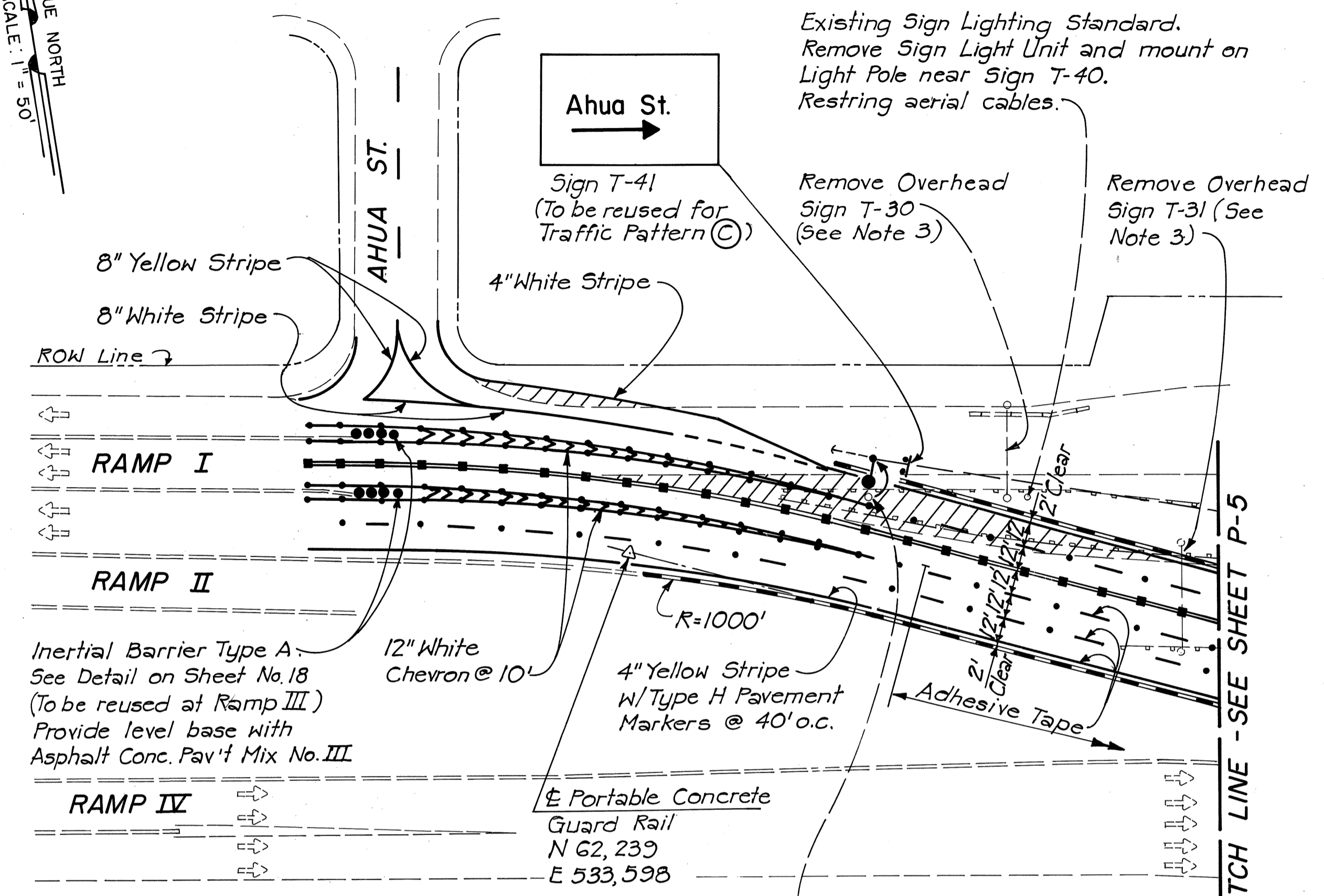


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	H-1(147):17	1980	76	338

NOTES

1. For General Signing Notes see sheet No. P-13
2. For Notes for Temporary Destination Signs (T-Designation) see Sheet No. P-18.
3. Remove Overhead Sign T-30 and T-31, and Highway Lighting Pole not more than 2 days before changing traffic pattern. Relocated highway lighting shall be in service not more than 5 working days after changing traffic pattern.

TRUE NORTH
SCALE: 1" = 50'



Existing Sign Lighting Standard. Remove Sign Light Unit and mount on Light Pole near Sign T-40. Restraining aerial cables.

Remove Overhead Sign T-30 (See Note 3)
Remove Overhead Sign T-31 (See Note 3)

Inertial Barrier Type A. See Detail on Sheet No. 18 (To be reused at Ramp III) Provide level base with Asphalt Conc. Pav't Mix No. III

Portable Concrete Guard Rail N 62, 239 E 533, 598

Existing Luminaires No. 2R & 1BR. Remove & stockpile one luminaire. Relocate pole and other luminaire (see Detail this sheet, see Note 3). Re-string aerial cables.

SIGNING & PAVEMENT MARKING LEGEND FOR STAGE 1B

- II Type III Barricade
- △ Traffic Delineator (Tube)
- Portable Concrete Guard Rail
- Existing Sign
- New or Relocated Sign
- ➔ Direction of Traffic, Proposed
- ➔ Direction of Traffic, Existing
- 2 1/2" - Asphalt Conc. Pavement, Mix No. III
- 6" - Aggregate Base
- 6" - Aggregate Subbase
- 4" Double Solid White Line w/Type 'C' Markers @ 20' o.c.
- - - 4" Broken White Lane Line, 10' long w/ 30' Gap
- . - 4" Broken White Lane Line, 10' long w/30' Gap & w/Type 'C' Markers @ 40' o.c.
- 8" Solid White Lane Line w/Type 'C' Markers @ 20' o.c.
- 4" Double Solid Yellow Center Line
- - - 4" Guide Line
- ➔ Standard Pavement Arrows
- Crosswalk & Stop Line
- Existing Portable Concrete Guard Rail

NOTE: SHEET NOS. P-1, P-2 & P-3 (73, 74 & 75) HAVE BEEN DELETED.

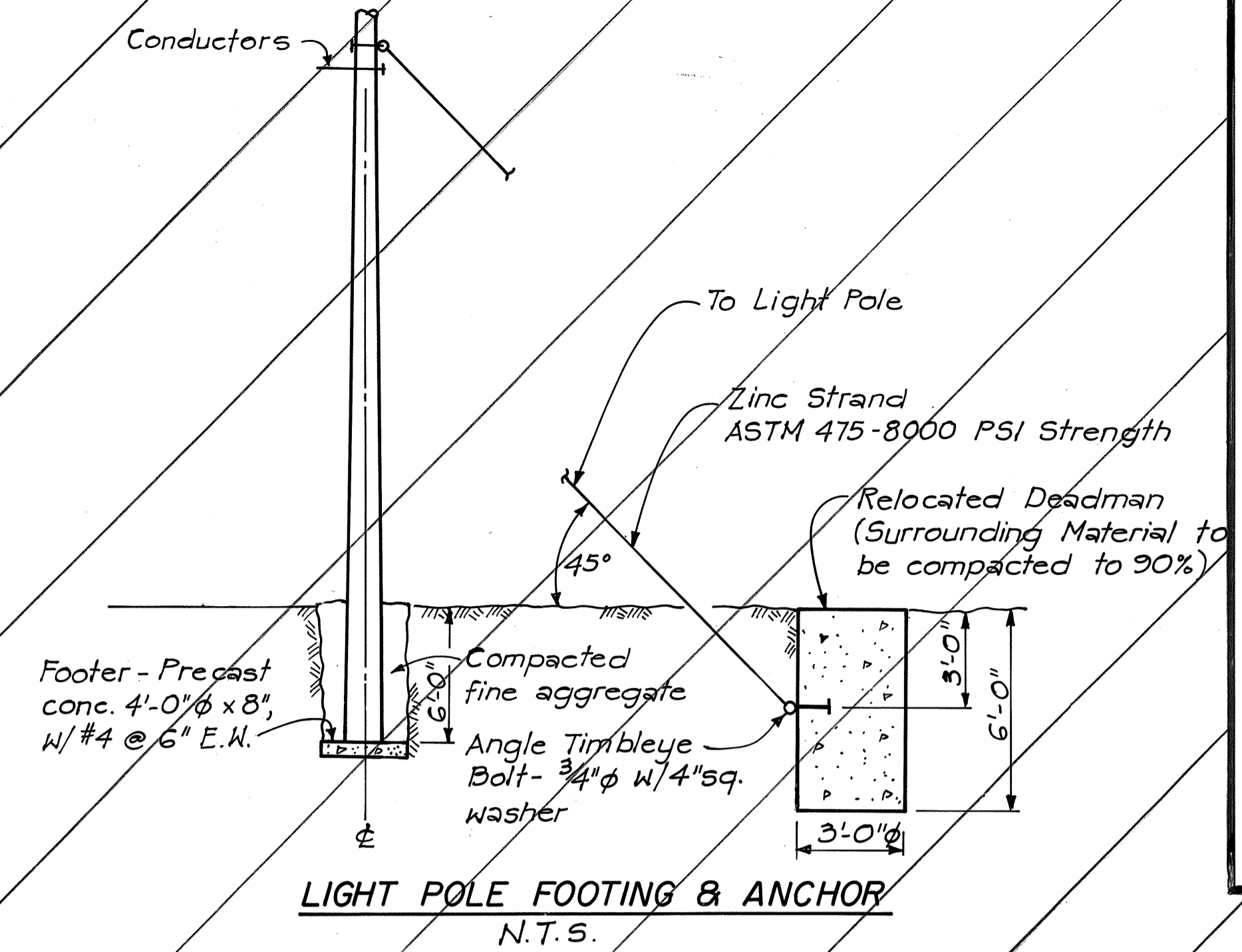
DATE	REVISION
4/20/81	Supersedes Sheet 76, dated 4/2/79

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

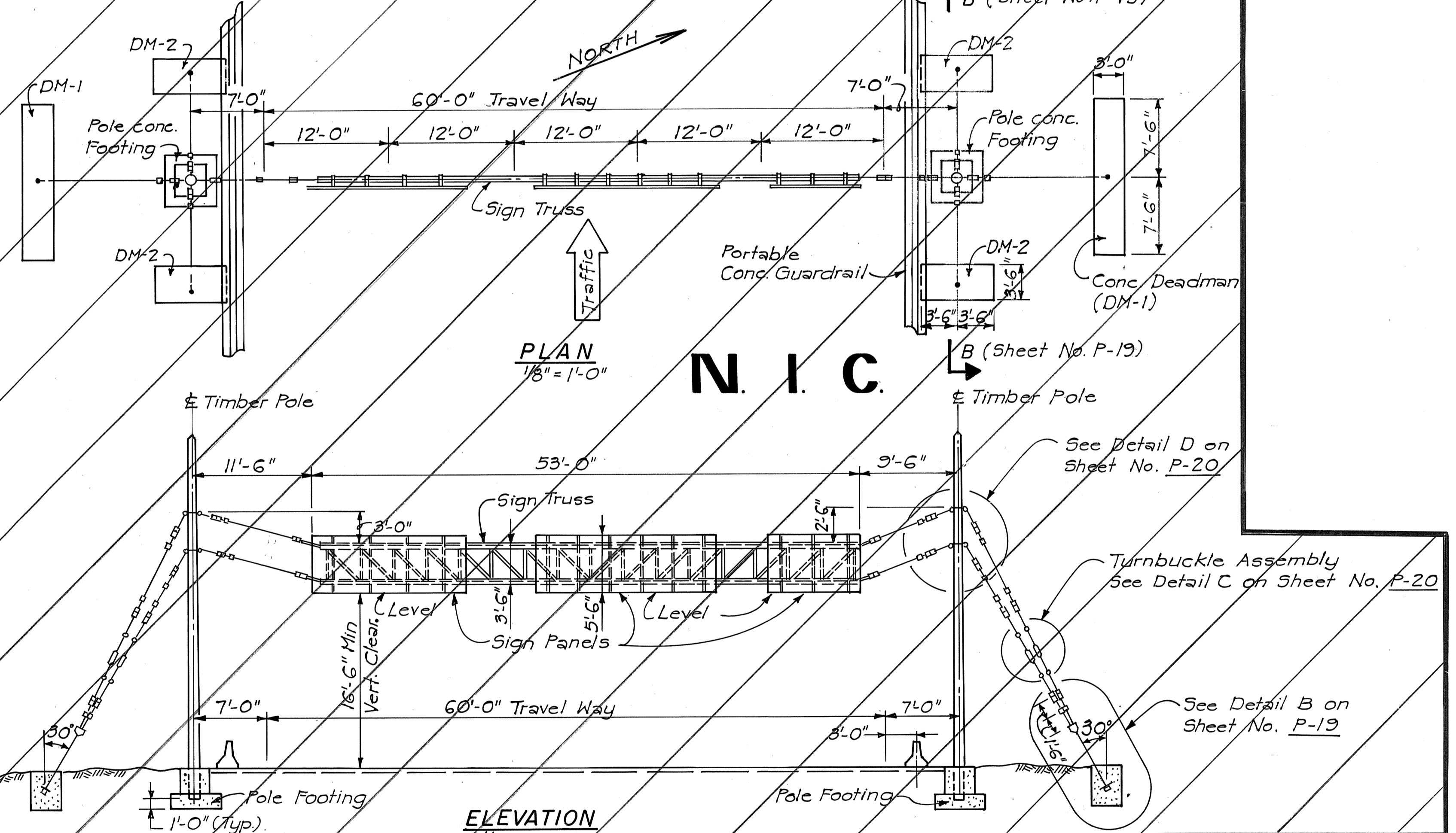
STAGE 1B SIGNING & PAVEMENT MARKING PLAN
TRAFFIC PATTERN ©

INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1(147):17

SCALE: 1" = 50' DATE: 4/20/81
SHEET No. P-4 OF 40 SHEETS



LIGHT POLE FOOTING & ANCHOR
N.T.S.



OVERHEAD SIGN T-40C
1/8" = 1'-0"

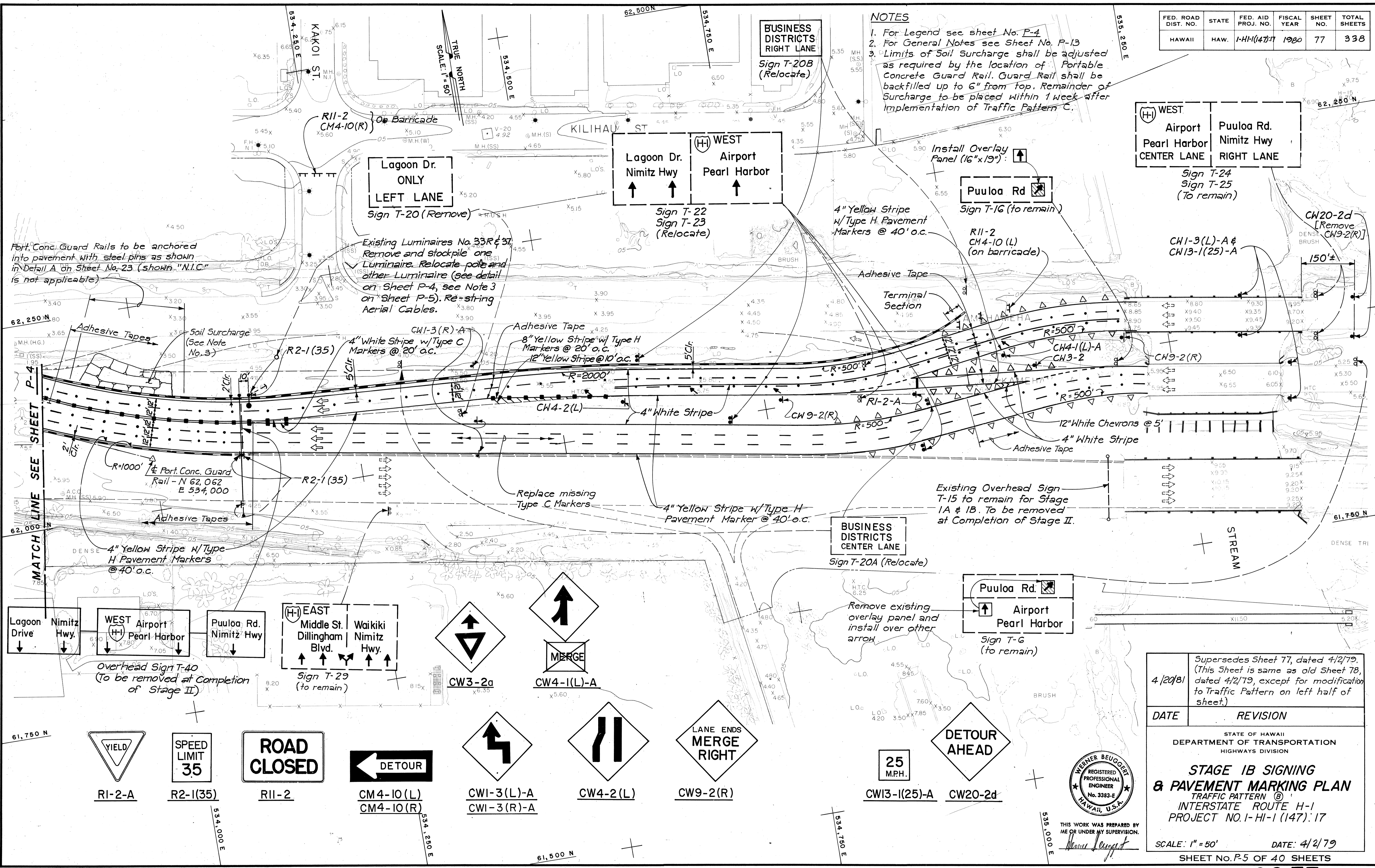
- NOTES FOR OVERHEAD SIGN T-40C**
1. For General Notes & Details, see Sheet No. P-19 & P-20.
 2. Use Sign T-40 Truss and Sign Panels.
 3. Concrete work shall be completed within 2 working days after changing traffic pattern. Sign truss & panels shall be installed not earlier than 2 weeks and not later than 3 weeks after changing traffic pattern.

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI(147)17	1980	77	338

NOTES

1. For Legend see sheet No. P-4
2. For General Notes see Sheet No. P-13
3. Limits of Soil Surcharge shall be adjusted as required by the location of Portable Concrete Guard Rail. Guard Rail shall be backfilled up to 6" from top. Remainder of Surcharge to be placed within 1 week after implementation of Traffic Pattern C.



Port. Conc. Guard Rails to be anchored into pavement with steel pins as shown in Detail A on Sheet No. 23 (shown "N.I.C." is not applicable)

Existing Luminaires No. 33R & 33L. Remove and stockpile one Luminaire. Relocate pole and other Luminaire (see detail on Sheet P-4, see Note 3 on Sheet P-5). Re-string Aerial Cables.

Existing Overhead Sign T-15 to remain for Stage 1A & 1B. To be removed at Completion of Stage II.

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

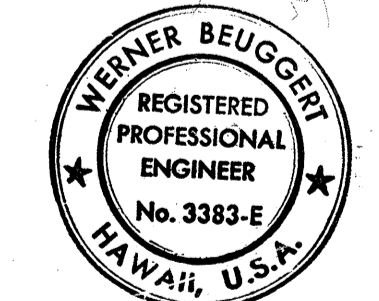
4/20/81
 Supersedes Sheet 77, dated 4/2/79. (This Sheet is same as old Sheet 78, dated 4/2/79, except for modification to Traffic Pattern on left half of sheet.)

DATE REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STAGE 1B SIGNING & PAVEMENT MARKING PLAN
 TRAFFIC PATTERN (C)
 INTERSTATE ROUTE H-1
 PROJECT NO. I-HI-1(147):17

SCALE: 1" = 50' DATE: 4/2/79
 SHEET NO. P-5 OF 40 SHEETS

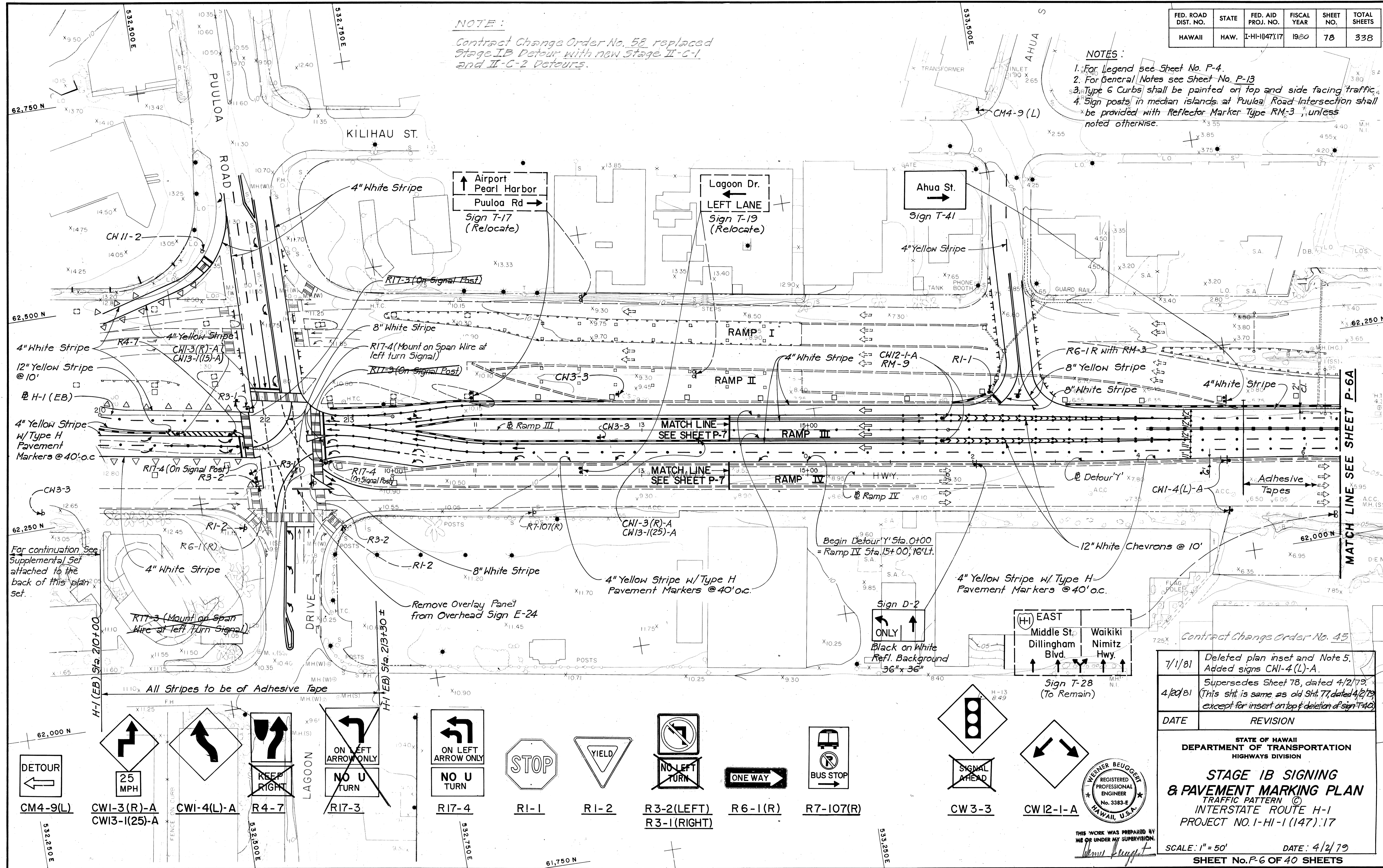


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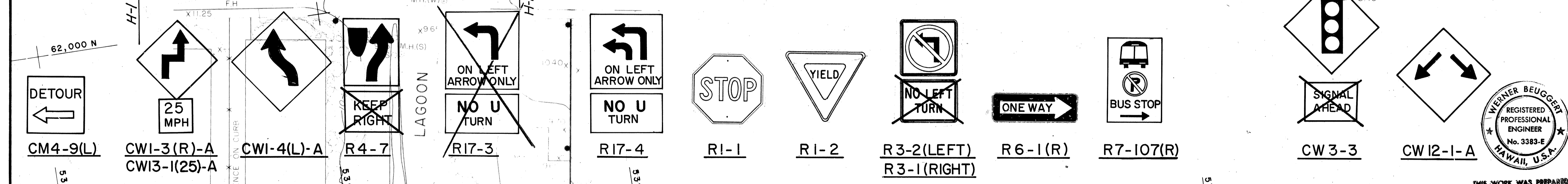
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147):17	1980	78	338

NOTE:
 Contract Change Order No. 58 replaced Stage IB Detour with new Stage II-C-1 and II-C-2 Detours.

- NOTES:**
- For Legend see Sheet No. P-4.
 - For General Notes see Sheet No. P-13
 - Type 6 Curbs shall be painted on top and side facing traffic.
 - Sign posts in median islands at Puuloa Road Intersection shall be provided with Reflector Marker Type RM-3, unless noted otherwise.



DATE	SURVEY PLATTED BY	DRAWN BY	DESIGNED BY	QUANTITIES BY	CHECKED BY



Contract Change Order No. 45

DATE	REVISION
7/1/81	Deleted plan inset and Note 5. Added signs CWI-4(L)-A.
4/20/81	Supersedes Sheet 78, dated 4/2/79. (This sheet is same as old sheet 77, dated 4/2/79, except for inset on top & deletion of sign T-40.)

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STAGE IB SIGNING & PAVEMENT MARKING PLAN
 TRAFFIC PATTERN ©
 INTERSTATE ROUTE H-1
 PROJECT NO. I-HI-1(147):17

SCALE: 1" = 50' DATE: 4/2/79
 SHEET No. P-6 OF 40 SHEETS

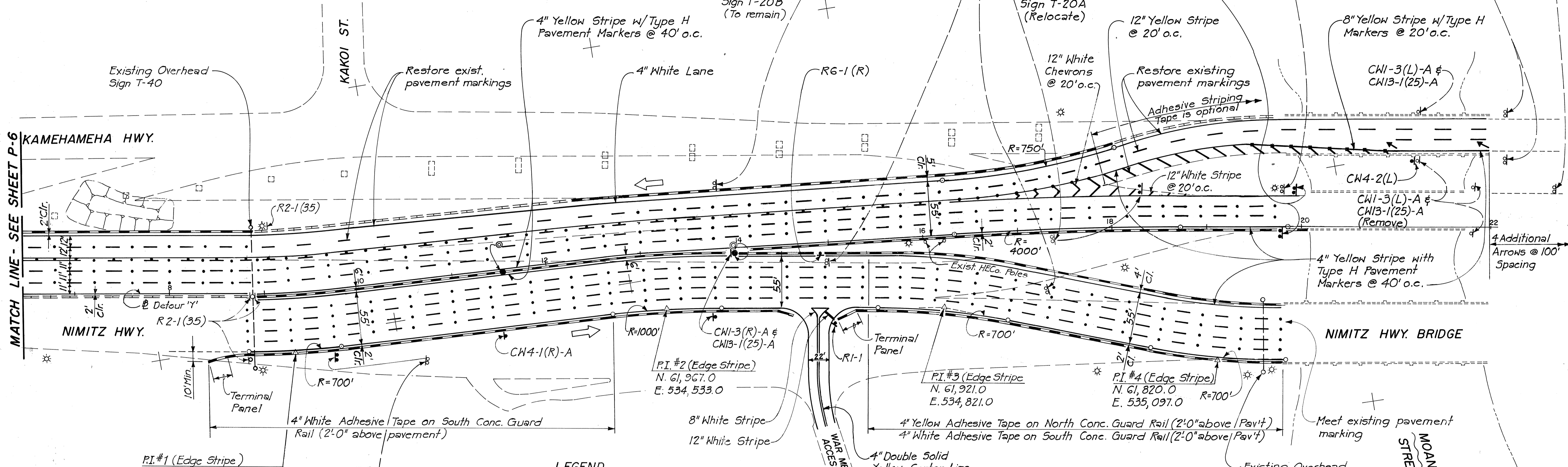
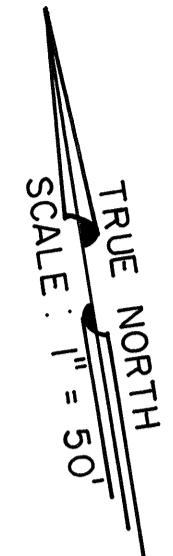
WERNER BEUGGERT
 REGISTERED PROFESSIONAL ENGINEER
 No. 3383-E
 HAWAII, U.S.A.

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Werner Beuggert

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147)17	1981	79S-1	338

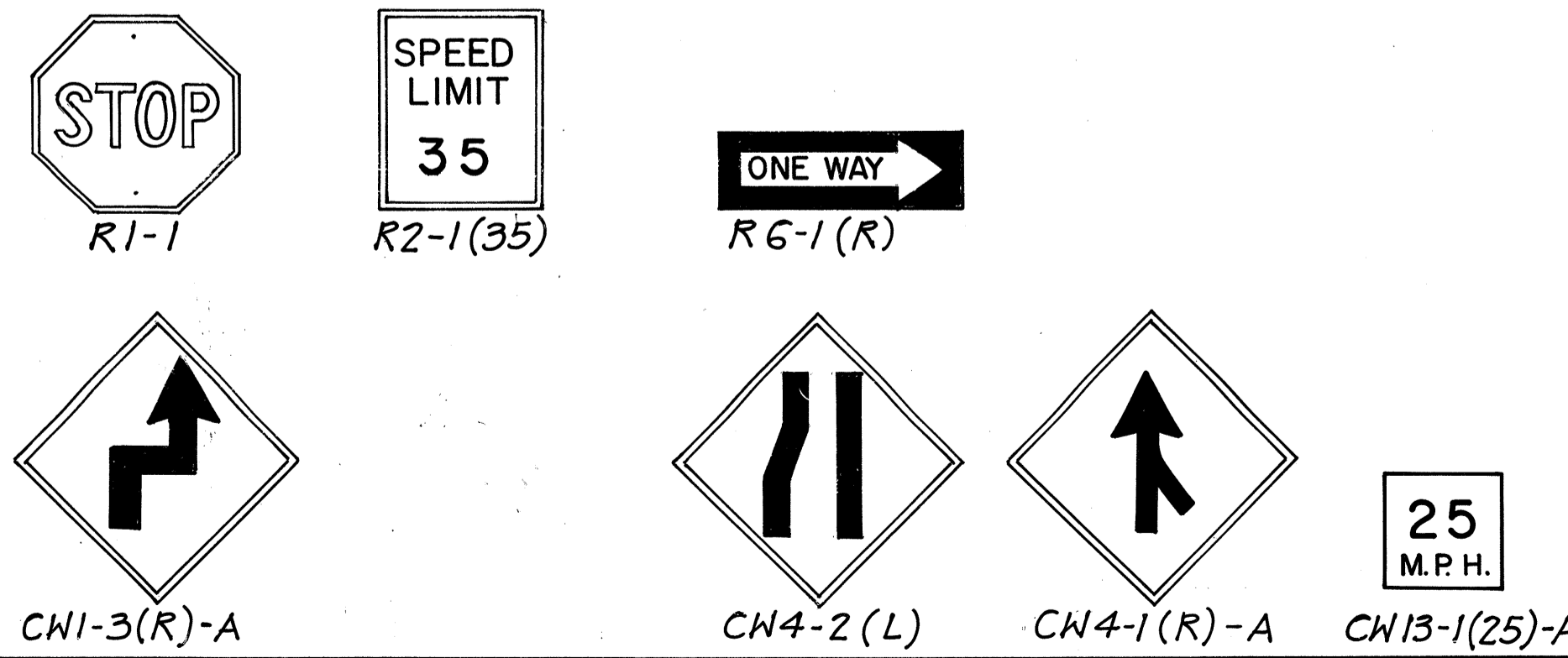
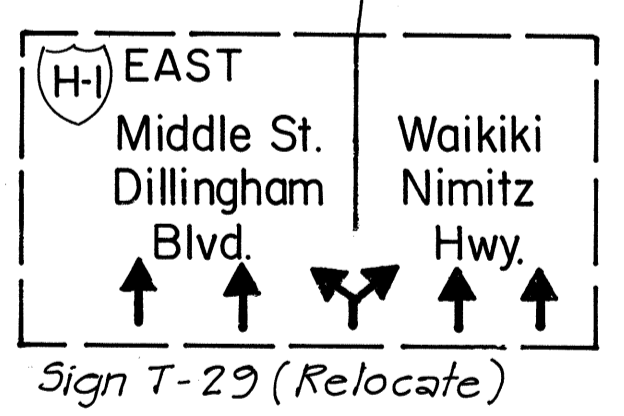
NOTES:

1. For General Note see Sheet No. P-13.
2. The Traffic Pattern shown on this sheet shall be implemented before December 31, 1981.
3. Location of P.I. #1 is to be determined in the field (controlled by location of existing edge stripe and existing Overhead Sign T-40).
4. Footings for relocated lighting poles shall be as shown in Detail 2/E19 on Sheet No. 131.
5. Relocated lighting poles in median shall be protected as shown in Detail G on Sheet No. C.O. 92.
6. All pavement markings for Westbound lanes shall be of Adhesive striping tape, except as otherwise indicated.



LEGEND

- 4" White Stripe (unless shown otherwise)
- 8" White Stripe with Type C Markers @ 20' o.c.
- 4" Double White Stripe with Type C Markers @ 20' o.c.
- . - 4" Broken Stripe, 10' long with 30' Gap & Type C Markers @ 40' o.c.
- Standard Pavement Arrow
- |—|—|— Portable Concrete Guard Rail
- |—|—|— Existing Portable Concrete Guard Rail
- ⊙ New or Relocated Sign
- ⊙ Existing Sign
- ⊙ Existing Lighting Pole to remain
- ⊙ Existing Lighting Pole to be relocated (restring cables)
- Relocated Lighting Pole



Contract Change Order No. 45

DATE	REVISION
7/1/81	Added Detour 'Y' to facilitate construction in future contract.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

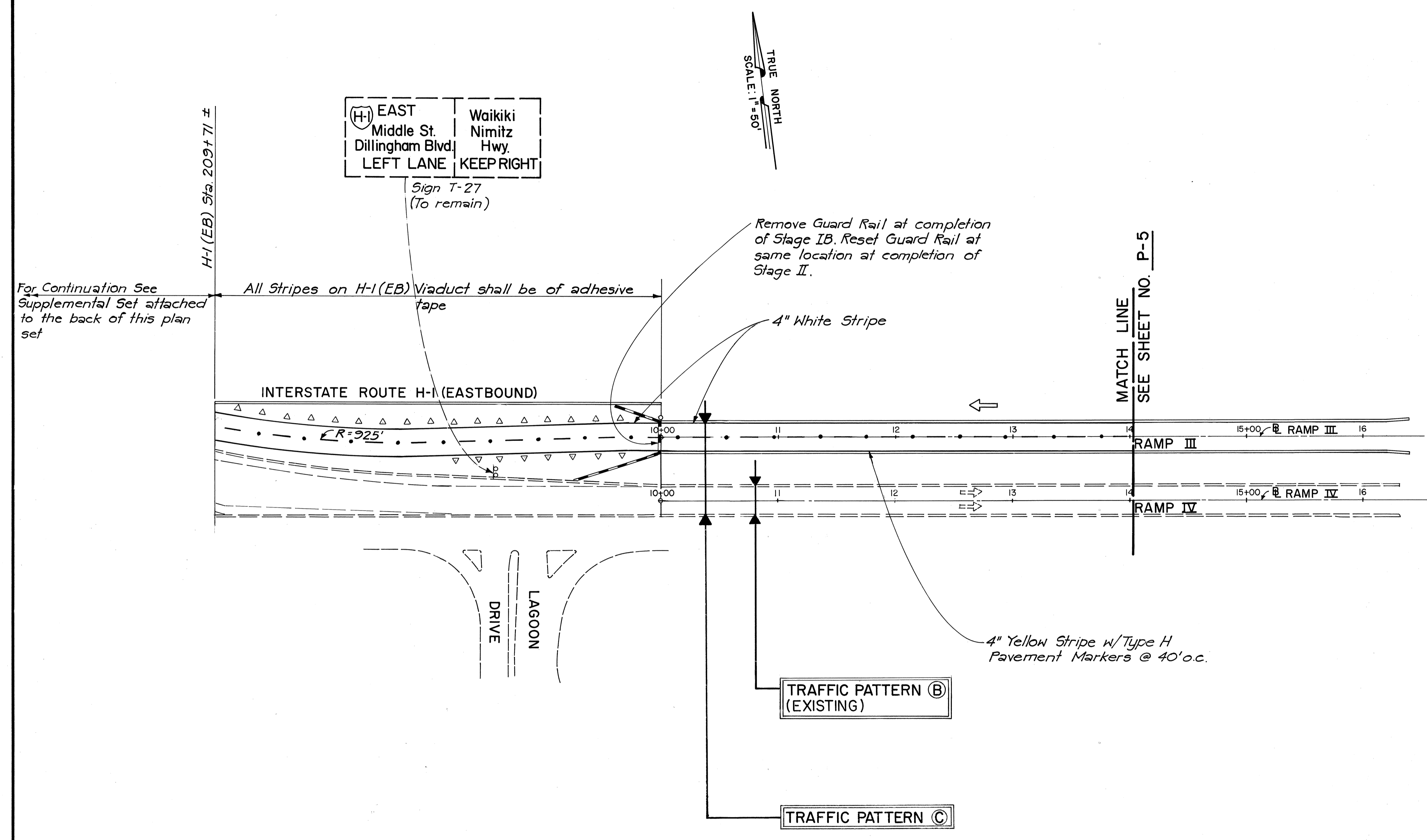
DETOUR "Y"
SIGNING, PAVEMENT MARKING & LIGHTING PLAN
TRAFFIC PATTERN ©
INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1(147)17

SCALE: 1" = 50' DATE: 7/1/81
SHEET No. P-6A OF 40 SHEETS

C.O. 78S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147)17	1980	79	338

NOTES:
 1. For Legend see sheet No. P-4
 2. For General Notes see sheet No. P-13



H-1 (EB) Sta. 209+71 ±

(H) EAST Middle St. Dillingham Blvd. LEFT LANE

Waikiki Nimitz Hwy. KEEP RIGHT

TRUE NORTH
 SCALE: 1" = 50'

Sign T-27 (To remain)

Remove Guard Rail at completion of Stage IB. Reset Guard Rail at same location at completion of Stage II.

For Continuation See Supplemental Set attached to the back of this plan set

All Stripes on H-1 (EB) Viaduct shall be of adhesive tape

4" White Stripe

MATCH LINE SEE SHEET NO. P-5

INTERSTATE ROUTE H-1 (EASTBOUND)

R=925'

RAMP III

RAMP IV

DRIVE LAGOON

4" Yellow Stripe w/Type H Pavement Markers @ 40' o.c.

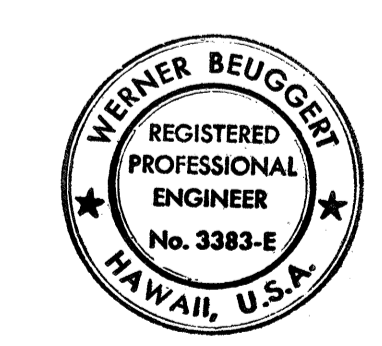
TRAFFIC PATTERN (B) (EXISTING)

TRAFFIC PATTERN (C)

SPEED LIMIT 35
 R2-1(35)-A

HILL
 QW7-1-A

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



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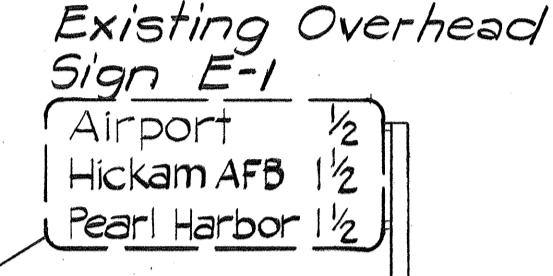
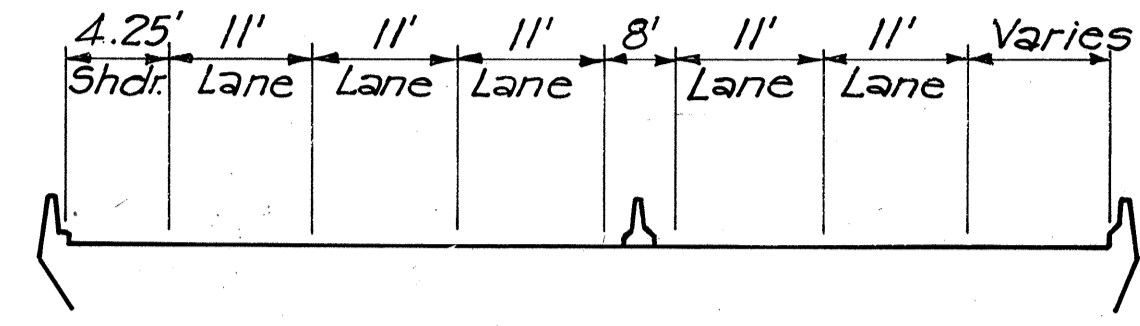
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STAGE IB SIGNING & PAVEMENT MARKING PLAN
 TRAFFIC PATTERN (C)
 INTERSTATE ROUTE H-1
 PROJECT NO. I-HI-1 (147):17

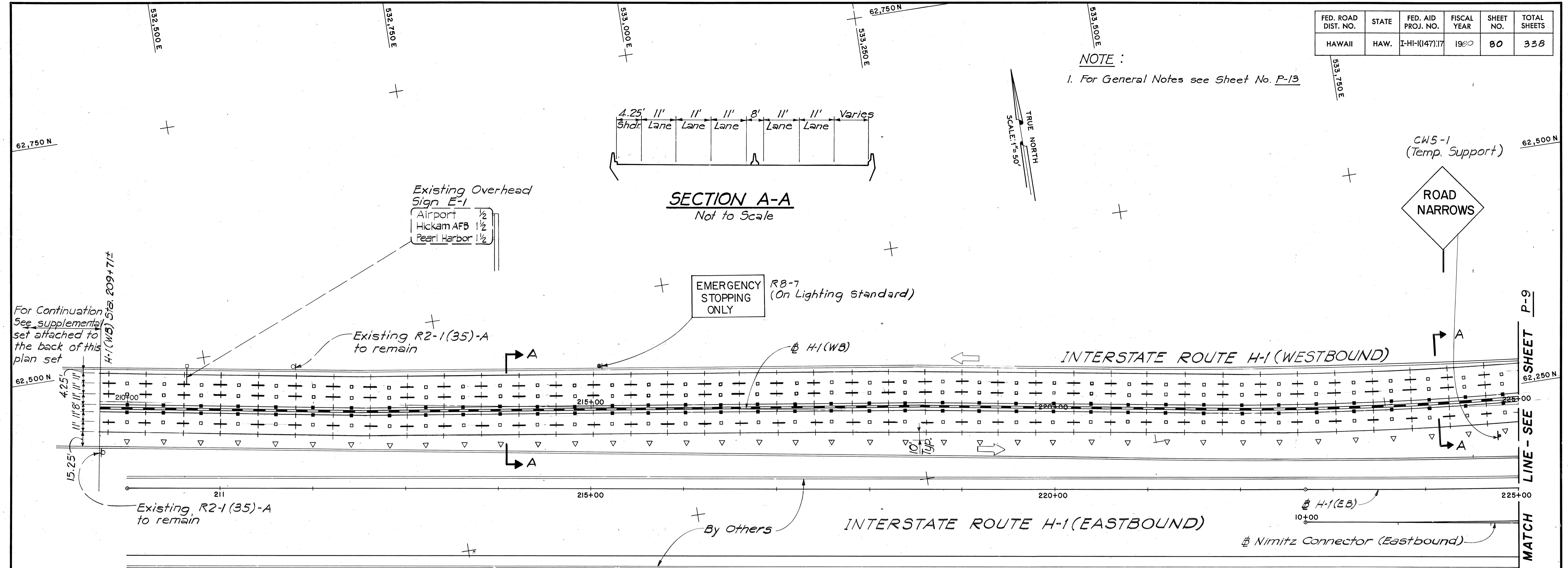
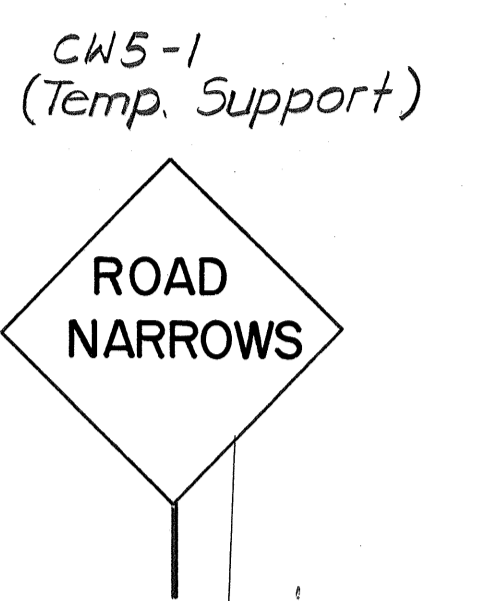
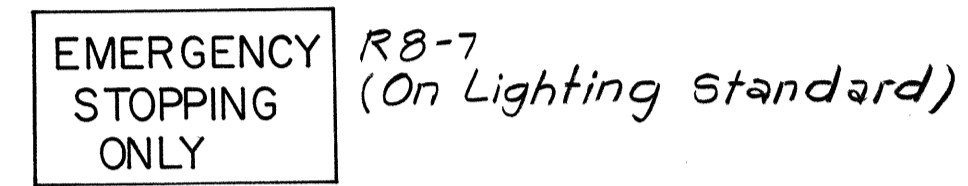
SCALE: 1" = 50' DATE: 4/2/79
 SHEET No. P-7 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147):17	1980	80	338

NOTE:
1. For General Notes see Sheet No. P-13



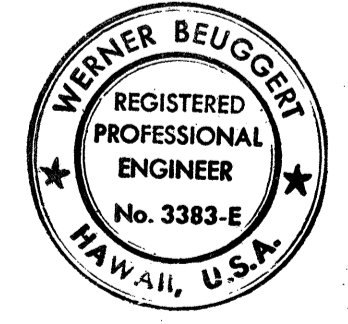
SECTION A-A
Not to Scale



LEGEND FOR STAGE II

- ||— 4" WHITE PAINTED STRIPE (EDGE STRIPE)
- +— 4" WHITE STRIPING TAPE (EDGE STRIPE)
- 8" WHITE PAINTED STRIPE
- ||— 8" YELLOW PAINTED STRIPE
- +— 4" DOUBLE YELLOW PAINTED STRIPE
- 4" YELLOW PAINTED STRIPE & TYPE H MARKERS @ 40'
- +— 4" YELLOW STRIPING TAPE & TYPE H MARKERS @ 40'
- 4" WHITE PAINTED STRIPE & TYPE C MARKERS @ 20'
- +— 4" WHITE STRIPING TAPE & TYPE C MARKERS @ 20'
- 8" WHITE PAINTED STRIPE & TYPE C MARKERS @ 20'
- +— 8" WHITE STRIPING TAPE & TYPE C MARKERS @ 20'
- 4" DOUBLE YELLOW PAINTED STRIPE & TYPE D MARKERS @ 20'
- +— 4" DOUBLE YELLOW STRIPING TAPE & TYPE D MARKERS @ 20'
- +□+□+ 10"x4" WHITE PAINTED STRIPES & TYPE C MARKERS @ 40'
- +□+□+ 10"x4" WHITE STRIPING TAPES & TYPE C MARKERS @ 40'
- 4 TYPE A MARKERS & TYPE C MARKERS @ 40'
- 2"x4" PAINTED GUIDE LINE, 4' SPACING
- +--+ 2"x4" STRIPING TAPE GUIDE LINE, 4' SPACING
- ▬ PAINTED CROSSWALK & STOP LINE
- ↔ STANDARD PAVEMENT ARROW
- || TYPE III BARRICADE
- △ △ TRAFFIC DELINEATOR (TUBE)
- PORTABLE CONCRETE GUARD RAIL
- DIRECTION OF TRAFFIC
- ◊ EXISTING SIGN
- NEW OR RELOCATED SIGN

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



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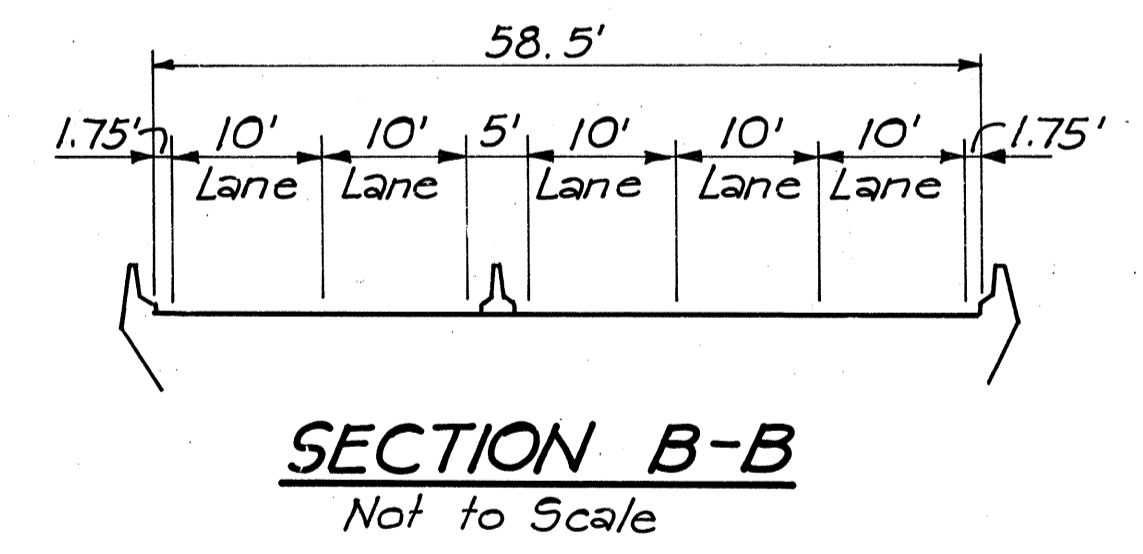
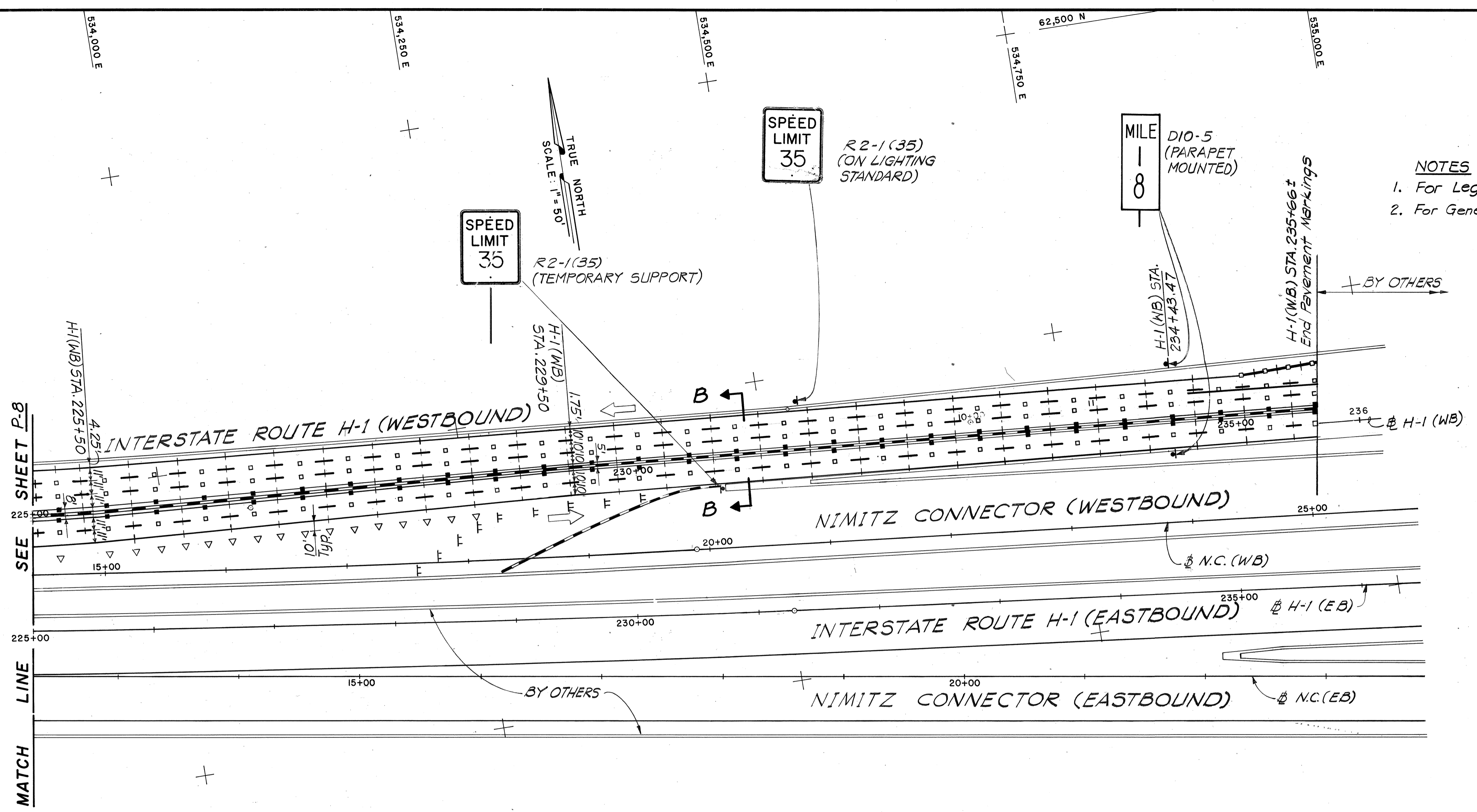
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STAGE II SIGNING & PAVEMENT MARKING PLAN
TRAFFIC PATTERN ①
INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1 (147):17

SCALE: 1" = 50' DATE: 4/2/79
SHEET No. P.8 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147)17	1980	81	338

NOTES:
 1. For Legend see sheet No. P-8.
 2. For General Notes see Sheet No. P-13.



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

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 REGISTERED PROFESSIONAL ENGINEER
 No. 3382-E
 HAWAII, U.S.A.

