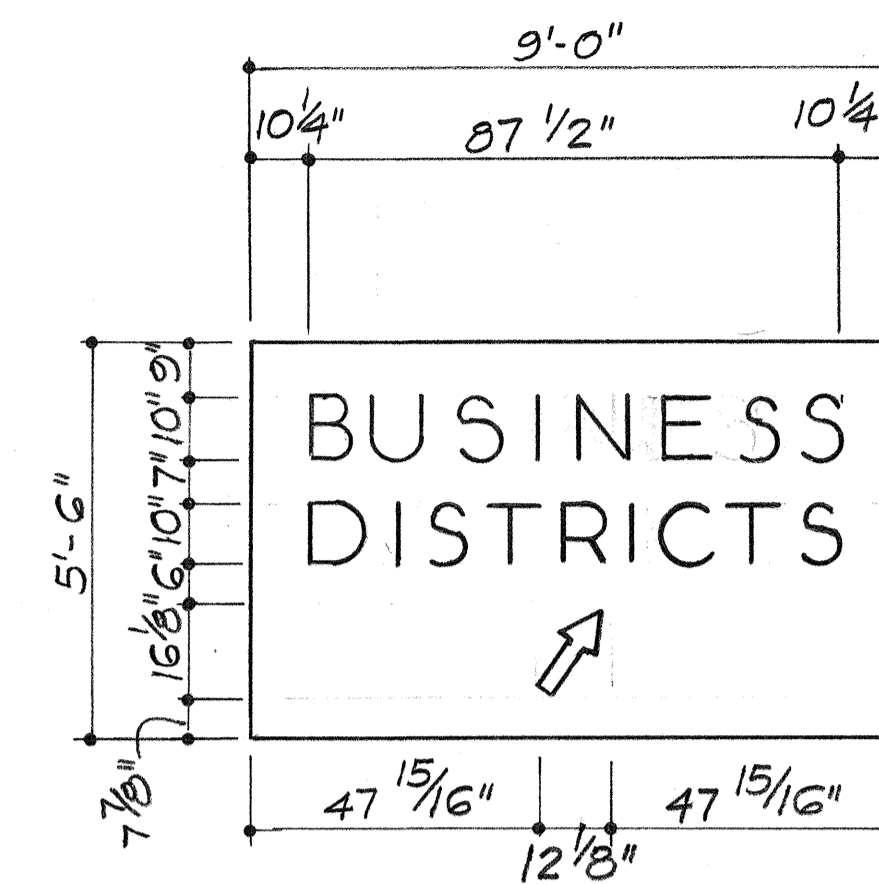
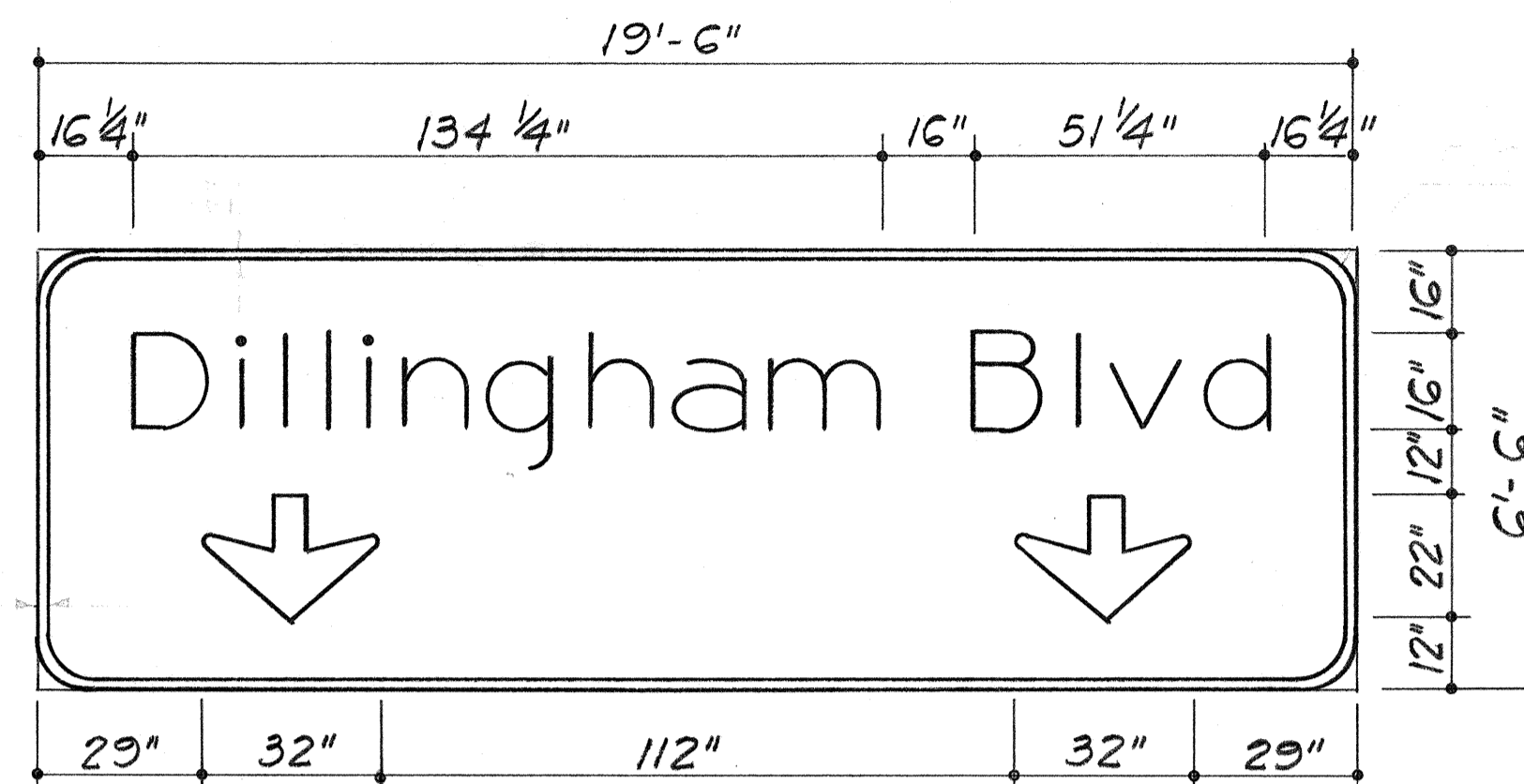
INTERSTATE ROUTE H-1
 PROJECT NO. I-IR-HI-1(169):17

SCALE: AS SHOWN DATE: 3/15/82
 SHEET No. 81 OF 35 SHEETS

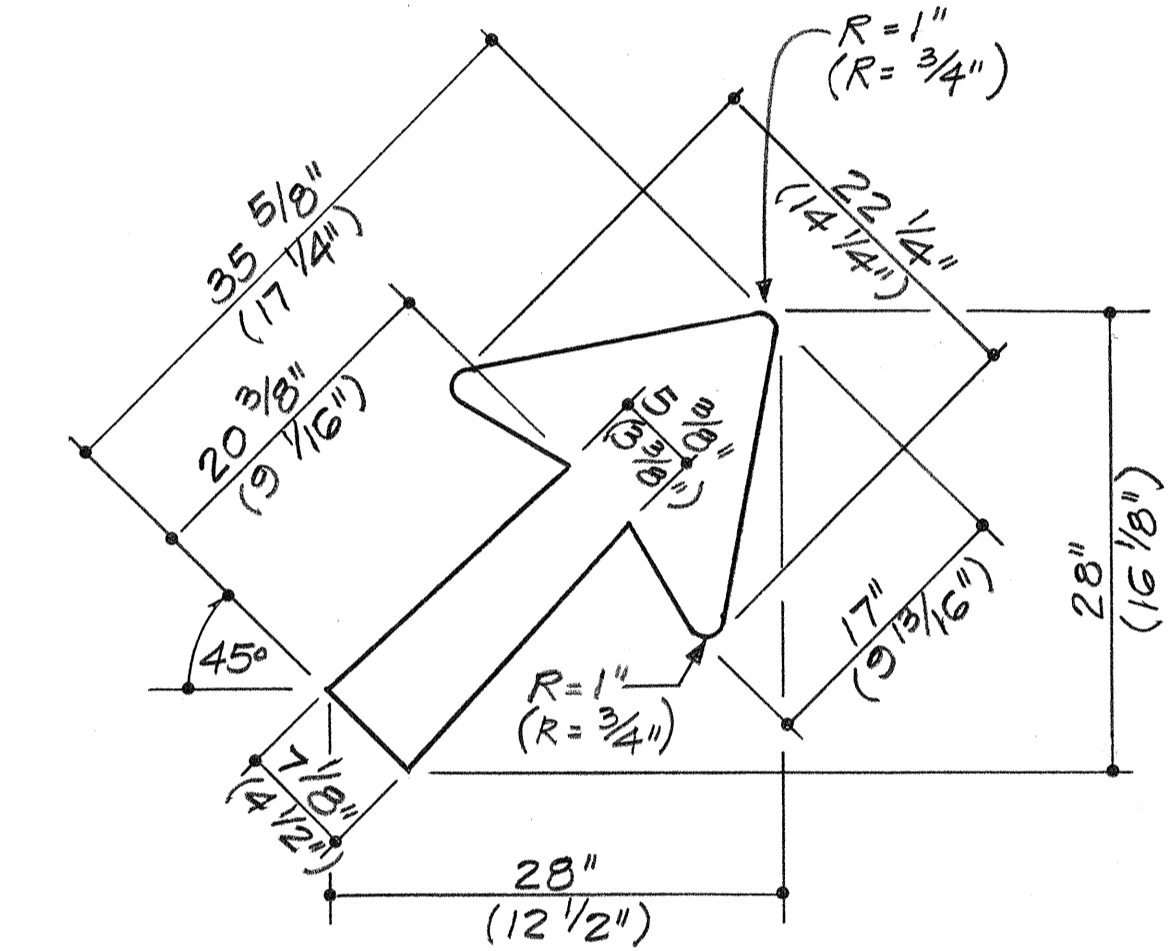
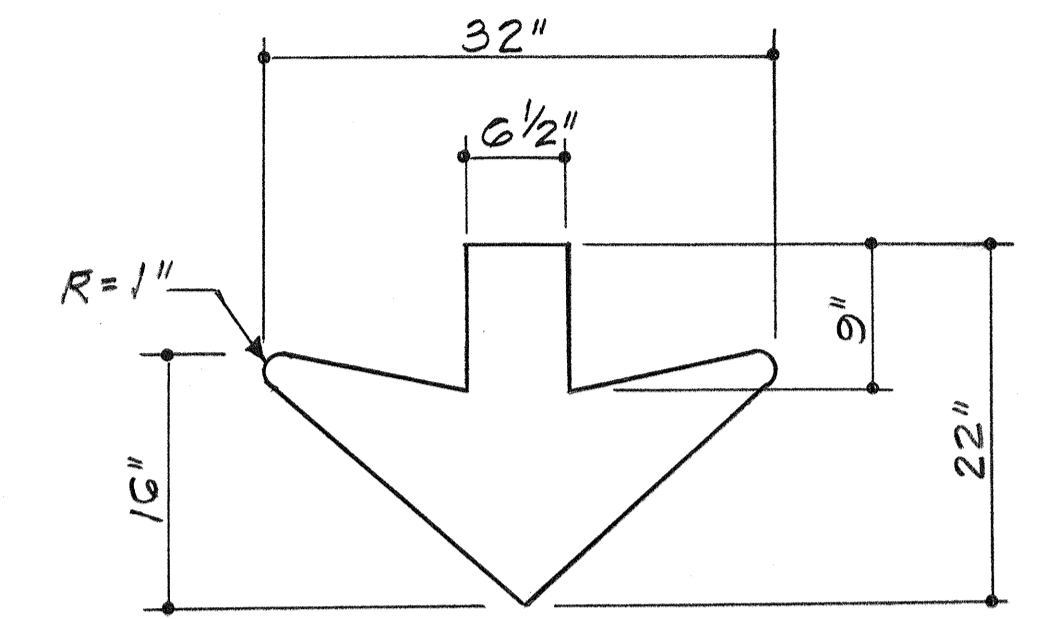
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IRH-1(163)	1933	82	280



SIGN ASSEMBLY E-35
Scale: 3/8" = 1'-0"

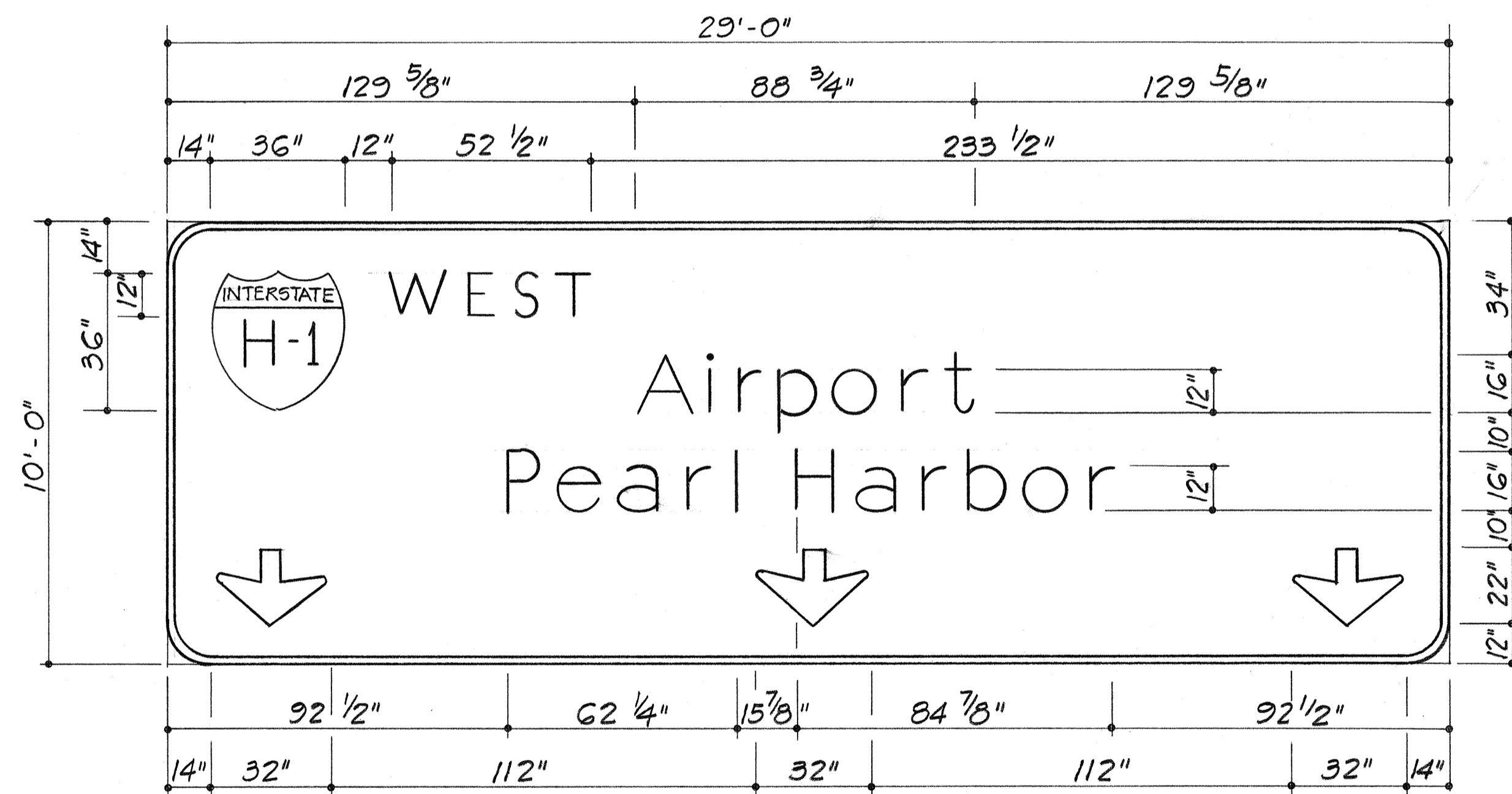


SIGN E-36A
Scale: 3/8" = 1'-0"

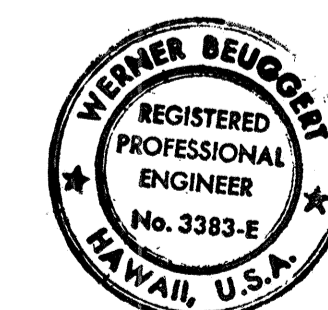
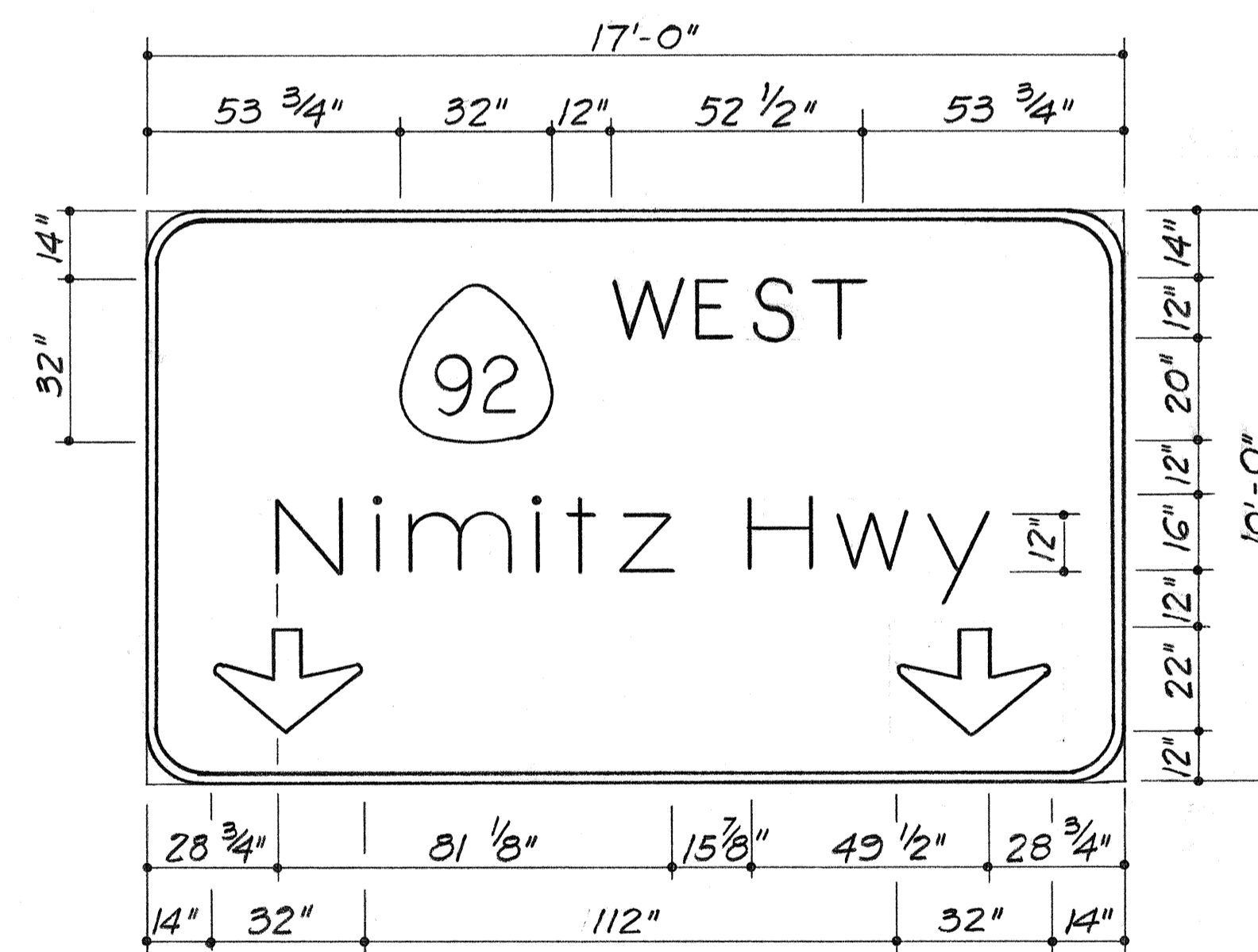


ARROW DETAILS
N.T.S.

NOTE:
For destination sign notes see Sheet No. P-11.



SIGN ASSEMBLY E-36
Scale: 3/8" = 1'-0"



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OR UNDER MY SUPERVISION.
Werner Bejoger

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

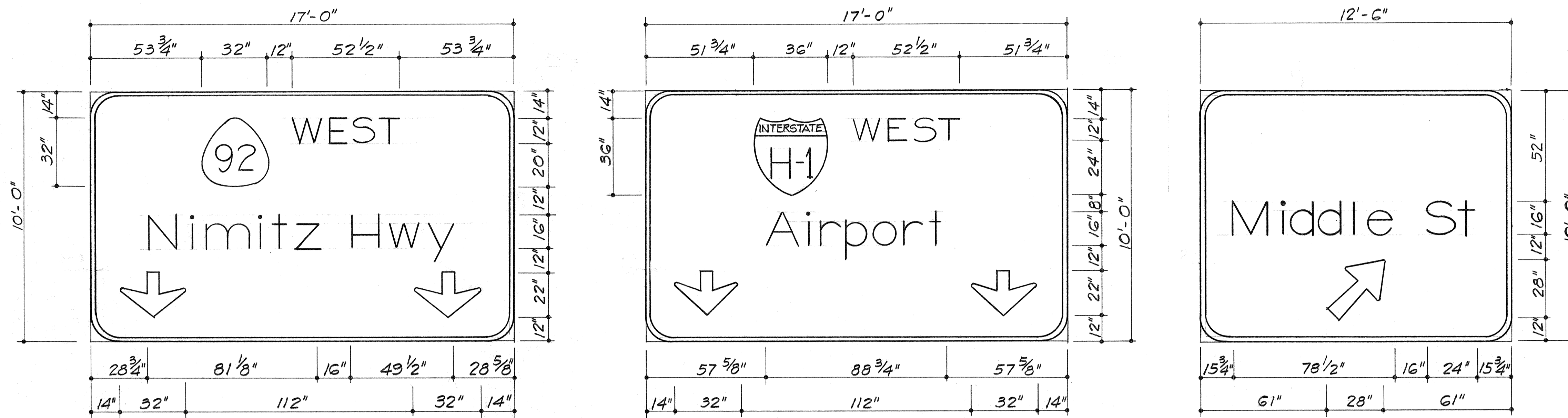
SIGN PANEL LAYOUT

INTERSTATE ROUTE H-1
PROJECT NO. I-IR-HI-1(163):17

SCALE: AS SHOWN DATE: 3/15/32
SHEET No. P.10 OF 35 SHEETS

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

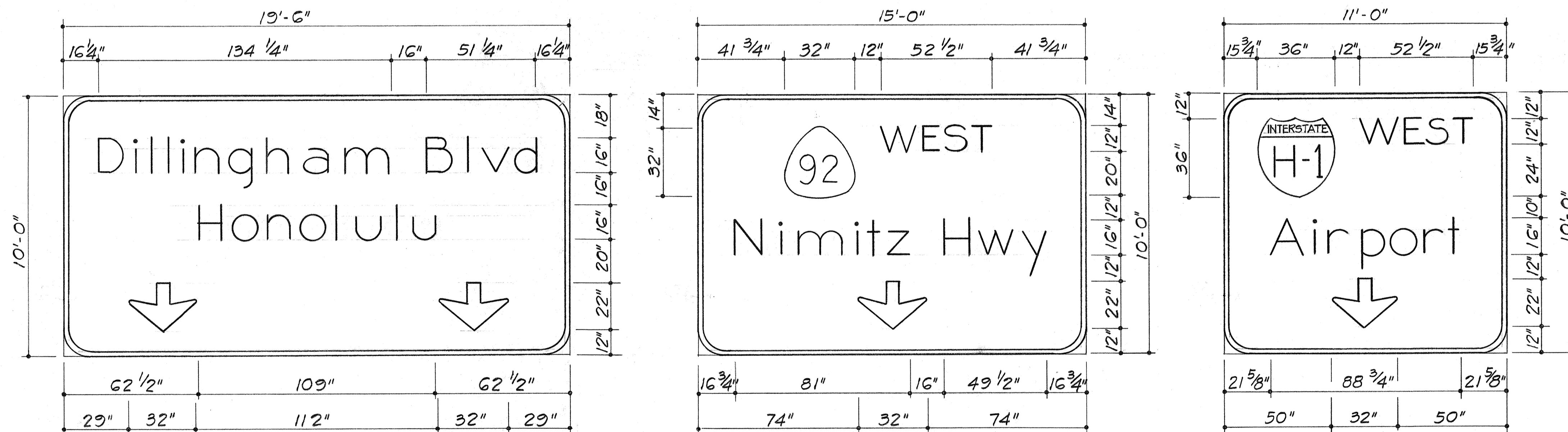
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-1(169):17	1963	83	280



SIGN ASSEMBLY E-37
Scale: $\frac{3}{8}'' = 1'-0''$

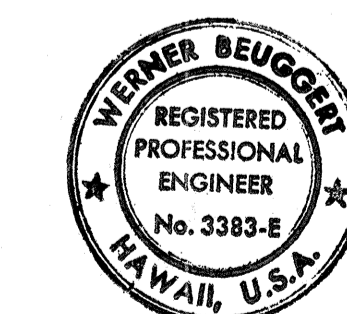
NOTES FOR DESTINATION SIGNS :

1. Alphabetical characters shall be uppercase or lowercase, as shown, and shall have series E dimensions & spacings in accordance with the FHWA Publication "Standard Alphabets for Highway Signs", Bureau of Public Roads, 1966.
2. Borders & Separation lines shall have a width of 2 inches. Corner radius of borders shall be as specified on Standard Detail Plans.



SIGN ASSEMBLY E-38
Scale: $\frac{3}{8}'' = 1'-0''$

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



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Werner Beugert

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN PANEL LAYOUT

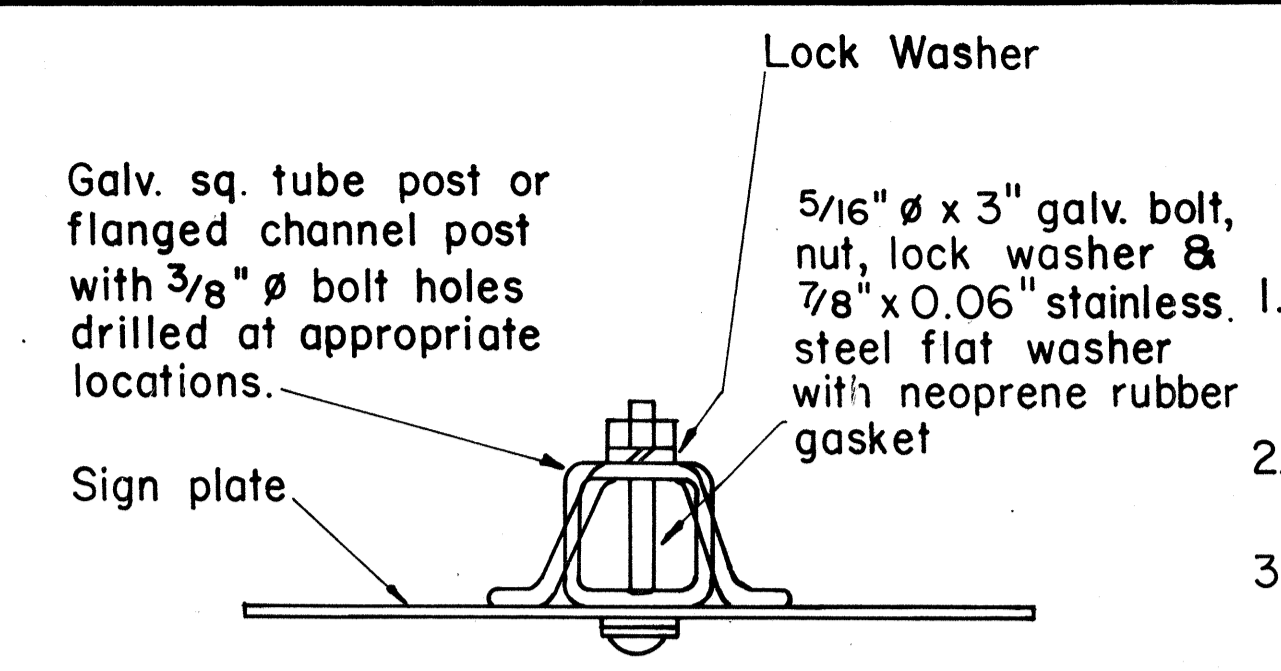
INTERSTATE ROUTE H-1
PROJECT NO. I-IR-HI-1(169):17

SCALE: AS SHOWN DATE: 3/15/62
SHEET No. P. 11 OF 35 SHEETS

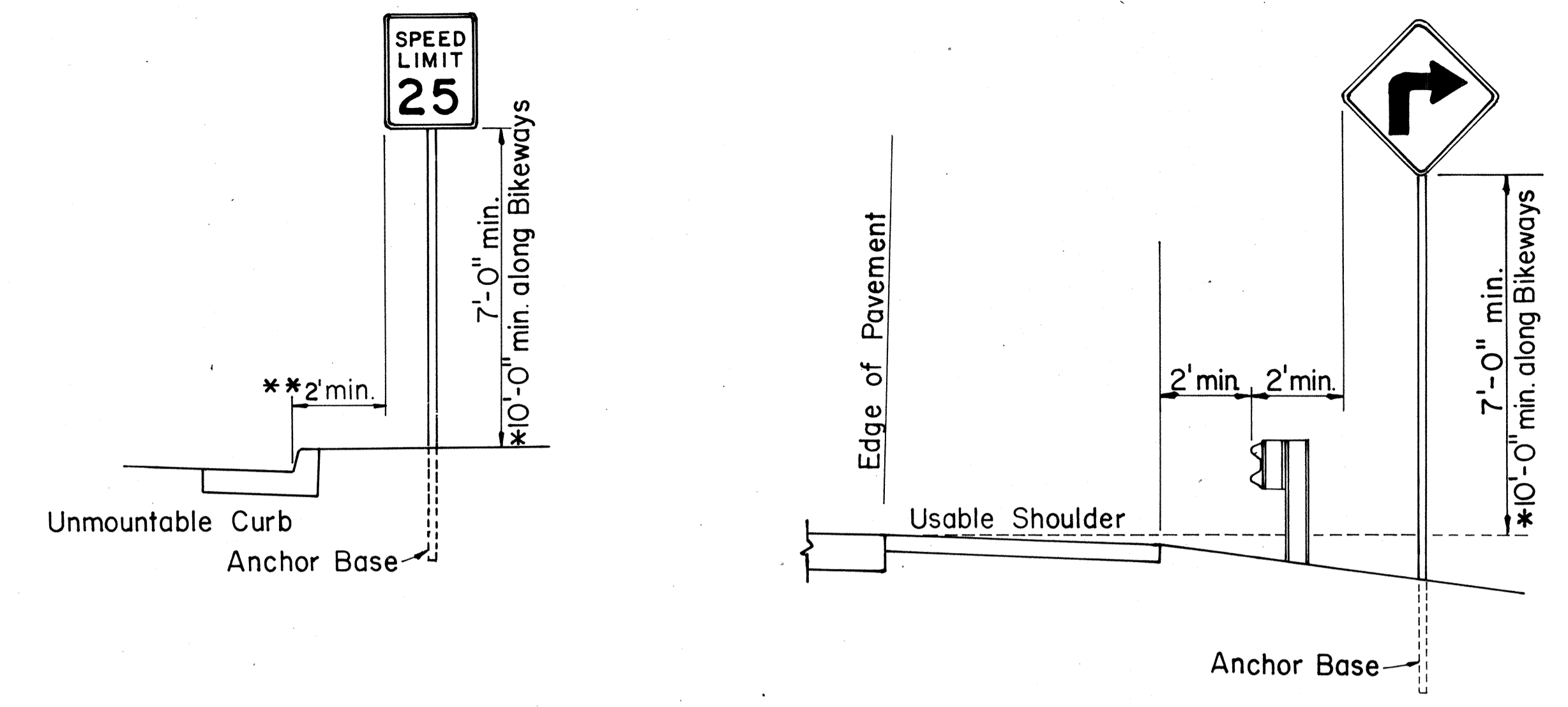
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-IR-HI-(16) :17	1983	84	280

GENERAL NOTES

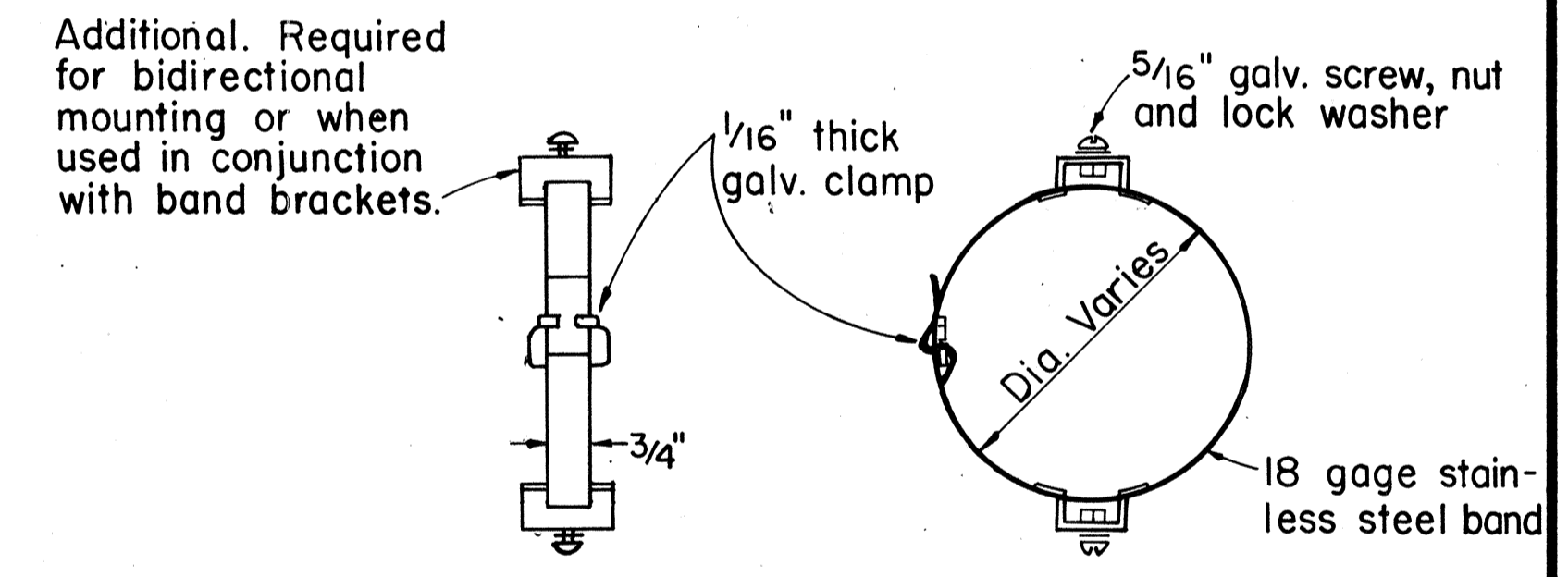
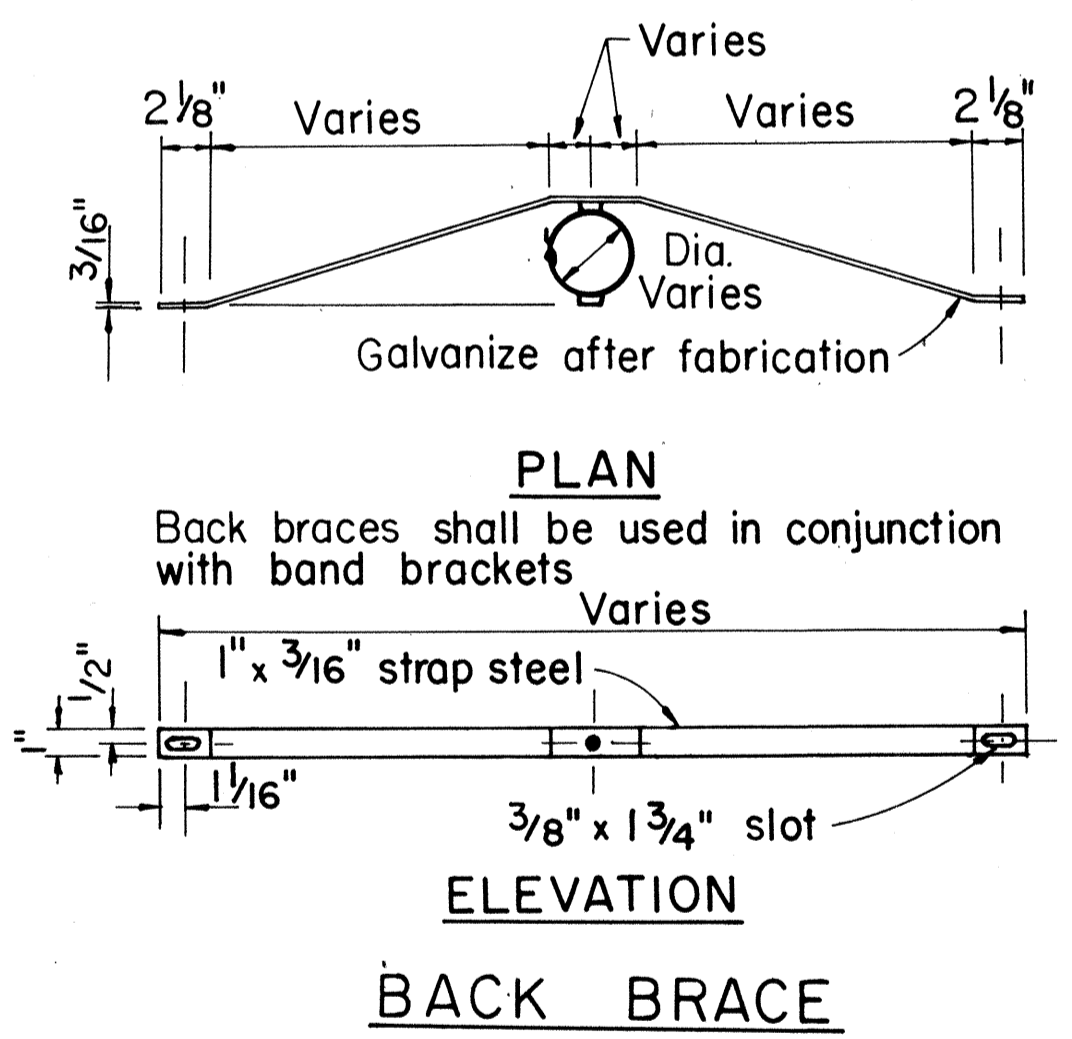
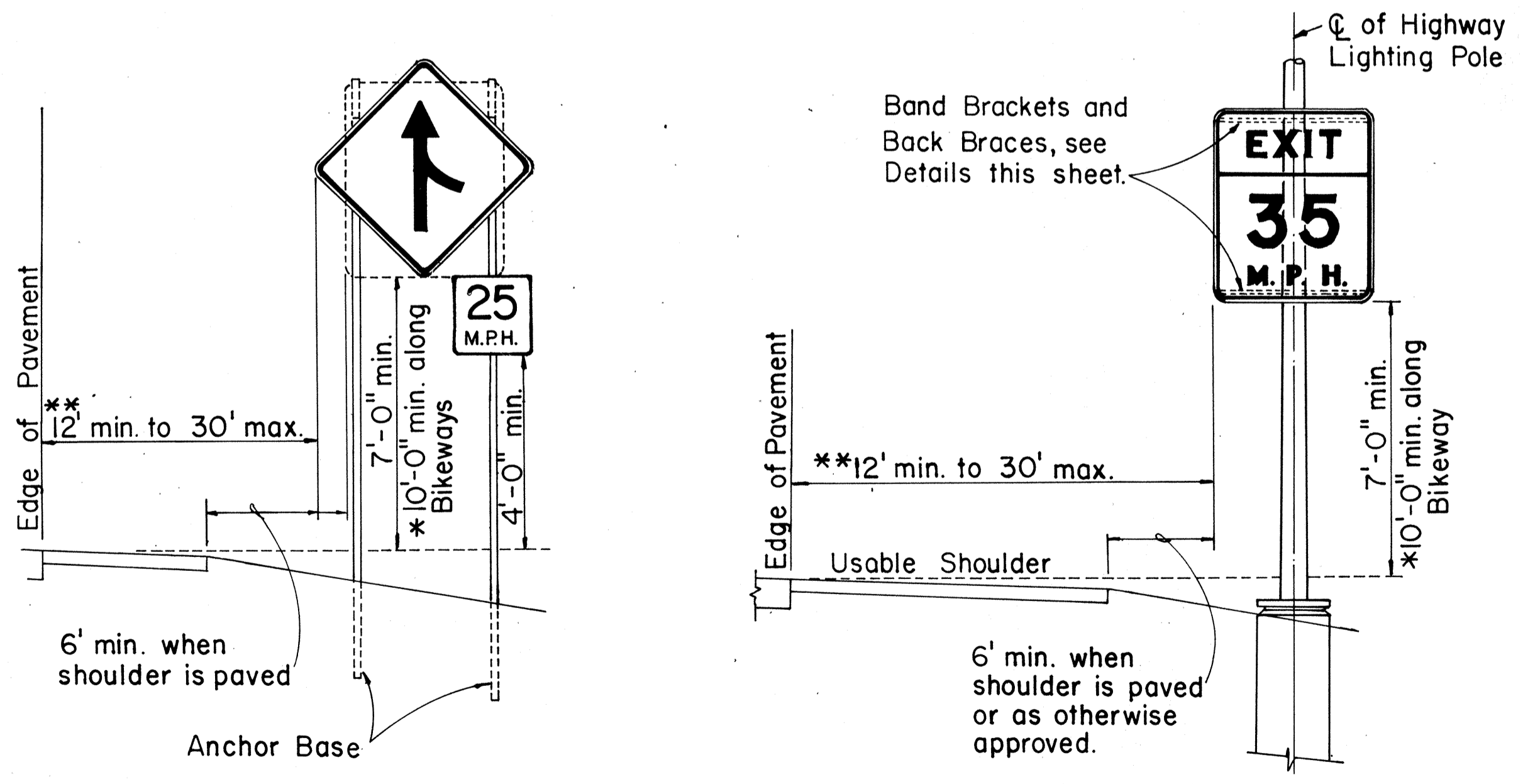
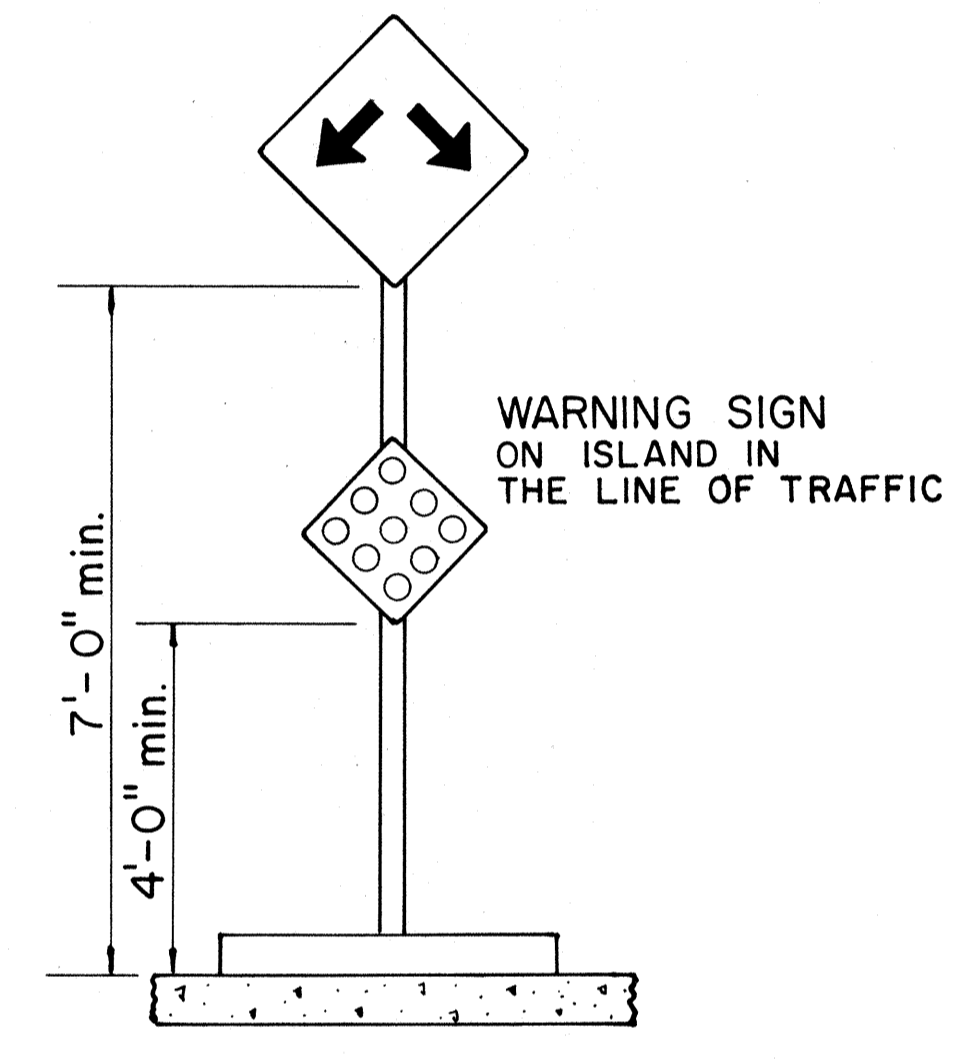
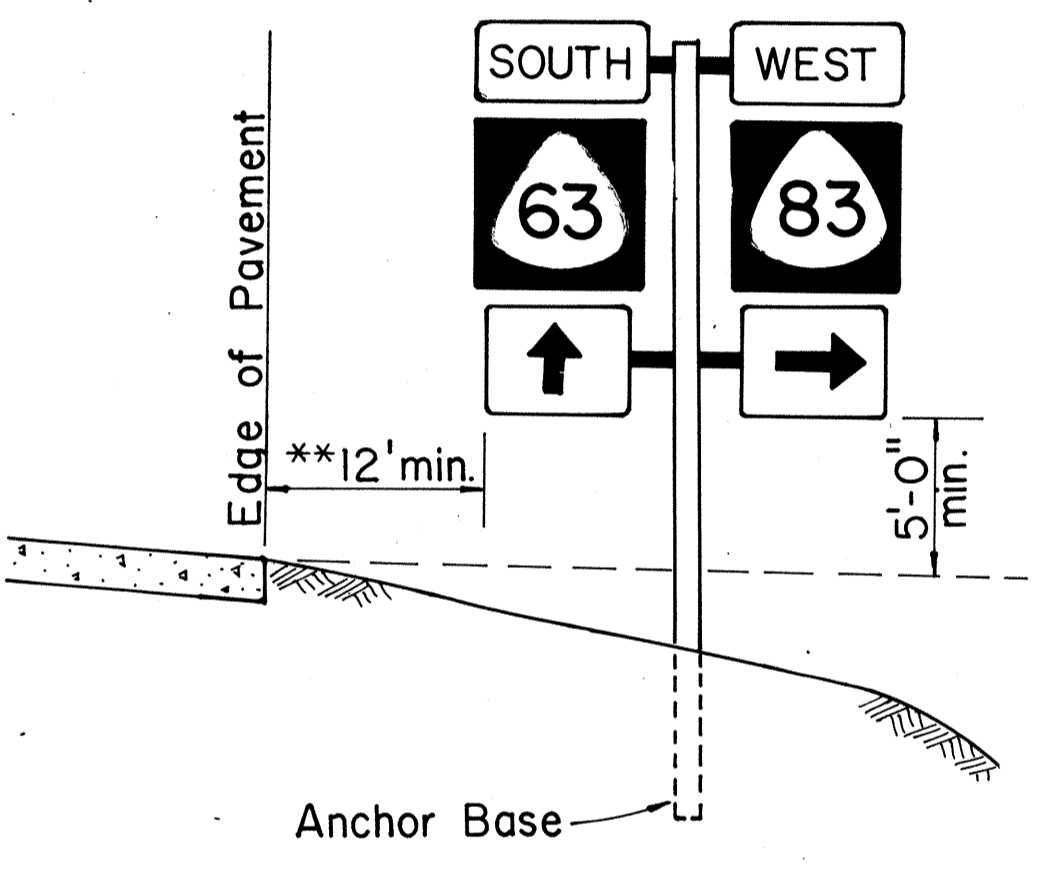
1. Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
2. Sign 48" and wider or larger than 10 sq. ft. in area shall be mounted on two or more sign posts except as noted below.
3. 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:
 - a. 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.
 - b. 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.
 - c. Signs larger than 28 sq. ft. in area shall be mounted with a minimum of three sets of band bracket and back braces.
4. All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
5. Sign posts shall extend 3 1/2" above each sign, where required, for attachment of City and County street name signs.
6. (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.
9. 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.
10. 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 10/14/83
 TRAFFIC ENGINEER DATE

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
MISCELLANEOUS SIGN DETAILS

Not to Scale: Oct. 1983
 SHEET No. 12 OF 35 SHEETS DT 100

DATE: _____
 SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN NO. _____

HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-IR-HI-(62):17	1983	85	280

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 = $A \times B \times H$
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

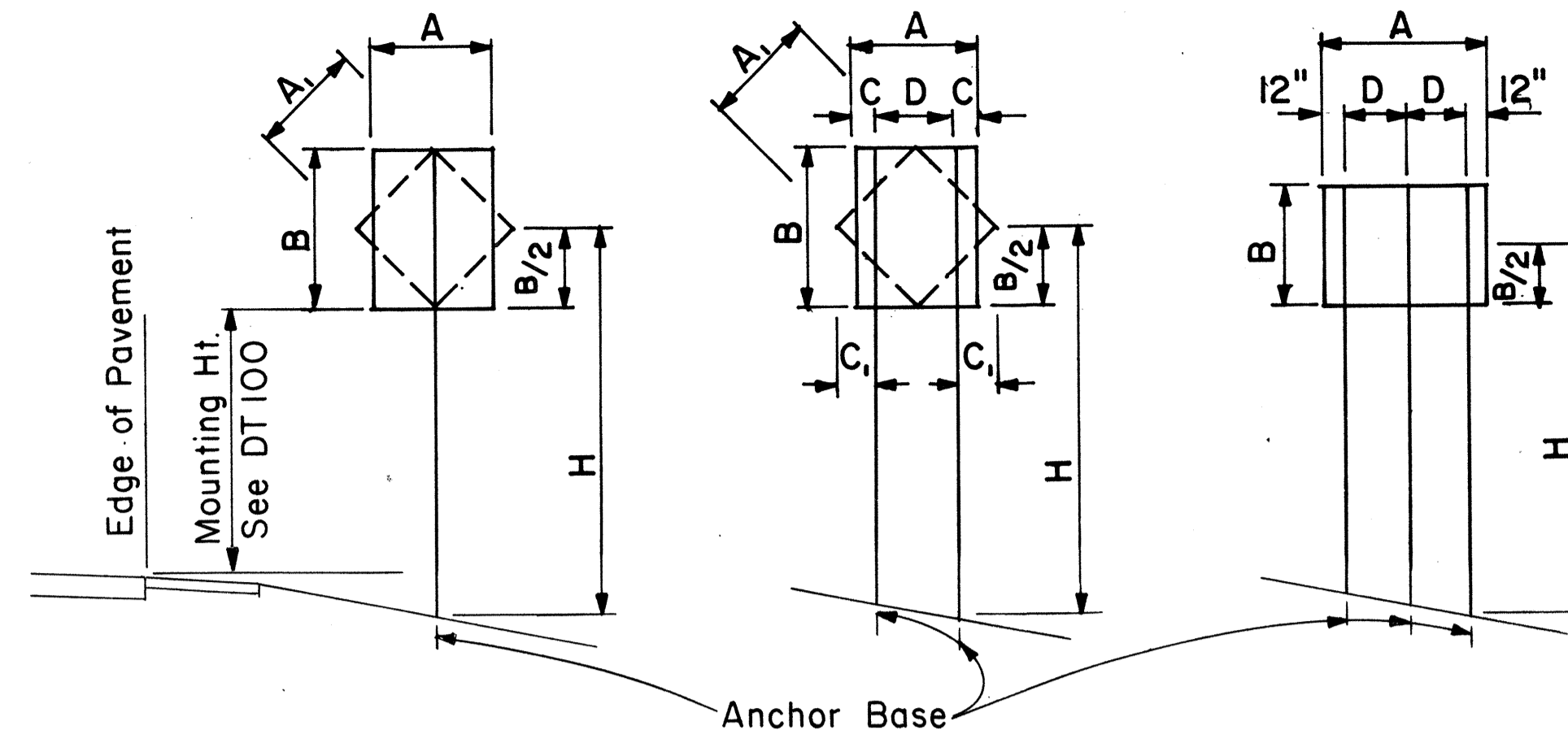
APPROVED:

Robert Zafiris 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. P-12A OF 35 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

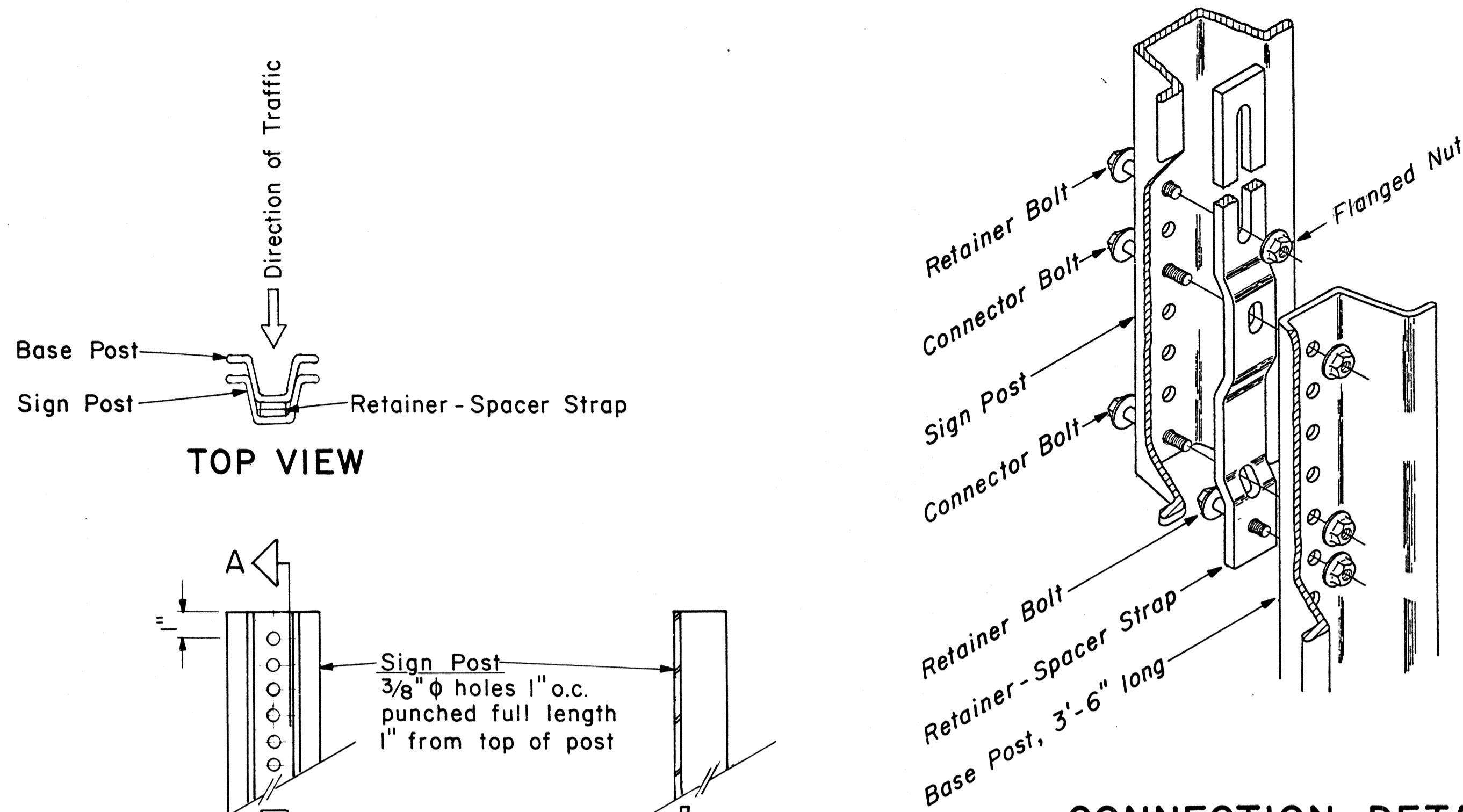
FLANGED CHANNEL: 1-POST INSTALLATION							
Post Size	A x B x H (Factor)	H = Ground Level to Midpoint (ft.)					
		7	8	9	10	11	12
2.50 lbs./ft.	57	8.14	7.13	6.33	5.70	5.18	4.75
4.00 lbs./ft.	112	-	-	-	-	-	9.33

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

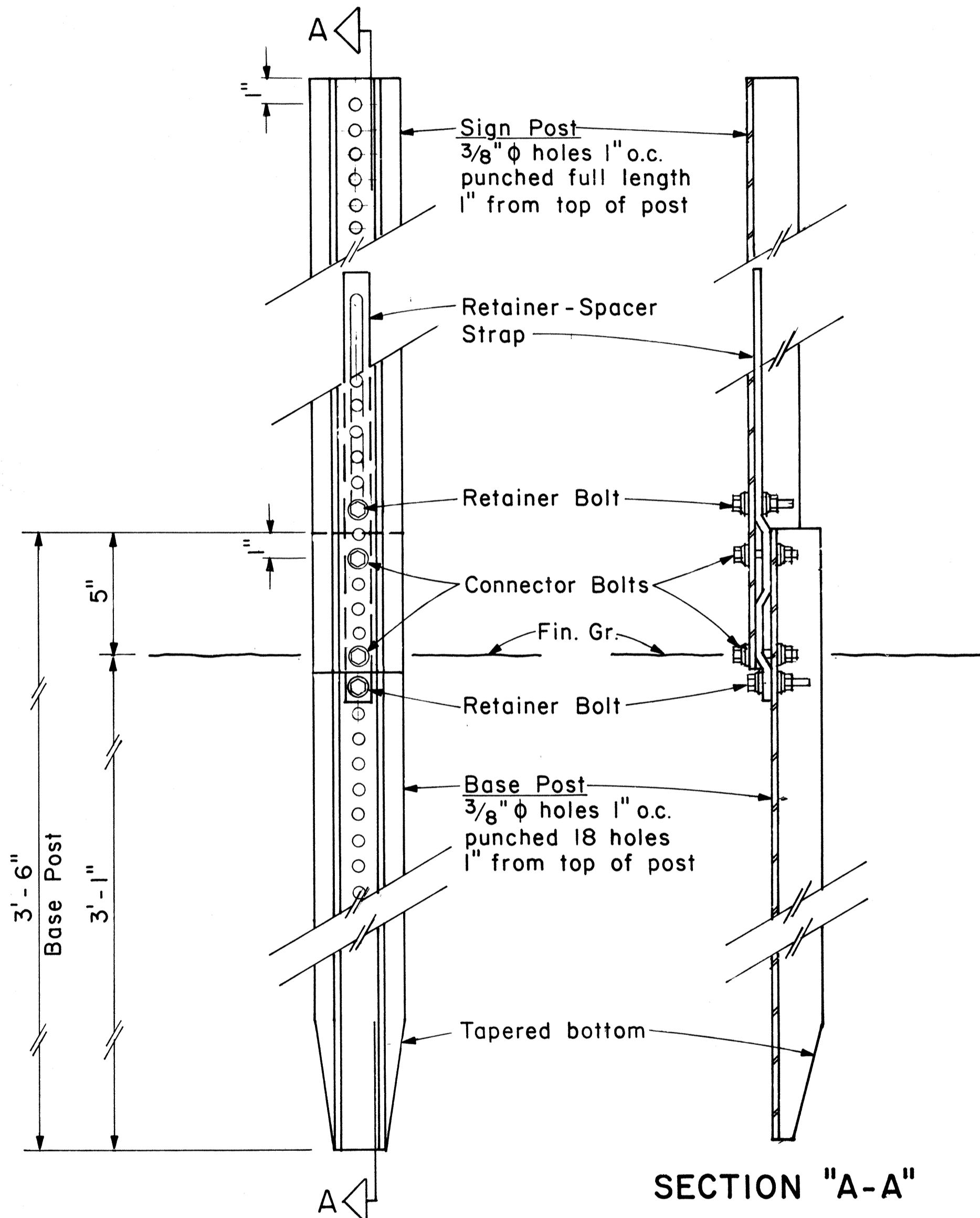
WINDLOAD CHARTS

NO.	REVISION	APPROVED BY	DATE



CONNECTION DETAIL

Not to Scale

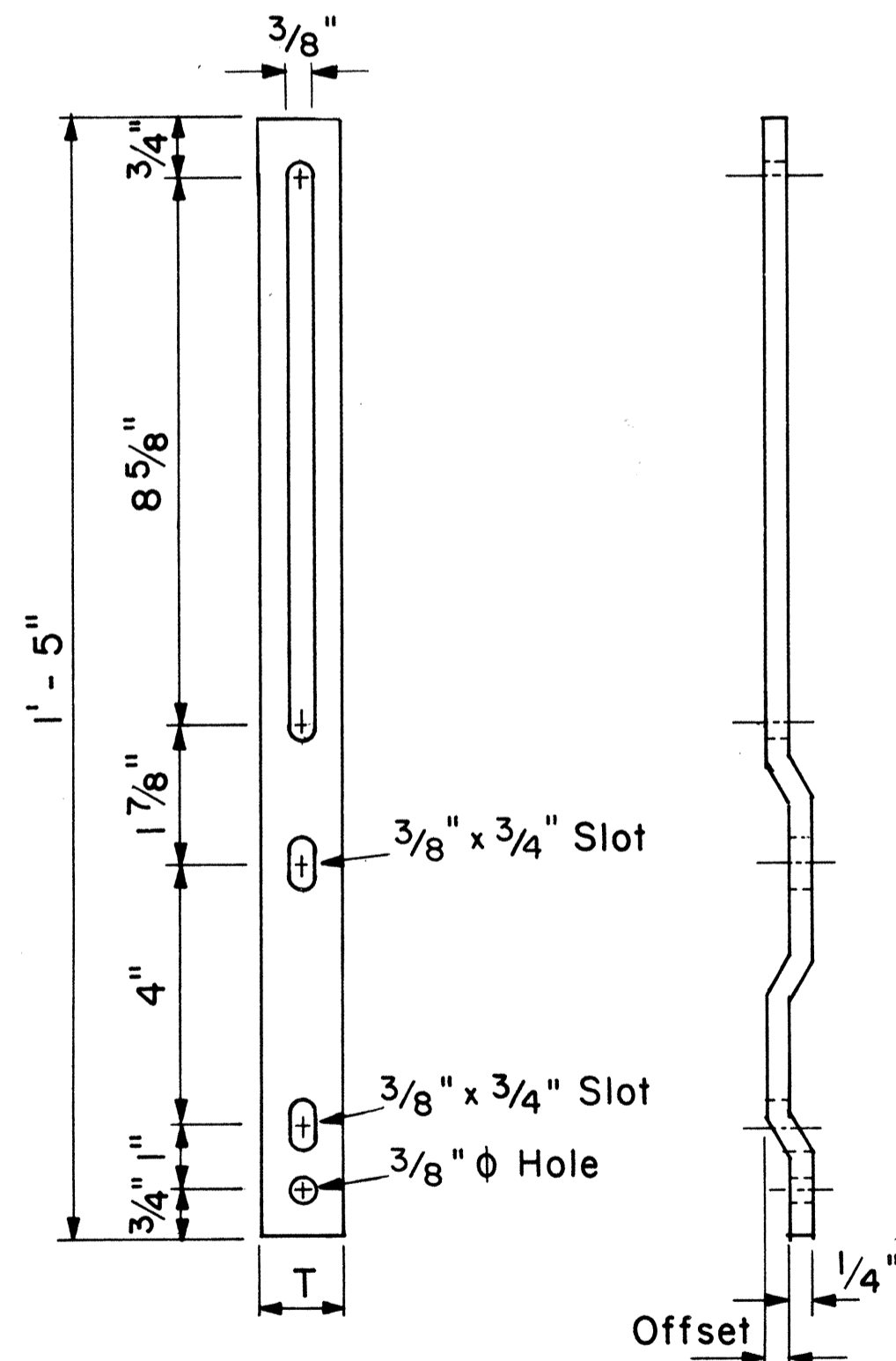


SECTION "A-A"

BACK VIEW

ANCHOR BASE DETAIL

Scale: 3" = 1'-0"



RETAINER-SPACER STRAP

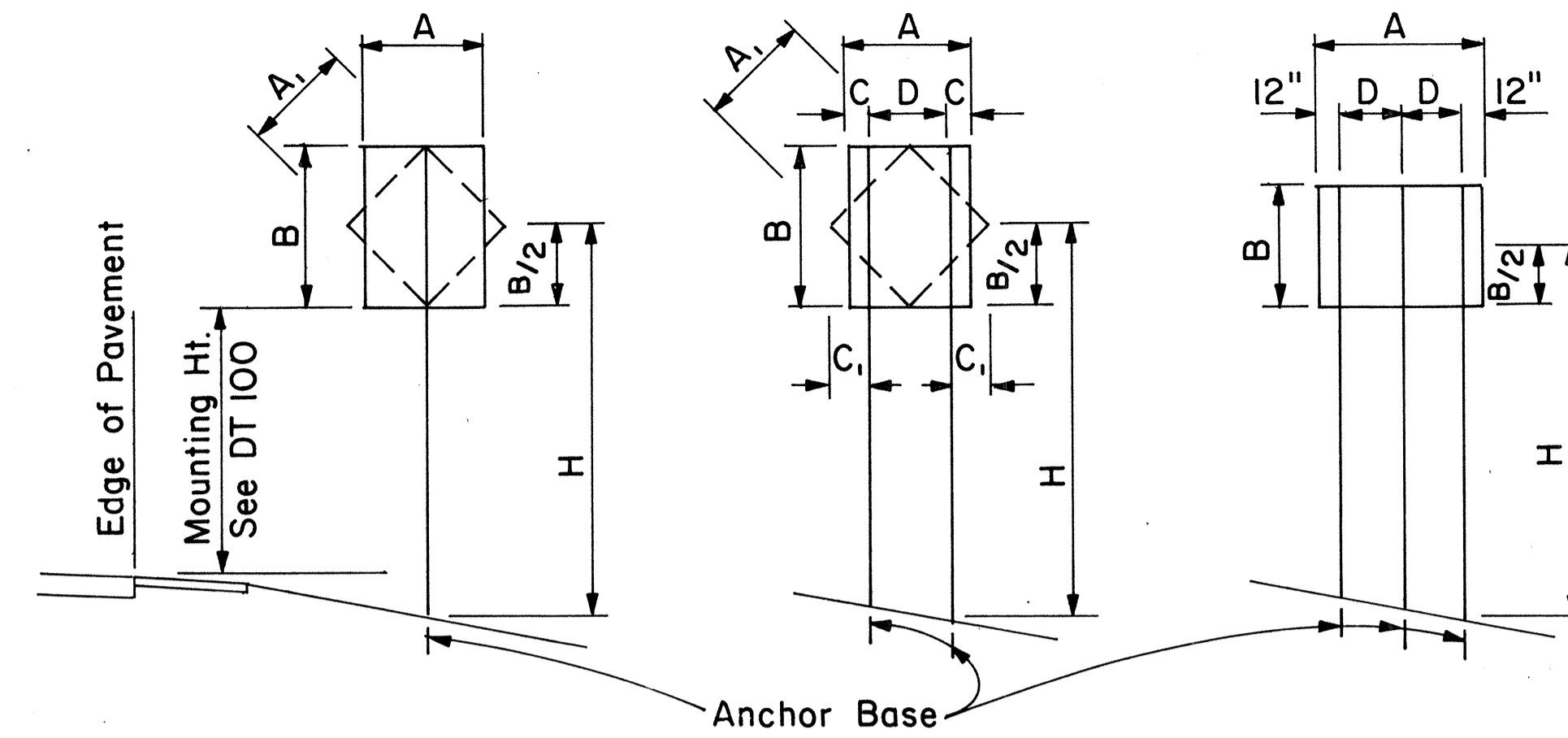
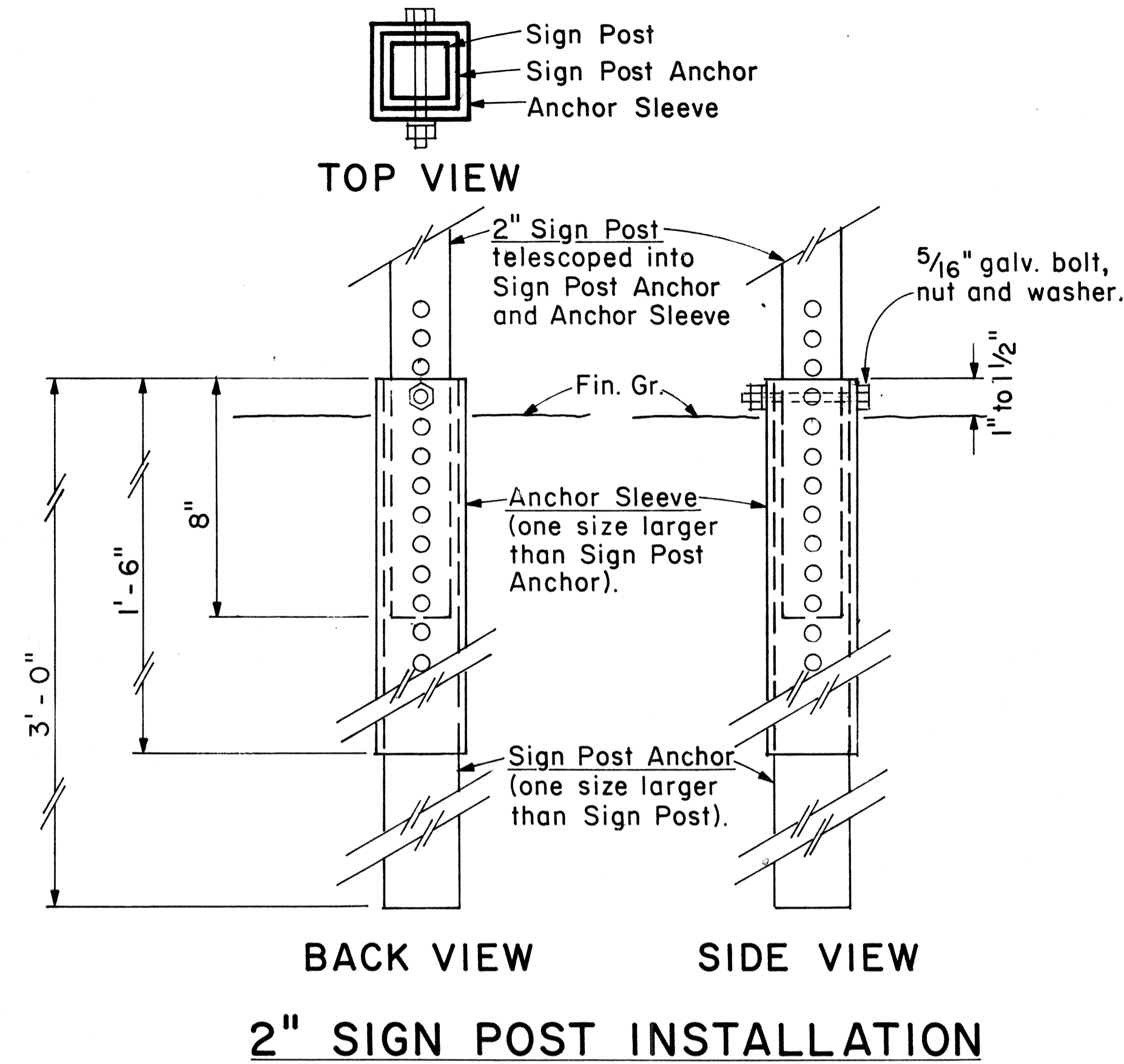
Not to Scale

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: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN 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,
 $Maximum\ sign\ area(A \times B) = \frac{Factor}{H}$



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

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

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

WINDLOAD CHARTS

NO.	REVISION	APPROVED BY	DATE

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

APPROVED:
Harbert 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: Sept. 1982

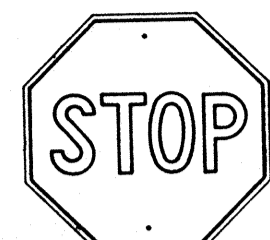
SHEET No. P-128 OF 35 SHEETS DT100B

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

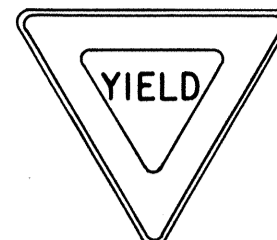
ANCHOR BASE DETAIL

Scale: 3" = 1'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1983	1983	87	280



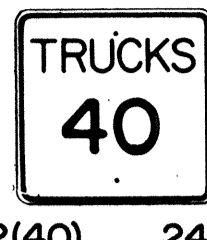
R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"



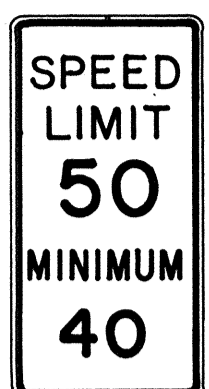
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



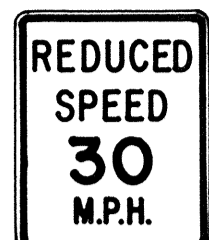
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



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"



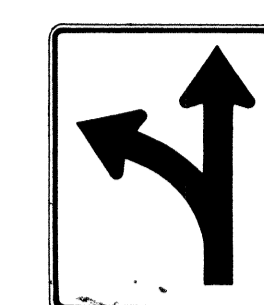
R3-3 24" x 24"
R3-3-A 48" x 48"



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"



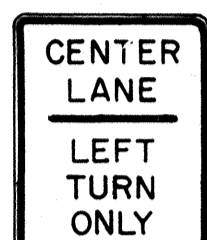
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



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"



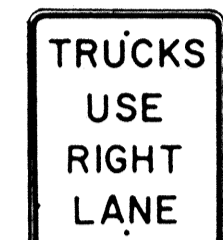
R4-1 24" x 30"



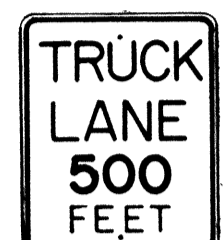
R4-2 24" x 30"



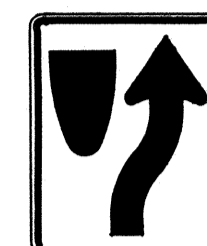
R4-3 24" x 30"
R4-3-A 48" x 60"



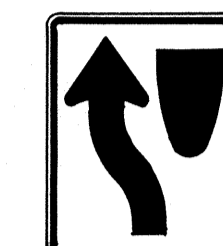
R4-5 24" x 30"



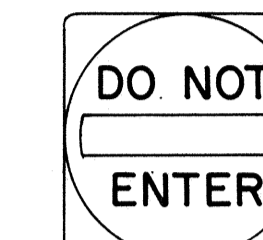
R4-6(500) 24" x 30"



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



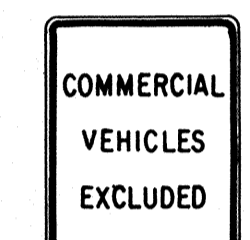
R4-8 24" x 30"
24" x 18"



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



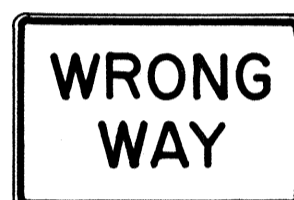
R5-2 24" x 24"
24" x 18"



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"



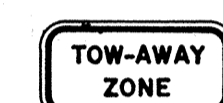
R7-4 12" x 18"
R7-4-A 24" x 30"



R7-107(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"



R8-2 24" x 30"



R8-3 24" x 30"



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



R8-5 24" x 30"



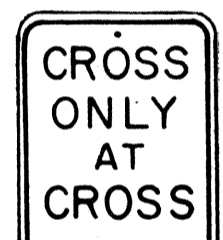
R8-6 24" x 30"



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"



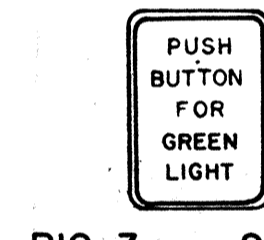
R9-4 18" x 24"



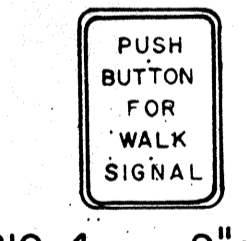
R10-1 12" x 18"



R10-2 12" x 18"



R10-3 9" x 12"



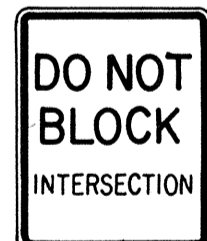
R10-4 9" x 12"



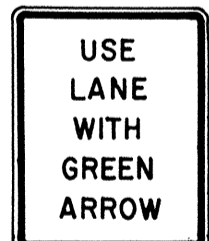
R10-5 24" x 30"



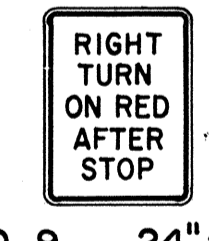
R10-6 24" x 36"



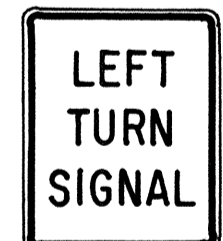
R10-7 24" x 30"



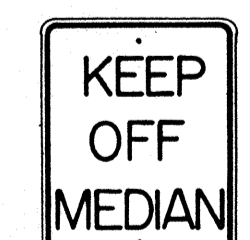
R10-8 24" x 30"



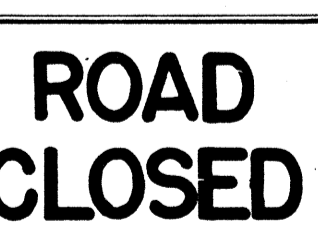
R10-9 24" x 30"



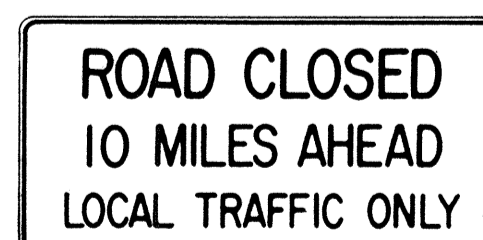
R10-10 24" x 30"



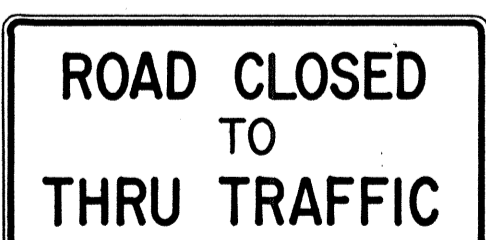
R11-1 24" x 30"



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:
Eiichi 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.	3/20/72
2	Revised General Note 1.	H.T.	10/10/74
3	Added General Note 5	H.T.	6/9/79

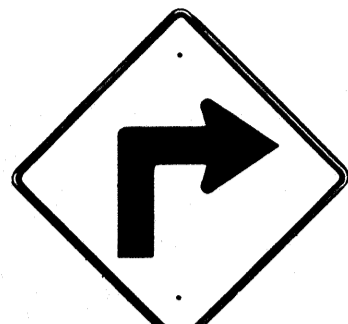

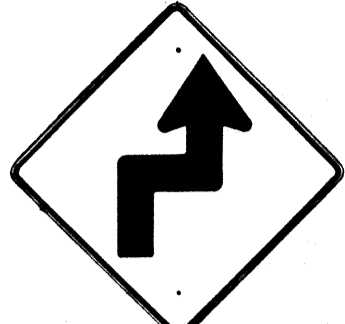
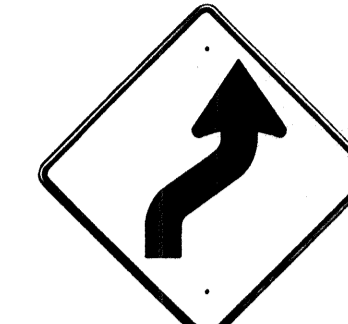
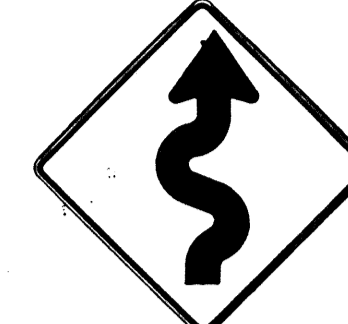
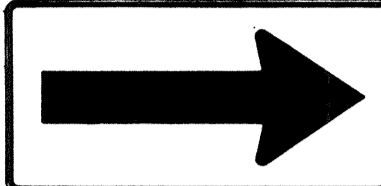
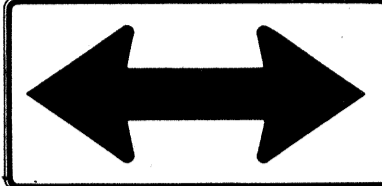
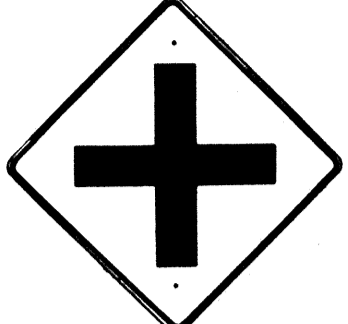
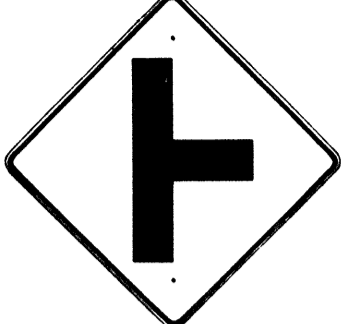
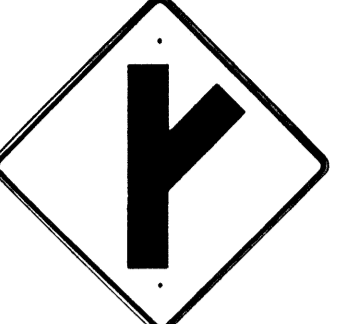
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

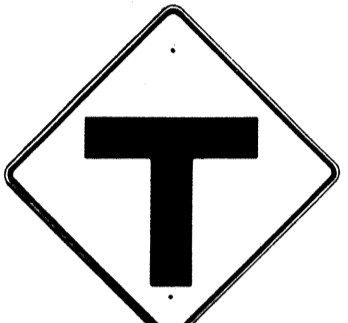



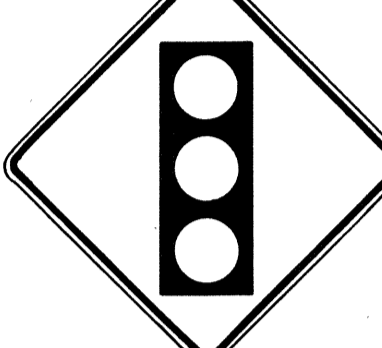

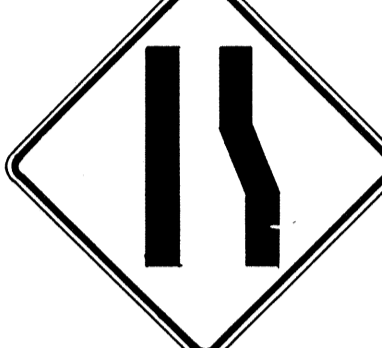



STANDARD DETAILS
REGULATORY SIGNS











NOT TO SCALE








SHEET No. P-13 OF 35 SHEETS DT 101

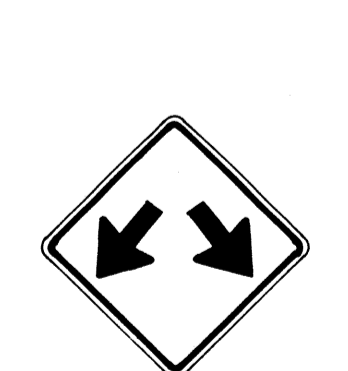


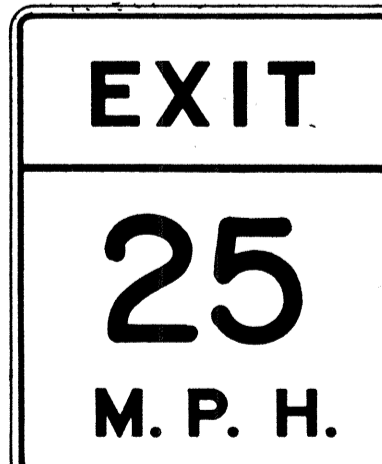
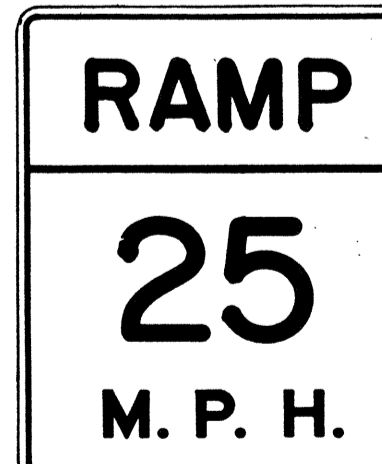


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII*	HAW.	111-10317	1933	88	280

 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"
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 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"
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 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"
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 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"
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 W12-1 24"x24" W12-1-A 36"x36" W12-1-B 48"x48"	 W12-2(12'-6") 36"x36" 24"x18"	 W13-1(25) 18"x18" W13-1(25)-A 24"x24"	 W13-2(25) 48"x60"	 W13-3(25) 48"x60"	 W14-1 30"x30"	 W14-3 36"x48"x48"
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GENERAL NOTES

- Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
- All warning signs shall be reflectorized unless otherwise specified.
- All warning signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized.

APPROVAL RECOMMENDED:
E. Tanaka
 TRAFFIC ENGINEER DATE 3/17/72

APPROVED:
W. Sakai
 ASSISTANT CHIEF, ENGINEERING DATE 3-20-72

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1	H.T.	10/16/72
3	Revised General Note 5	M.T.	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. P-14 OF 35 SHEETS DT 102

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

DATE: _____
 SURVEY PLOTTED BY: _____
 PLAN DESIGNED BY: _____
 TRACED BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1RHH(10)1	1983	89	280

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"

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 PED XING
R9-3a 18" x 18"
18" x 12"
R9-3a-A 24" x 24"
24" x 18"

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

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

NO TURN ON RED
R10-11a 24" x 30"

TURN RIGHT ANY TIME WITH CAUTION
4" Series C
R16-1 24" x 30"

NO LEFT TURN ON RED
- 4" Series D -
- 3" Series D -
- 2" Series D -
- 3" Series D -
R16-3 18" x 24"

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

UNLICENSED VEHICLES BICYCLES, CYCLES UNDER 5 H P, PEDESTRIANS KEEP OUT FREEWAY
3" Series C
4" Series E
R16-5 36" x 42"

TURN AHEAD
- 8" Series F
- 5" Series D
R16-6 24" x 30"

U TURN OK
- 8" Series F
- 5" Series D
R16-7 24" x 30"

MOTOR-DRIVEN CYCLES PROHIBITED
4" Series B
R5-8 30" x 24"

U TURN AHEAD
W17-1(L) 60" x 60"

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

YIELD AHEAD
W3-2a 36" x 36"
24" x 18"
W3-2a-A 48" x 48"
24" x 18"

STOP AHEAD WHEN FLASHING
6" Series C
W3-4 48" x 48"

TRUCK CROSSING
W8-6 30" x 30"
W8-6-A 36" x 36"

THRU TRAFFIC MERGE LEFT
6" Series E
W9-3(L) 48" x 48"

EQUESTRIAN XING
W11-7 36" x 36"
24" x 18"
W11-7-A 48" x 48"
24" x 18"

FIRE STATION
W11-8 36" x 36"
24" x 18"
W11-8-A 48" x 48"
24" x 18"

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
S3-1 30" x 30"

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

WHEN CHILDREN ARE PRESENT
S4-2 24" x 10"

SCHOOL
S4-3 24" x 8"

WHEN FLASHING
S4-4 24" x 10"

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

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

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

APPROVED:
Harbert Z. Zakechis 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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978
SHEET NO. P-15 OF 35 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.	FIRHH(69)17	1983	90	280



CW20-1a 48" x 48"



CW20-2d 48" x 48"



CW20-3b 48" x 48"



CW20-4d 48" x 48"



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



CW20-7c 48" x 48"



CW21-1 30" x 30"



CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



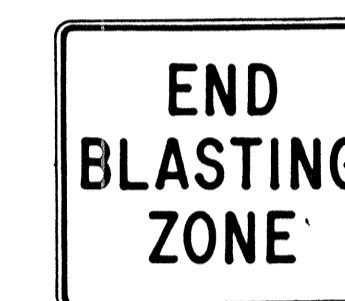
CW21-6 30" x 30"



CW22-1b 48" x 48"



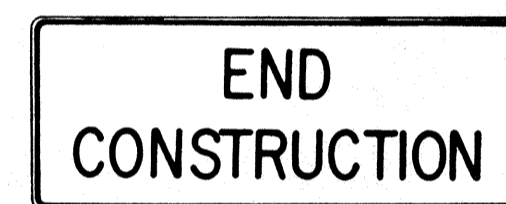
CW22-2 42" x 36"



CW22-3 42" x 36"



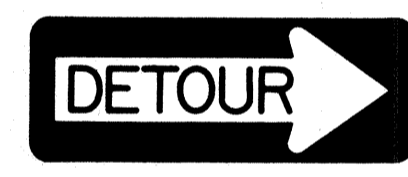
CG20-1(5) 60" x 36"



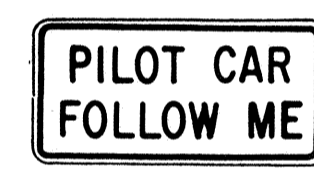
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



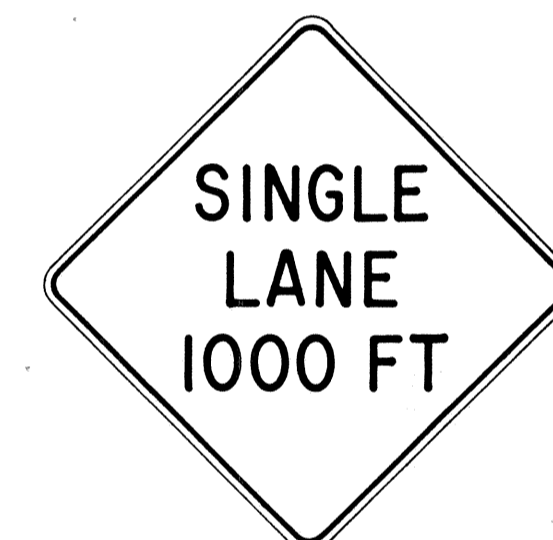
CM4-10(R) 48" x 18"



CG20-4 36" x 18"



CW23-1 36" x 36"



CW23-2b 48" x 48"



CW23-3(R) 48" x 48"

GENERAL NOTES

- Sign details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, and "Standard Highway Signs," 1972, and as amended.
- All construction signs shall be reflectorized.
- All construction signs shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
- For "CW" series signs, suffixes a,b,c and d are as follows:
a-1500 FT, b-1000 FT, c-500 FT and d-AHEAD.

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

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

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

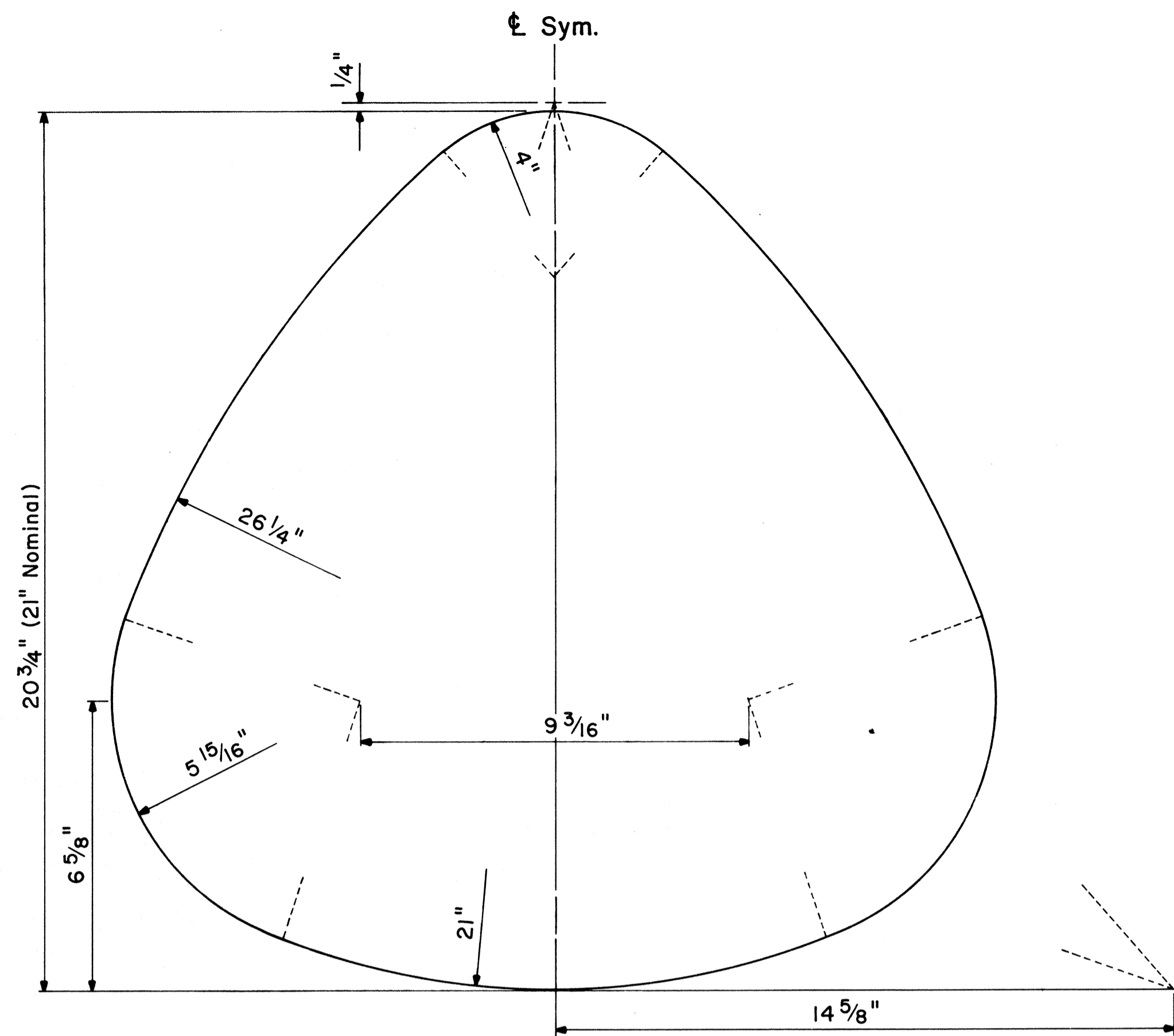
STANDARD DETAILS
CONSTRUCTION SIGNS

NOT TO SCALE

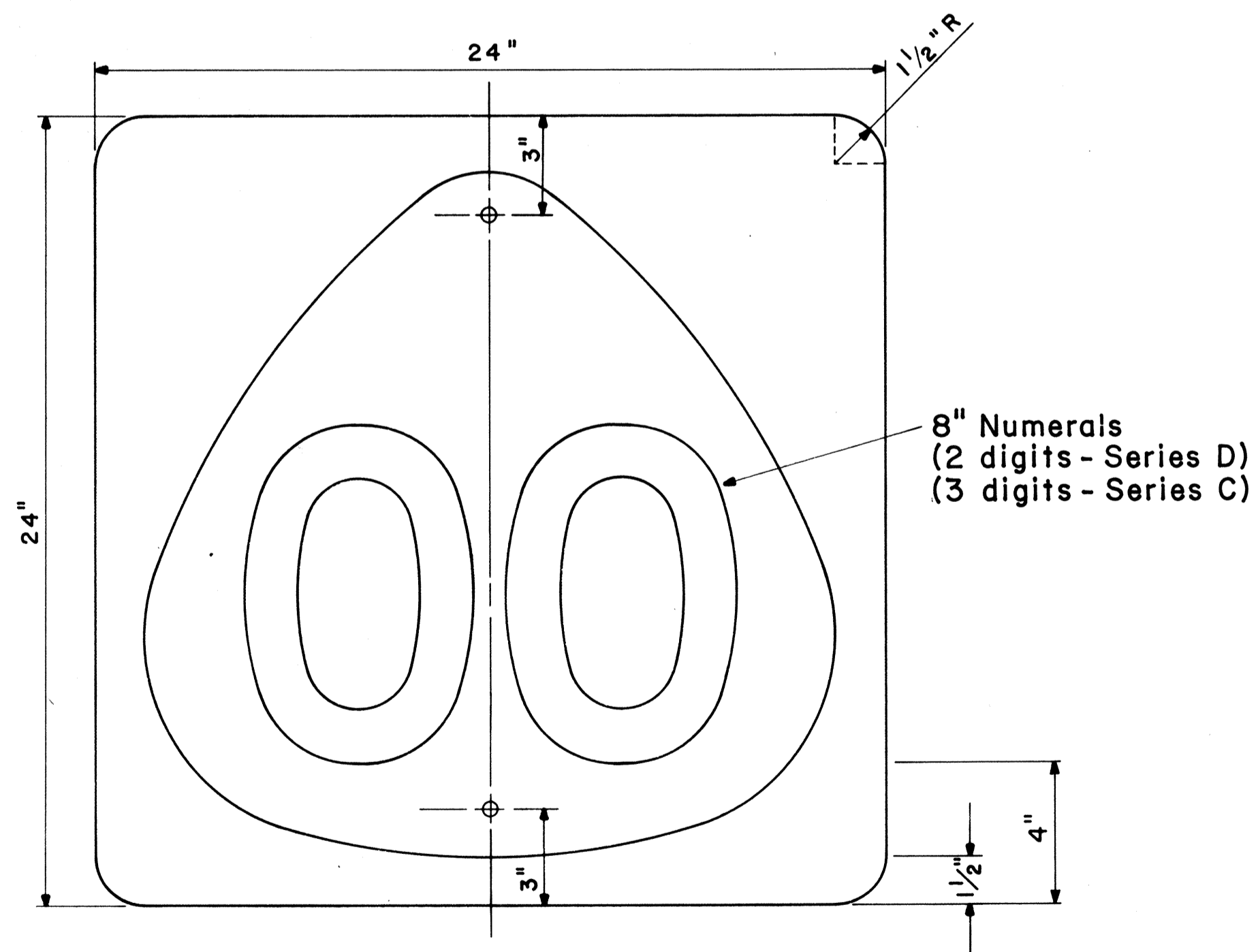
SHEET No. P-16 OF 35 SHEETS DT 104

DATE	_____
SURVEY PLATTED BY	_____
DRAWN BY	_____
TRACED BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
No.	_____

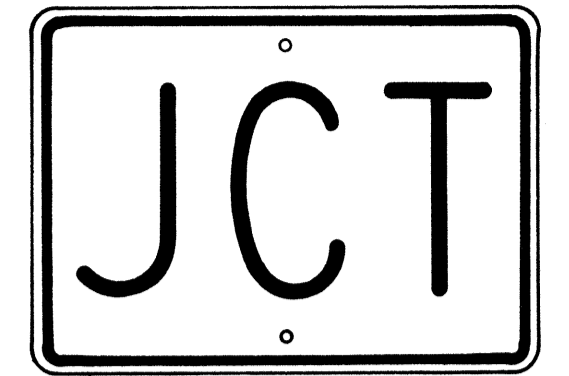
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-111(10)17	1983	91	280



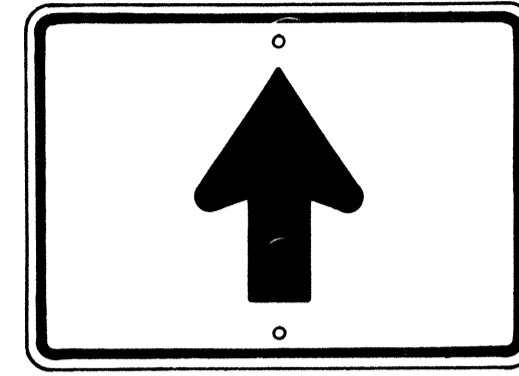
STATE ROUTE MARKER DETAIL
Not to Scale



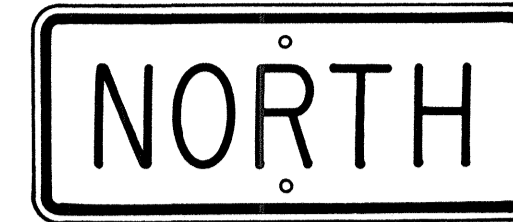
STATE ROUTE MARKER
M1-6 (00) 24" x 24"
Scale: 1/4" = 1"



M2-1 21" x 15"



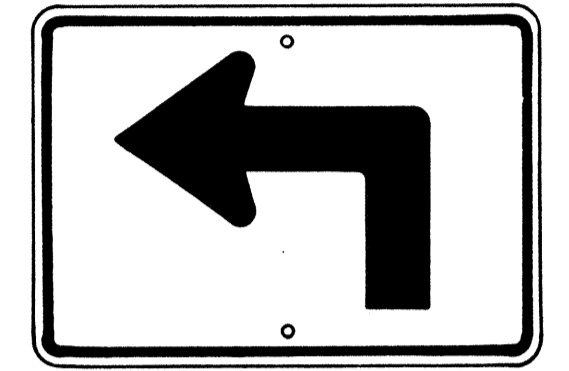
M6-3 21" x 15"



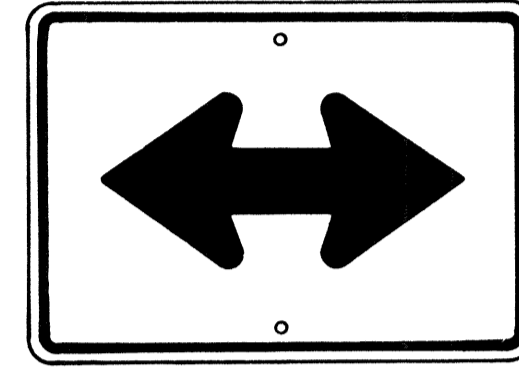
M3-1 24" x 12"
M3-1-A 36" x 18"



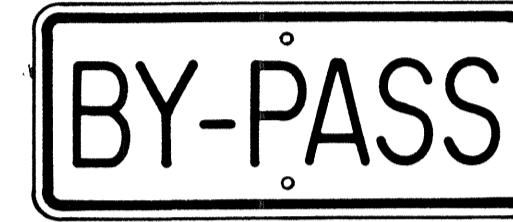
M4-1 24" x 12"



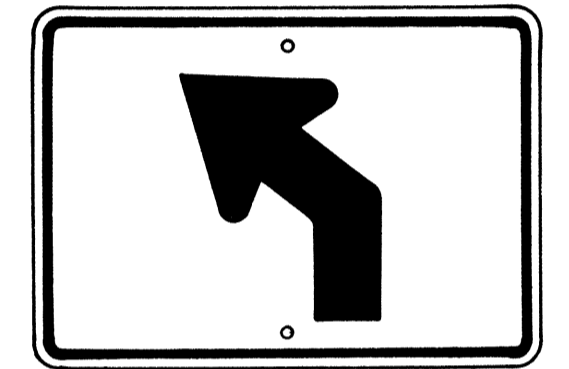
M5-1(L) 21" x 15"



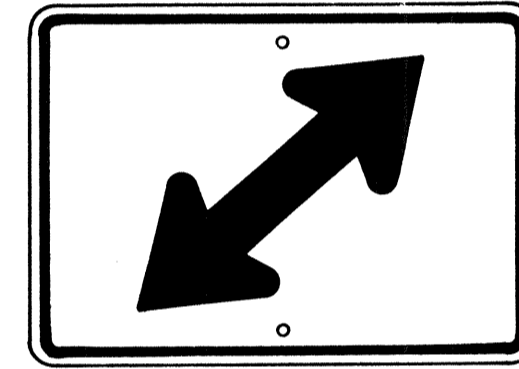
M6-4 21" x 15"



M4-2 24" x 12"



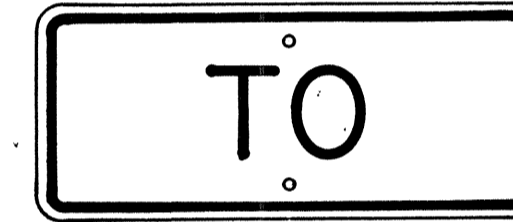
M5-2(L) 21" x 15"



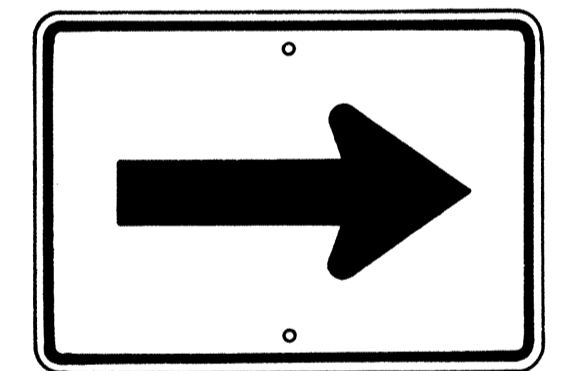
M6-5(R) 21" x 15"



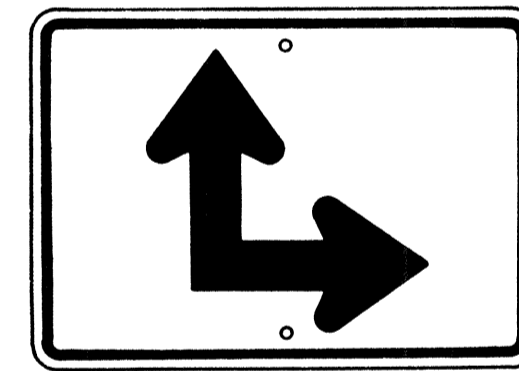
M4-3 24" x 12"



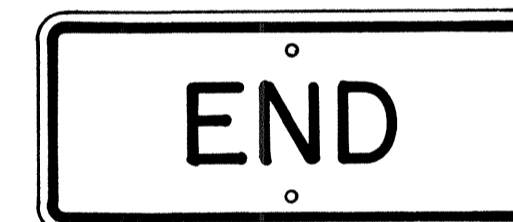
M4-5 24" x 12"



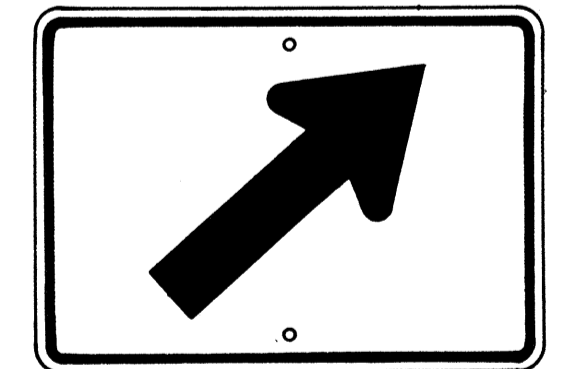
M6-1 21" x 15"



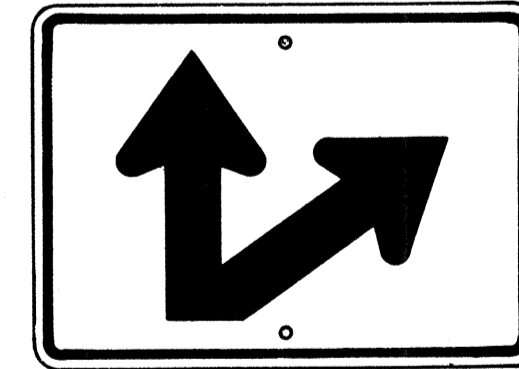
M6-6(R) 21" x 15"



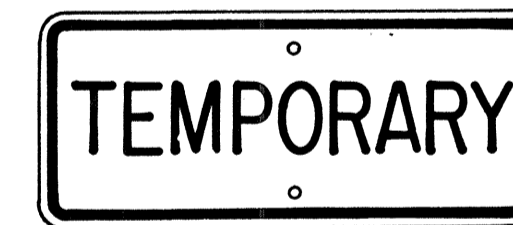
M4-6 24" x 12"



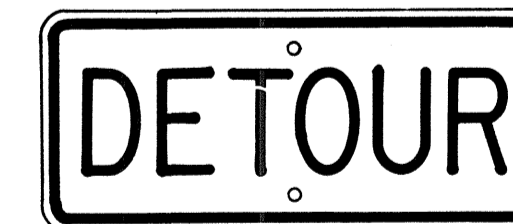
M6-2(R) 21" x 15"



M6-7(R) 21" x 15"



M4-7 24" x 12"



M4-8 24" x 12"

GENERAL NOTES

- Marker details shall conform to the FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, "Standard Alphabets for Highway Signs," 1966, and "Standard Highway Signs," 1972, and as amended.
- All markers shall be reflectorized unless otherwise specified.
- All markers shall have 3/8" bolt holes drilled at appropriate locations.
- Numerals in () indicates numerals to be inserted for marker message. (R) or (L) indicates right or left.
- Sign message of Cardinal Direction Marker (M3 series) shall be denoted by the following:
 - M3-1 : NORTH
 - M3-2 : EAST
 - M3-3 : SOUTH
 - M3-4 : WEST
- Markers prefixed with "IM" on the plans shall have a white legend on a blue background.