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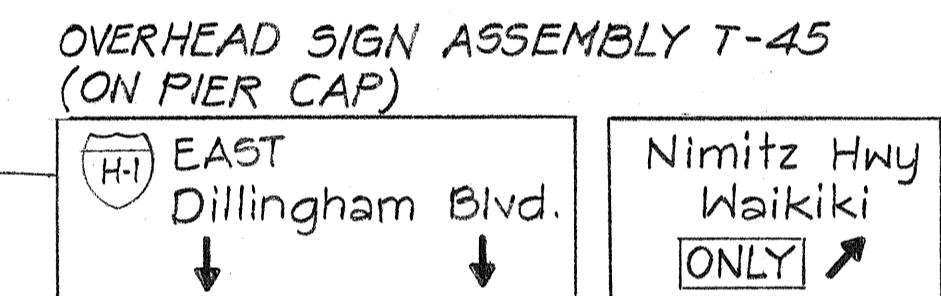
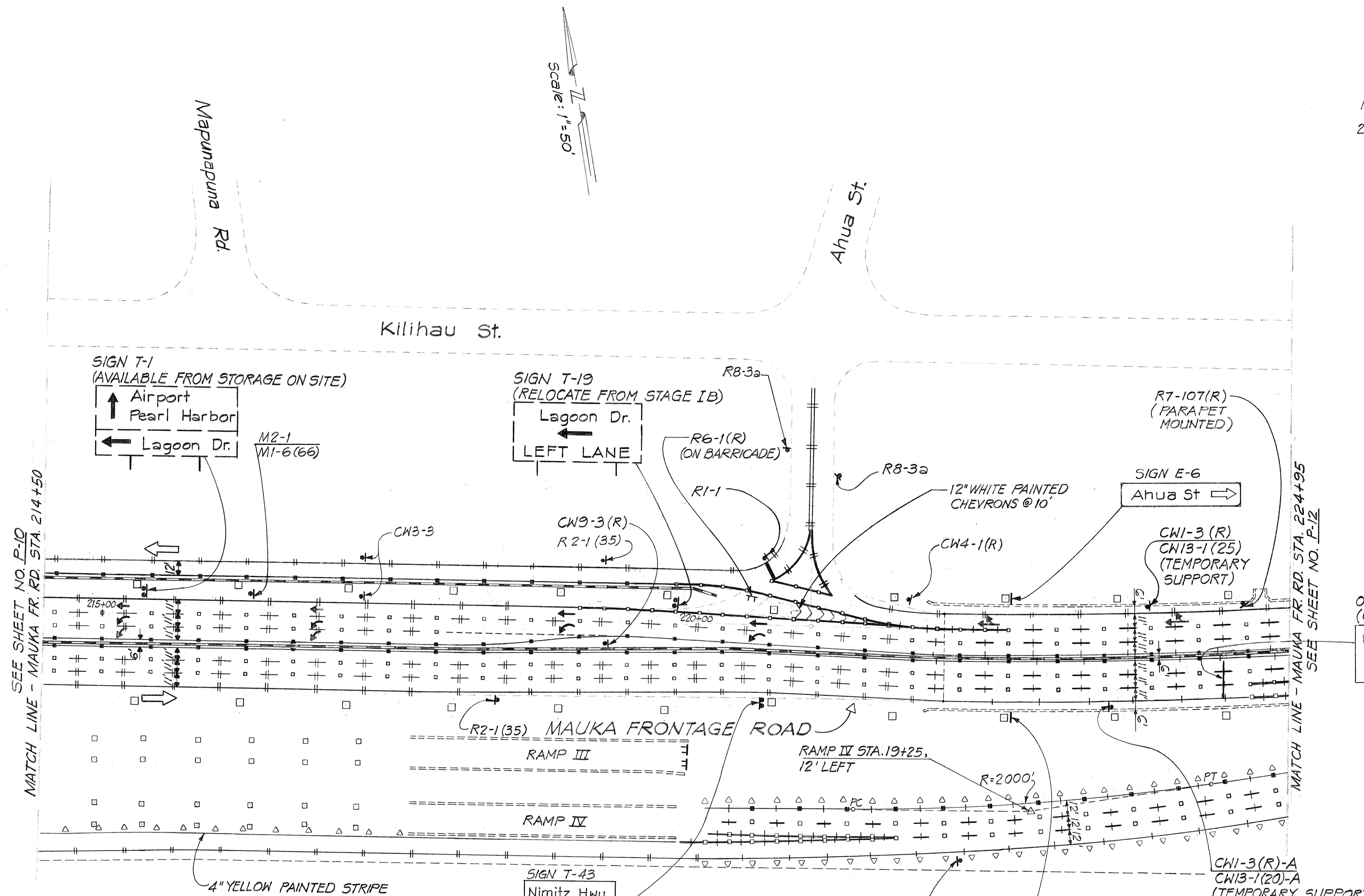
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STAGE II SIGNING & PAVEMENT MARKING PLAN
 TRAFFIC PATTERN ①
 INTERSTATE ROUTE H-1
 PROJECT NO. I-HI-1 (147):17

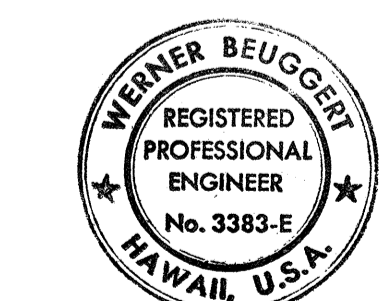
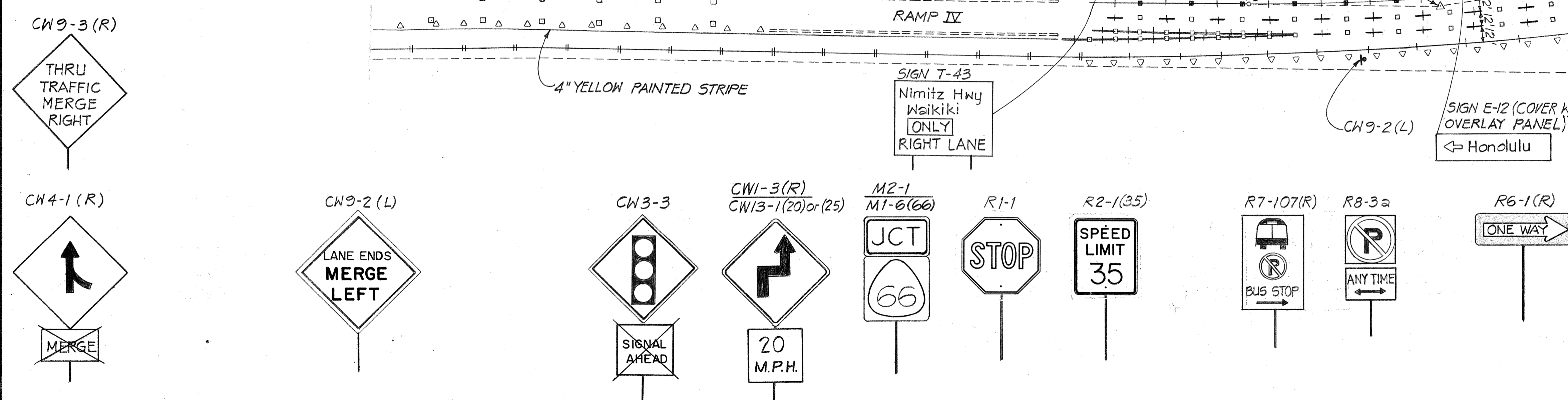
SCALE: 1" = 50' DATE: 4/2/79
 SHEET No. P-9 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H1-1(147):17	1980	83	338

- NOTES:
- FOR LEGEND SEE SHEET NO. P-8
 - FOR GENERAL NOTES SEE SHEET NO. P-13



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



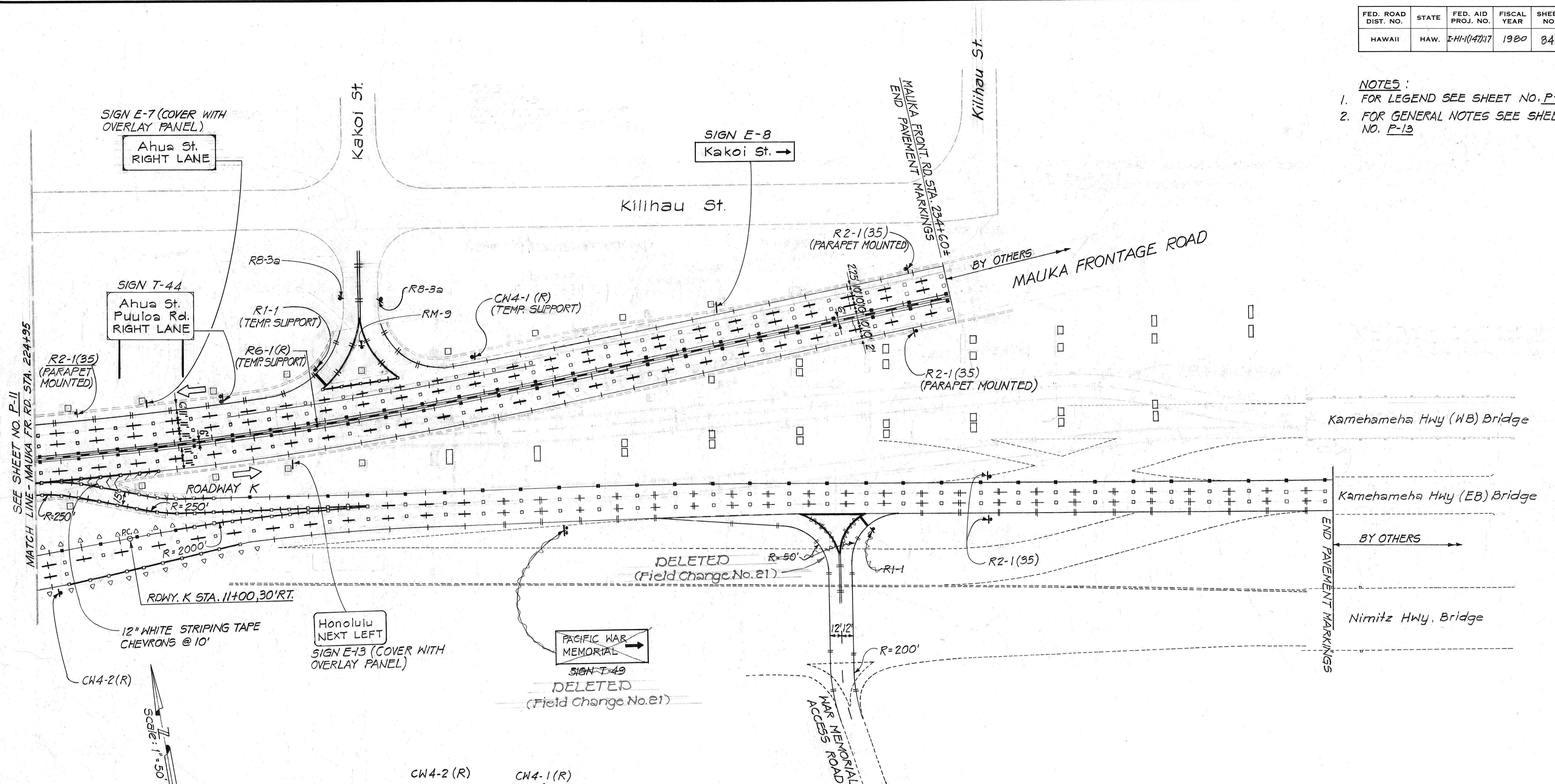
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 HIGHWAYS DIVISION

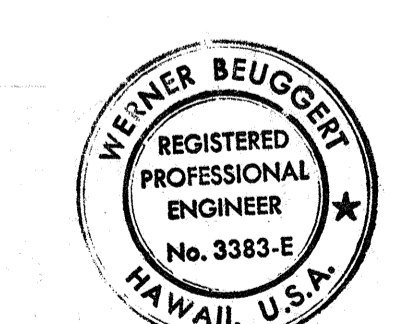
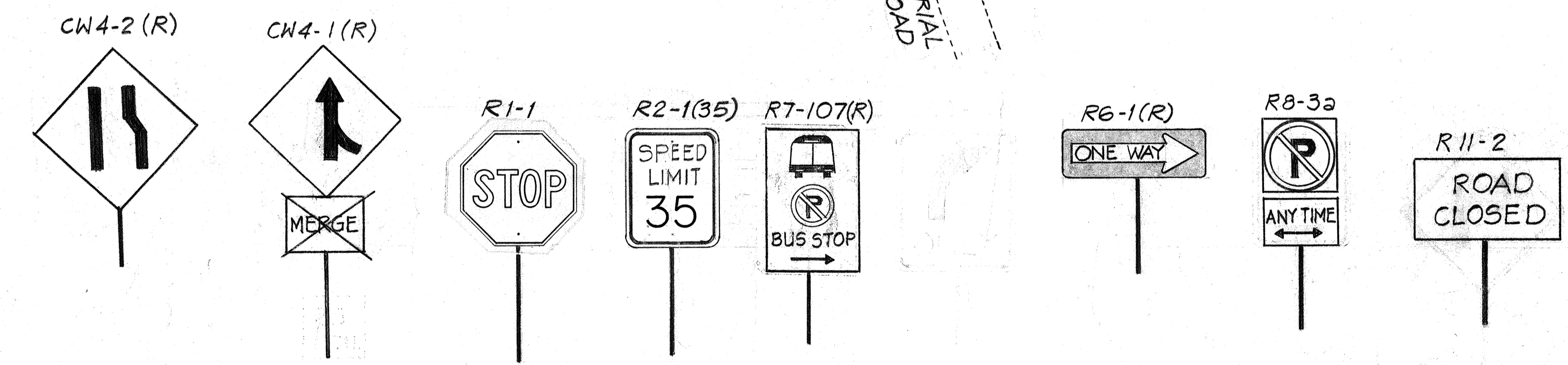
STAGE II SIGNING & PAVEMENT MARKING PLAN
 TRAFFIC PATTERN (D)
 INTERSTATE ROUTE H-1
 PROJECT NO. I-H1-1(147):17
 SCALE: 1" = 50' DATE: 4/2/79
 SHEET NO. P-11 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147):17	1980	84	338

- NOTES:
- FOR LEGEND SEE SHEET NO. P-8
 - FOR GENERAL NOTES SEE SHEET NO. P-13



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



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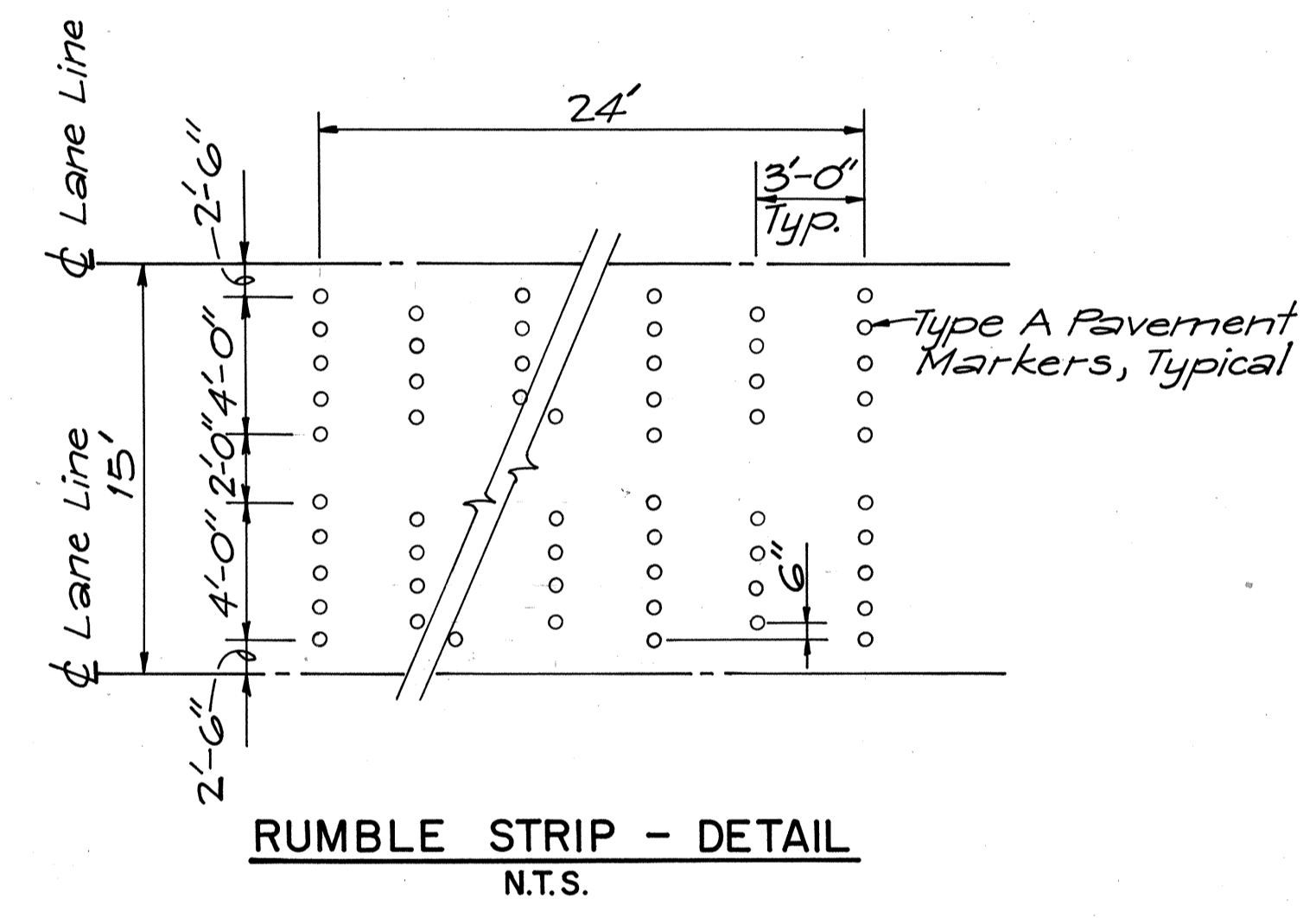
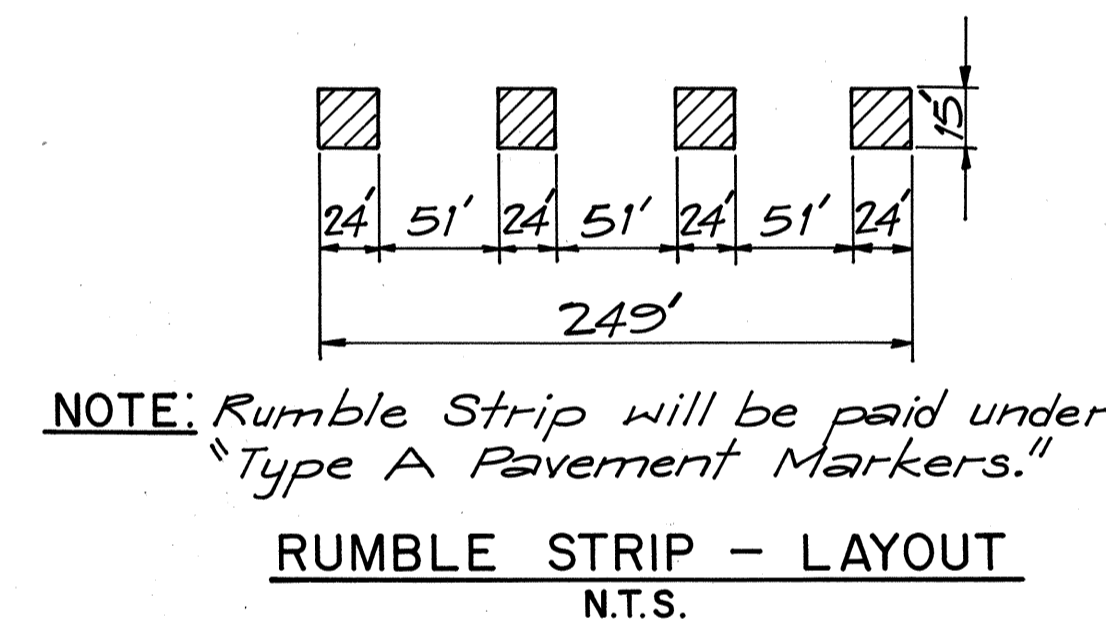
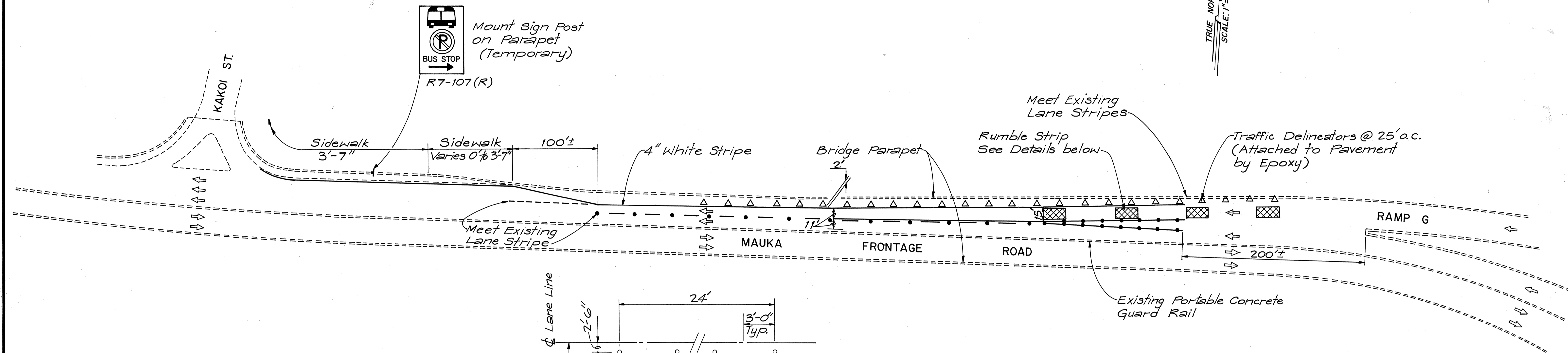
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STAGE II SIGNING & PAVEMENT MARKING PLAN
TRAFFIC PATTERN ①
INTERSTATE ROUTE HI-1
PROJECT NO. I-HI-1(147):17

SCALE: 1" = 50' DATE: 4/2/79
SHEET No. P-12 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1047:17	1980	CO.84S-1	338

TRUE NORTH
SCALE: 1" = 50'



- NOTES:**
1. For Legend see Sheet No. P-4.
 2. All Stripes shall be of Adhesive Tape.

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

7/8/83	Sheet added to Contract Plan Set for providing Bus Stop on Mauka Front. Rd. Structure.
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
SIGNING & PAVEMENT MARKING PLAN	
INTERSTATE ROUTE H-1 PROJECT NO. I-HI-1 (147):17	
SCALE: AS SHOWN	DATE: JULY 1983
SHEET No. P-12A OF 40 SHEETS	

C.O.84S-1

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147)17	1980	85	338

SIGNING SUMMARY (FOR NEW & RESET SIGNS)

TYPE	MESSAGE	QUANTITY		TYPE	MESSAGE	QUANTITY	
		W/P	WO/P			W/P	WO/P
R1-1	STOP	6	-	R8-7	EMERGENCY STOPPING ONLY	-	2
R1-2	YIELD	3	-	R8-3a	NO PARKING	8	-
R1-2-A	YIELD	1	-	R10-6	STOP HERE ON RED	-	-
R2-1(35)	SPEED LIMIT 35	14	2	R11-2	ROAD CLOSED	-	2
R2-1(35)-A	SPEED LIMIT 35	1	-	R17-3	ON LEFT ARROW ONLY	-	5
R3-1	NO RIGHT TURN	-	2	R17-4	ON LEFT ARROW ONLY	1	8
R3-2	NO LEFT TURN	-	-				
R3-3	NO TURNS	-	-				
R3-3-A	NO TURNS	2	-	W4-2(R)		1	-
R3-5(R)	ONLY	2	-	W6-3		1	-
R4-7	KEEP RIGHT	4	-	CH1-3(R)		3	-
R5-1	DO NOT ENTER	-	-	CH1-3(R)-A		4	-
R5-9	WRONG WAY	-	-	CH1-3(L)-A		-	4
R6-1(R)	ONE WAY	2	3	CH3-2	YIELD AHEAD	1	-
R7-107(R)	BUS STOP	4	-	CH3-3	SIGNAL AHEAD	6	-

GENERAL SIGNING NOTES

- For Notes for Temporary Destination Signs (T-Designation) See Sheet P-18. For Notes for Permanent Destination Signs (E-Designation) See Sheet P-15.
- 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.
- All existing and reusable Signs, Signs from storage, Barricades and Traffic Delineators, as directed by the Engineer, shall be reset at locations shown on the plans. All additional materials required shall be furnished by Contractor. Payment for resetting of Barricades and Traffic Delineators shall be considered incidental to various contract items.
- Contractor is responsible for Maintaining all new and existing Signs, barricades and delineators in good condition during Life of Project.
- All superfluous signs, barricades and delineators shall be removed and stored on site upon completion of construction work, as directed by the Engineer. Payment shall be considered incidental to various Contract Items.
- All proposed Signs not compatible with the existing traffic pattern shall be covered with overlay panel until the Detours are operational. Payment shall be incidental to Signs.
- Necessary traffic control devices required for the temporary closure of lanes, temporary detours during working hours and other work that may temporarily obstruct any portion of the roadway shall be considered incidental to various contract items.
- Payment for Signs D-1 & D-2 will be made under "Regulatory and Warning Sign, (.....)".
- Payment for Regulatory signs mounted on Overhead Traffic Signal Span Wire will be made under "Regulatory and Warning Sign, (.....), with Post".

SUMMARY OF PAVEMENT MARKERS

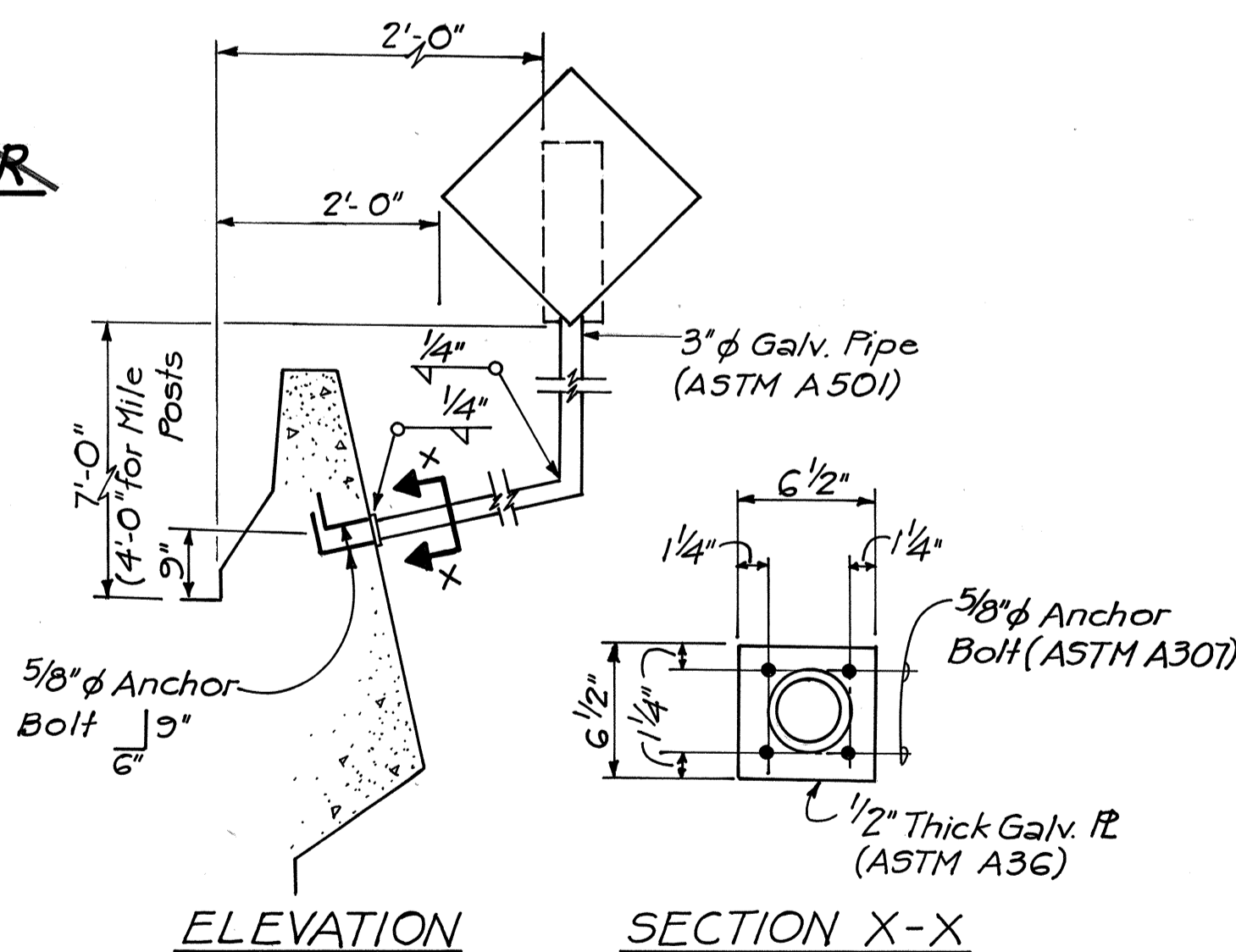
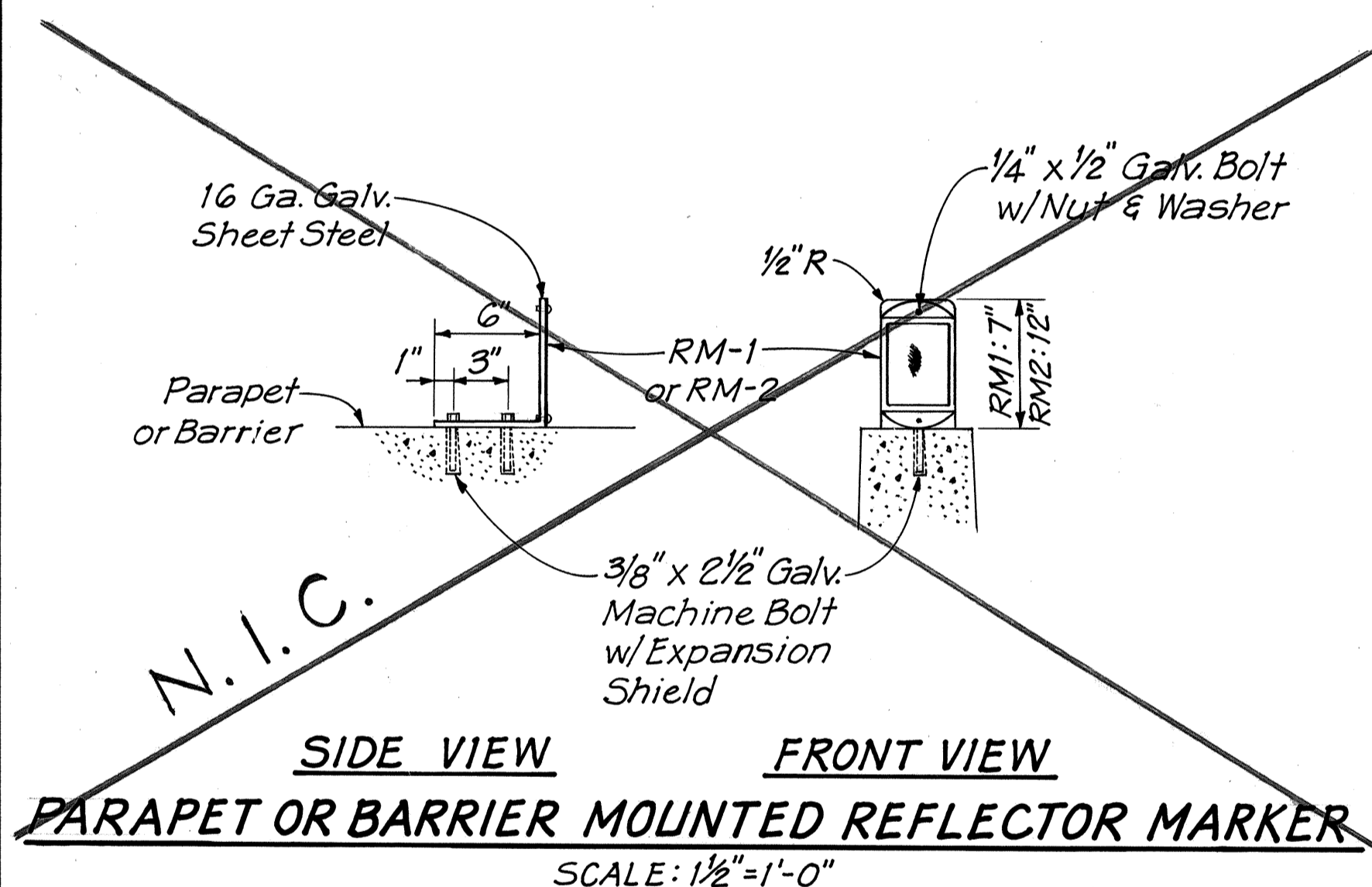
SHEET NO.	QUANTITY			
	Type A	Type C	Type D	Type H
P-4		49		24
P-5		178		48
P-6		141		58
P-7		19		20
P-8		114		76
P-9		85		54
P-10		204	78	8
P-11		163		77
P-12	124	195		83
TOTAL	124	1148	78	448

CH4-1(R)	MERGE	2	-
CH4-2(L)		1	-
CH4-2(R)		1	-
CH4-1(L)-A	MERGE	1	-
CH5-1	ROAD NARROWS	1	-
CH7-1-A	HILL	1	1
CH9-2(R)	LANE ENDS MERGE RIGHT	2	-
CH9-2(L)	LANE ENDS MERGE LEFT	1	-
CH9-3(R)	THRU TRAFFIC MERGE RIGHT	1	-
CH12-1-A		2	-
CH13-1(15)-A	15 M.P.H.	-	3
CH13-1(20)-A	20 M.P.H.	-	1
CH13-1(25)	25 M.P.H.	-	1
CH13-1(25)-A	25 M.P.H.	4	-
CH20-2d	DETOUR AHEAD	2	-
CH4-9(L)	DETOUR	1	-
CH4-9(R)	DETOUR	-	-
CH4-10(L)	DETOUR	-	1
CH4-10(R)	DETOUR	-	1
D-1		2	-
D-2		1	-
D10-5	MILE 18	2	-

MISCELLANEOUS :

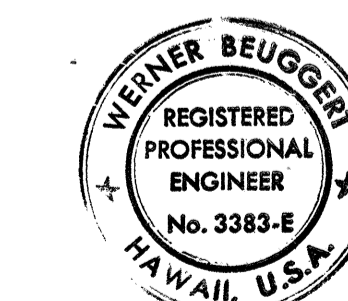
Reset Destination Signs	8	Each
Reset Warning, Regulatory and Construction Sign	27	Each
Traffic Delineators	195	Each
Type III Barricades	38	Each
State Route Marker Assembly	4	Each

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



PARAPET MOUNTED SIGN & MILE MARKER
N.T.S.

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



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 Werner Beuggert

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

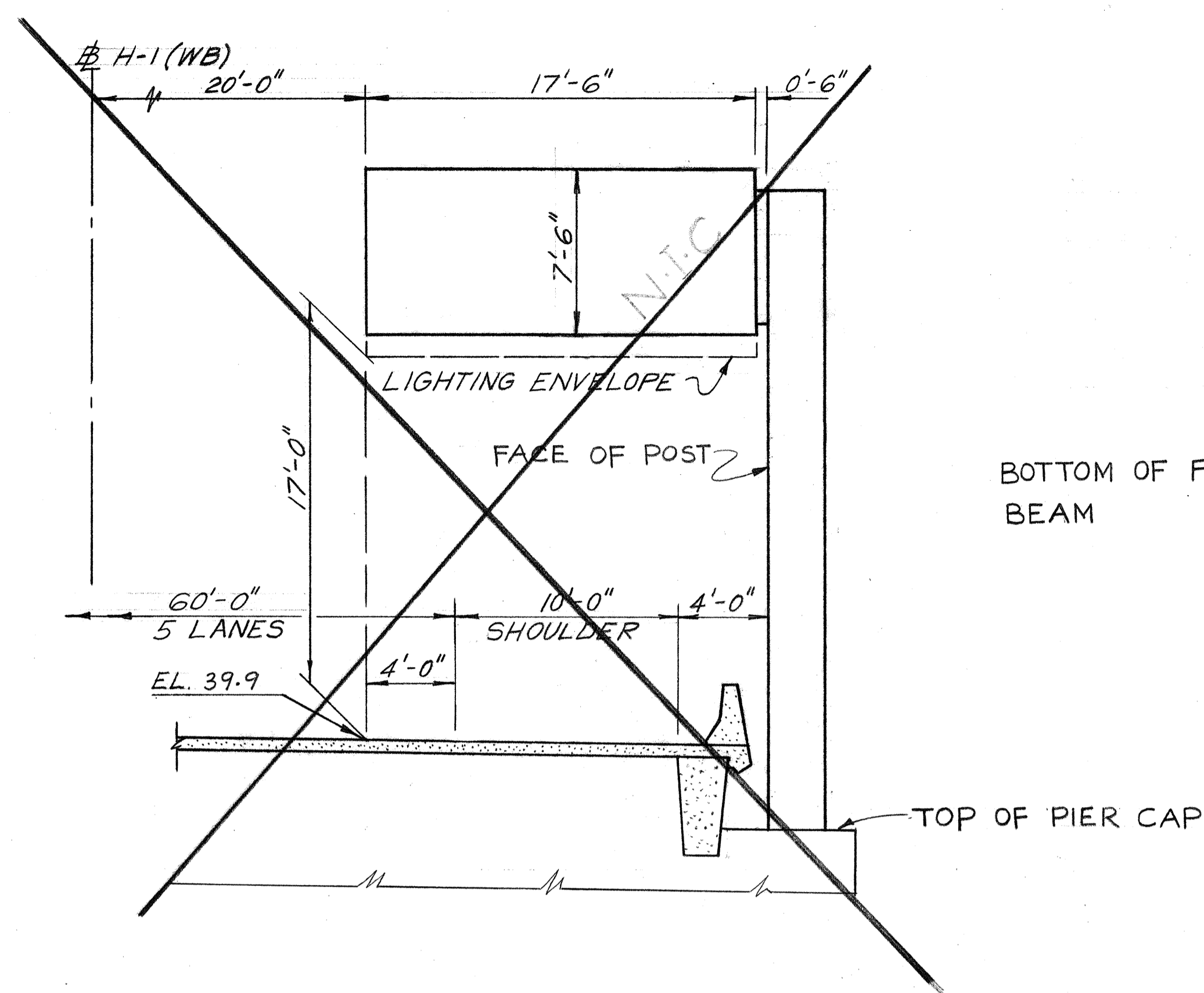
SIGNING DETAILS

INTERSTATE ROUTE H-1
 PROJECT NO. I-HI-1 (147)-17

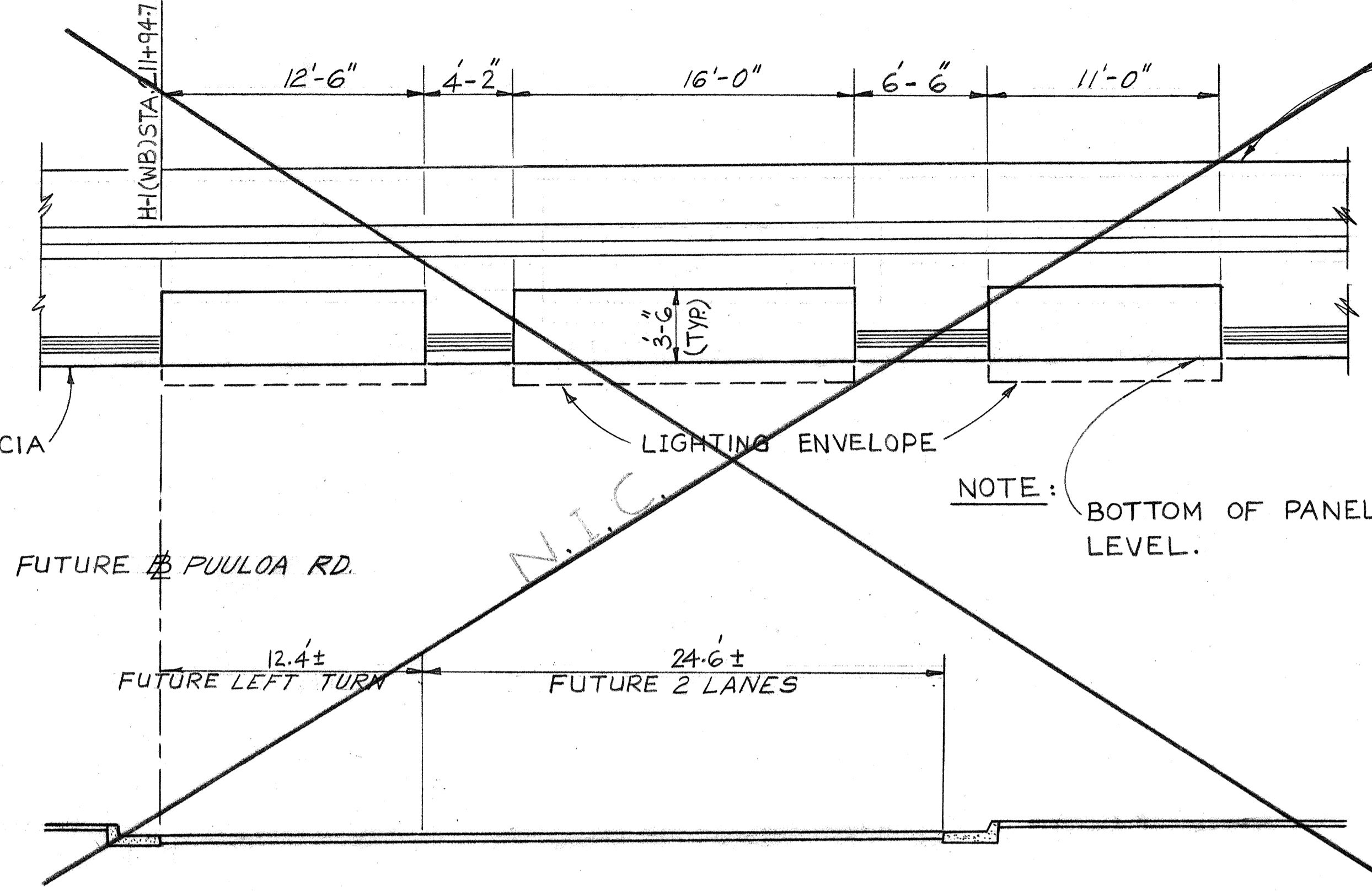
SCALE: AS SHOWN DATE: 4/2/79

SHEET No. P-13 OF 40 SHEETS

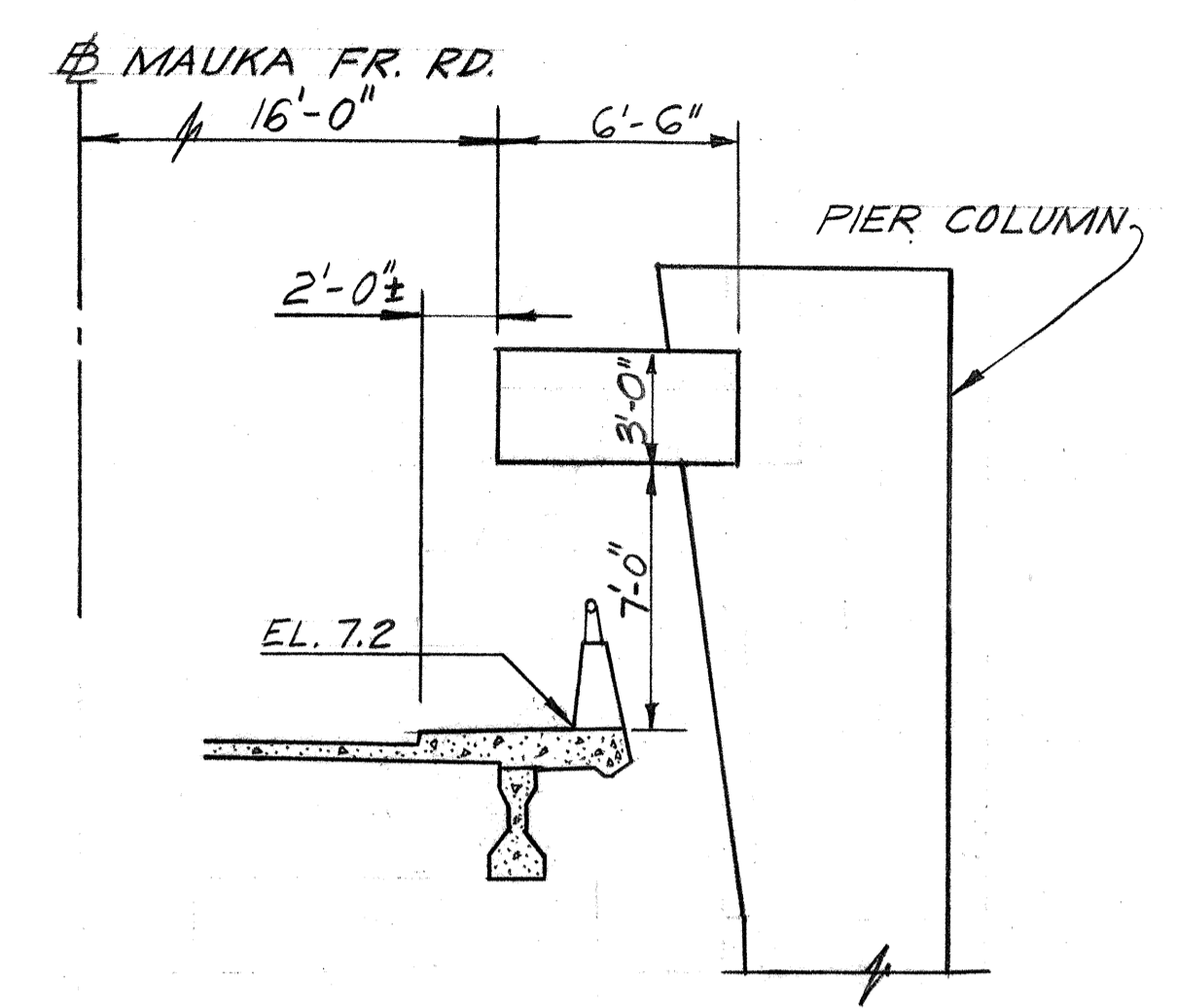
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147):17	1980	86	338



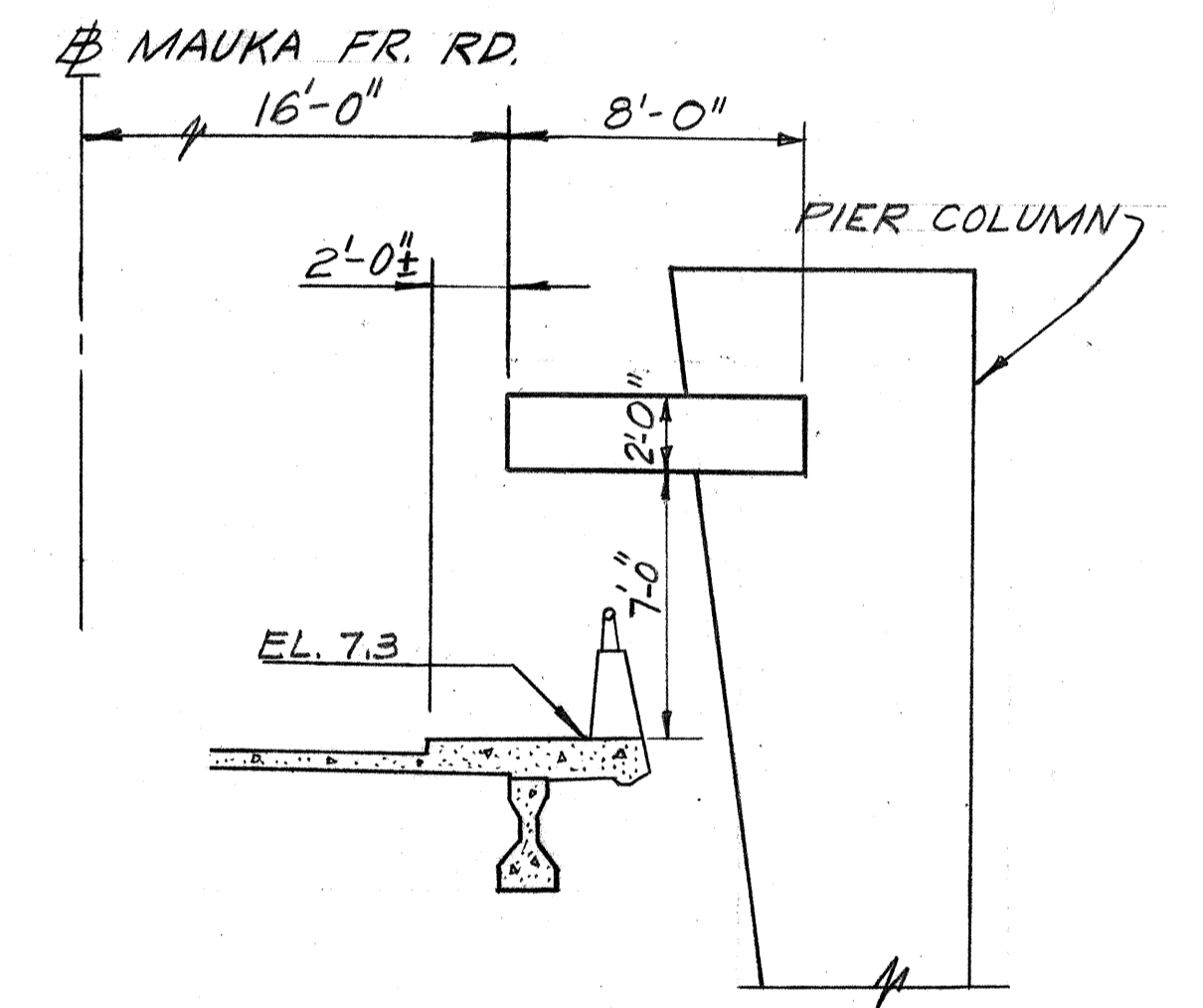
SIGN E-1
H-1(WB) STA. 210+64.97



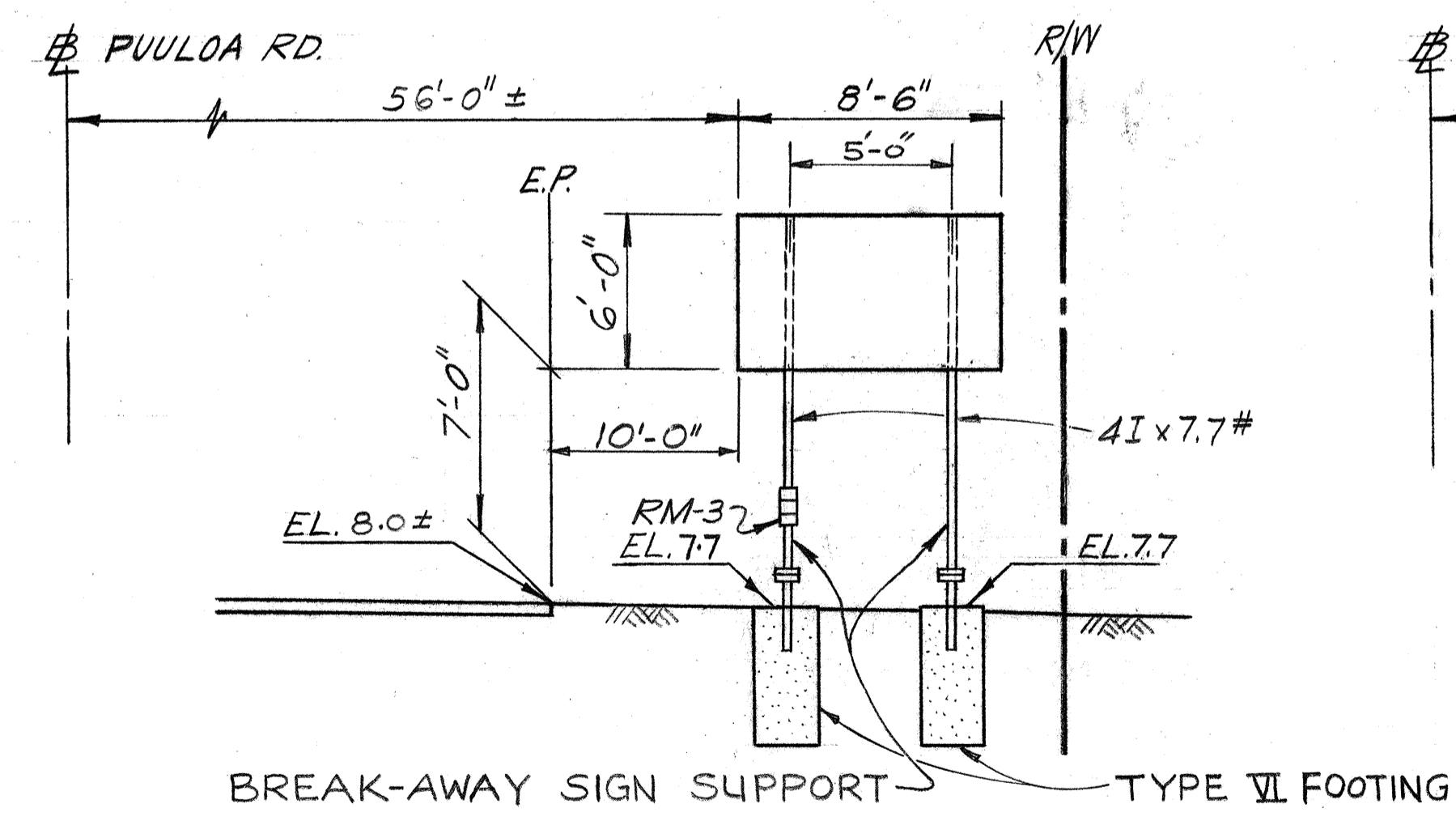
SIGN E-2
PUULOA RD. STA. 10+27±



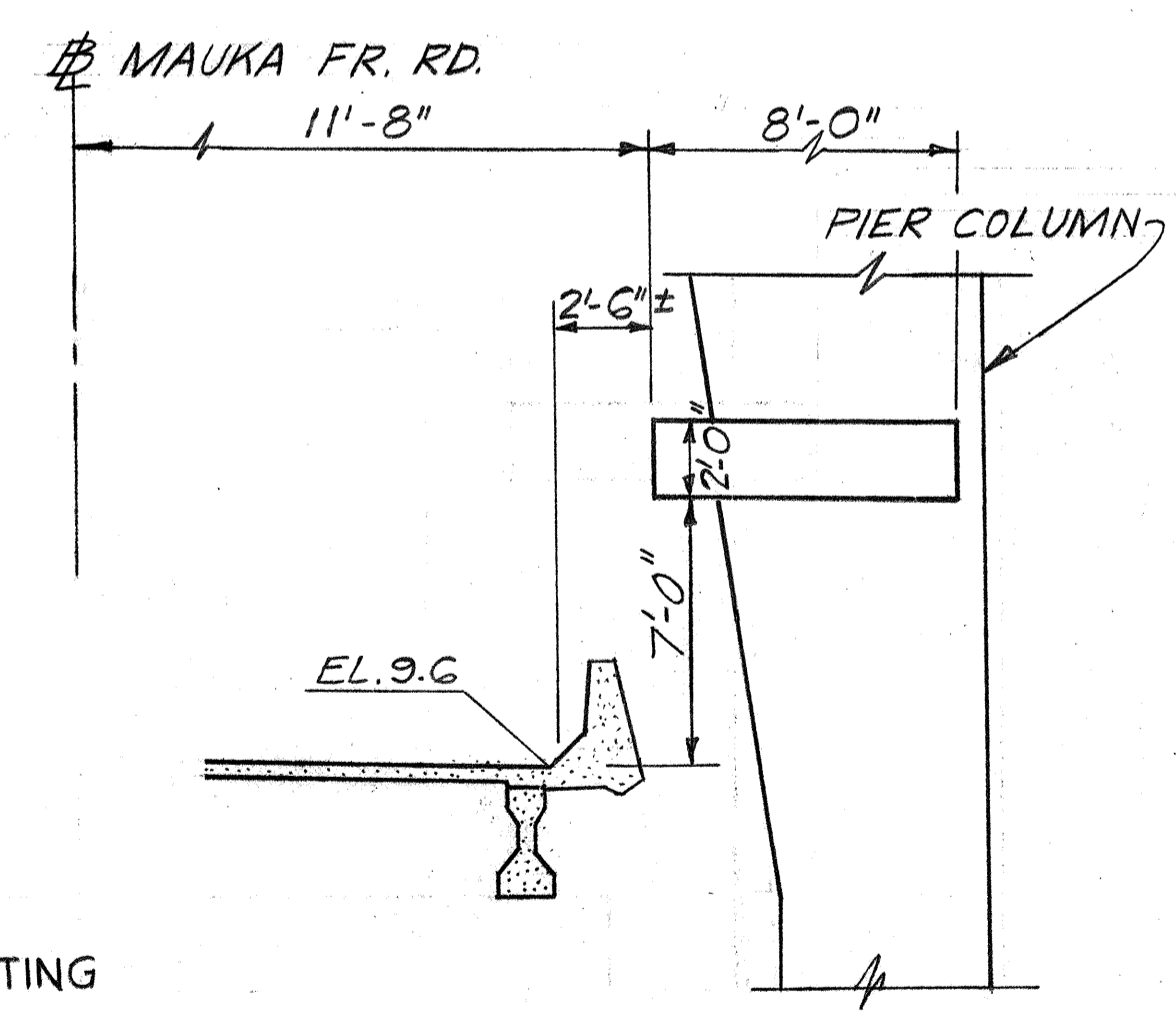
SIGN E-7
MAUKA FR. RD. STA. 226+14±
PIER #13