AUXILIARY MARKERS

Not to Scale

APPROVAL RECOMMENDED:
Erich Tanaka 6/6/72
 TRAFFIC ENGINEER DATE

APPROVED:
Shuler S. Sakai 6-1-72
 ASSISTANT CHIEF, ENGINEERING DATE

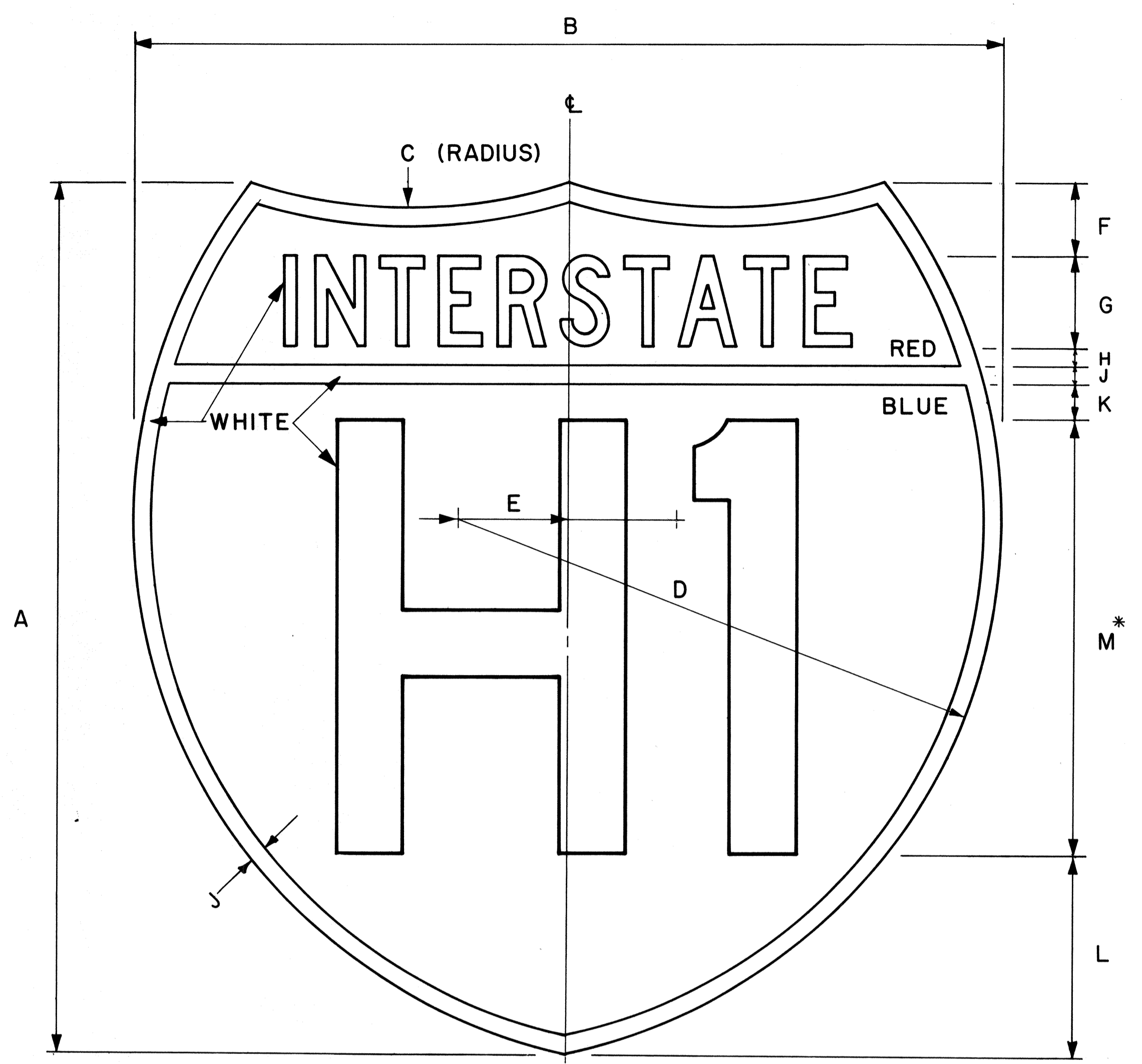
NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 105 Approved 12-30-69	HT.	6/1/72
2	Revised General Note 1	HT.	10/16/74

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
STATE ROUTE MARKER
AND AUXILIARY MARKERS

Scale: As Shown
 SHEET No. P-170F 35 SHEETS DT 105

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FIR-HH(69)47	1969	92	280



INTERSTATE ROUTE MARKER
IM-1()
 Scale: 3/8" = 1"

GENERAL NOTES

- Interstate route marker details shall conform to the latest FHWA publications:
 - "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
 - "Standard Alphabets for Highway Signs," and as amended.
 - "Standard Highway Signs," and as amended.
- All Interstate route markers shall be reflectorized with reflective sheeting.
- All Interstate route markers shall have 3/8" bolt holes drilled at appropriate locations unless otherwise specified.
- The Interstate route marker shall be a cut-out shield in a red, white and blue design as shown on the plans.

INTERSTATE ROUTE MARKER SCHEDULE (INCHES)												
SIZE ()	A	B	C	D	E	F	G	H	J	K	L	M
1	24	24	15	15	3	2	2 1/2 C	1/2	1/2	1	5 1/2	12D
2	36	36	22 1/2	22 1/2	4 1/2	3	3 3/4 C	3/4	3/4	1 1/2	8 1/4	18D
3	48	48	30	30	6	4	5 C	1	1	2	11	24D

* If letters and numerals cannot be accommodated within available space, Series C letters may be used.

APPROVAL RECOMMENDED:
Etsuki Tanaka 4/17/78
 TRAFFIC ENGINEER DATE

APPROVED:
Robert S. Zakeishi 4/18/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Replaces DT 106 Approved 12/30/69.	H.T.	4-18-78

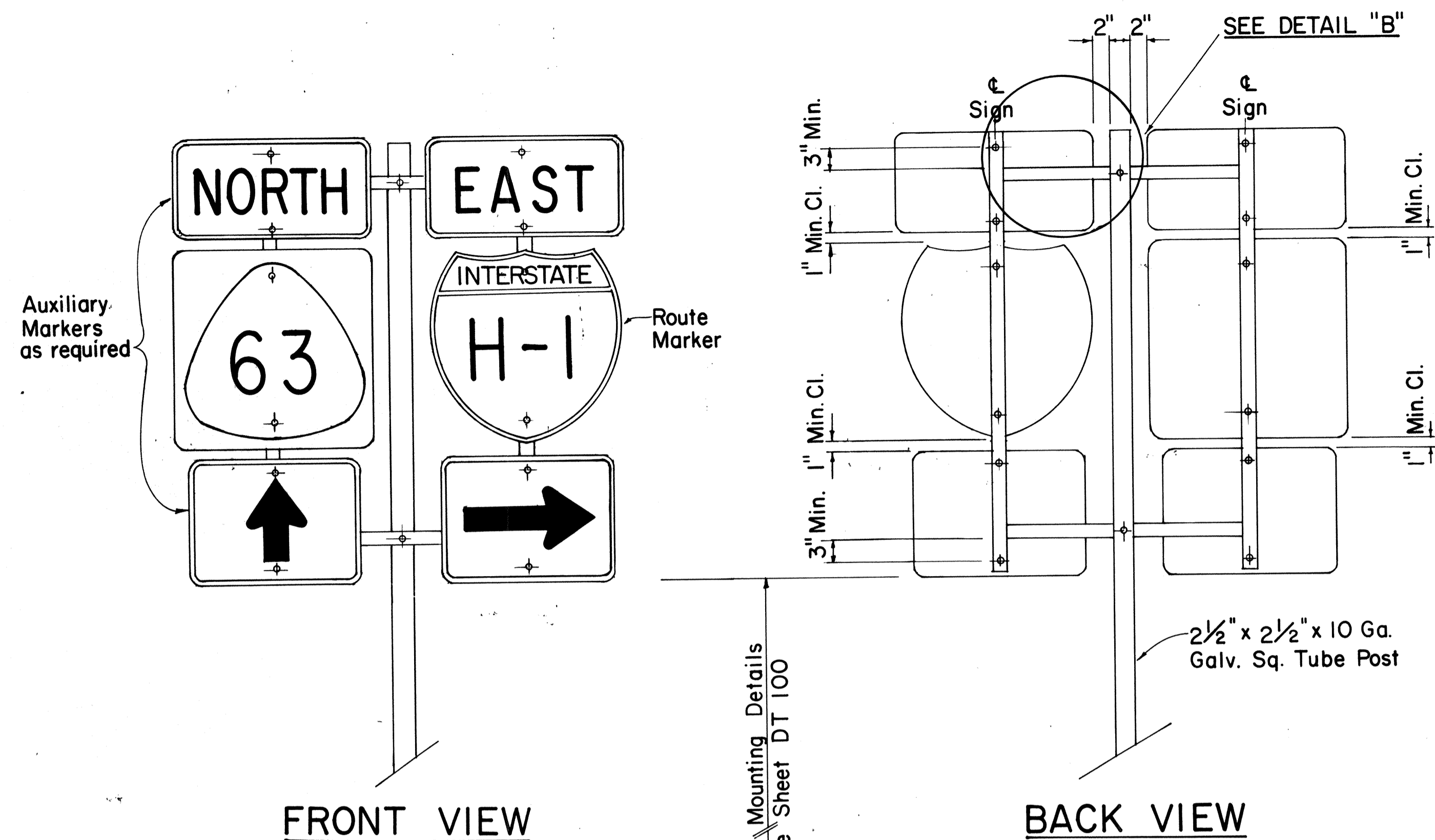
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
INTERSTATE ROUTE MARKER

Scale: 3/8" = 1" Date: January, 1978

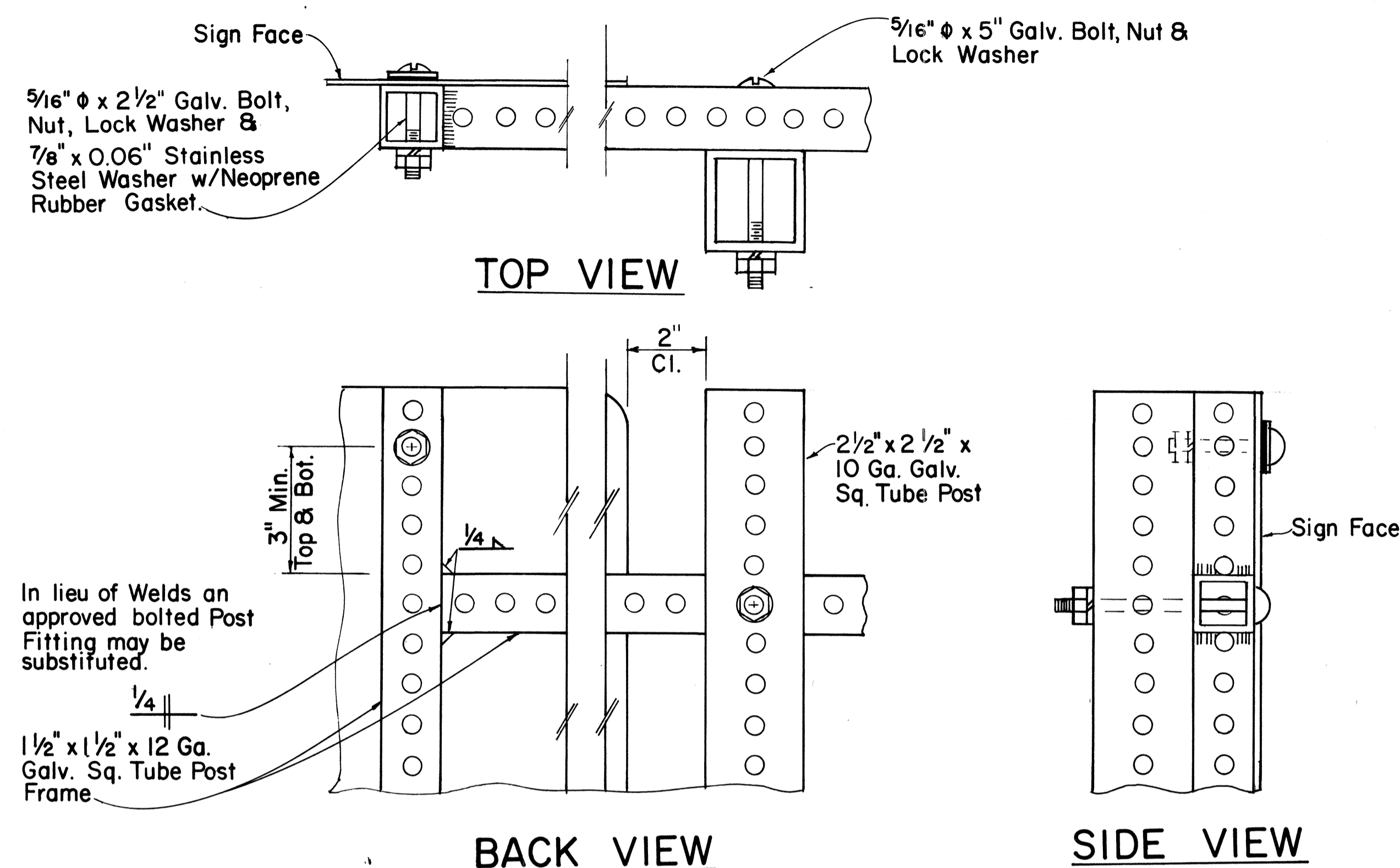
SURVEY PLOTTED BY _____ DATE _____
 DRAWN BY _____
 NOTE BOOK DESIGNED BY _____
 QUANTITIES BY _____
 CHECKED BY _____
 ORIGINAL PLAN No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IRH(10)17	1983	93	280



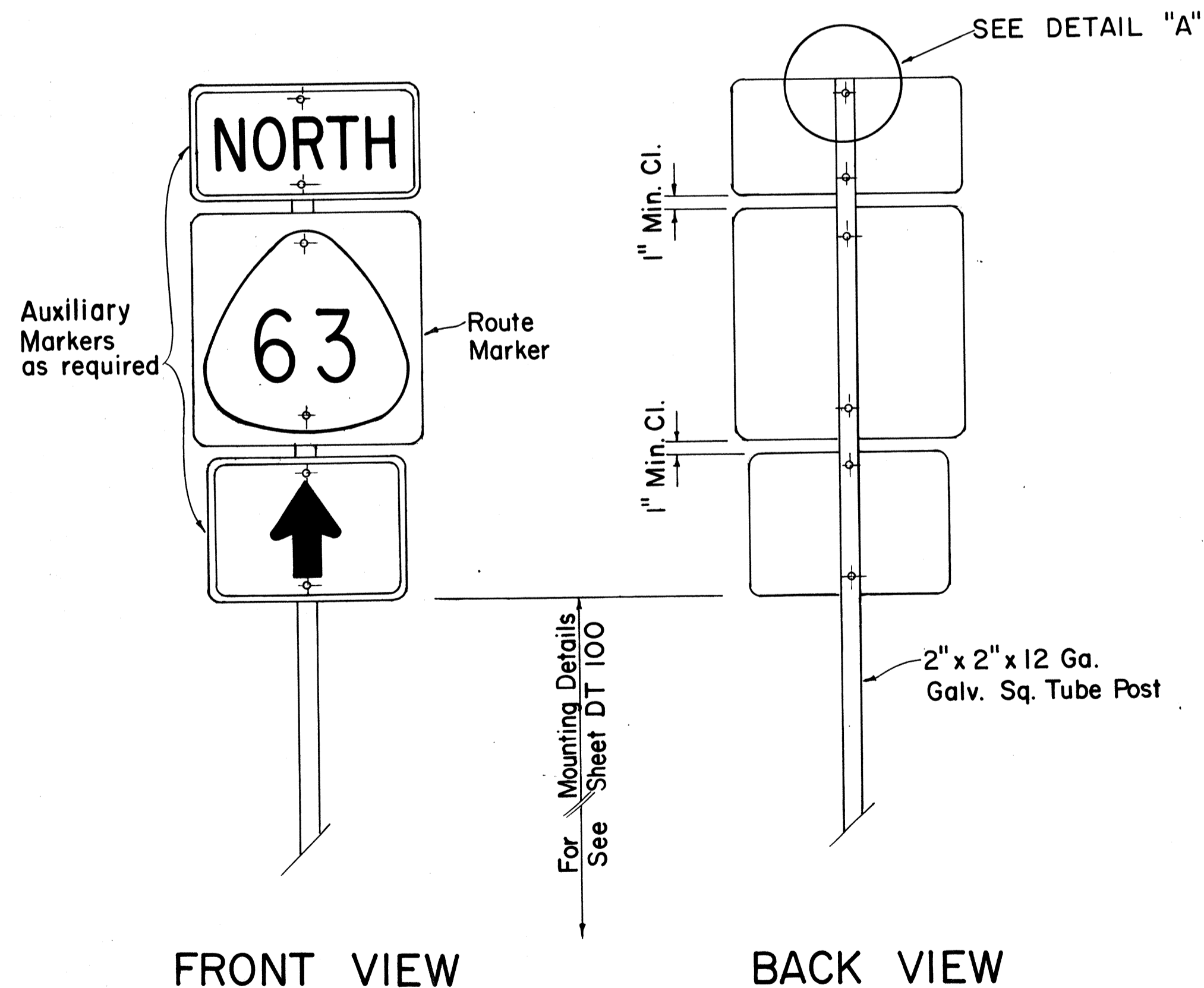
TYPE "B" ASSEMBLY

SCALE: 1" = 1'-0"



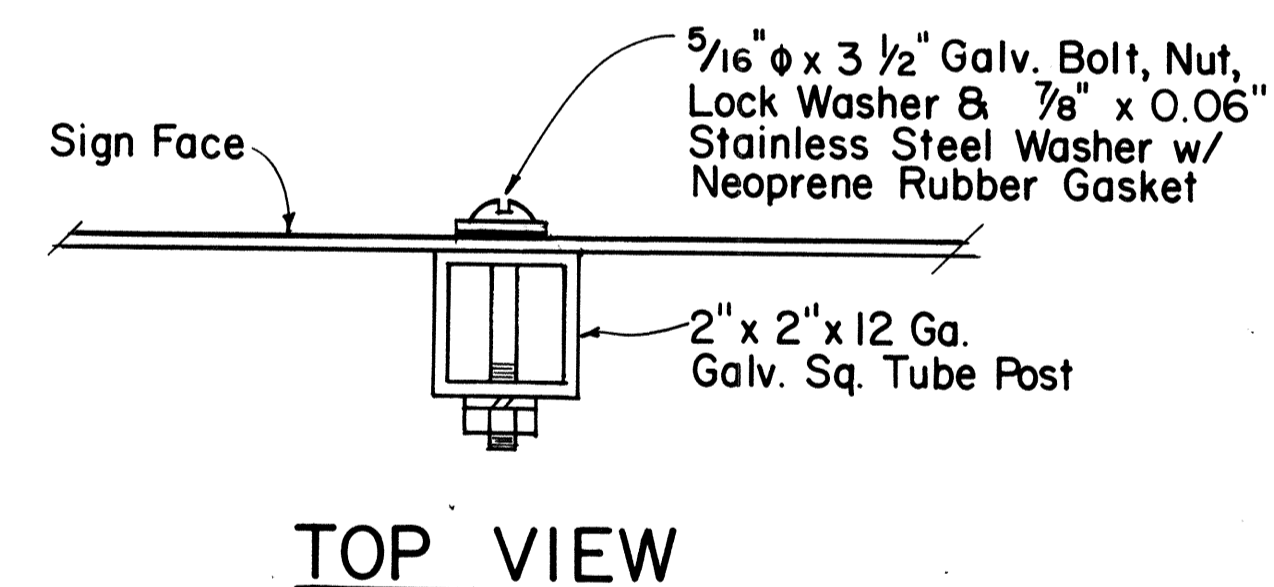
DETAIL "B"

SCALE: 3/8" = 1"



TYPE "A" ASSEMBLY

SCALE: 1" = 1'-0"



DETAIL "A"

SCALE: 3/8" = 1"

APPROVAL RECOMMENDED:

Eiichi Tanaka 7/31/80
TRAFFIC ENGINEER DATE

APPROVED:

Herbert Zakeishi 1/31/80
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 107 dated 12/30/69.	H.T.	1/31/80

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
ROUTE MARKER
ASSEMBLIES

SCALE: AS SHOWN

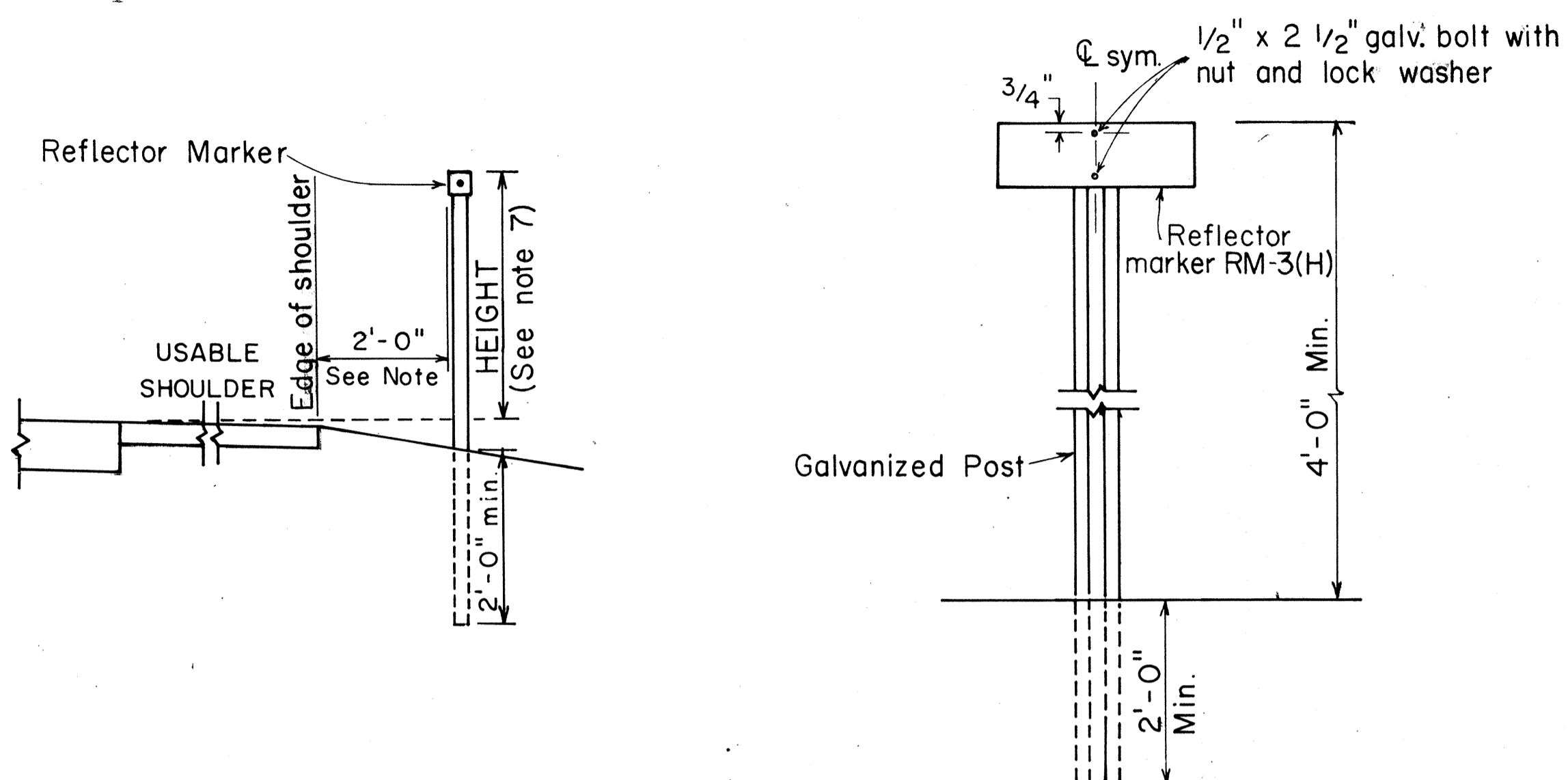
SHEET No. 93 OF 35 SHEETS DT 107

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

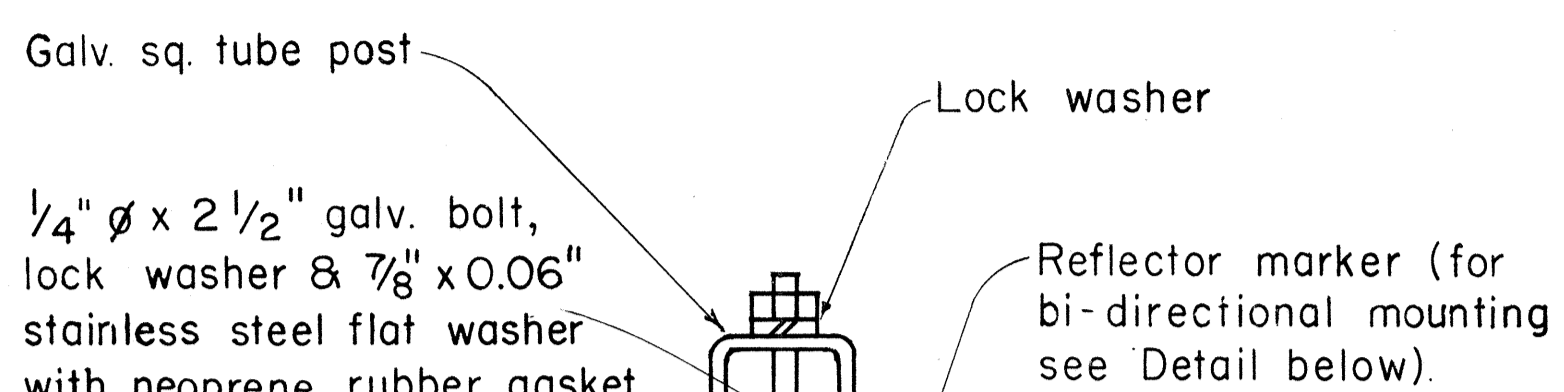
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1R-H-10(2)	1983	94	280

GENERAL NOTES:

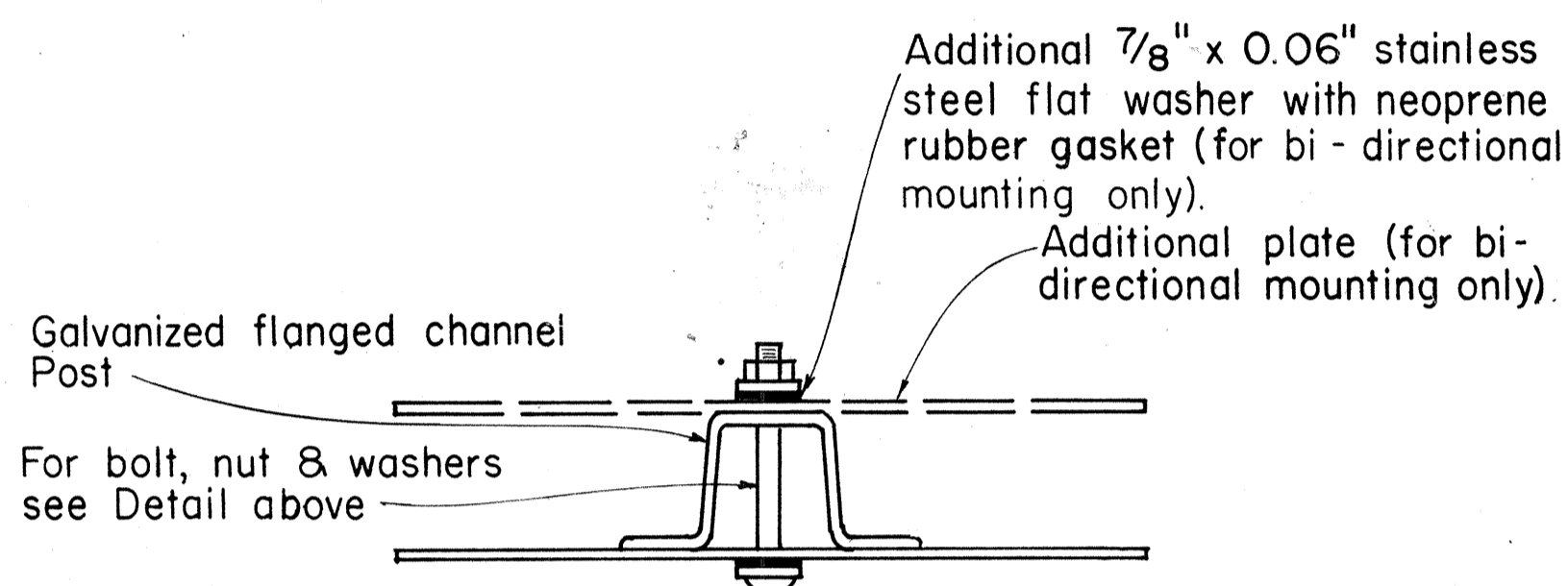
1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
2. (R) or (L) indicates right or left and shall be as shown on the plans.
3. Reflector markers RM-1 and RM-2 shall be:
 - a) Yellow if placed along the left edge of divided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



REFLECTOR MARKER MOUNTING DETAIL

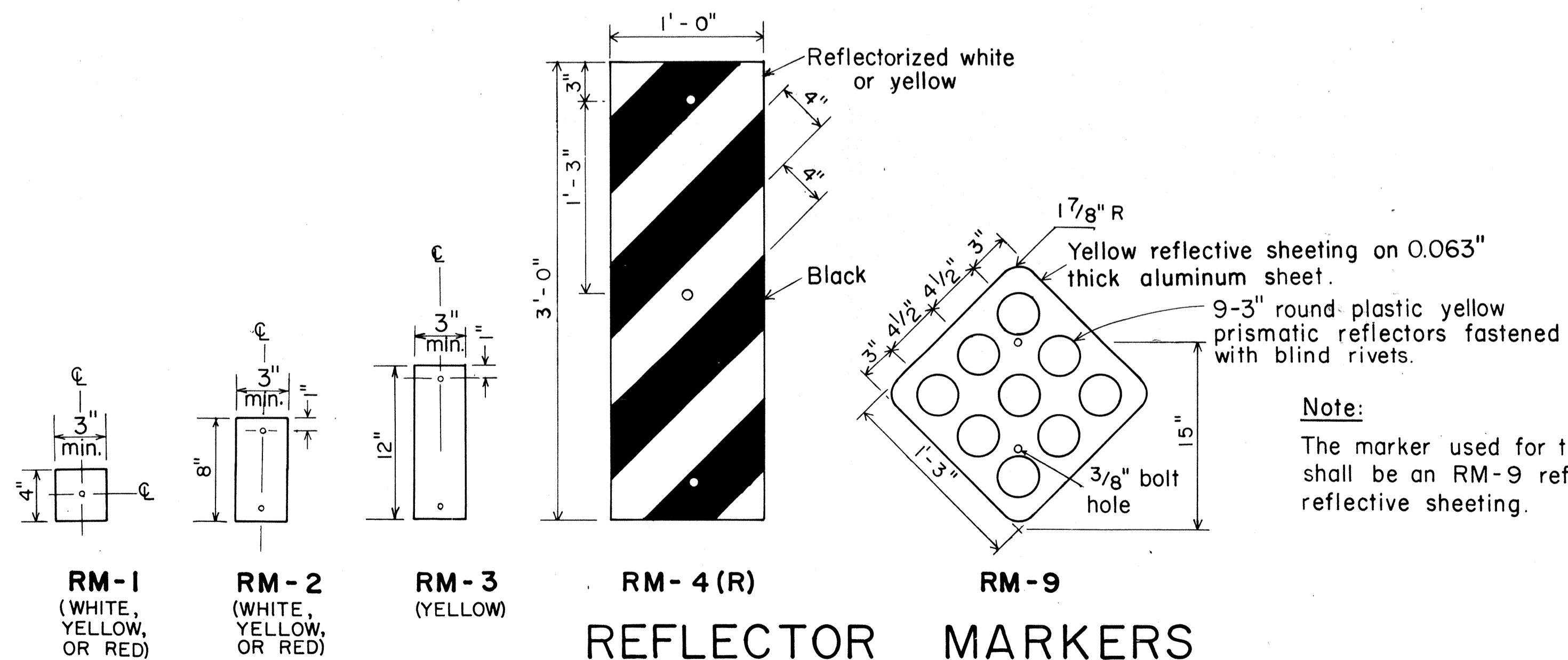


GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS



REFLECTOR MARKERS

APPROVAL RECOMMENDED:
Eishi Tanaka
 TRAFFIC ENGINEER
 DATE: 11/7/77

APPROVED:
Herbert A. Sakai
 ASSISTANT CHIEF, ENGINEERING
 DATE: 11/15/77

NO.	REVISION	APPROVED BY	DATE
1	Revised Mounting Details	H.T.	4/23/80
2	Revised General Notes, Mounting Details and Reflector Markers.	H.T.	9-28-83

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS REFLECTOR MARKERS

Not to scale June, 1977

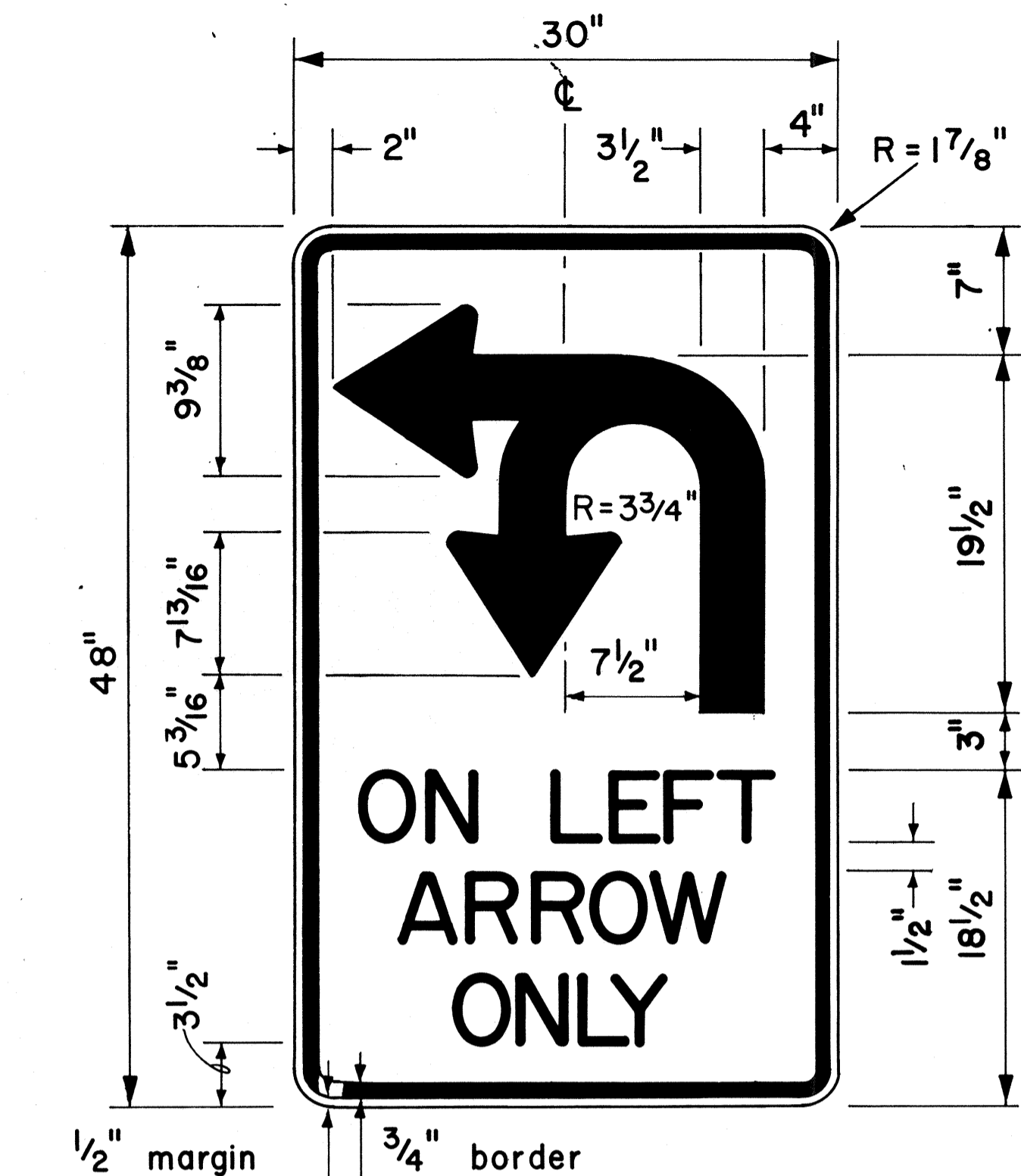
SHEET No. P-200F 35 SHEETS DT 110

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

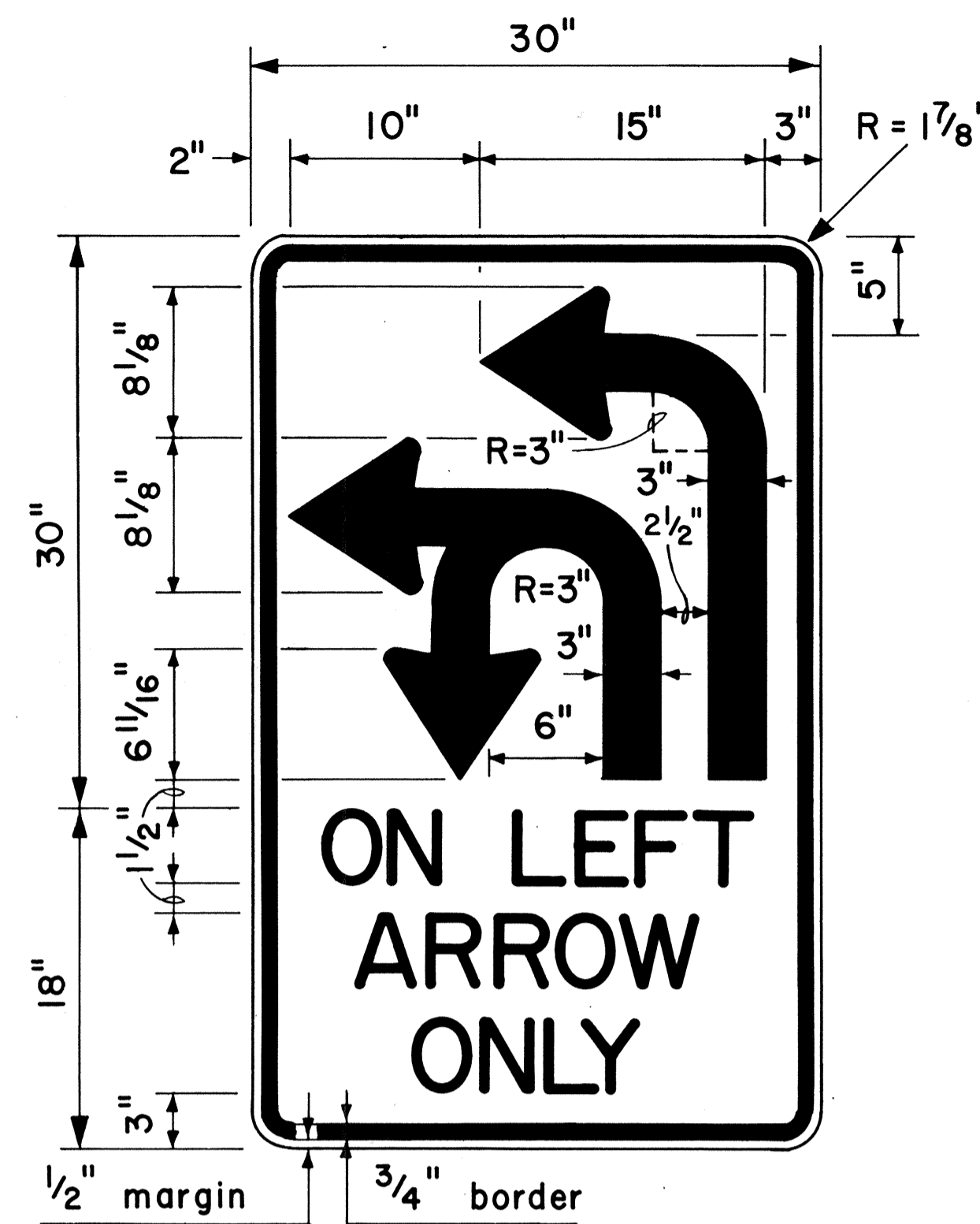
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FIRH-1017	1983	95	280

GENERAL NOTES

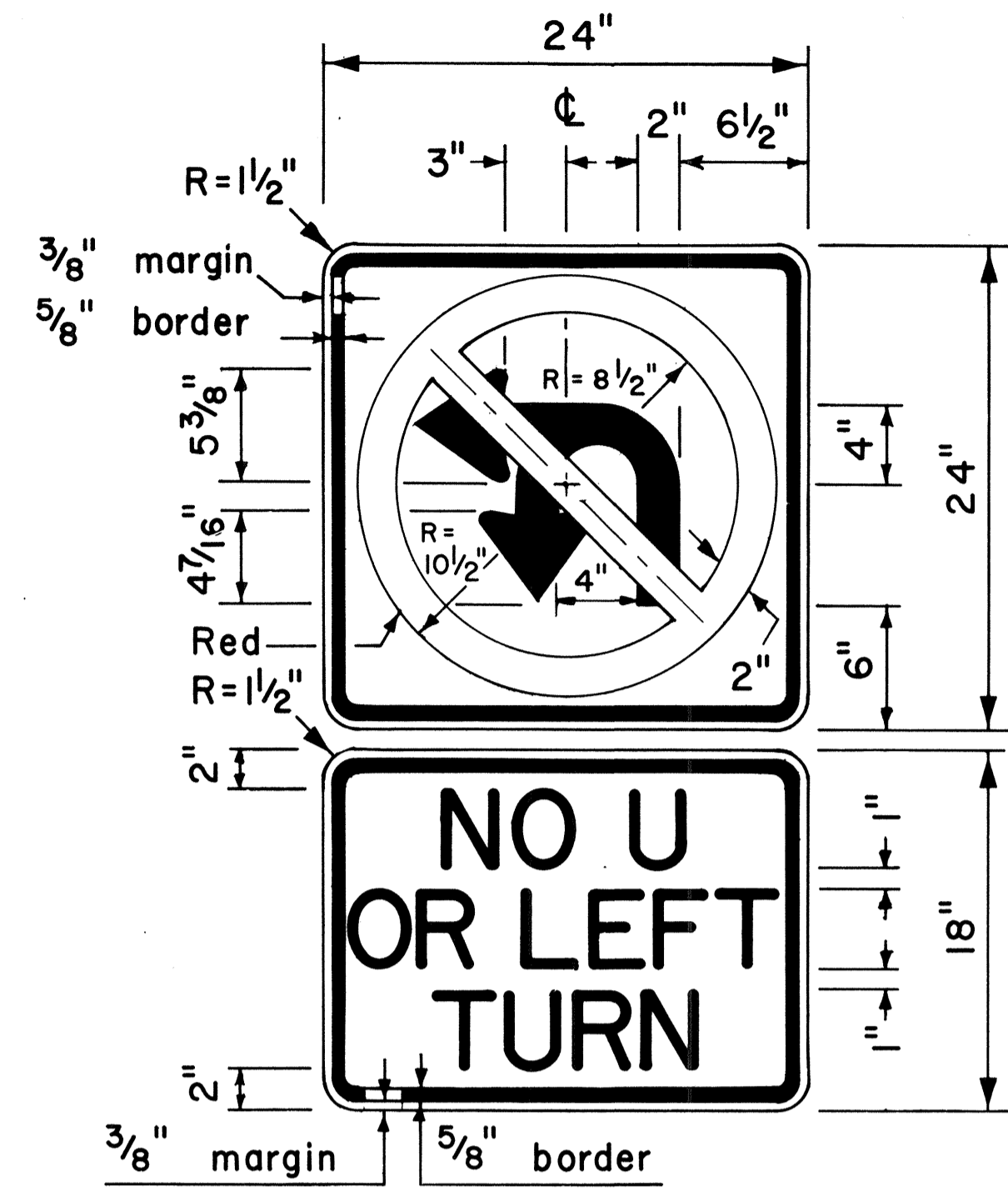
1. Sign details shall conform to the latest editions of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and "Standard Highway Signs," and as amended.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs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



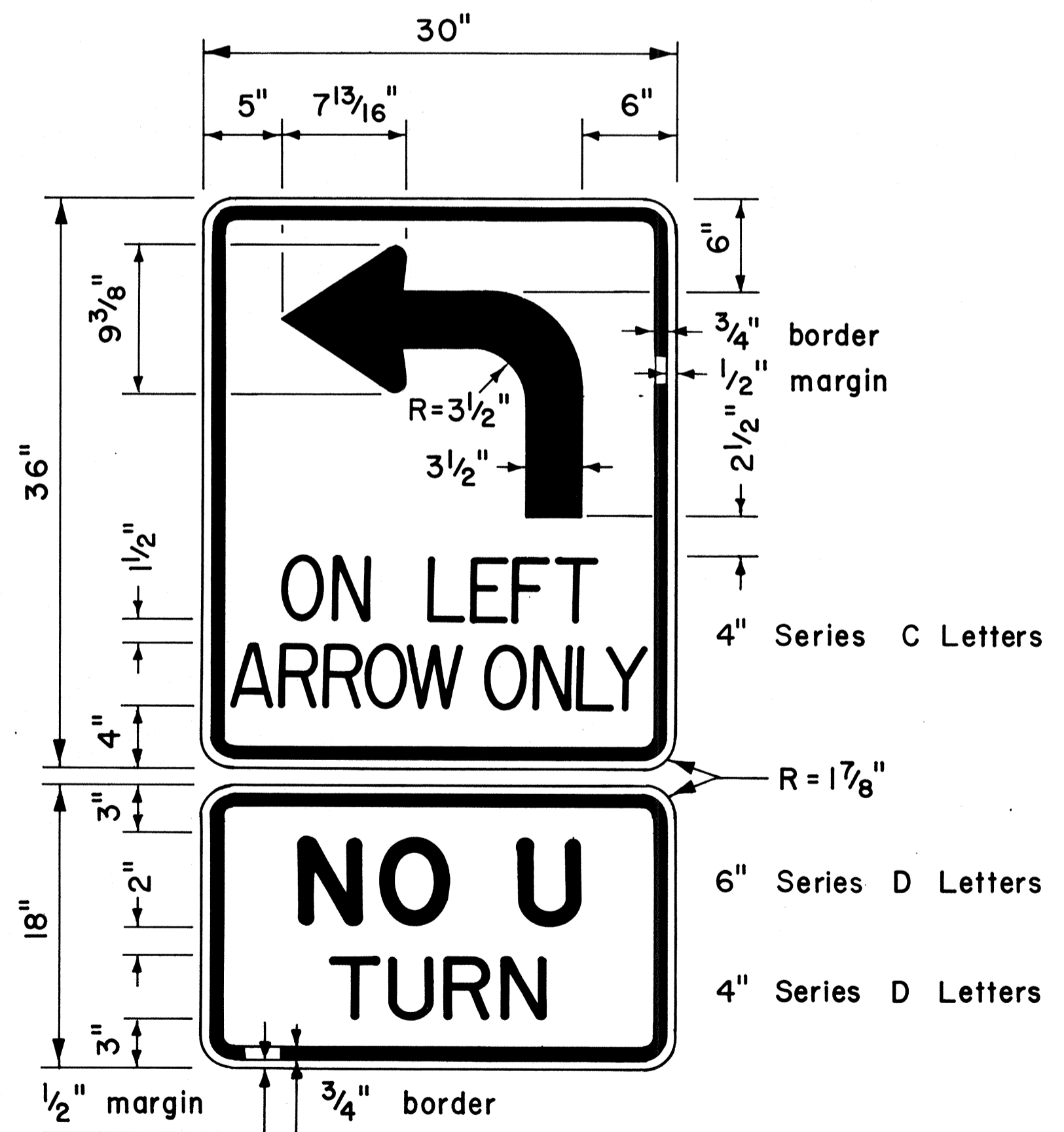
4" Series D Letters
R17-1



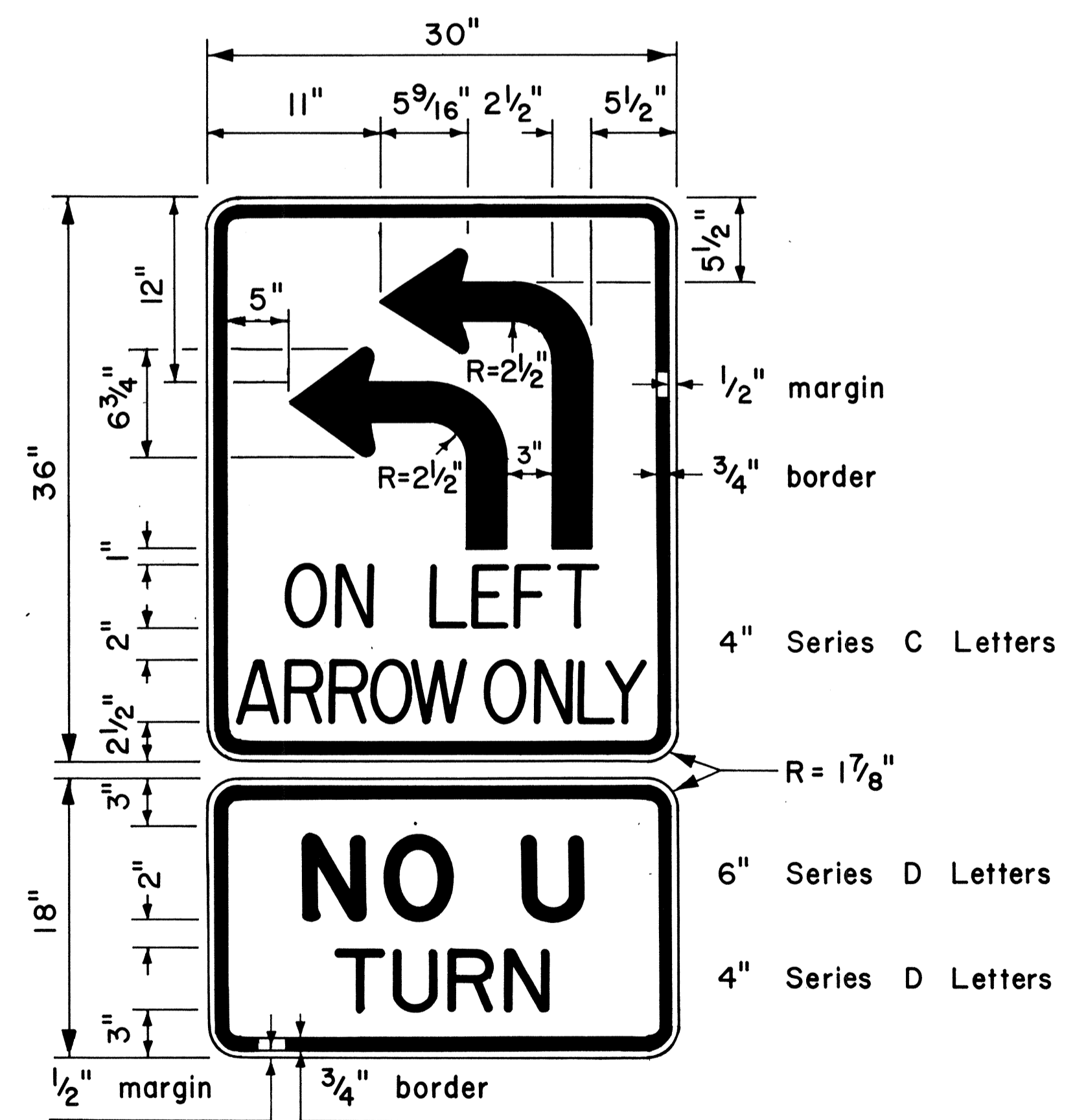
4" Series D Letters
R17-2



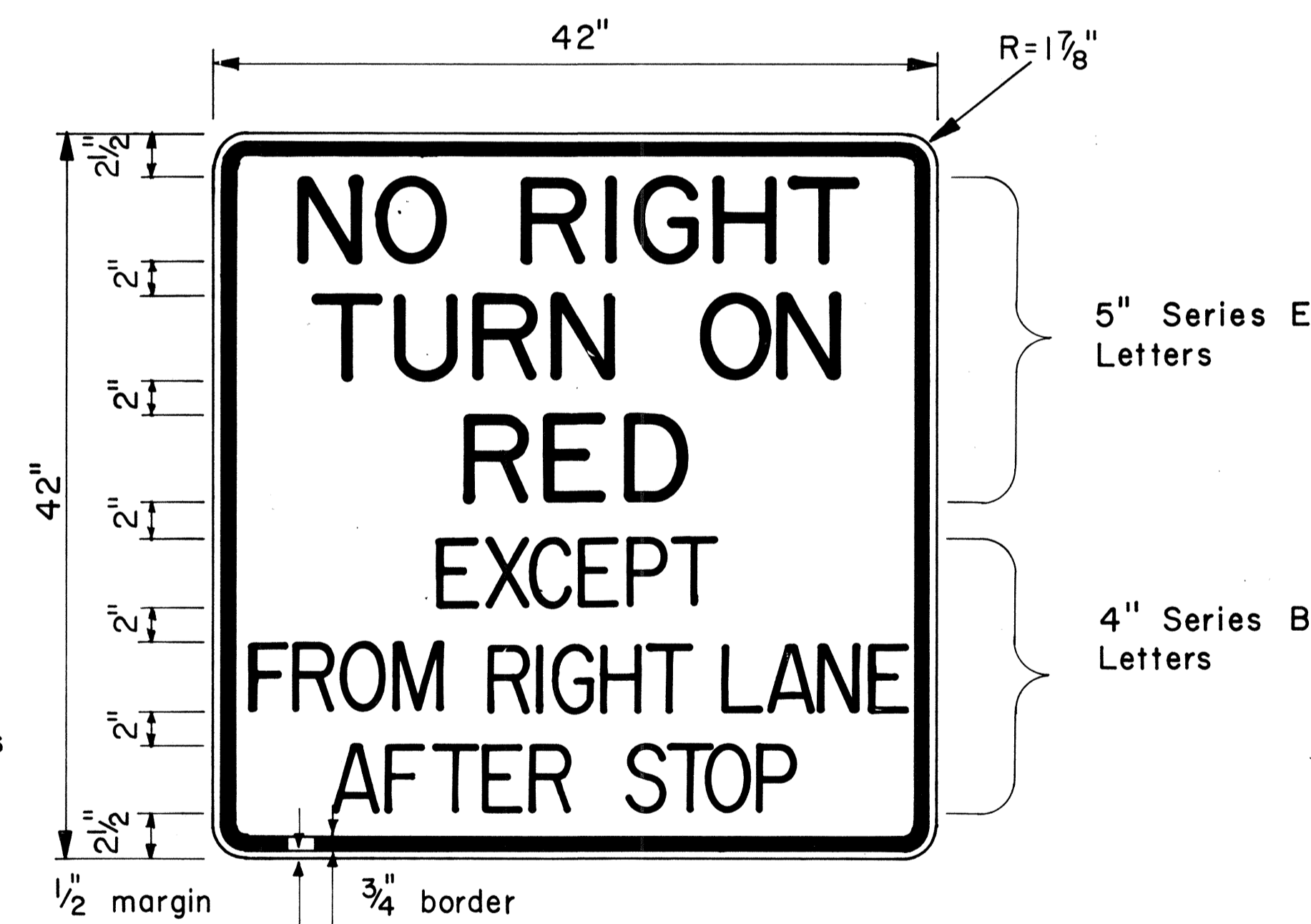
4" Series D Letters
R3-4b



R17-3



R17-4



R10-1ld

5" Series E Letters
4" Series B Letters

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

APPROVED:
Hubert Pafishu 8/16/77
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

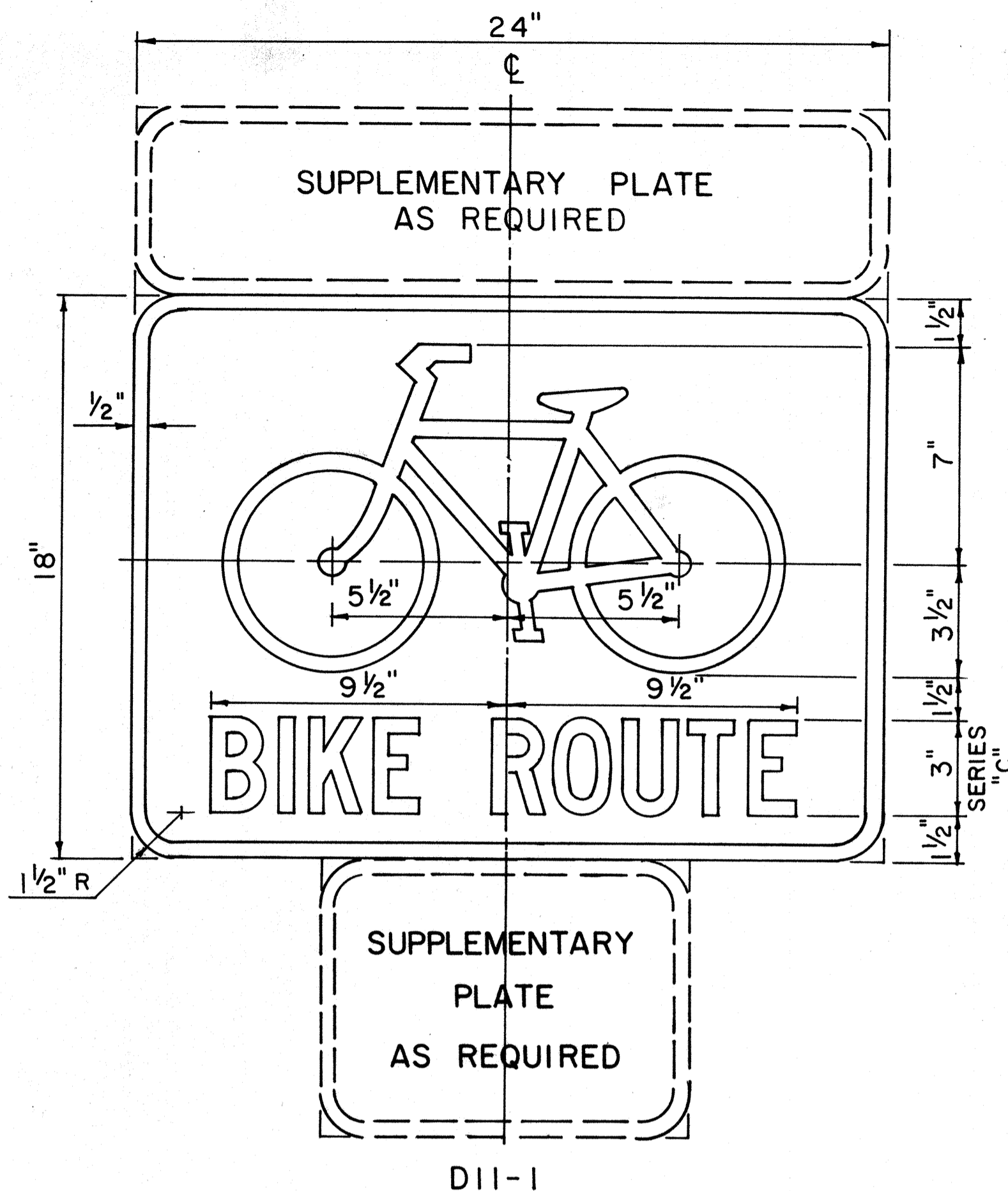
STANDARD DETAILS
MISCELLANEOUS
INTERSECTION SIGNS

Scale: 1/2" = 1'-0" Date: Aug., 1977
SHEET No. P-21 OF 35 SHEETS DT 112

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IIR-H-1(63):17	1983	96	200

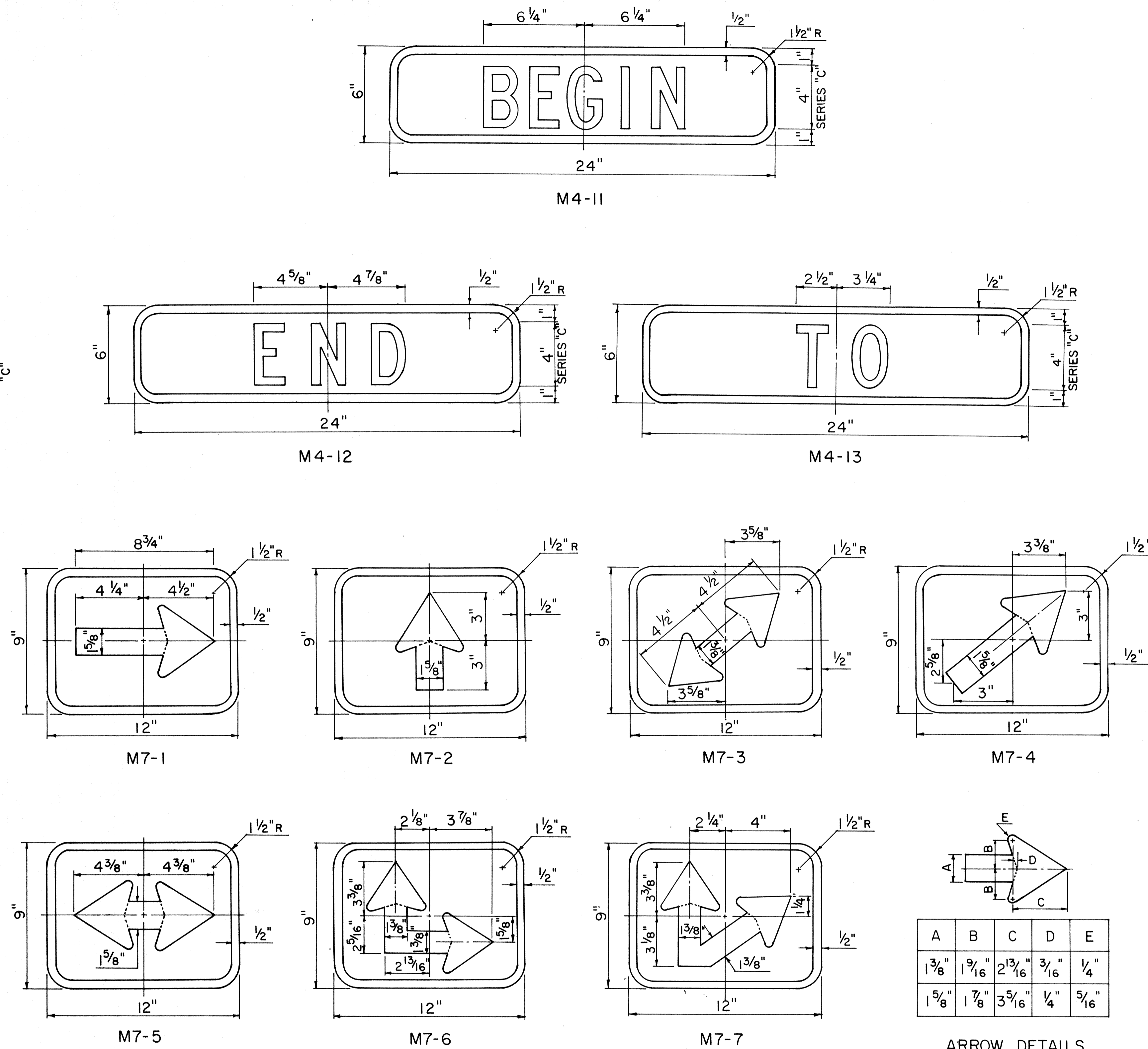
GENERAL NOTES

- 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 $\frac{3}{8}$ " 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.



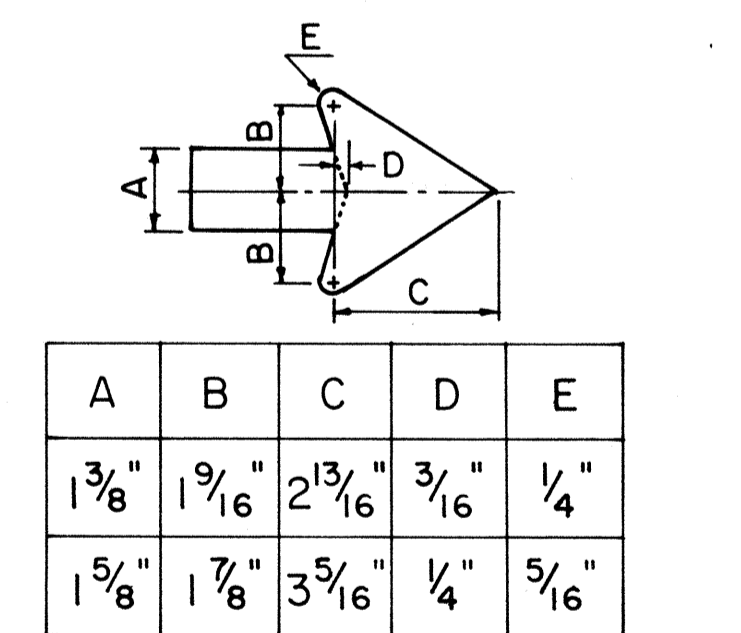
BIKE ROUTE SIGN

Scale: 3" = 1'-0"



SUPPLEMENTARY PLATES

Scale: 3" = 1'-0"



ARROW DETAILS

A	B	C	D	E
$1\frac{3}{8}$ "	$1\frac{9}{16}$ "	$2\frac{13}{16}$ "	$\frac{3}{16}$ "	$\frac{1}{4}$ "
$1\frac{5}{8}$ "	$1\frac{7}{8}$ "	$3\frac{5}{16}$ "	$\frac{1}{4}$ "	$\frac{5}{16}$ "

APPROVAL RECOMMENDED:

Eishi Tanaka
TRAFFIC ENGINEER 9/1/82
DATE

APPROVED:

Robert Zalschi
ASSISTANT CHIEF, ENGINEERING 9/22/82
DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

BIKE ROUTE SIGN
& SUPPLEMENTARY PLATES

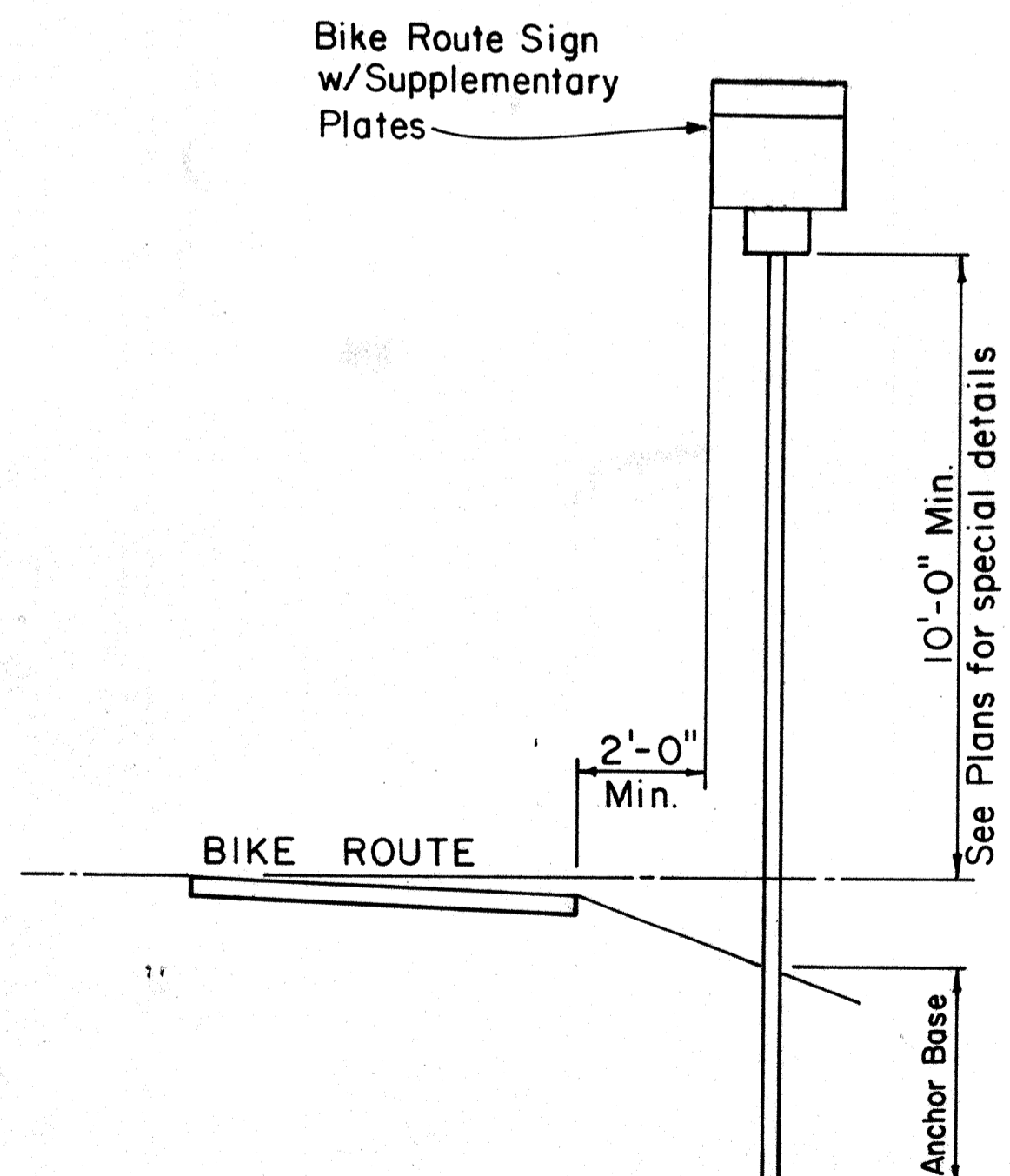
Scale: As Shown July 1982

SHEET No. P-22 OF 35 SHEETS DT 114

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

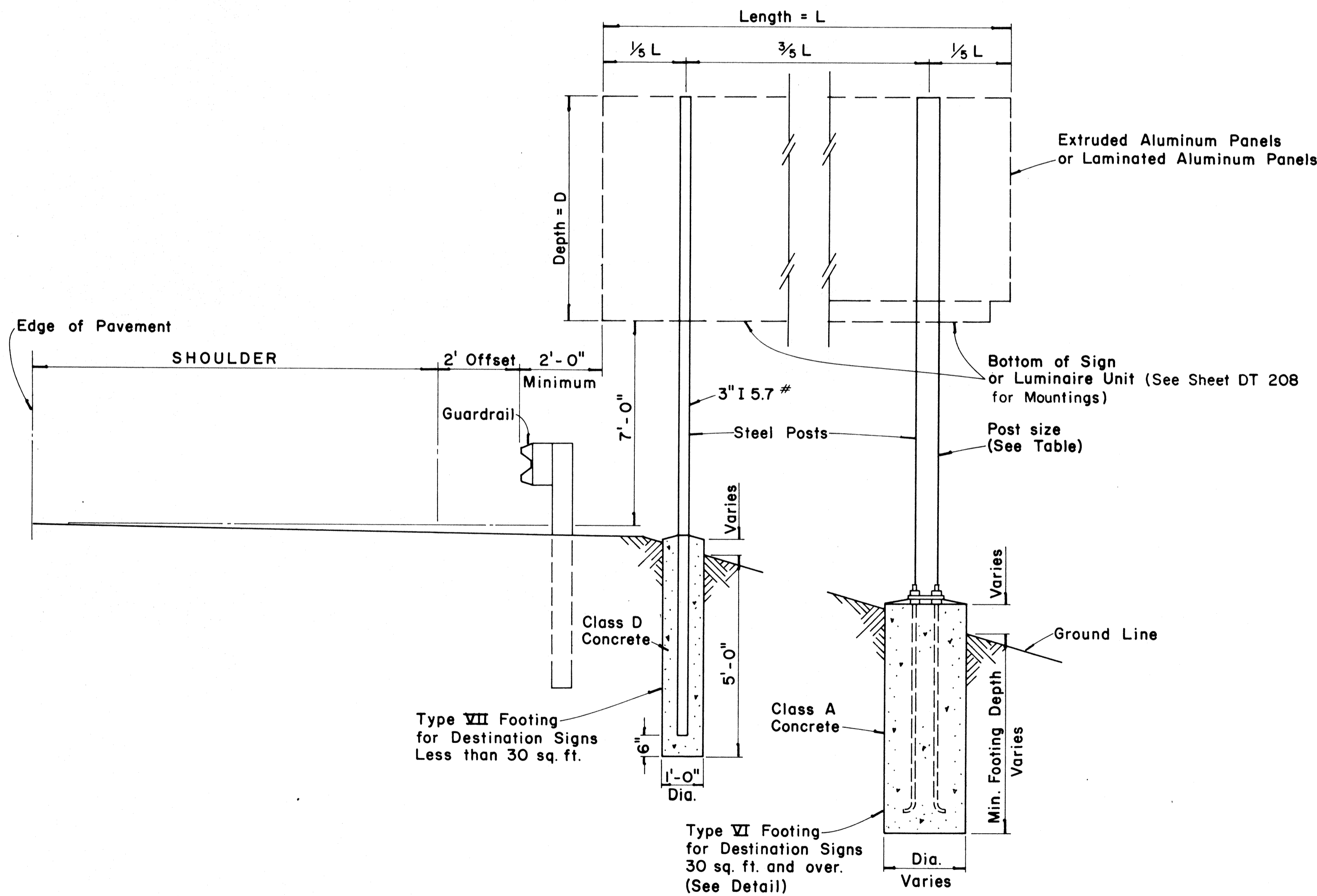
TYPICAL INSTALLATION

Scale: Not to Scale

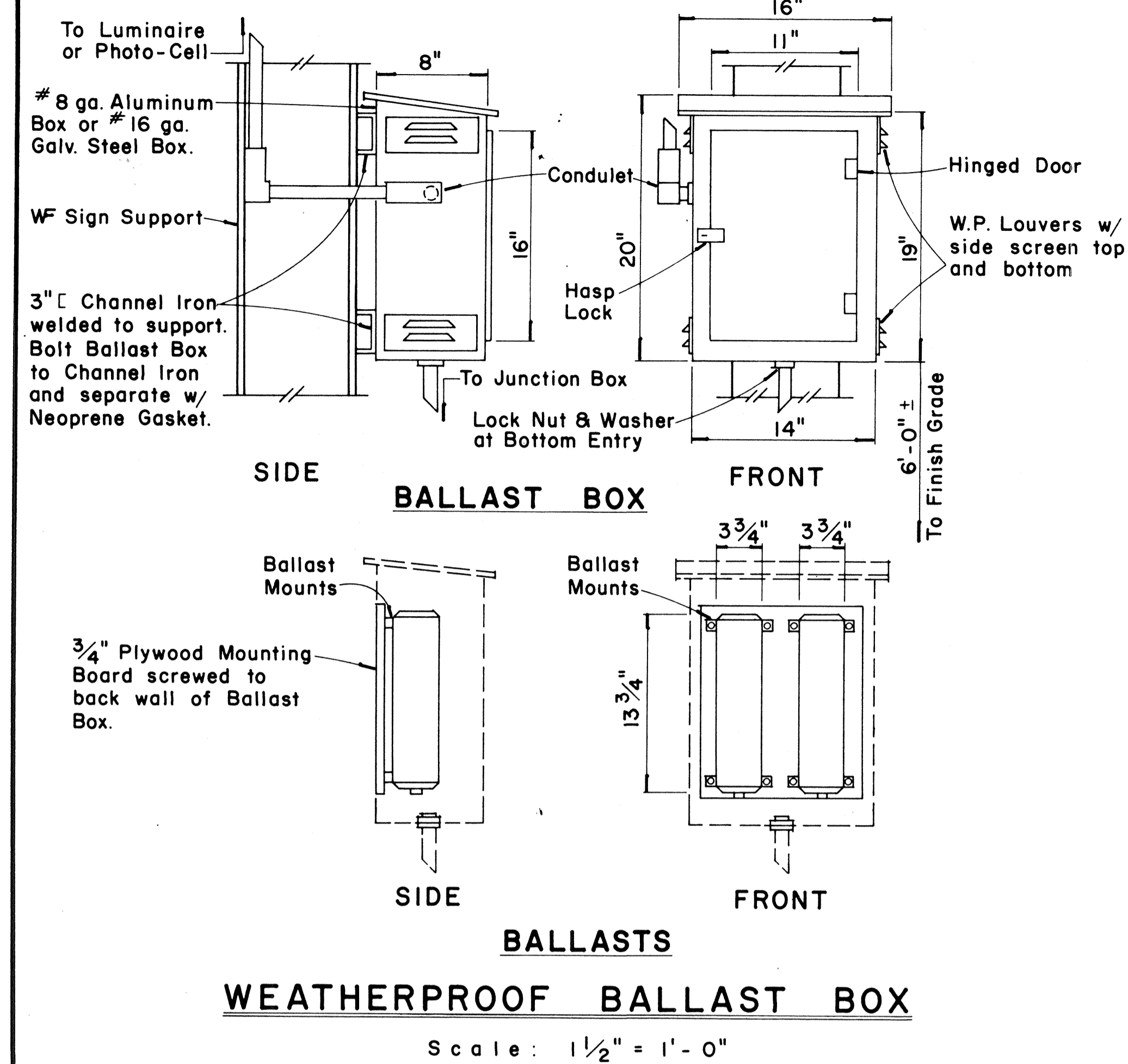


* For moment calculations only. Post shall be from top of foundation to top of sign.
 ** For fills with side slopes flatter than 4:1, Minimum Footing Depth shall be 4½ feet.

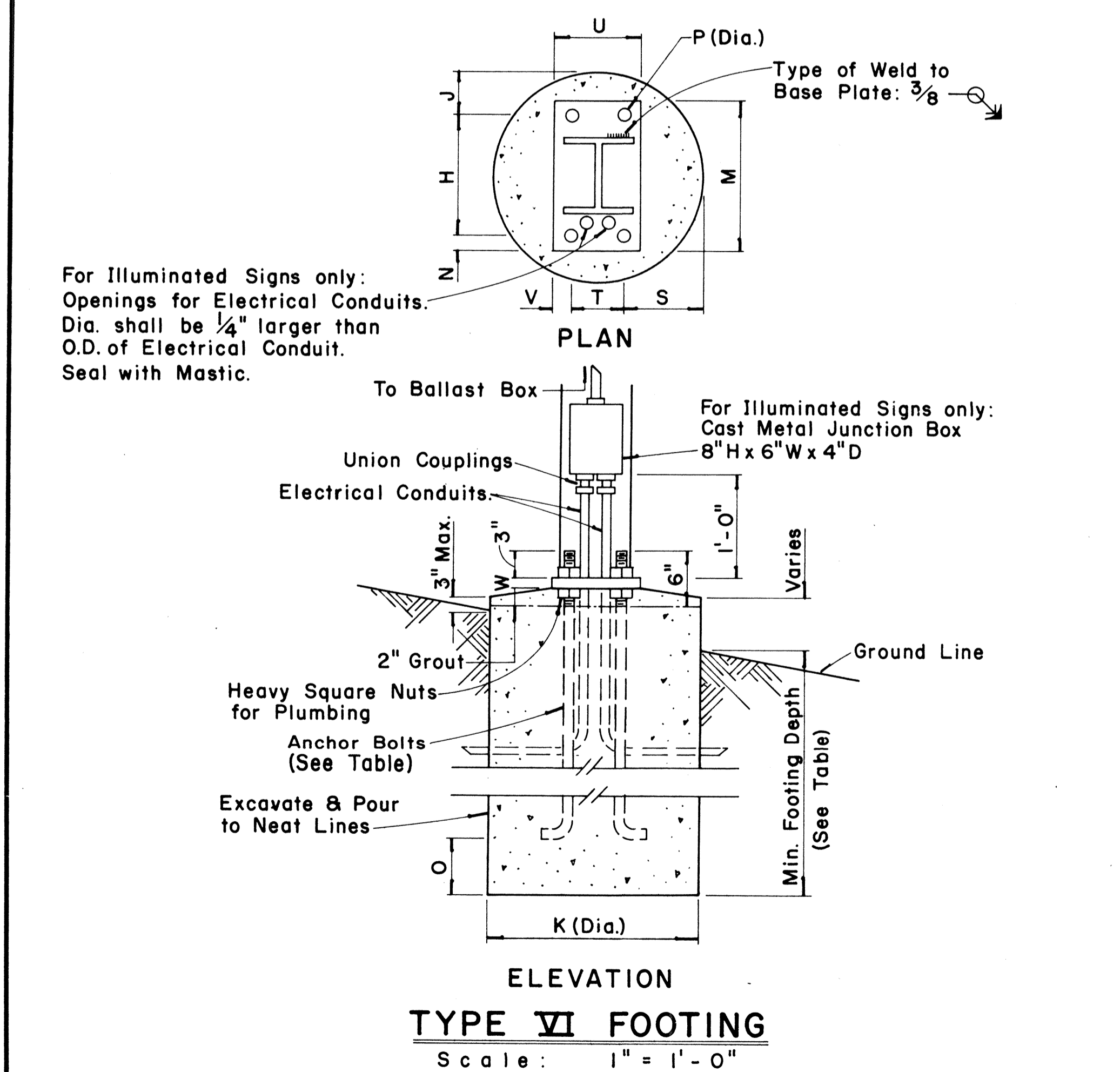
DATA TABLE FOR TYPE VI FOOTING																	
POST SIZE	MAXIMUM SIGN AREA	POST HEIGHT TOP OF FOUNDATION TO CENTER OF SIGN *	DIMENSIONS											ANCHOR BOLT DIA.	MINIMUM FOOTING DEPTH		
			H	J	K	M	N	O	P	S	T	U	V		W	CUT	FILL**
8 J 10	50 sq. ft.	14'	14"	5"	24"	17¼"	1½"	6"	1¼"	9"	6"	10"	2"	1"	1½" Ø	4½'	4½'
8 WF 24	90 sq. ft.	21'															5'
8 WF 35	190 sq. ft.	15'	16½"	6¾"	30"	20"	1¾"	6"	1¾"	11¾"	6½"	10"	1¾"	1"	1¼" Ø	6'	7'
10 WF 45	190 sq. ft.	25'															
10 WF 45	200 sq. ft.	25'															
12 WF 50	230 sq. ft.	25'															
12 WF 50	250 sq. ft.	23'															



TYPICAL DESTINATION & GROUND MOUNTED EXPRESSWAY SIGN
 Not to Scale



WEATHERPROOF BALLAST BOX
 Scale: 1 1/2" = 1'-0"



TYPE VI FOOTING
 Scale: 1" = 1'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IRH-1(10)17	1983	97	280

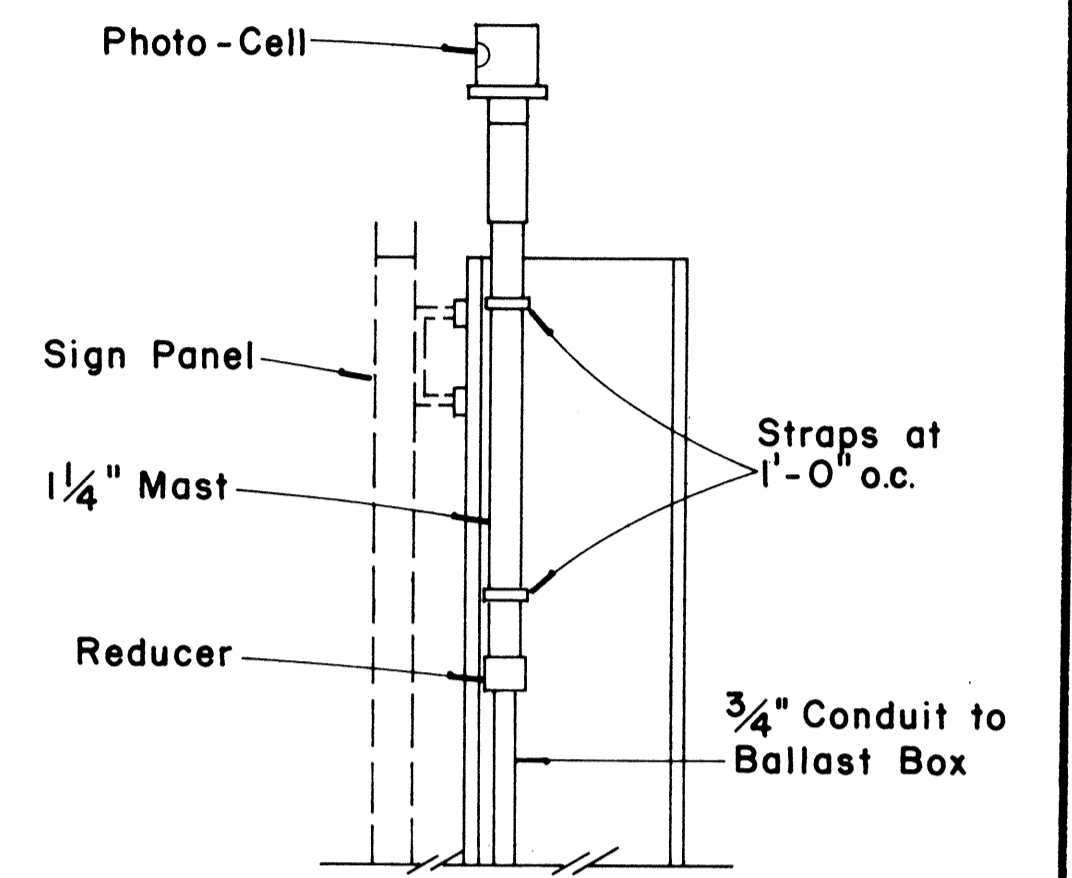


PHOTO-CELL DETAIL
 Scale: 1 1/2" = 1'-0"

APPROVAL RECOMMENDED:
Eishi Tanaka 12/29/62
 TRAFFIC ENGINEER DATE

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

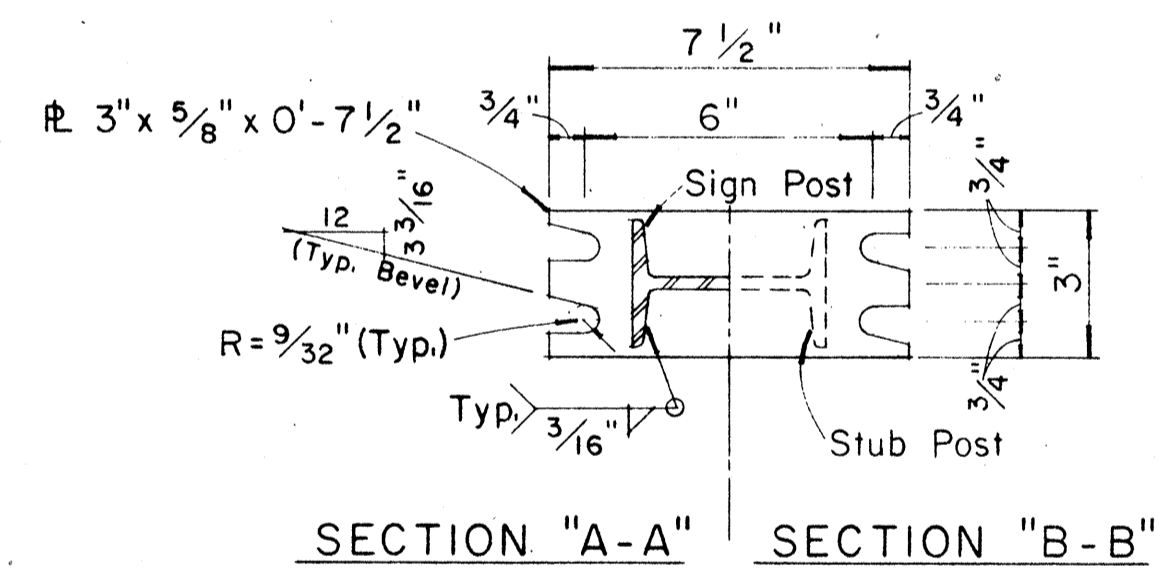
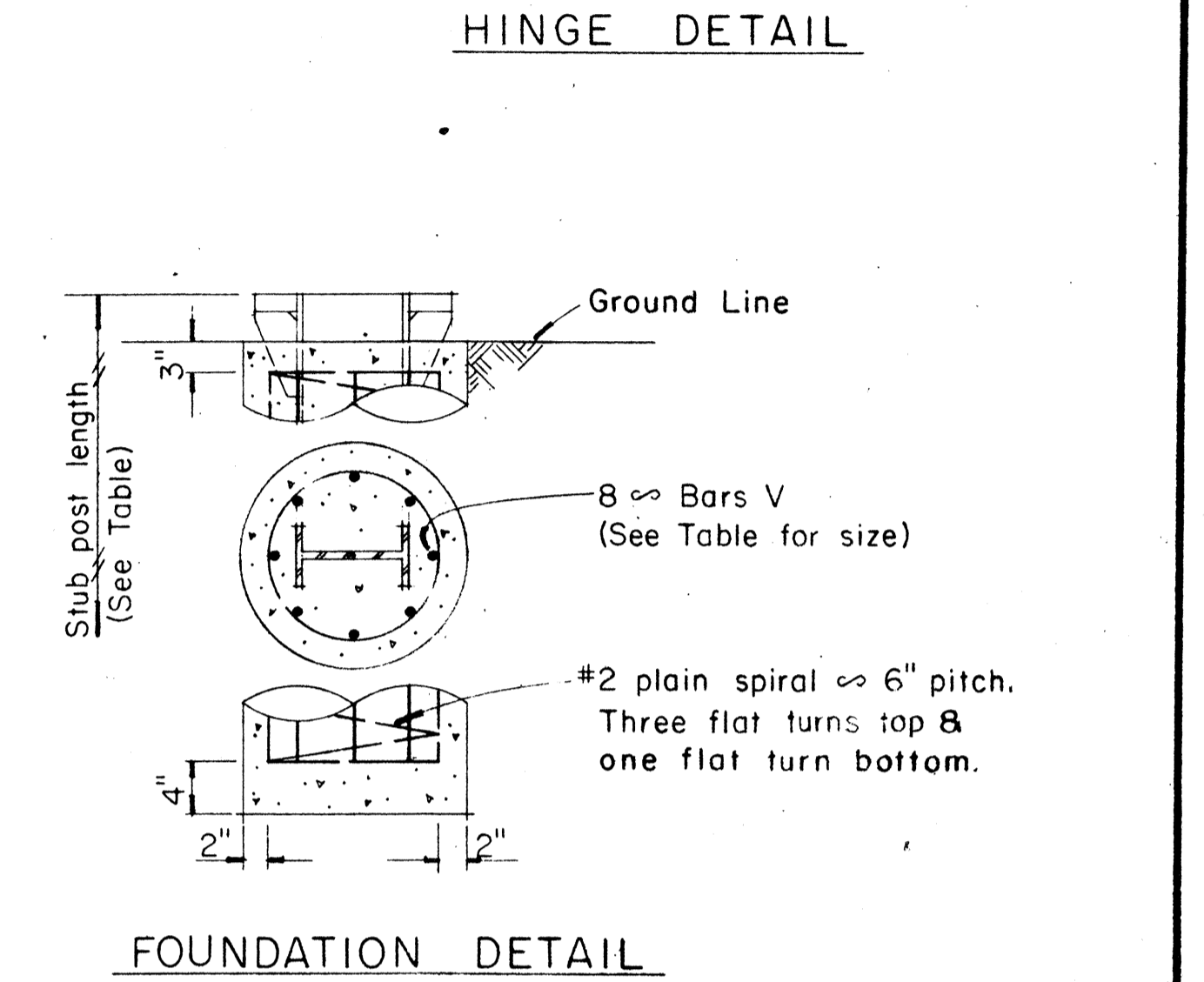
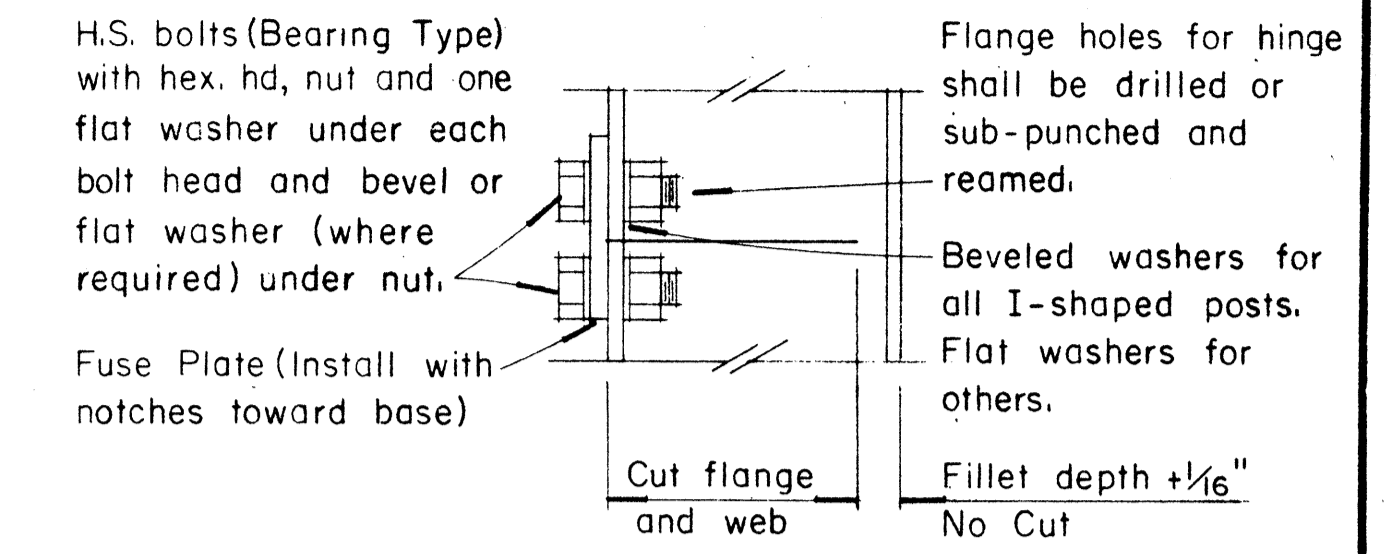
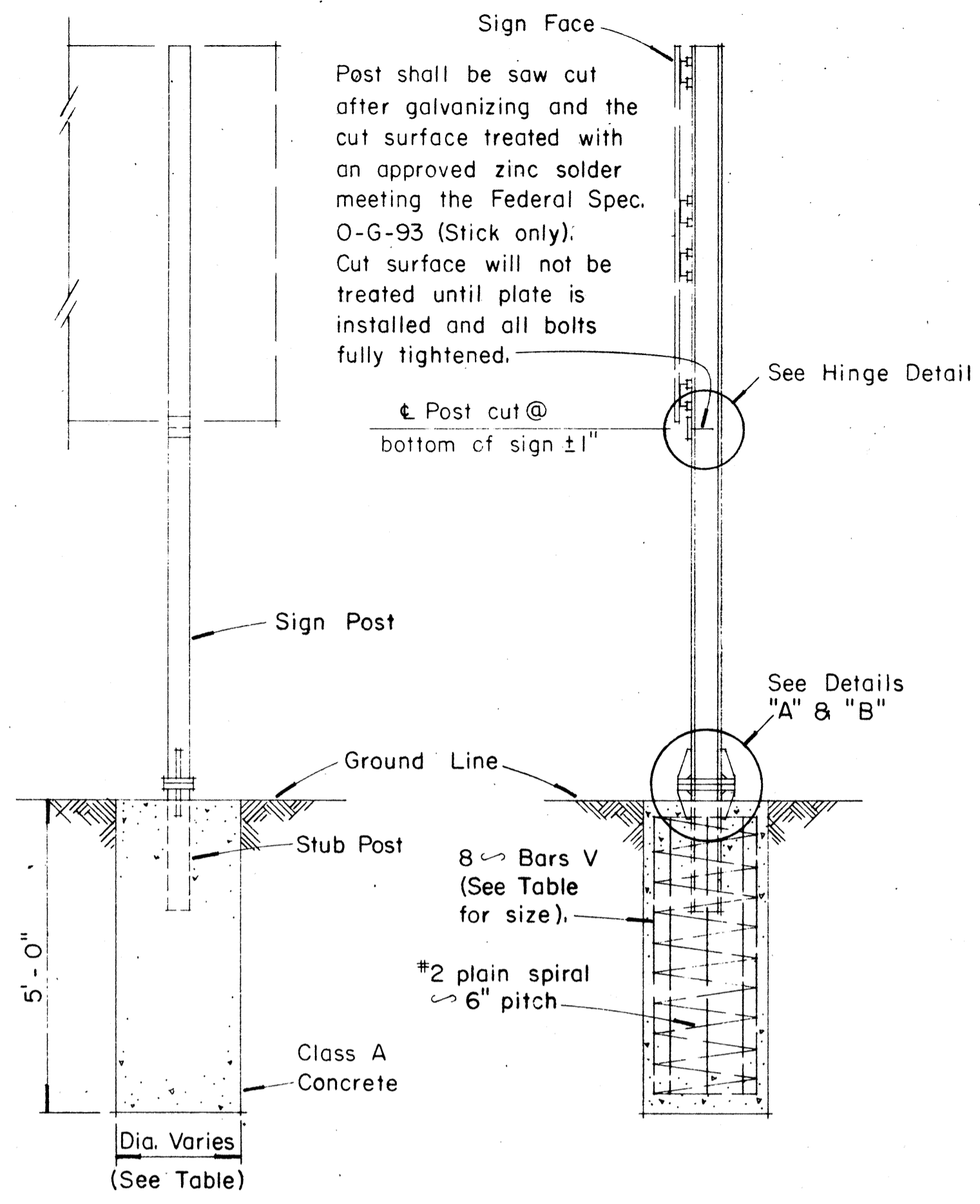
NO.	REVISION	APPROVED BY	DATE
1	Add note for luminaire mounting.	H.T.	6/3/80

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

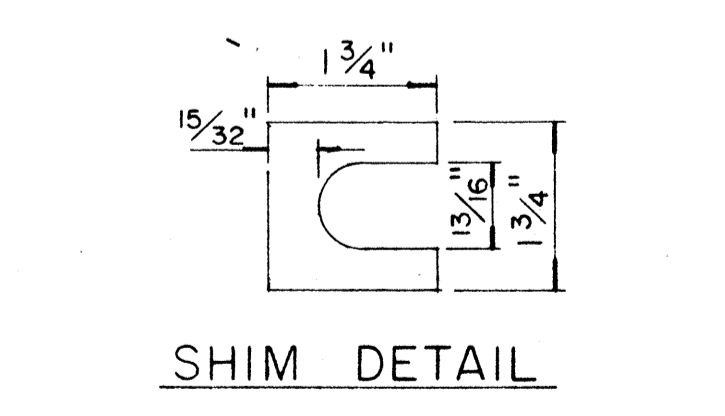
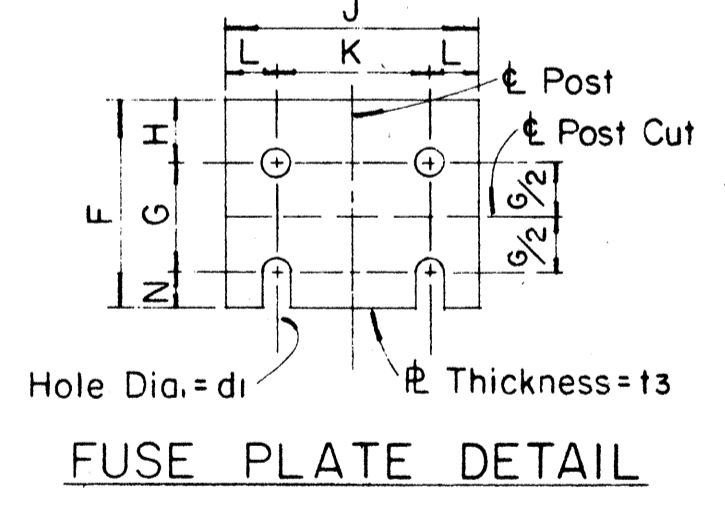
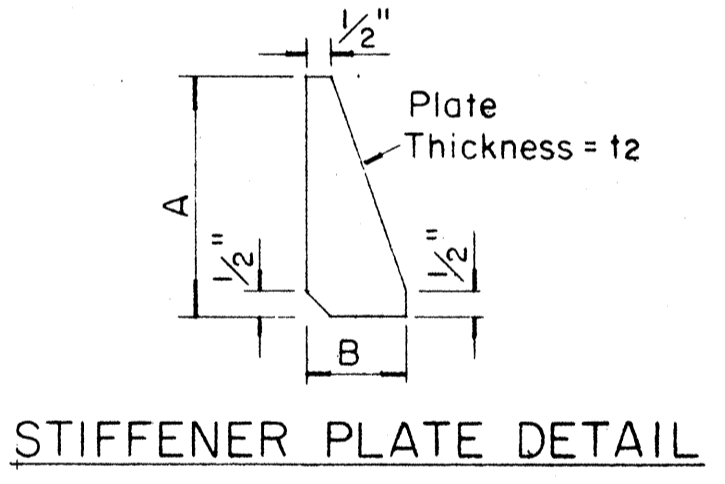
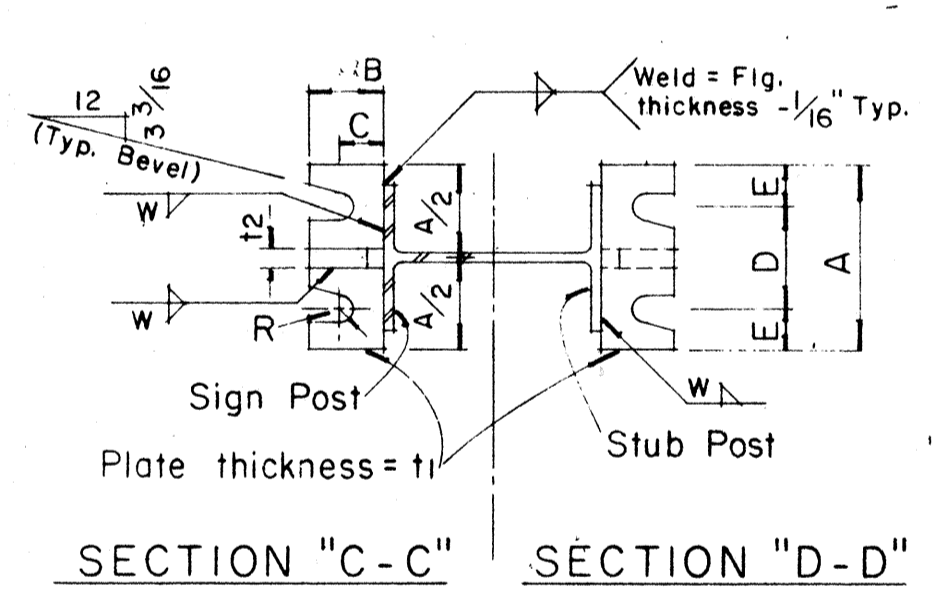
Scale: As Shown
 SHEET No. P23 OF 35 SHEETS DT 203

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FIR-H-1(60)-17	1983	97A	280

BASE CONNECTION DATA TABLE											FUSE PLATE DATA TABLE								FOUNDATION DATA						
Post Size	Bolt Size & Torque	A	B	C	D	E	t ₁	t ₂	W	R	F	G	H	J	K	L	N	d ₁	t ₃	Bolt Dia.	Wt. of each Fuse lb	Stub Length	Stub Projection	Footing Diameter	Bars V Size
6 B 8.5	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 5/8"	2"	1 1/8"	4"	2 1/4"	7/8"	1/2"	9/16"	1/4"	1/2" φ	1.09 #	2'-0"	3"	2'-0"	#5
6 B 12											3 3/4"	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"	#5
6 B 15.5											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"	#6
8 WF 17											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
8 WF 20	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"	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
10 WF 21											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
10 WF 25											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
12 WF 27											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
3 I 5.7	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
4 I 7.7	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.
- 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:
Eishi Tanaka
TRAFFIC ENGINEER
12/29/83
DATE

APPROVED:
John J. Del
ASSISTANT CHIEF, ENGINEERING
12-30-83
DATE

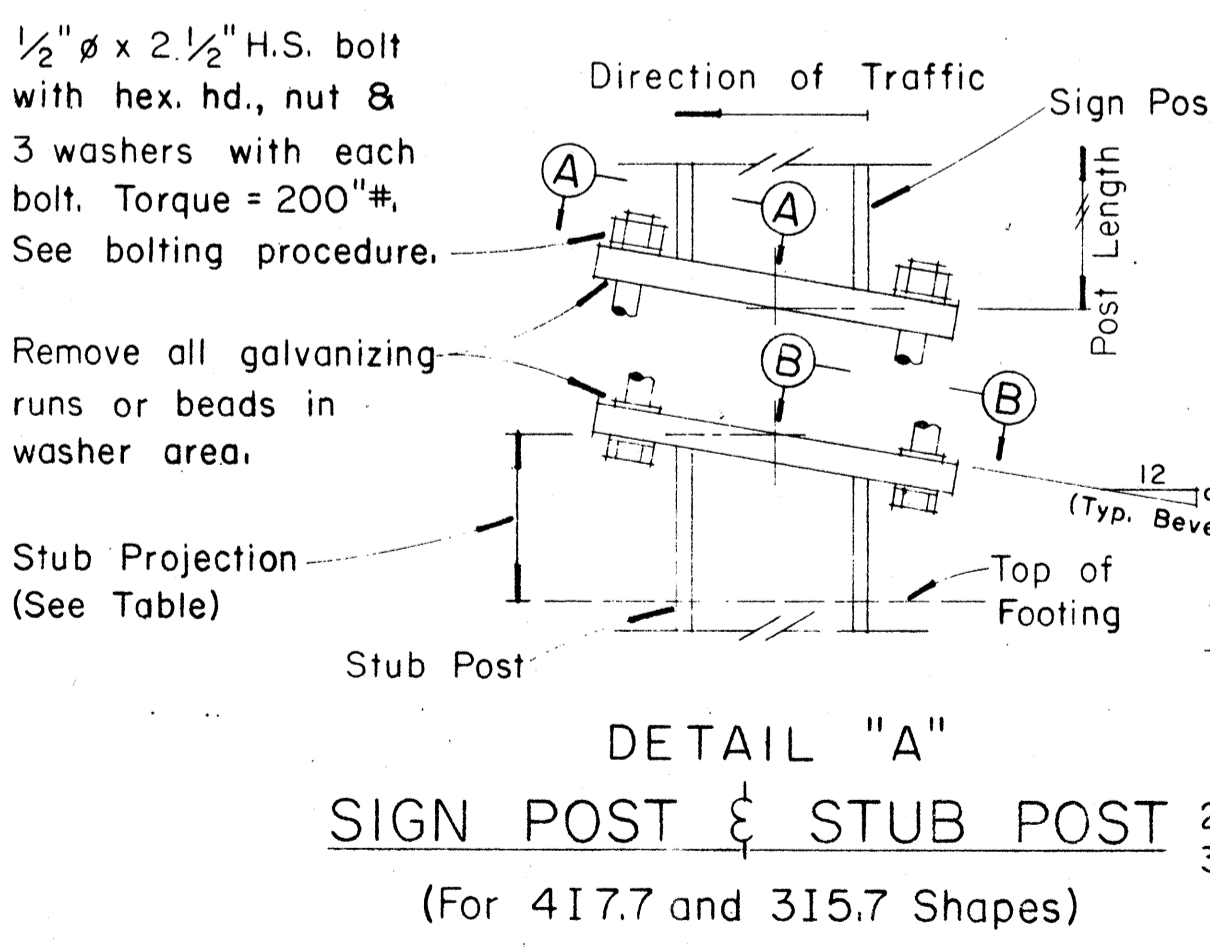
NO.	REVISION	APPROVED BY	DATE
1	Added General Note No. 9	H.T.	6/3/80

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
BREAK-AWAY SIGN SUPPORTS
FOR
GROUND MOUNTED GUIDE SIGNS

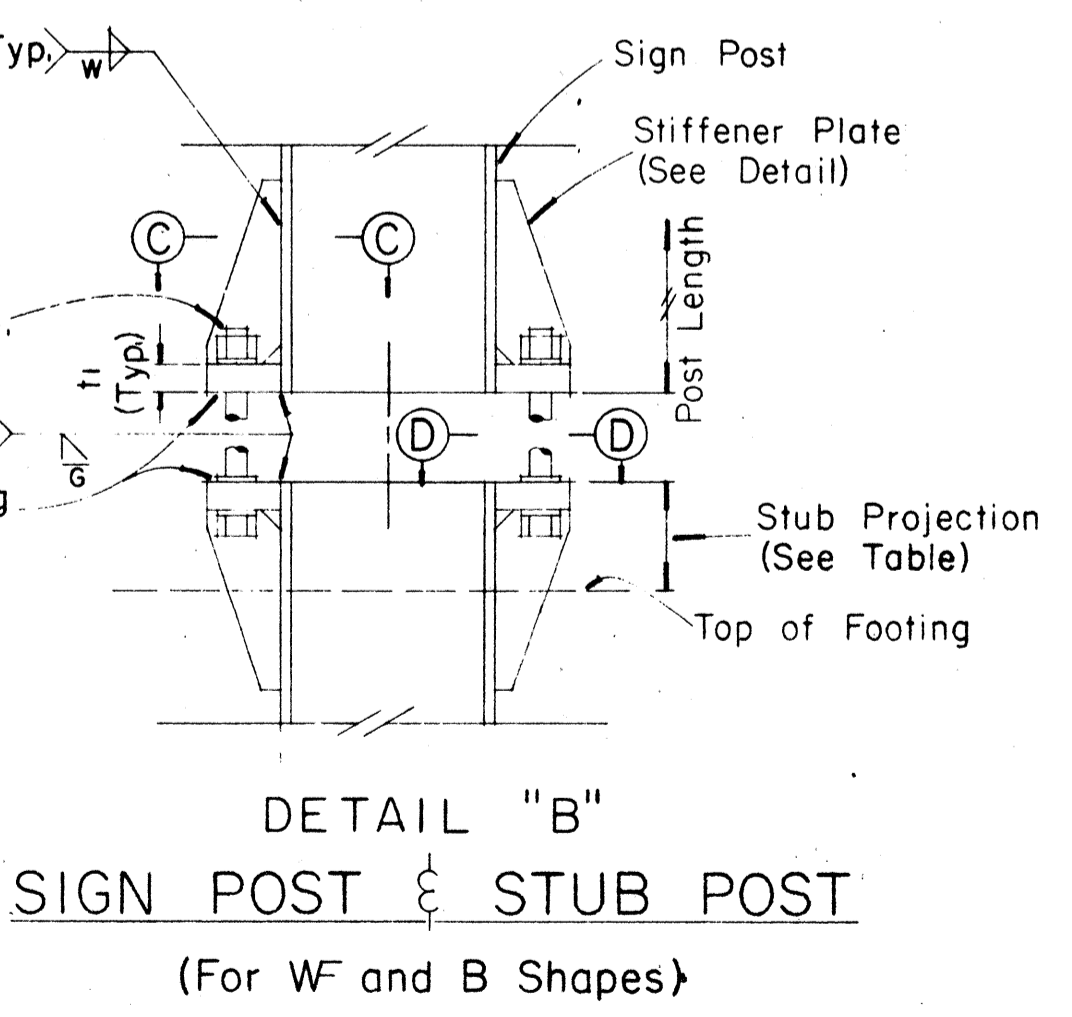
Not to Scale

SHEET No. P23A OF 35 SHEETS DT-204



PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

- Assemble post to stub with bolts and with one flat washer on each bolt between plates.
- Shim as required to plumb post.
- 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)
- Burr threads at junction with nut using a center punch to prevent nut loosening.