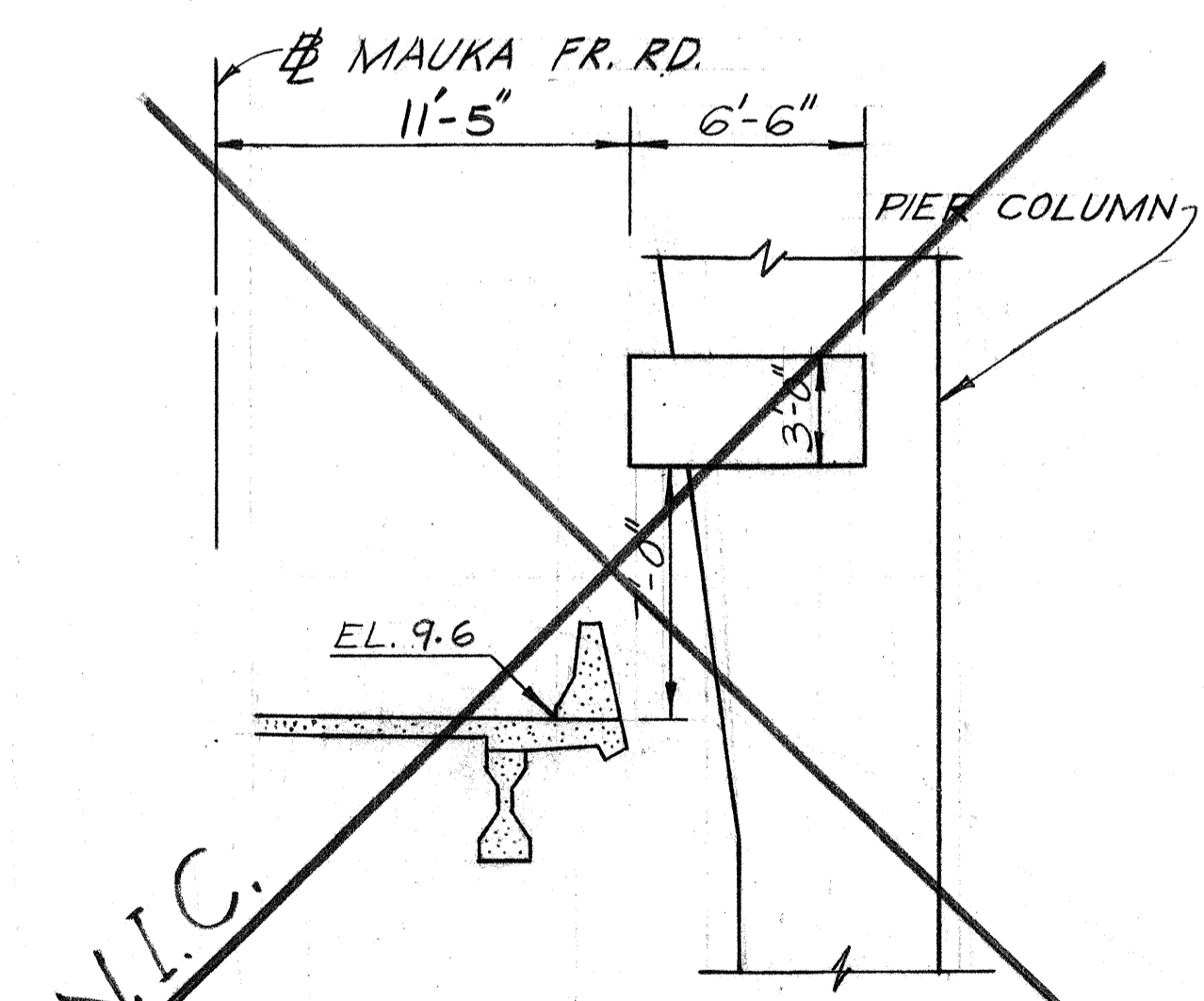
SIGN E-6
MAUKA FR. RD. STA. 222+62±
PIER #14



SIGN E-3
PUULOA RD. STA. 6+00±

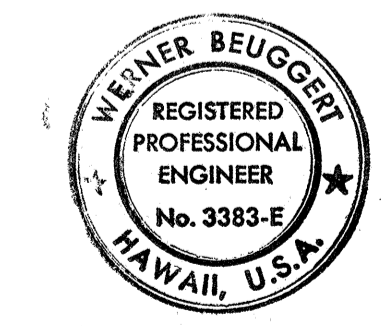


SIGN E-8
MAUKA FR. RD. STA. 232+14±
PIER #25



SIGN E-9
MAUKA FR. RD. STA. 232+14±
PIER #25

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



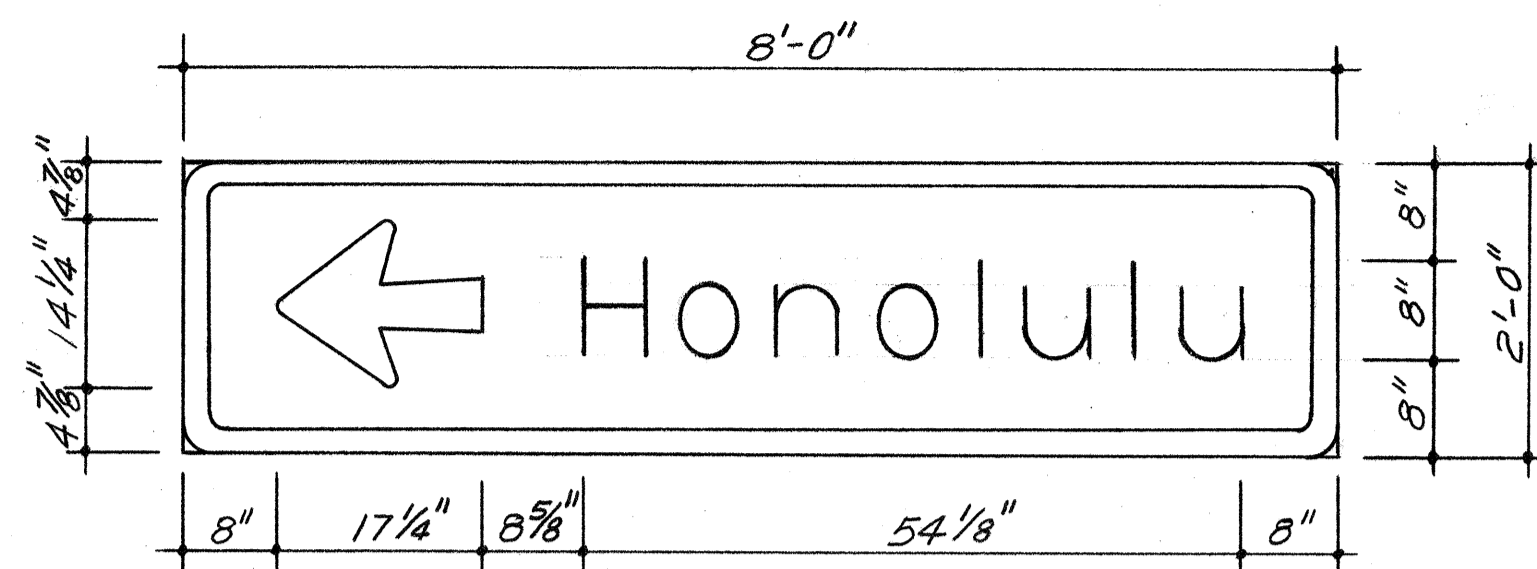
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Werner Beugger

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

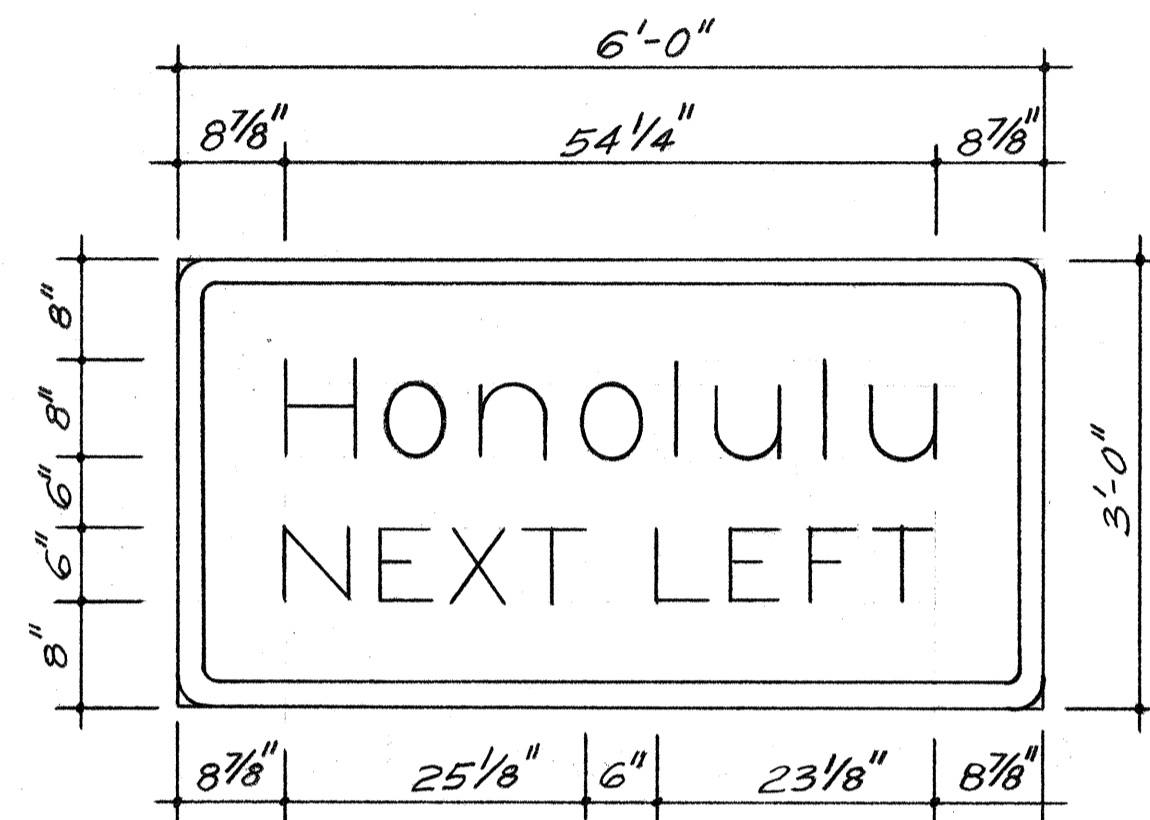
SIGN FRAME LAYOUT
(E-SIGNS)
INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1 (147):17

SCALE: 1" = 5' DATE: 4/2/79
SHEET No. P-14 OF 40 SHEETS

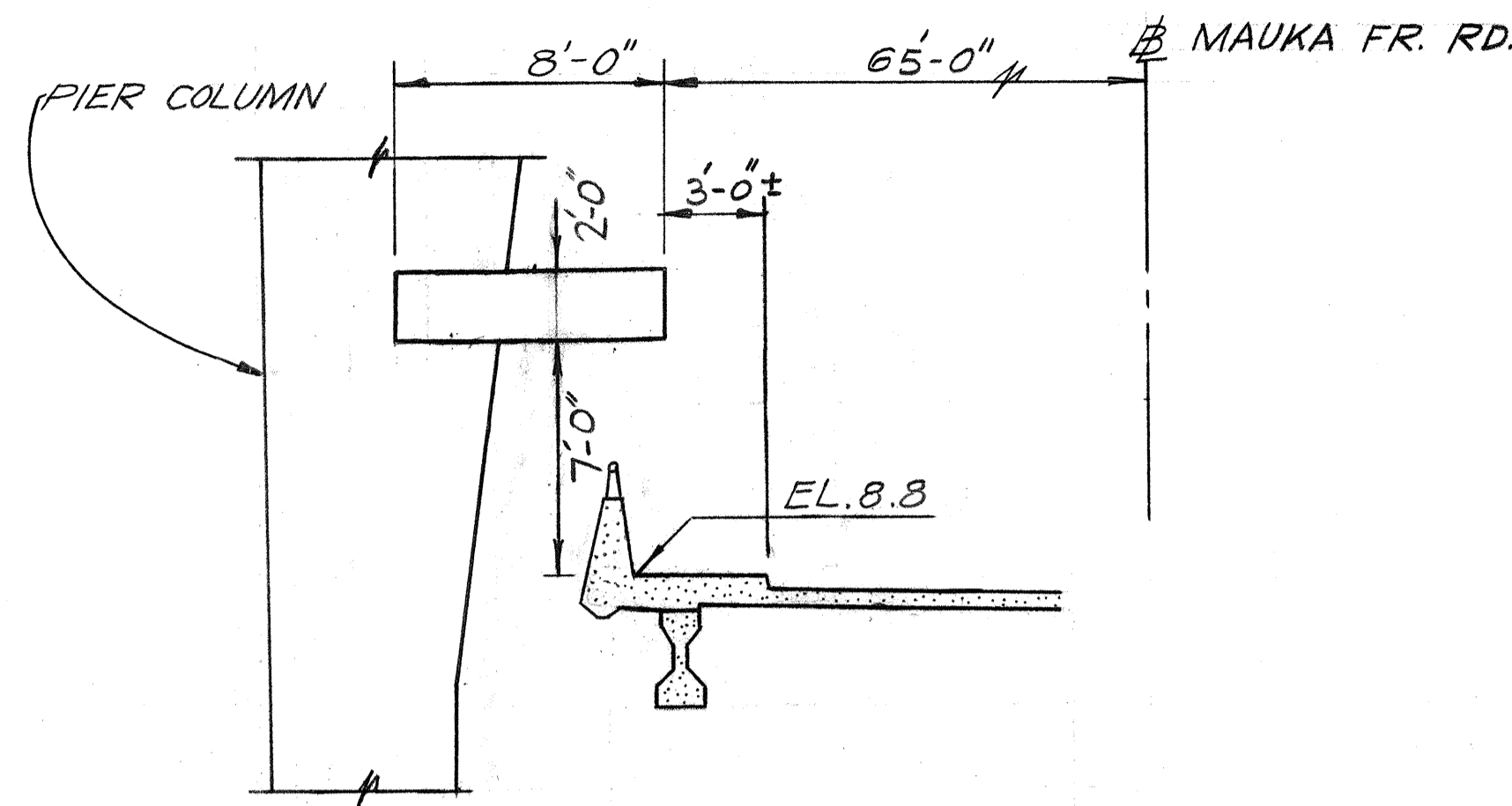
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147):17	1980	87	338



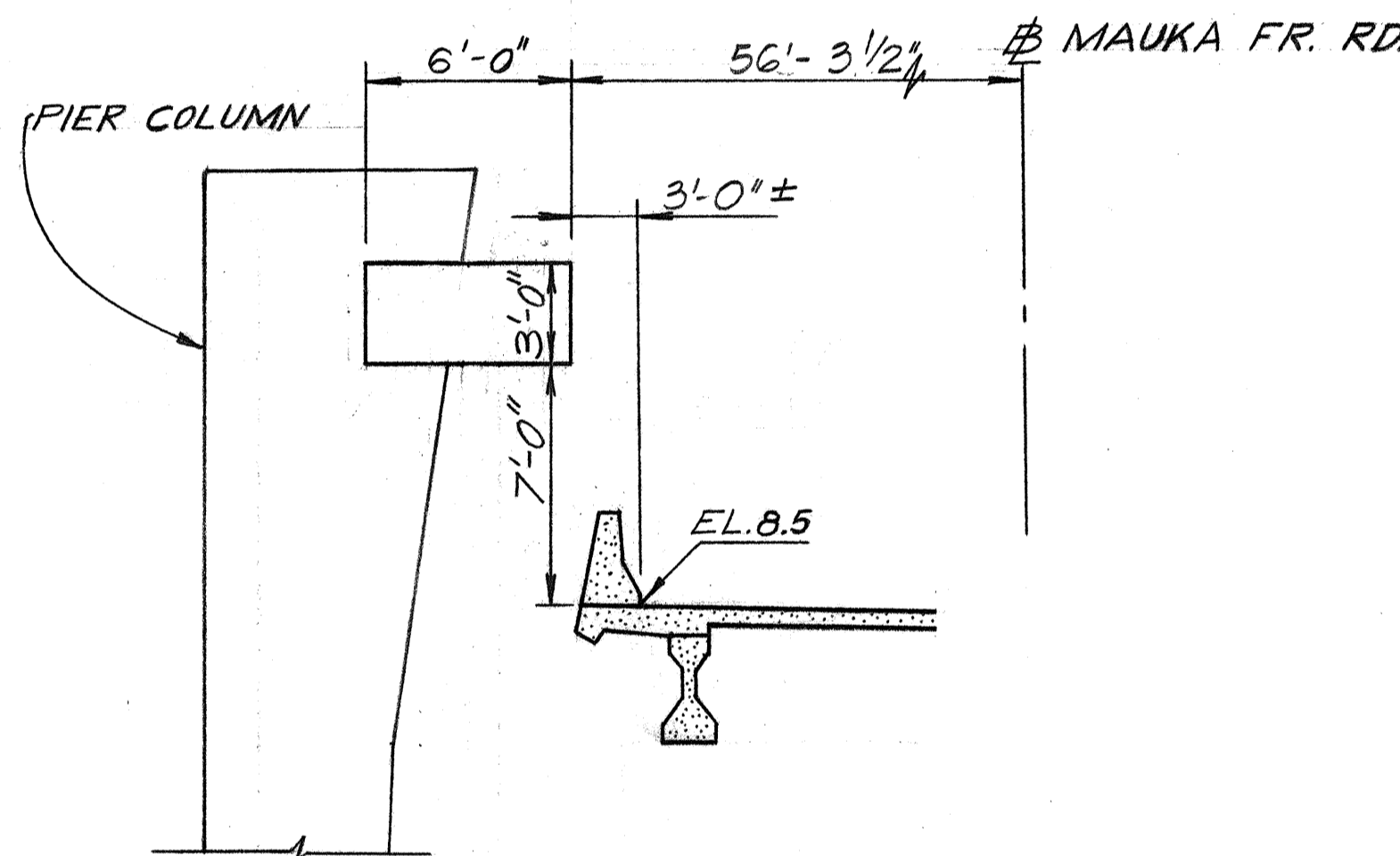
SIGN E-12
SCALE: 3/4" = 1'-0"



SIGN E-13
SCALE: 3/4" = 1'-0"



SIGN E-12
MAUKA FR. RD. STA. 222+62±
PIER #14
SCALE: 1" = 5'

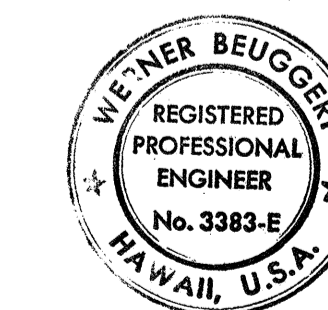


SIGN E-13
MAUKA FR. RD. STA. 227+67
PIER #20
SCALE: 1" = 5'

**NOTES FOR PERMANENT DESTINATION SIGNS:
(“E” DESIGNATION)**

1. ALPHABETICAL CHARACTERS SHALL BE UPPERCASE OR LOWERCASE, AS SHOWN, AND SHALL HAVE SERIES E DIMENSIONS AND SPACINGS IN ACCORDANCE WITH THE FHWA PUBLICATION "STANDARD ALPHABETS FOR HIGHWAY SIGNS", BUREAU OF PUBLIC ROADS, 1966
2. BORDERS AND SEPARATION LINES SHALL HAVE A WIDTH OF 2 INCHES. CORNER RADIUS OF BORDERS SHALL BE AS SPECIFIED ON STANDARD DETAIL PLANS.
3. PAYMENT FOR COVERING SIGNS WITH OVERLAY PANEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS CONTRACT ITEMS.

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



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DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

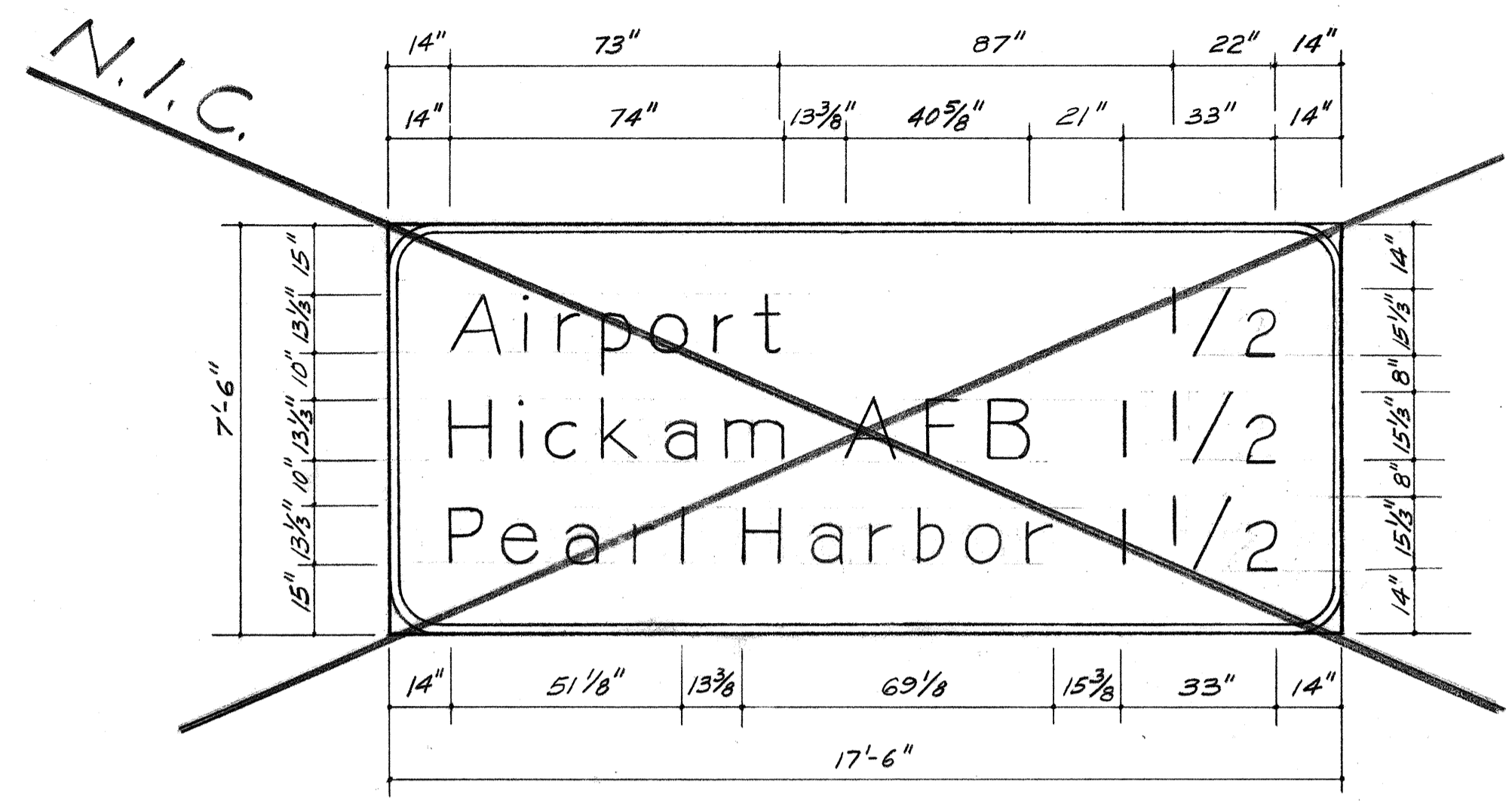
SIGN FRAME & PANEL LAYOUT
(“E”-SIGNS)

INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1 (147) :17

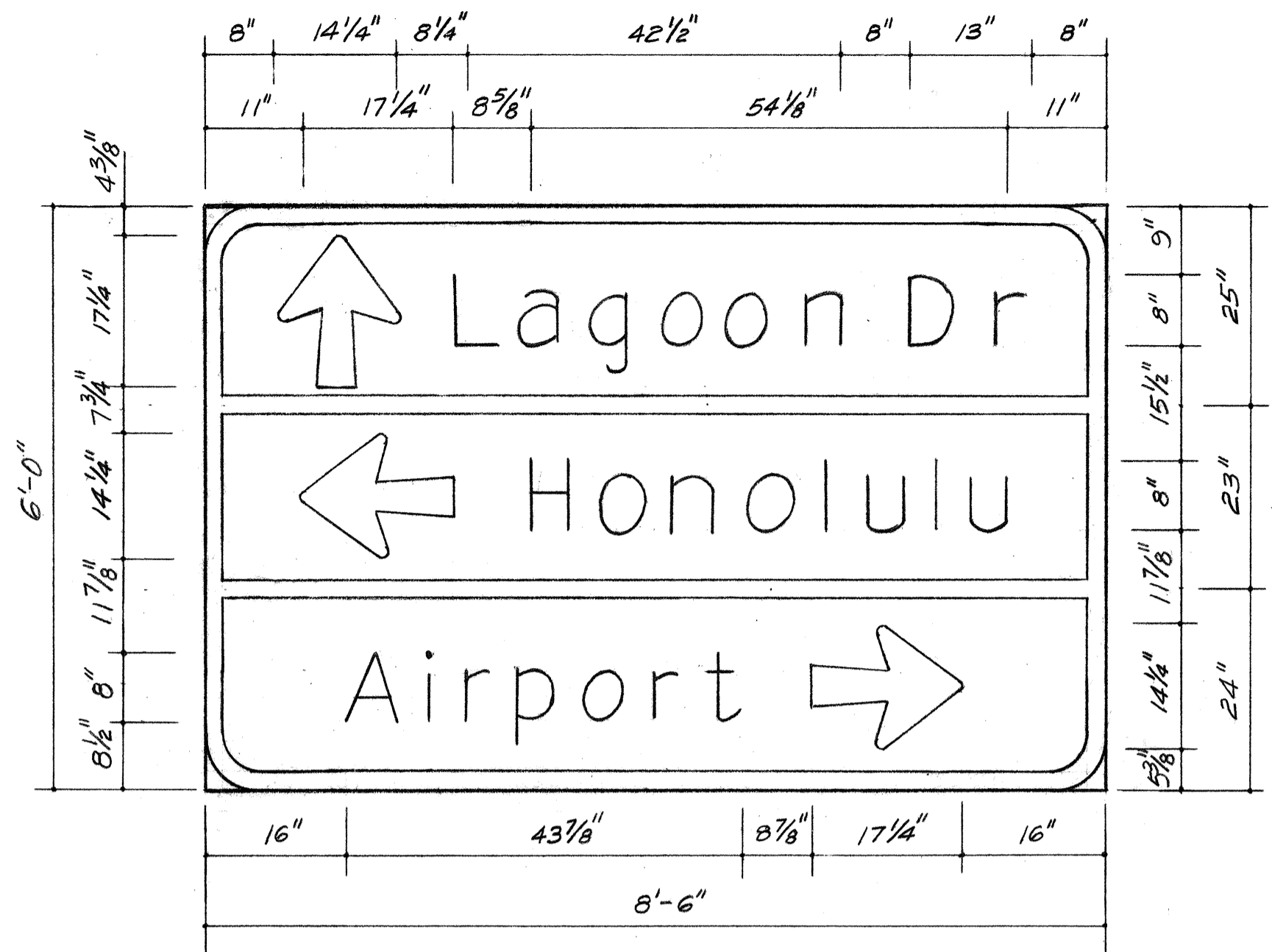
SCALE: AS SHOWN DATE: 4/2/79

SHEET No. P15 OF 40 SHEETS

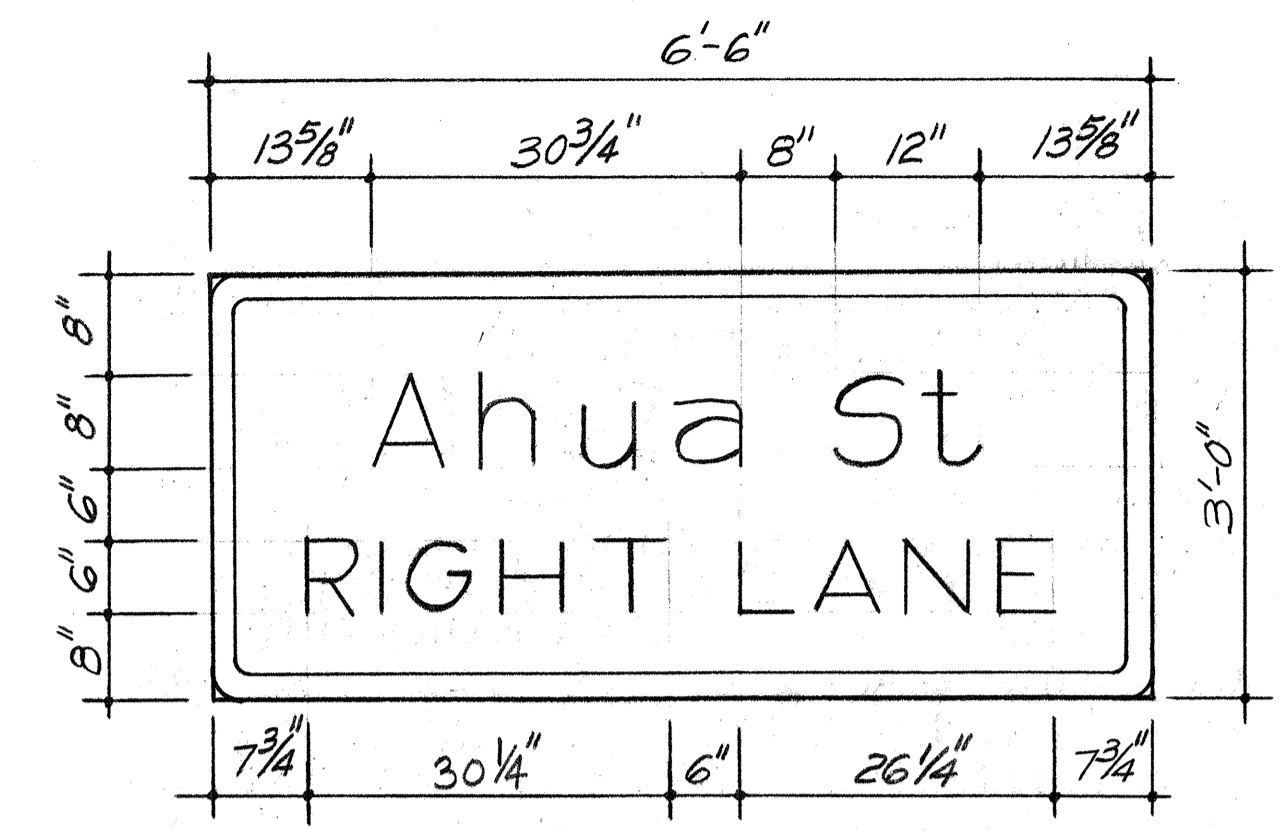
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(147):17	1980	88	338



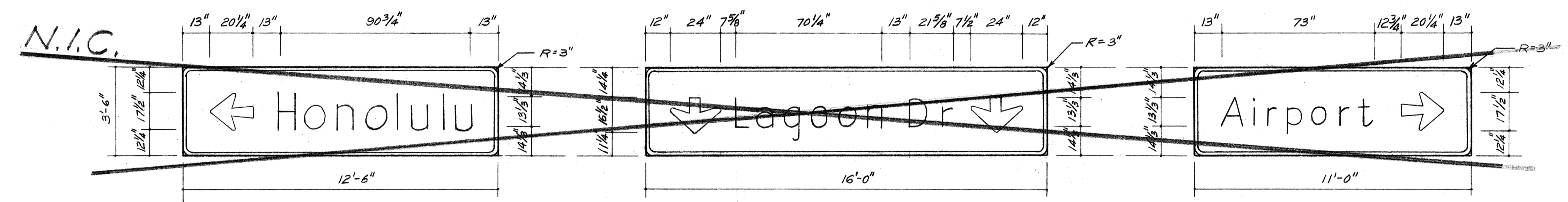
SIGN E-1
SCALE: 3/8"=1'-0"



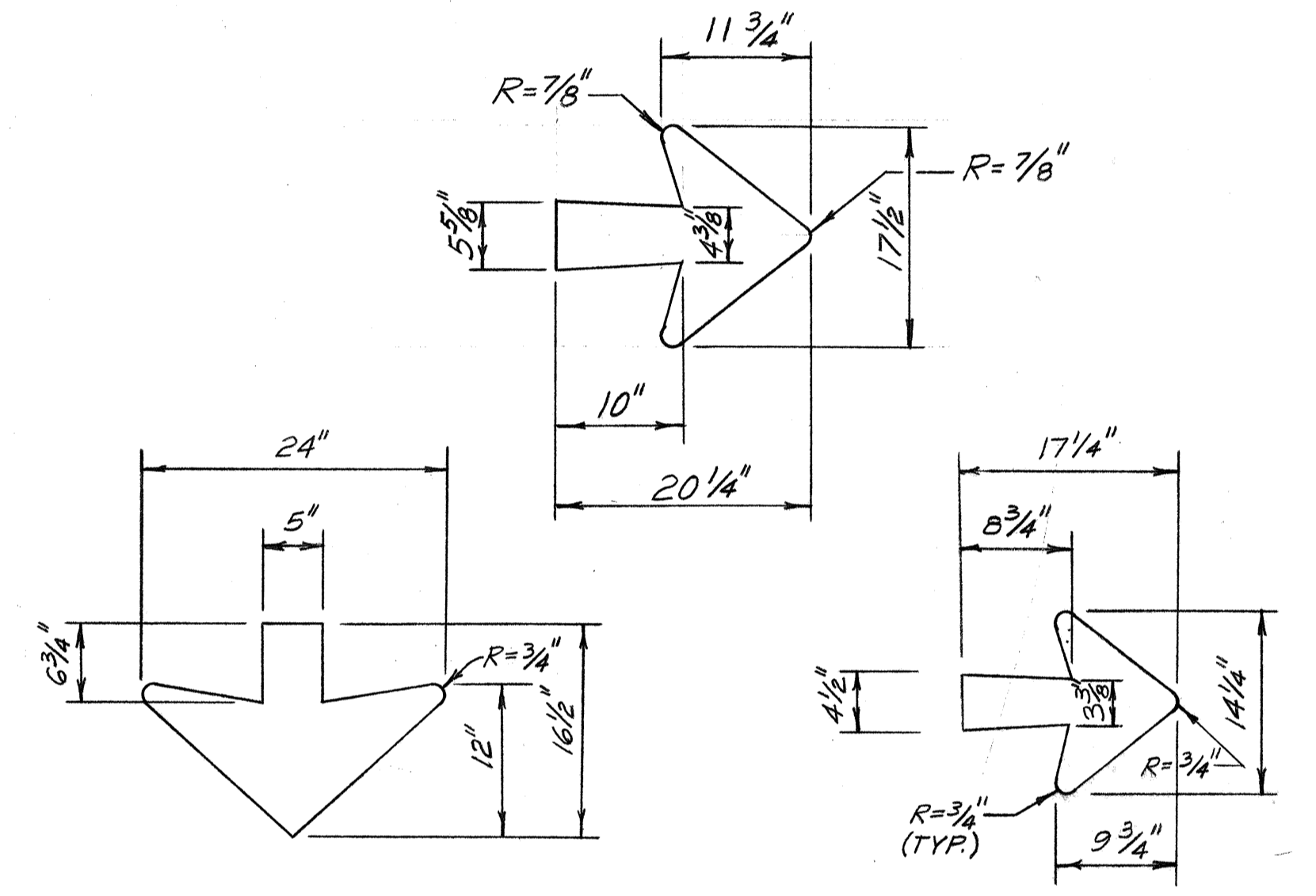
SIGN E-3
SCALE: 3/4"=1'-0"



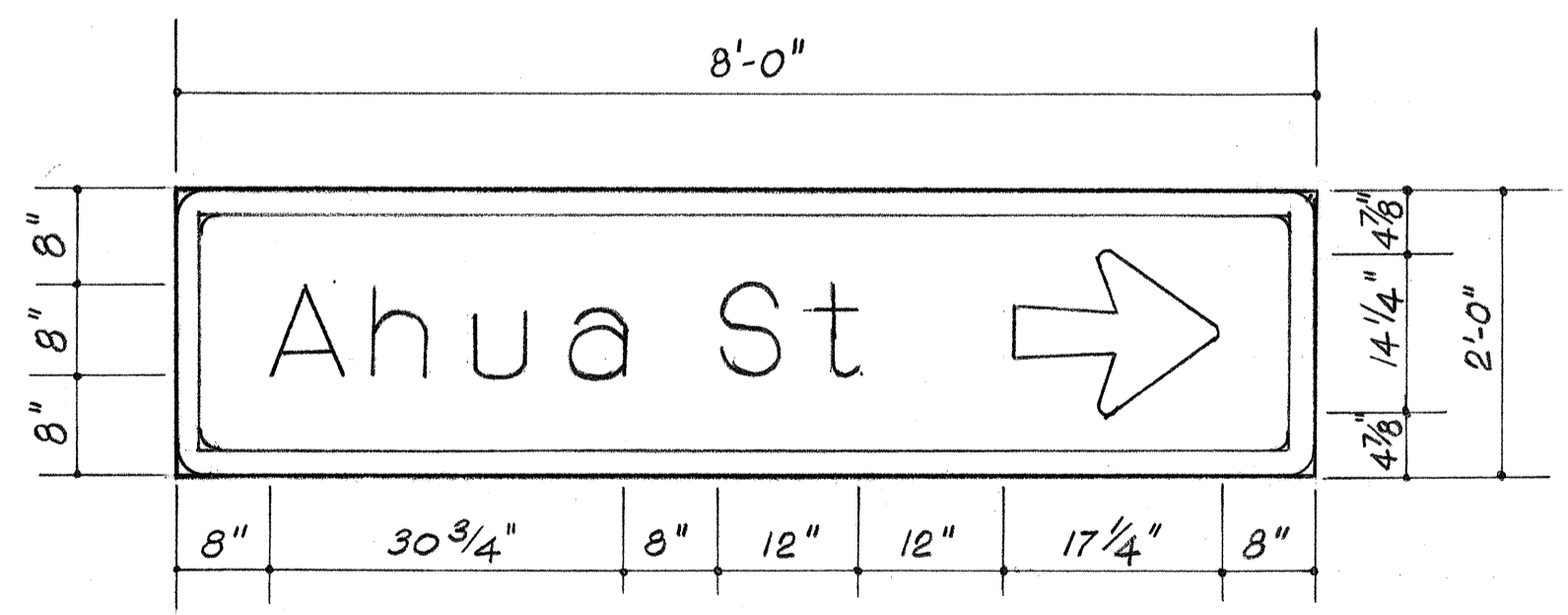
SIGN E-7
SCALE: 3/4"=1'-0"



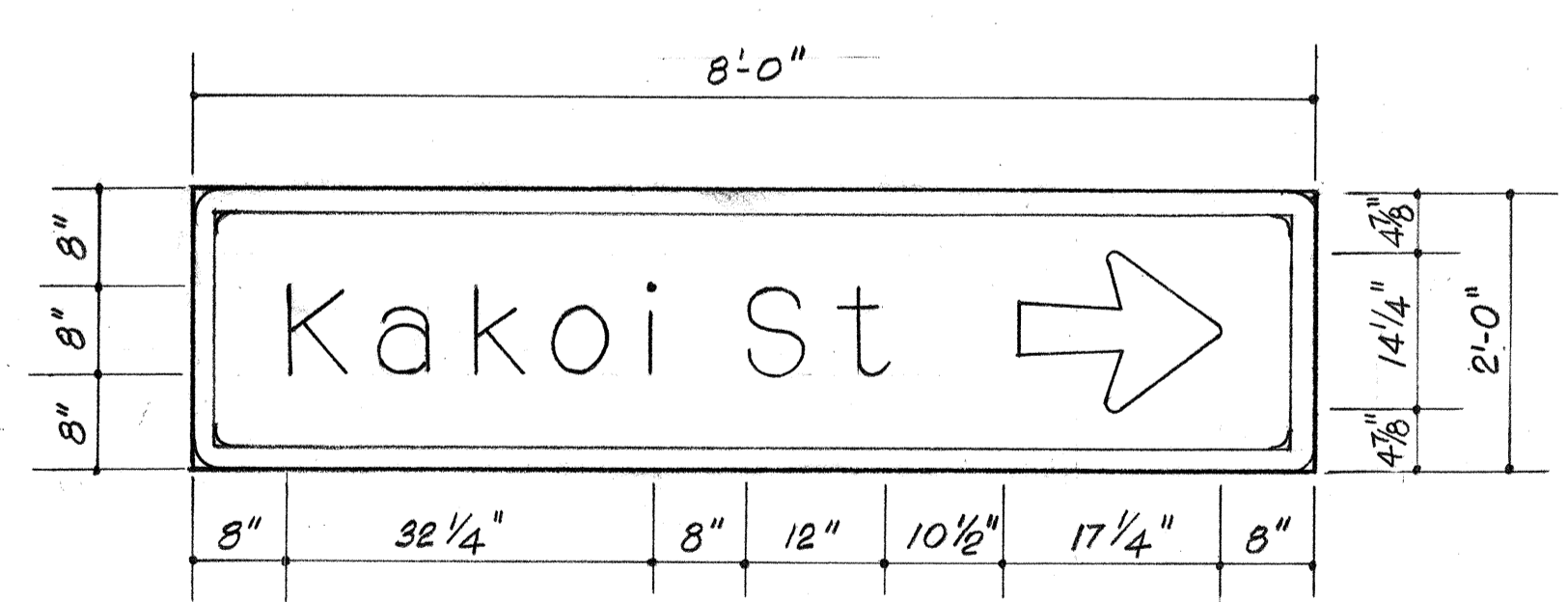
SIGN ASSEMBLY E-2
SCALE: 3/8"=1'-0"



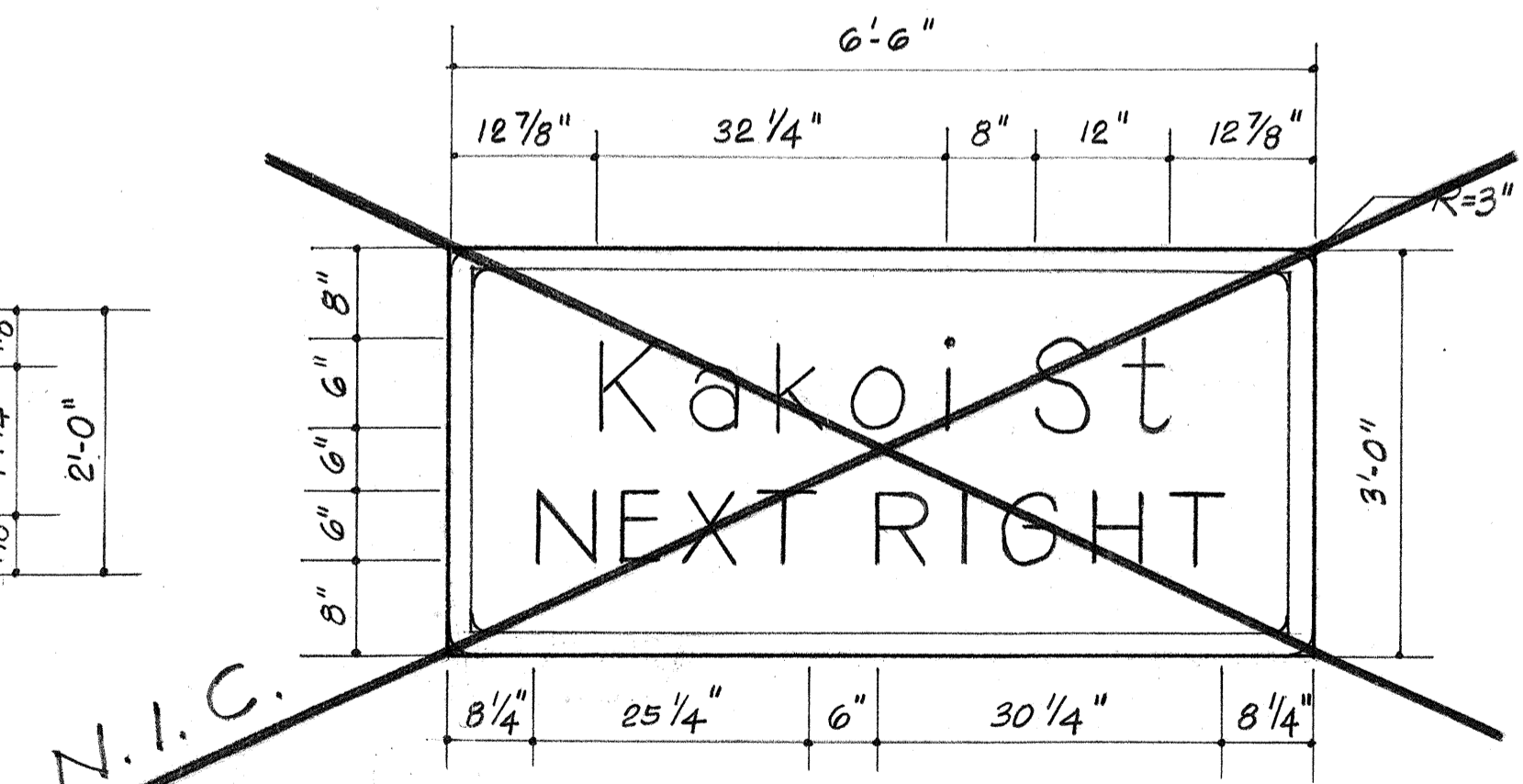
ARROW DETAILS
SCALE 1"=1'-0"



SIGN E-6
SCALE: 3/4"=1'-0"

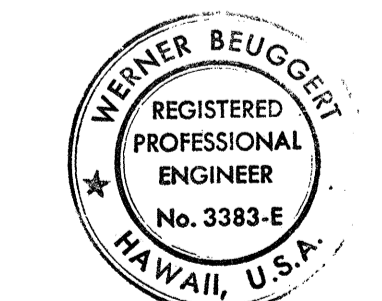


SIGN E-8
SCALE: 3/4"=1'-0"



SIGN E-9
SCALE: 3/4"=1'-0"

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



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN PANEL LAYOUT
(E'-SIGN)

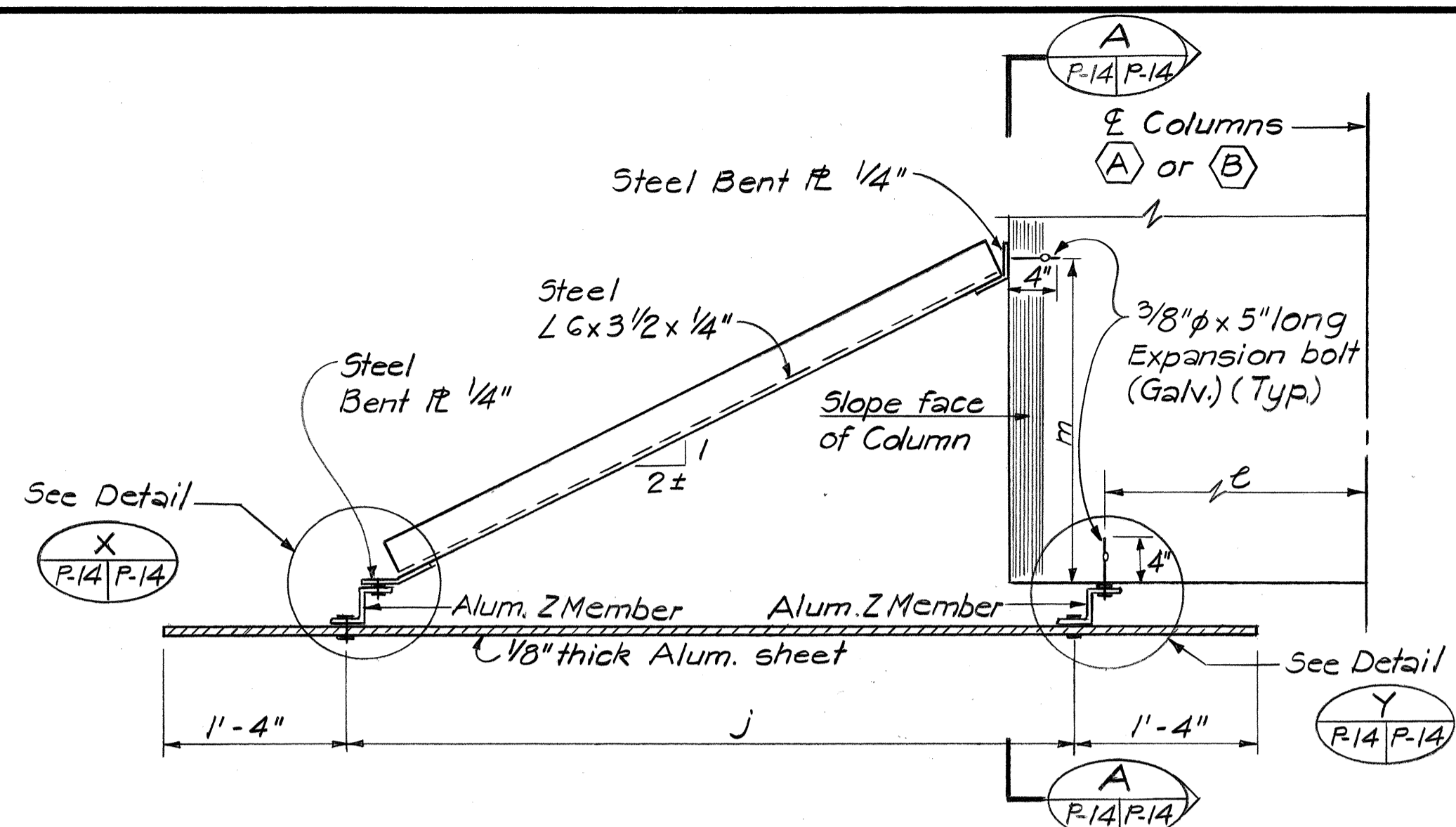
INTERSTATE ROUTE H-1
PROJECT NO. I-H-1 (147):17

SCALE: AS SHOWN DATE: 4/2/79
SHEET No. P-16 OF 40 SHEETS

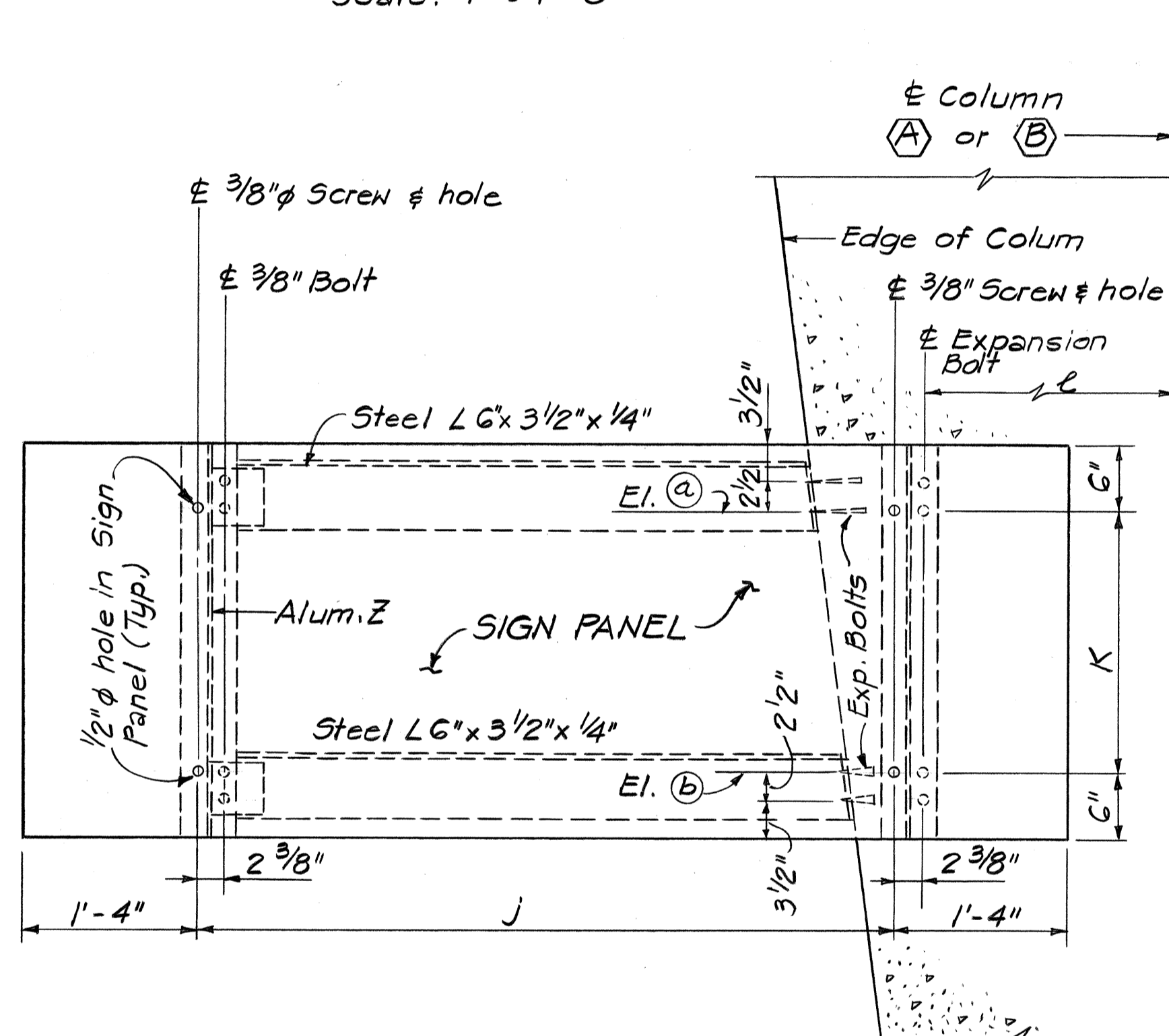
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147):17	1980	89	338

NOTES:

1. Design Specifications: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires & Traffic Signals, dated 1975.
2. Design Wind Velocity = 75mph
3. All Structural Steel shall be ASTM A36 and shall be hot dipped galvanized.
4. All aluminum members & aluminum sheet shall be 6061-T6 Aluminum Alloy.
5. Aluminum members and surfaces in contact with Structural Steel shall be isolated with neoprene material.
6. Expansion bolts shall have an ultimate pullout strength = 4100 lbs. and ultimate shear = 5000 lbs.