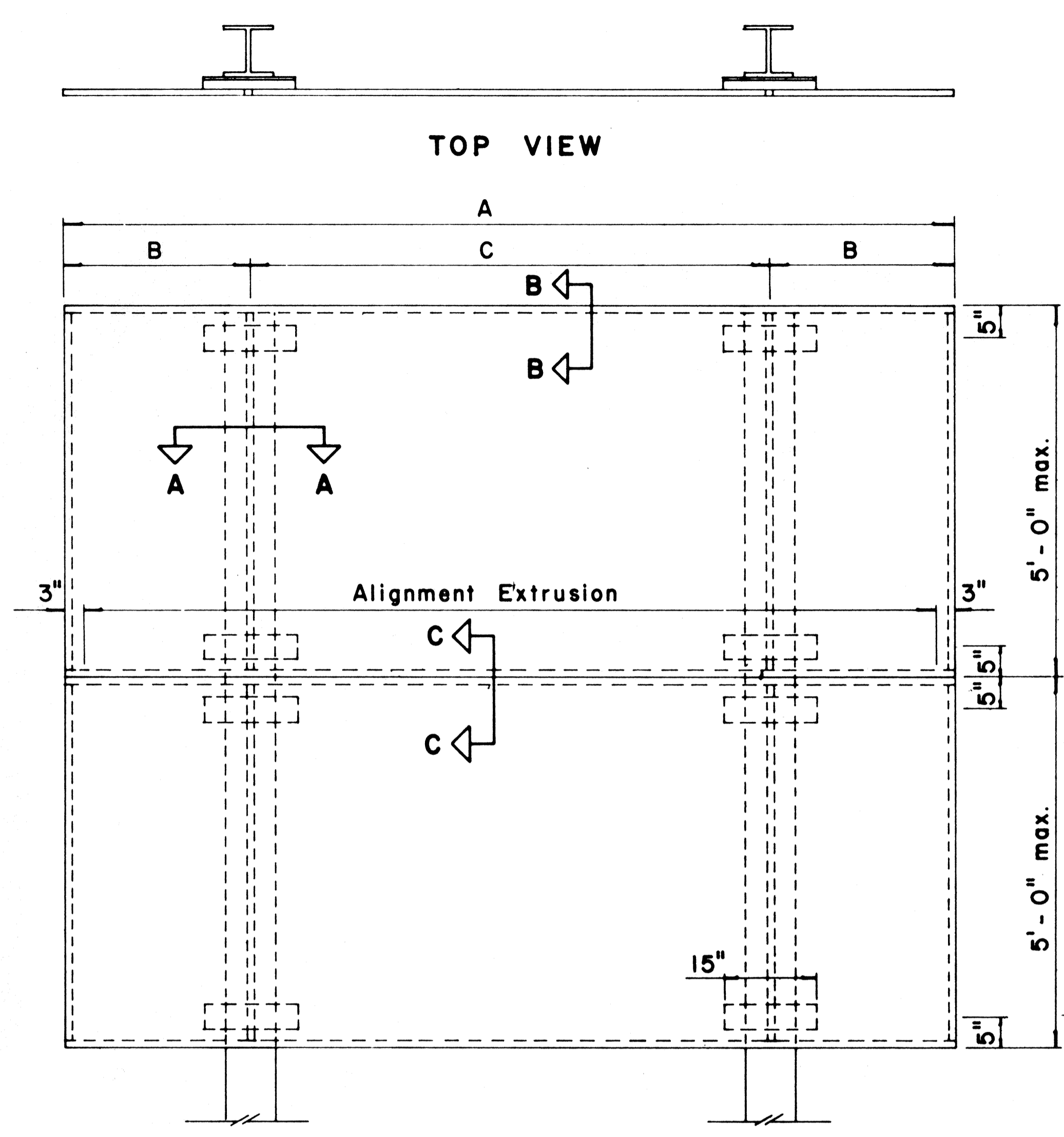
Furnish 2- 0.012" ± thick and 2- 0.032" ± thick shims per post. Shims shall be fabricated from brass shim stock or strip conforming to ASTM - B 36.

DATE
DRAWN BY
CHECKED BY
DESIGNED BY
NOTED BY
QUANTITIES BY
NO.

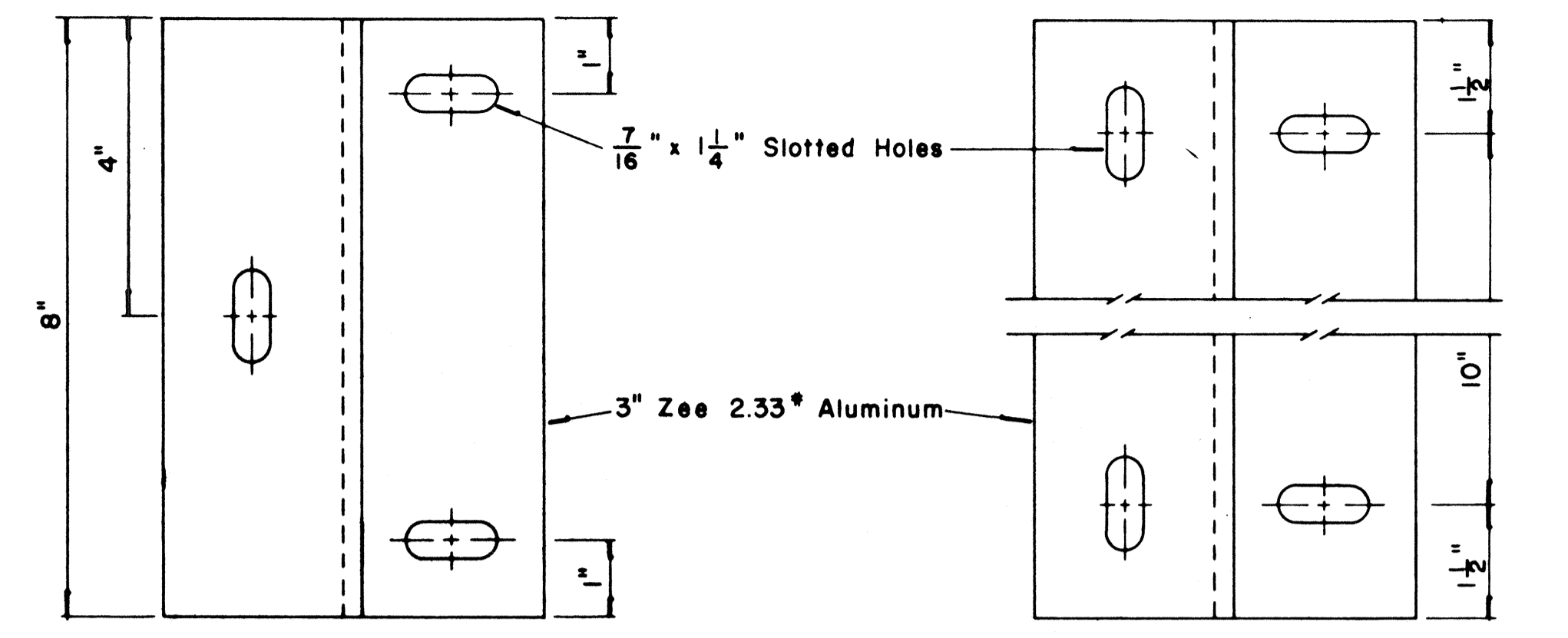
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IRH-1(2)	1983	98	280

(GROUND MOUNTED SIGNS)
SUPPORT SPACING TABLE

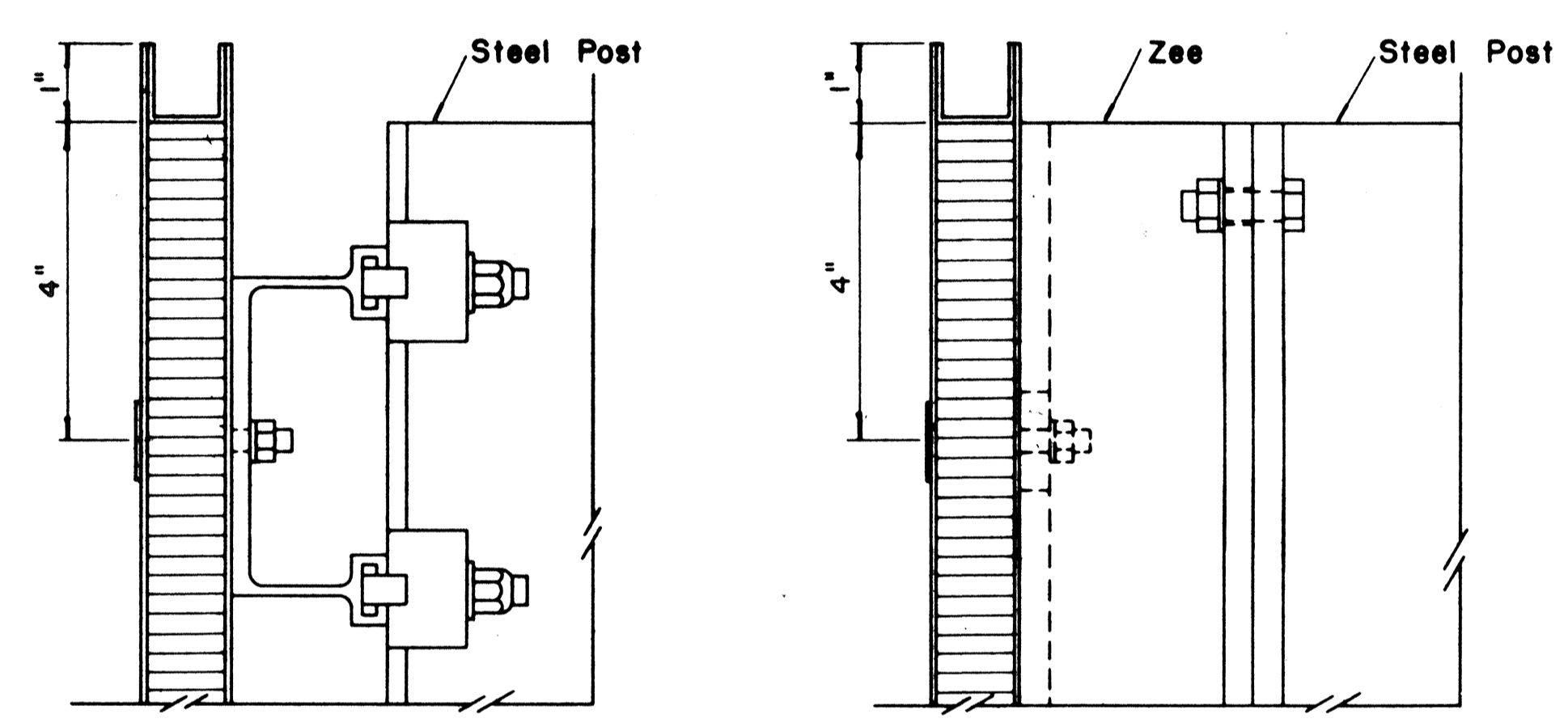
PANEL THICK.	LENGTH OF SIGN	NO. OF SUPPORTS	OVERHANG		SUPPORT SPACING
			B	C	
1"	6'-0"	2	12"		48"
1"	6'-6"	2	15"		48"
1"	7'-0"	2	15"		54"
1"	7'-6"	2	18"		54"
1"	8'-0"	2	18"		60"
1"	8'-6"	2	20"		62"
1"	9'-0"	2	22"		64"
1"	9'-6"	2	23"		68"
1"	10'-0"	2	24"		72"
1"	10'-6"	2	24"		78"
1"	11'-0"	2	24"		84"
1"	11'-6"	2	27"		84"
1"	12'-0"	2	30"		84"
1"	12'-6"	2	30"		90"
1"	13'-0"	2	30"		96"
1"	13'-6"	2	30"		102"
1"	14'-0"	2	30"		108"
1"	14'-6"	2	36"		102"
1"	15'-0"	2	36"		108"
2.5"	15'-6"	2	36"		114"
2.5"	16'-0"	2	39"		114"
2.5"	16'-6"	2	39"		120"
2.5"	17'-0"	2	39"		126"
2.5"	17'-6"	2	42"		126"
2.5"	18'-0"	2	42"		132"
2.5"	18'-6"	2	45"		132"
2.5"	19'-0"	2	45"		138"
2.5"	19'-6"	2	45"		144"
2.5"	20'-0"	2	48"		144"
2.5"	20'-6"	2	48"		150"
2.5"	21'-0"	2	51"		150"
2.5"	21'-6"	2	51"		156"
2.5"	22'-0"	2	51"		162"
2.5"	22'-6"	2	54"		162"
2.5"	23'-0"	2	54"		168"
2.5"	23'-6"	2	54"		174"
2.5"	24'-0"	2	57"		174"



TYPICAL SIGN ASSEMBLY
Scale: $\frac{3}{4}$ " = 1'-0"

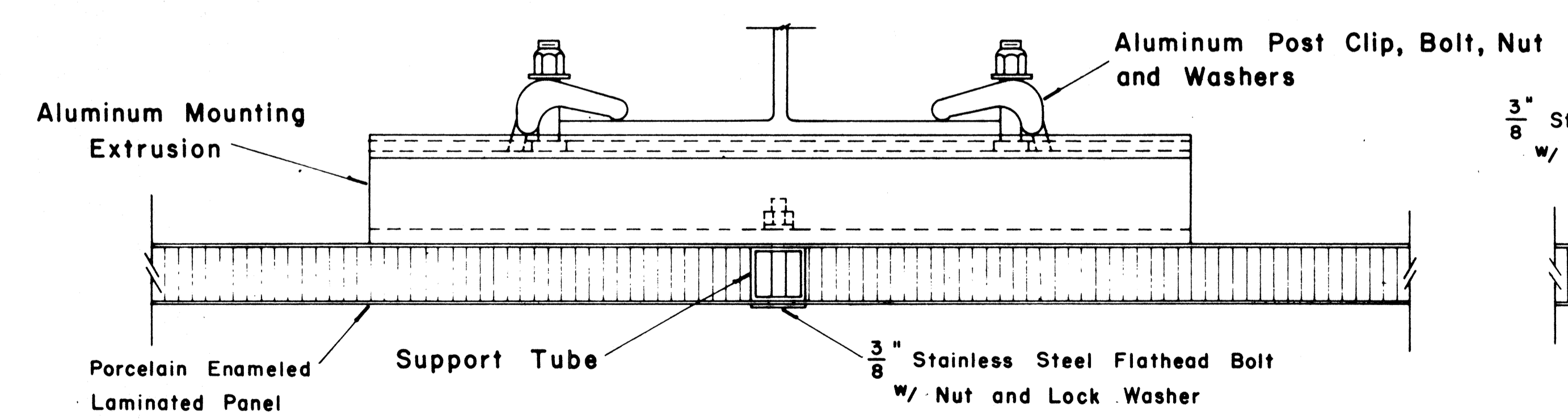


ZEE MOUNTING DETAILS
Scale: $\frac{1}{2}$ " = 1"

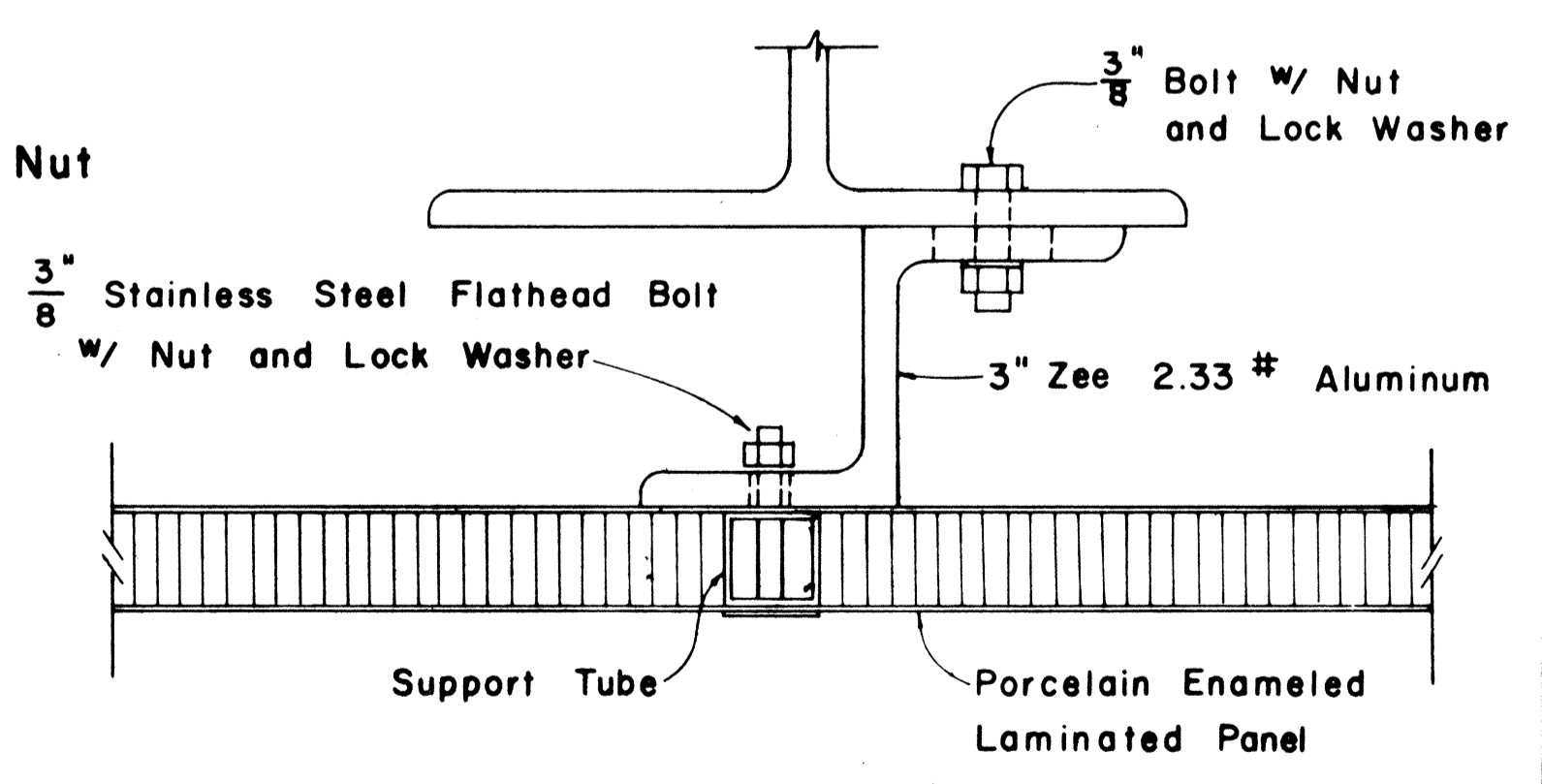


SECTION "B-B"
Scale: $\frac{1}{2}$ " = 1"

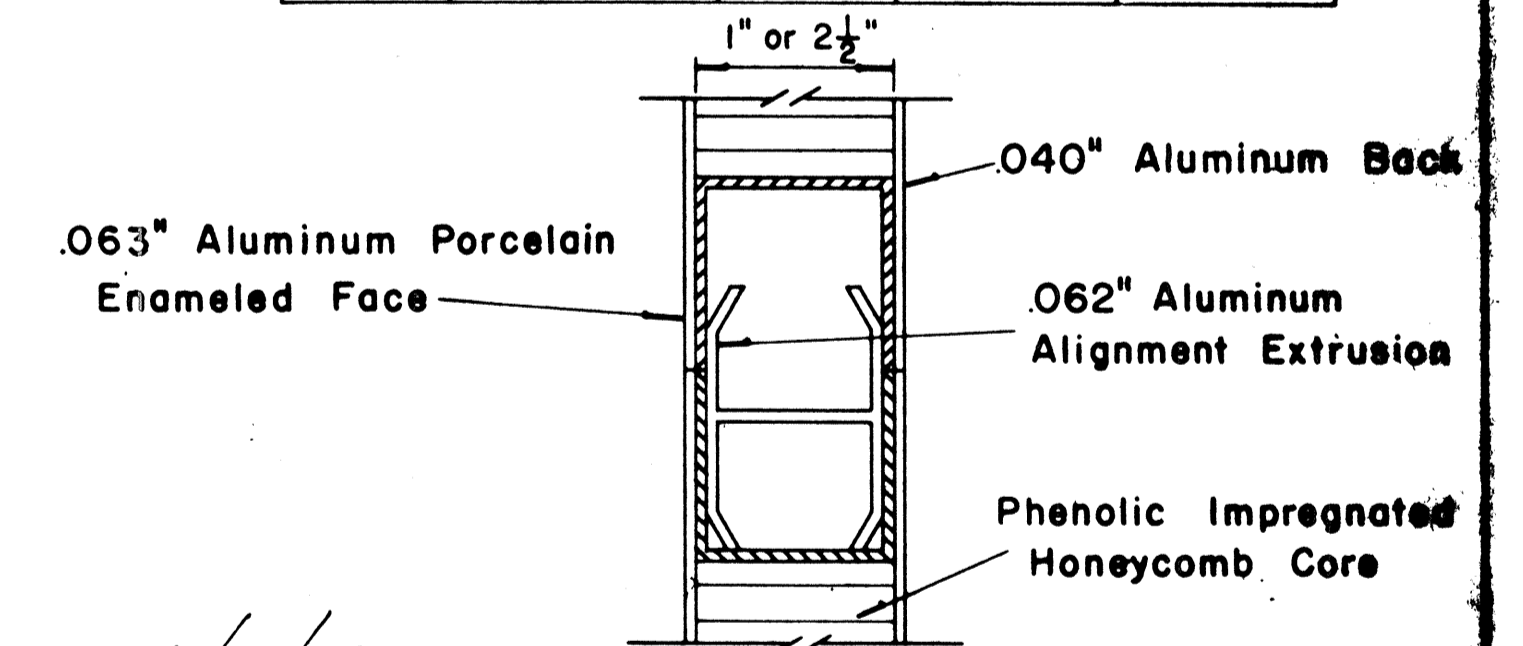
SECTION "B-B" (Alternate)
Scale: $\frac{1}{2}$ " = 1"



SECTION "A-A"
Scale: $\frac{1}{2}$ " = 1"



SECTION "A-A" (Alternate)
Scale: $\frac{1}{2}$ " = 1"



CLOSURE DETAIL SECTION "C-C"
FULL SCALE

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

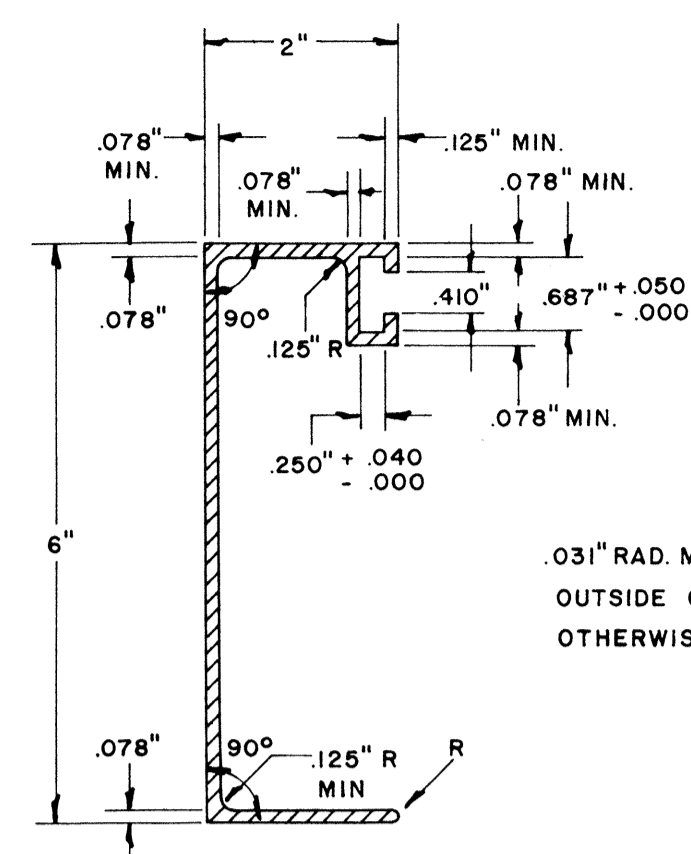
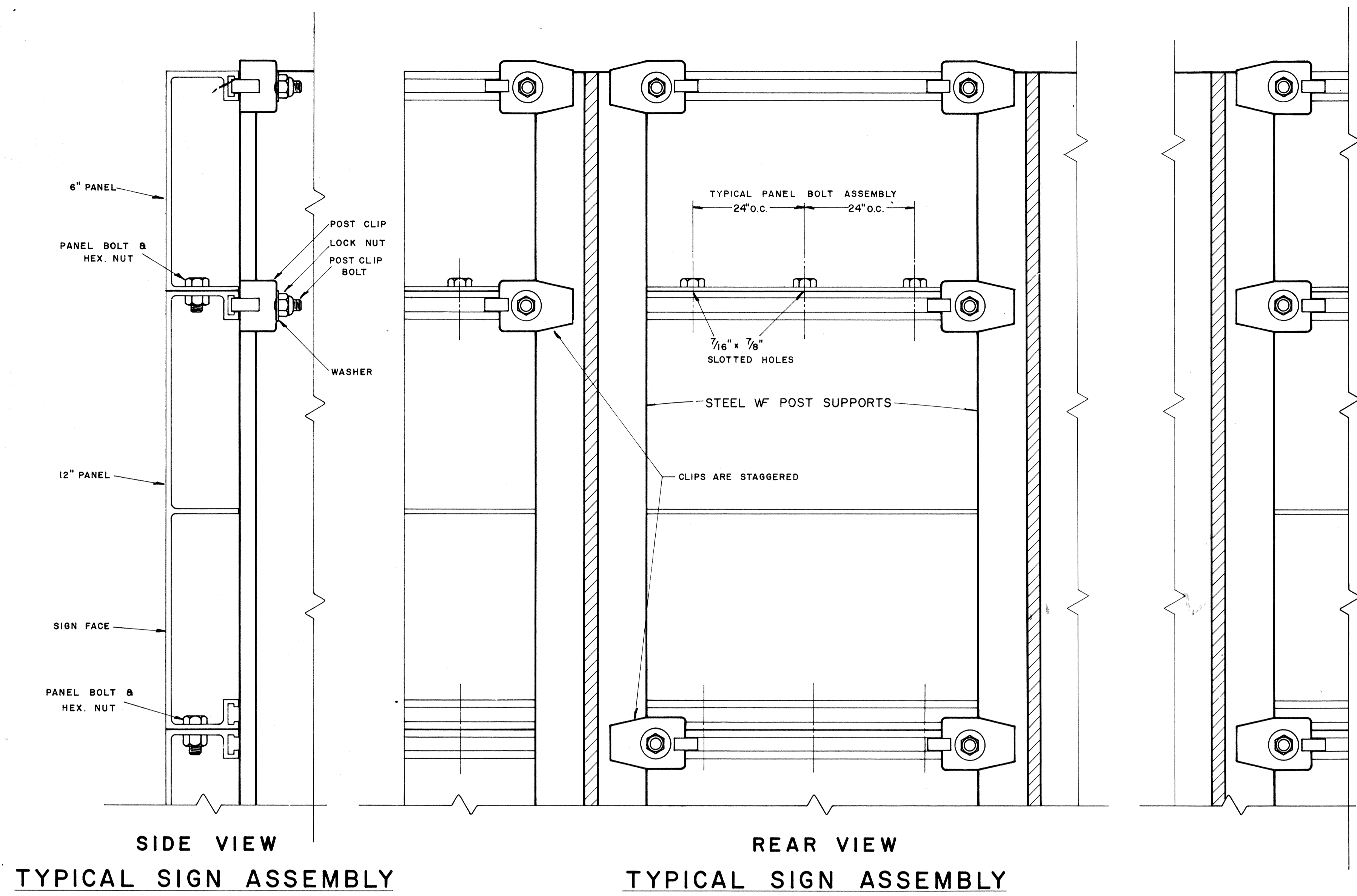
APPROVED:
John S. S. S. 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
LAMINATED ALUMINUM
SIGN PANELS
(GROUND MOUNTED)
Scale: As Shown

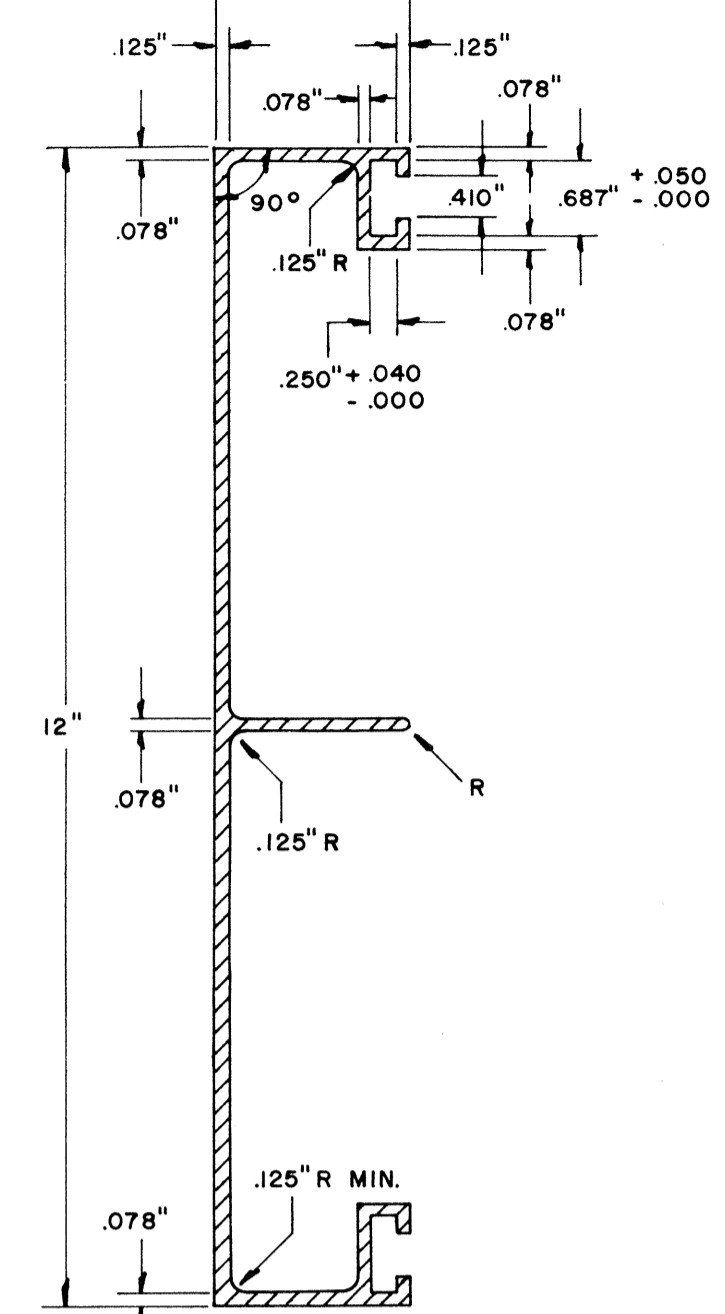
SURVEY PLOTTED BY _____ DATE _____
 PLAN CHECKED BY _____
 ORIGINAL PLAN TRACKED BY _____
 NOTE BOOK DESIGNED BY _____
 QUANTITIES BY _____
 CHECKED BY _____
 No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IRH-1(69)17	1983	99	280



6" SIGN PANEL
 WT./LINEAL FT. - 1.103 LBS. MIN.
 ALLOY - 6061 - F(1)
 MOMENT OF INERTIA - 0.487 MIN.
 MINIMUM SECTION MODULUS 0.341

SOLID EXTRUDED SIGN PANEL DETAILS

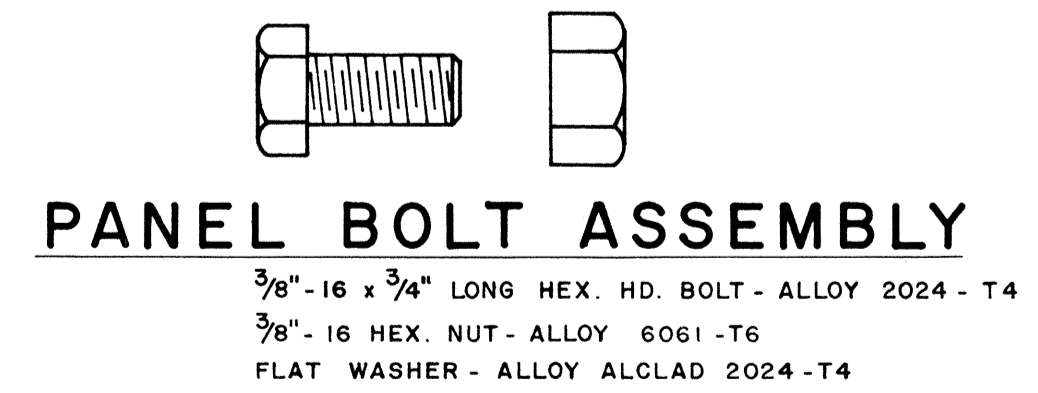
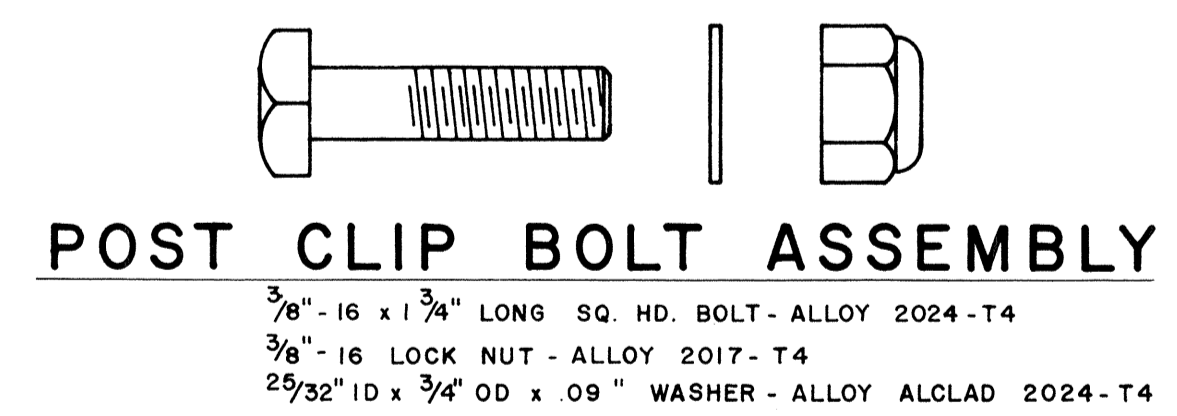
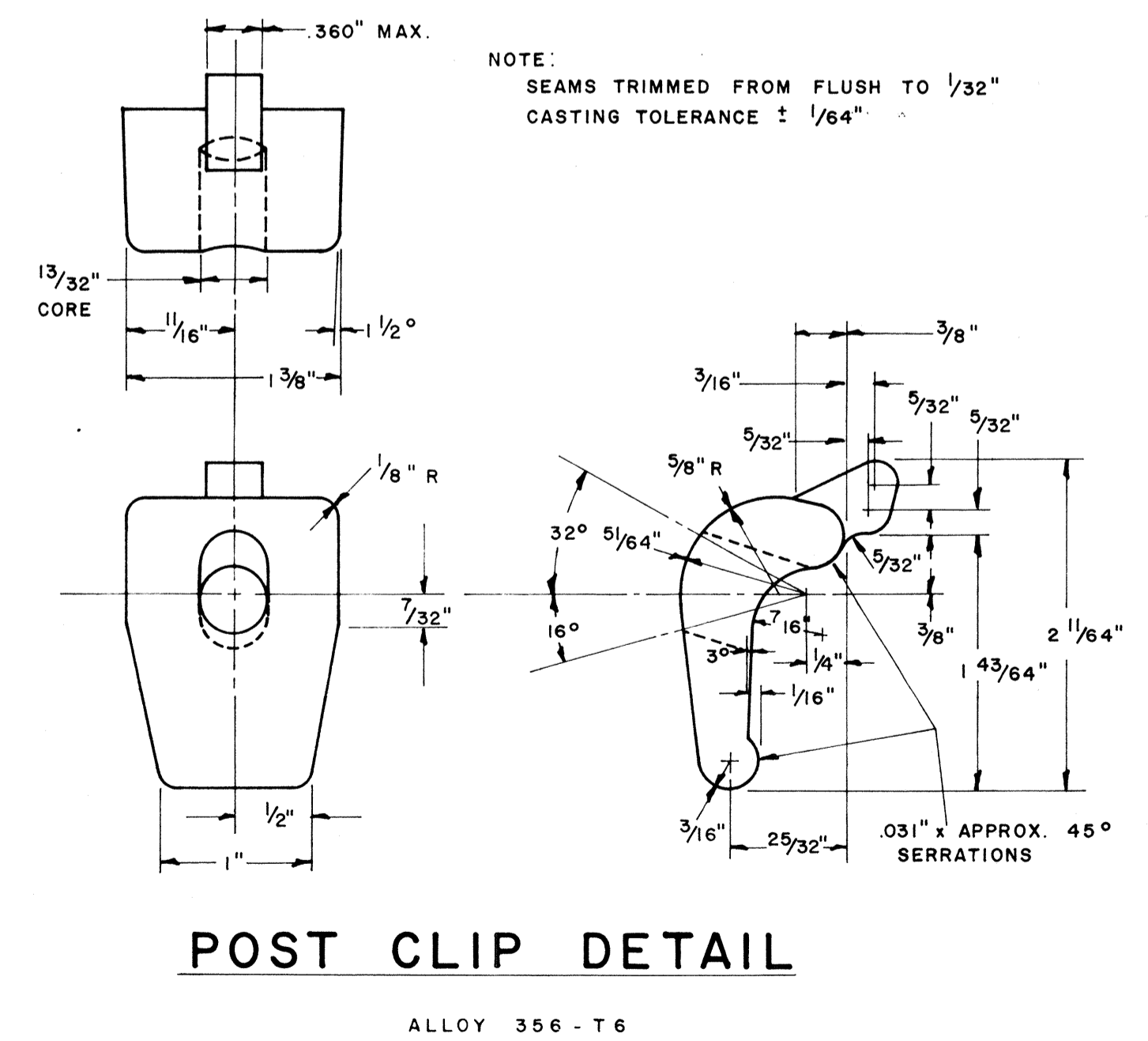


12" SIGN PANEL
 WT./LINEAL FT. - 2.690 LBS. MIN.
 ALLOY - 6061 - F(1)
 MOMENT OF INERTIA 0.936 MIN.
 MINIMUM SECTION MODULUS 0.605

TYPICAL SIGN ASSEMBLY
 SIDE VIEW

TYPICAL SIGN ASSEMBLY
 REAR VIEW

DATE	_____
SURVEY PLOTTED BY	_____
ORIGINAL PLAN	_____
TRACED BY	_____
NOTE BOOK	_____
QUANTITIES CHECKED BY	_____
CHECKED BY	_____



NOTE:
 Extruded Aluminum Panels to be used for
 Destination Signs with Reflective Sheeting Background

APPROVAL RECOMMENDED:
Eiichi Tanaka 12/27/83
 TRAFFIC ENGINEER DATE

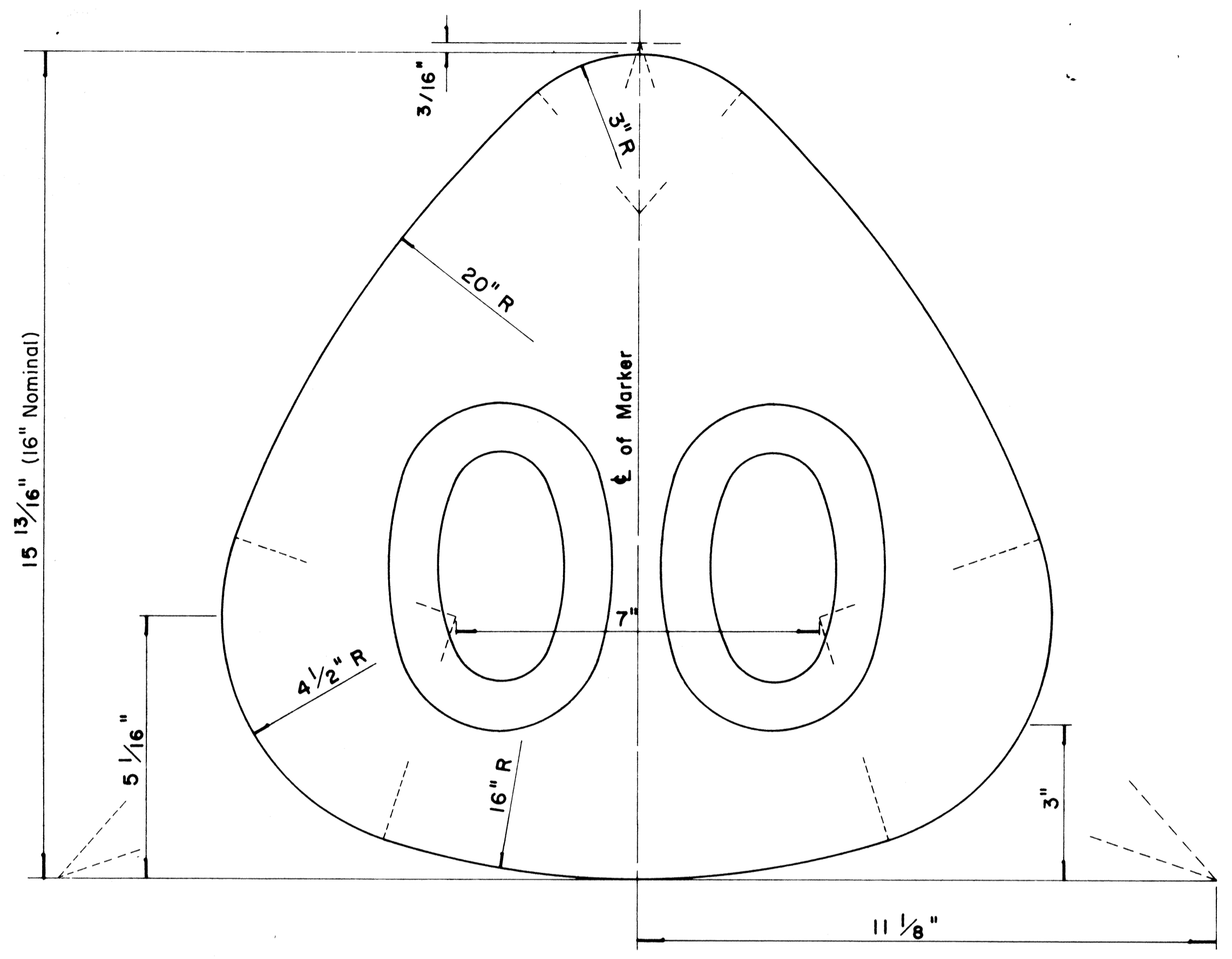
APPROVED:
[Signature] 12-30-83
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
 SOLID ALUMINUM
 EXTRUDED SIGN PANEL
 AND
 ACCESSORY DETAILS
 SCALE:

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-11(10)17	1983	100	280

MARKER SIZE	MULTIPLY DIMENSIONS BY	NUMERAL SIZE
		2 Digit - Series D 3 Digit - Series C
21"	1.3	8"
32"	2.0	12"
42"	2.63	16"



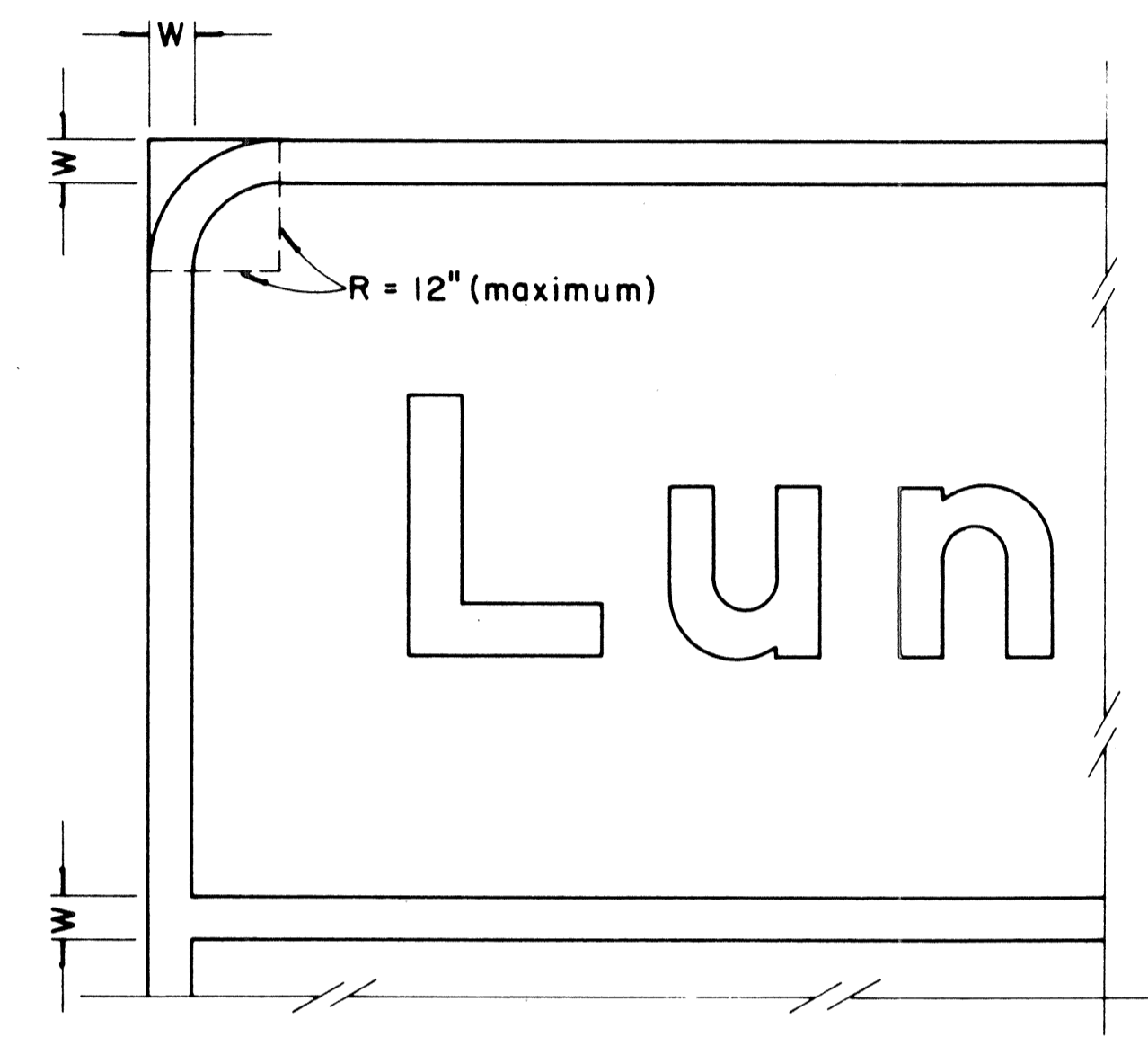
**STATE ROUTE MARKER
FOR GUIDE SIGNS**

Scale: Half Size

NOTE:

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

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



**BORDER DETAIL
FOR GUIDE SIGNS**

Not to Scale

NOTE:

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

APPROVAL RECOMMENDED:
Eishi Tanaka 4/11/72
 TRAFFIC ENGINEER DATE

APPROVED:
Shuji Z. Salsishi 4/12/72
 ASSISTANT CHIEF, ENGINEERING DATE

NO	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 209 Approved 12-30-69	H.T.	4/12/72
2	Revised Notes and Schedules	H.T.	7-14-70

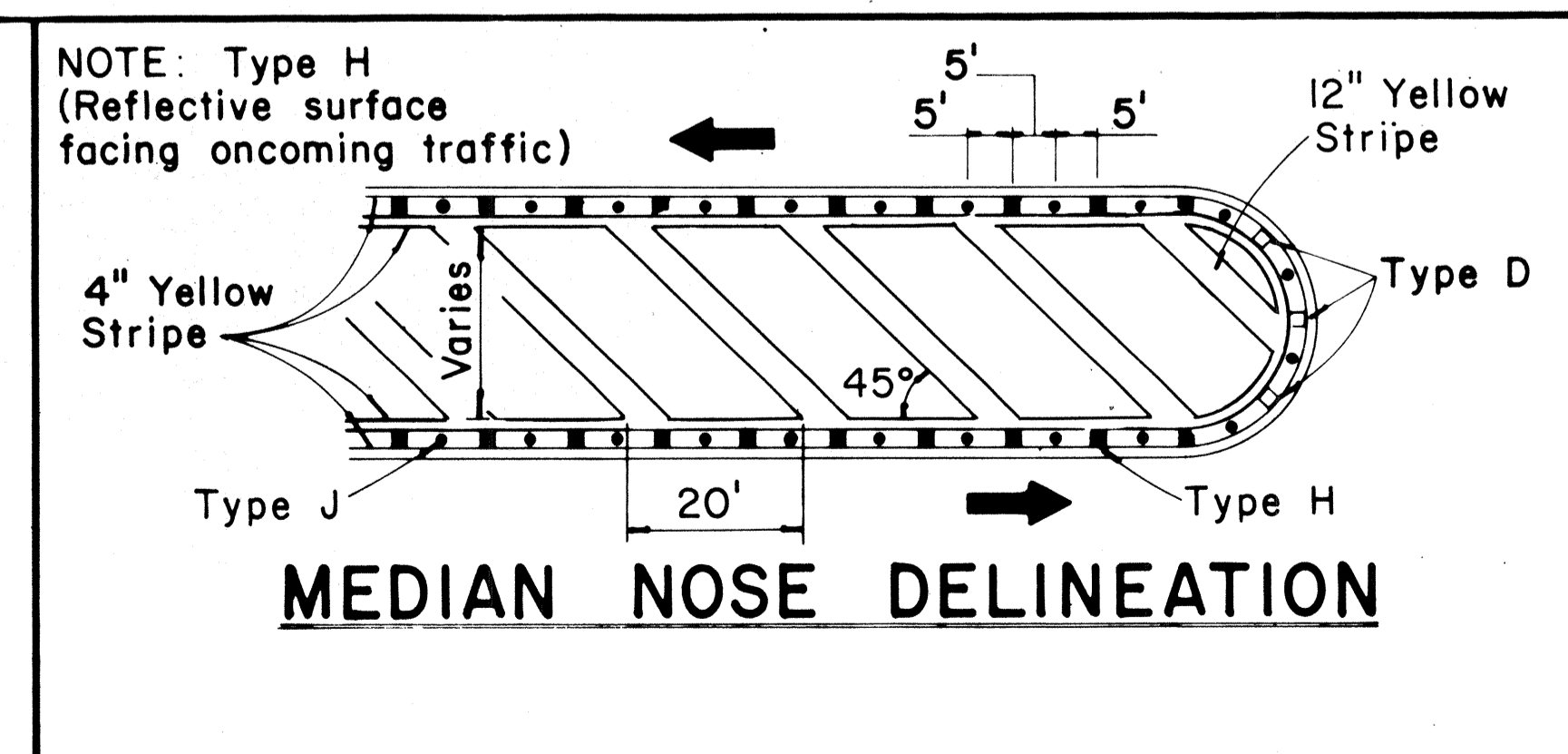
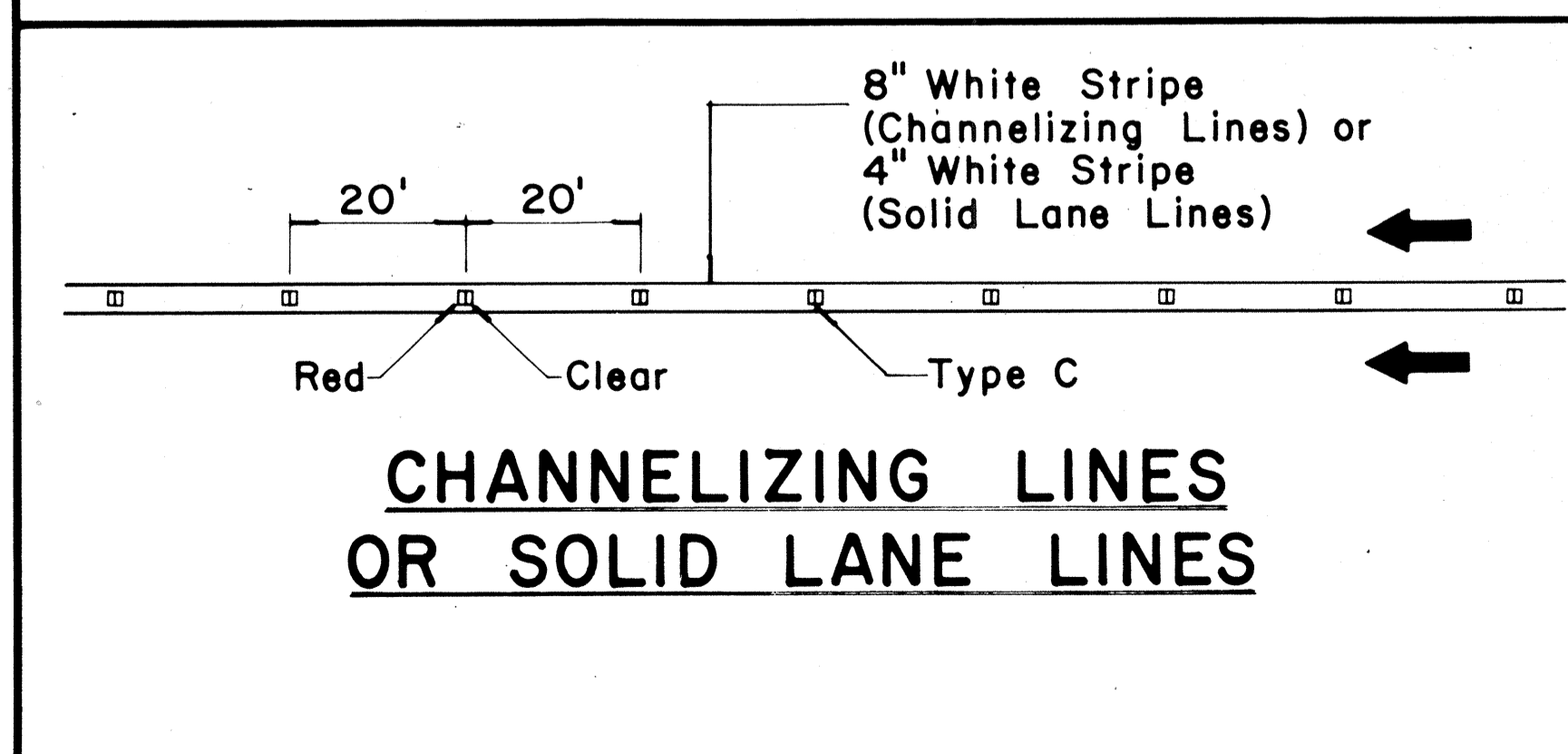
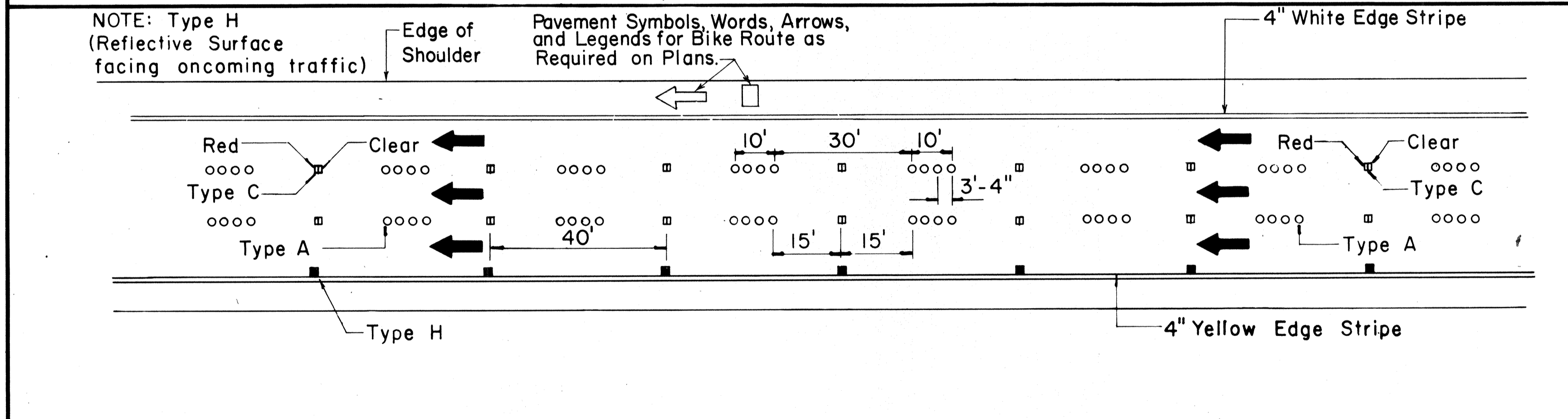
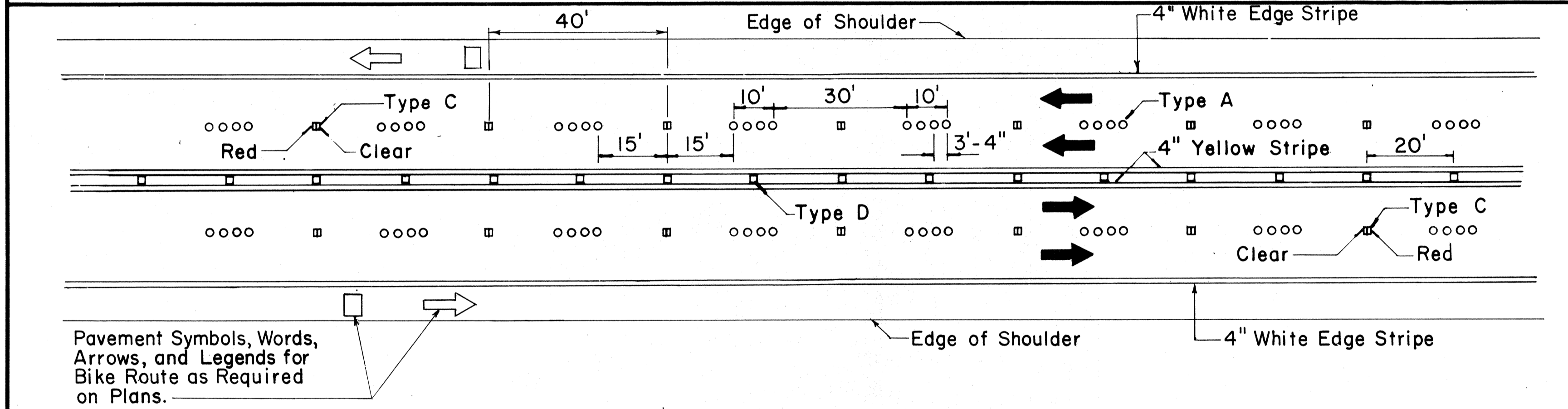
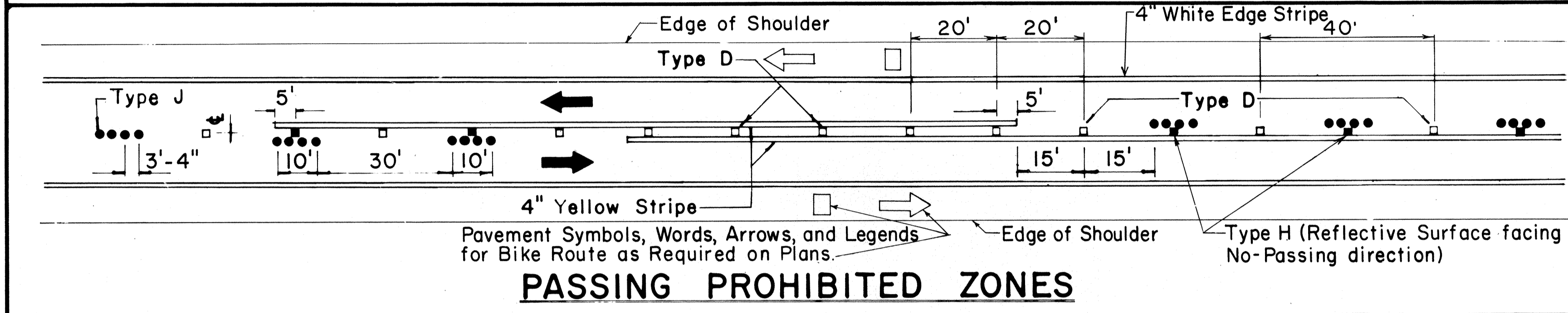
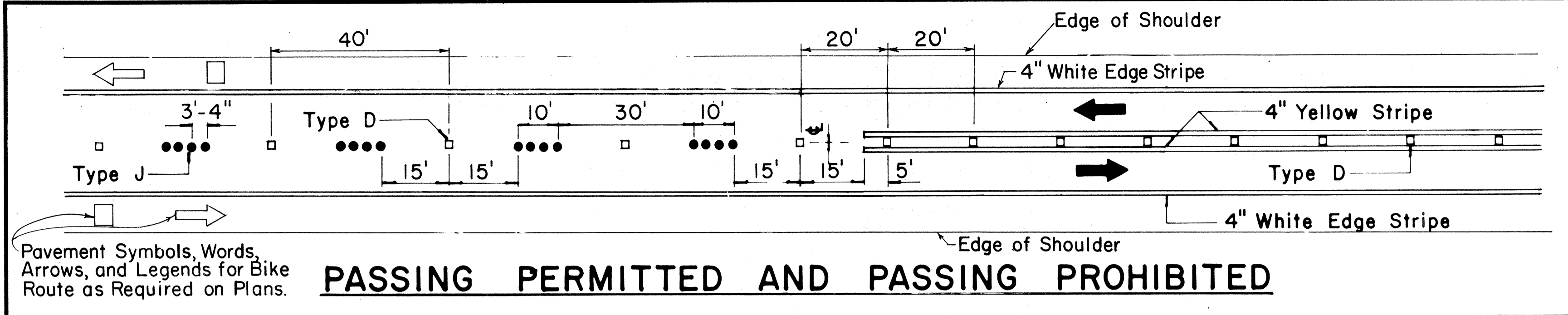
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
**STATE ROUTE MARKER
 AND BORDER DETAIL
 FOR GUIDE SIGNS**

Scale: As Shown

SHEET No. P-26 OF 35 SHEETS DT 209

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H-1(6)17	1983	101	280

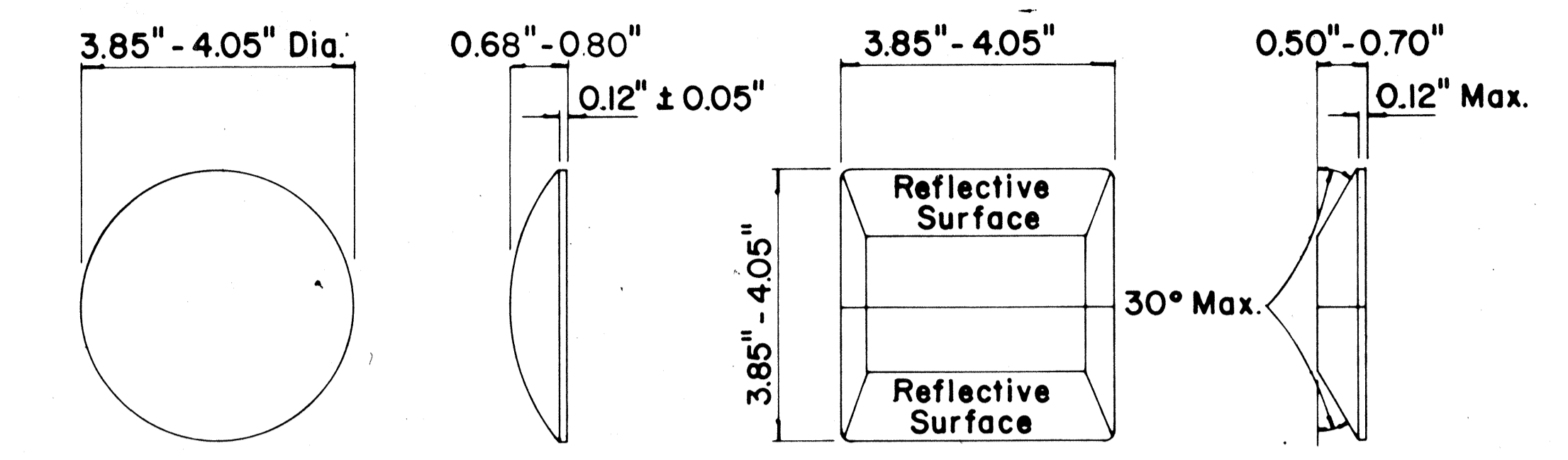


TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

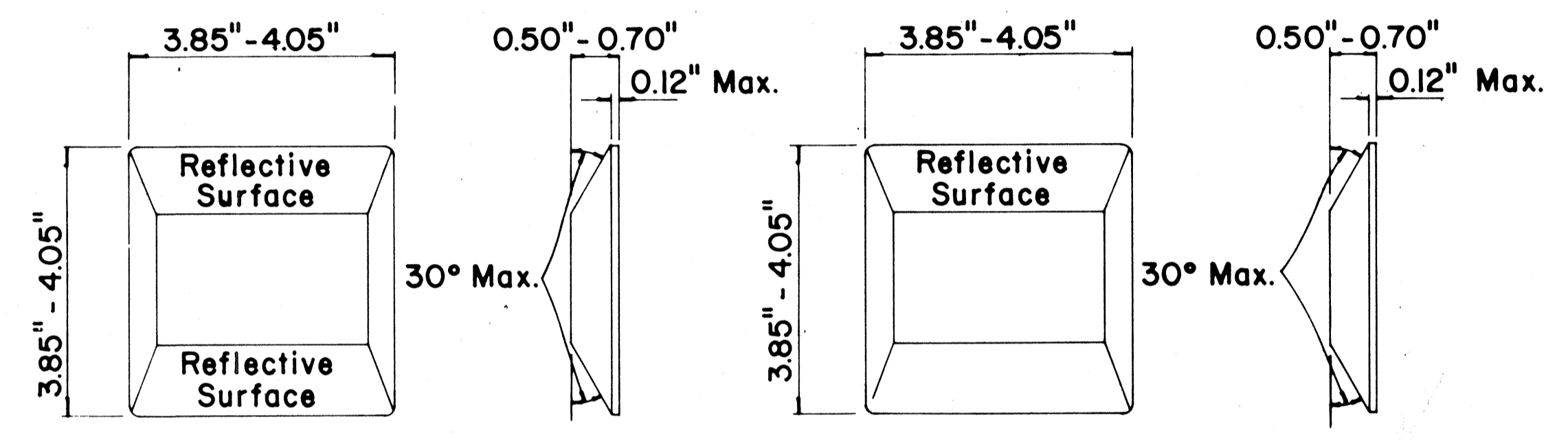
MISCELLANEOUS



TYPE A
NON-REFLECTIVE WHITE MARKER

TYPE C
RED-CLEAR REFLECTIVE MARKER

TYPE J
NON-REFLECTIVE YELLOW 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:
Robert J. Reichen 7/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

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

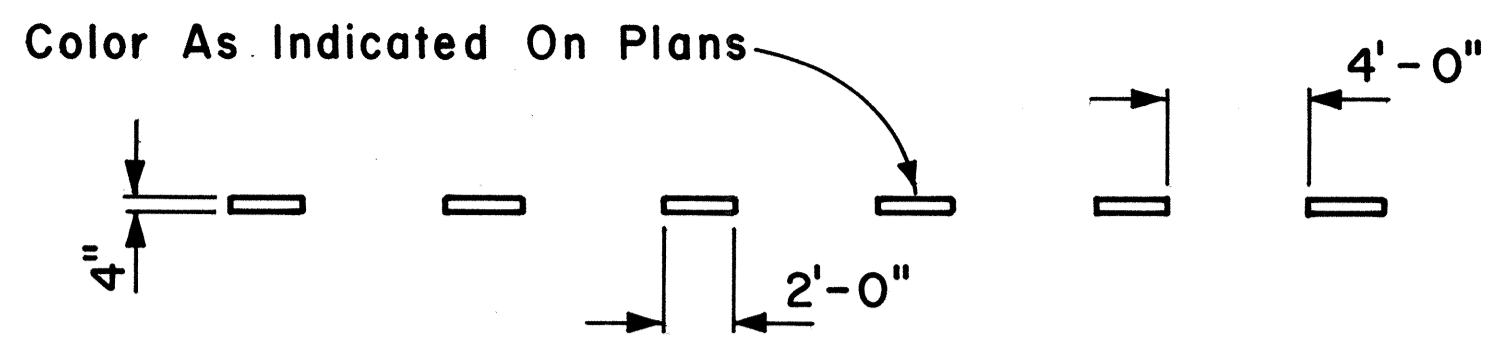
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

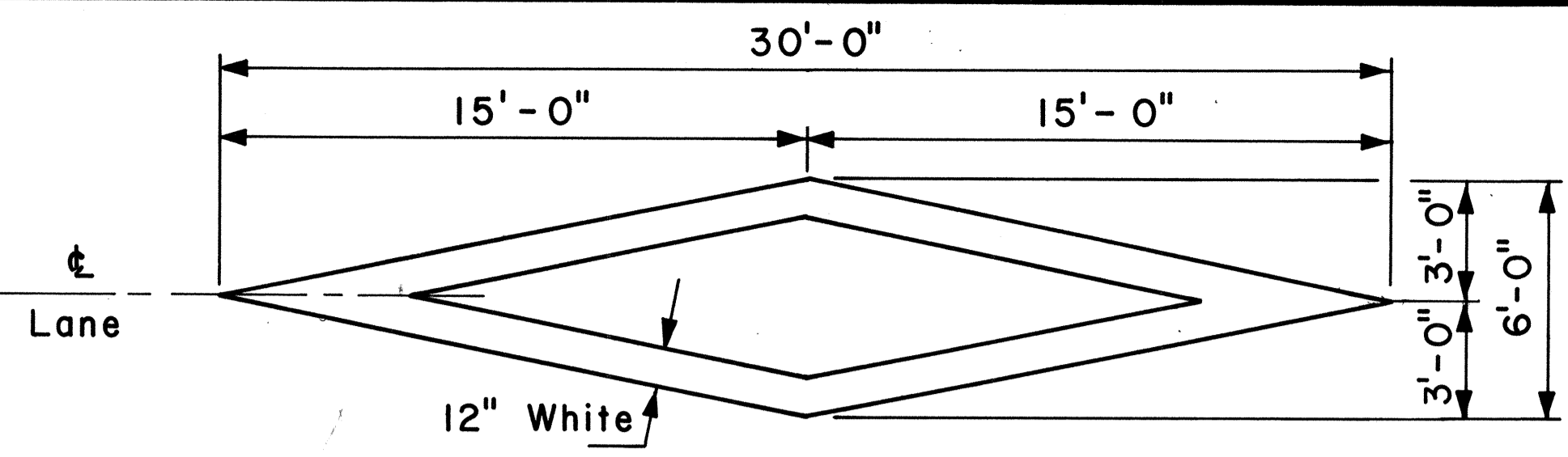
Not to Scale July 1978
 SHEET No.P-27 OF 35 SHEETS DT 300

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

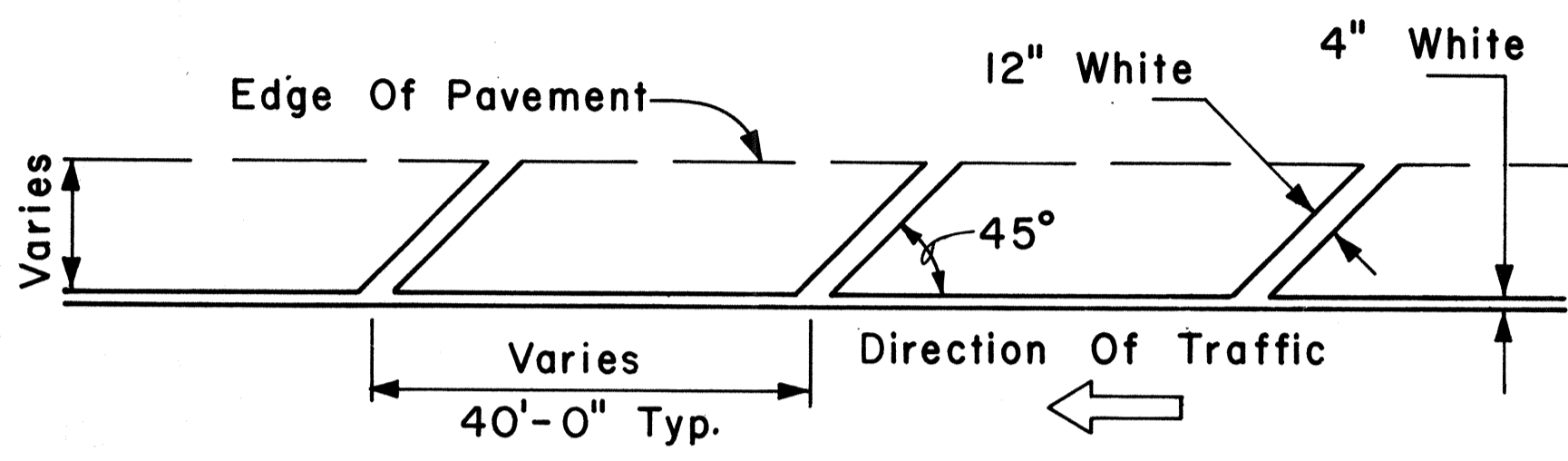
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	111-117	1983	102	280



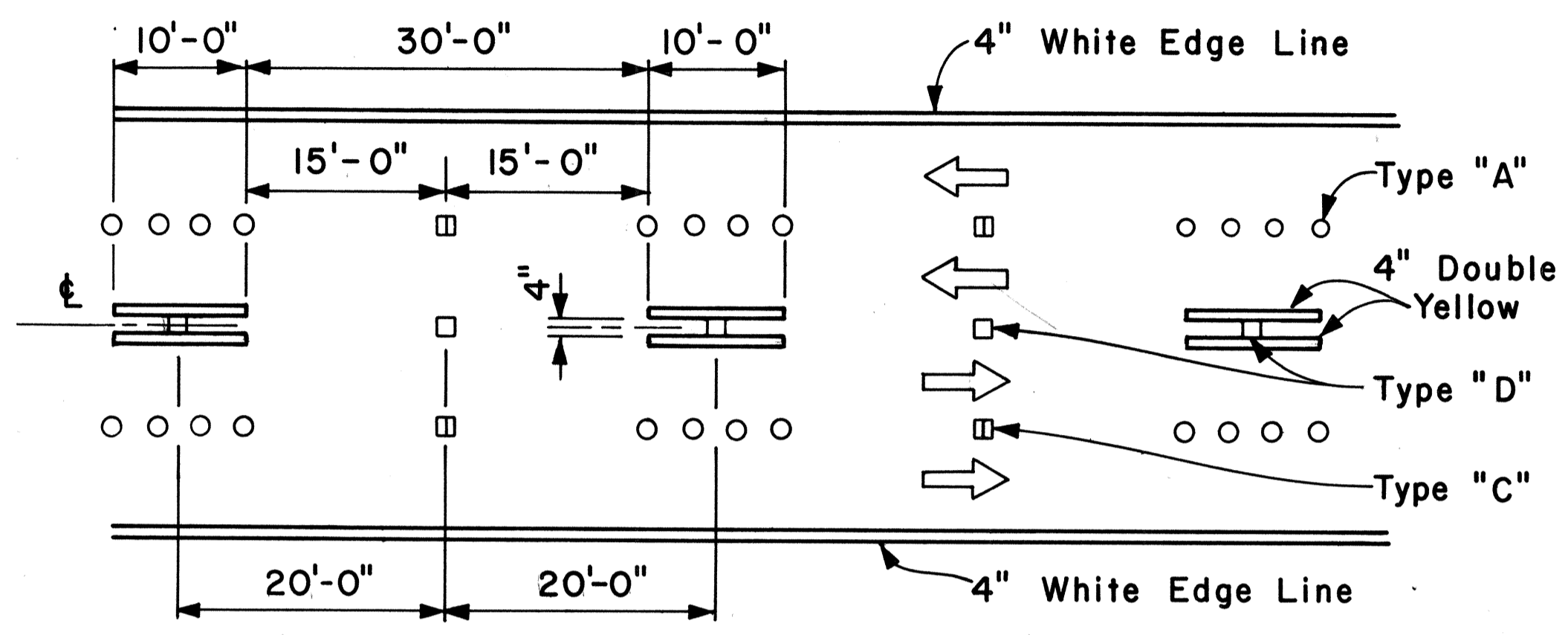
4" GUIDE LINE



PAVEMENT DIAMOND

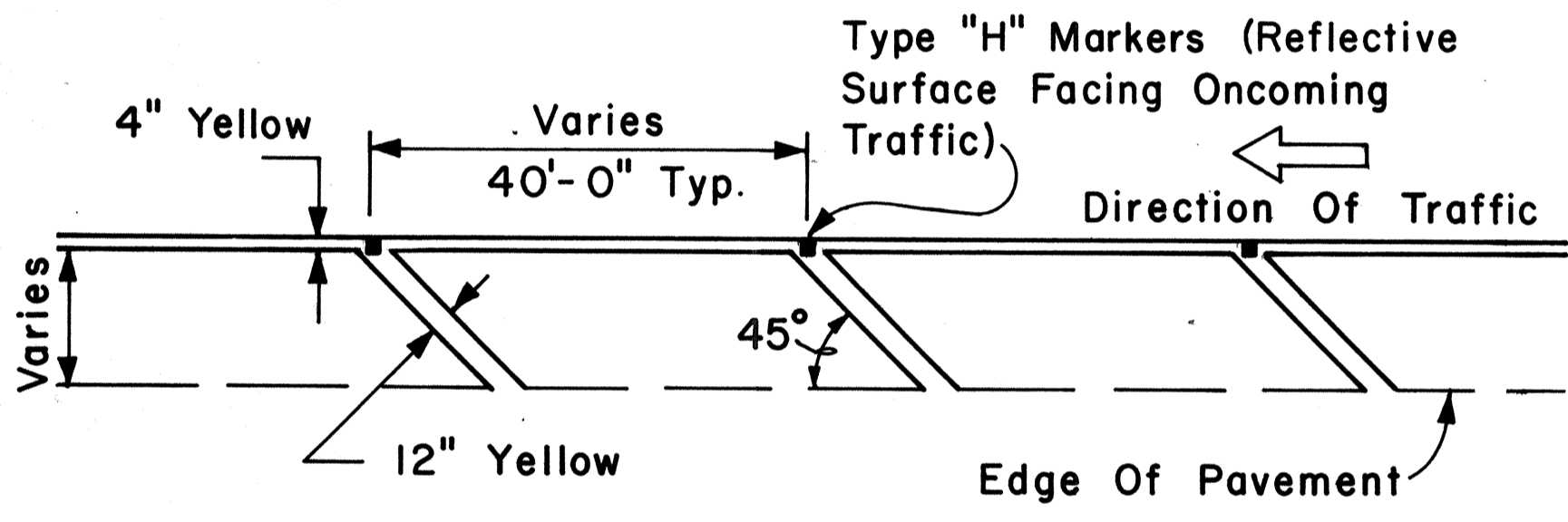


TRANSVERSE RIGHT SHOULDER MARKING

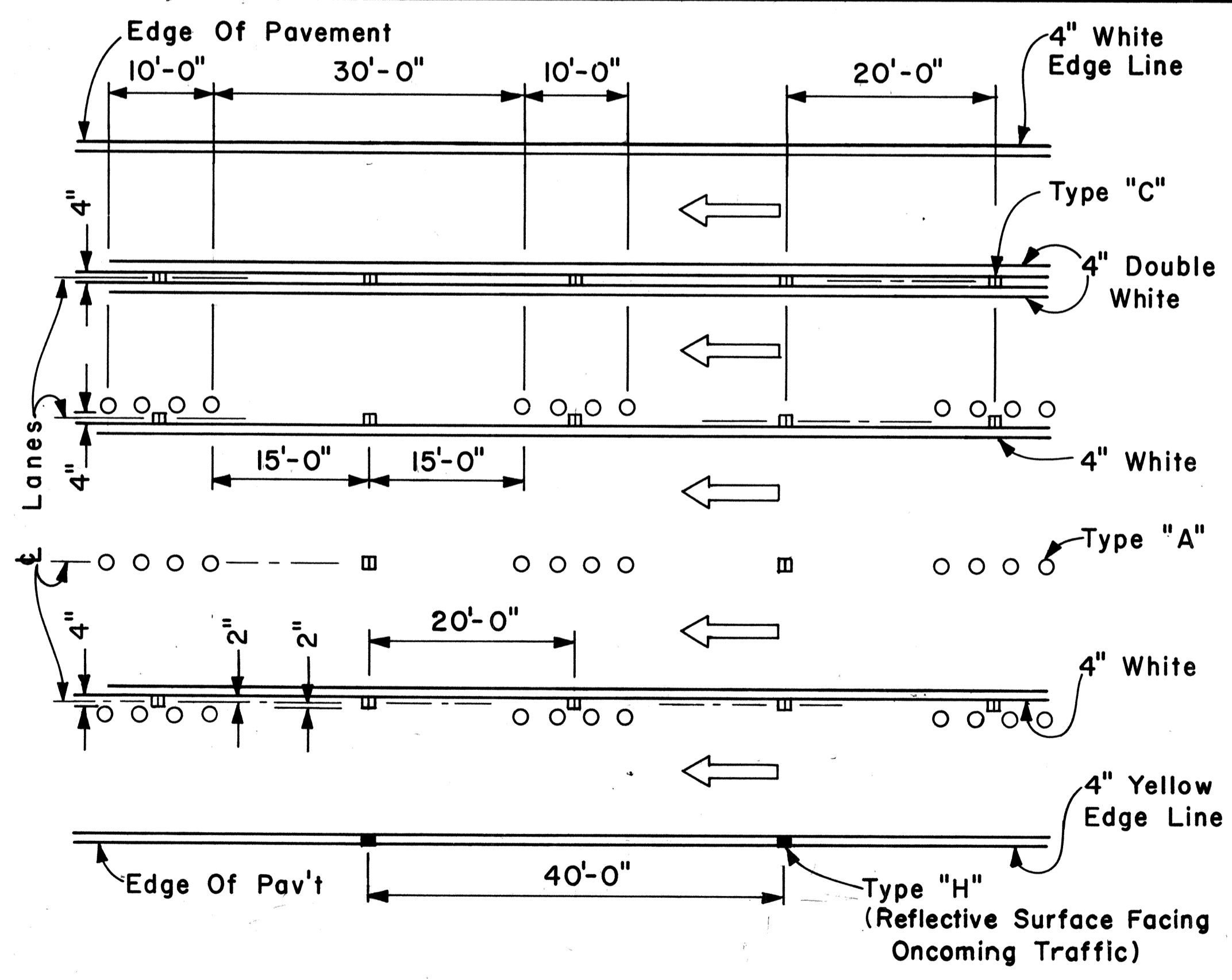


NOTE: Traffic Cone Usage Required.

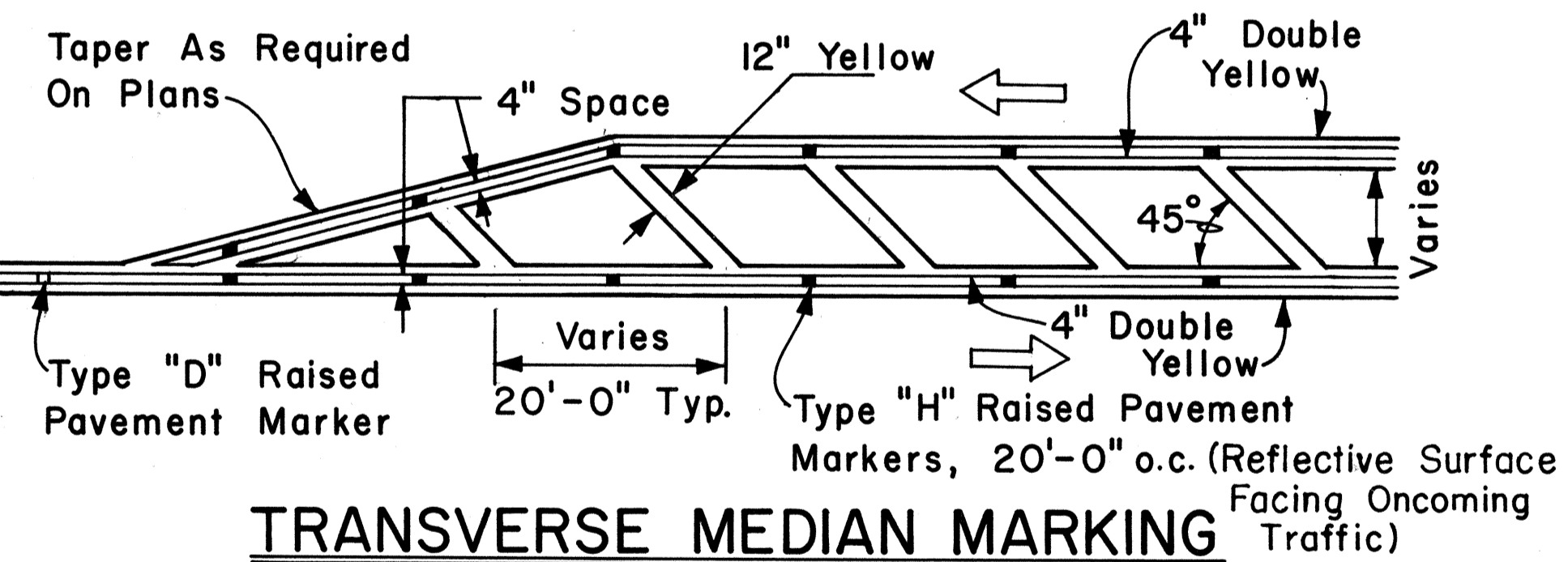
MULTI-LANE REVERSIBLE LANES



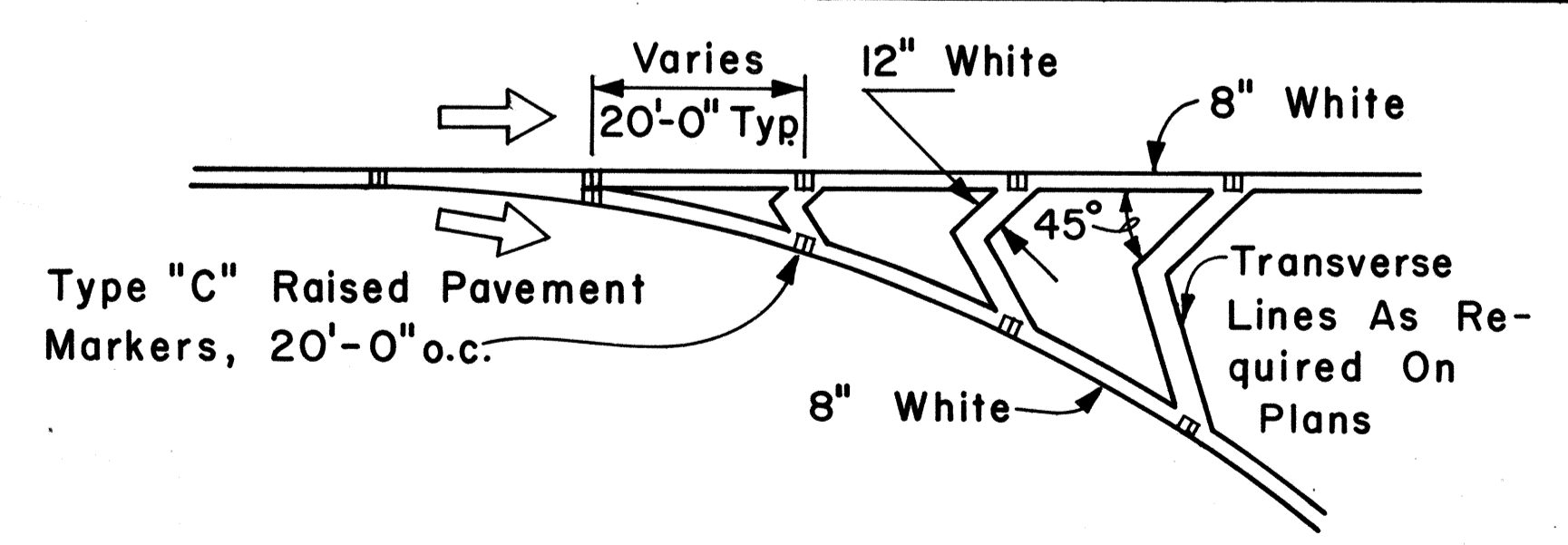
TRANSVERSE LEFT SHOULDER MARKING



MULTI-LANE LANE CHANGE RESTRICTION ZONES



TRANSVERSE MEDIAN MARKING



CHANNELIZING ISLAND

GENERAL NOTES:

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

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

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

MISCELLANEOUS
 PAVEMENT MARKINGS

Scale: Not to Scale Date: April, 1978
 SHEET NO. 28 OF 35 SHEETS DT 302

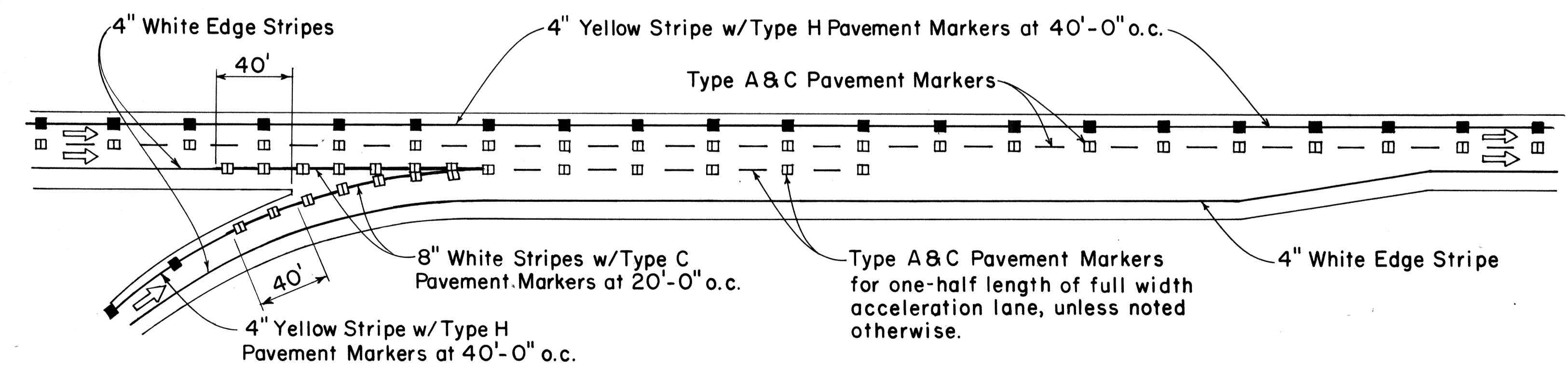
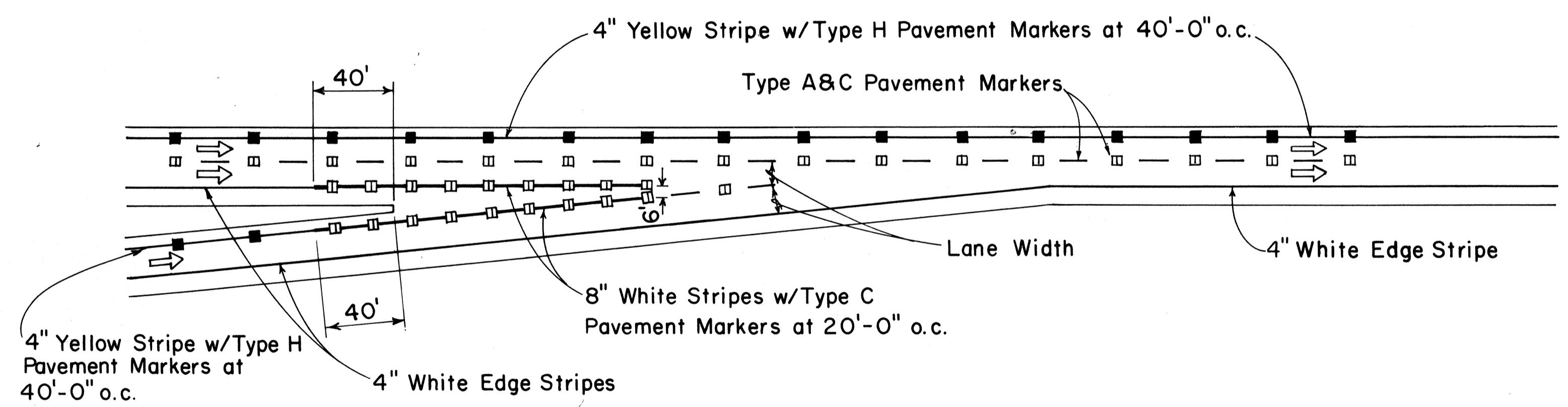
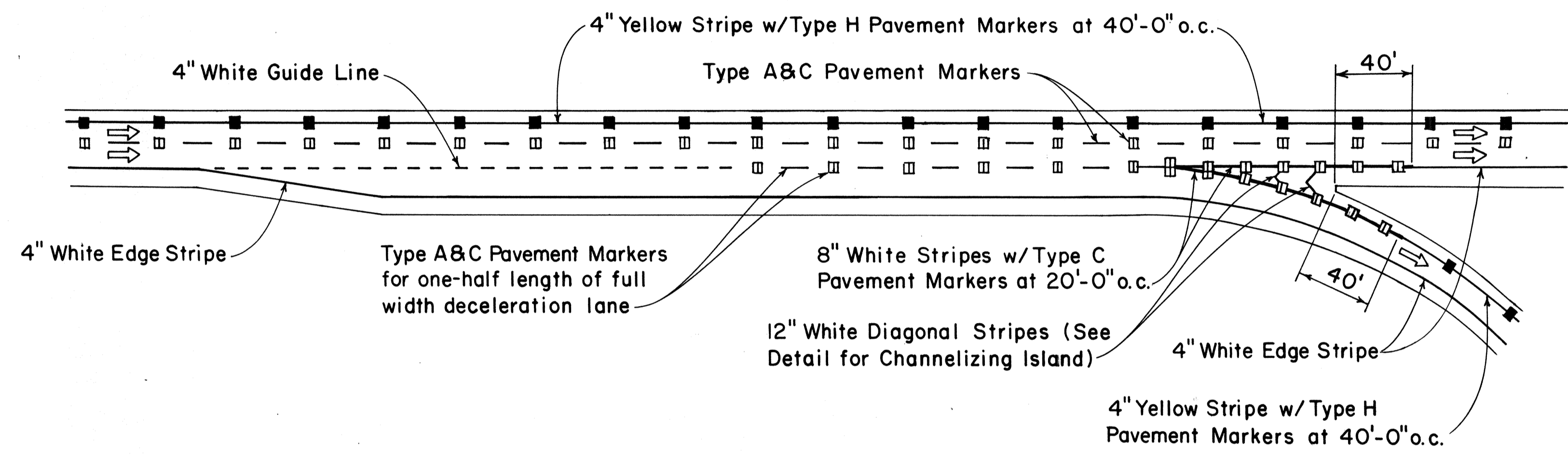
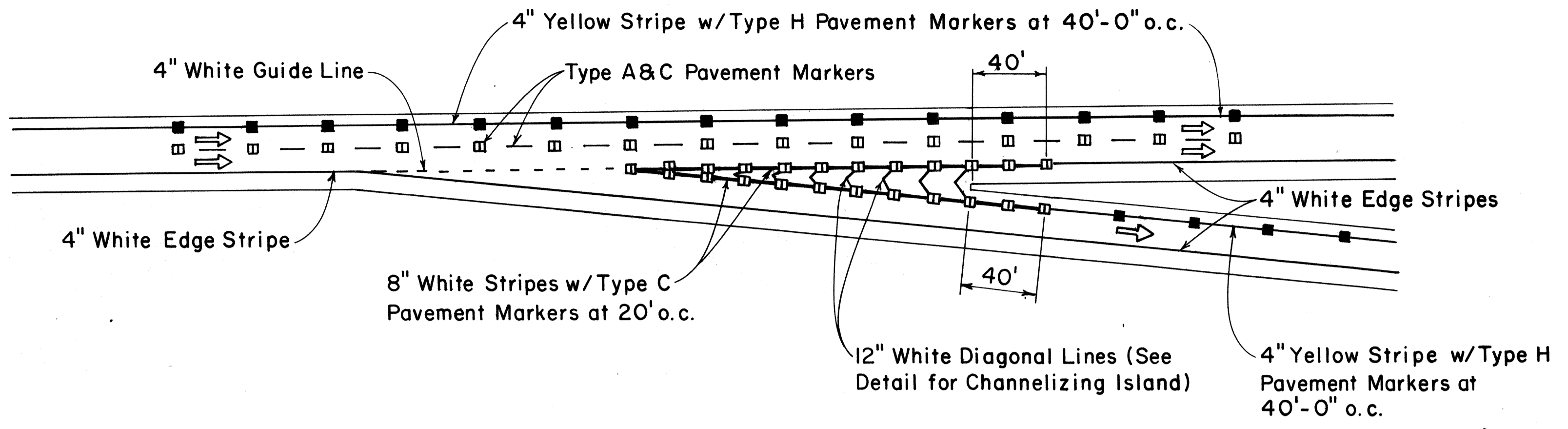
DATE: _____
 SURVEY PLOTTED BY: _____
 PLAN DRAWN BY: _____
 DESIGNED BY: _____
 NOTE BOOK QUANTITIES BY: _____
 CHECKED BY: _____
 No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-19(10)	1983	103	280

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



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

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

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

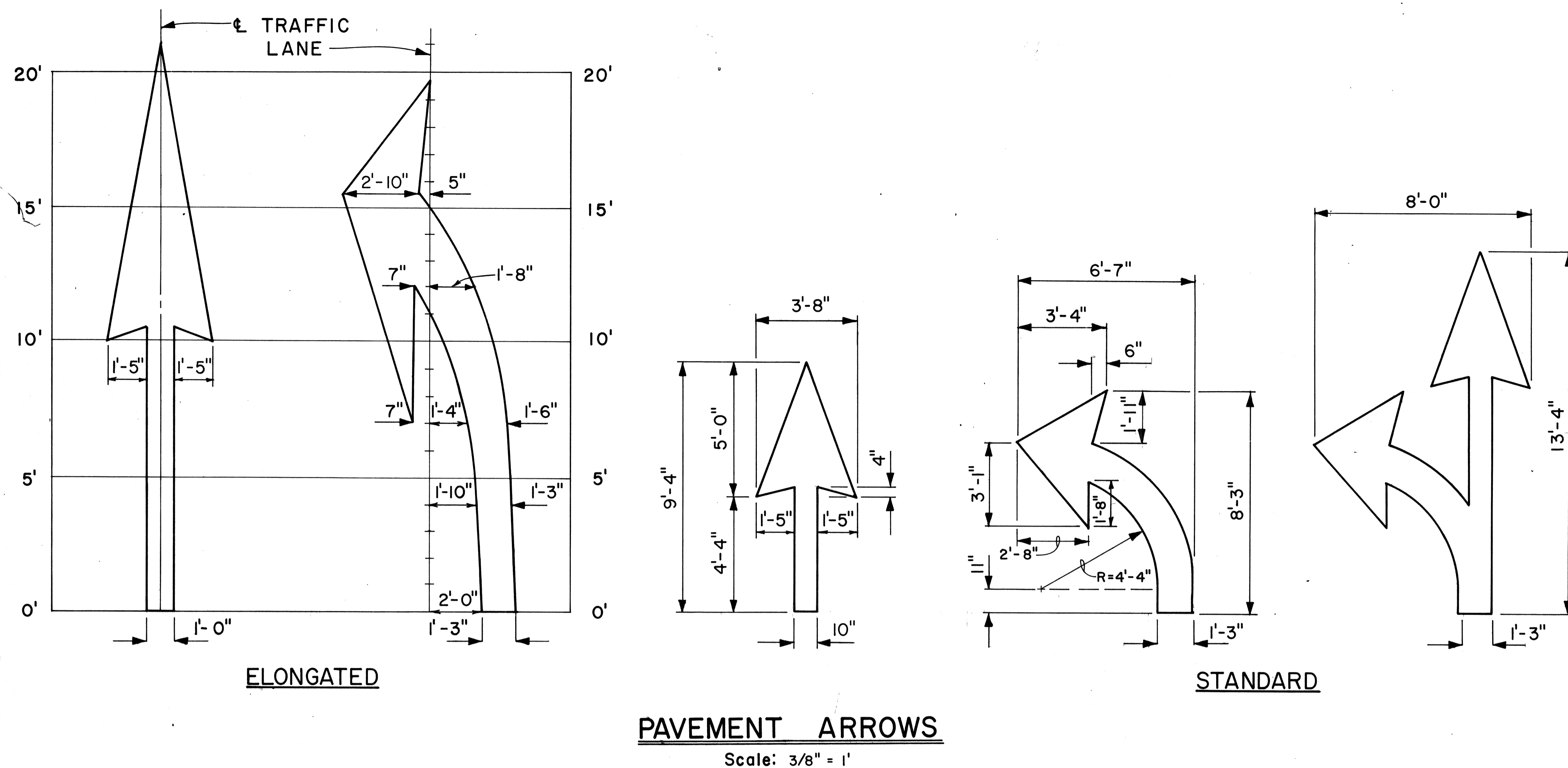
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