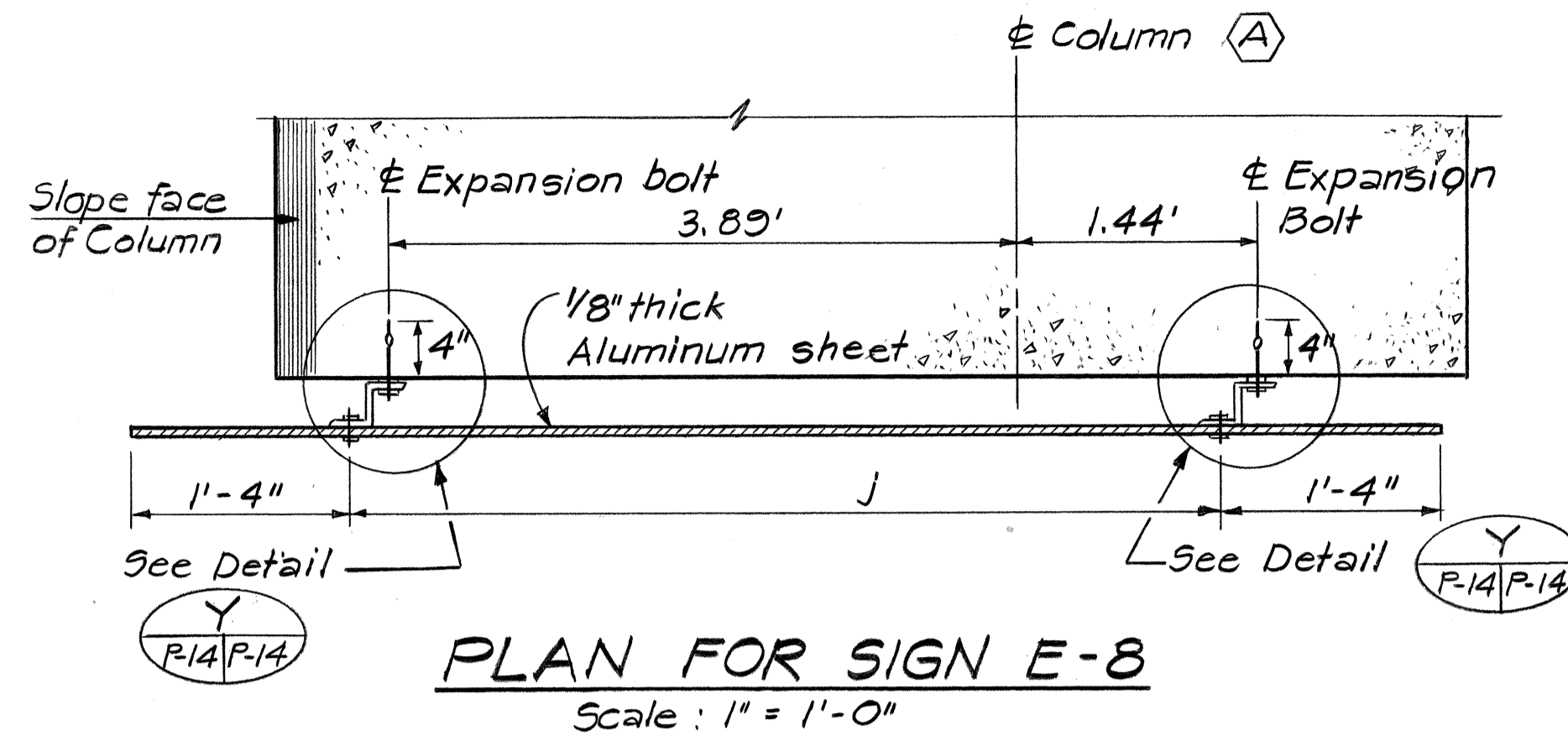


PLAN FOR SIGN E-6, E-7, E-12, E-13
Scale: 1" = 1'-0"

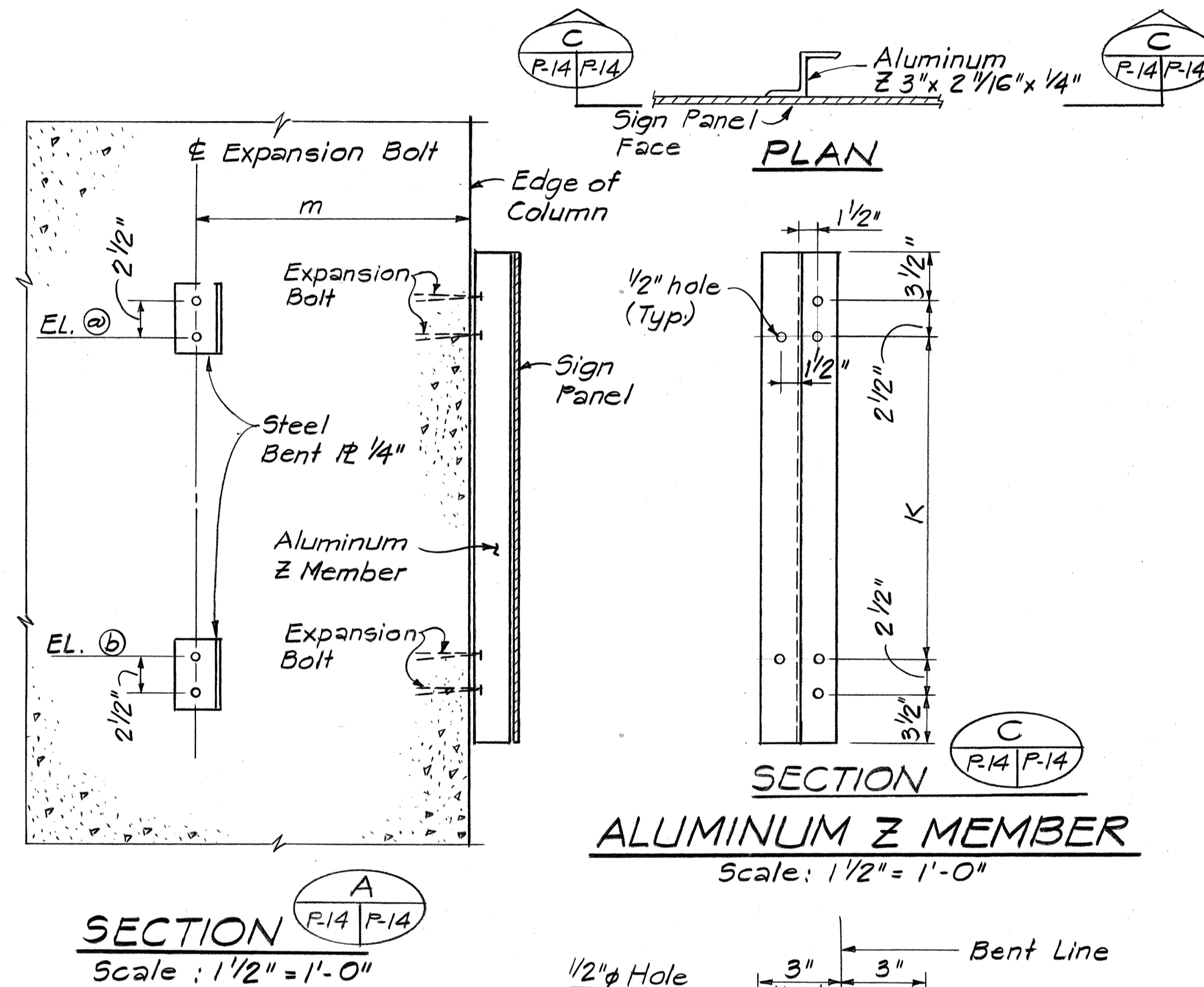


ELEVATION
Scale: 1" = 1'-0"

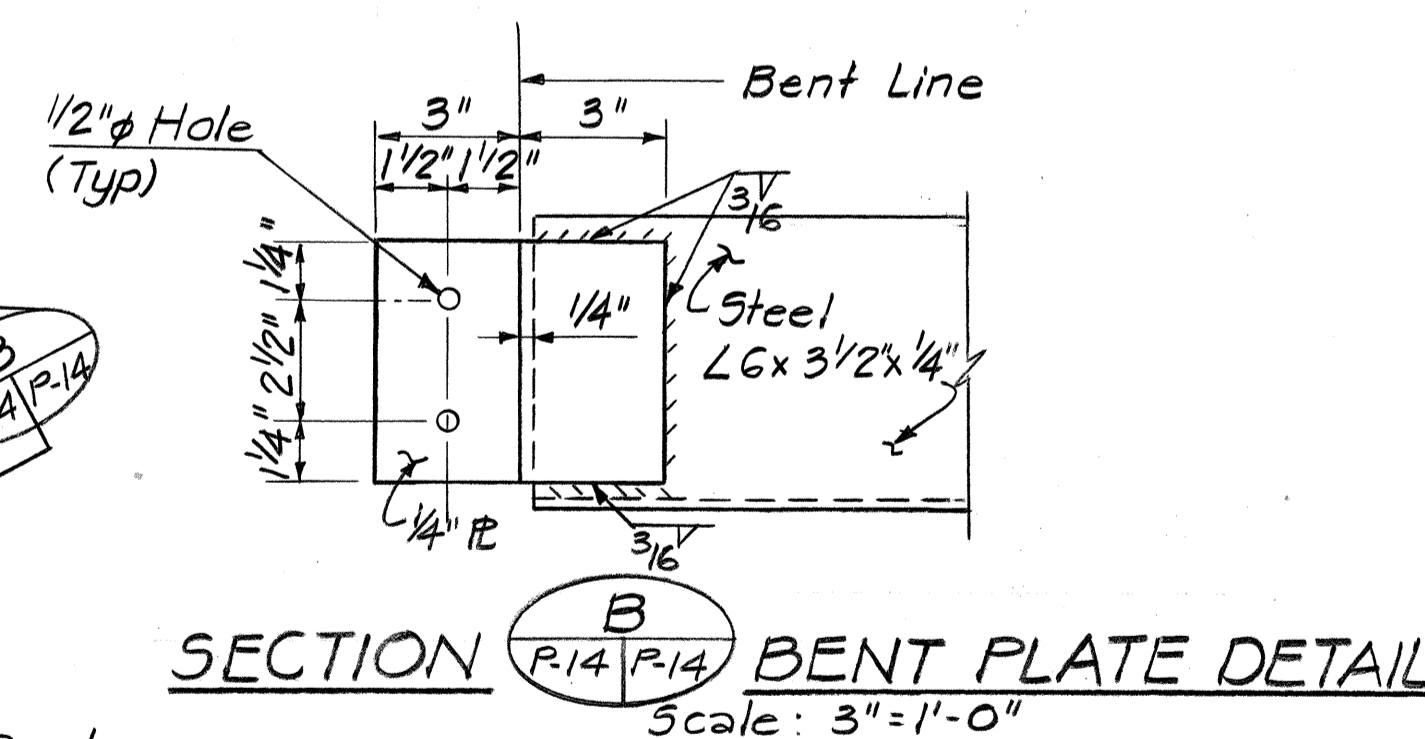
	PANEL SIZE	EL. (a)	EL. (b)	j	k	l	m
SIGN E-6	2'x8'	15.8'	14.8'	5.33'	1.0'	2.46'	1.70'
SIGN E-7	3'x6.5'	16.7'	14.7'	3.83'	2.0'	3.96'	1.73'
SIGN E-8	2'x8'	18.1'	17.1'	5.33'	1.0'	See Plan	0
SIGN E-12	2'x8'	17.3'	16.3'	5.33'	1.0'	2.14'	1.57'
SIGN E-13	3'x6'	18.0'	16.0'	3.33'	2.0	3.97'	1.56'



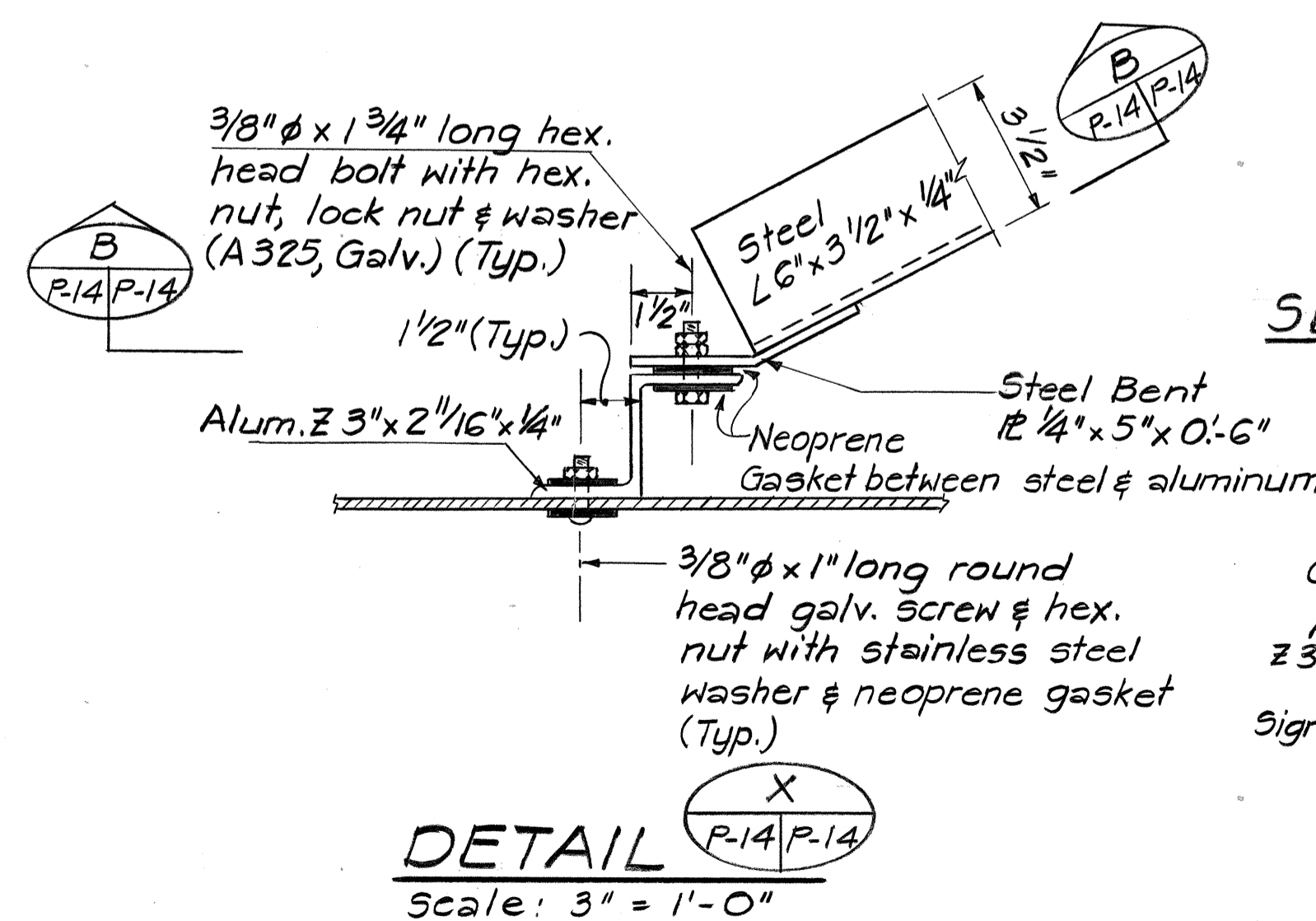
PLAN FOR SIGN E-8
Scale: 1" = 1'-0"



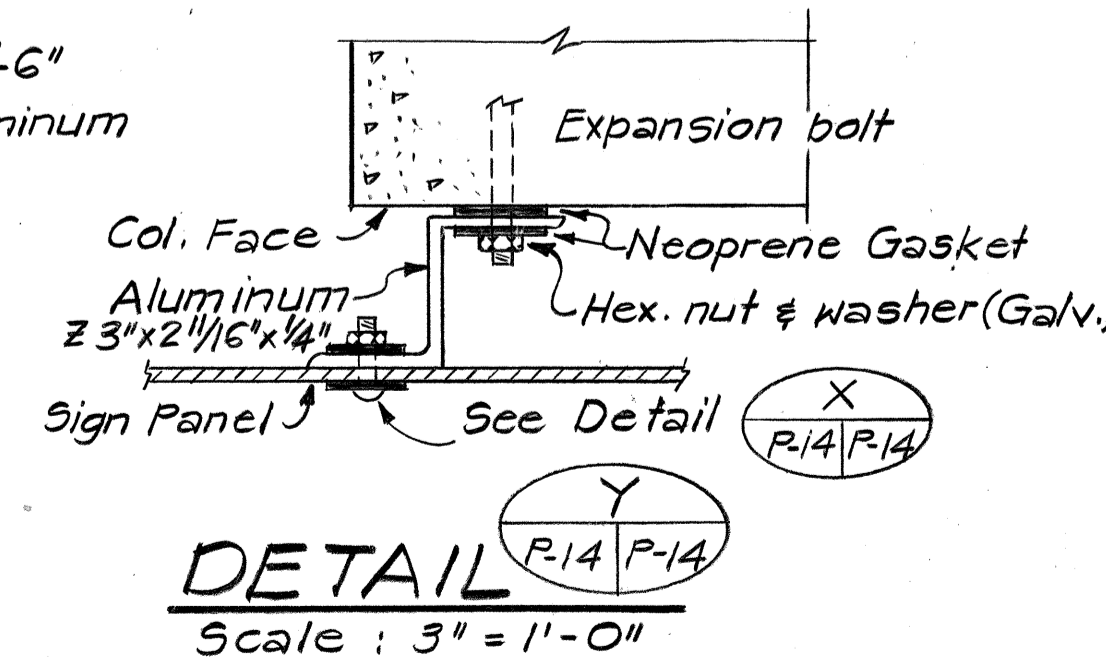
SECTION ALUMINUM Z MEMBER
Scale: 1/2" = 1'-0"



SECTION BENT PLATE DETAIL
Scale: 3" = 1'-0"



DETAIL
Scale: 3" = 1'-0"



DETAIL
Scale: 3" = 1'-0"

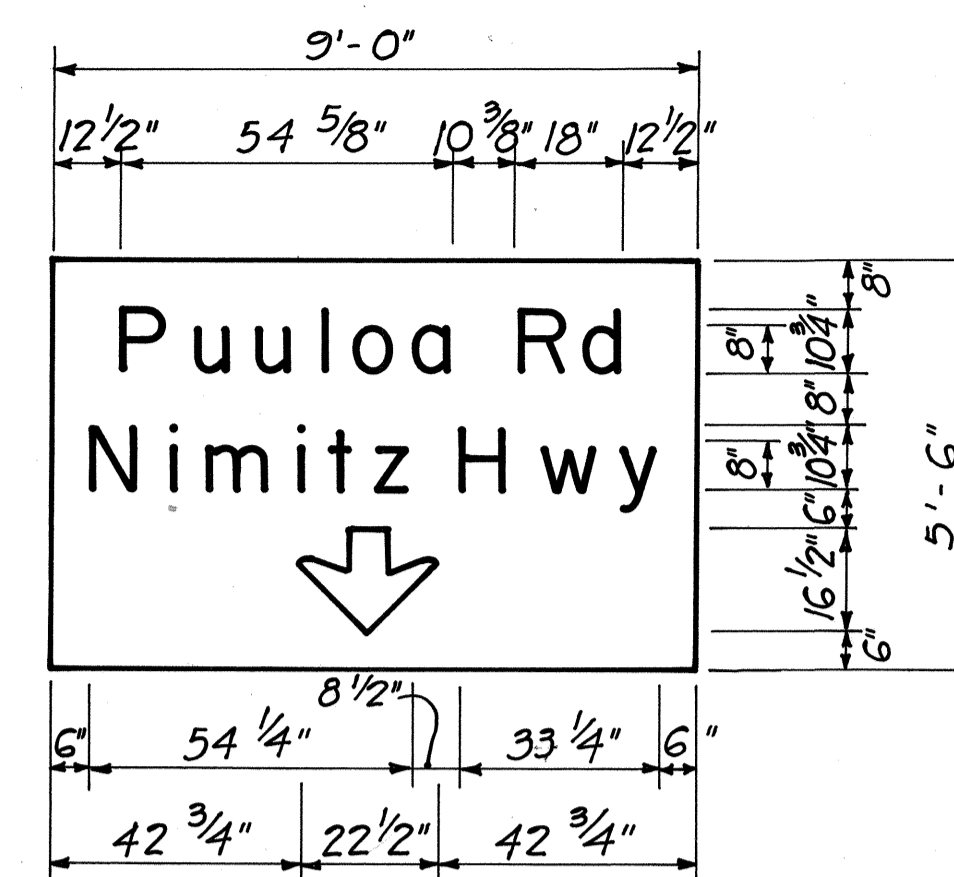
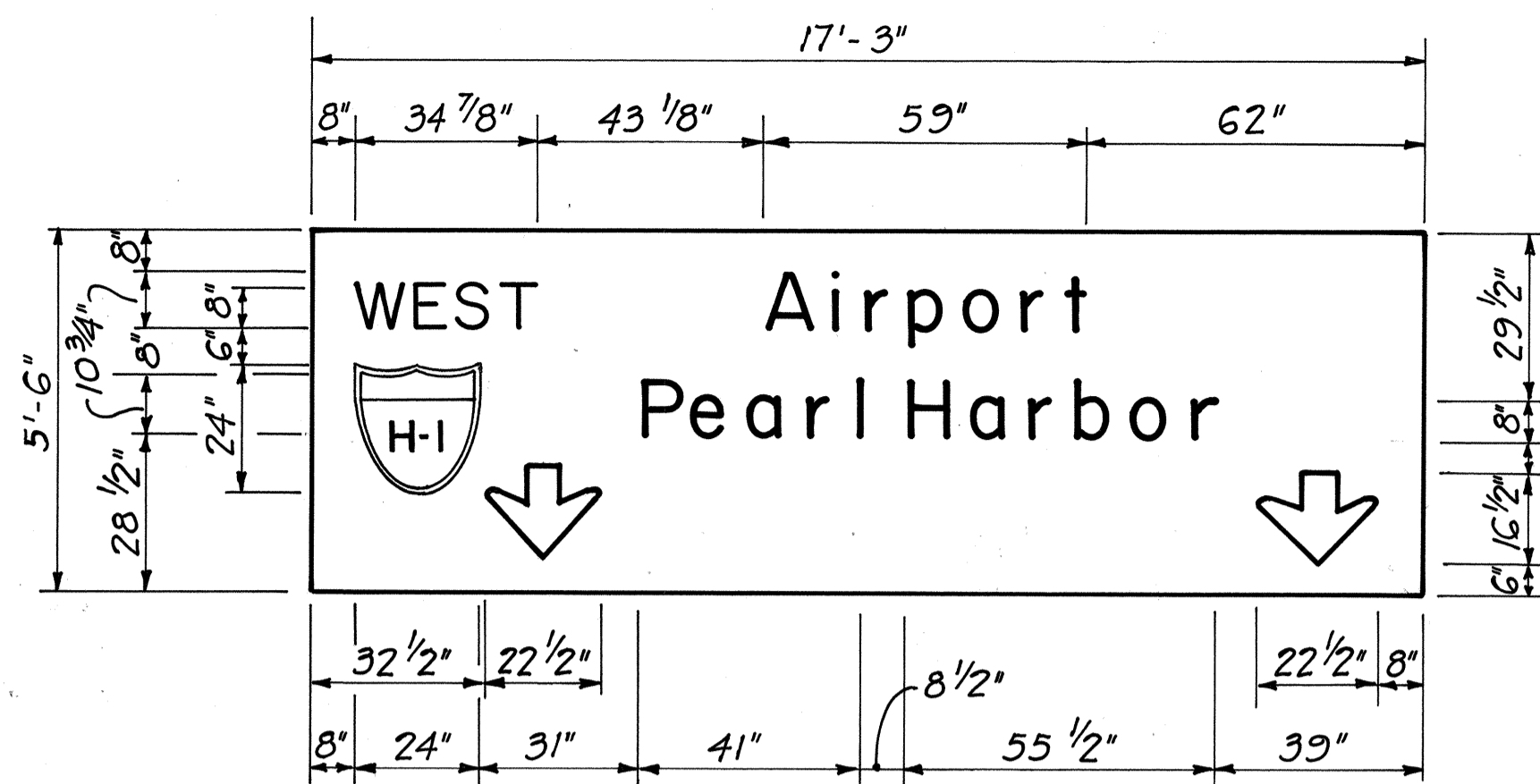
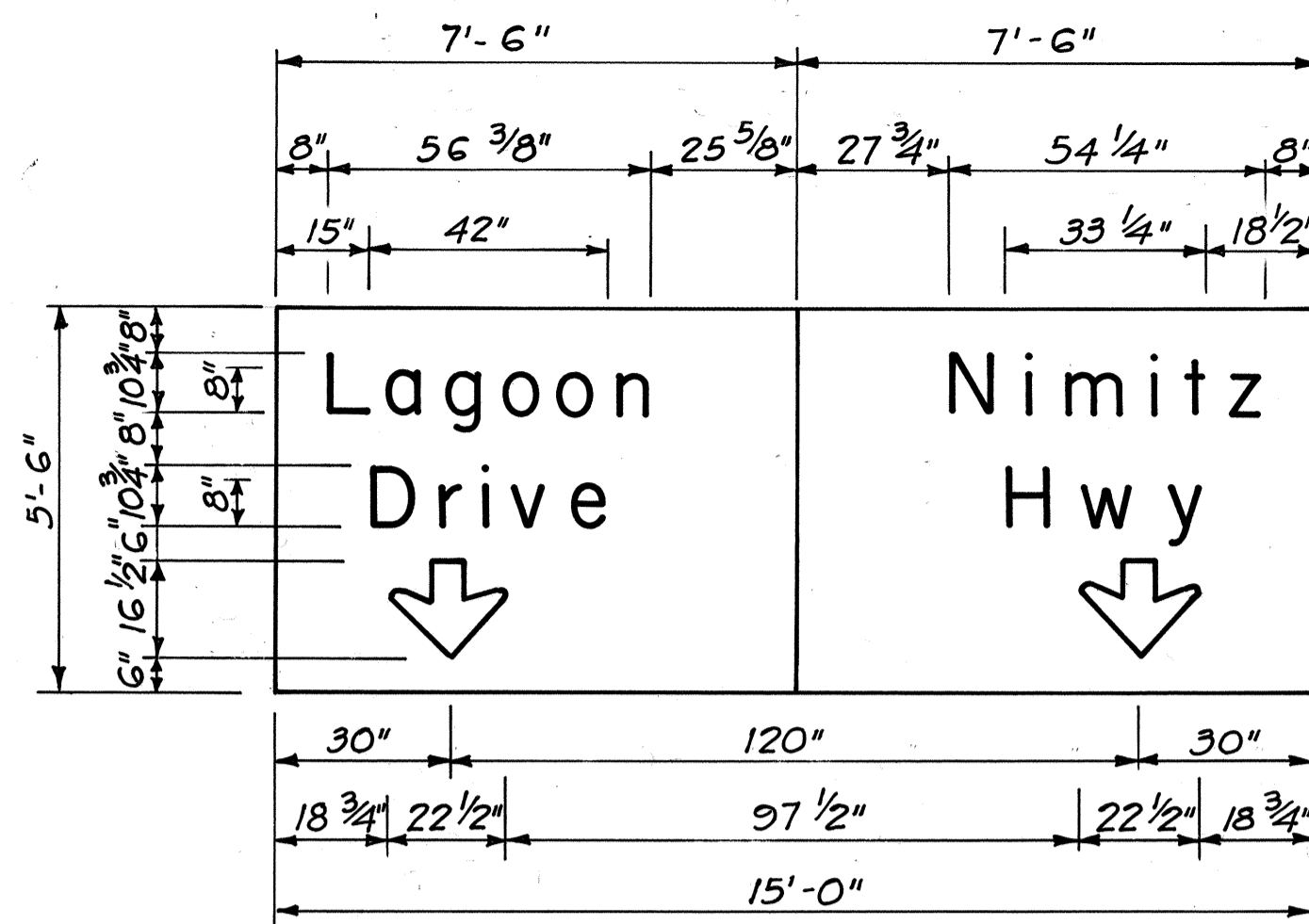
DATE: _____
 SURVEY PLOTTED BY: _____
 ORIGINAL PLAN: _____
 DRAWN BY: _____
 TRACED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 NO. _____



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 Rui Pang Chen

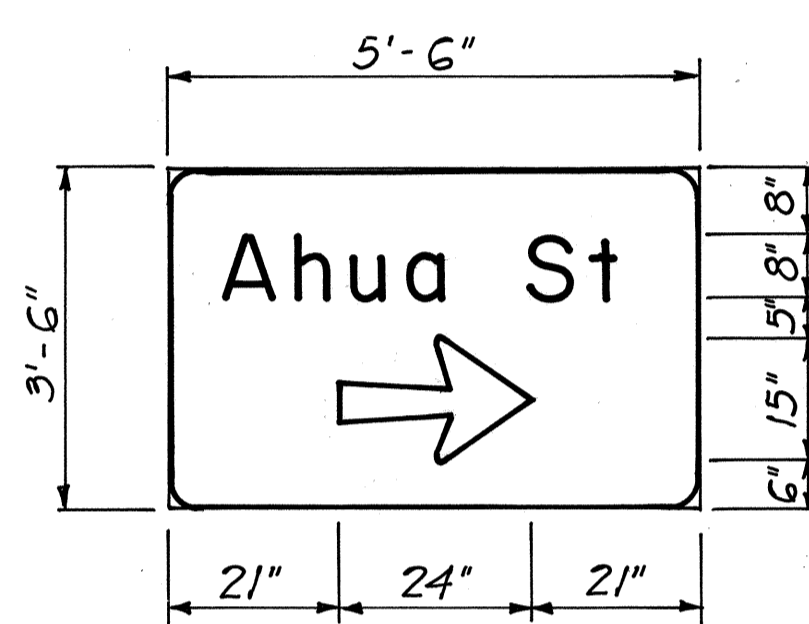
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
**SUPPORT FOR
 PIER MOUNTED SIGNS**
 (SIGNS E-6, E-7, E-8, E-12 & E-13)
 INTERSTATE ROUTE H-1
 PROJECT NO. I-HI-1 (147):17
 SCALE: AS SHOWN DATE: 4/2/79
 SHEET NO. P.17 OF 40 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147)17	1980	90	338



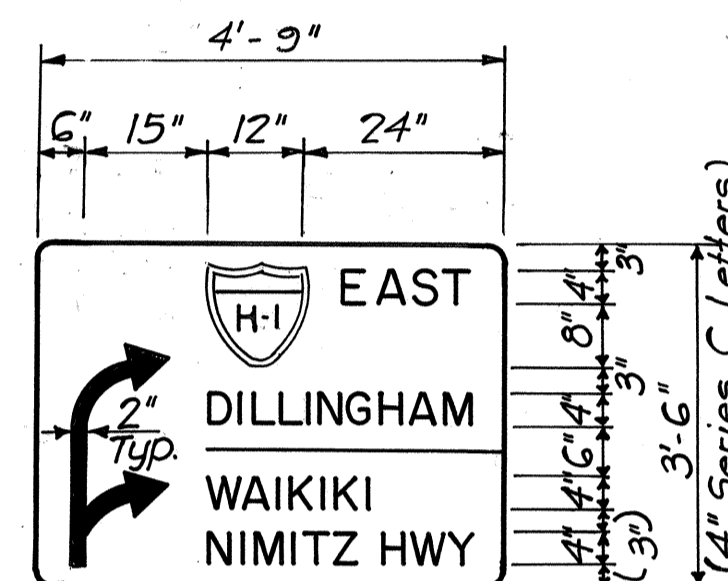
OVERHEAD SIGN T-40

Scale: 3/8" = 1'-0"



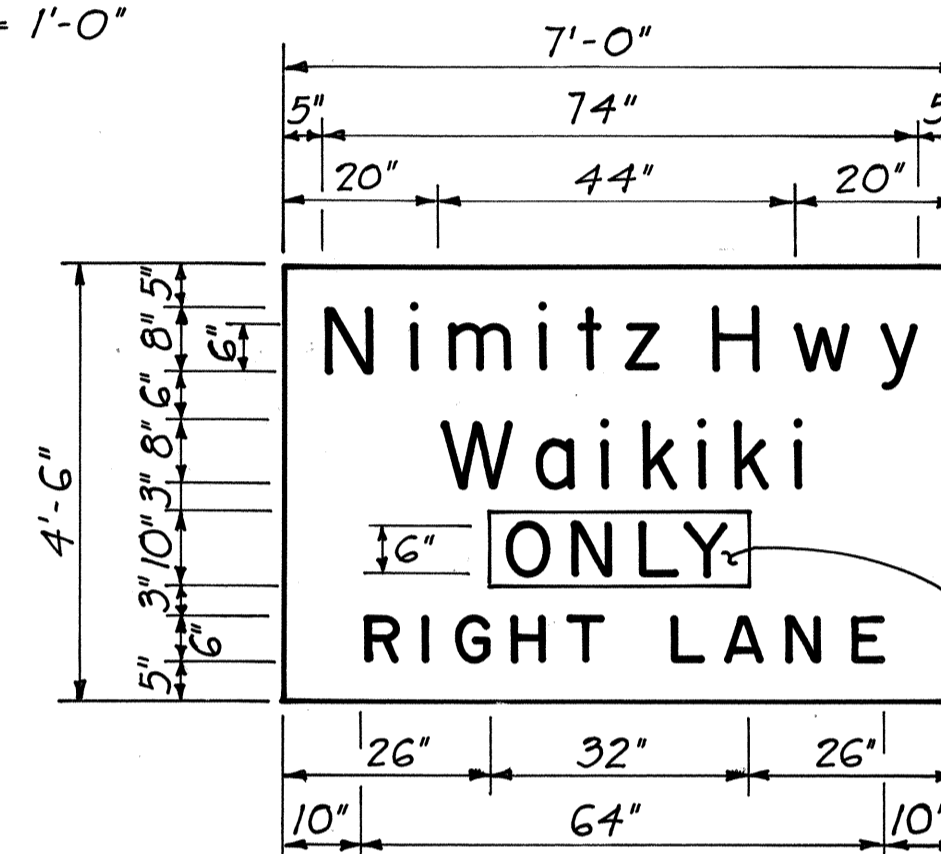
SIGN T-41

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



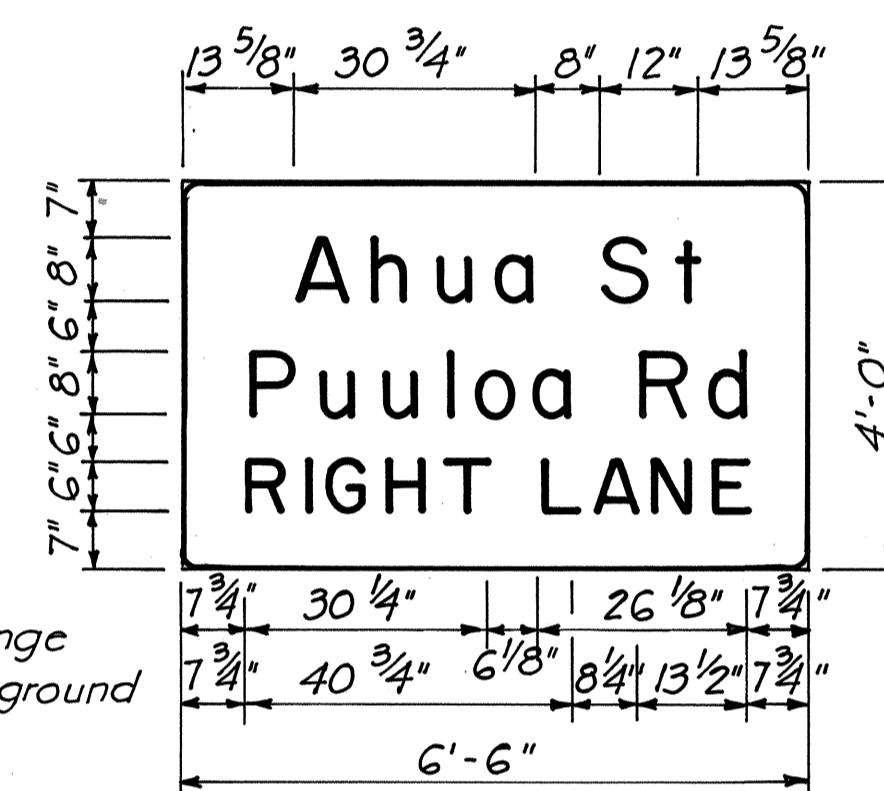
SIGN T-42

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



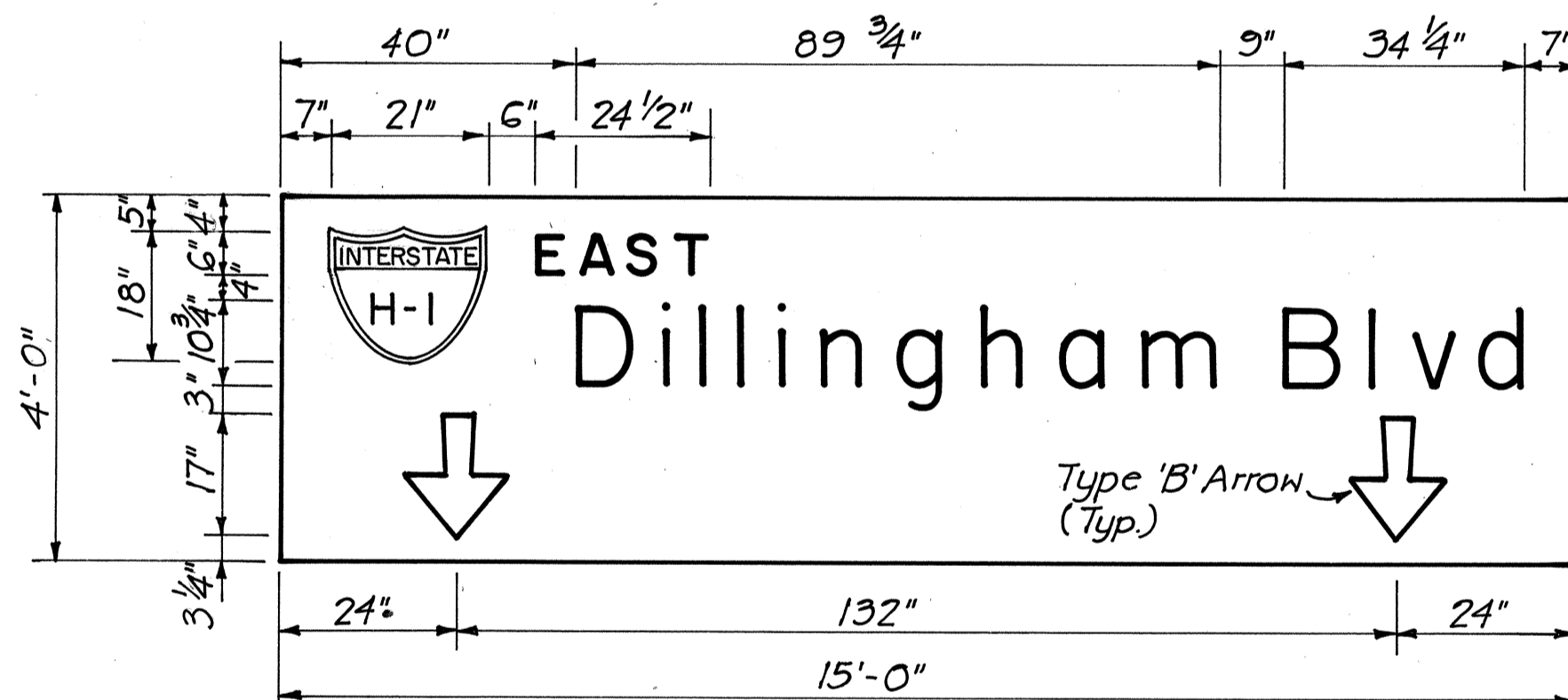
SIGN T-43

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



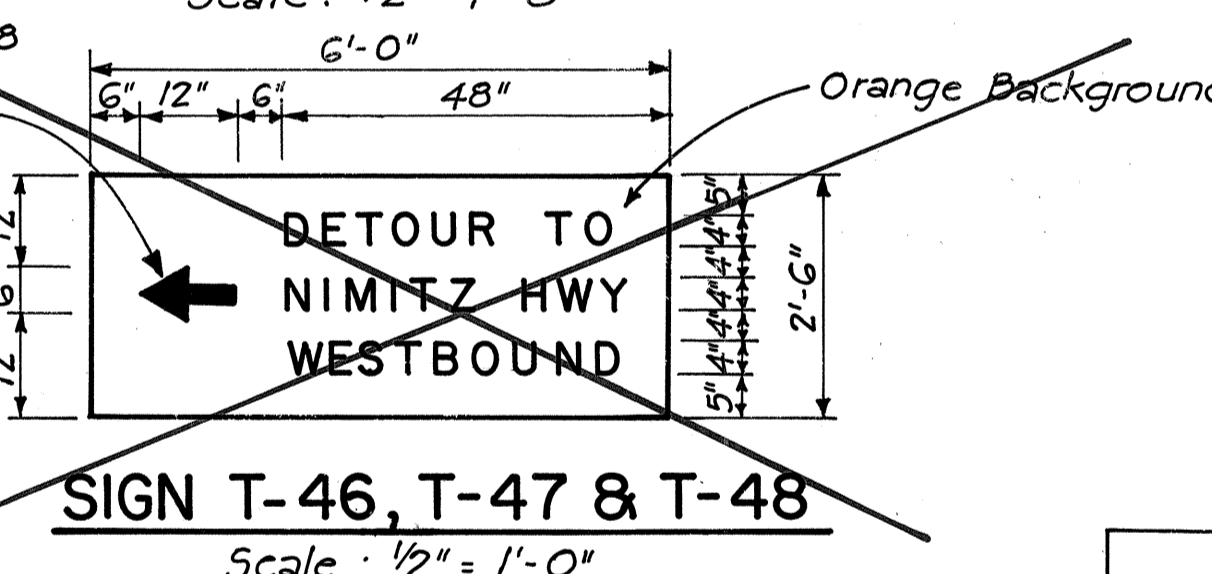
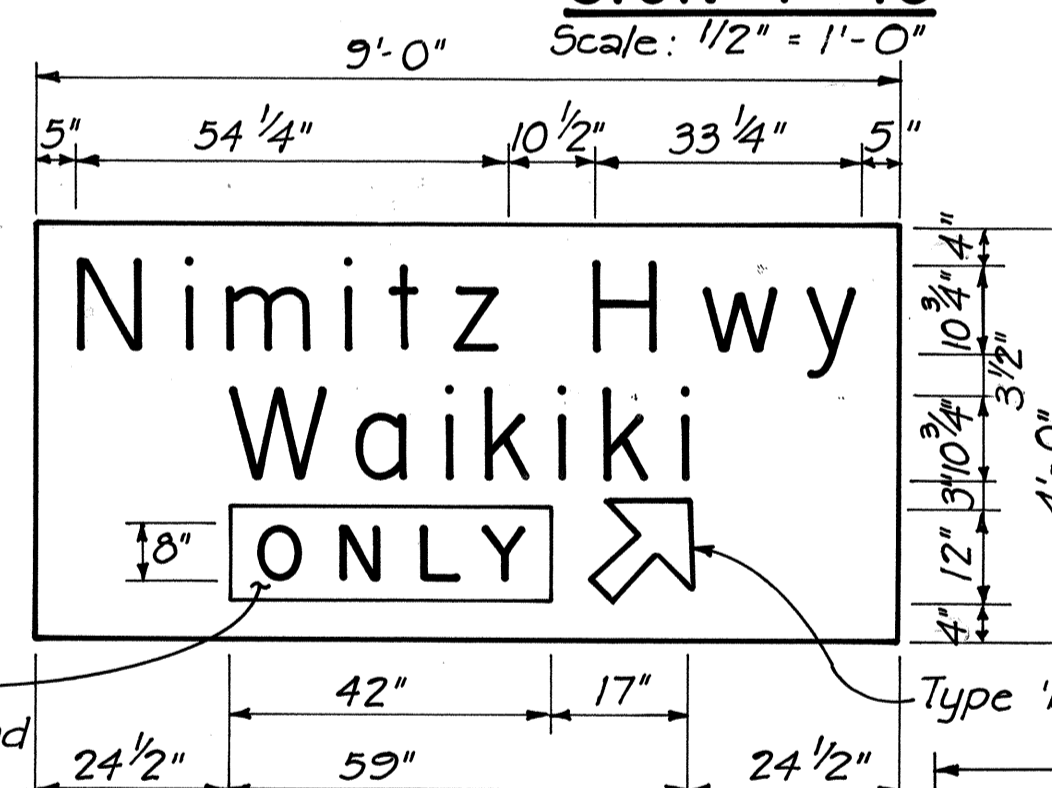
SIGN T-44

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



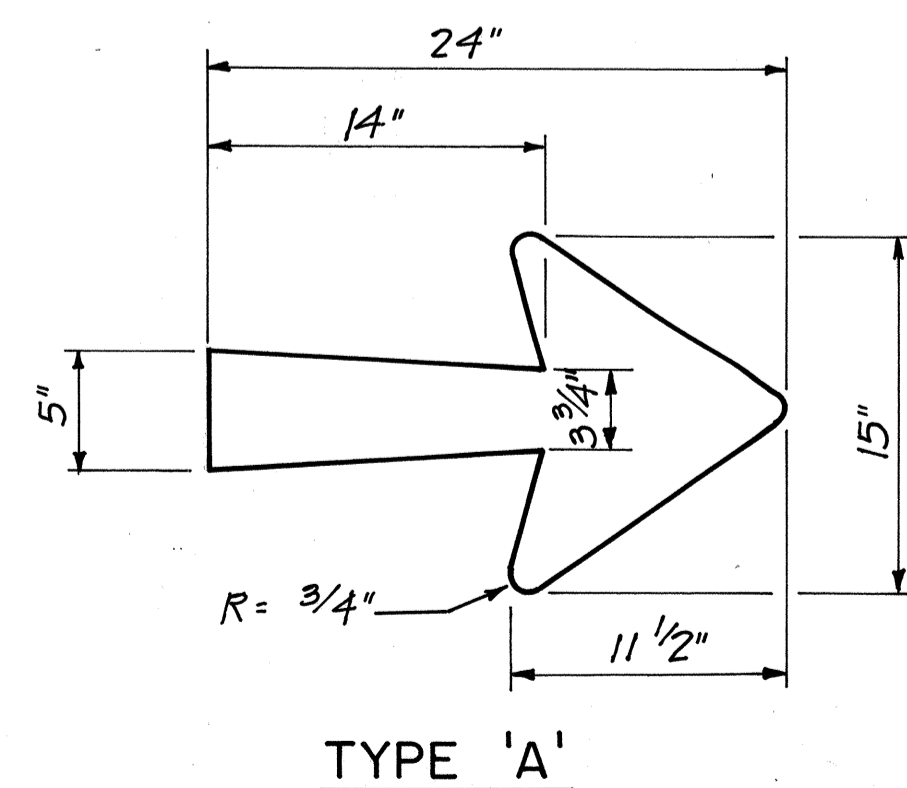
OVERHEAD SIGN T-45

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



SIGN T-46, T-47 & T-48

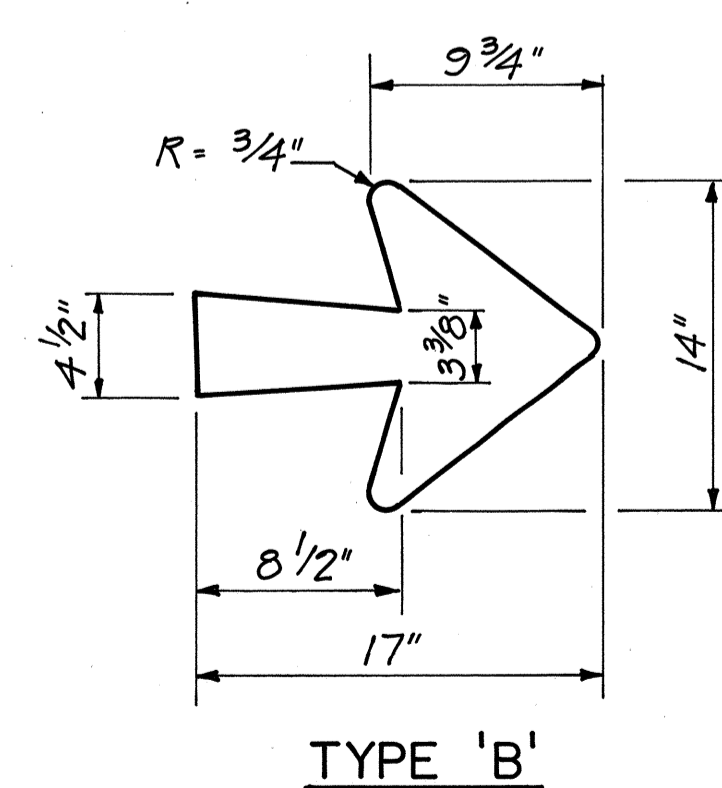
Scale: 1/2" = 1'-0"



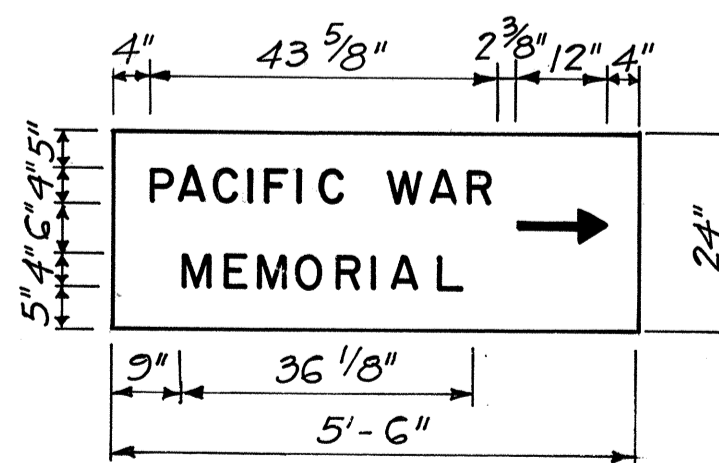
TYPE 'A'

ARROW DETAILS

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

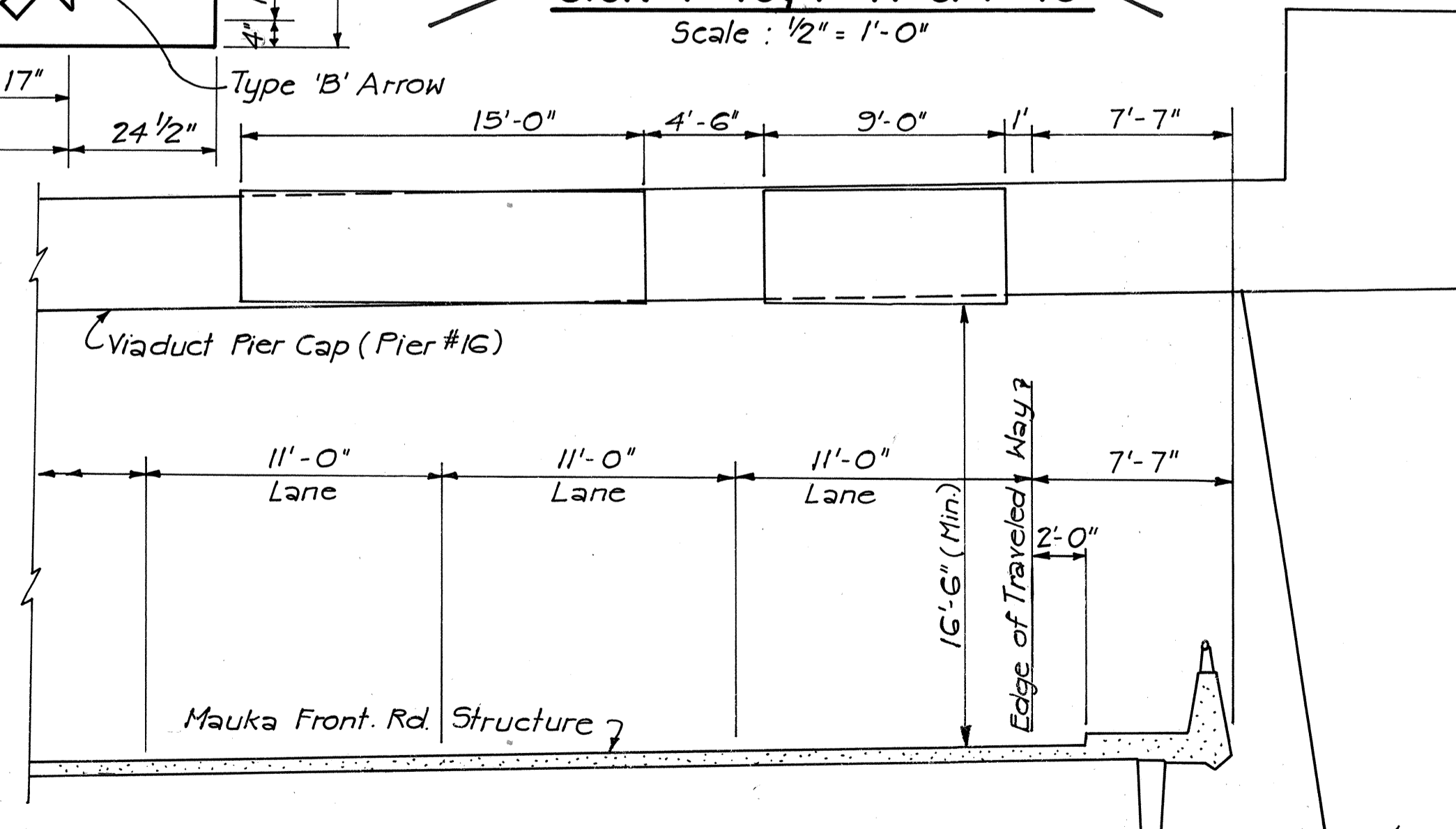


TYPE 'B'



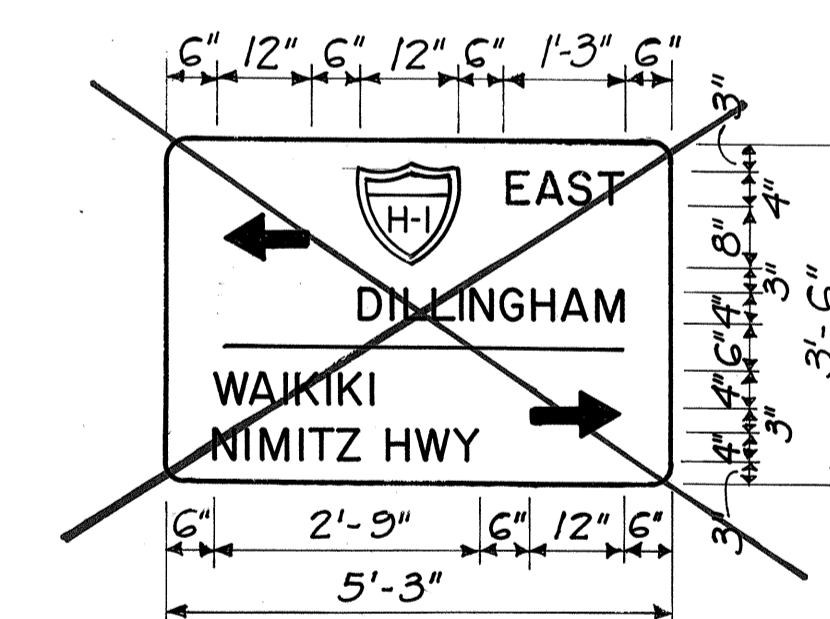
SIGN T-49

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



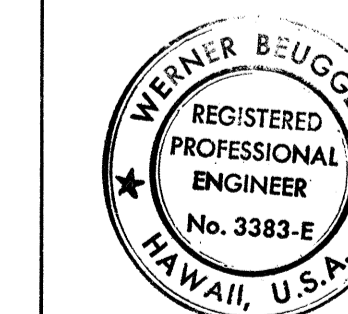
OVERHEAD SIGN T-45

± H-1 (WB) Sta. 224+46.00 ± (PIER #16)
Scale: 1" = 5'-0"



SIGN T-42A

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



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

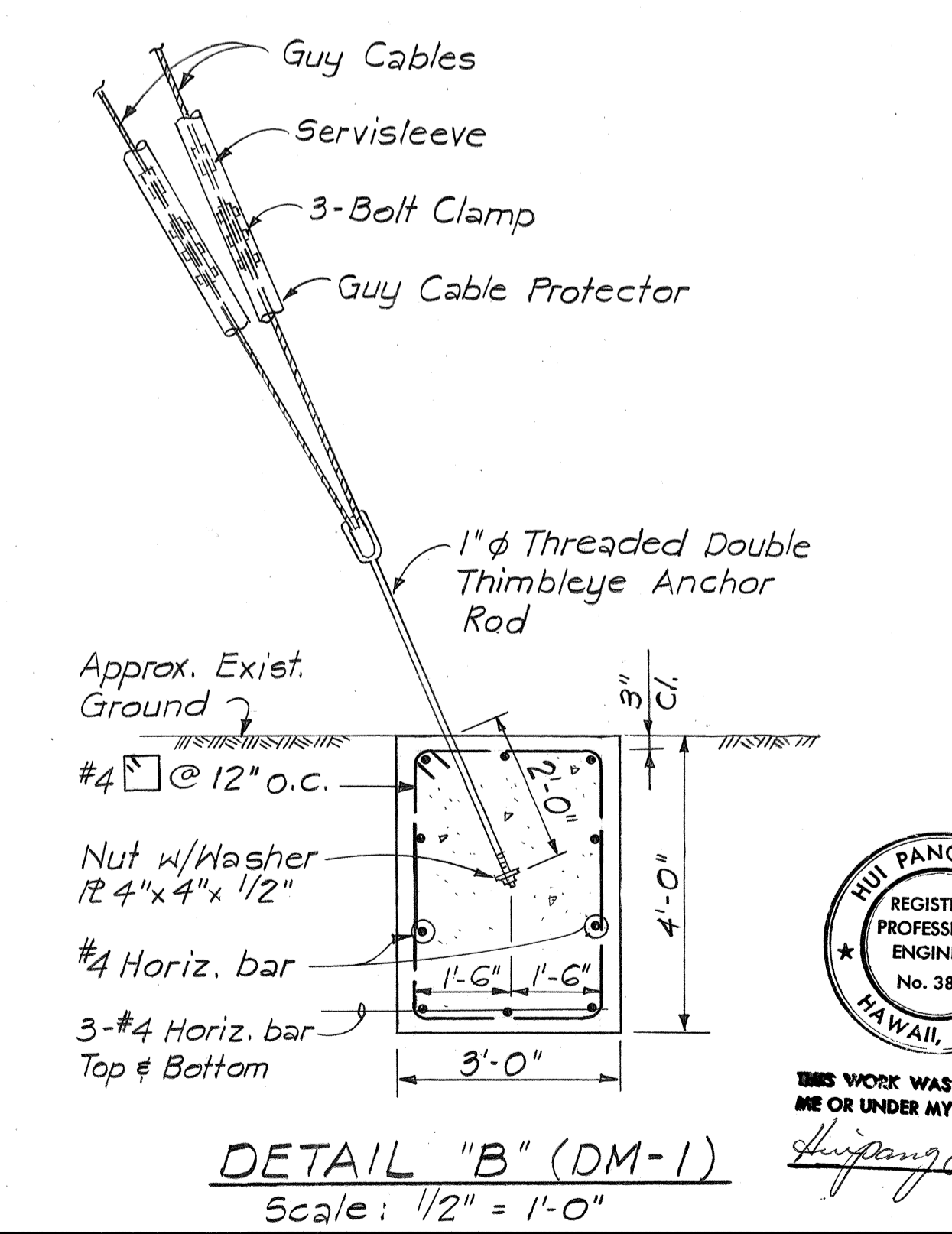
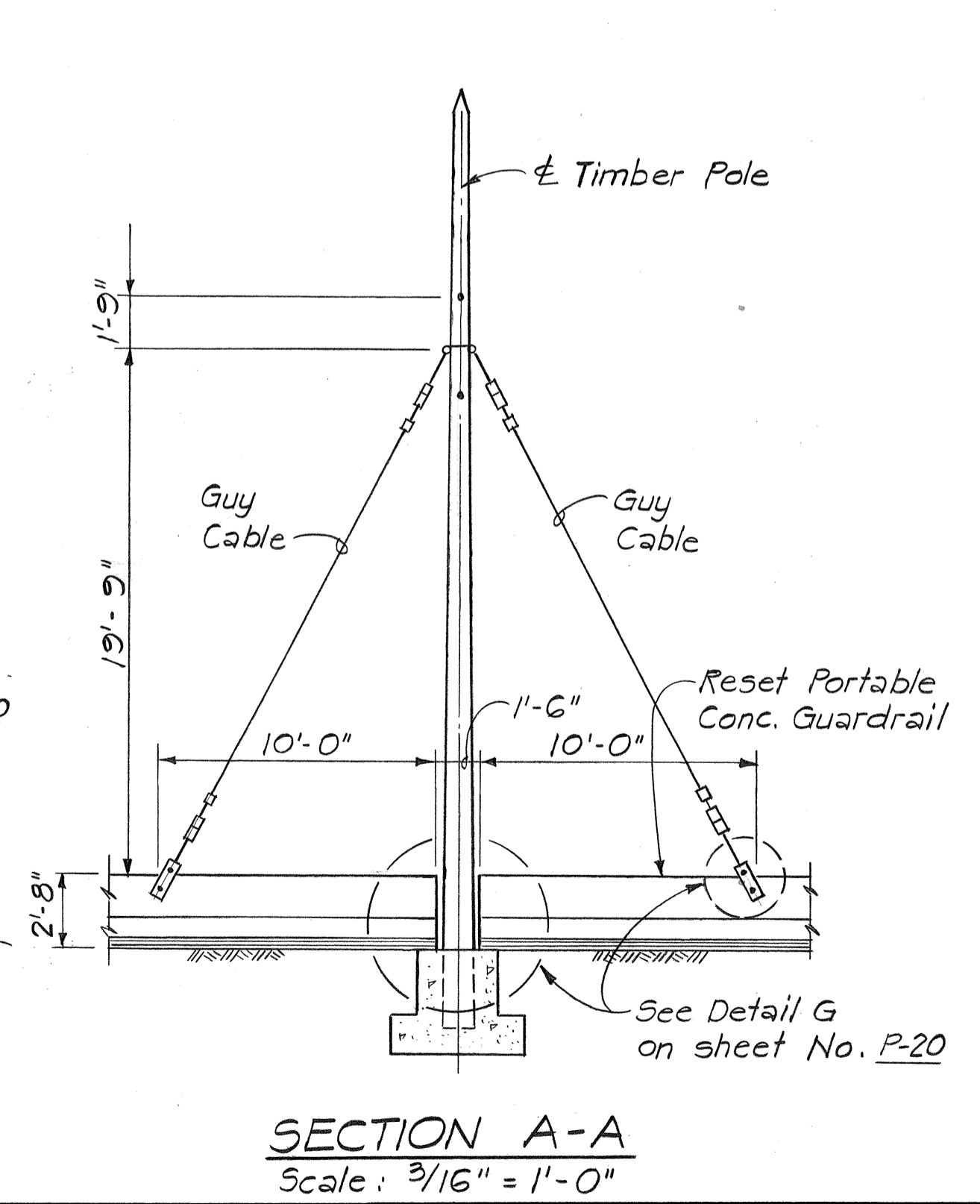
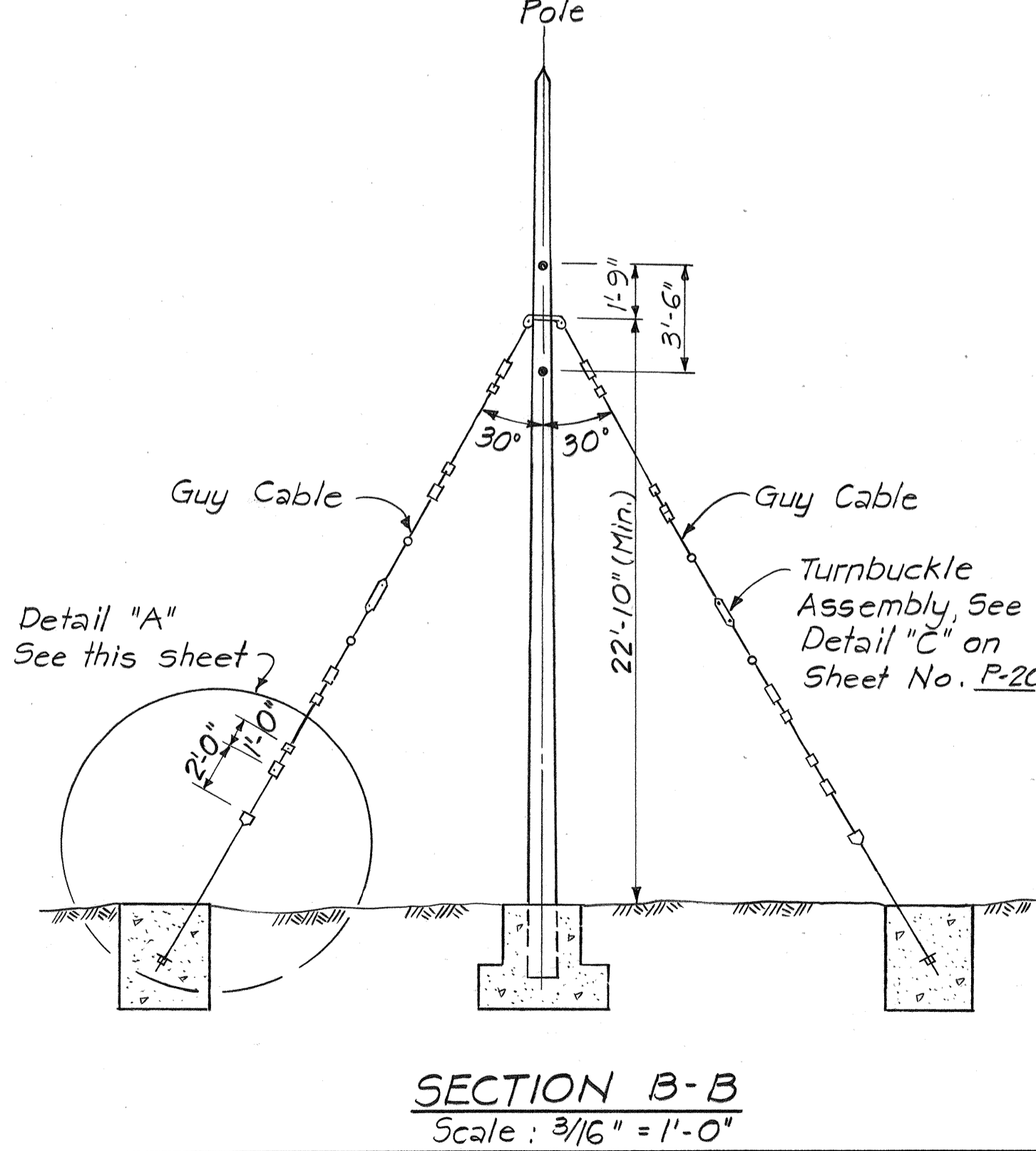
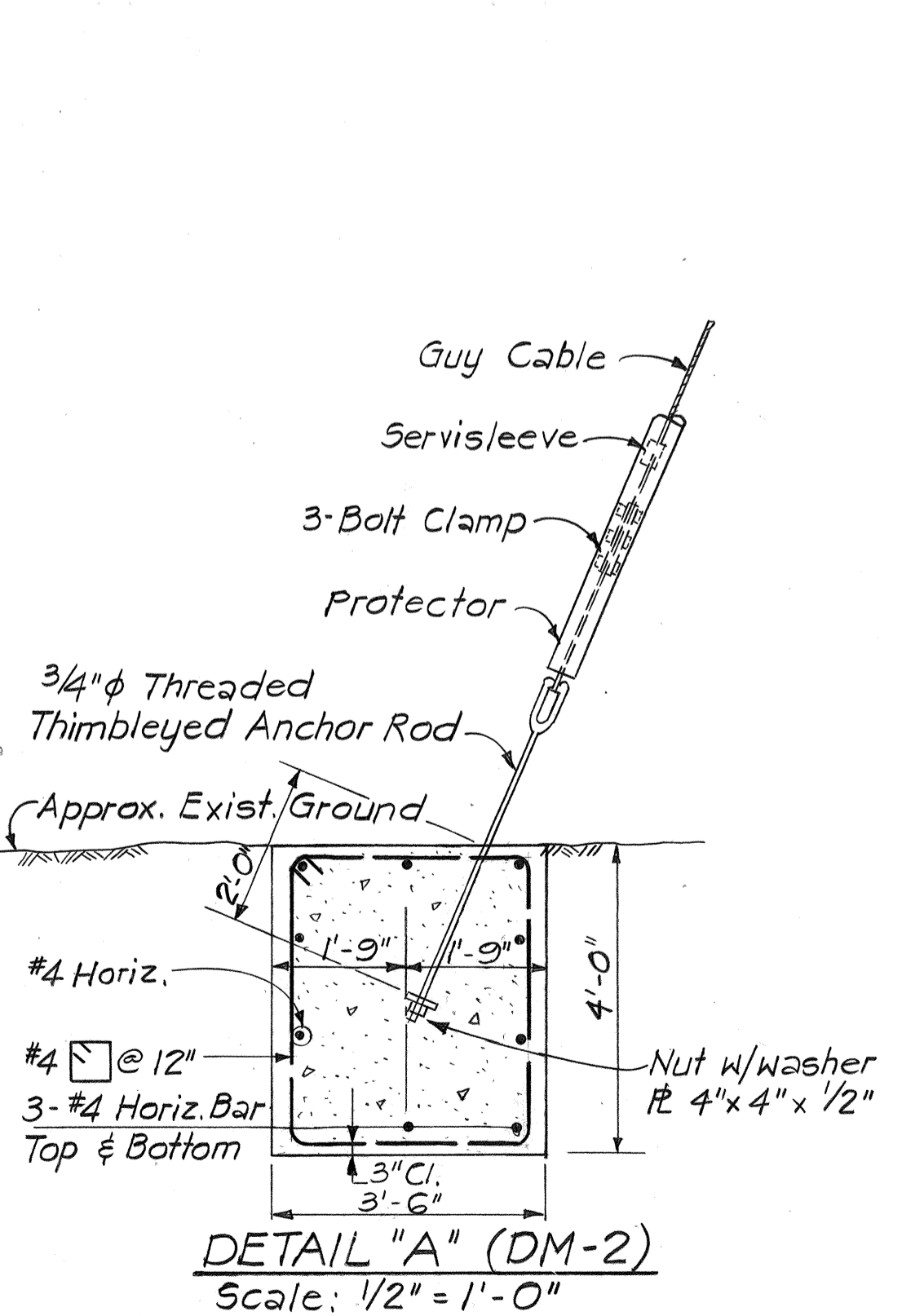
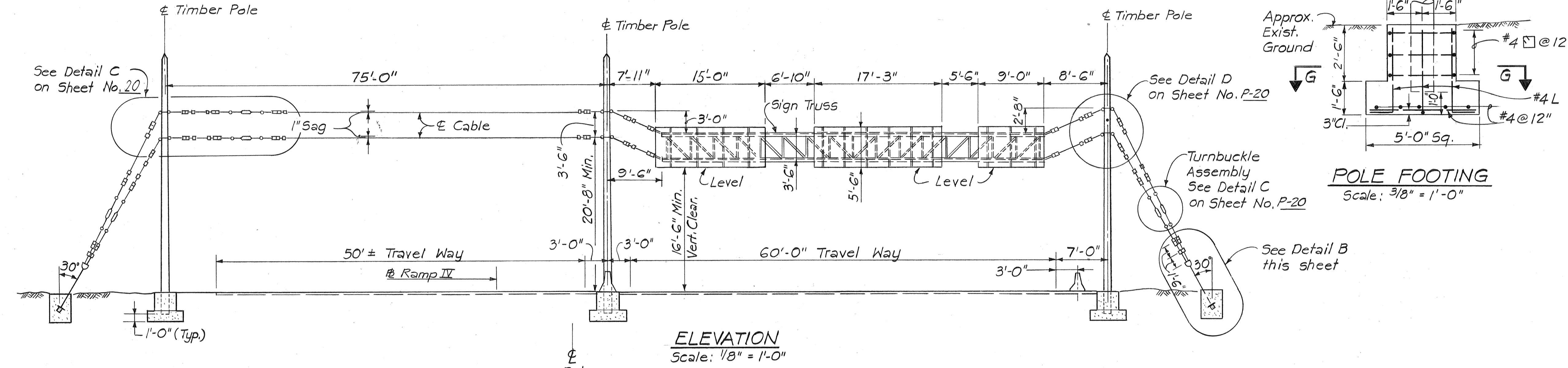
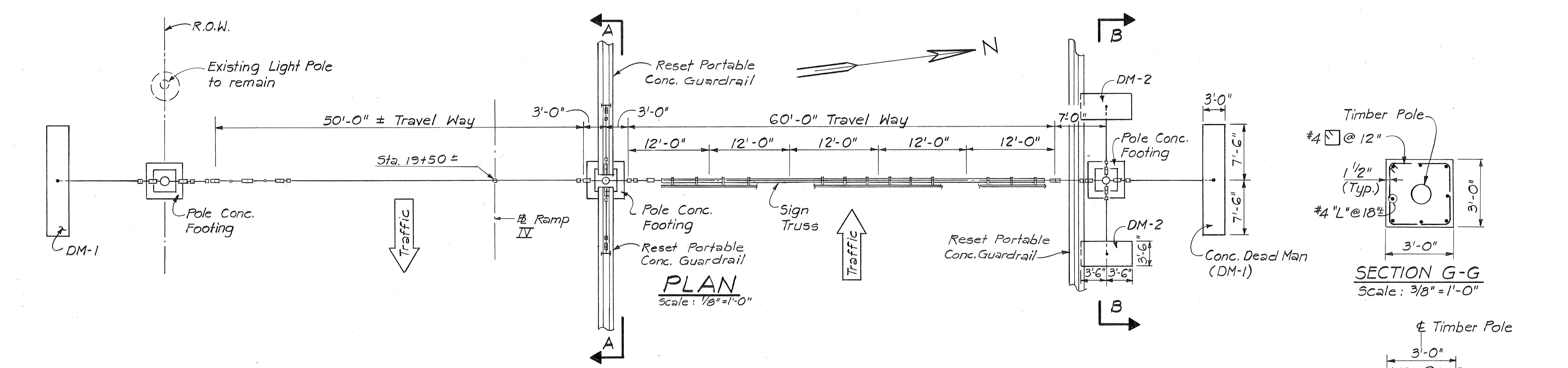
**SIGN PANEL LAYOUT
(T-SIGNS)**

INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1(147)17
SCALE: As shown DATE: 4/2/79
SHEET NO. P-18 OF 40 SHEETS

- NOTES FOR TEMPORARY DESTINATION SIGNS
(T DESIGNATION)**
- Type of Sign Mounting, except for Overhead Sign T-40, will be at the Contractors Option, Subject to Approval by the Engineer. Contractor shall submit to the Engineer for approval detail plans of the mounting of Overhead Sign T-45.
 - Mounting to be incidental to "Sign Panel", except for Overhead Sign T-40.
 - Material used for Sign Panels, except for Overhead Sign T-40, shall be 3/4" thick, waterproof, Fir Plywood. Contractor may submit alternative, subject to approval by the Engineer.
 - Alphabetical Characters, Arrows, & Borders shall be of White Reflective Sheeting. Background shall be of Green Reflective Sheeting. Shields shall be of Reflective Sheeting.
 - Alphabetical Characters shall be Uppercase or Lowercase as shown, and shall have Series E dimensions and spacing in accordance with the FHWA publication "Standard Alphabets for Highway Signs" (Bureau of Public Roads, 1966).
 - Borders and Separation lines shall have a width of 2 inches and a corner radius of 3 inches, unless shown otherwise. Sign corners shall be left square.
 - Overlay Panels shall be of the same color and reflectorization as sign panel. Payment shall be made under "Panel for Temporary Destination Sign."
 - Payment for removal and disposal of Overhead Signs T-15, T-30, T-31 and T-40 shall be considered incidental to various contract items.

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H1-1(147)17	1980	91	338



- GENERAL NOTES:**
- DESIGN DATA:**
 - Concrete: $f_c' = 2,000$ psi, $f_c = 800$ psi, $n = 10$.
 - Reinf. Steel: ASTM A615, Grade 40, $f_s = 20,000$ psi.
 - Timber: Modulus of Elasticity = 1,700,000 psi, $f_b = 1,750$ psi.
 - Cable: All Cables are 1/2" φ Zinc-Coated Steel Strand, Utility Grade, with Ultimate Tensile Strength = 25,000 lb.
 - Steel Pipe: ASTM A-53, $f_y = 35,000$ psi.
 - Aluminum: Alloy 6061-T6.
 - SPECIFICATION:**

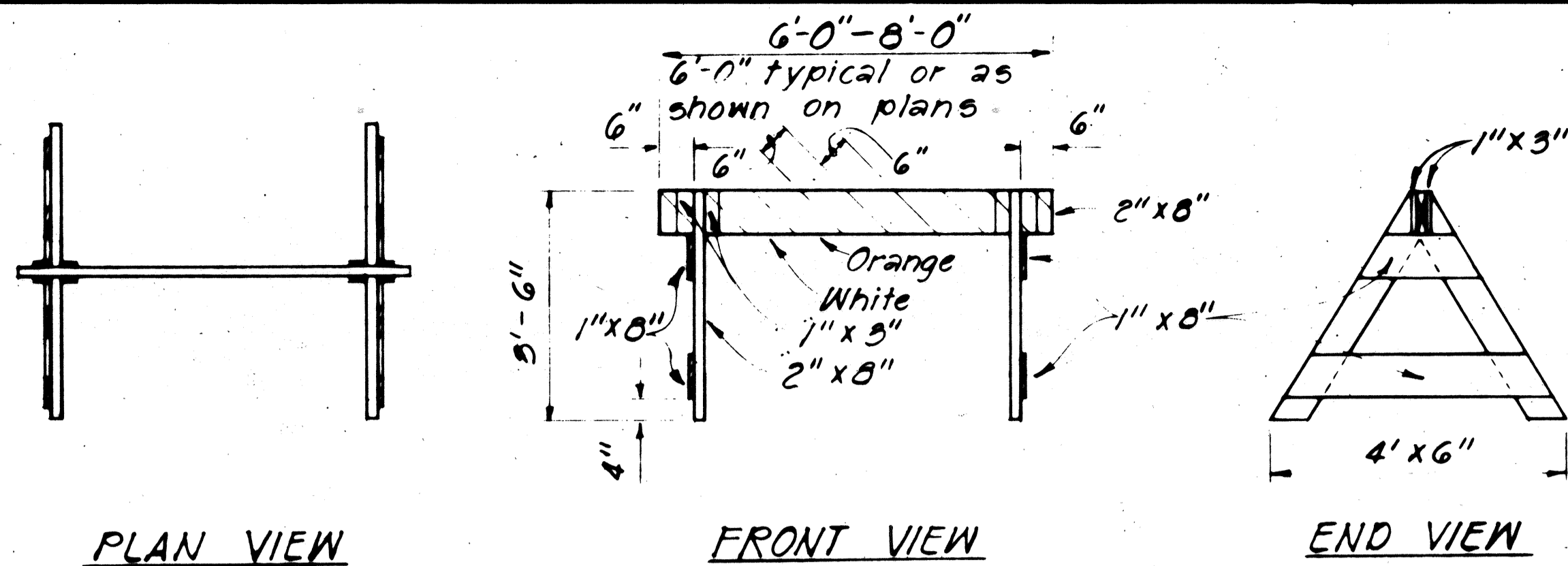
AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 1975.
 - All Guy Anchorage Rods and Cable Accessories shall be galvanized.
 - All Timber Poles are 35-foot creosoted Douglas Fir or Southern Pine poles, ANSI Class 3, with min. circumferences: At Top = 23 inches, at 6 feet from Butt = 32 inches.
 - The Cable dimensions shown are based on Temperature @ 68°F.
 - The Sign Truss & Sign Panels shall be supported during construction until all Cables, including Guys, are installed.
 - When installing Guy Cables, the Contractor shall tension the Guys and gradually release the Sign Truss simultaneously so as to keep the Poles plumb.
 - Deadmen & Sign Footings shall be of Class 'B' Concrete.
 - The Concrete Footings shall be excavated and poured to neat lines.
 - All parts of Sign Truss shall be prime coated with a suitable primer and painted with three coats of dark green enamel.
 - Design bearing Pressure = 1 tsf.

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

4/20/81	Revised Dimensions on 'Plan' and 'Elevation'
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
OVERHEAD SIGN T-40	
INTERSTATE ROUTE H-1 PROJECT NO. I-H1-1 (147):17	
Scale: As shown	Date: 4/2/79
SHEET NO. 19 OF 40 SHEETS	

HUI PANG CHEN
 REGISTERED PROFESSIONAL ENGINEER
 No. 3865
 HAWAII, U.S.A.
 THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Hui Pang Chen

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147)17	1980	23	338



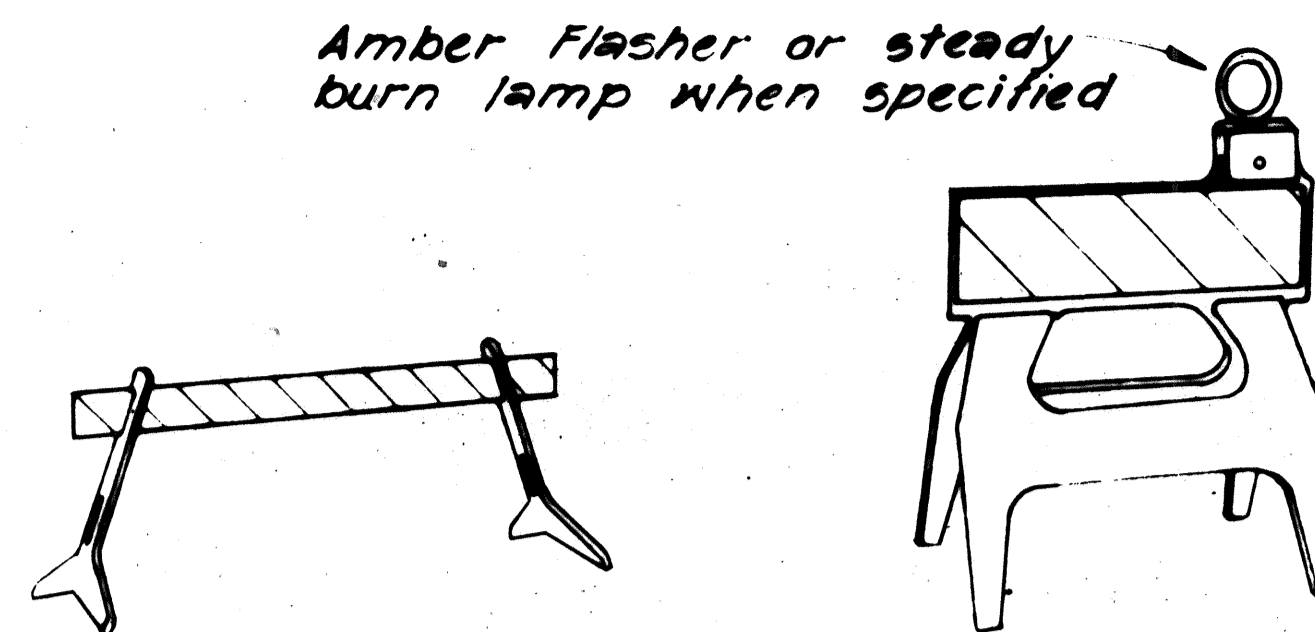
PLAN VIEW

FRONT VIEW

END VIEW

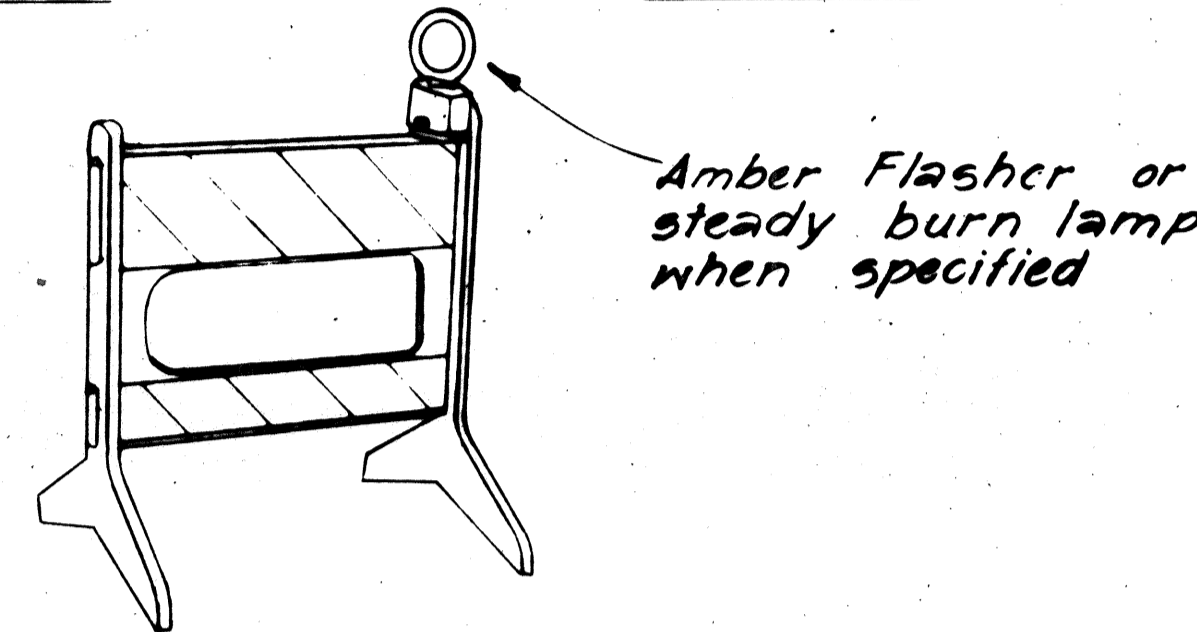
TYPE I BARRICADE

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

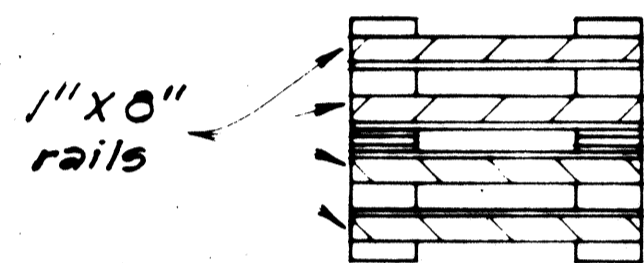
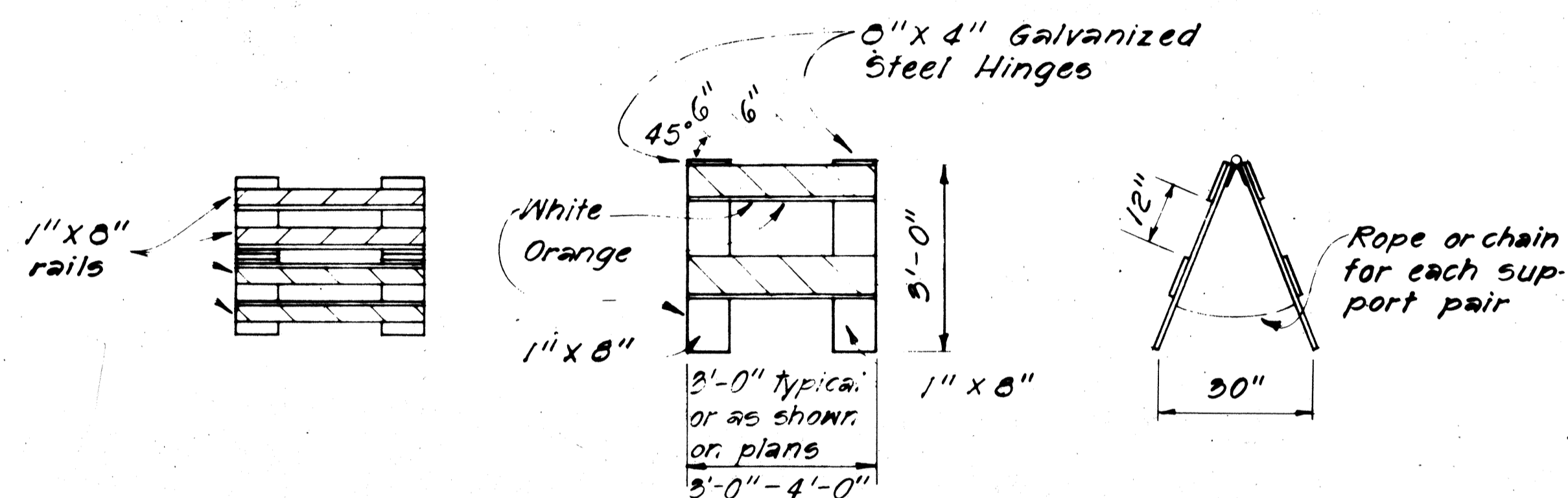


TYPE I

TYPE I



TYPE II



PLAN VIEW

FRONT VIEW

END VIEW

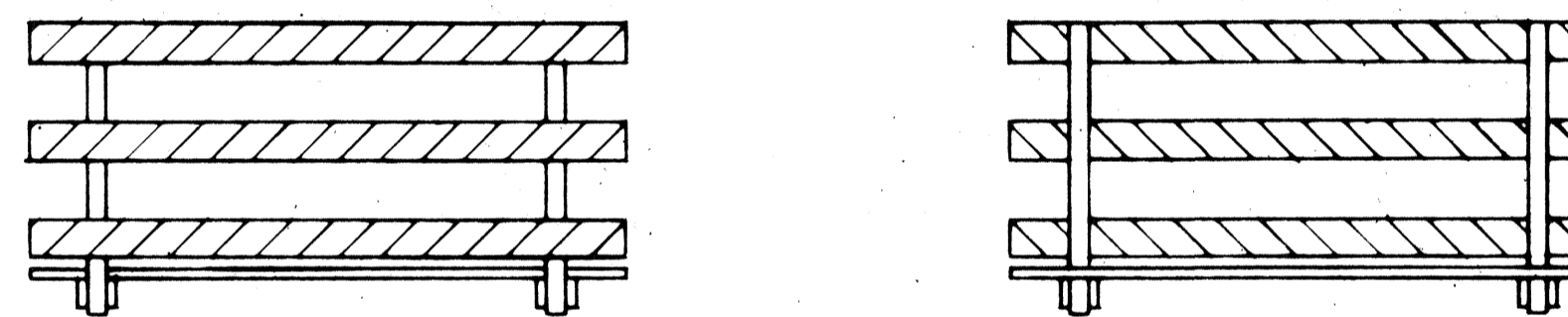
TYPE II BARRICADE

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

PLASTIC MOLDED BARRICADE OPTIONS*

Not to Scale

* Shop Drawings must be submitted for approval.

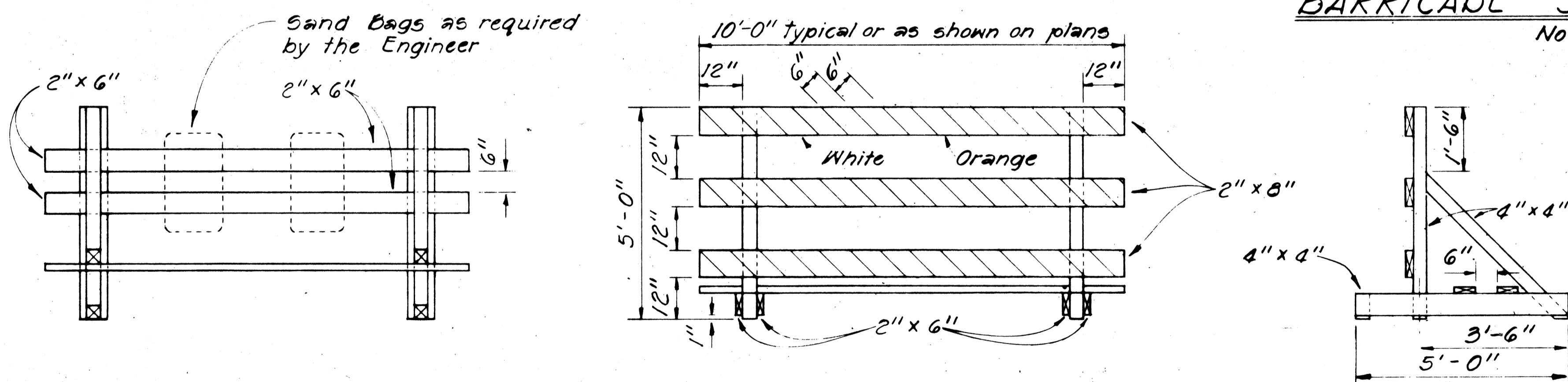


FRONT FACE

BACK FACE

BARRICADE STRIPING DETAILS

Not to Scale



PLAN VIEW

FRONT VIEW

END VIEW

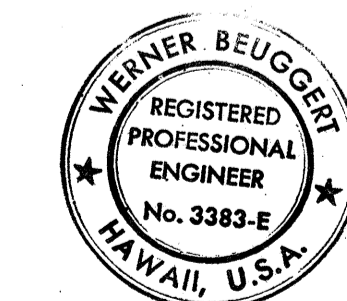
TYPE III BARRICADE

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

GENERAL NOTES

1. The Contractor shall construct, install and maintain the barricades at the locations shown on the Plans.
2. The barricades shall be left in place or relocated upon completion of the project as ordered by the Engineer and are to become State property, unless otherwise specified.
3. The orange and white stripes shall slant downward toward the side on which traffic is to pass and shall be reflectorized with reflective sheeting.
4. Both faces of the barricade rails shall be striped. See Striping Detail Arrangement.
5. Contractor may submit alternate designs for approval.
6. Barricade details shall conform to the "Manual on Uniform Traffic Control Devices for Streets and Highways," 1978, by the Federal Highway Administration and as amended.
7. If wooden rails are used, 26 ga. galv. steel sheet shall be first tacked on to the rails and then overlaid with reflective sheeting.

DATE	
REVISIONS	
REVISION NO.	
REVISION DESCRIPTION	
REVISION DATE	
REVISION BY	
REVISION CHECKED BY	
REVISION QUANTITY	
REVISION TOTAL	



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TYPICAL DETAILS
BARRICADES**

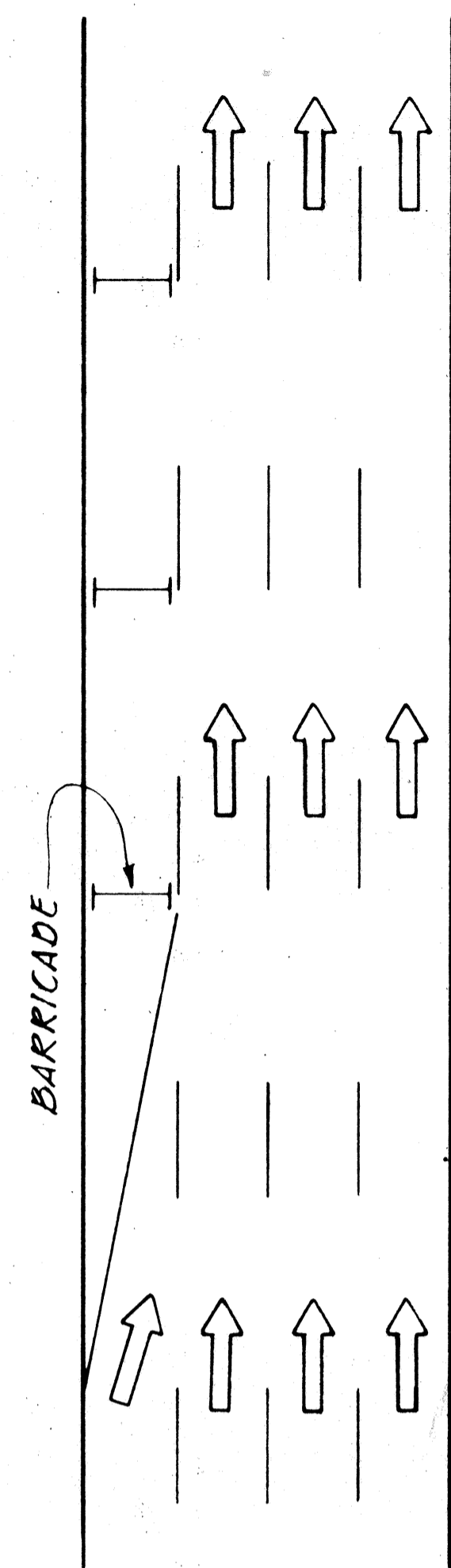
INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1(147).17

SCALE: AS SHOWN DATE: 4/2/79
SHEET NO. P-21 OF 40 SHEETS

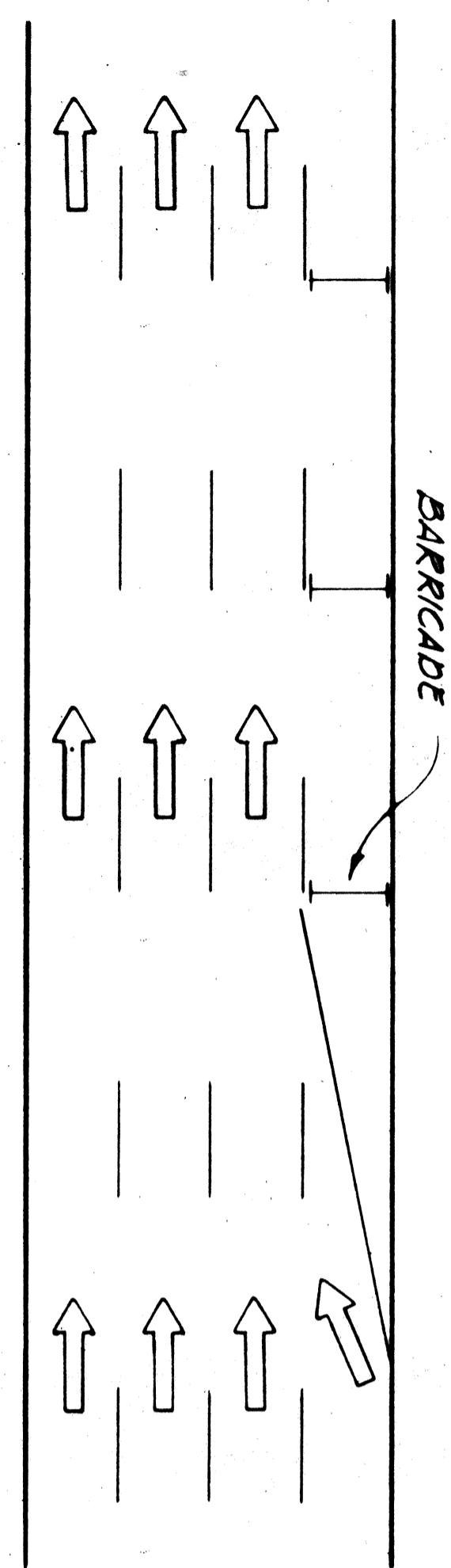
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(147):17	1980	94	338

GENERAL NOTES

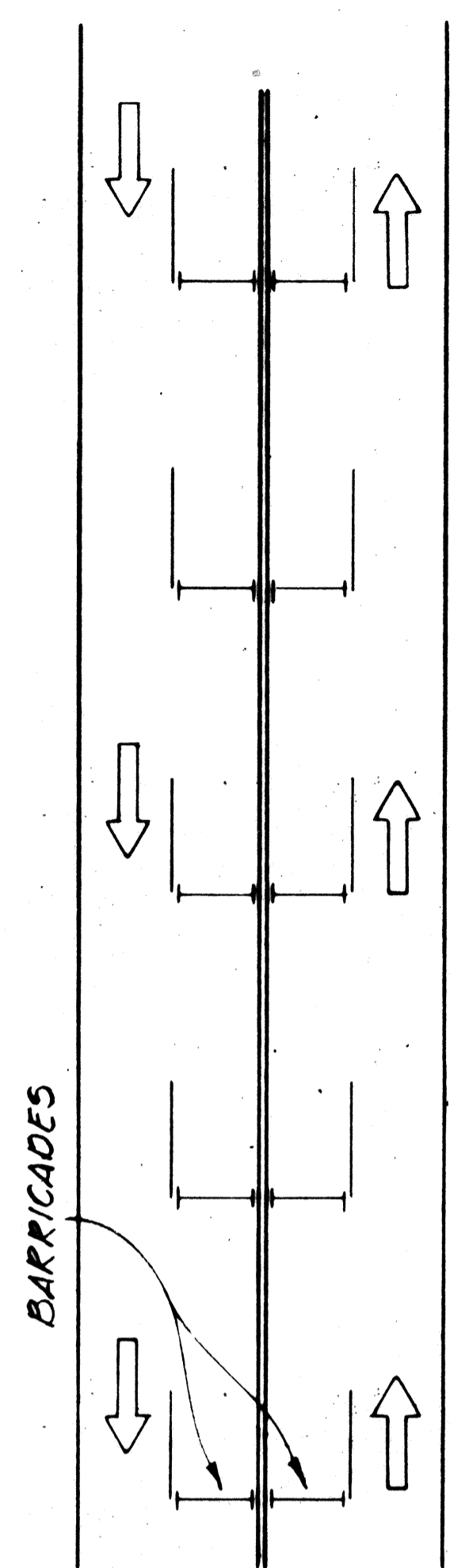
1. Barricade Type, Placement, and Arrangement shall be as shown on the Construction Plans.



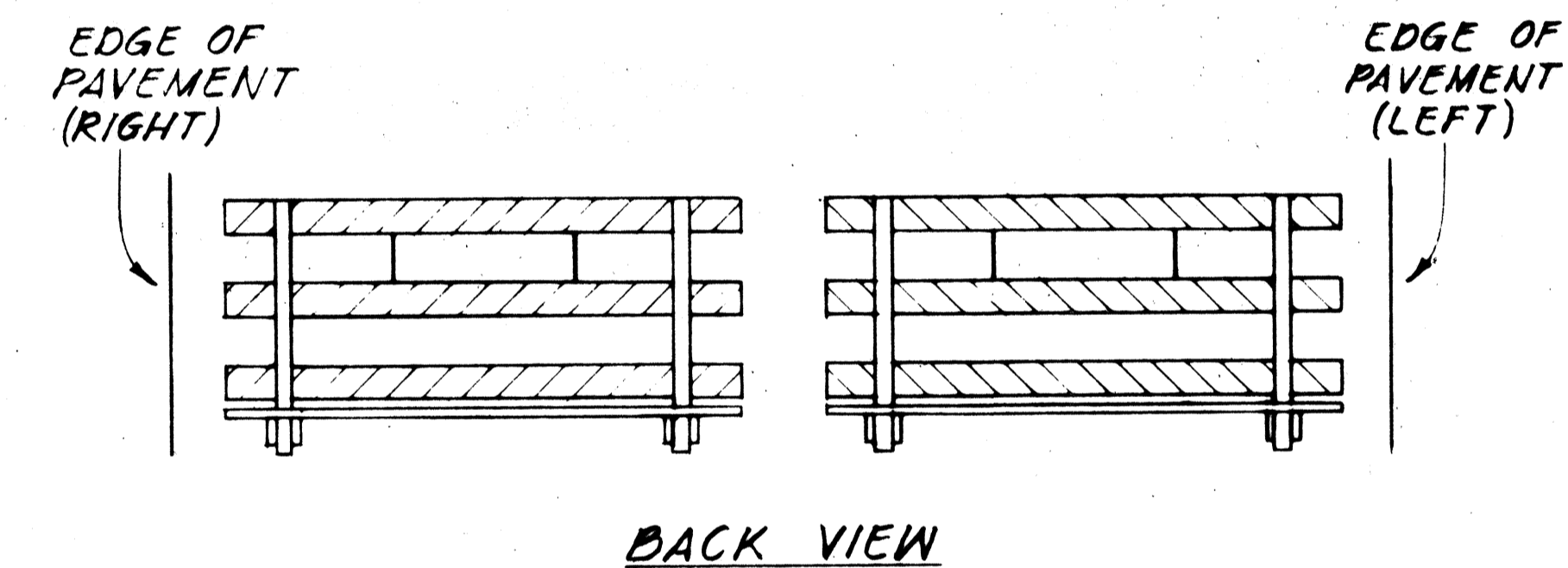
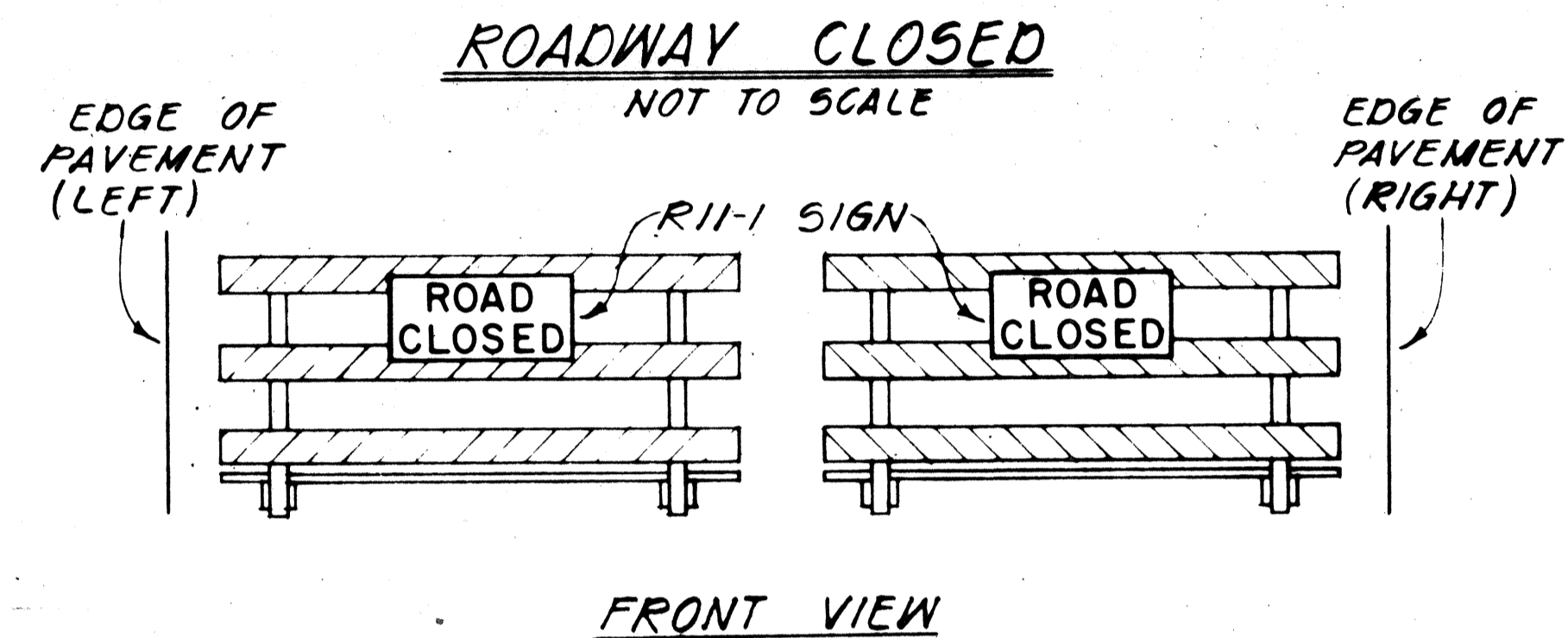
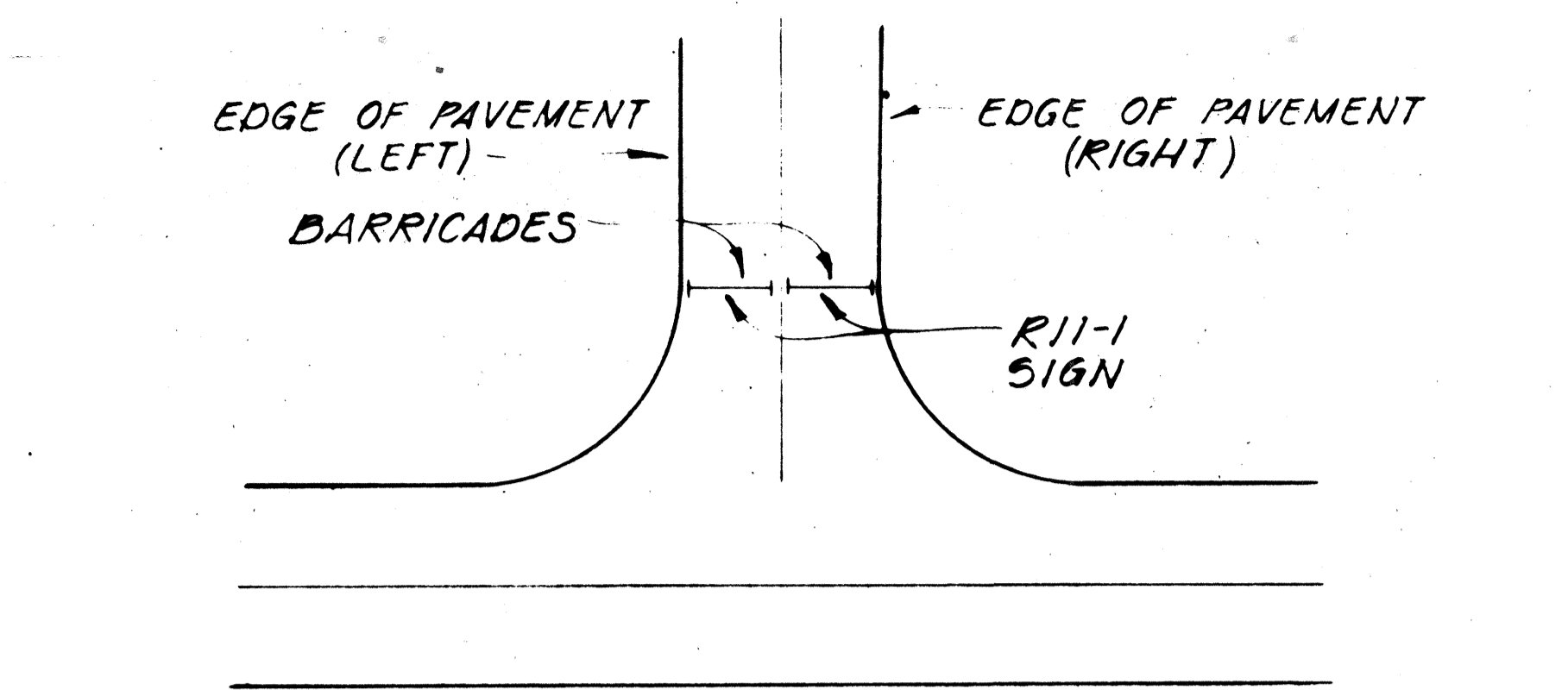
ROADWAY DELINEATION TO THE RIGHT
NOT TO SCALE