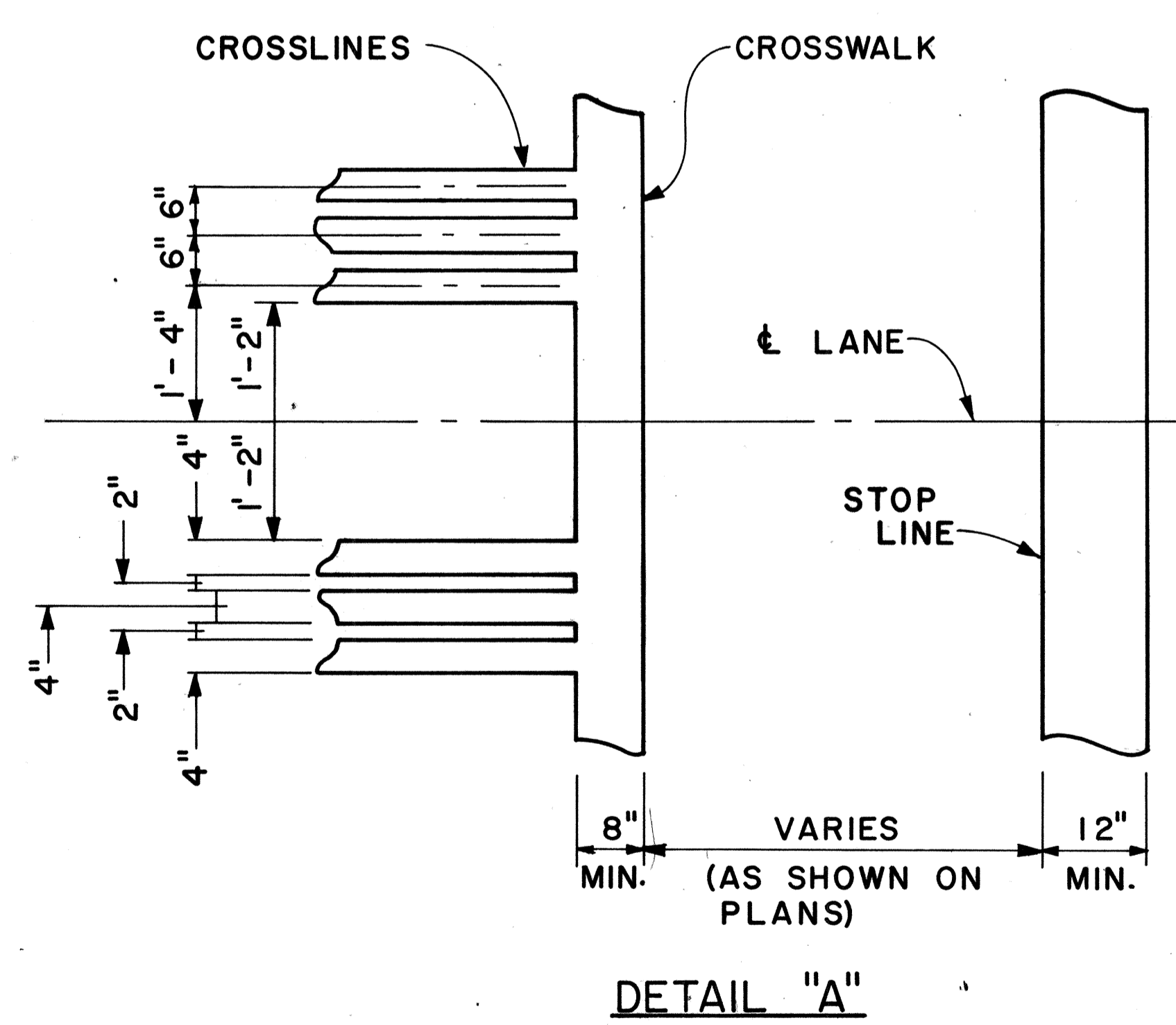
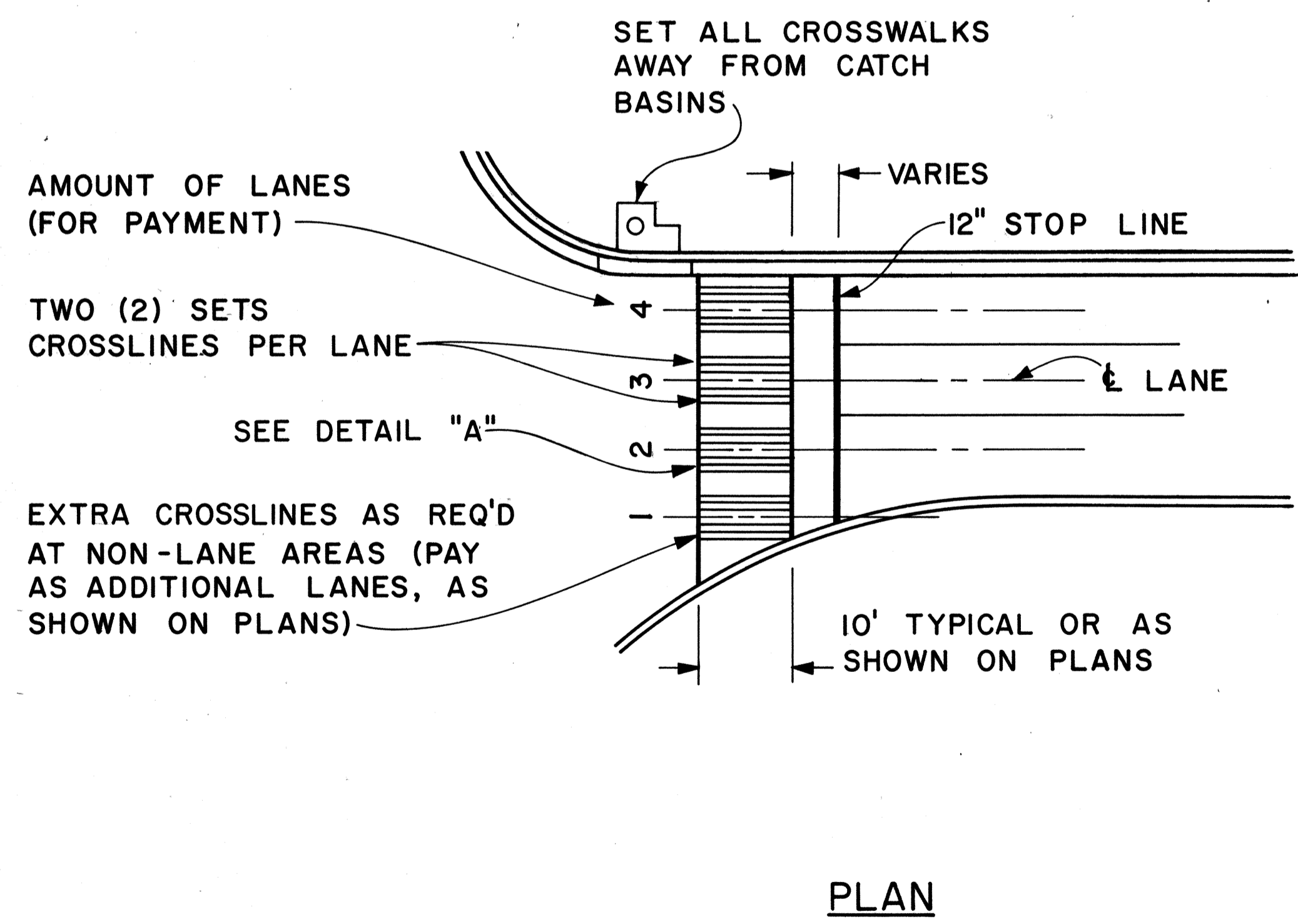
Not to Scale July 1978
 SHEET No. P-29 OF 35 SHEETS DT 304

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-17-11(10)	1983	104	280



GENERAL NOTES:

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



CROSSWALK & STOP LINE
Scale: Not to Scale

APPROVAL RECOMMENDED:
E. J. Tanaka 5/2/78
 TRAFFIC ENGINEER DATE

APPROVED:
Harold S. Zaleski 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

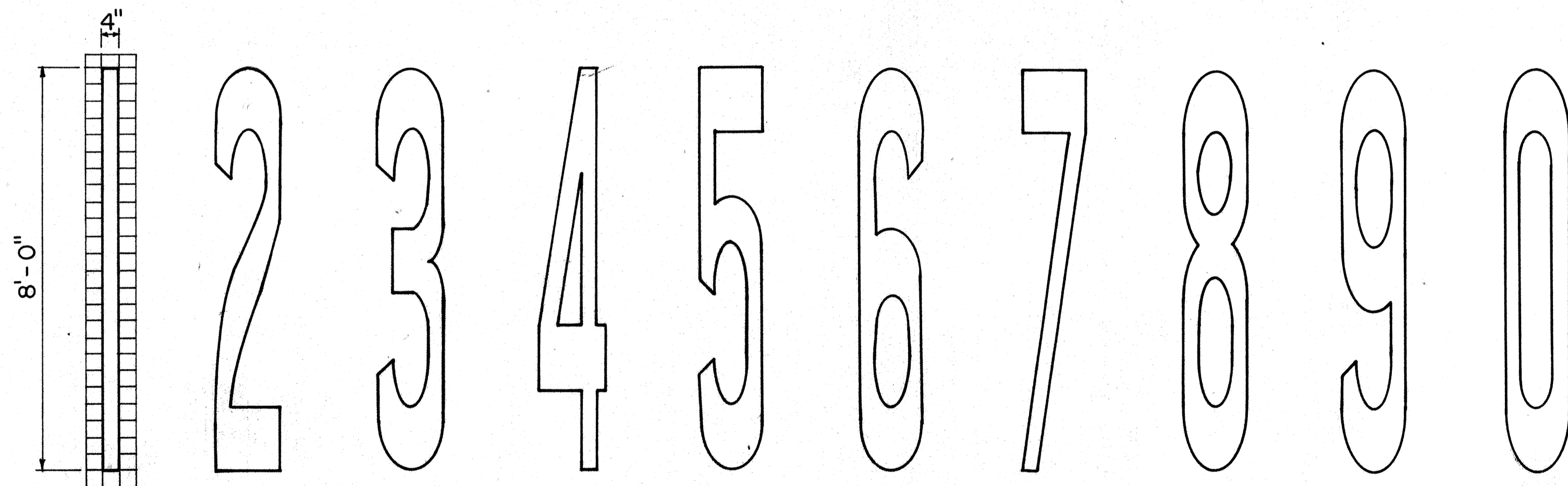
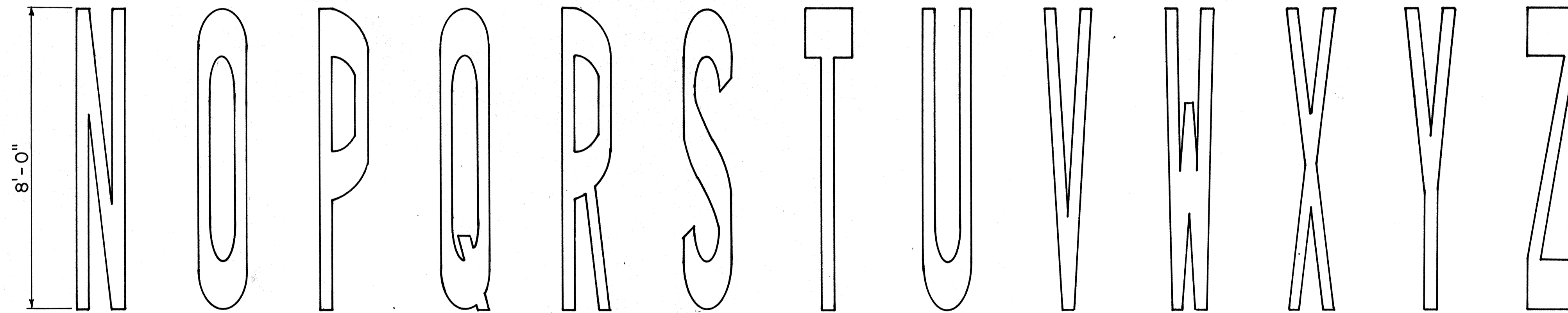
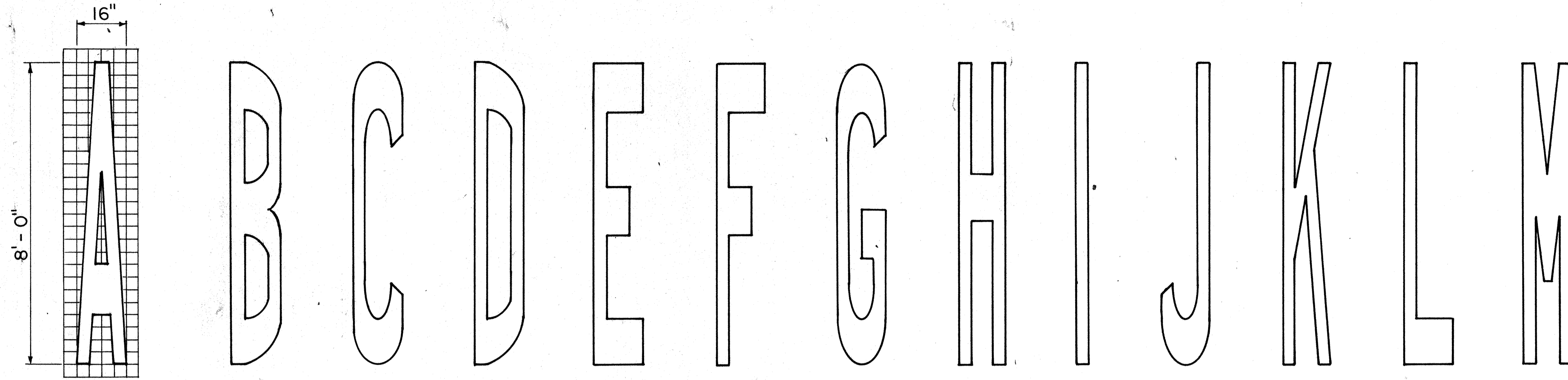
Scale: As Shown Date: March, 1978
 SHEET No. P.30 OF 35 SHEETS DT 306

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IRH-1(62)17	1983	105	280

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:
Eiichi 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

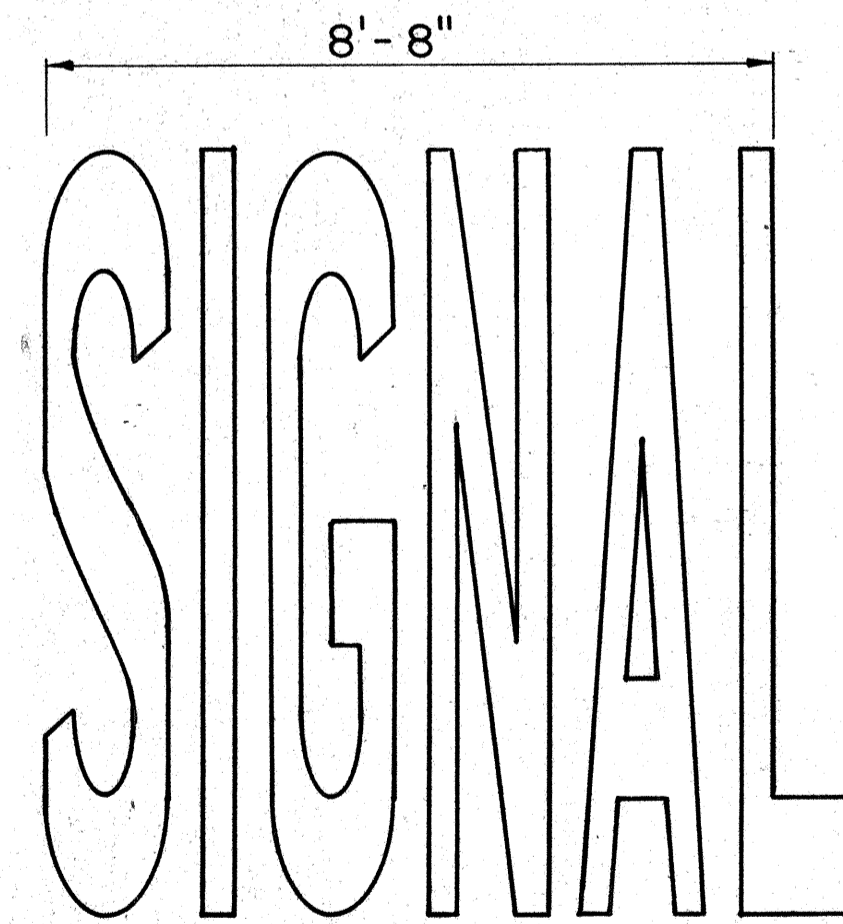
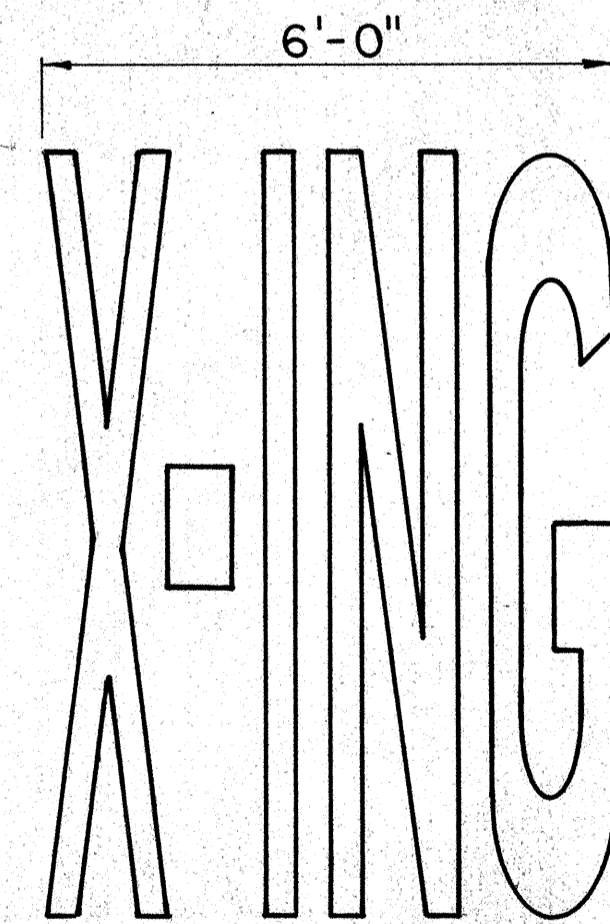
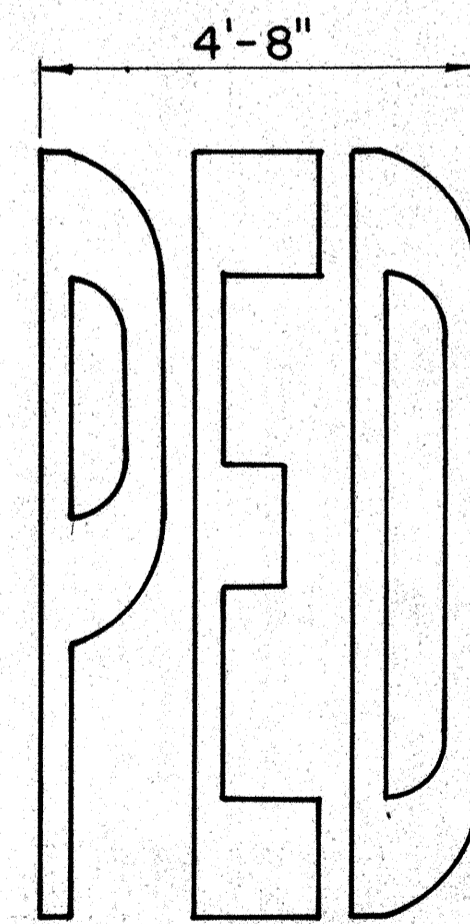
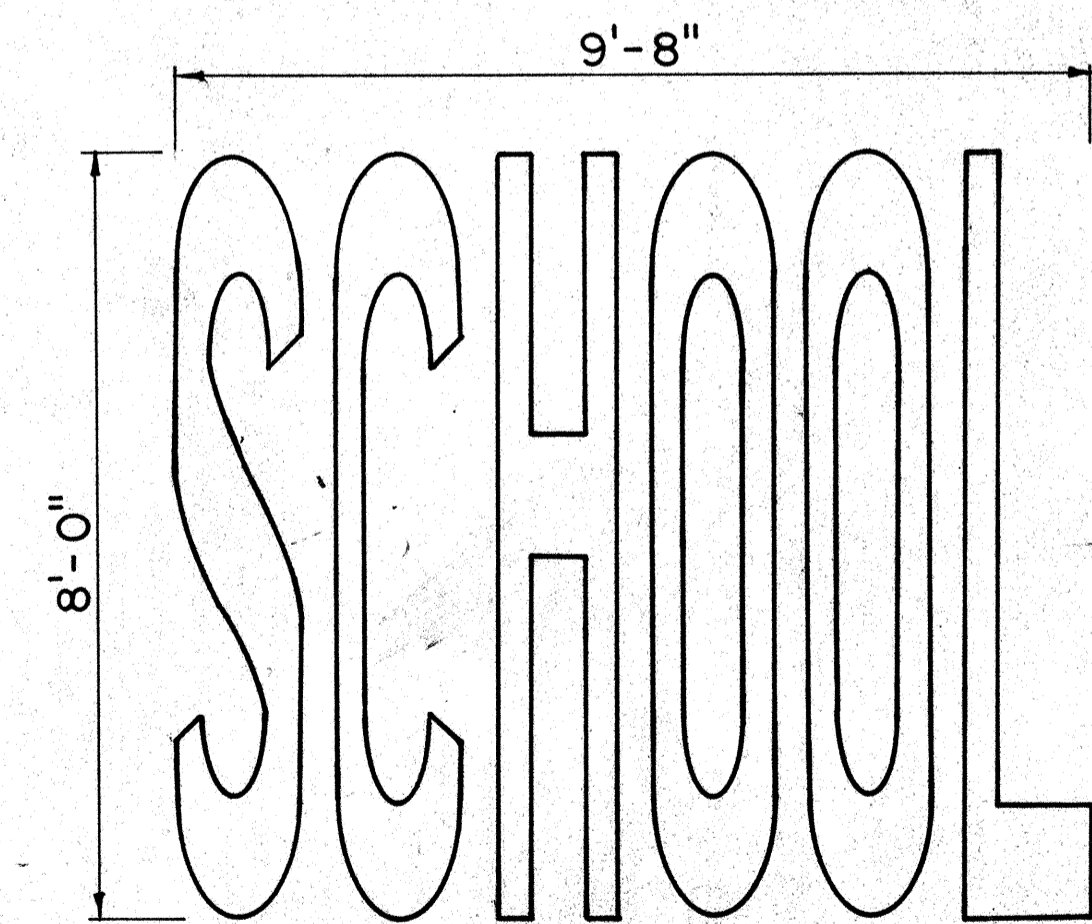
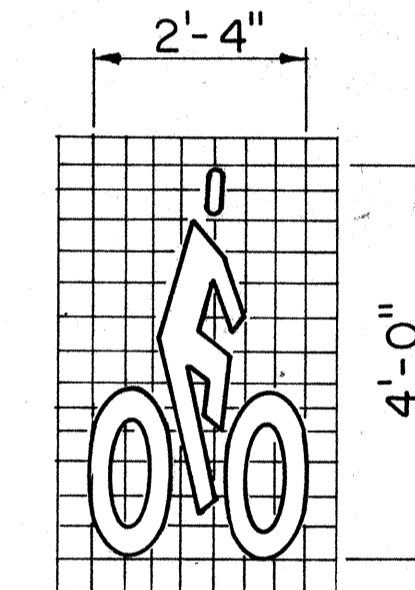
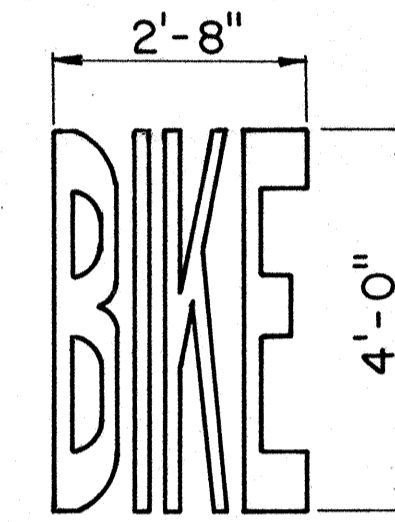
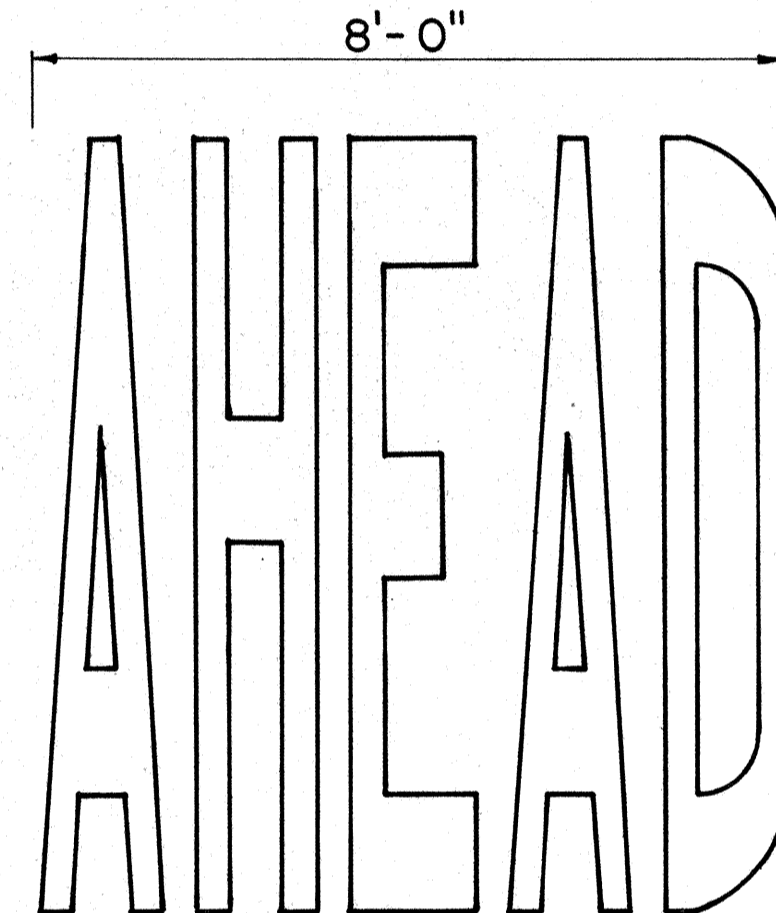
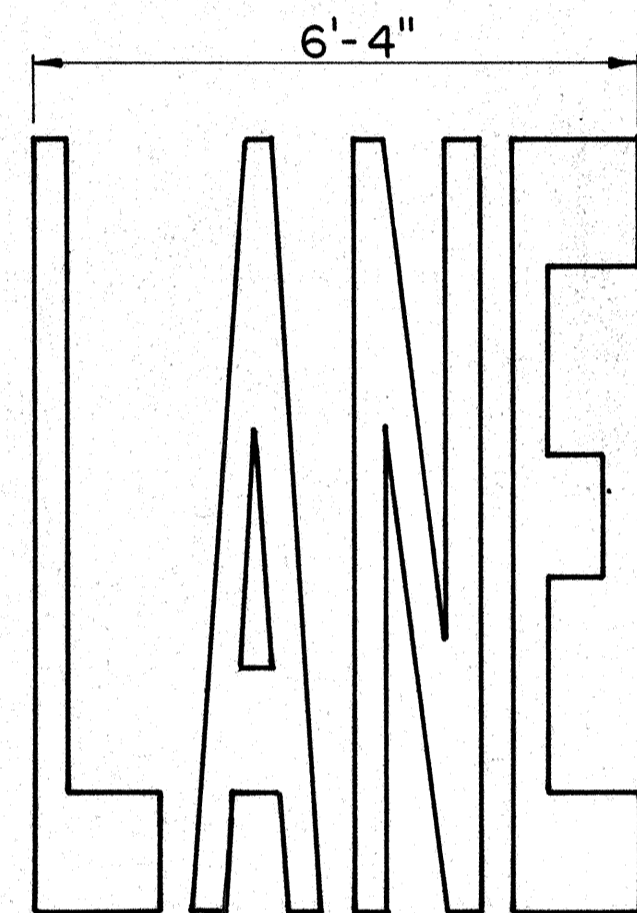
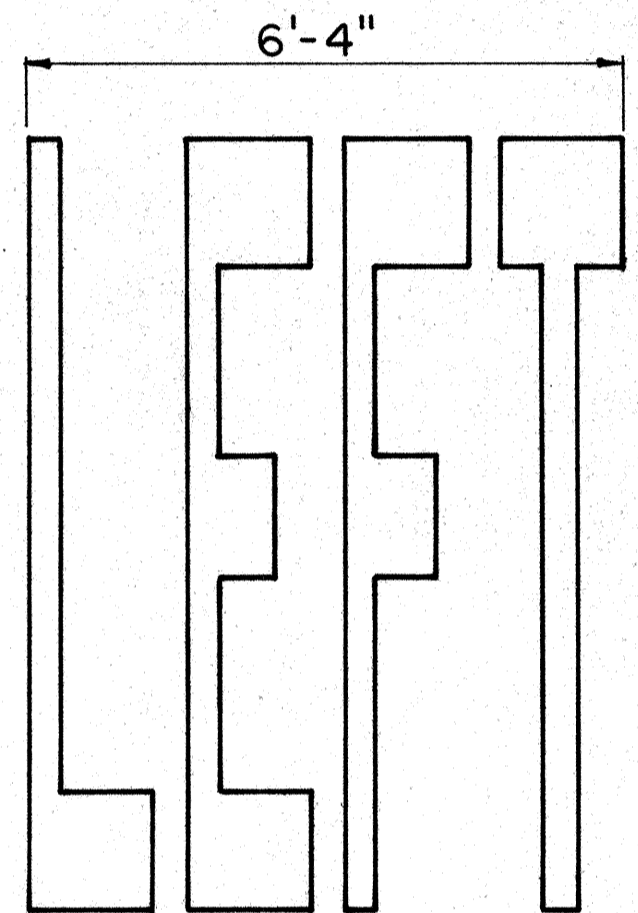
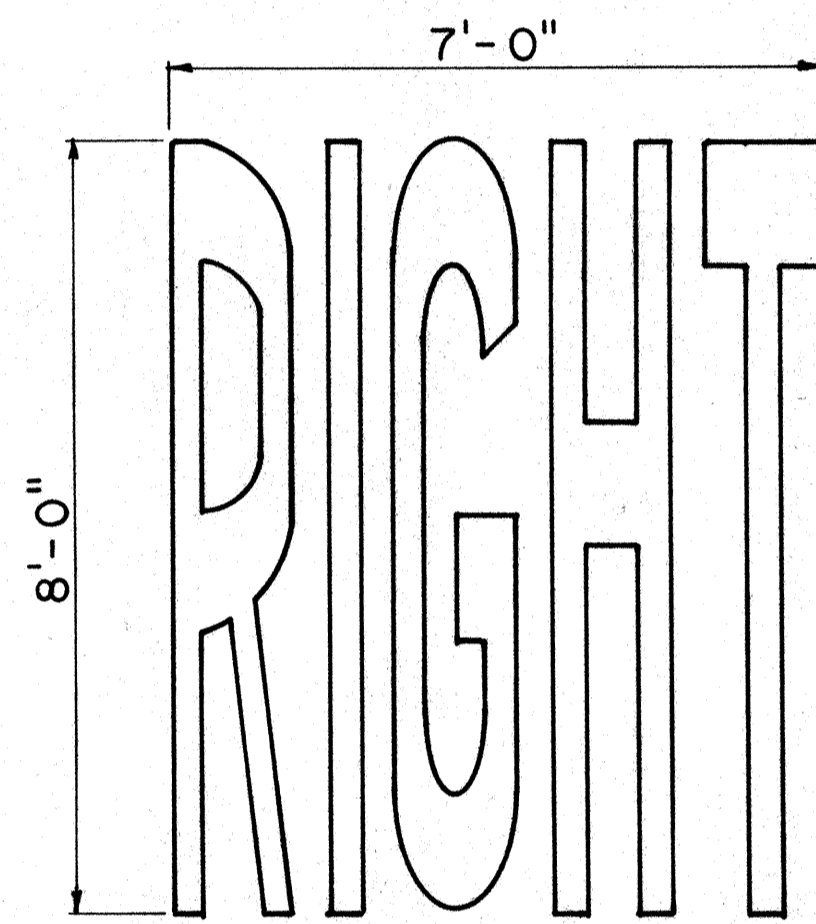
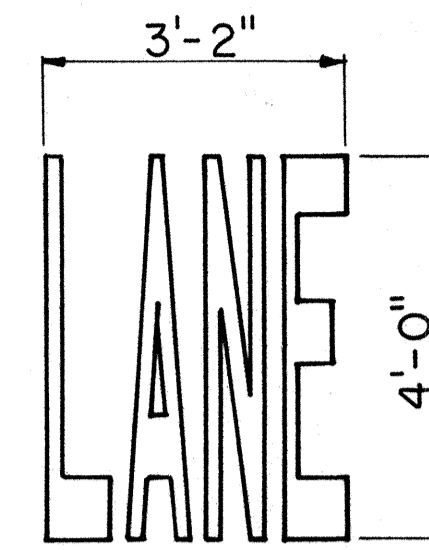
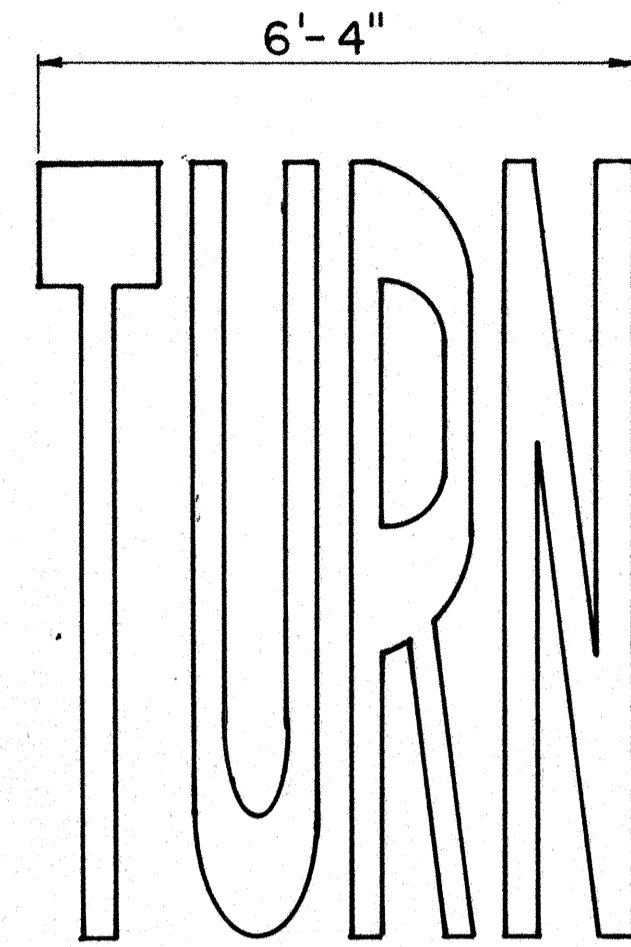
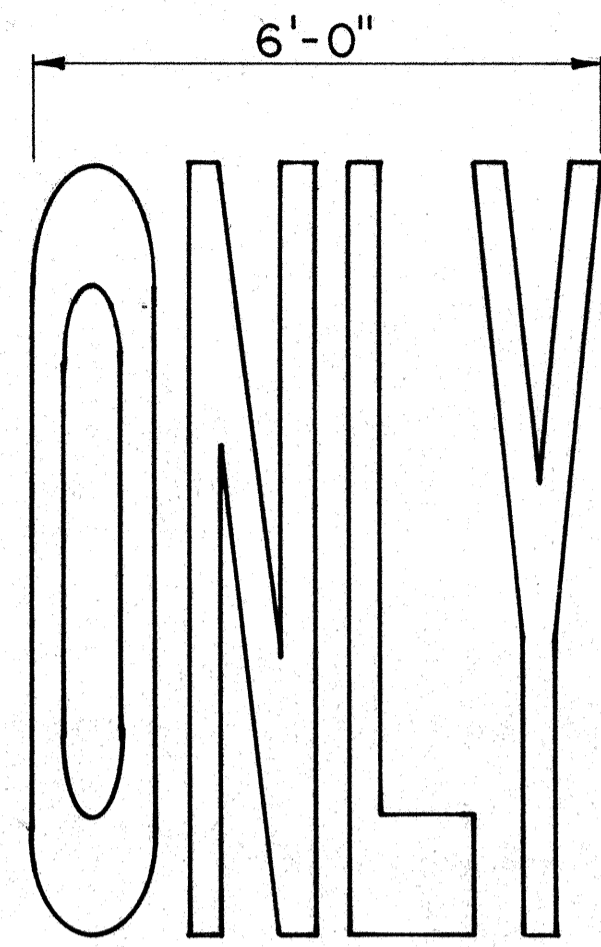
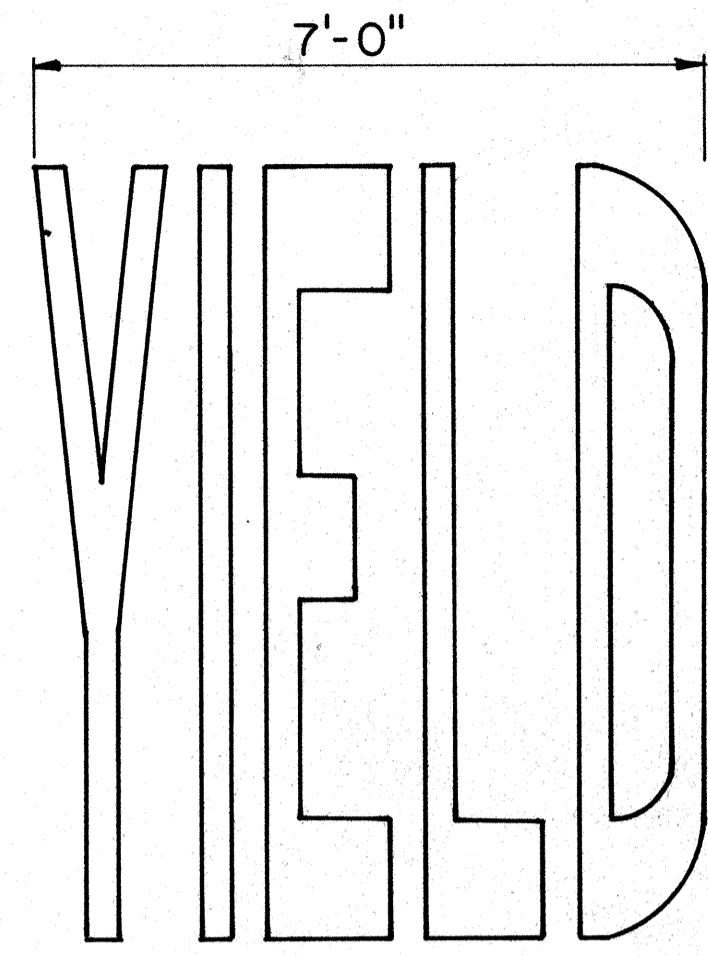
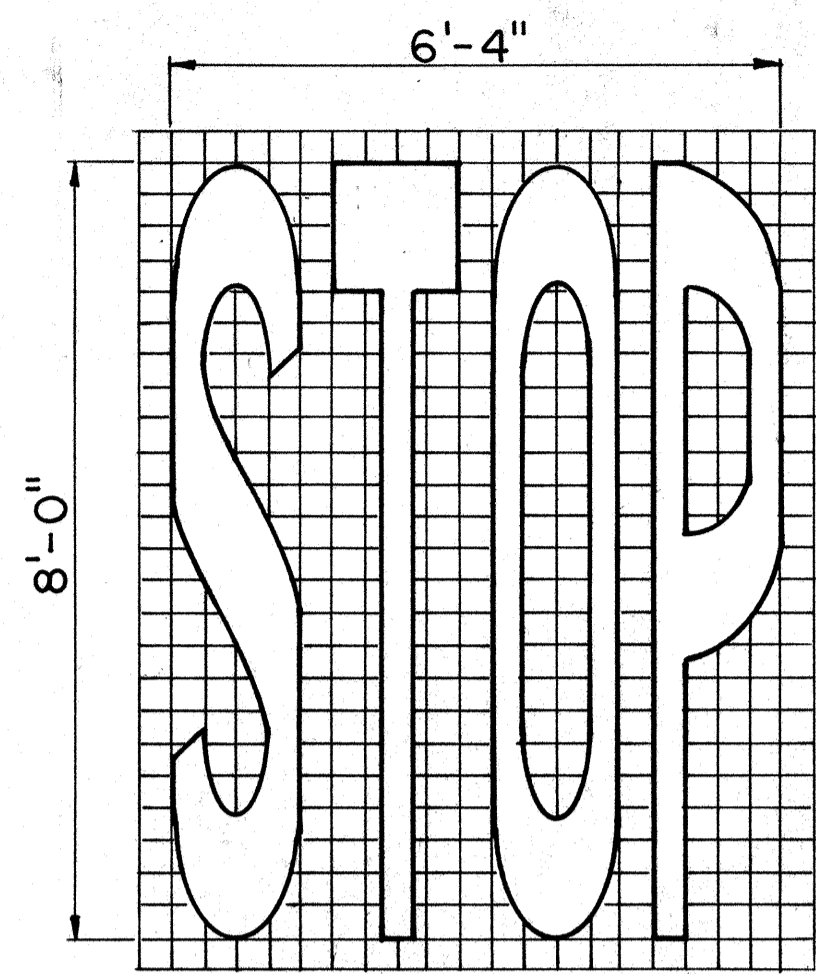
STANDARD DETAILS

**PAVEMENT ALPHABETS,
 NUMBERS & SYMBOLS**

Not to Scale

SHEET No. P-31 OF 35 SHEETS DT 307

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	IR-H-(60):17	1983	106	280



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.

APPROVAL RECOMMENDED:

Eichi Tanaka 1/28/83
TRAFFIC ENGINEER DATE

APPROVED:

S. J. Ojiyama 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**

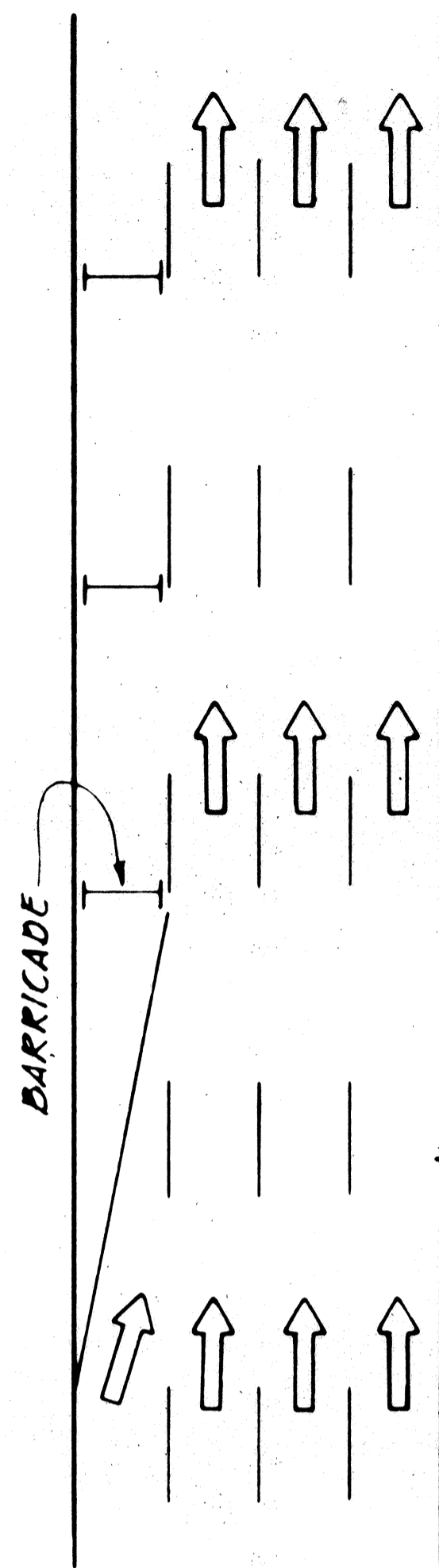
Not to Scale
SHEET NO. P-320F 35 SHEETS DT 308

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

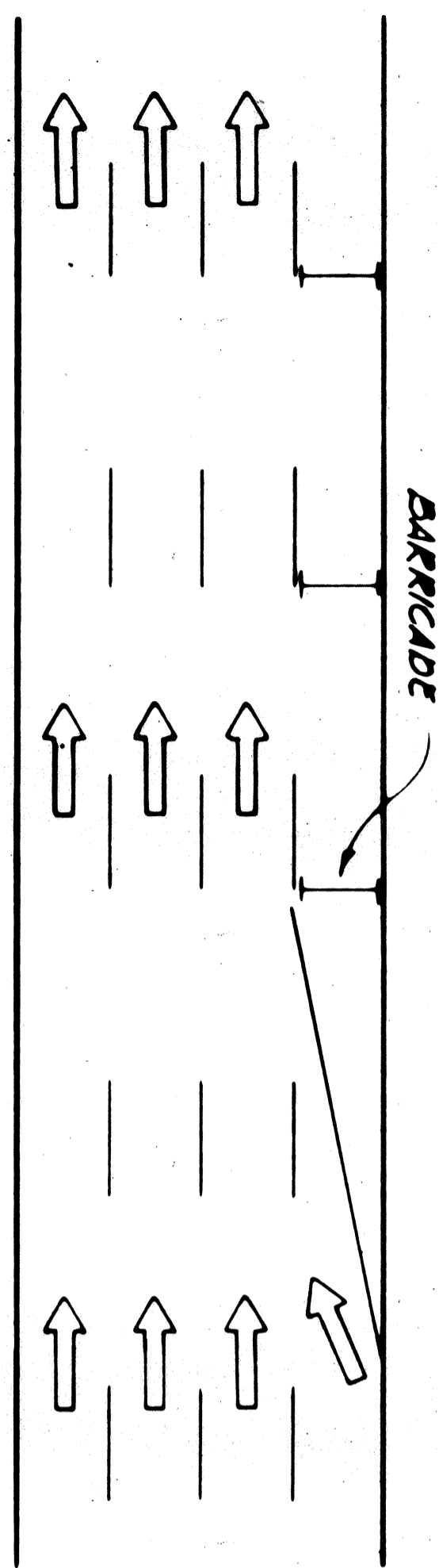
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FIRH-1(69):17	1969	107	280

GENERAL NOTES

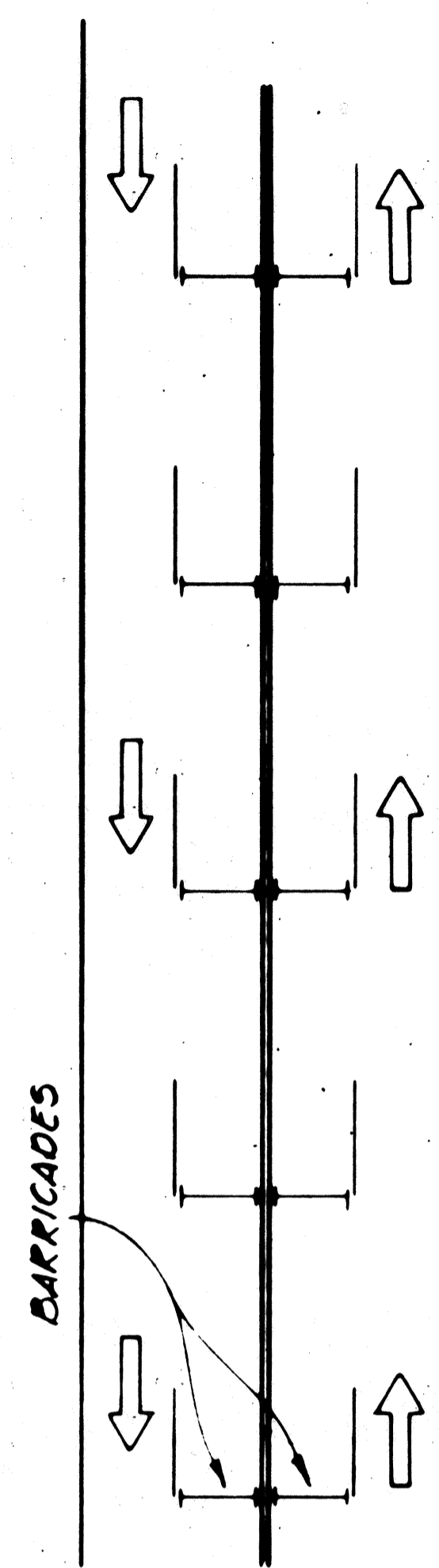
- Barricade Type, Placement, and Arrangement shall be as shown on the Construction Plans.