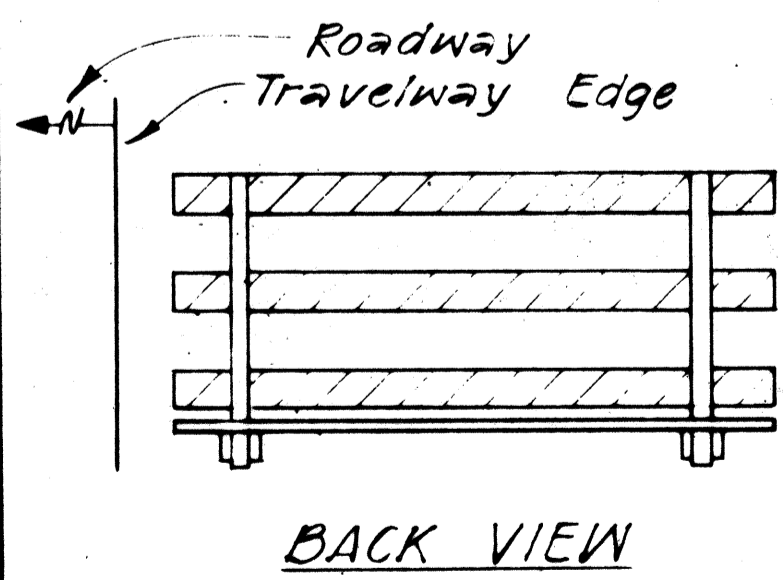
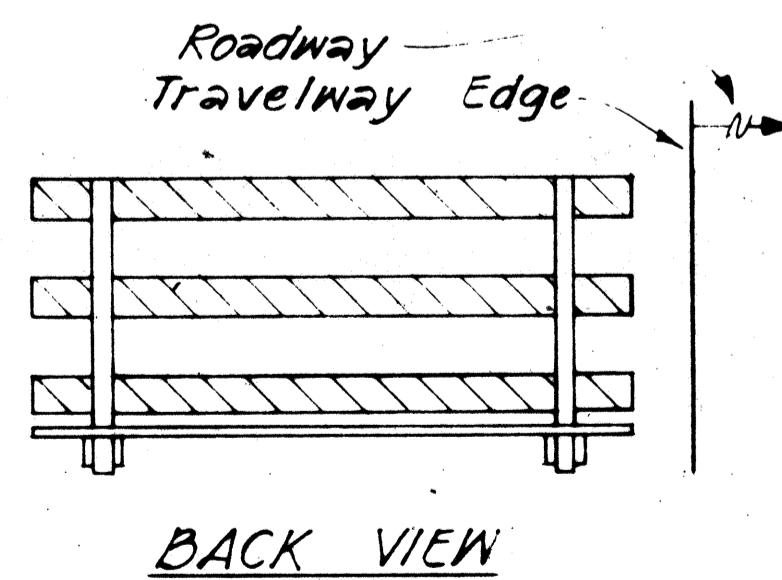
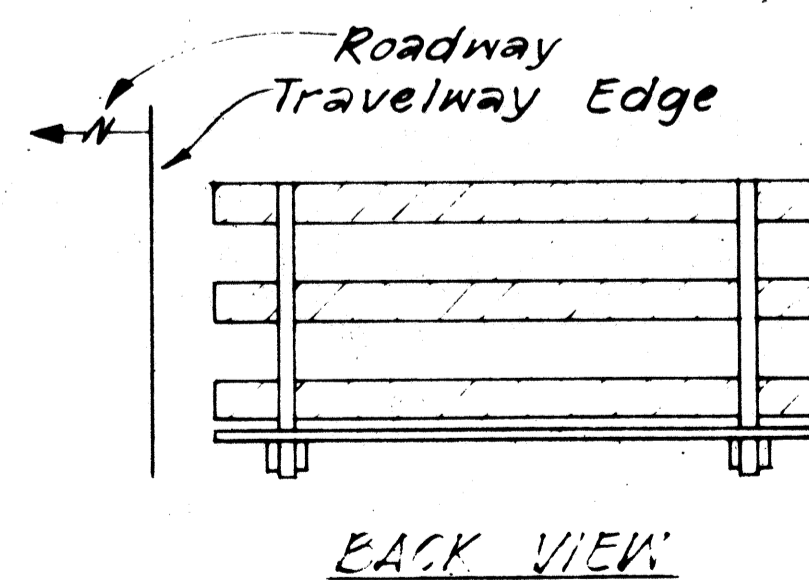
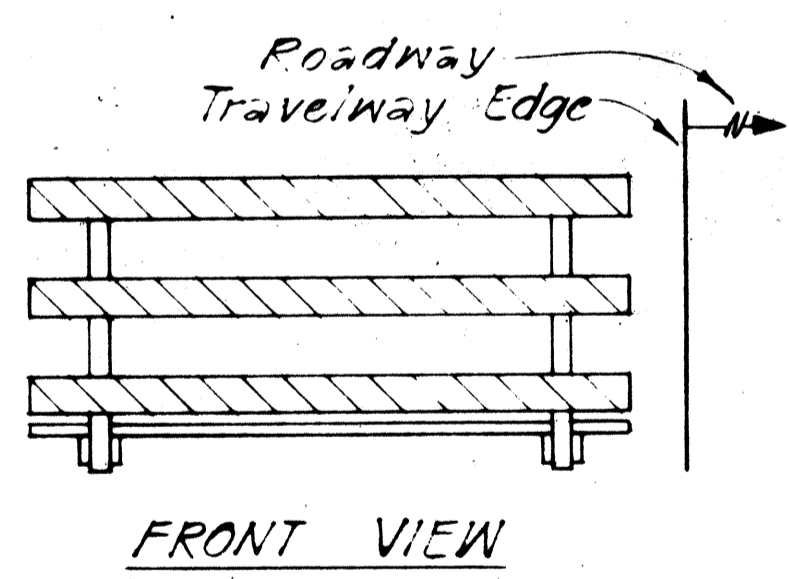
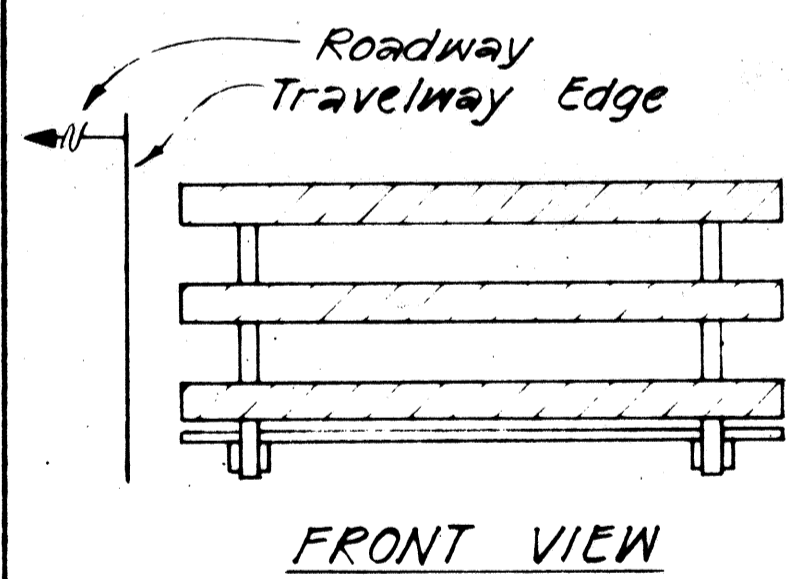
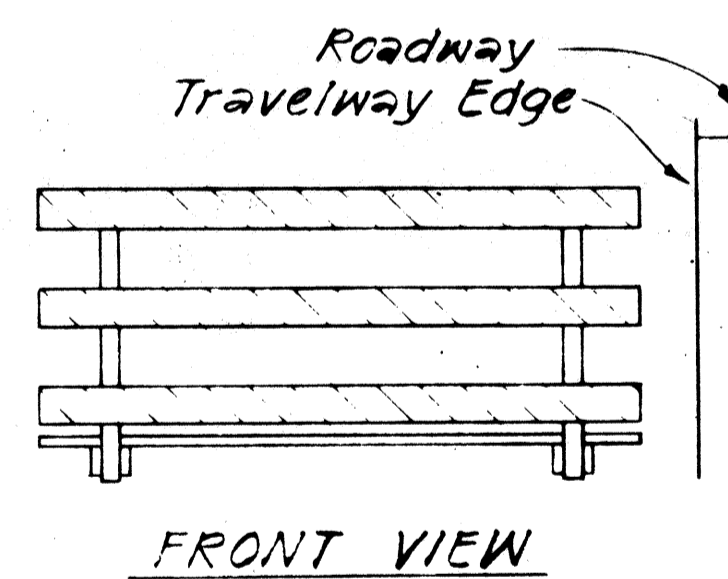
ROADWAY DELINEATION TO THE LEFT
NOT TO SCALE



ROADWAY DELINEATION FOR 2-WAY TRAFFIC
NOT TO SCALE



BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE

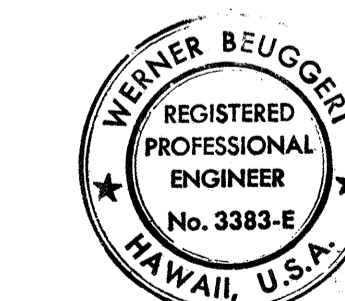


BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE

BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE

BARRICADE STRIPING ARRANGEMENT
NOT TO SCALE

DATE
REVISIONS
QUANTITIES BY
DESIGNED BY
DRAWN BY
CHECKED BY
ORIGINAL PLAN



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Werner Beuggert

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS
BARRICADE STRIPING DETAILS

INTERSTATE ROUTE H-1
PROJECT NO. I-HI-1 (147):17

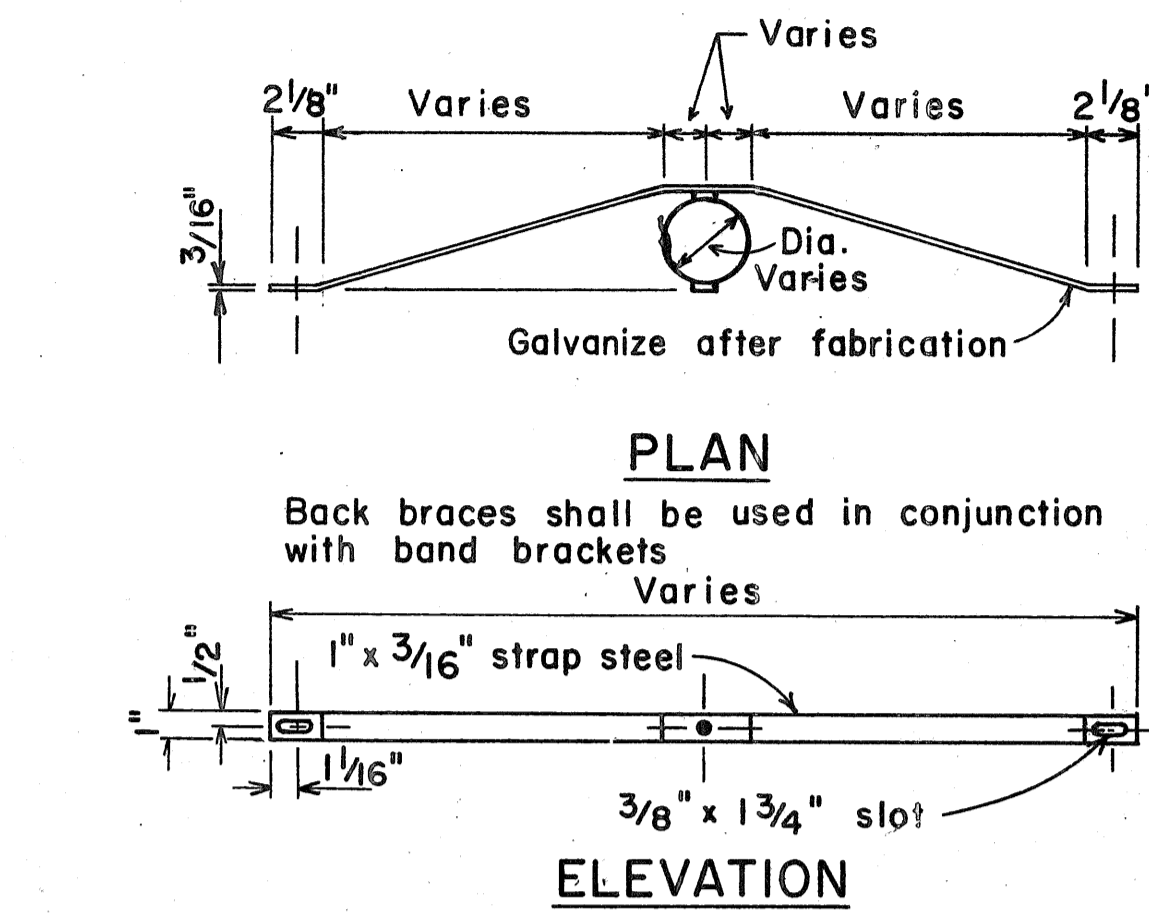
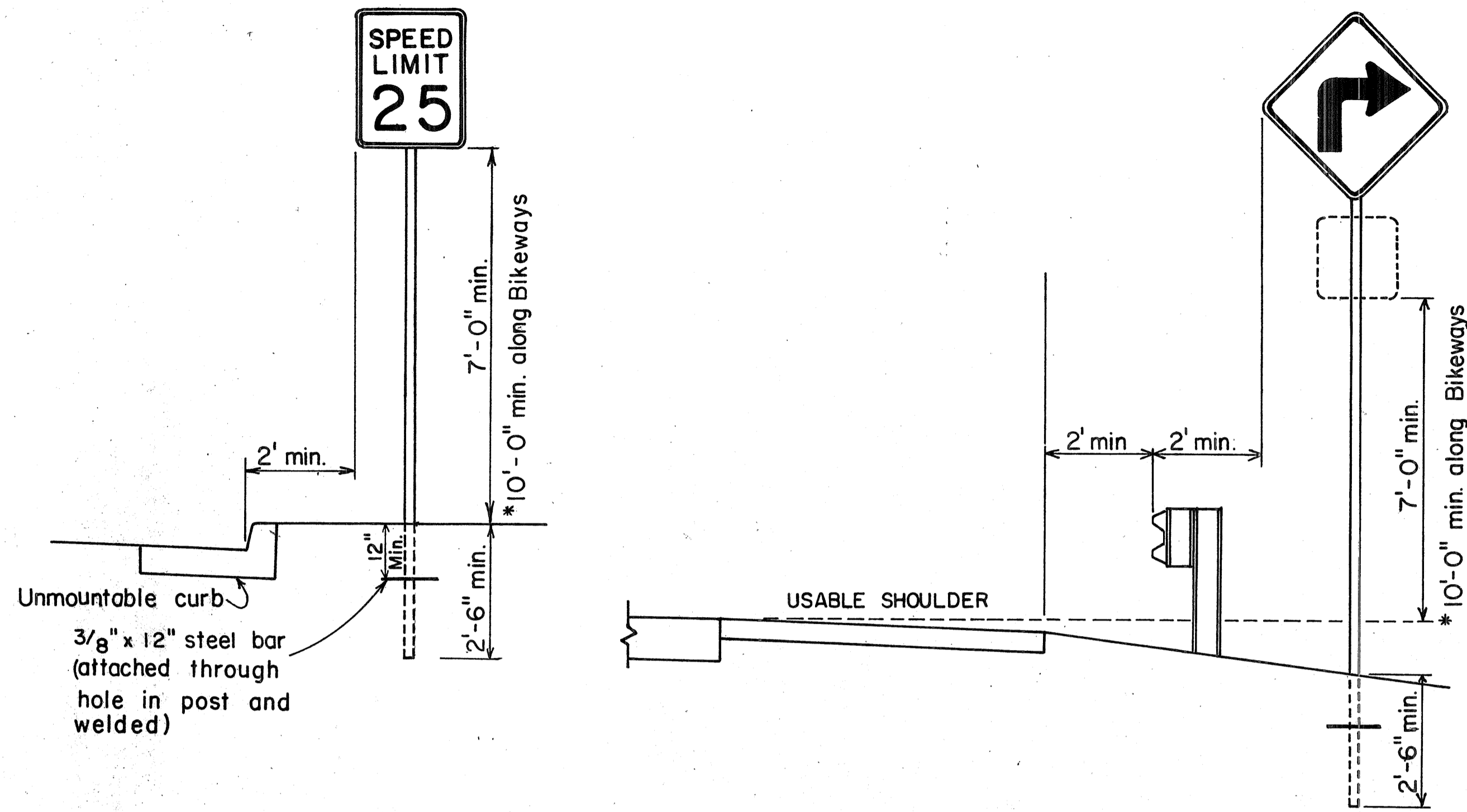
SCALE: AS SHOWN DATE: 4/2/79

SHEET NO. P.22 OF 40 SHEETS

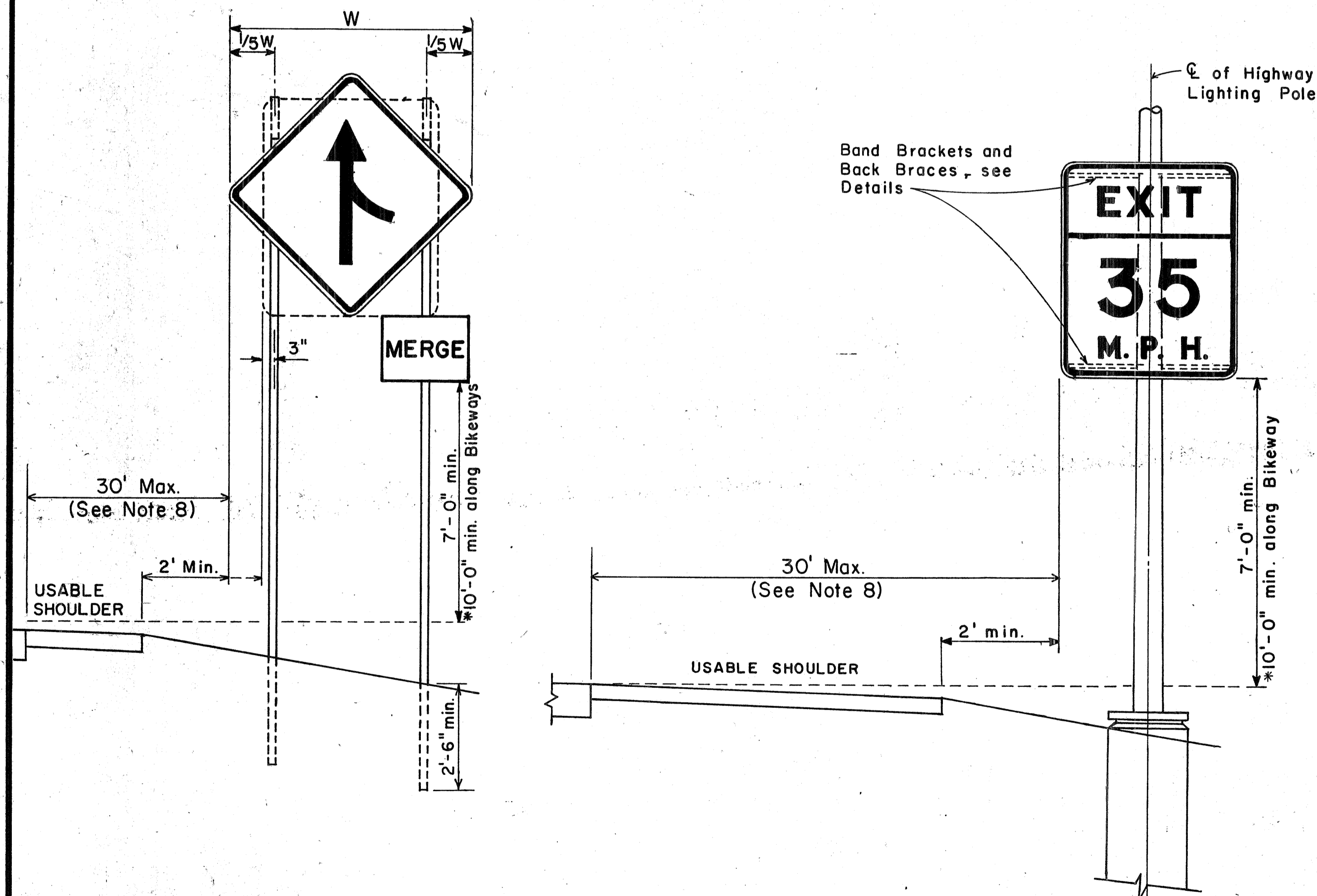
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1(147)17	1980	95	358

GENERAL NOTES

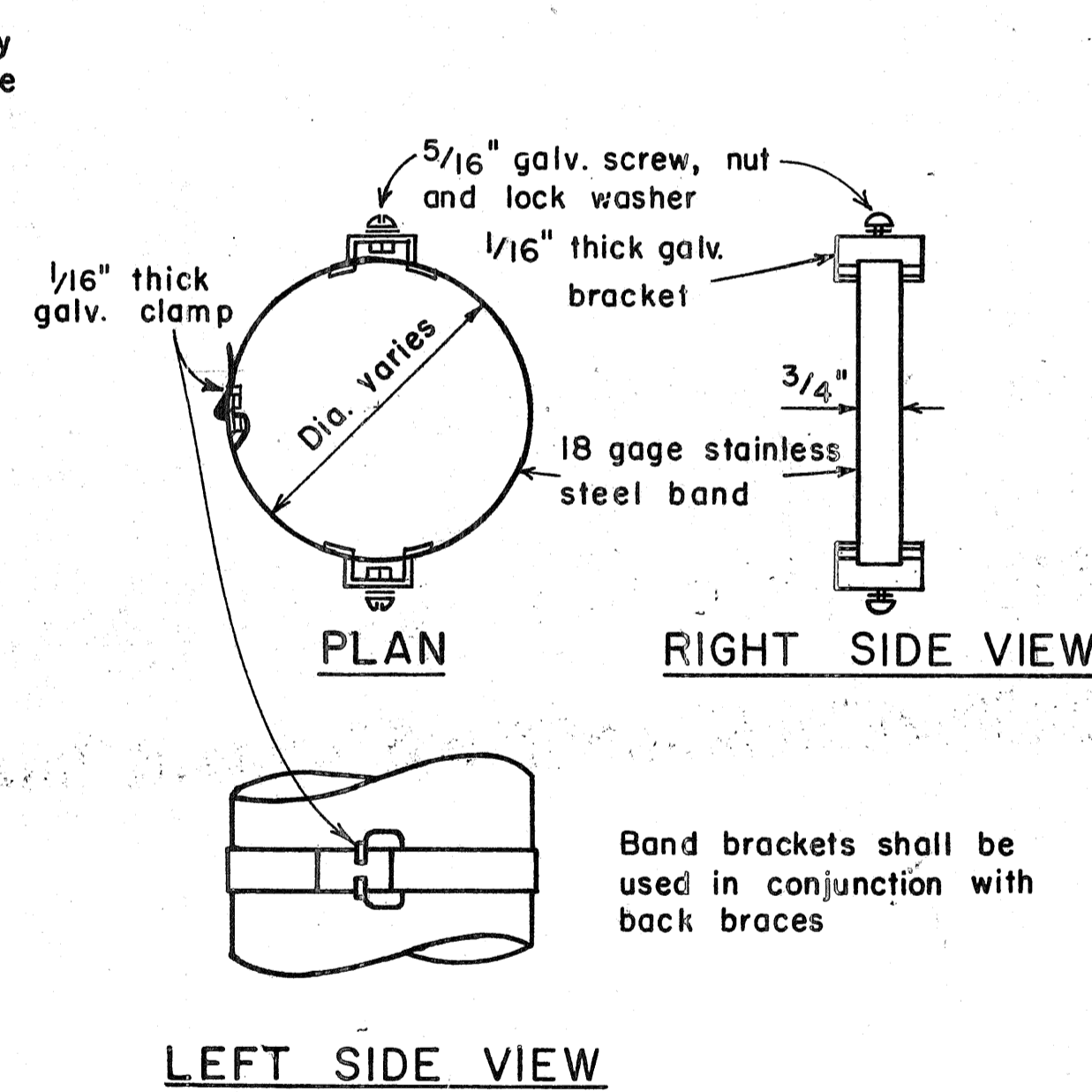
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts.
- All signs larger than 10 sq. ft. in area or 48" inches and wider, and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least two sets of band brackets and back braces.
- All signs 28 sq. ft. in area or larger and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least three sets of band brackets and back braces.
- All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
- Sign posts shall extend 3 1/2" above sign where required for City and County street name signs.
- (R) or (L) indicates right or left and shall be as shown on the plans.
- See plans for special details.
- When clear roadside recovery areas are provided, Signs shall be placed as far from the edge of traveled way as possible up to a maximum of 30 feet. When possible they shall be placed in protected locations.
- 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.



BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



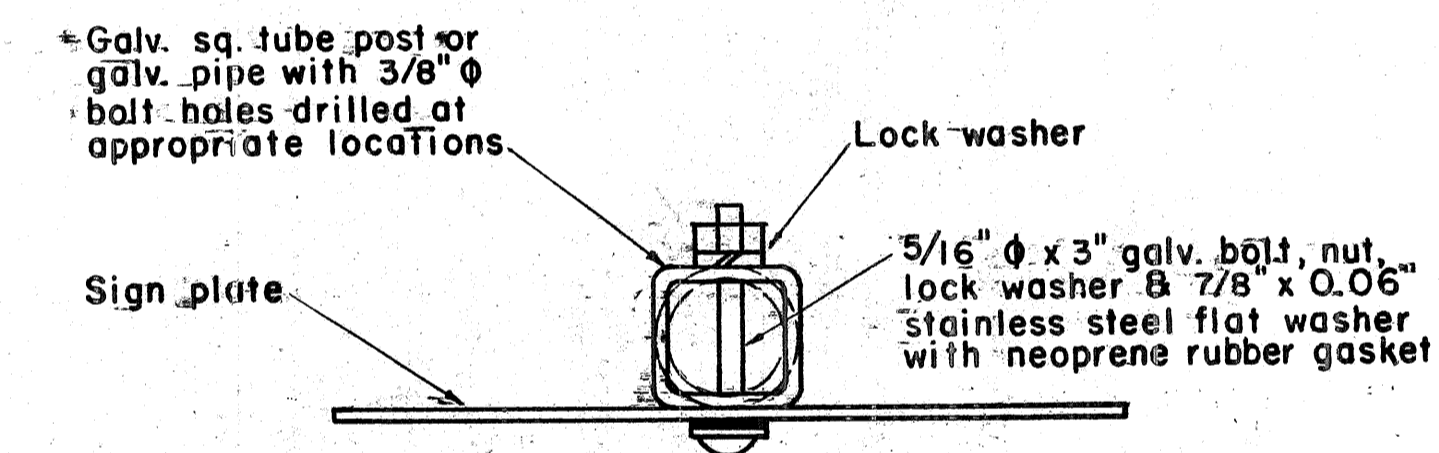
HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION



BAND BRACKET

TYPICAL MOUNTING DETAILS

NOT TO SCALE



GALVANIZED SQUARE TUBE POST (OR GALVANIZED PIPE)

APPROVAL RECOMMENDED:
Eishi Tanaka 11/10/77
 TRAFFIC ENGINEER DATE

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

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT - 100 approved 12/30/69	H.T.	11/15/77
2	Revised depth of signpost	H.T.	5/18/79
3	Added Notes No. 8 & No. 9	H.T.	5/18/79
4	Revised Gen. Note #4 & Mounting Details	H.T.	4/23/80

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977

DATE: _____
 SURVEY PLOTTED BY: _____
 ORIGINAL PLAN: _____
 DRAWN 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.	141(47)	1980	96	338

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

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

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

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

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

REDUCED SPEED 30 M.P.H.
R2-5b(30) 24" x 30"
R2-5b(30)-A 48" x 60"

NO RIGHT TURN
R3-1 24" x 24"
24" x 18"
R3-1-A 48" x 48"
48" x 36"

NO LEFT TURN
R3-2 24" x 24"
24" x 18"
R3-2-A 48" x 48"
48" x 36"

NO TURNS
R3-3 24" x 24"
R3-3-A 48" x 48"

NO U TURN
R3-4 24" x 24"
24" x 18"
R3-4-A 48" x 48"
48" x 36"

ONLY
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"

RIGHT LANE MUST TURN RIGHT
R3-7(R) 30" x 30"
R3-7(R)-A 48" x 48"

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

CENTER LANE LEFT TURN ONLY
R3-9 24" x 30"

DO NOT PASS
R4-1 24" x 30"

PASS WITH CARE
R4-2 24" x 30"

SLOWER TRAFFIC KEEP RIGHT
R4-3 24" x 30"
R4-3-A 48" x 60"

TRUCKS USE RIGHT LANE
R4-5 24" x 30"

TRUCK LANE 500 FEET
R4-6(500) 24" x 30"

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

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

DO NOT ENTER
R5-1 30" x 30"
R5-1-A 48" x 48"

NO TRUCKS
R5-2 24" x 24"
24" x 18"

COMMERCIAL VEHICLES EXCLUDED
R5-4 24" x 30"

NO BICYCLES
R5-6 24" x 24"
24" x 18"

WRONG WAY
R5-9 36" x 24"

ONE WAY
R6-1(R) 36" x 12"

ONE WAY
R6-2(R) 18" x 24"

NO PARKING ANY TIME
R7-1 12" x 18"
R7-1-A 24" x 30"

NO STOPPING OR STANDING
R7-4 12" x 18"
R7-4-A 24" x 30"

NO PARKING BUS STOP
R7-1,7(R) 12" x 18"

2 HR PARKING 8:30 AM TO 5:30 PM
R7-108 12" x 18"

TOW-AWAY ZONE
R7-201 12" x 6"
R7-201-A 24" x 12"

NO PARKING ON PAVEMENT
R8-1 24" x 30"

NO PARKING EXCEPT ON SHOULDER
R8-2 24" x 30"

NO PARKING
R8-3 24" x 30"

EMERGENCY PARKING ONLY
R8-4 30" x 24"
R8-4-A 48" x 36"

NO STOPPING ON PAVEMENT
R8-5 24" x 30"

NO STOPPING EXCEPT ON SHOULDER
R8-6 24" x 30"

EMERGENCY STOPPING ONLY
R8-7 30" x 24"
R8-7-A 48" x 36"

WALK ON LEFT FACING TRAFFIC
R9-1 18" x 24"

CROSS ONLY AT CROSS WALKS
R9-2 12" x 18"

NO PEDESTRIAN CROSSING
R9-3 12" x 18"

NO HITCH HIKING
R9-4 18" x 24"

CROSS ON GREEN LIGHT ONLY
R10-1 12" x 18"

CROSS ON WALK SIGNAL ONLY
R10-2 12" x 18"

PUSH BUTTON FOR GREEN LIGHT
R10-3 9" x 12"

PUSH BUTTON FOR WALK SIGNAL
R10-4 9" x 12"

LEFT ON ARROW ONLY
R10-5 24" x 30"

STOP HERE ON RED
R10-6 24" x 36"

DO NOT BLOCK INTERSECTION
R10-7 24" x 30"

USE LANE WITH GREEN ARROW
R10-8 24" x 30"

RIGHT TURN ON RED AFTER STOP
R10-9 24" x 30"

LEFT TURN SIGNAL
R10-10 24" x 30"

KEEP OFF MEDIAN
R11-1 24" x 30"

ROAD CLOSED
R11-2 48" x 30"

ROAD CLOSED 10 MILES AHEAD LOCAL TRAFFIC ONLY
R11-3(10) 60" x 30"

ROAD CLOSED TO THRU TRAFFIC
R11-4 60" x 30"

WEIGHT LIMIT 10 TONS
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:
Esaki Tanaka 3/17/72
 TRAFFIC ENGINEER DATE

APPROVED:
Robert J. ... 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.	10/14/74
3	Added General Note 5	H.T.	11/17/74

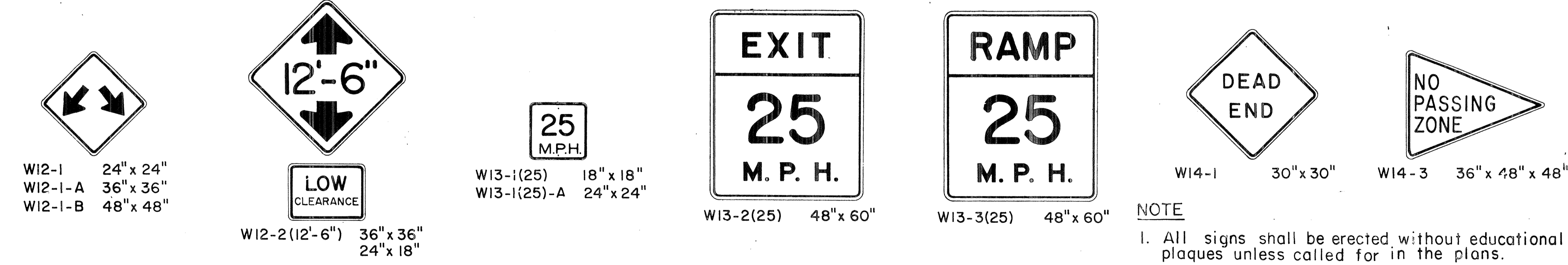
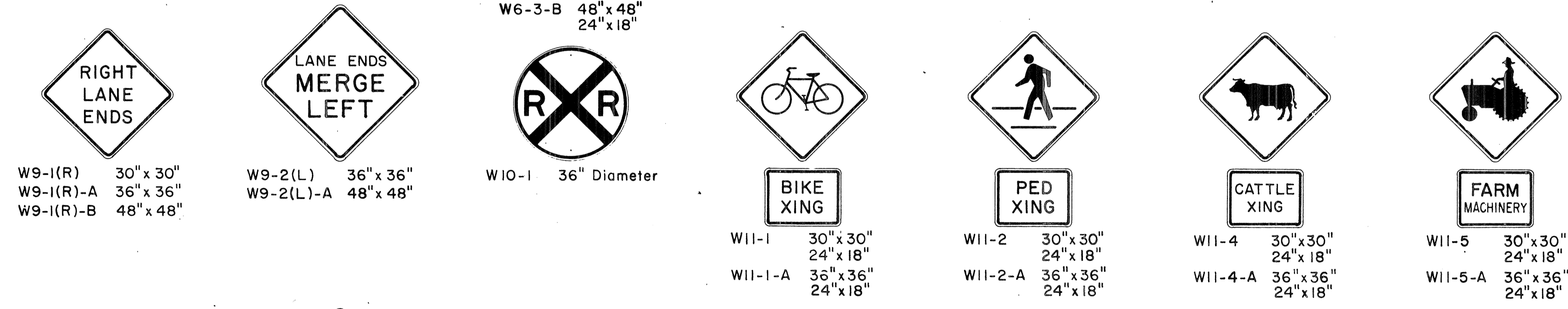
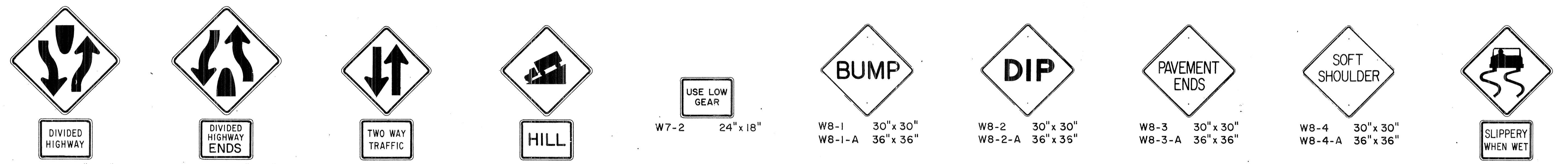
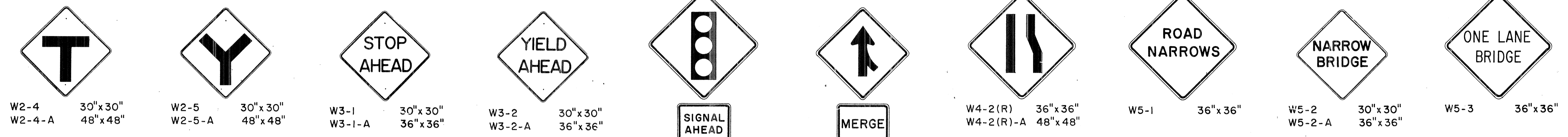
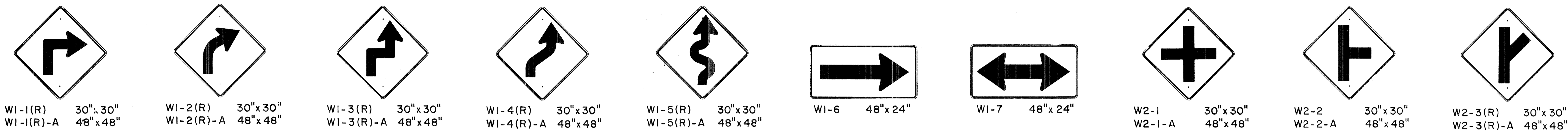
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE

SHEET No. P-24 OF 40 SHEETS DT 101

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



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:
Erich Tanaka 3/17/72
 TRAFFIC ENGINEER DATE

APPROVED:
Hubert Ralsin 3-20-72
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1	H.T.	10/16/74
3	Revised General Note 5	MF	9-16-75
4	Revised General Note 5	H.T.	9-14-76
5	Added Note 1	H.T.	11-7-77

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE

SHEET No. P-25 OF 40 SHEETS DT 102

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

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HH-1(47)7	1980	98	338

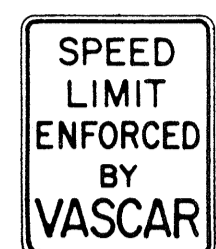
General Notes

- 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"



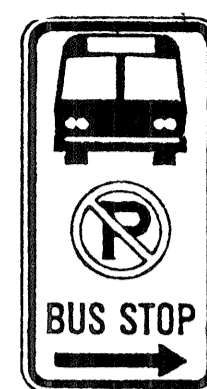
R2-5d(35) 24" x 30"
R2-5d(35)-A 48" x 60"



R2-10 24" x 30"



R3-9b 24" x 36"



R7-107(R) 12" x 24"



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



R8-3a 24" x 24"
24" x 18"
R8-3a-A 48" x 48"



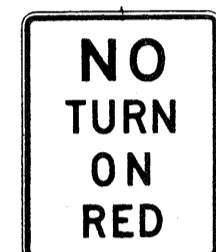
R9-3a 18" x 18"
18" x 12"
R9-3a-A 24" x 24"
24" x 18"



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



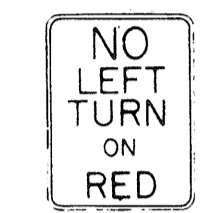
R9-3b(L) 18" x 12"



R10-11a 24" x 30"



R16-1 24" x 30"



R16-3 18" x 24"



R16-4 18" x 24"



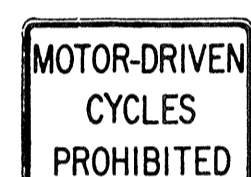
R16-5 36" x 42"



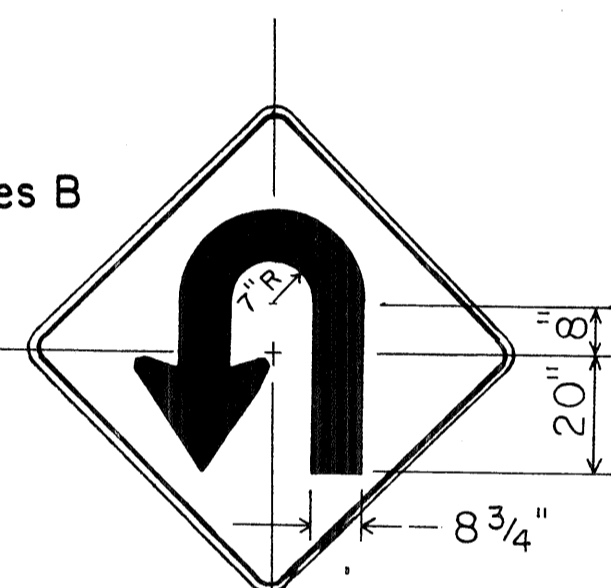
R16-6 24" x 30"



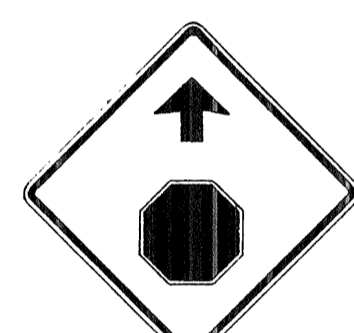
R16-7 24" x 30"



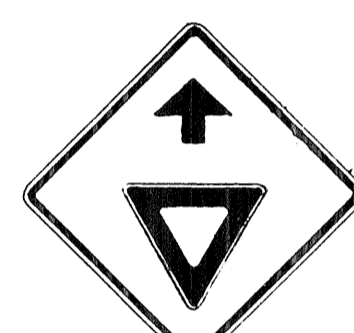
R5-8 30" x 24"



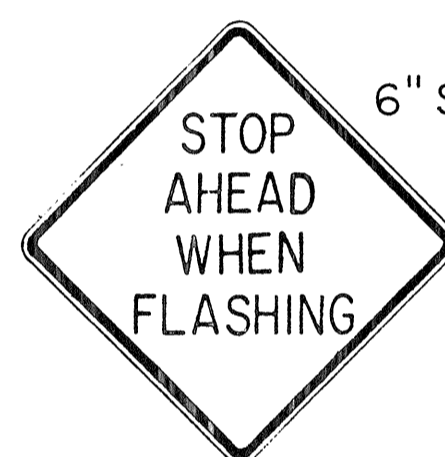
W17-1(L) 60" x 60"



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



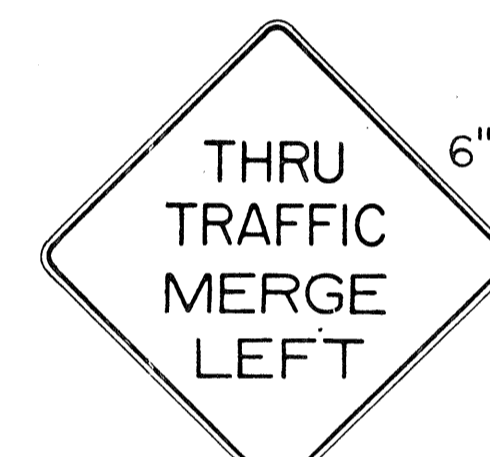
W3-2a 36" x 36"
24" x 18"
W3-2a-A 48" x 48"
24" x 18"



W3-4 48" x 48"



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



W9-3(L) 48" x 48"



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



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



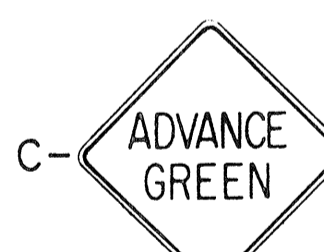
W11-9 36" x 36"
W11-9-A 48" x 48"



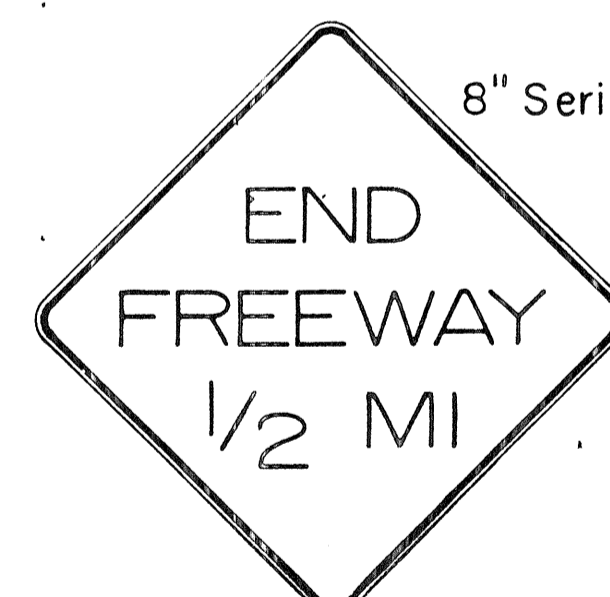
W14-4 36" x 36"
W14-4-A 48" x 48"



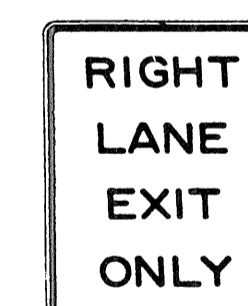
W15-1 24" x 24"



W15-2 24" x 24"



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



W18-1 48" x 60"



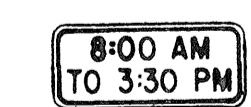
S1-1 36" x 36"



S2-1 36" x 36"



S3-1 30" x 30"



S4-1 24" x 10"



S4-2 24" x 10"



S4-3 24" x 8"



S4-4 24" x 10"



CW23-4 48" x 48"



R18-1 24" x 18"

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

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 103 approved 3/20/72	H.I.	5/2/78
2	Added General Note 6	H.I.	11.7.78

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978
SHEET No. P-26 OF 40 SHEETS DT 103

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-11737	1980	99	138



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"



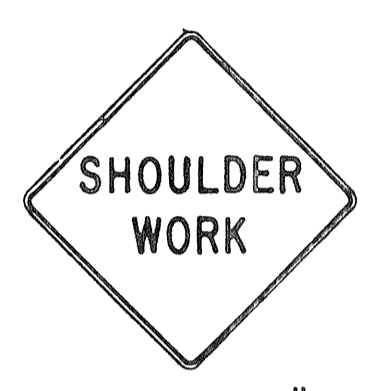
CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



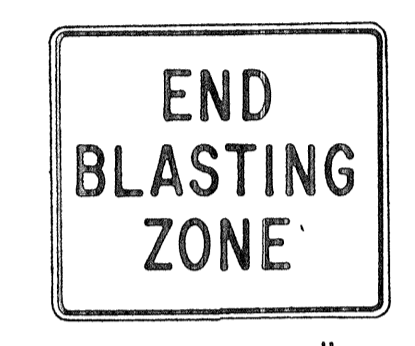
CW21-6 30" x 30"



CW22-1b 48" x 48"



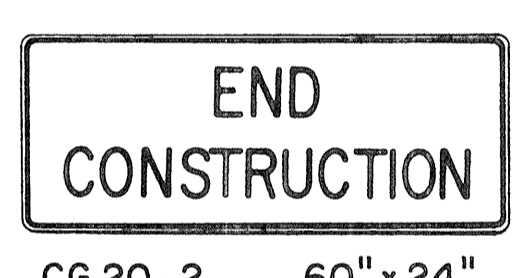
CW22-2 42" x 36"



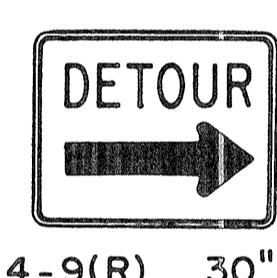
CW22-3 42" x 36"



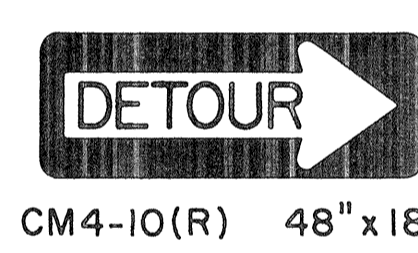
CG20-1(5) 60" x 36"



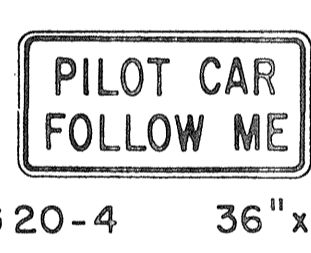
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



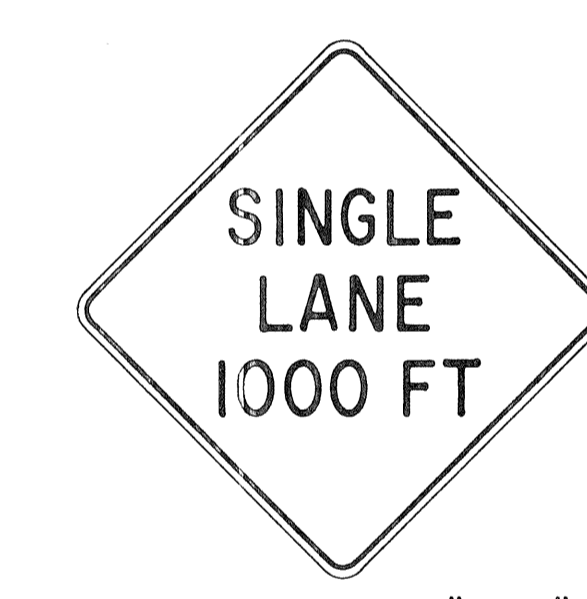
CM4-10(R) 48" x 18"



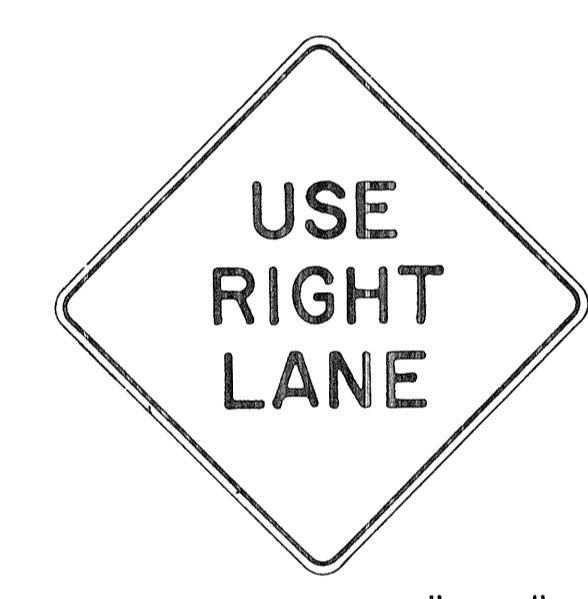
CG20-4 36" x 18"



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:
Eiichi Tanaka 3/21/72
 TRAFFIC ENGINEER DATE

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

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 104 Approved 12-30-69	H.T.	3/23/72
2	Revised General Note 1	H.T.	10/10/74
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
 LAND TRANSPORTATION FACILITIES DIVISION

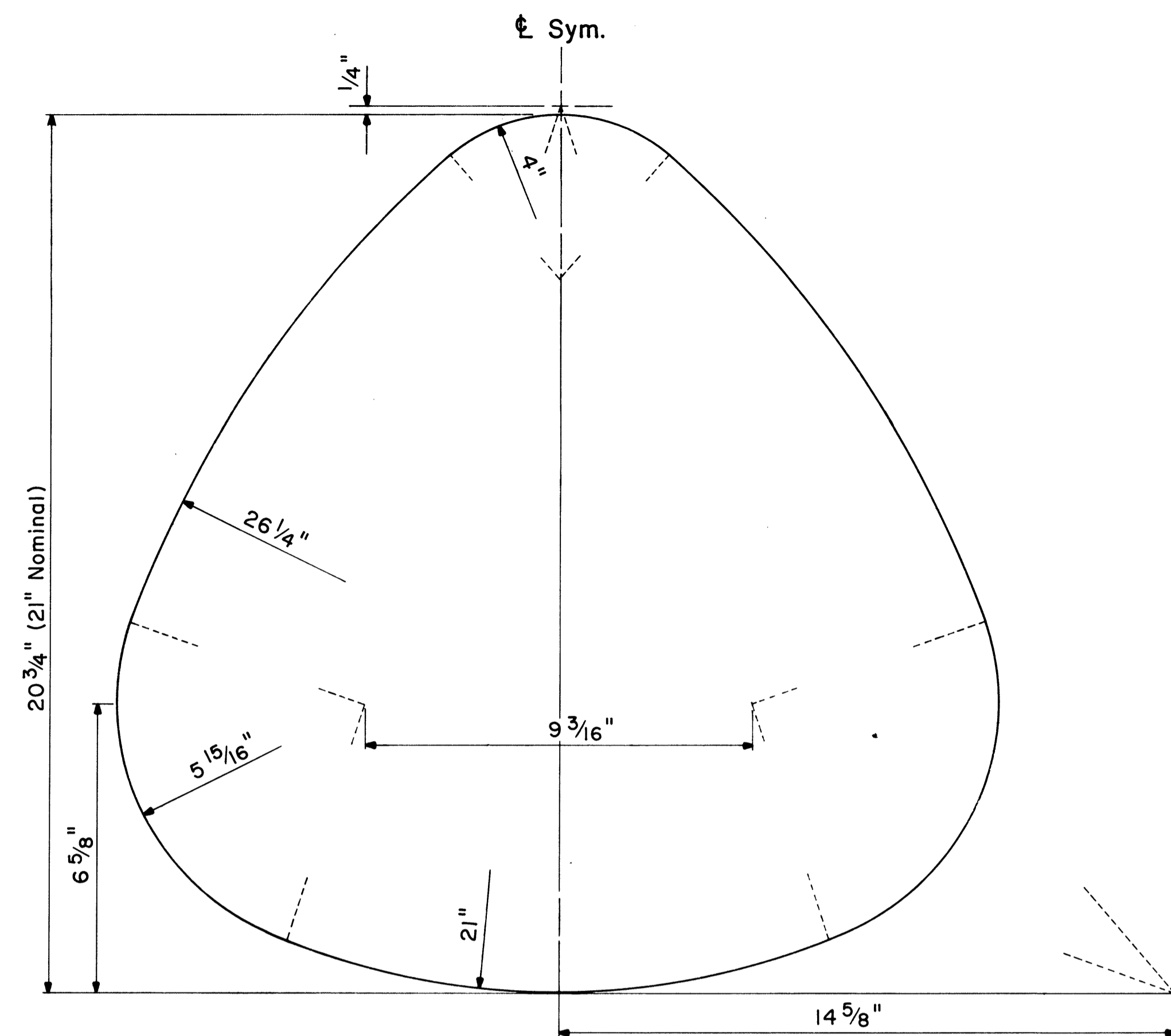
STANDARD DETAILS
CONSTRUCTION SIGNS

NOT TO SCALE

SHEET No. 99 OF 10 SHEETS DT 104

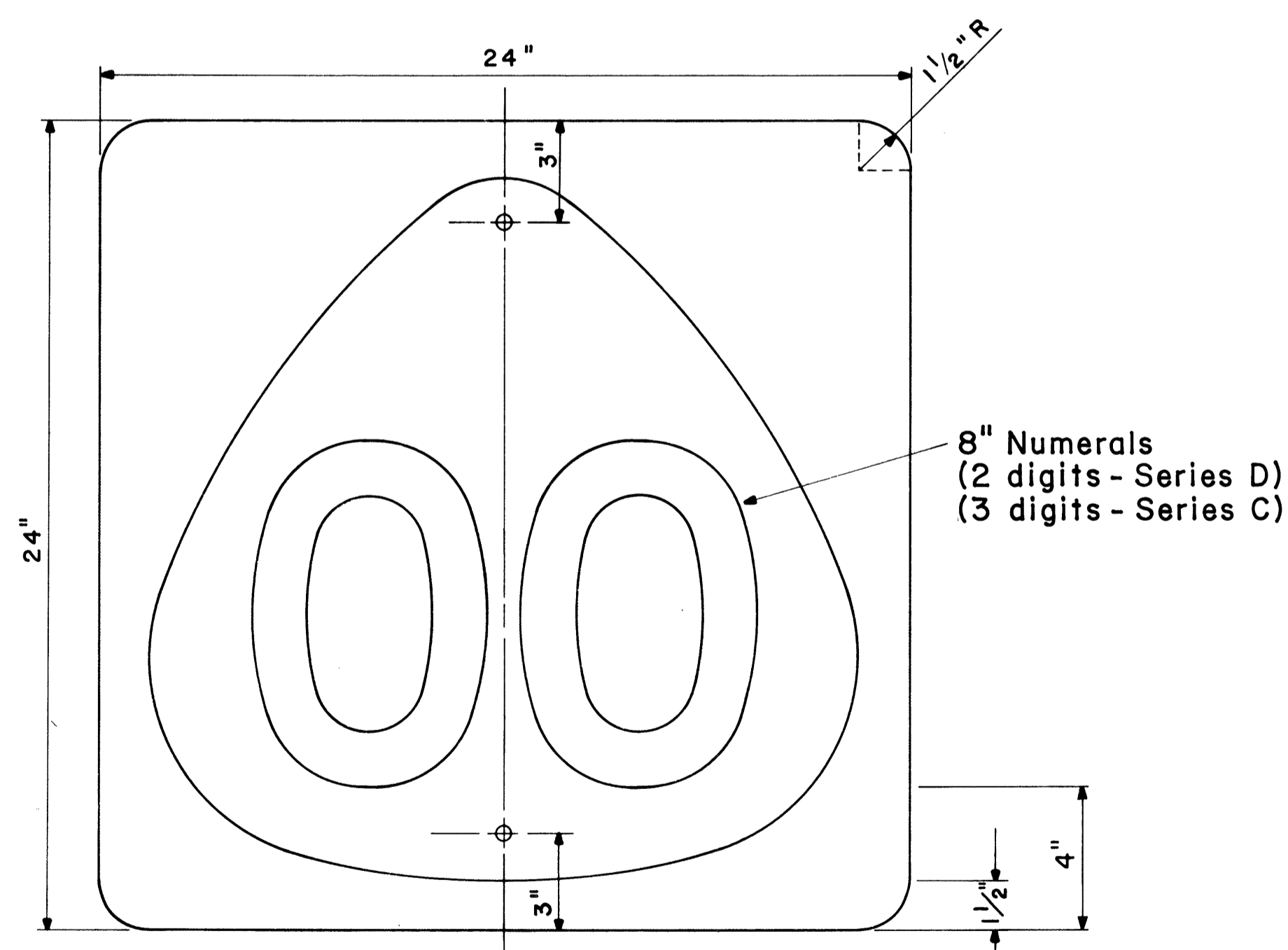
DESIGNED BY	DATE
CHECKED BY	
DESIGNED BY	
CHECKED BY	
DESIGNED BY	
CHECKED BY	
DESIGNED BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1(147)17	1980	100	338



STATE ROUTE MARKER DETAIL

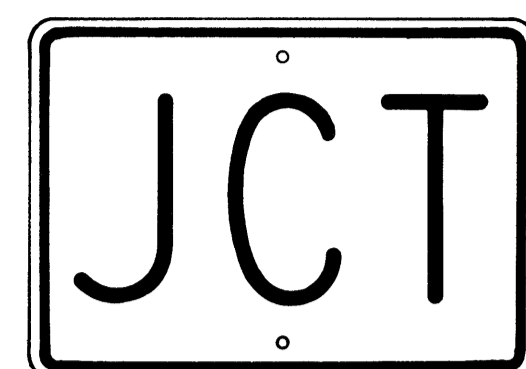
Not to Scale



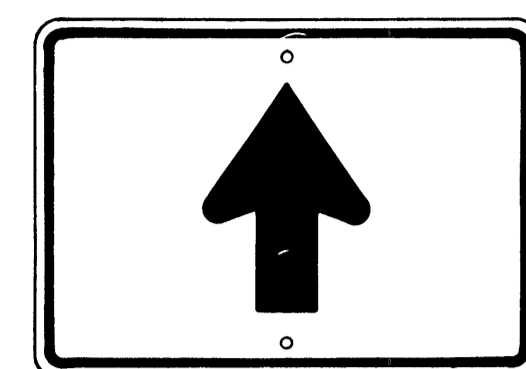
STATE ROUTE MARKER

MI-6 (00) 24" x 24"

Scale: 1/4" = 1"



M2-1 21" x 15"



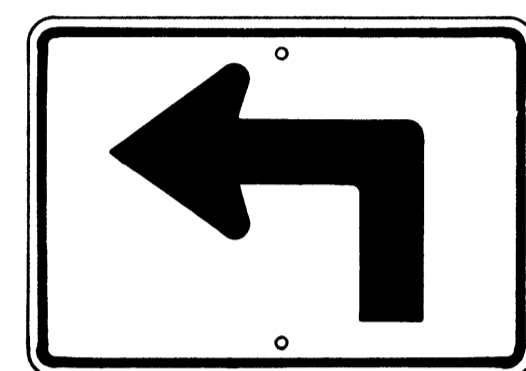
M6-3 21" x 15"



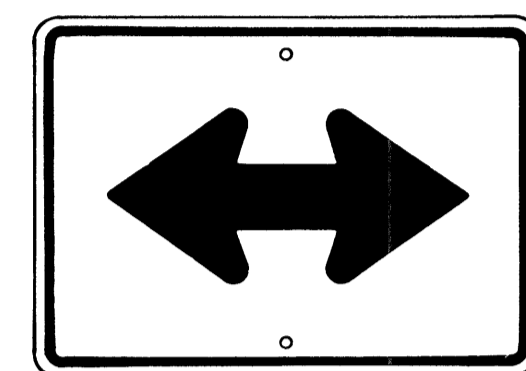
M3-1 24" x 12"
M3-1-A 36" x 18"



M4-1 24" x 12"



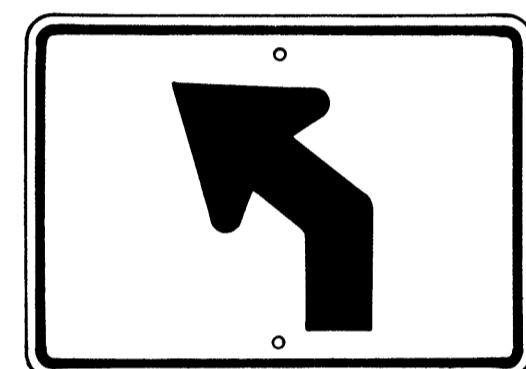
M5-1(L) 21" x 15"



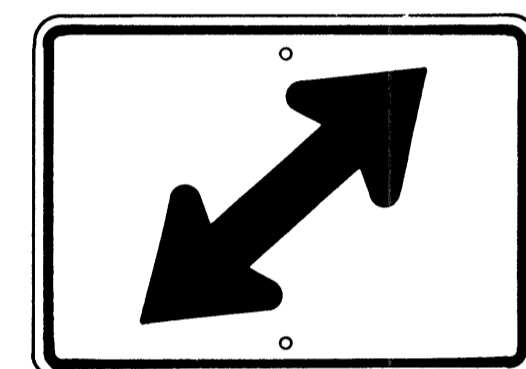
M6-4 21" x 15"



M4-2 24" x 12"



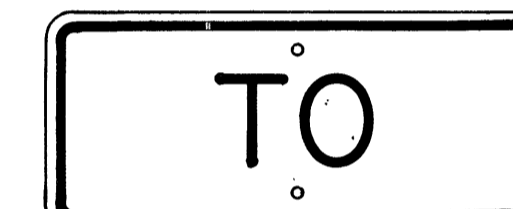
M5-2(L) 21" x 15"



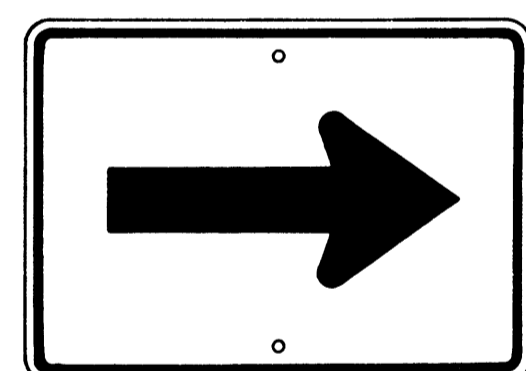
M6-5(R) 21" x 15"



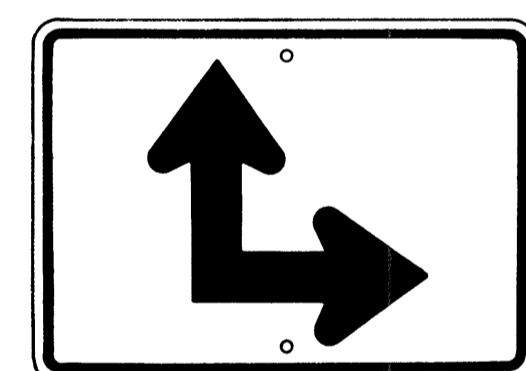
M4-3 24" x 12"



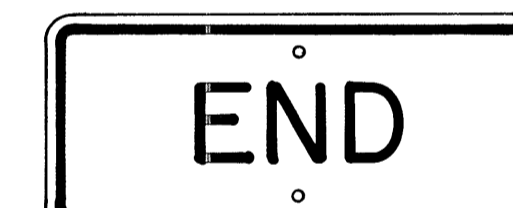
M4-5 24" x 12"



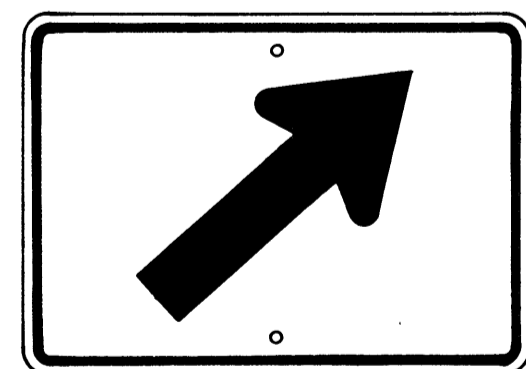
M6-1 21" x 15"



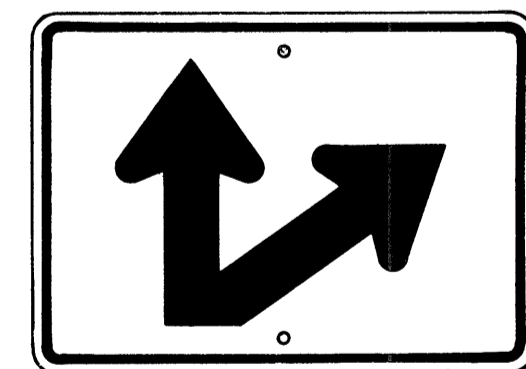
M6-6(R) 21" x 15"



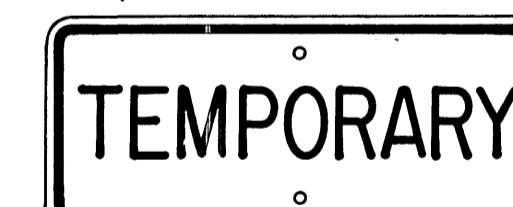
M4-6 24" x 12"



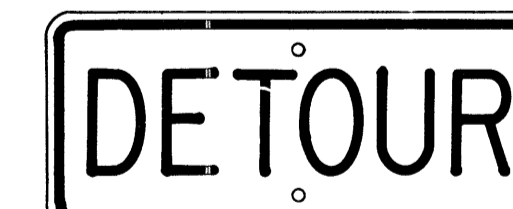
M6-2(R) 21" x 15"



M6-7(R) 21" x 15"



M4-7 24" x 12"



M4-8 24" x 12"

AUXILIARY MARKERS

Not to Scale

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.

APPROVAL RECOMMENDED:

Eiichi Tanaka 6/6/72
TRAFFIC ENGINEER DATE

APPROVED:

Abdul S. Salim 6-7-72
ASSISTANT CHIEF, ENGINEERING DATE

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

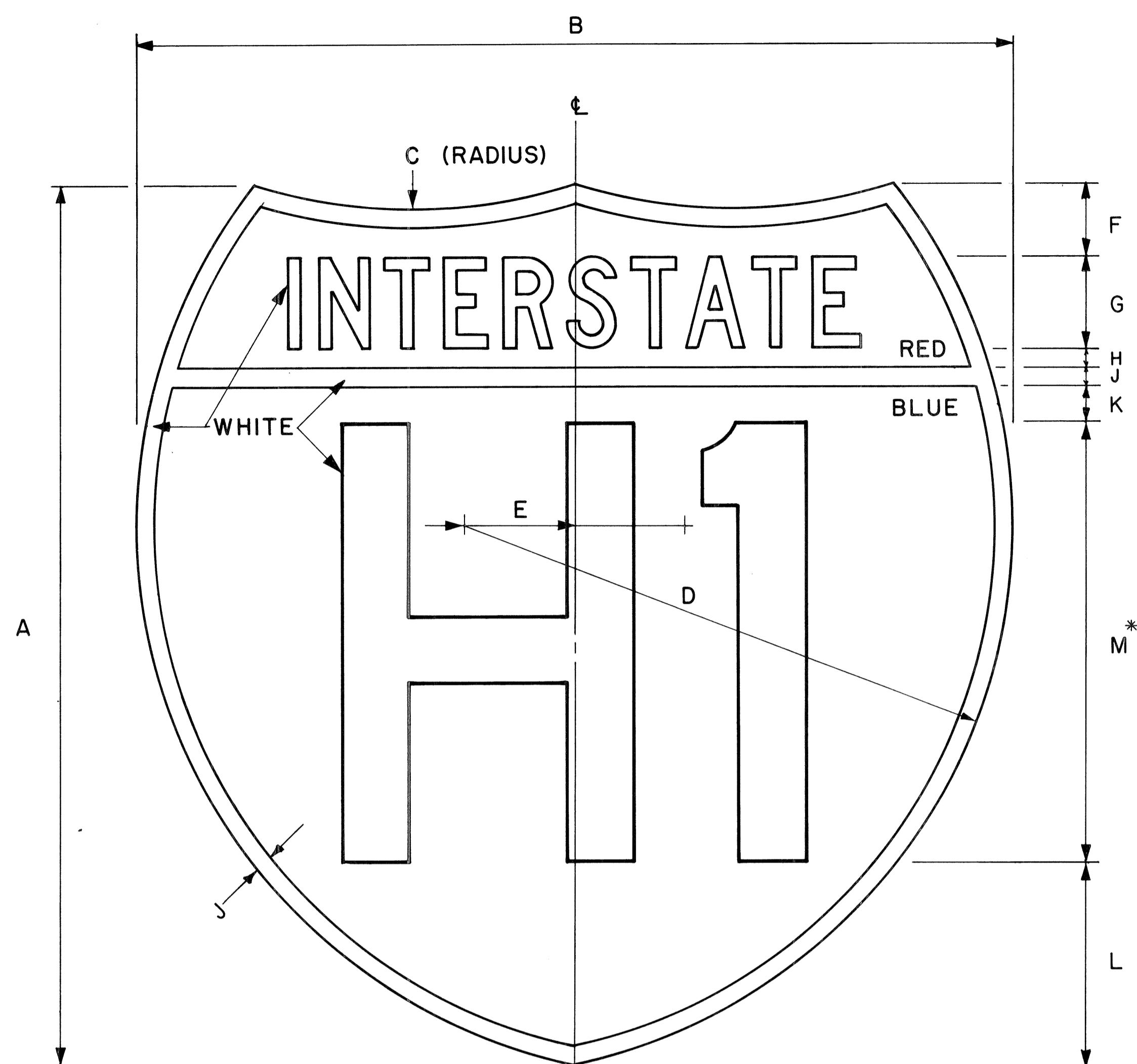
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
STATE ROUTE MARKER
AND AUXILIARY MARKERS

Scale: As Shown

SHEET NO. P-28 OF 40 SHEETS DT 105

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-1(147)17	1980	101	338



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 $\frac{3}{8}$ " 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

IM-1()

Scale: $\frac{3}{8}$ " = 1"

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:

Harold 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: $\frac{3}{8}$ " = 1" Date: January, 1978

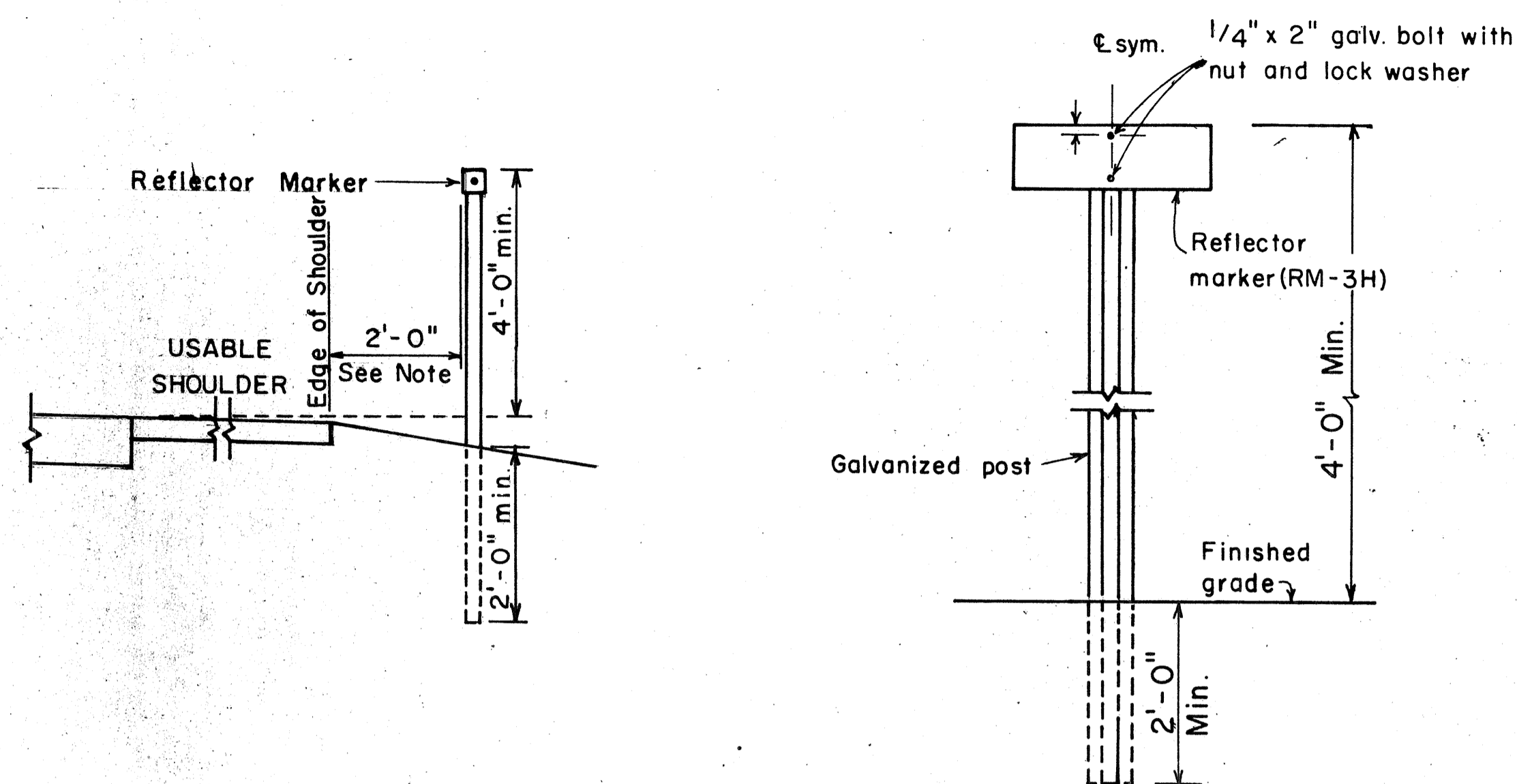
SHEET NO. P-29 OF 40 SHEETS DT 106

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

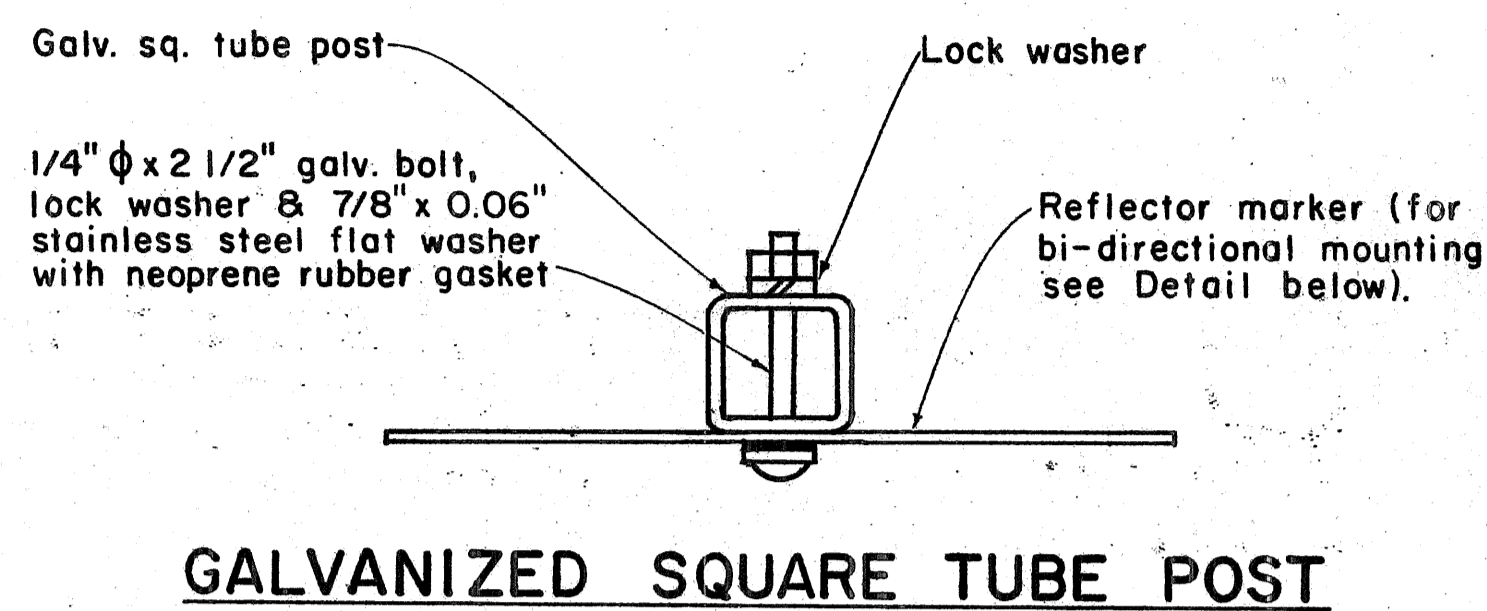
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HH-1(047)17	1980	103	338

GENERAL NOTES:

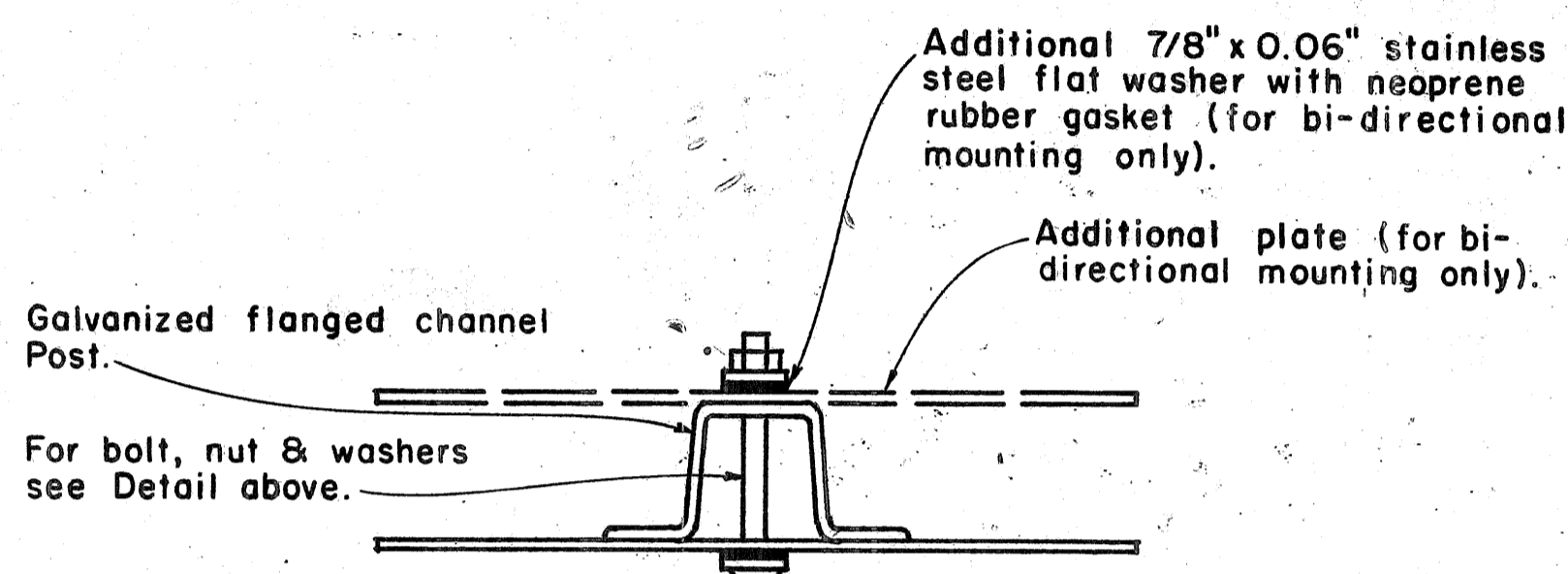
1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
2. (R) or (L) indicates right or left and shall be as shown on the plans.
3. Reflector markers RM-1 and RM-2 shall be:
 - a) Yellow if placed along the left edge of divided 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 reflector marker RM-9, reflective sheeting material may be used as an alternate.
5. For RM-4, the stripes shall slope downward at an angle of 45° in the direction of traffic.



REFLECTOR MARKER MOUNTING DETAIL

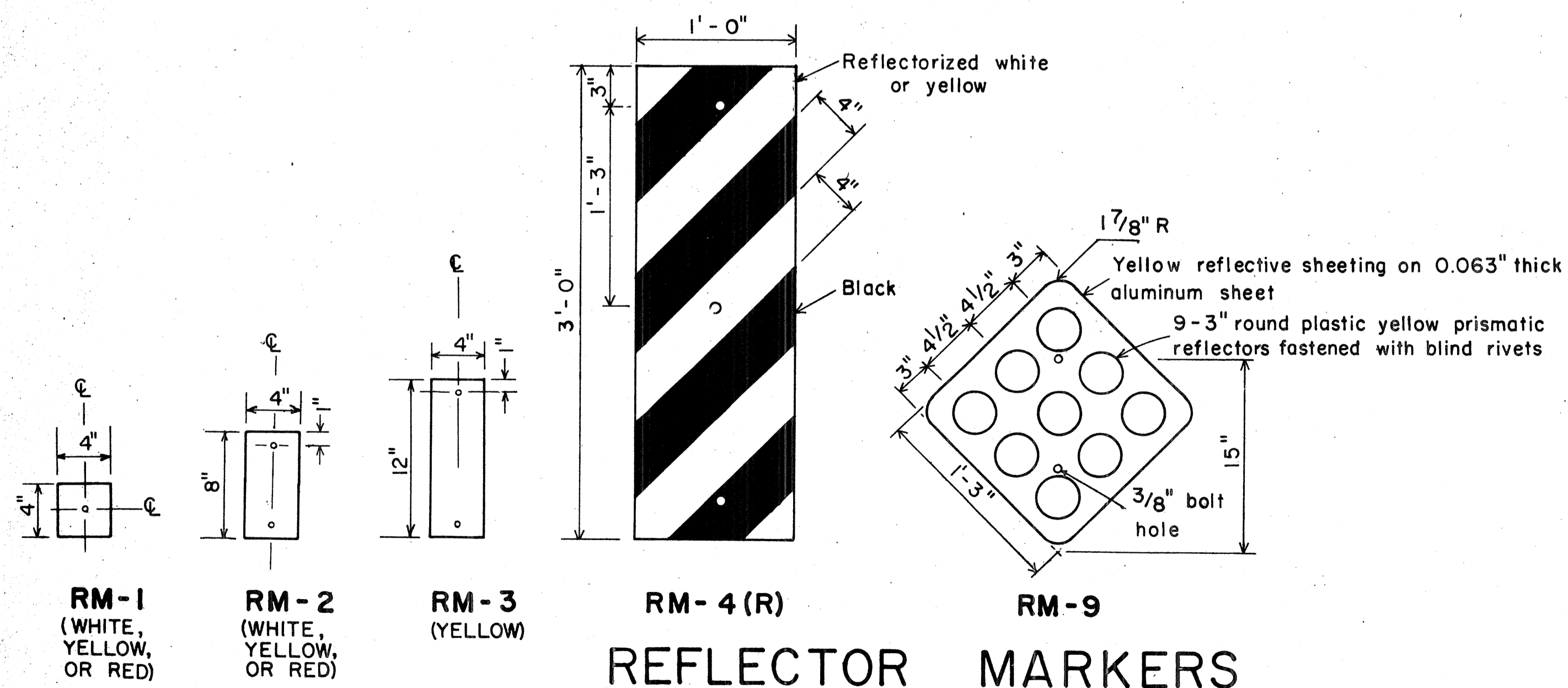


GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS



REFLECTOR MARKERS

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

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

NO.	REVISION	APPROVED BY	DATE
1	Revised Mounting Details	H-1	4/29/80

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS REFLECTOR MARKERS

Not to scale June, 1977

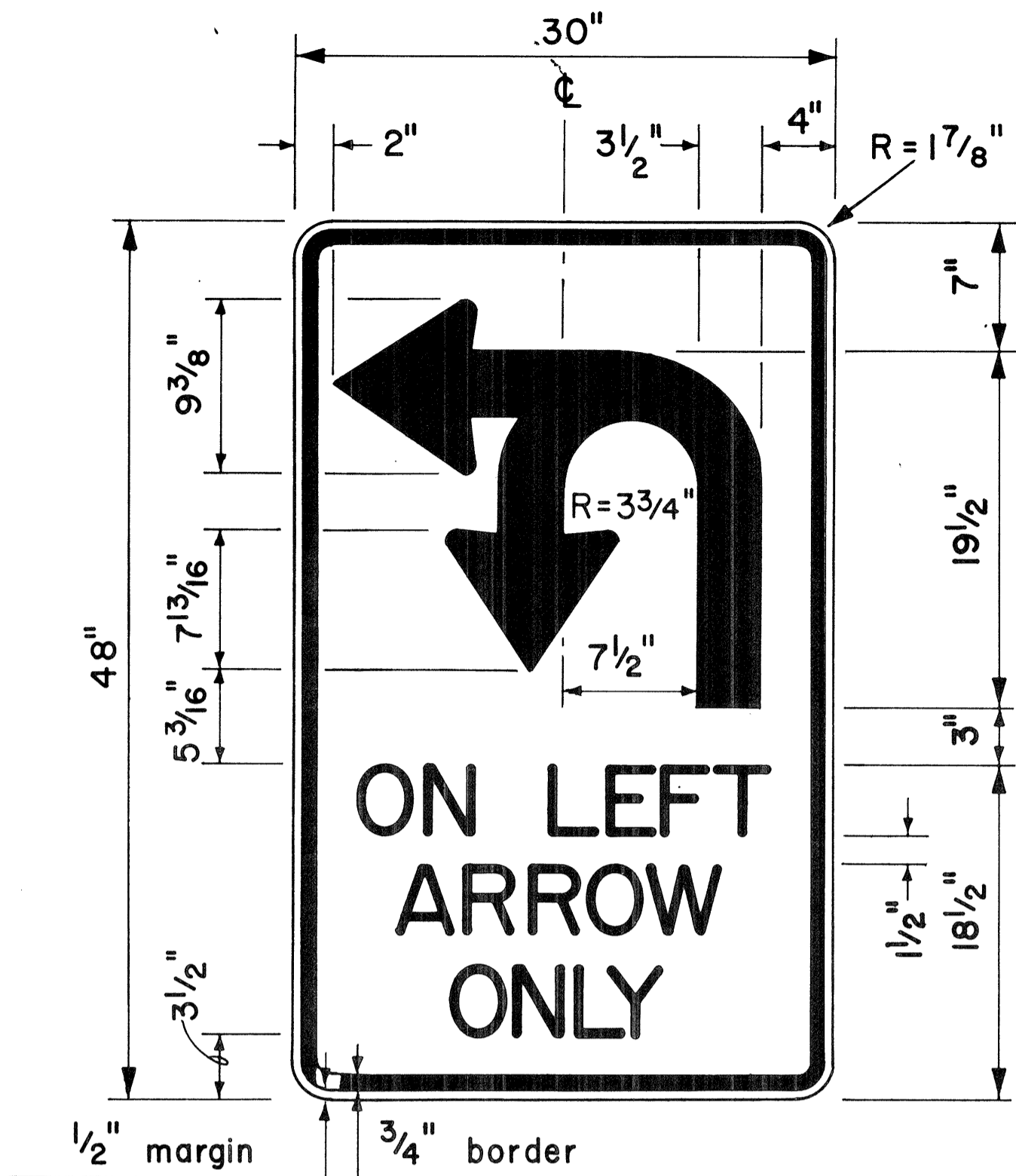
SHEET No. P-31 OF 40 SHEETS DT 110

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

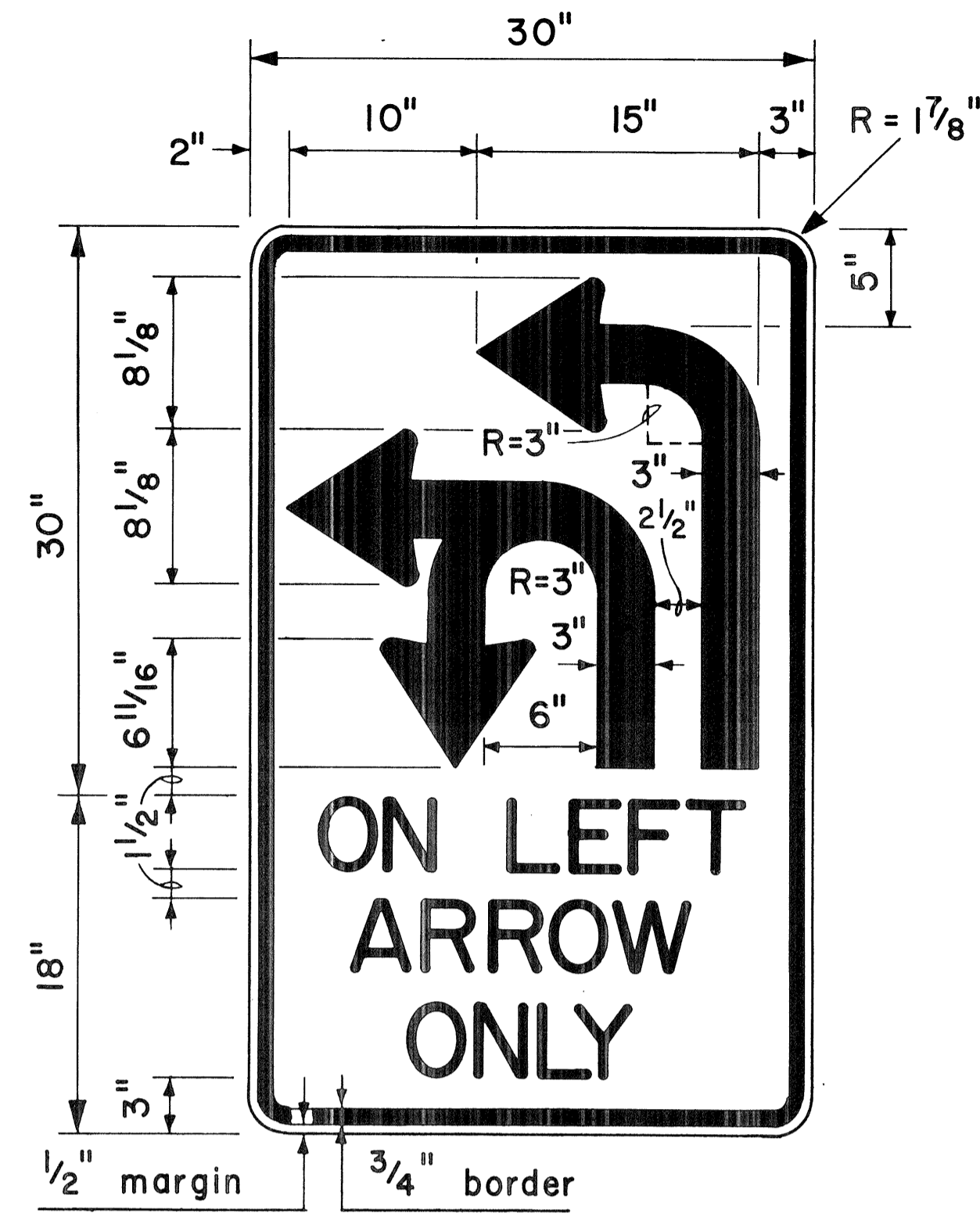
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	E-H-1(4)77	1980	104	338

GENERAL NOTES

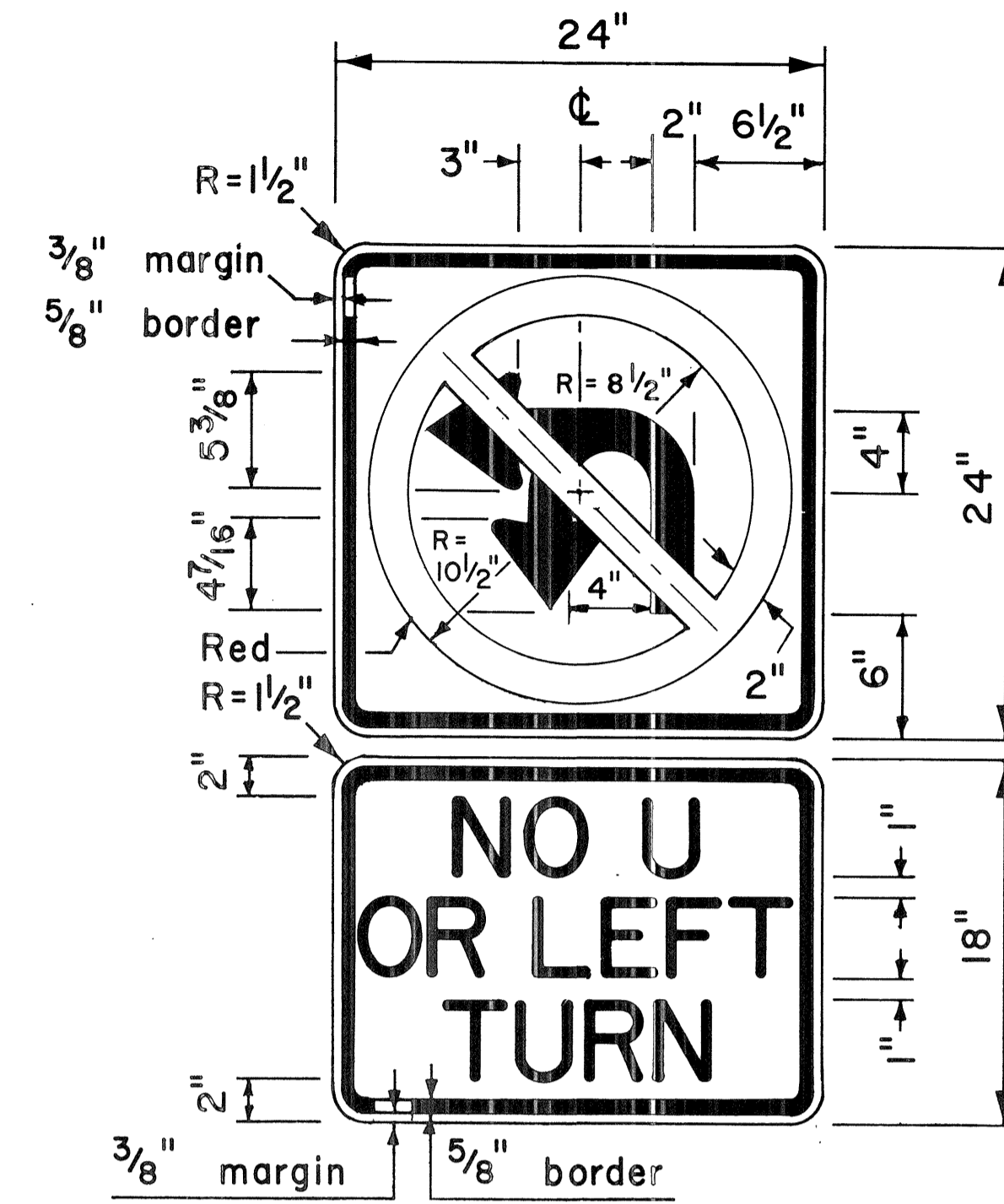
1. Sign details shall conform to the latest editions of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and "Standard Highway Signs," and as amended.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs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



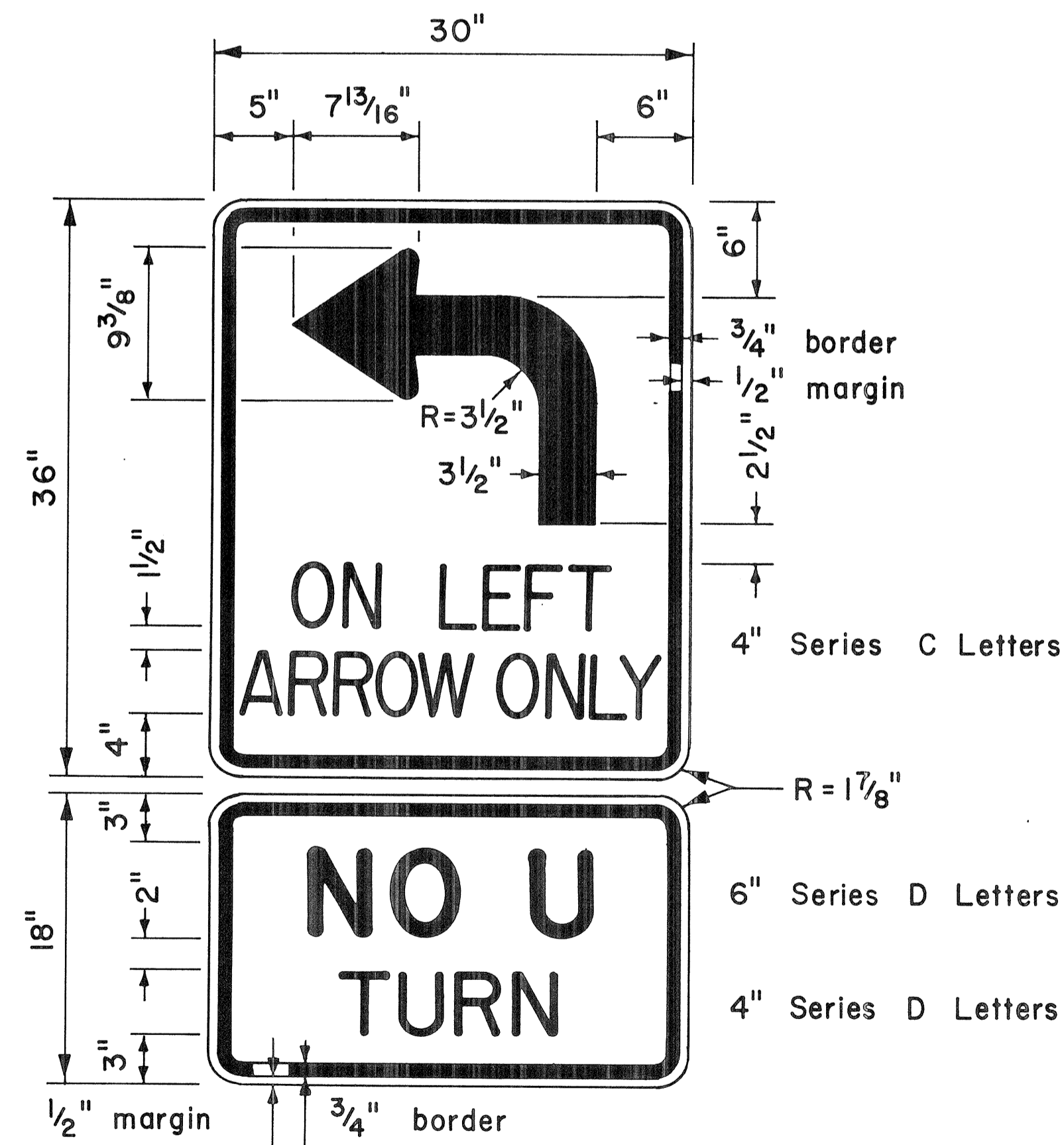
4" Series D Letters
R17-1



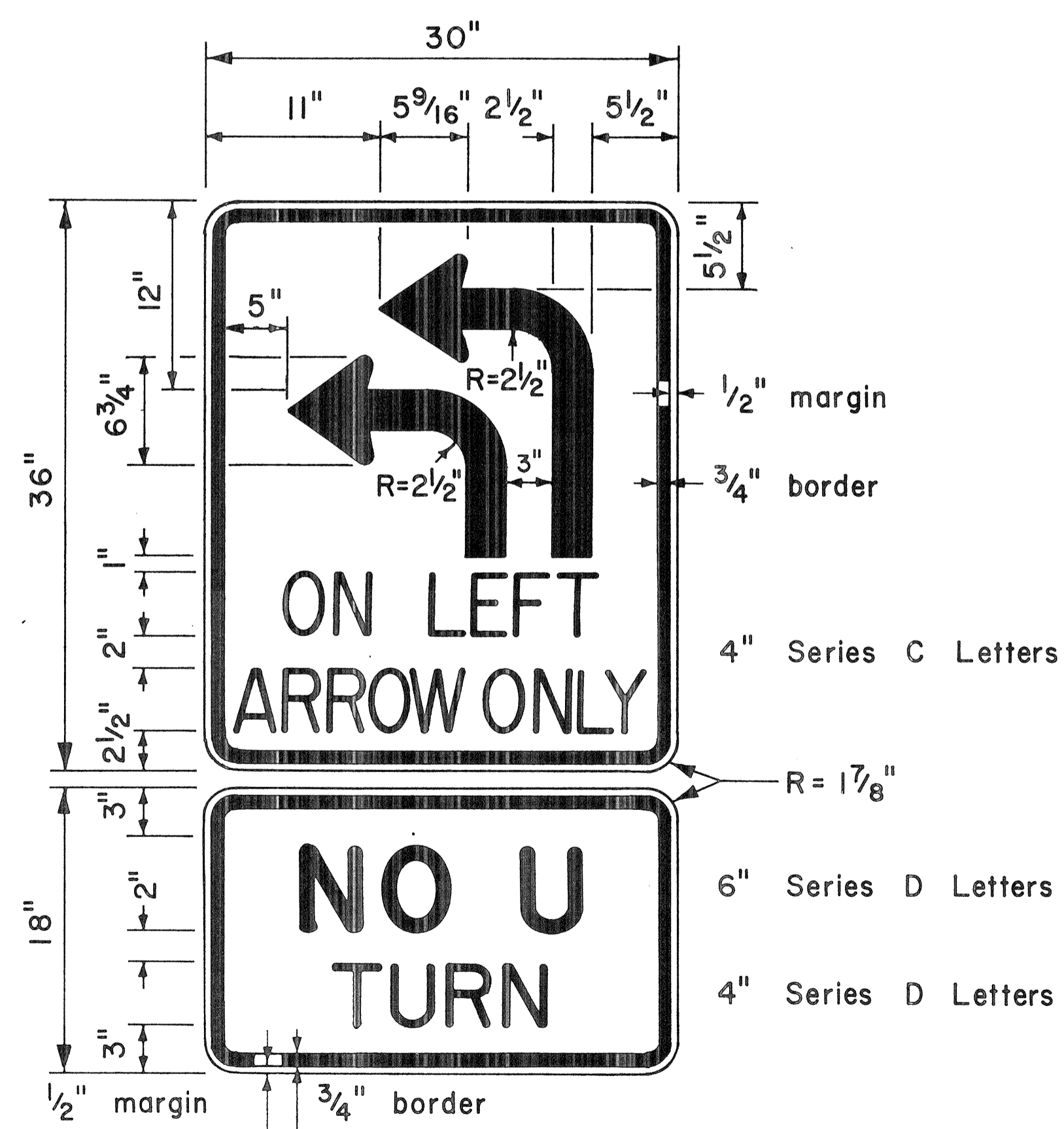
4" Series D Letters
R17-2



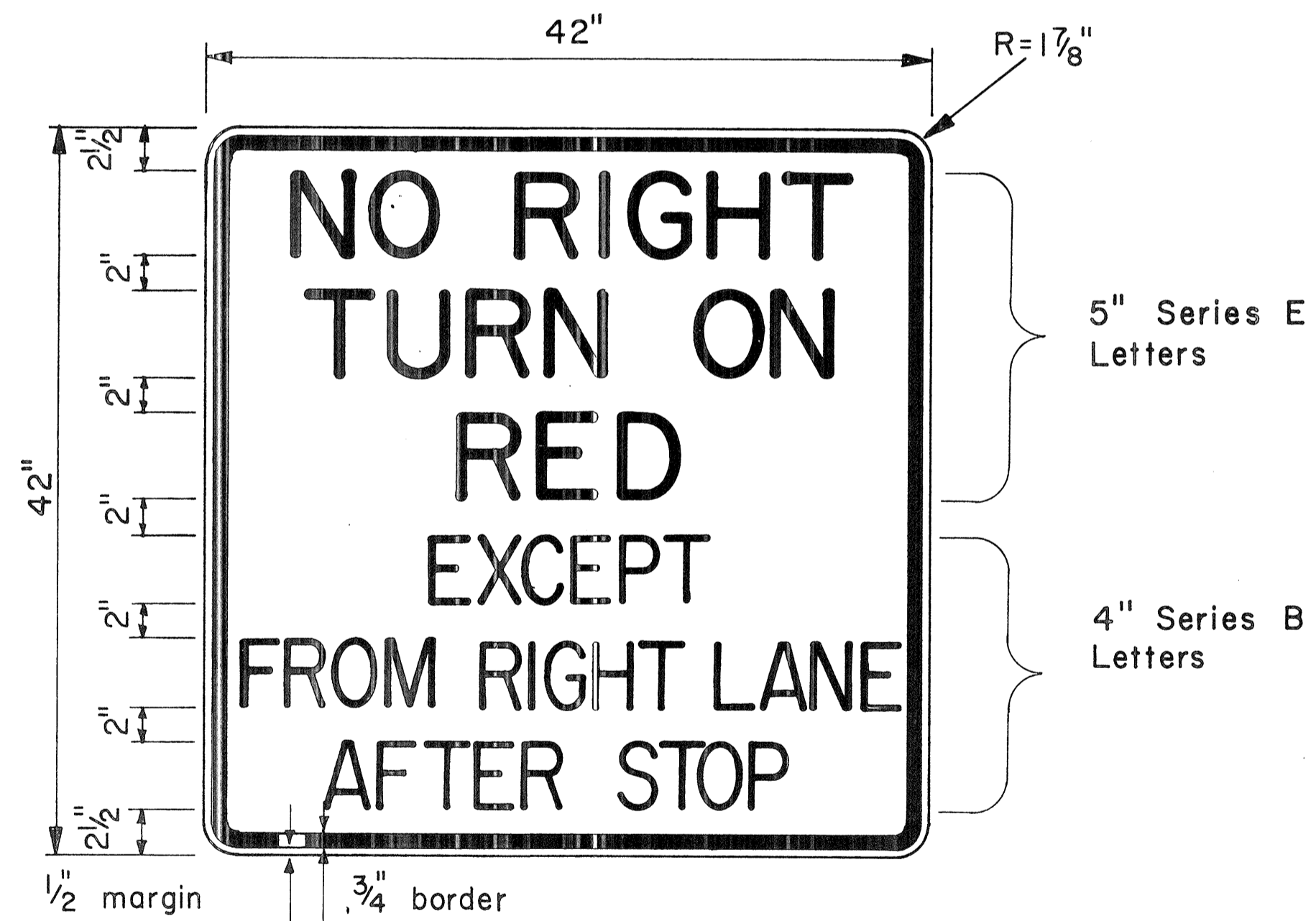
4" Series D Letters
R3-4b



R17-3



R17-4



RIO-11d

NO.	REVISION	APPROVED BY	DATE

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

APPROVED:
Herbert Sakai 8/16/77
ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS
INTERSECTION SIGNS

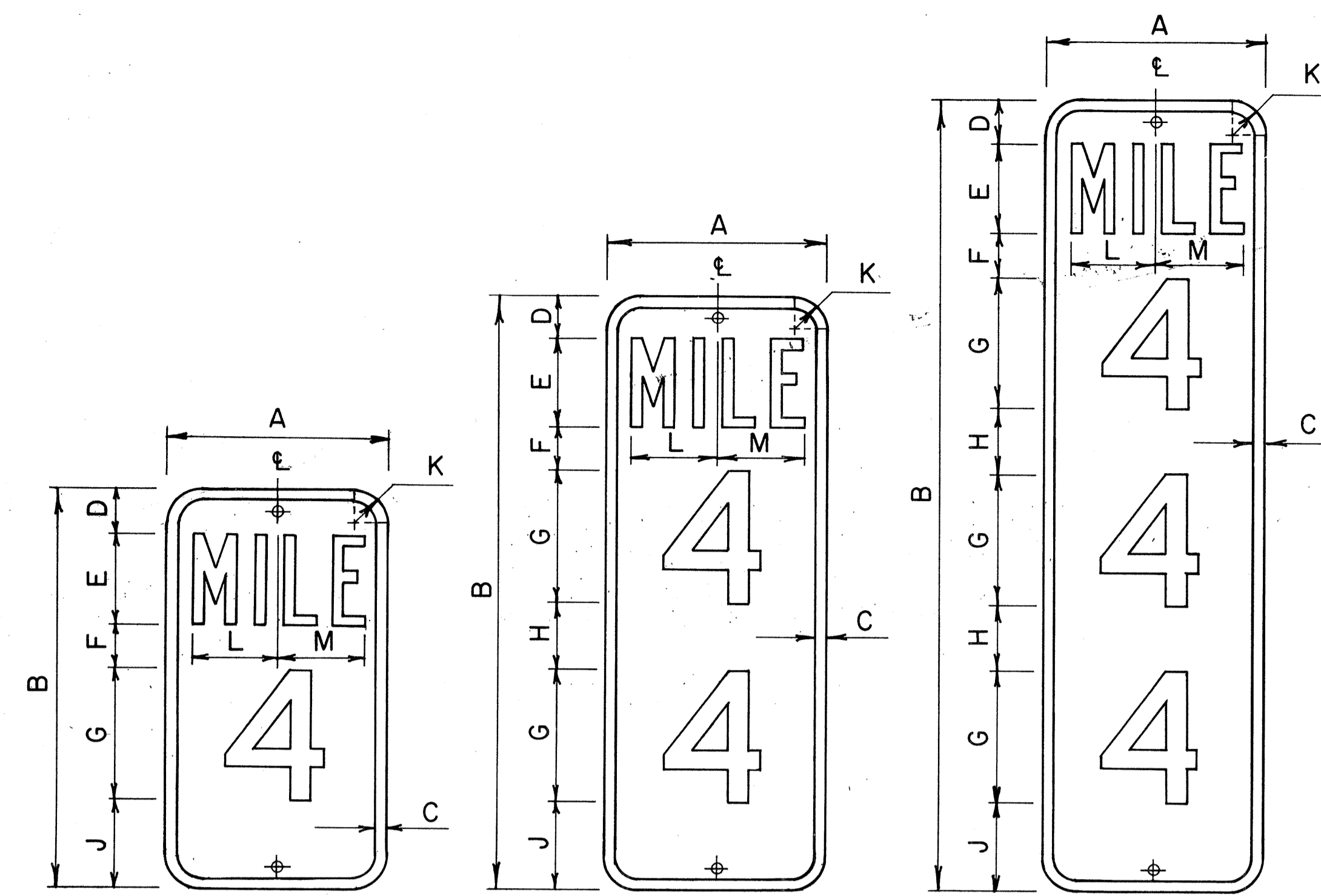
Scale: 1/2" = 1'-0" Date: Aug., 1977
SHEET NO. 104 OF 10 SHEETS DT 112

ORIGINAL PLAN	DATE
SURVEY ELICITED 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.	1-HI-1(147)17	1980	105	338

GENERAL NOTES:

- Milepost marker and highway route number plates 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.
- Milepost markers and highway route numbers shall be completely reflectorized with reflective sheeting as follows:
 - Milepost markers shall have white legends and border on a green background.
 - Highway route numbers shall have black numerals on a white background.
- The plate backings for milepost markers and highway route numbers shall conform to the requirements for standard highway signs. The plates shall have 3/8" bolt holes drilled at appropriate locations.
- Highway route number plates shall be used in conjunction with milepost marker plates on all roadways, except Interstate freeways. Fabrication and installation costs of highway route number plates shall be considered incidental to the milepost marker assembly.
 - One milepost on each side of multi-lane roadways.
 - Back-to-back mileposts on one side of 2-lane roadways. (Right side of roadway in direction of increasing mileage.)