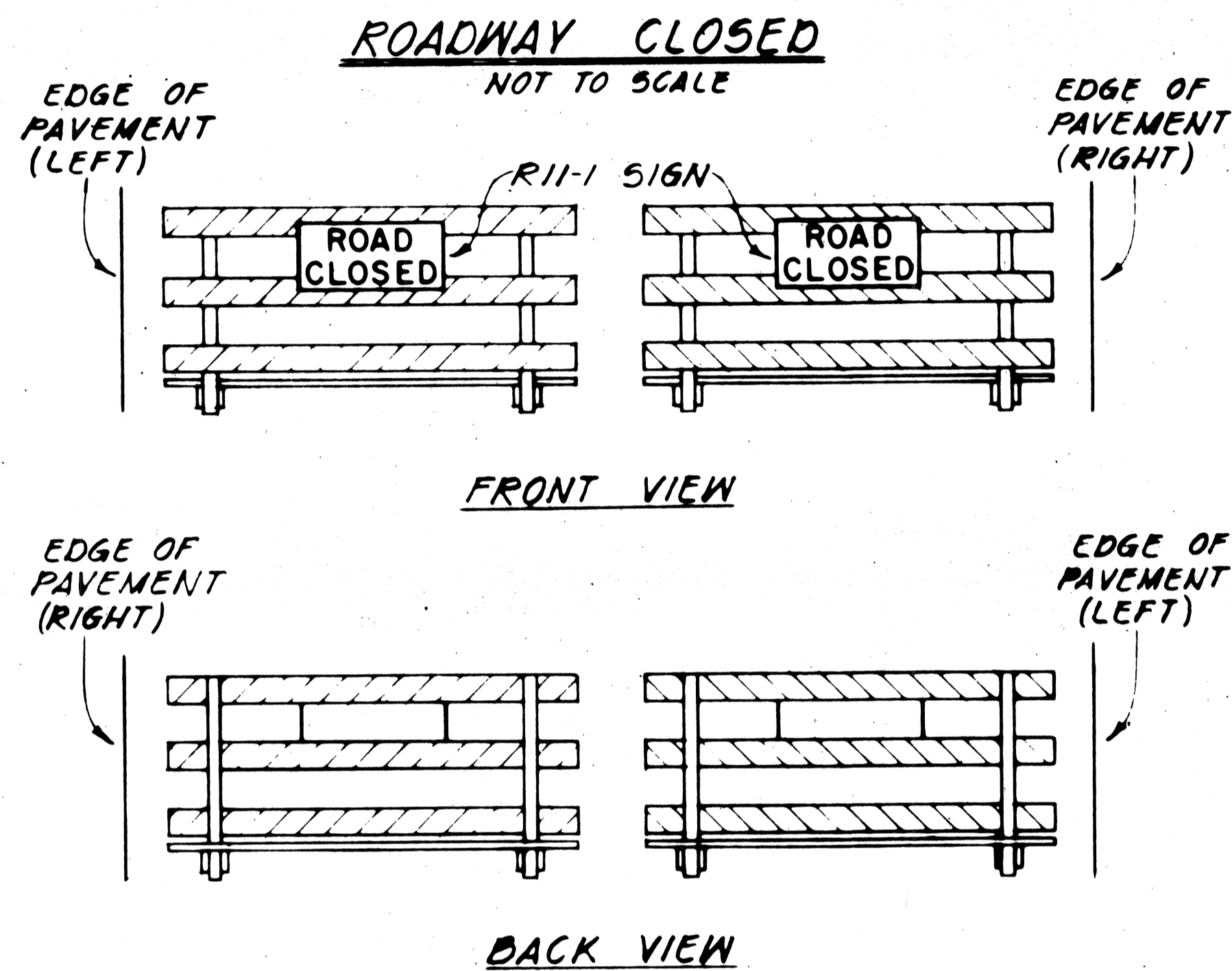
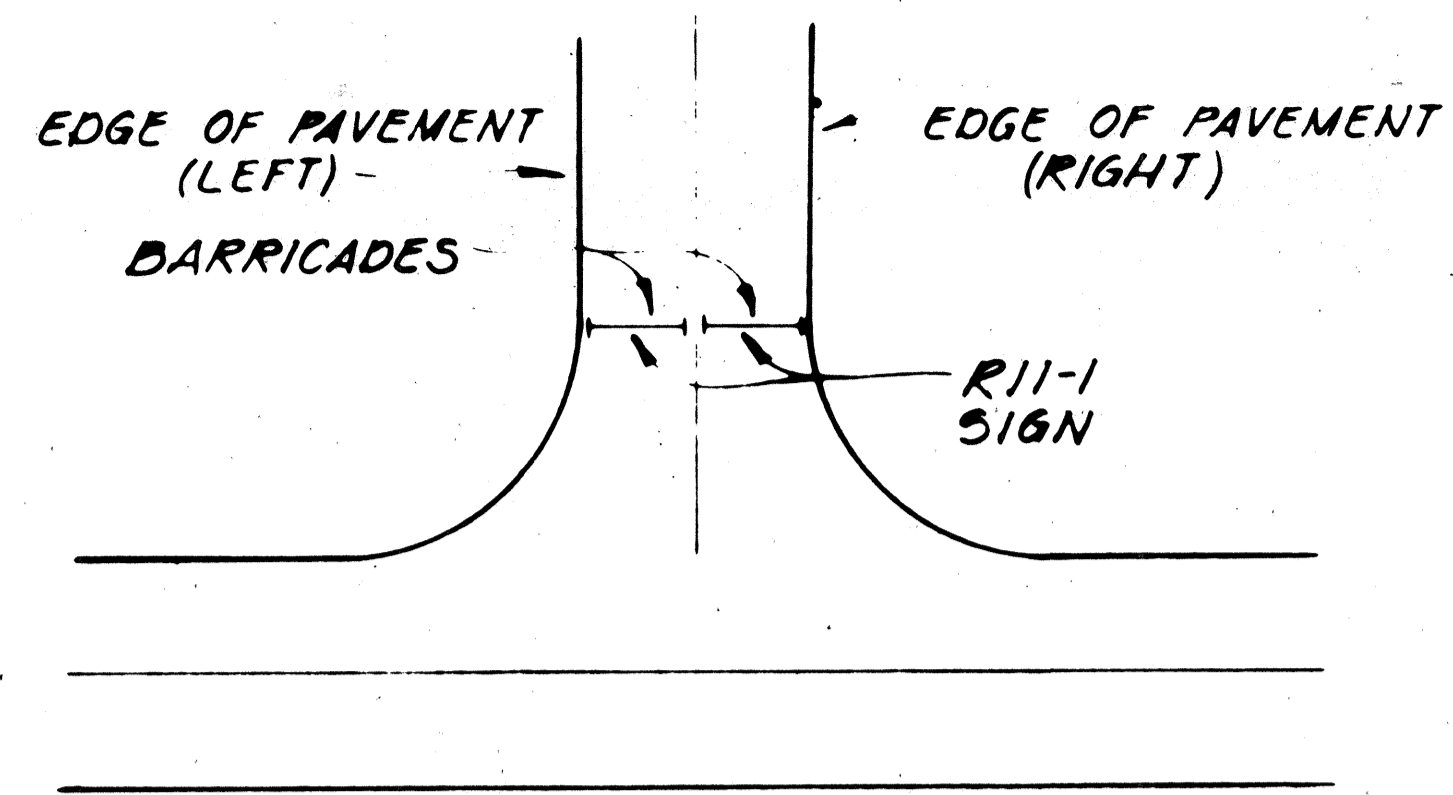
ROADWAY DELINEATION TO THE RIGHT
NOT TO SCALE



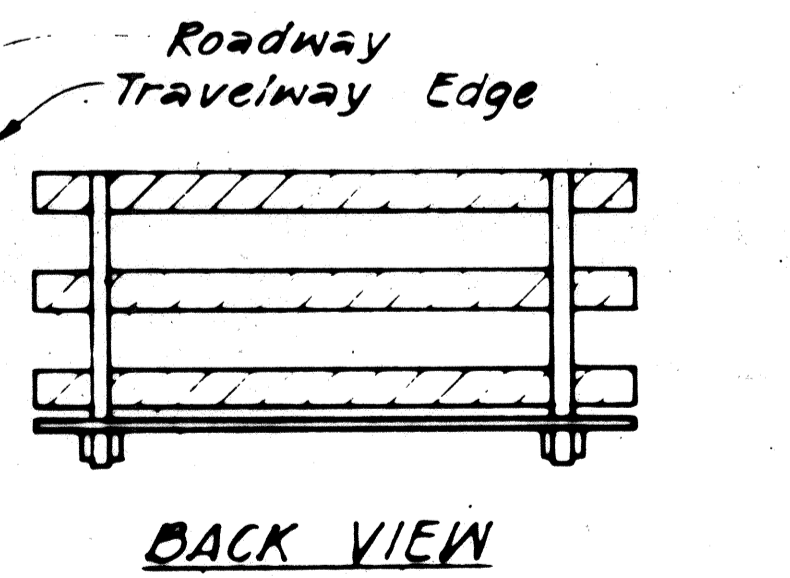
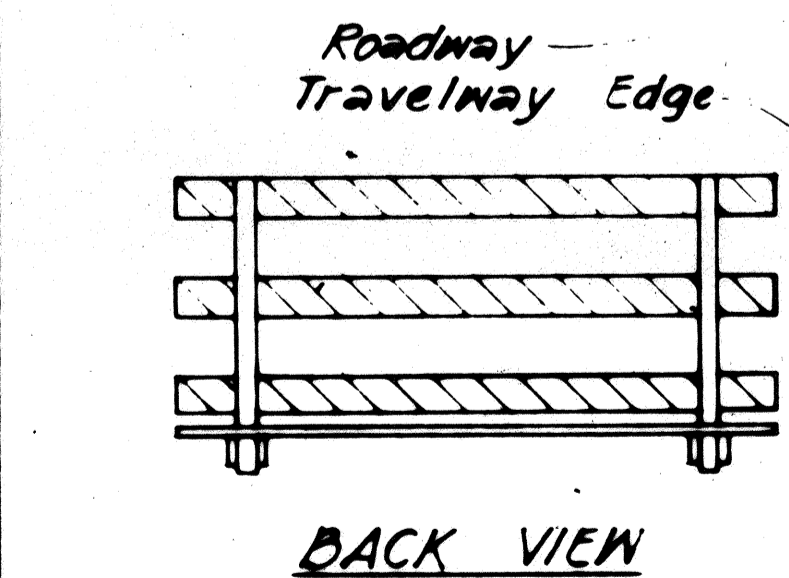
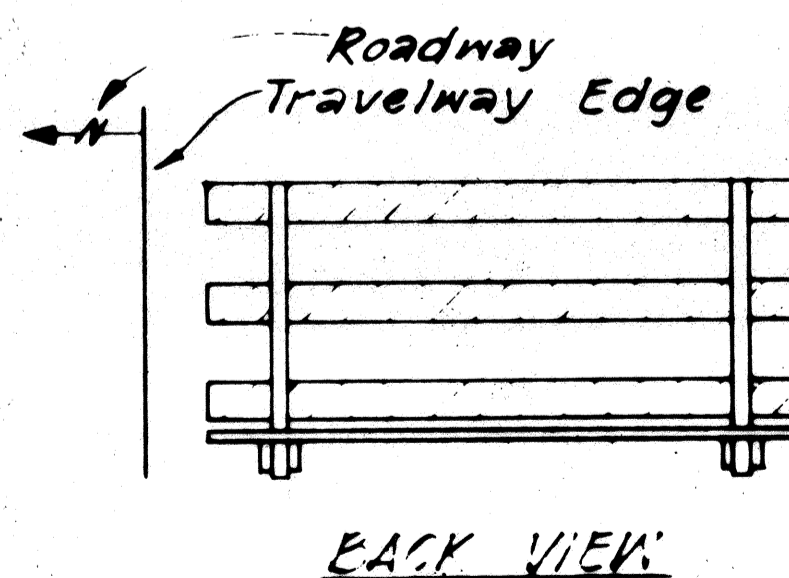
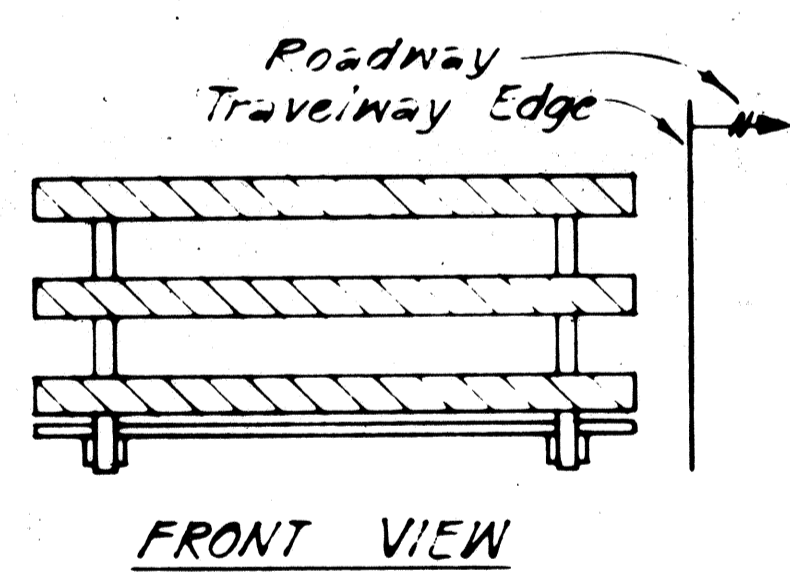
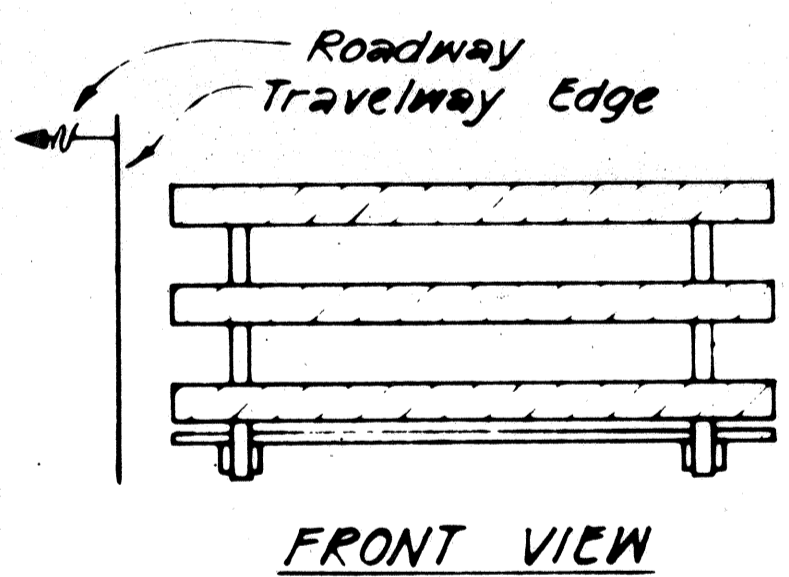
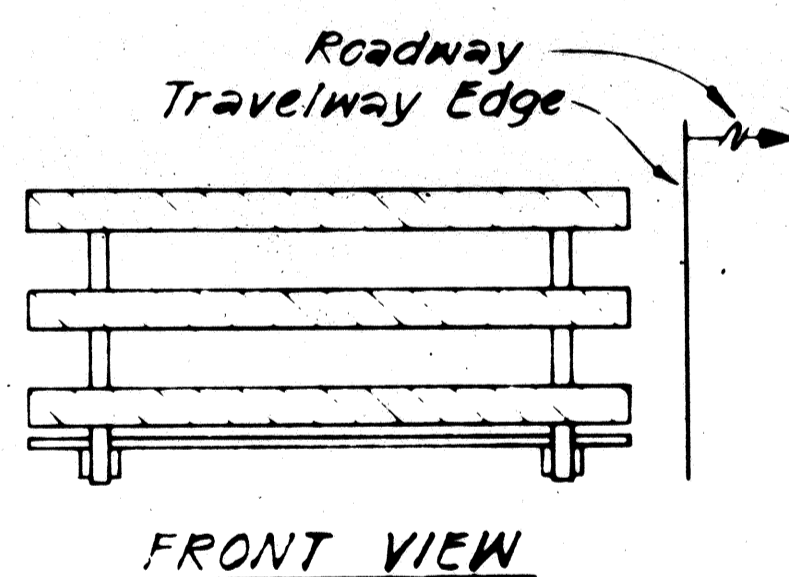
ROADWAY DELINEATION TO THE LEFT
NOT TO SCALE



ROADWAY DELINEATION FOR 2-WAY TRAFFIC
NOT TO SCALE



BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE



BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE

BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE

BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Werner Beugert

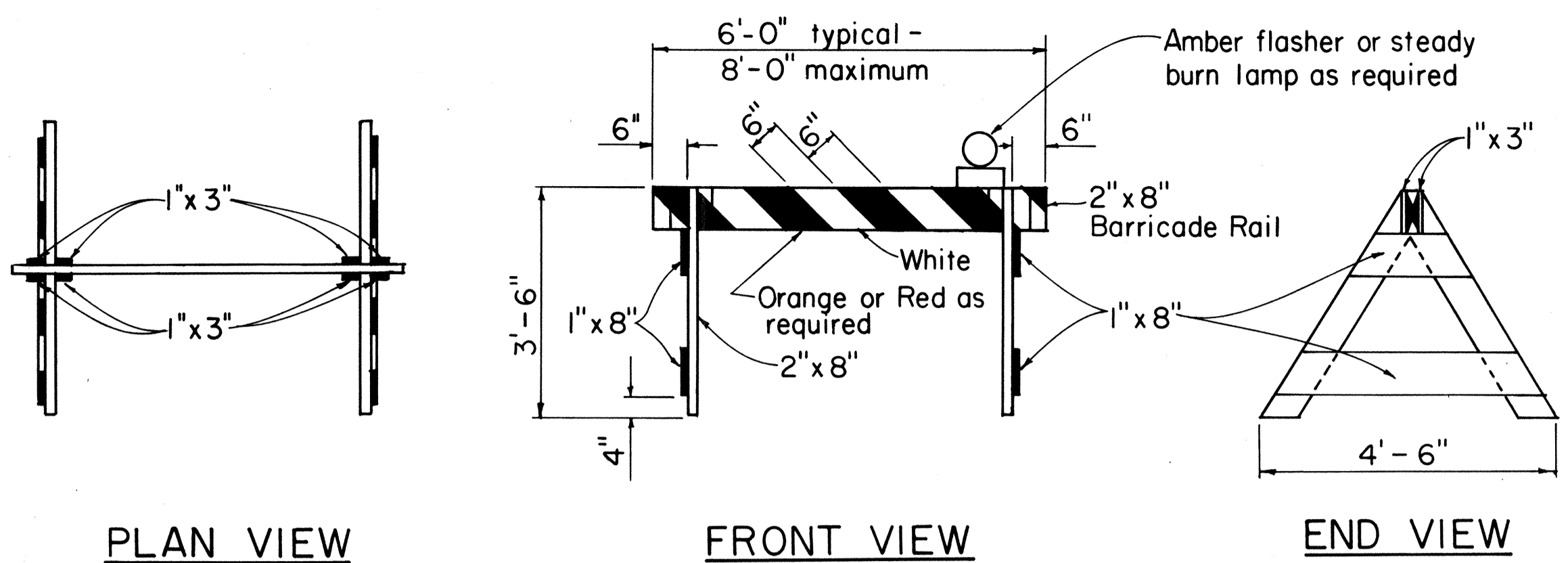
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS
BARRICADE STRIPING DETAILS

INTERSTATE ROUTE H-1
PROJECT NQI-IR-H-1(169):17

SCALE: AS SHOWN DATE: 6/15/81
SHEET No. P-33 OF 35 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-15#11(8)	1983	108	280



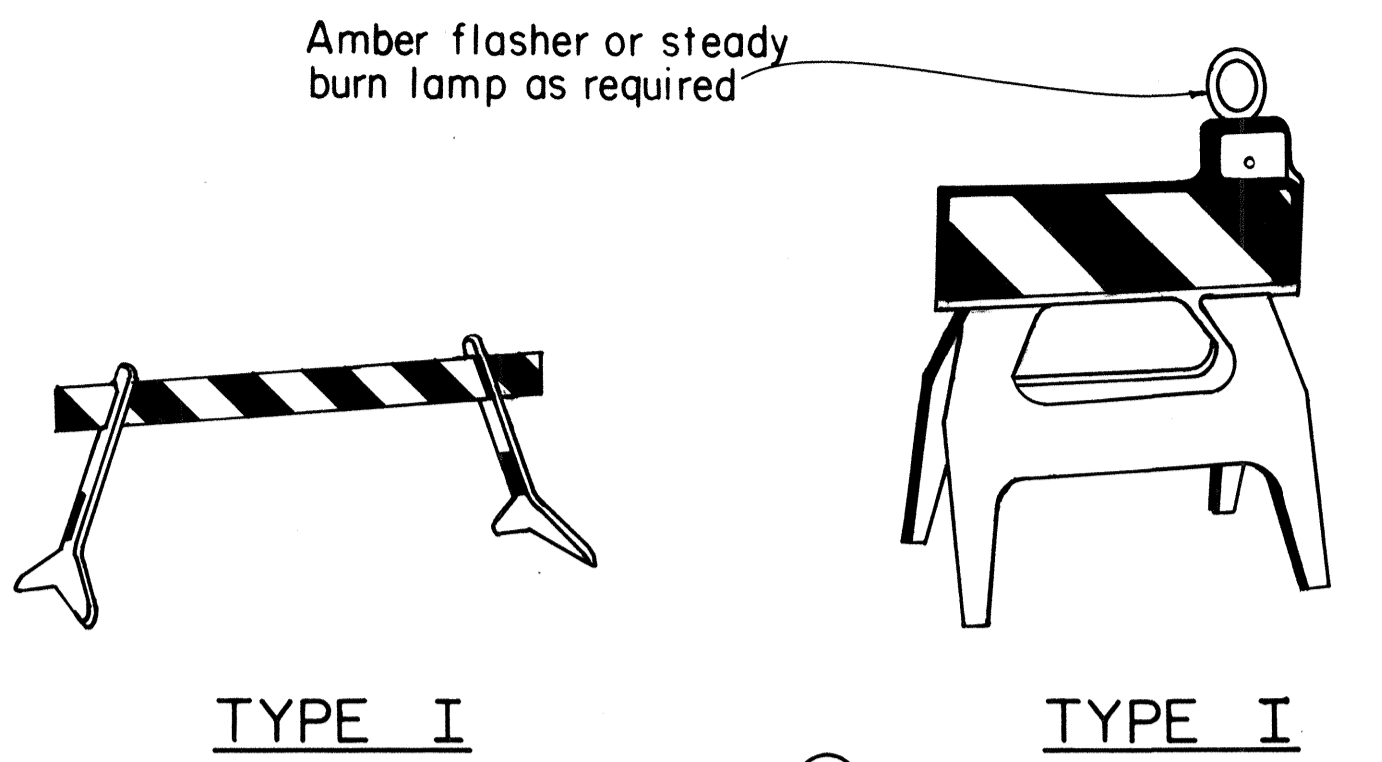
PLAN VIEW

FRONT VIEW

END VIEW

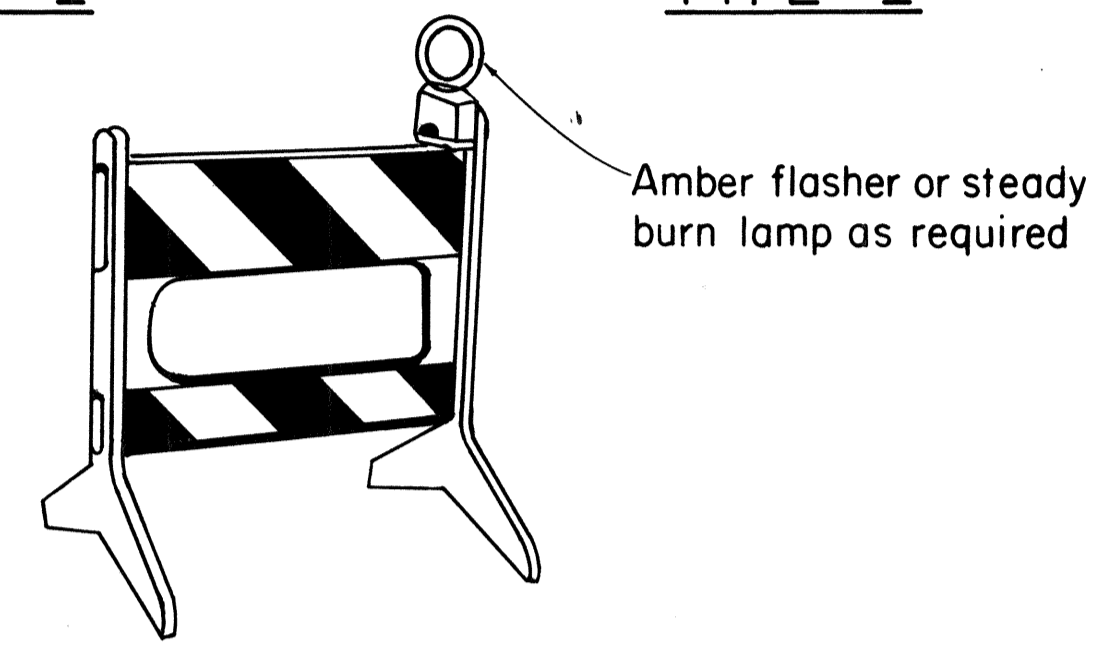
TYPE I BARRICADE

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



TYPE I

TYPE I

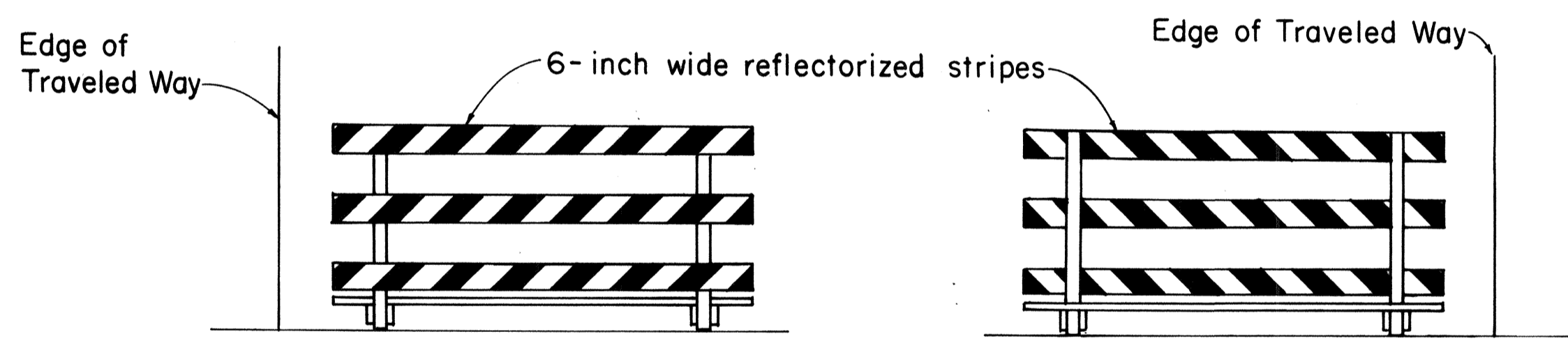


TYPE II

PLASTIC MOLDED BARRICADE OPTIONS*

Not to Scale

* Shop Drawings must be submitted for approval.



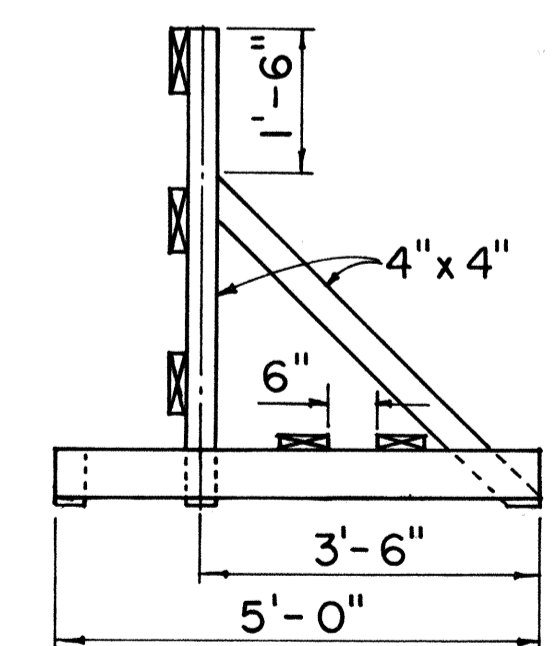
FRONT FACE

BACK FACE

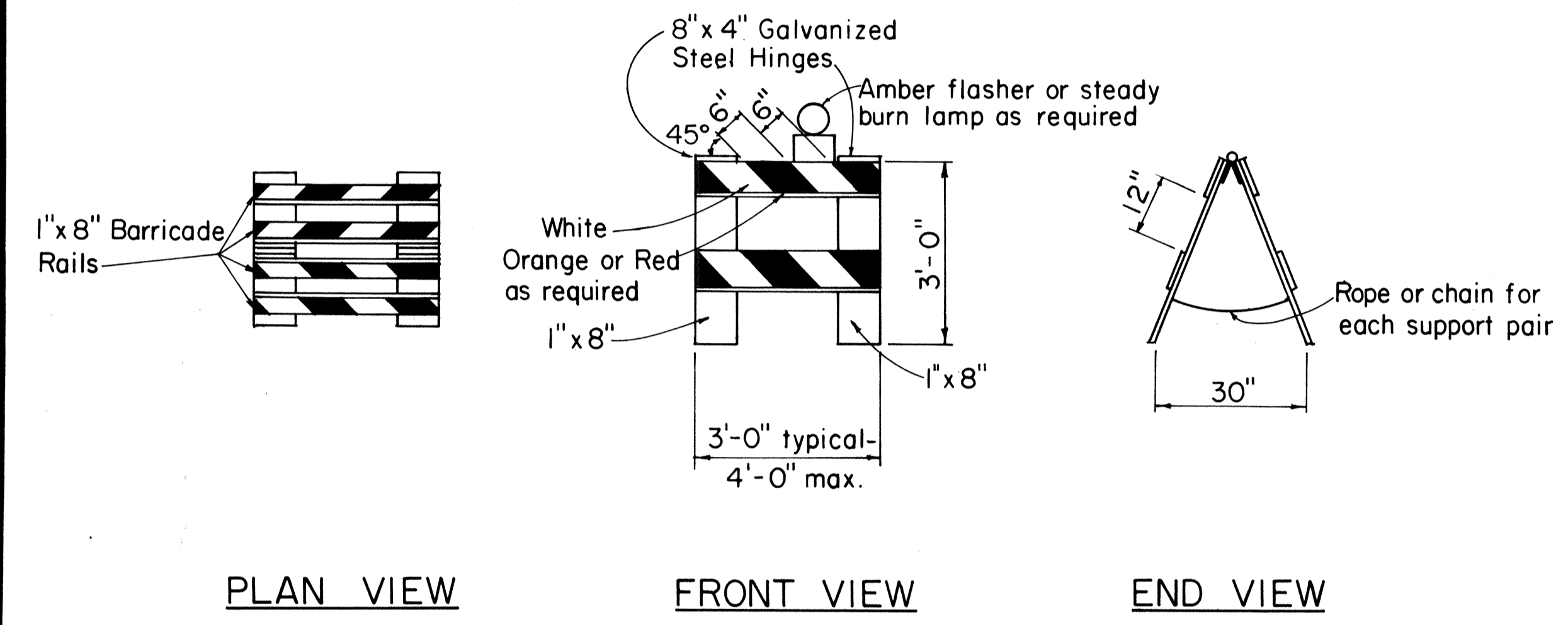
TYPICAL BARRICADE STRIPING DETAILS**

Not to Scale

** Similar for Types I & II



END VIEW



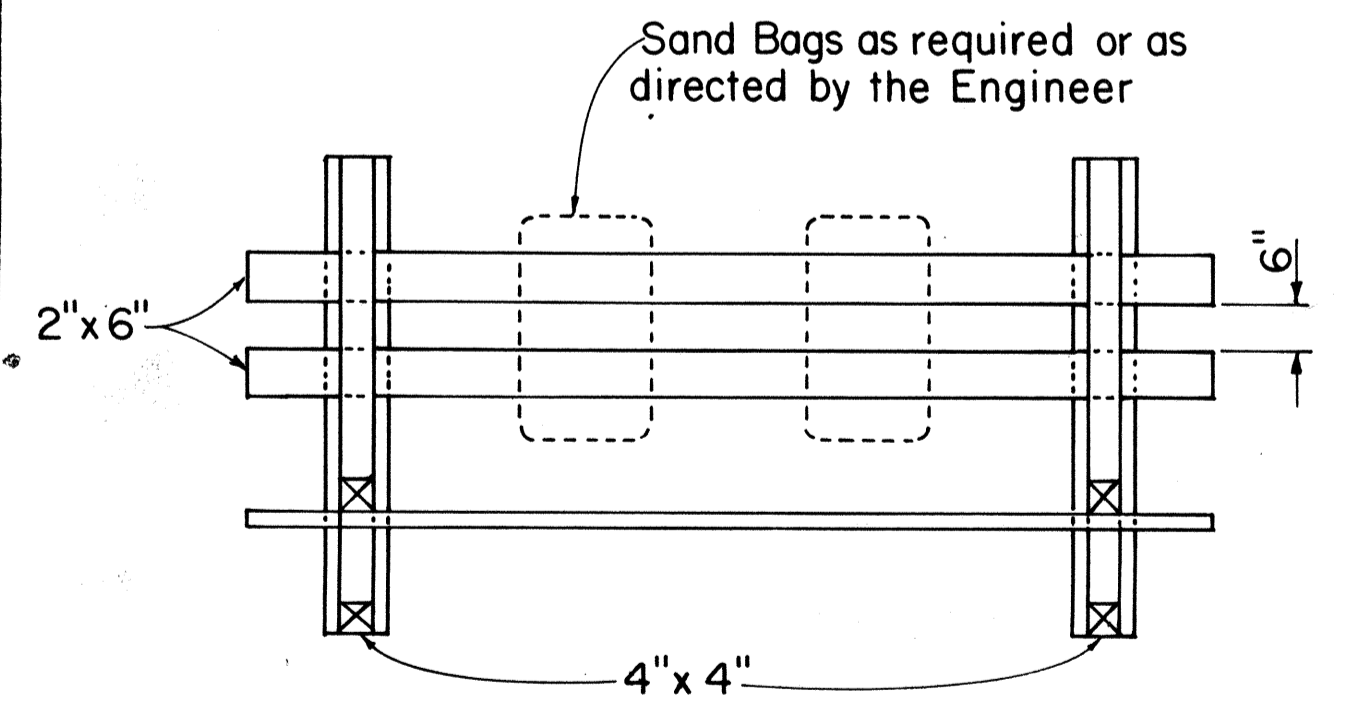
PLAN VIEW

FRONT VIEW

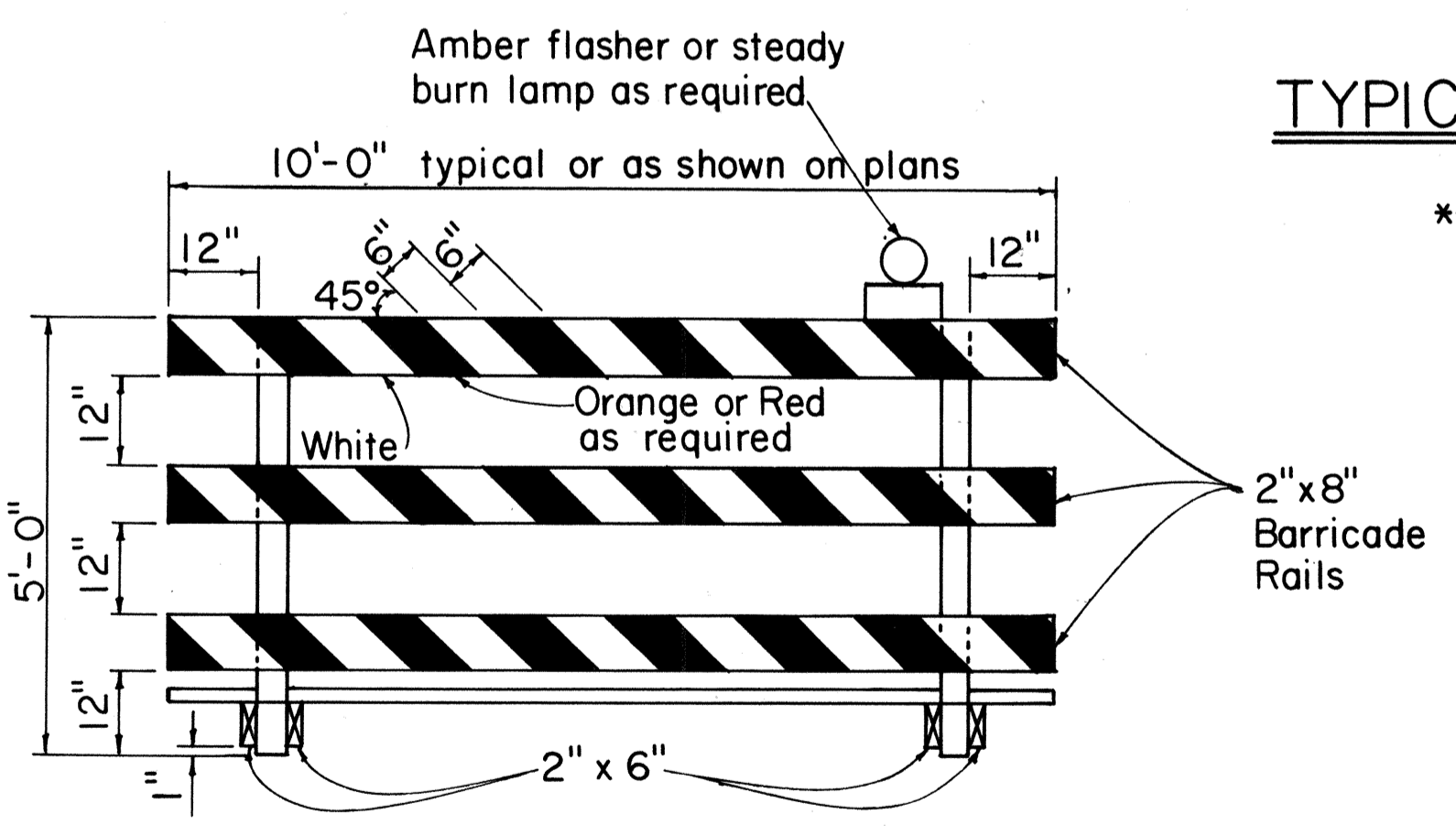
END VIEW

TYPE II BARRICADE

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



PLAN VIEW



FRONT VIEW

TYPE III BARRICADE

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

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

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

APPROVED:
Shuhei S. Saitoh
 ASSISTANT CHIEF, ENGINEERING 10/23/81 DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

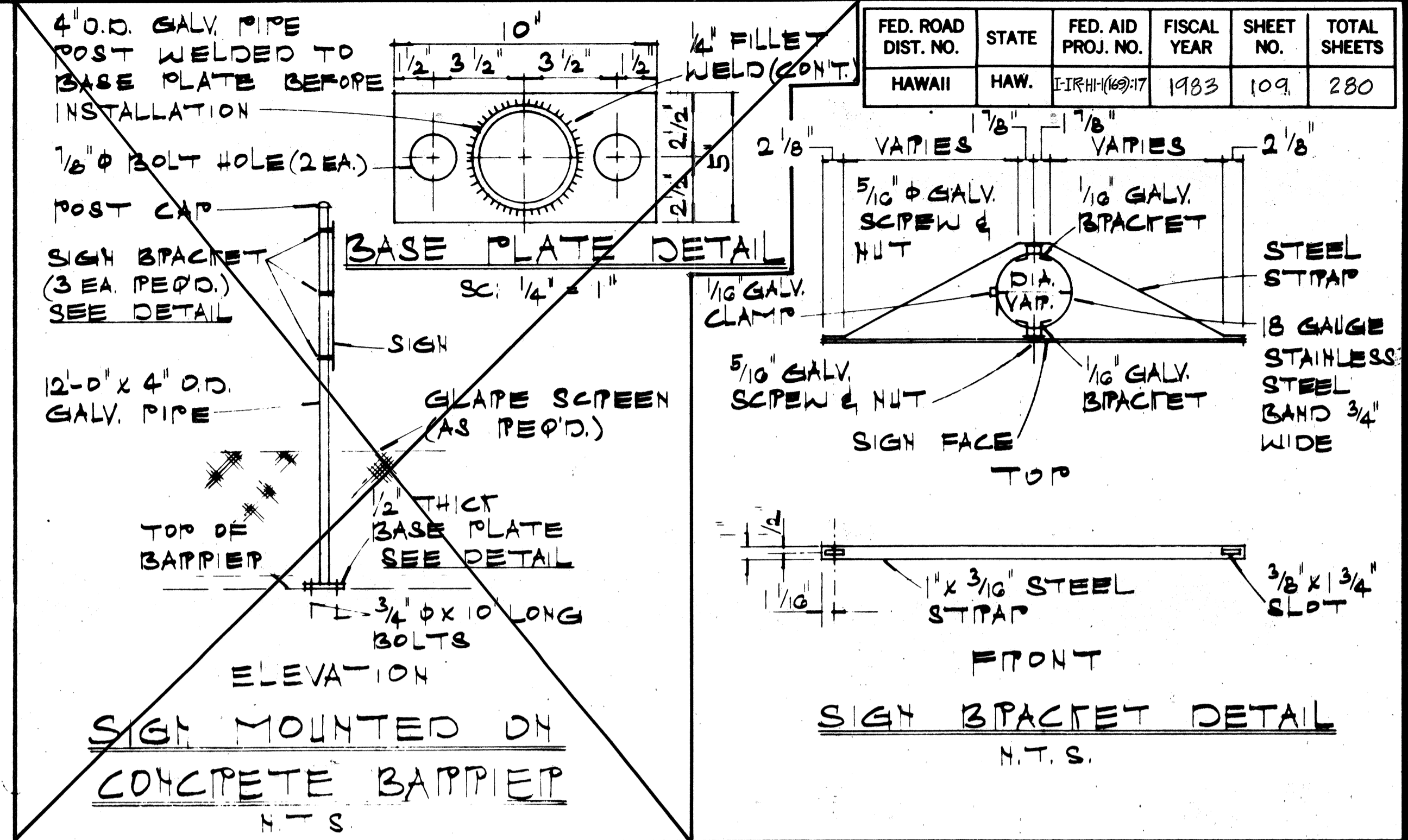
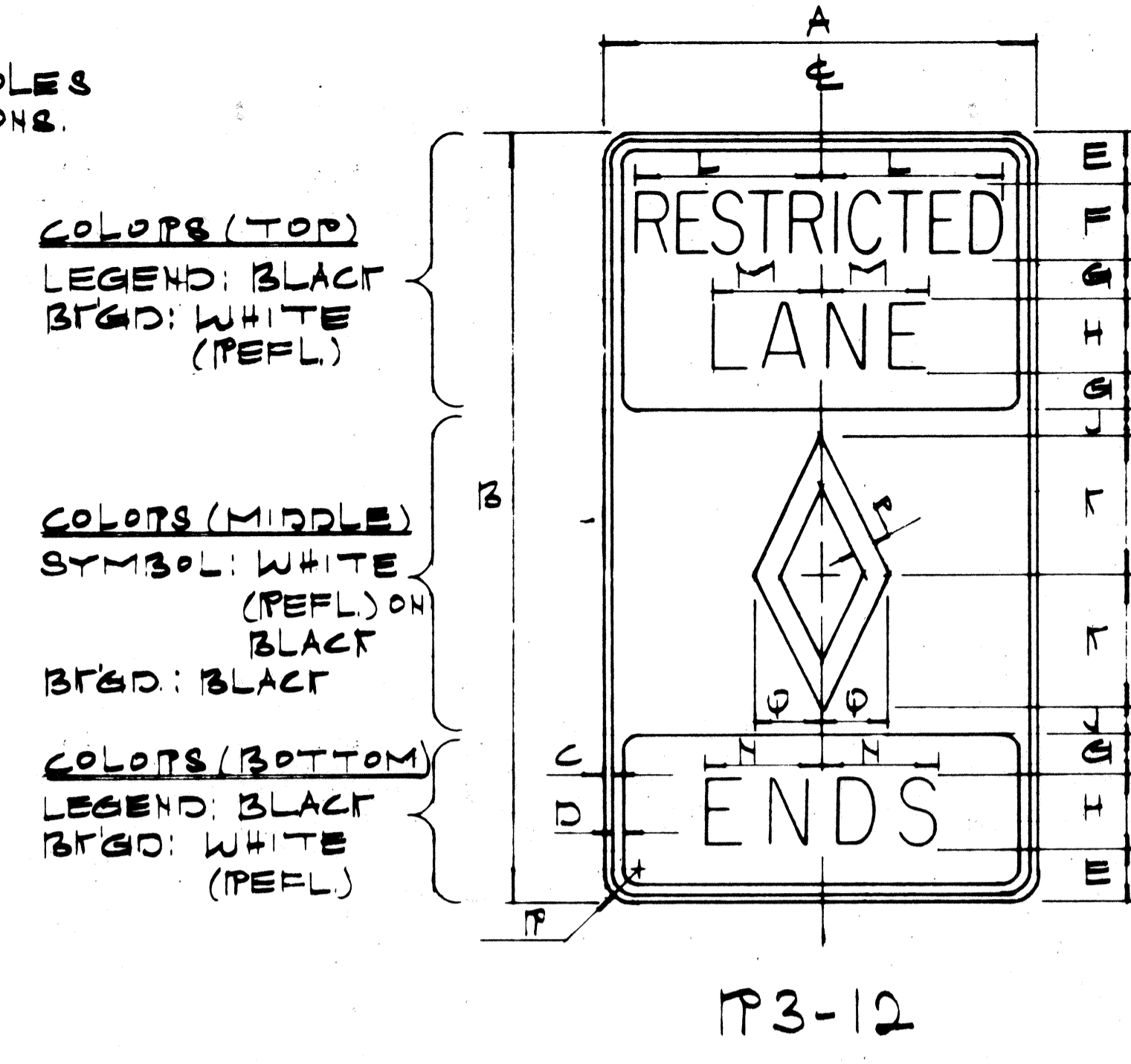
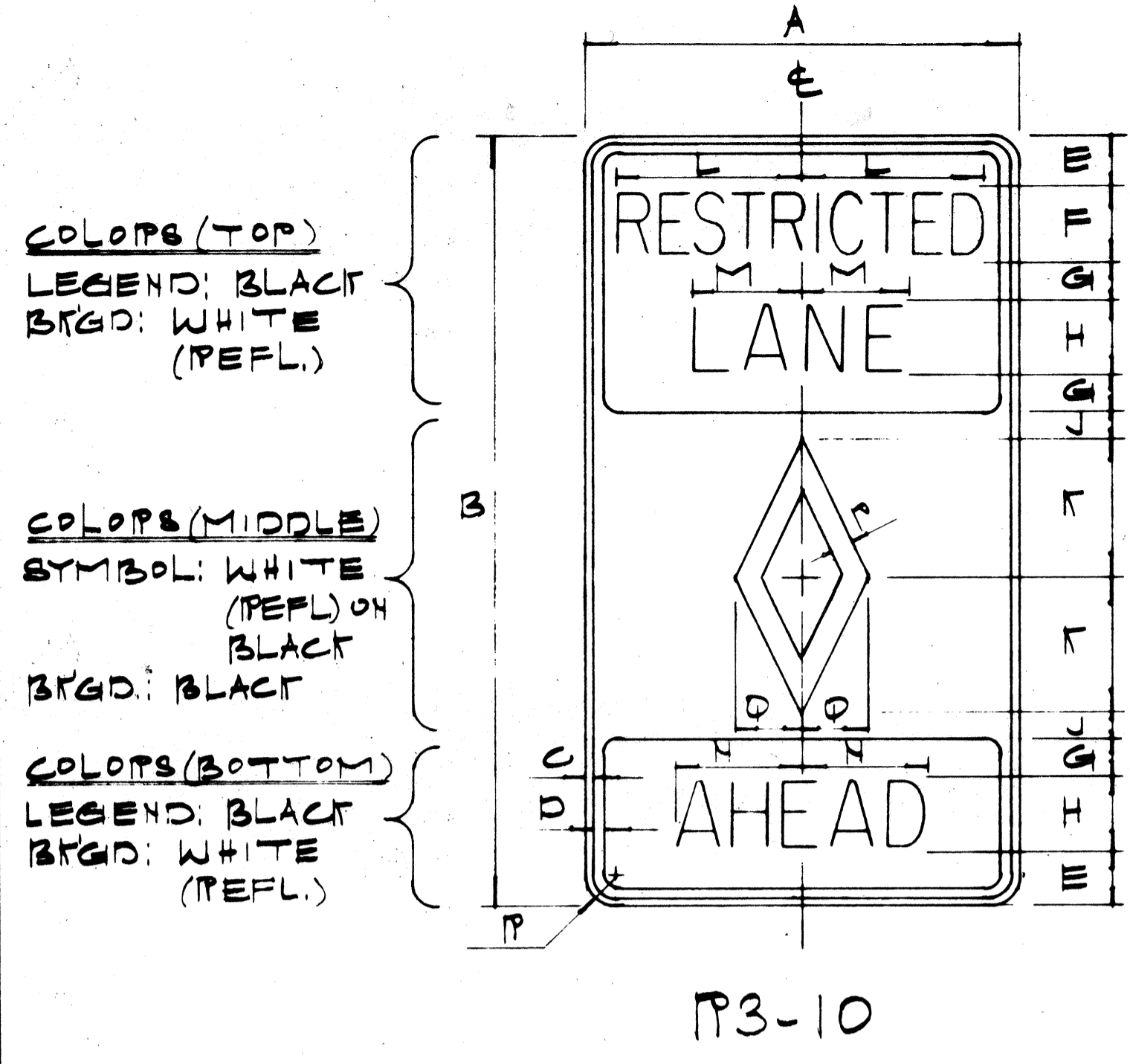
STANDARD DETAILS

BARRICADES

SCALE: As Shown

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

NOTE:
DRILL 3/8" φ BOLT HOLES APPROPRIATE LOCATIONS.

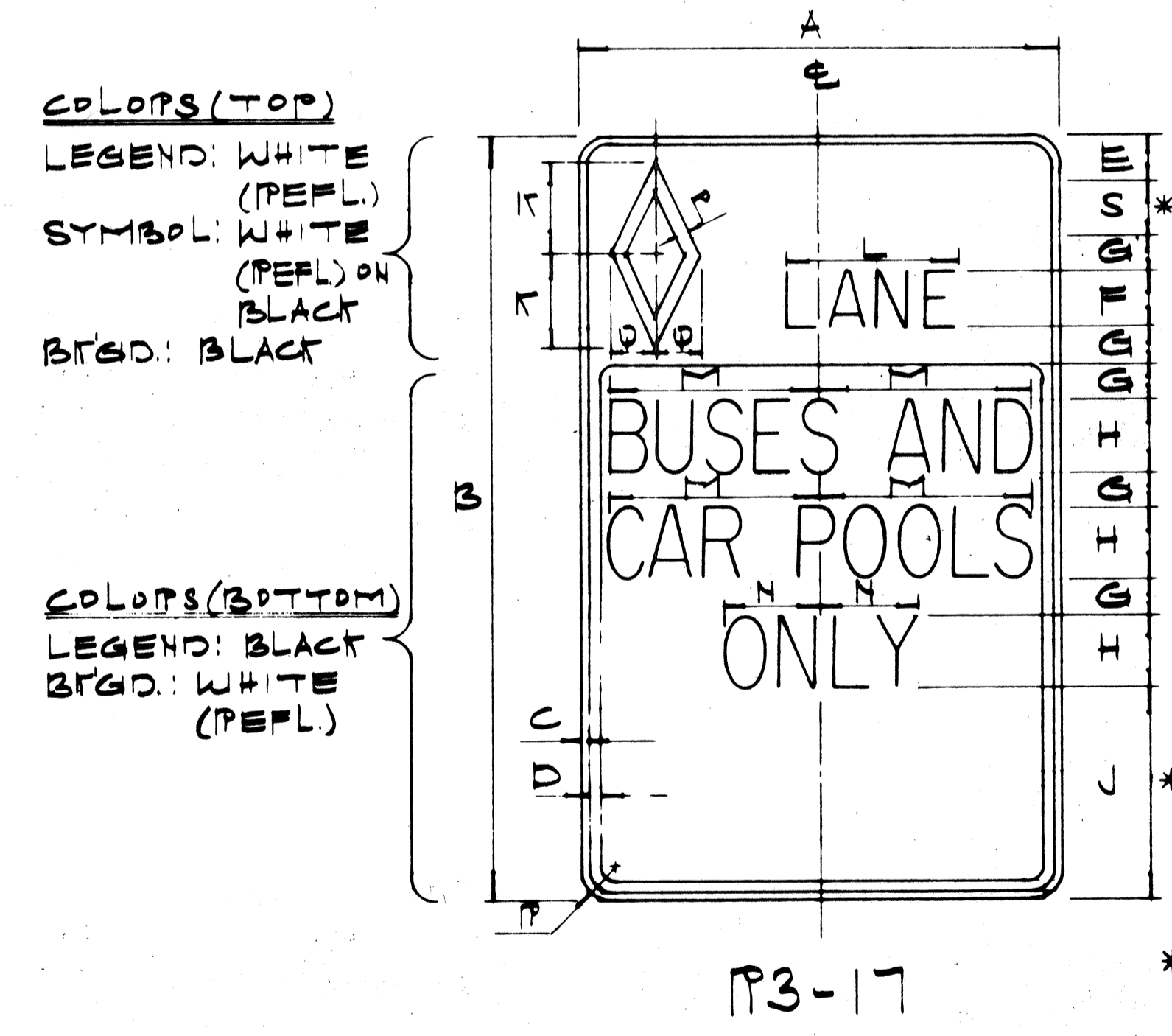
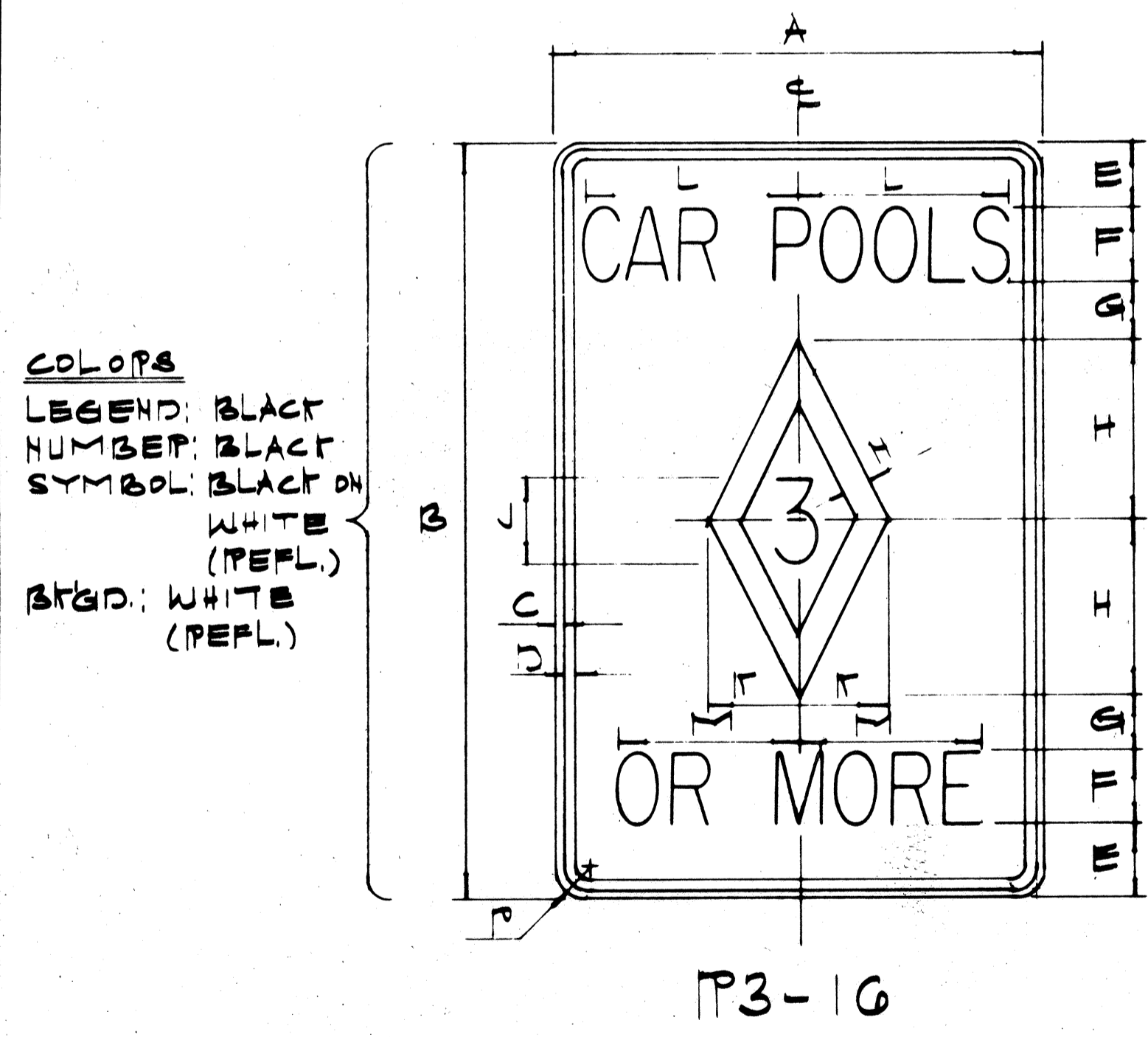


SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	φ	P
P3-10	30	42	1/2	3/4	3/4	4B	2	4C	1 1/4	7 1/2	10 3/8	G	8 3/4	1 1/8	3 3/4	1 7/8
P3-10-A	36	60	5/8	7/8	4 1/2	6B	3	6C	2	10	15 1/2	9	10 1/2	1 1/2	5	2 1/4

SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	φ	P
P3-12	30	42	1/2	3/4	3/4	4B	2	4C	1 1/4	7 1/2	10 3/8	G	6 1/2	1 1/8	3 3/4	1 7/8
P3-12-A	36	60	5/8	7/8	4 1/2	6B	3	6C	2	10	15 1/2	9	9 3/4	1 1/2	5	2 1/4

GENERAL NOTES:

- SIGN DETAILS SHALL CONFORM TO THE LATEST EDITION OF THE FOLLOWING FHWA PUBLICATIONS: "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS," "STANDARD HIGHWAY SIGNING," & "STANDARD ALPHABETS FOR HIGHWAY SIGNING."
- FOR ADDITIONAL DETAILS, SEE SHT. #DT 100.
- SIGN PANELS SHALL BE ONE CONTINUOUS SHEETS AND NO SPLICING WILL BE ALLOWED.



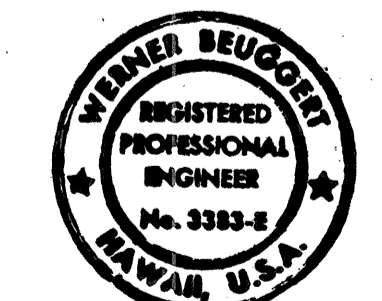
ALTERNATE MESSAGE	SPACE	P3-17		P3-17-A	
		SERIES	DIM.	SERIES	DIM.
LEFT	S	3" D	8 7/8"	4" D	11 3/4"
CONED	S	3" D	12 1/2"	4" D	16 3/4"
SIGNED	S	3" D	13 3/4"	4" D	18 1/2"
WHEN CONED	J	4" B	24"	6" B	36 3/4"
WHEN SIGNED	J	4" B	24"	6" B	38 3/4"
24 HRS	J	4" C	17 1/2"	6" C	27"
6-8:30 AM	J	2" C		3" C	
3:30-5:30 PM	J	2" C		3" C	
EXCEPT SAT SUN & HOL	J	1" C		2" C	

NOTE:
ALL ALTERNATE MESSAGES SHALL BE VISUALLY CENTERED WITHIN AREAS AS SPECIFIED.

*INSERT ALTERNATE MESSAGE (SEE SCHEDULE)

SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	φ	P
P3-16	30	42	1/2	3/4	4	4C	3	10	5C	5	12	10 1/4	1 1/2	1 7/8		
P3-16-A	42	60	5/8	7/8	5	6C	4	15	8D	7 1/2	18	16	2	2 1/4		

SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	φ	P
P3-17	30	42	1/2	3/4	2 1/2	3D	2	4C	1 1/2	5	9 5/8	12	5 1/2	3/4	2 1/2	1 7/8
P3-17-A	42	60	5/8	7/8	4	4D	3	6C	15	7 1/2	12 3/4	18	8 1/4	1 1/8	3 3/4	2 1/4



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS
BUS-CAR POOL SIGNS

INTERSTATE ROUTE H-1
PROJECT NO. IR-H-1(169).17
NOT TO SCALE JAN. 1999
SHEET NO. P-350F 35 SHEETS

DATE _____
SERIES PLOTTED BY _____
DRAWN BY _____
TRACED BY _____
DESIGNED BY _____
NOTE BOOK QUANTITIES BY _____
CHECKED BY _____