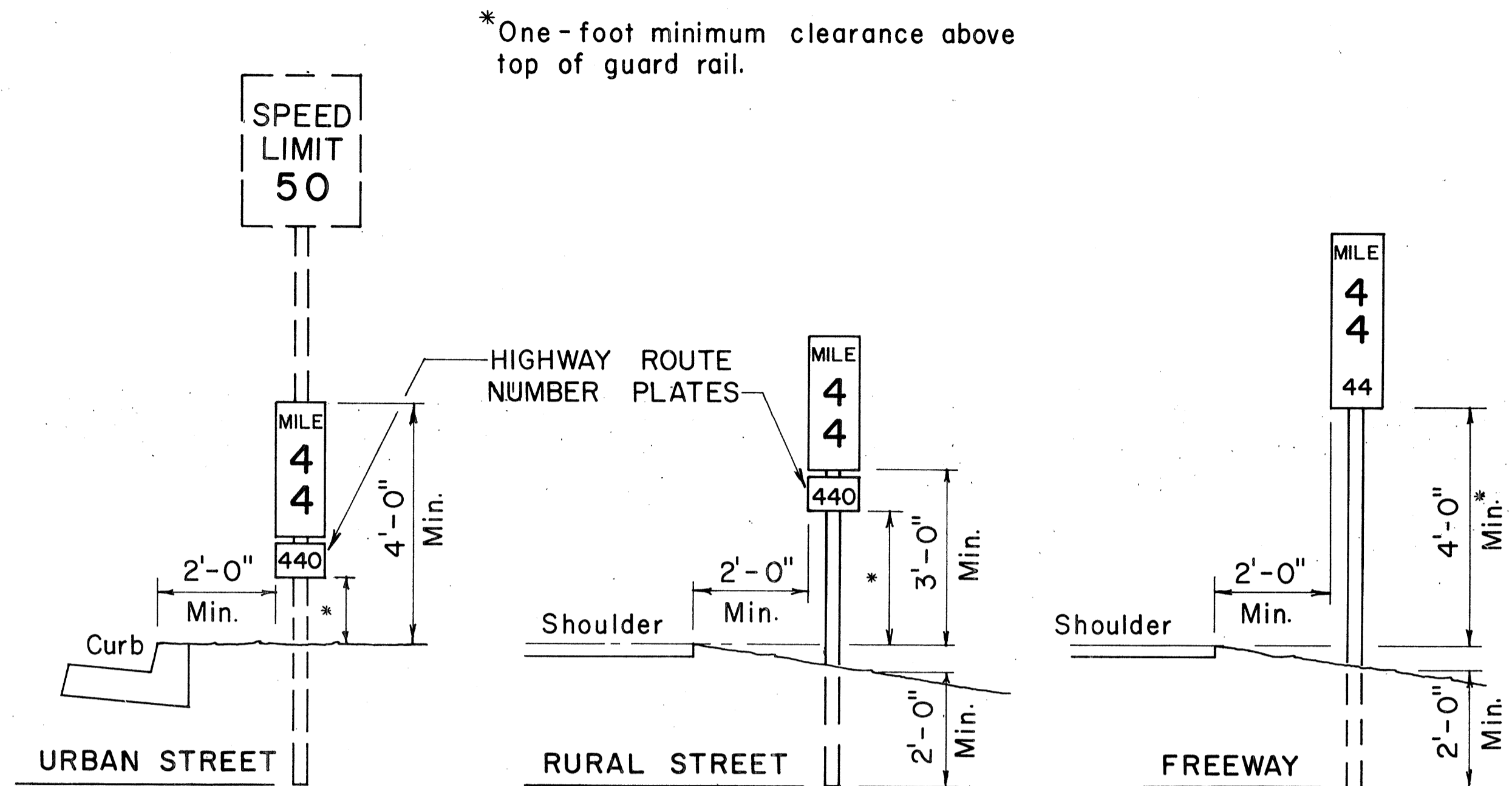


DIO-1 10" x 18" DIO-2 10" x 27" DIO-3 10" x 36"
 DIO-4 12" x 24" DIO-5 12" x 36" DIO-6 12" x 48"

MILEPOST MARKER PLATE DETAILS

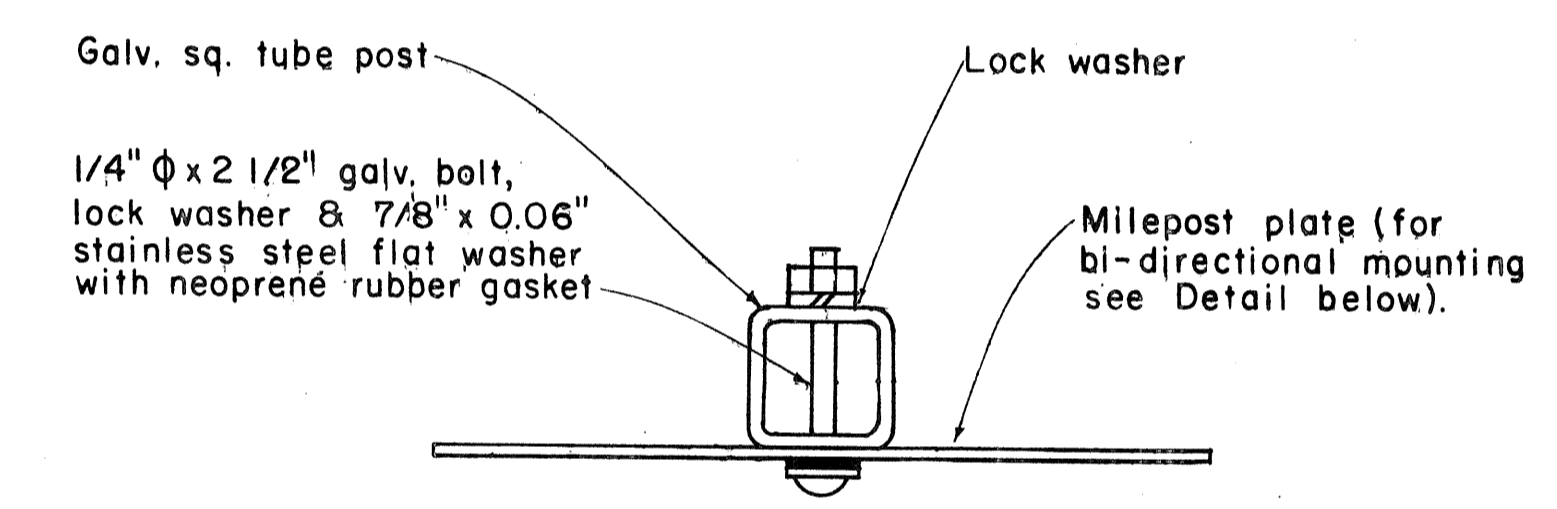
Scale: 3/16" = 1"

MILEPOST PLATE SCHEDULE (INCHES)															
NAME	SIZE	A	B	C	D	E	F	G	H	J	K	L	M	LETTER SERIES	NUMERAL SERIES
DIO-1	10 x 18	10	18	1/2	2	4	2	6		4	1 1/2	3 5/8	3 3/8	B	C
DIO-4	12 x 24	12	24	1/2	3	4	3	10		4	1 1/2	4 5/8	4 7/8	C	C
DIO-2	10 x 27	10	27	1/2	2	4	2	6	3	4	1 1/2	3 5/8	3 3/8	B	C
DIO-5	12 x 36	12	36	1/2	3	4	3	10	3	3	1 1/2	4 5/8	4 7/8	C	C
DIO-3	10 x 36	10	36	1/2	2	4	2	6	3	4	1 1/2	3 5/8	3 3/8	B	C
DIO-6	12 x 48	12	48	1/2	3	4	3	10	2 1/2	3	1 1/2	4 5/8	4 7/8	C	C

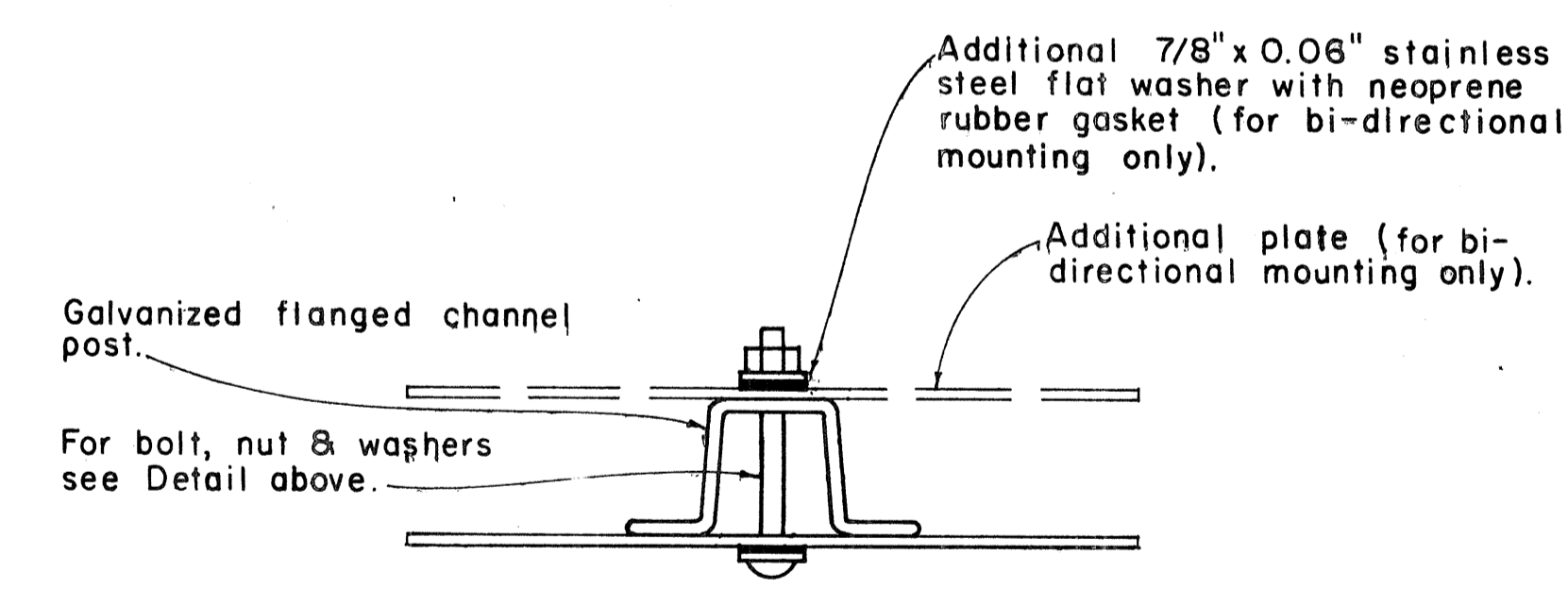


TYPICAL ROADSIDE INSTALLATION

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



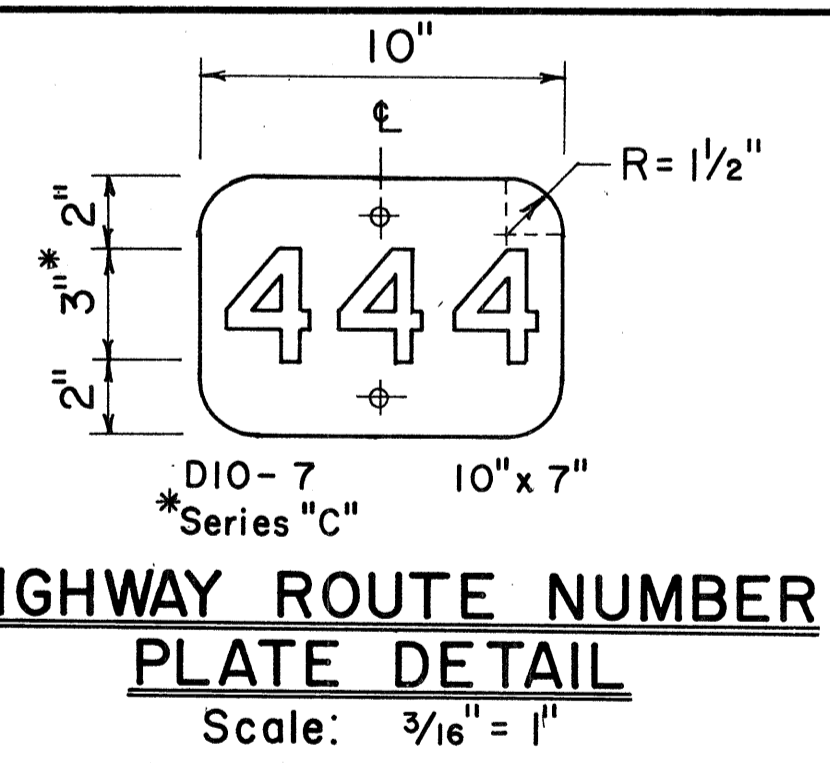
GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

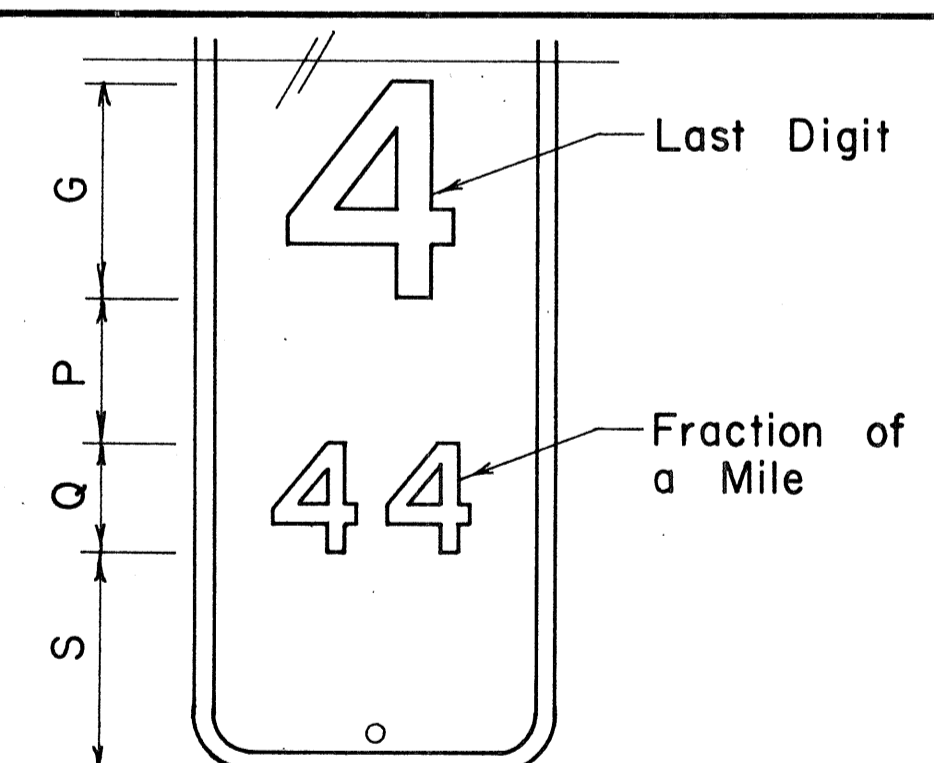
TYPICAL MOUNTING DETAILS

Scale: 1/2" = 1"



HIGHWAY ROUTE NUMBER PLATE DETAIL

Scale: 3/16" = 1"



MILEPOST MARKER FRACTION DETAIL

Scale: 3/16" = 1"

MILEPOST PLATE SCHEDULE WITH FRACTION OF A MILE							
NAME	SIZE	G	P	Q	S	NUMERAL SERIES	
DIO-1a	10" x 27"	6"	4"	3"	6"	C	
DIO-4a	12" x 36"	10"	4"	5"	7"	C	
DIO-2a	10" x 36"	6"	4"	3"	6"	C	
DIO-5a	12" x 48"	10"	4"	5"	6"	C	
DIO-3a	10" x 45"	6"	4"	3"	6"	C	
DIO-6a	12" x 60"	10"	4"	5"	6"	C	

NO.	REVISION	APPROVED BY	DATE
1	Revised Mounting Details	H.K.	4/23/80

APPROVAL RECOMMENDED:
Eichi Tanaka 1/17/78
 TRAFFIC ENGINEER DATE

APPROVED:
Robert S. Sakai 1/12/78
 ASSISTANT CHIEF, ENGINEERING DATE

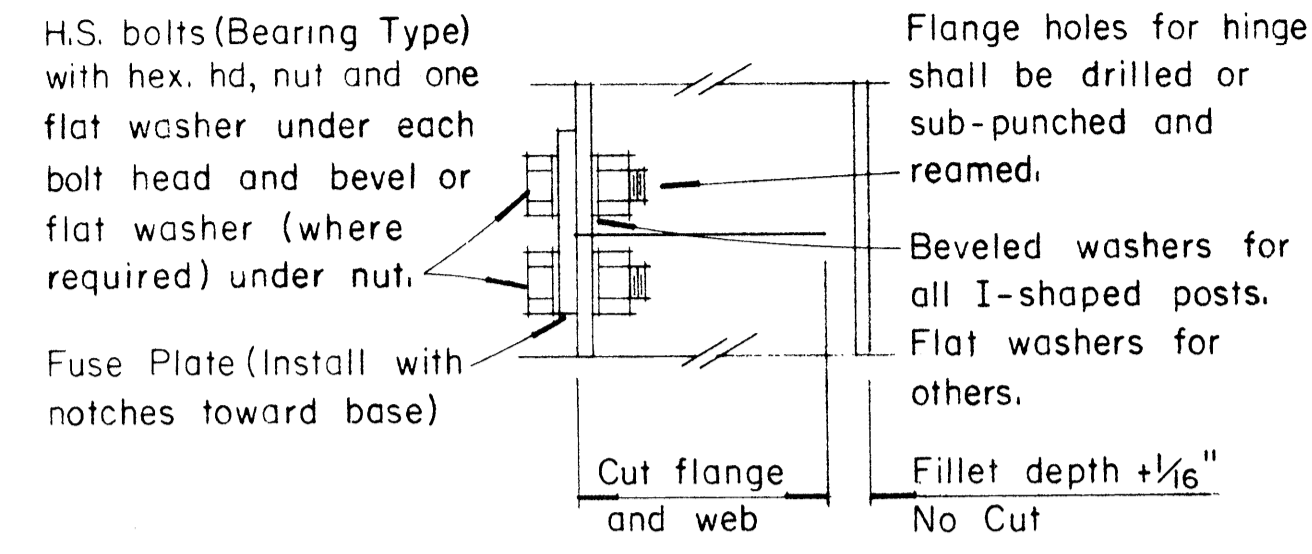
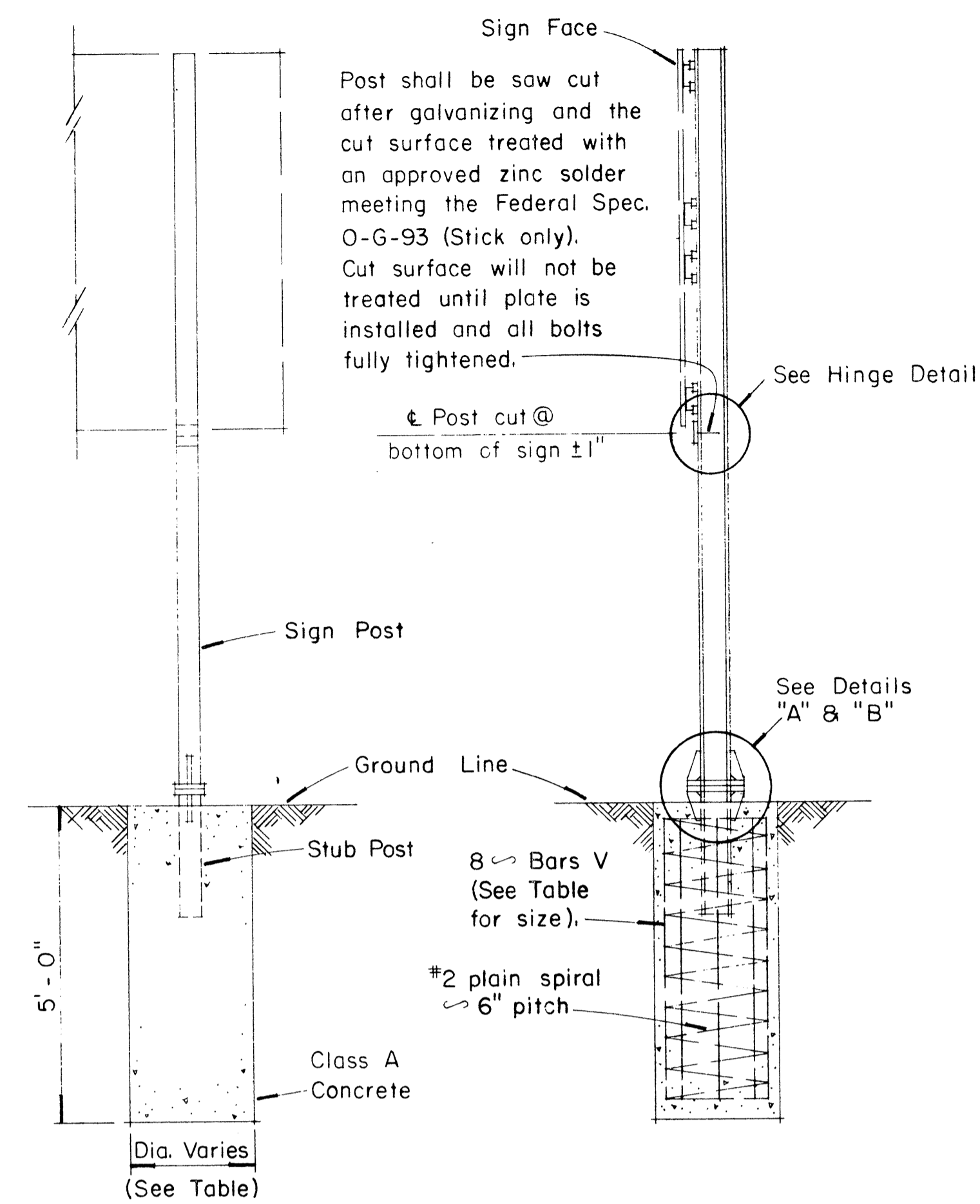
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
MILEPOSTS

SCALE: As Shown DATE: December, 1977

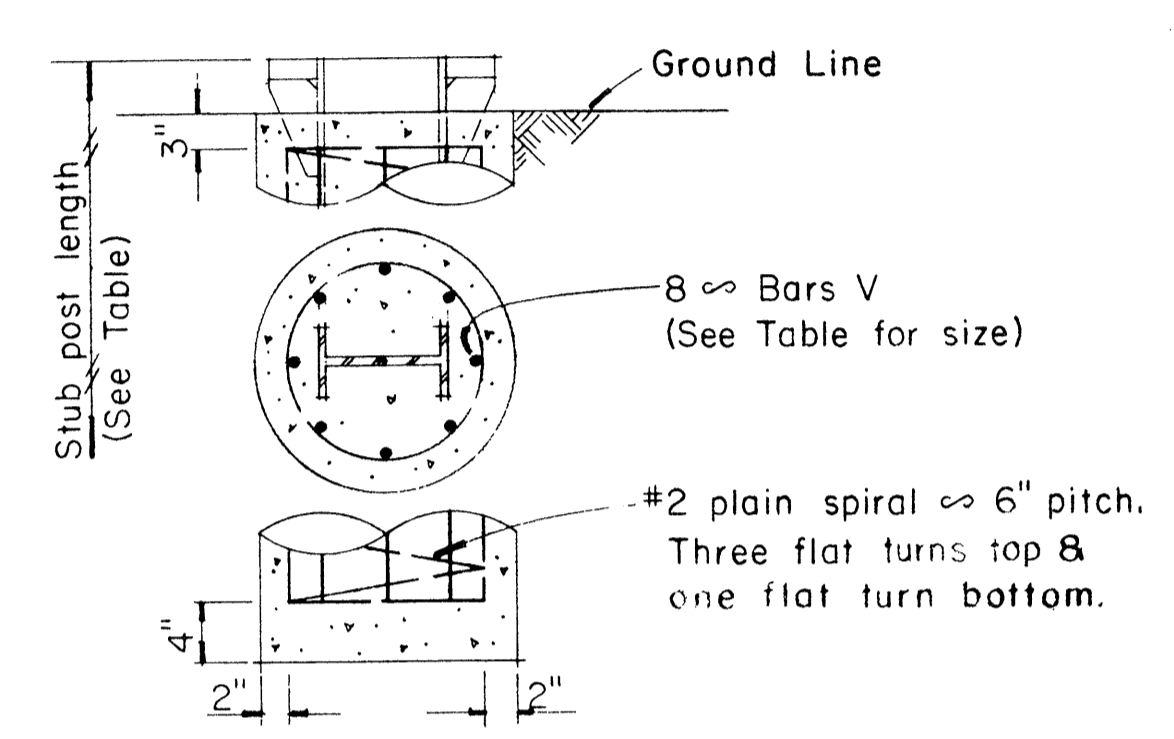
ORIGINAL PLAN
 SURVEY PLOTTED BY
 DRAWN BY
 TRACED BY
 DESIGNED BY
 CHECKED BY
 No.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(14)	1980	106	338

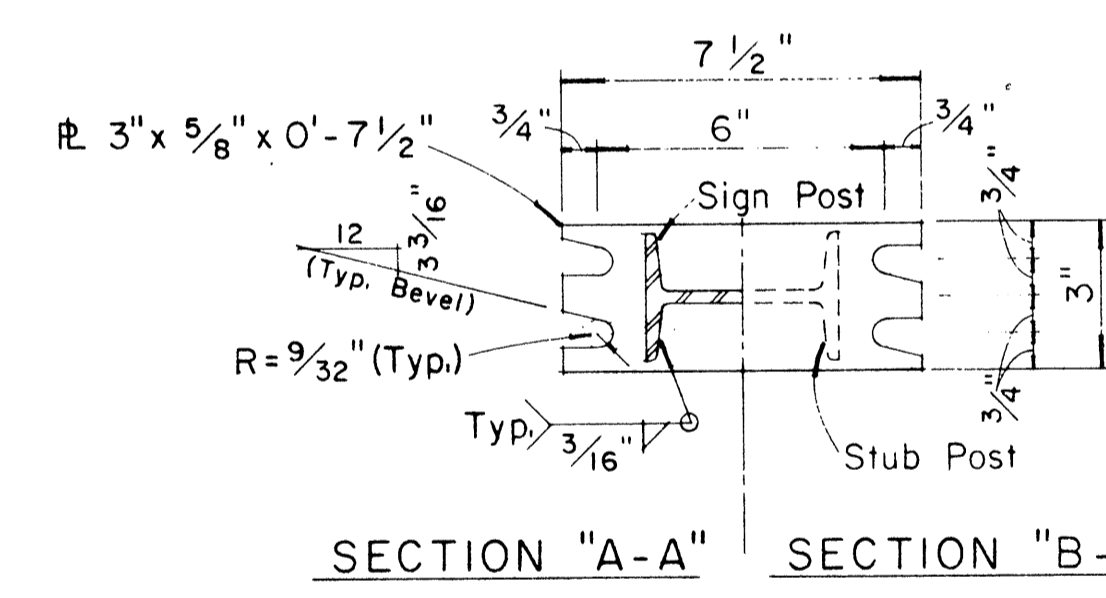
BASE CONNECTION DATA TABLE											FUSE PLATE DATA TABLE										FOUNDATION DATA				
Post Size	Bolt Size & Torque	A	B	C	D	E	t1	t2	W	R	F	G	H	J	K	L	N	d1	t3	Bolt Dia.	Wt. of each Fuse Pl.	Stub Length	Stub Projection	Footing Diameter	Bars V Size
6 B 8.5	5/8" φ x 2 3/4" Torque = 450" #	5"	2"	1 1/4"	2 3/4"	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	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										



HINGE DETAIL

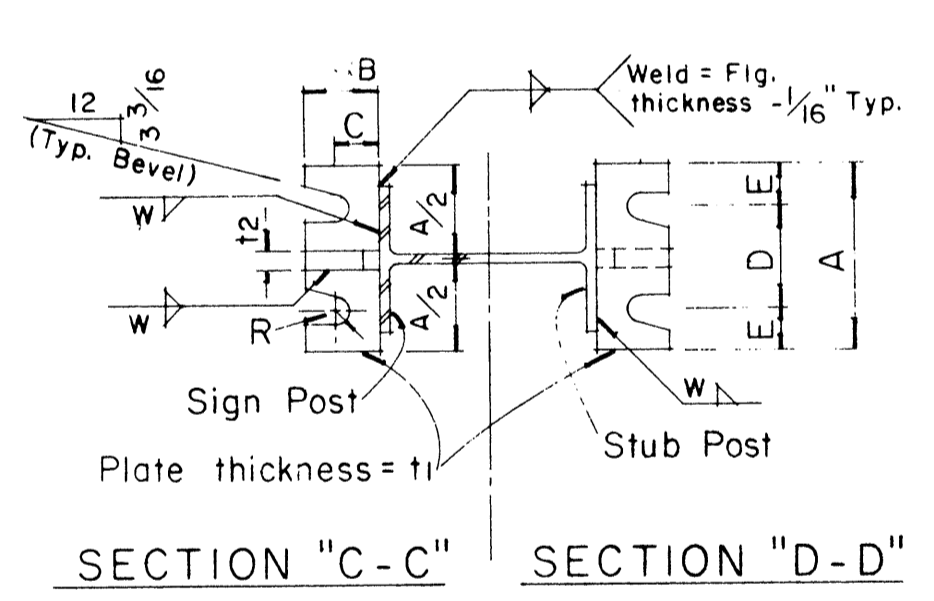


FOUNDATION DETAIL

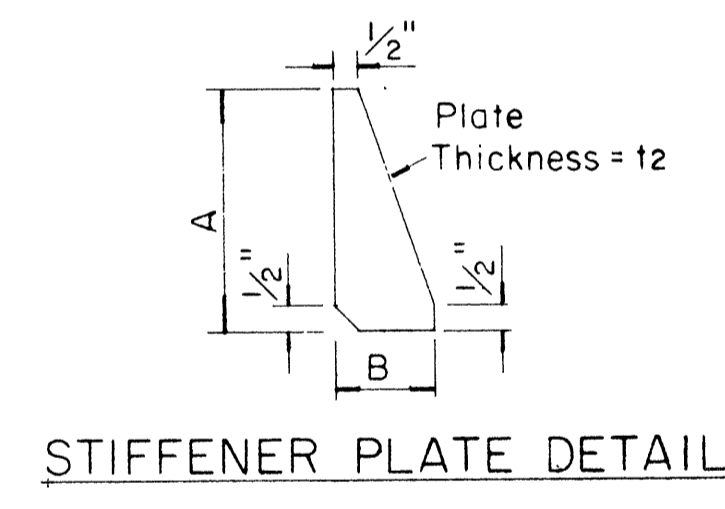


SECTION "A-A" SECTION "B-B"

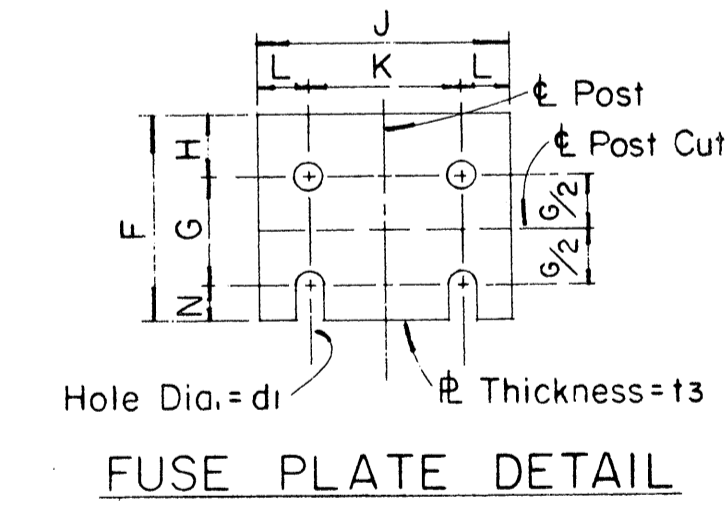
NOTE: Sections shown are for installations on right shoulder and in gore. Reverse plate slot bevels for installations on left shoulder.



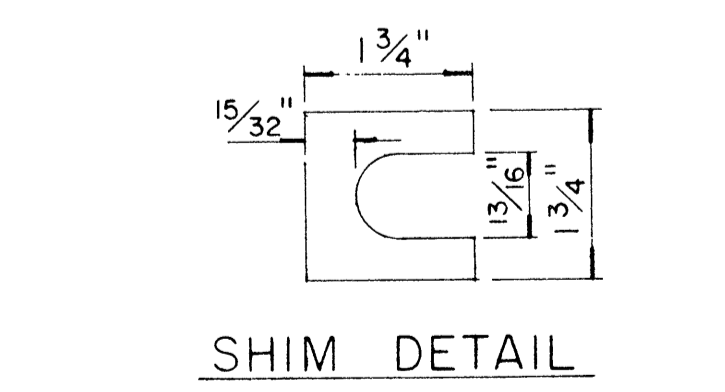
SECTION "C-C" SECTION "D-D"



STIFFENER PLATE DETAIL



FUSE PLATE DETAIL



SHIM DETAIL

GENERAL NOTES

- Design conforms 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 with with the requirements of ASTM A 441
- Galvanizing of all posts shall be projection above concrete plus 6" 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.

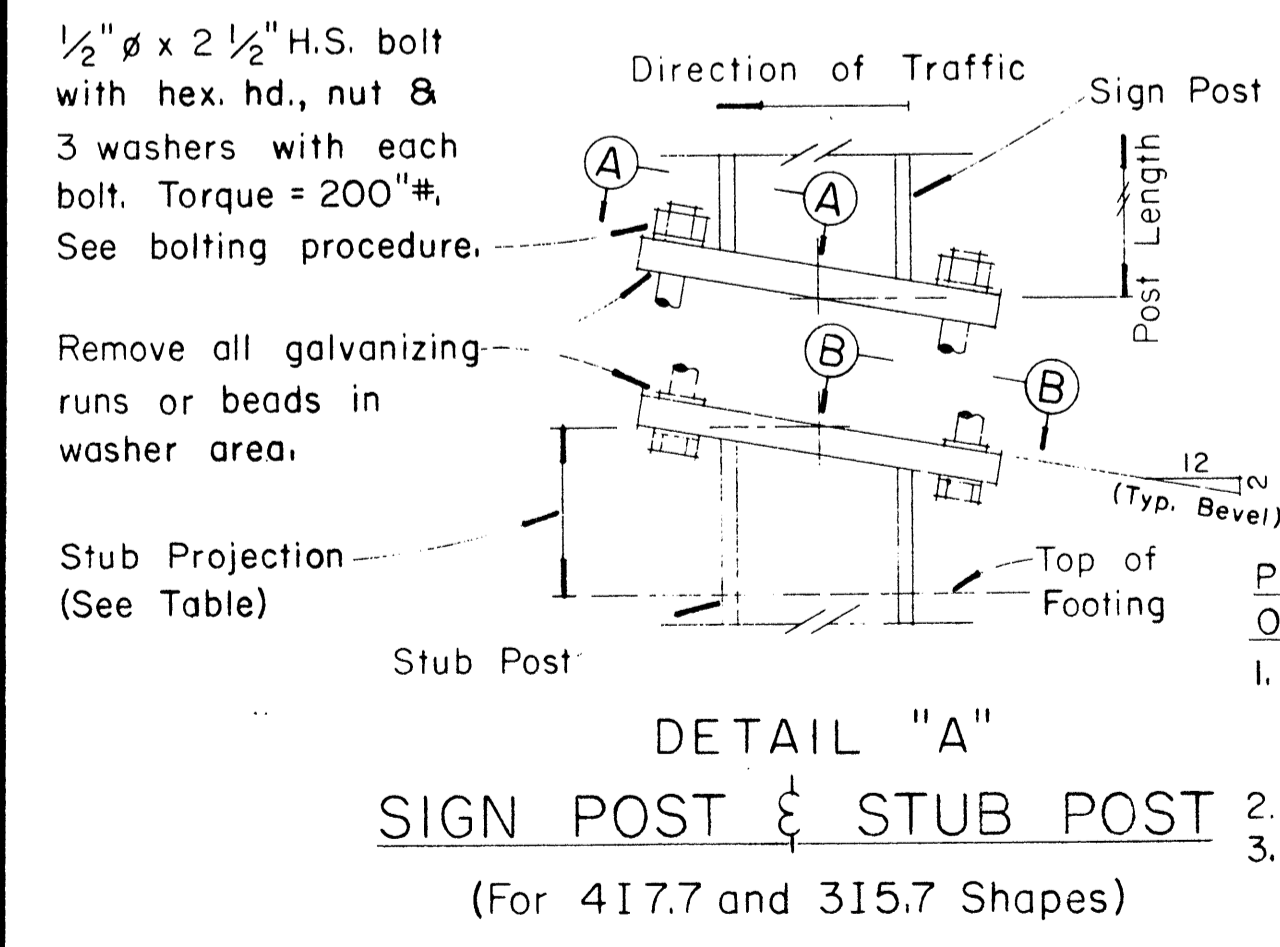
APPROVAL RECOMMENDED:
Eishi Tanaka 12/29/69
 TRAFFIC ENGINEER DATE

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

NO.	REVISION	APPROVED BY	DATE

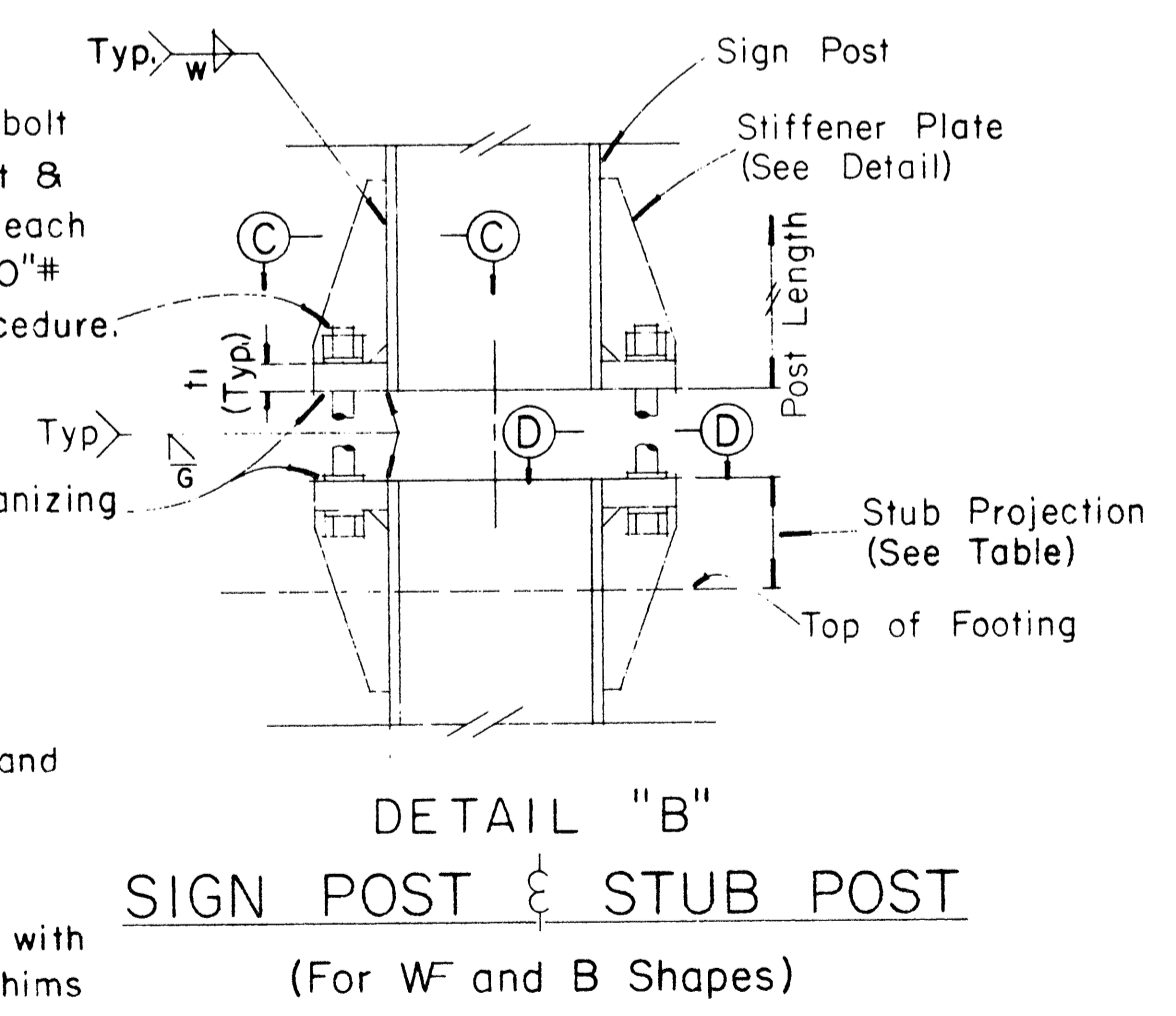
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
BREAK-AWAY SIGN SUPPORTS
FOR
GROUND MOUNTED GUIDE SIGNS
 Not to Scale
 SHEET No. P34 OF 40 SHEETS DT204

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



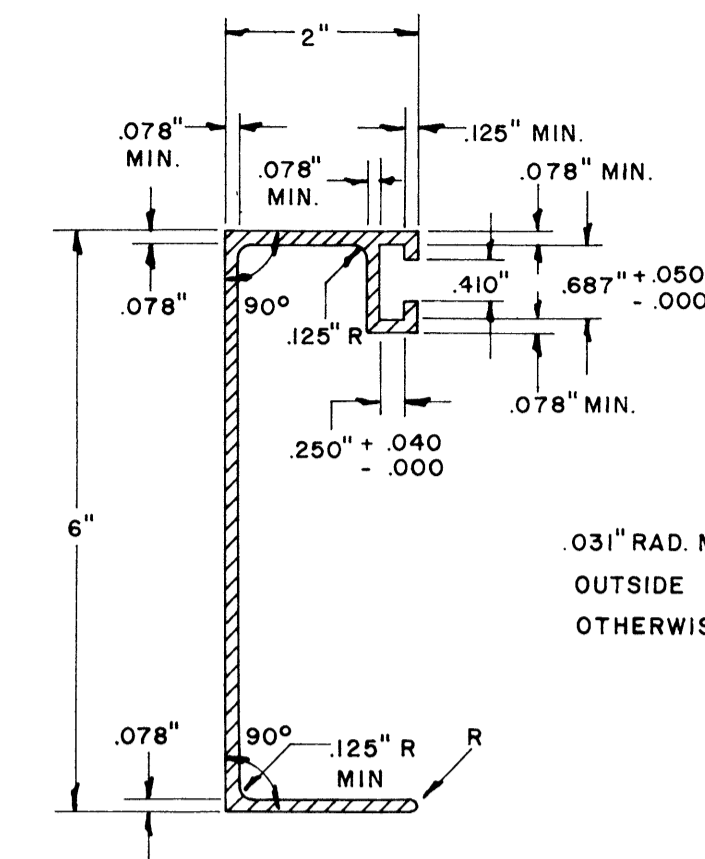
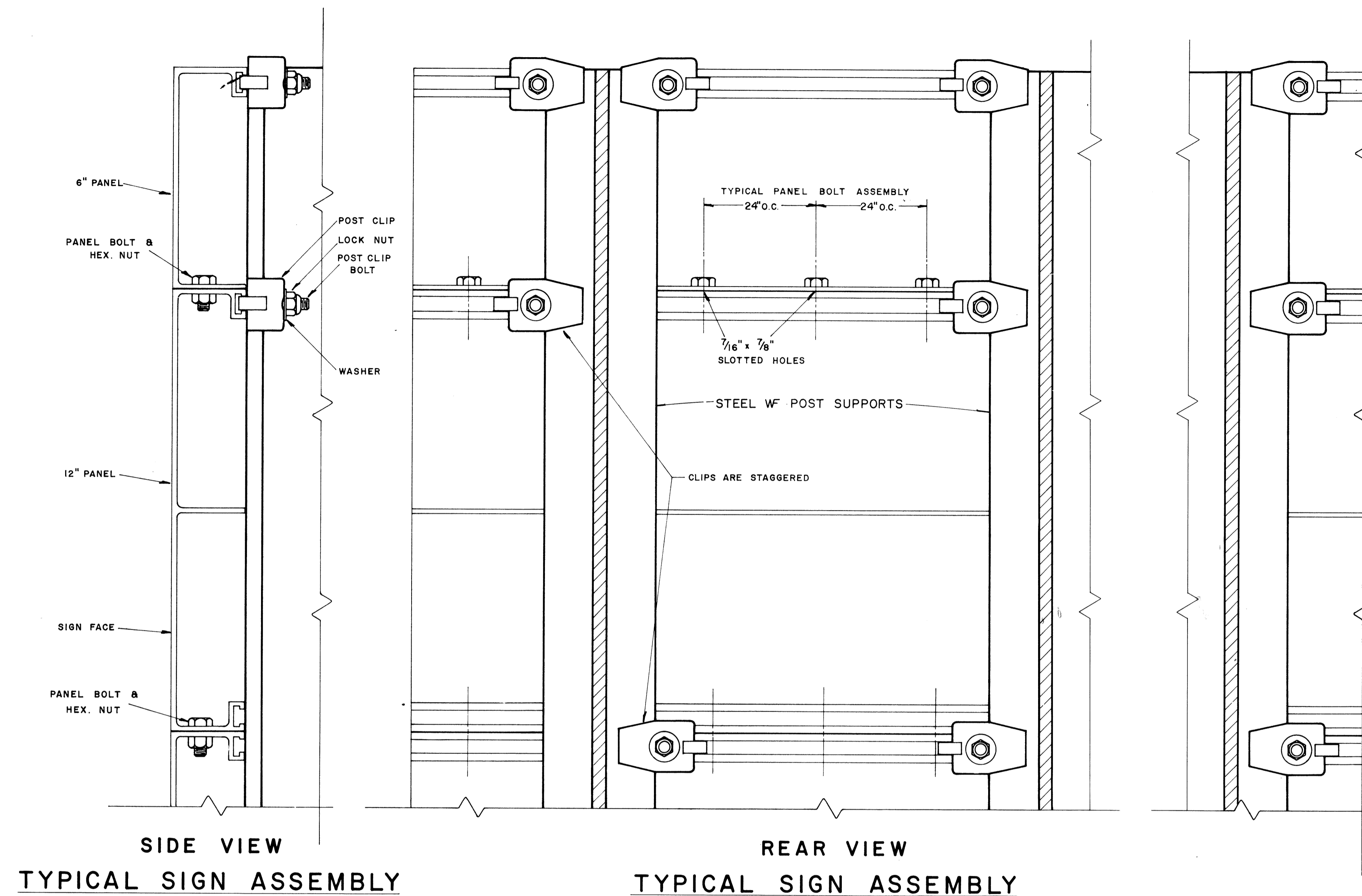
DETAIL "A"
SIGN POST & STUB POST
(For 4I7.7 and 3I5.7 Shapes)

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



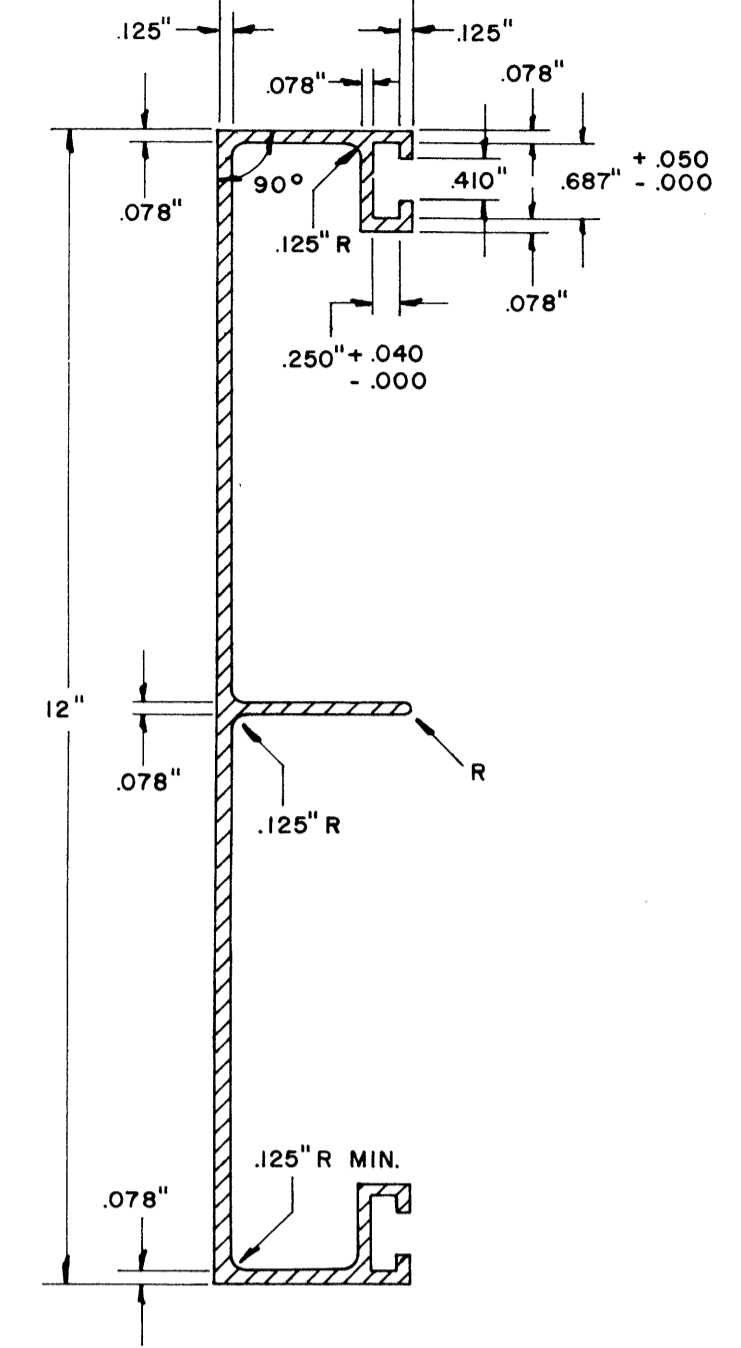
DETAIL "B"
SIGN POST & STUB POST
(For WF and B Shapes)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(47)17	1980	107	338



6" SIGN PANEL

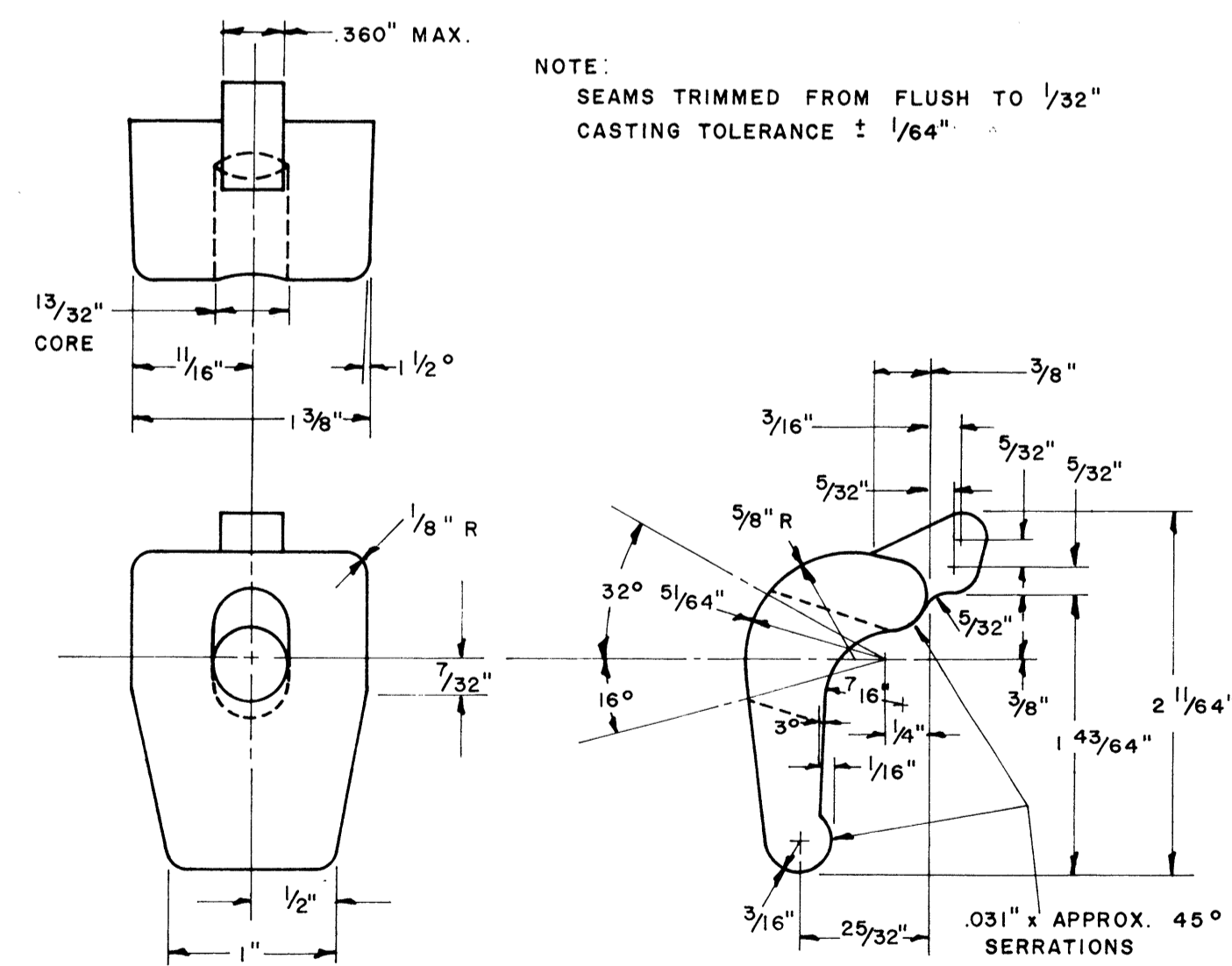
WT./LINEAL FT. - 1.103 LBS. MIN.
ALLOY - 6061 - F(1)
MOMENT OF INERTIA - 0.487 MIN.
MINIMUM SECTION MODULUS 0.341



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

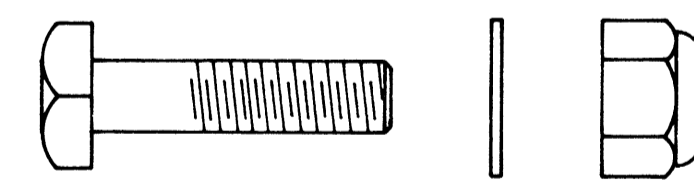
SOLID EXTRUDED SIGN PANEL DETAILS



POST CLIP DETAIL

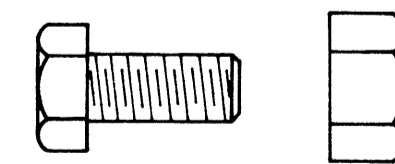
ALLOY 356 - T6

NOTE:
SEAMS TRIMMED FROM FLUSH TO 1/32"
CASTING TOLERANCE ± 1/64"



POST CLIP BOLT ASSEMBLY

3/8" - 16 x 1 3/4" LONG SQ. HD. BOLT - ALLOY 2024 - T4
3/8" - 16 LOCK NUT - ALLOY 2017 - T4
2 9/32" ID x 3/4" OD x .09" WASHER - ALLOY ALCLAD 2024 - T4



PANEL BOLT ASSEMBLY

3/8" - 16 x 3/4" LONG HEX. HD. BOLT - ALLOY 2024 - T4
3/8" - 16 HEX. NUT - ALLOY 6061 - T6
FLAT WASHER - ALLOY ALCLAD 2024 - T4

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

APPROVAL RECOMMENDED:
Eiichi Tanaka 12/27/67
TRAFFIC ENGINEER DATE

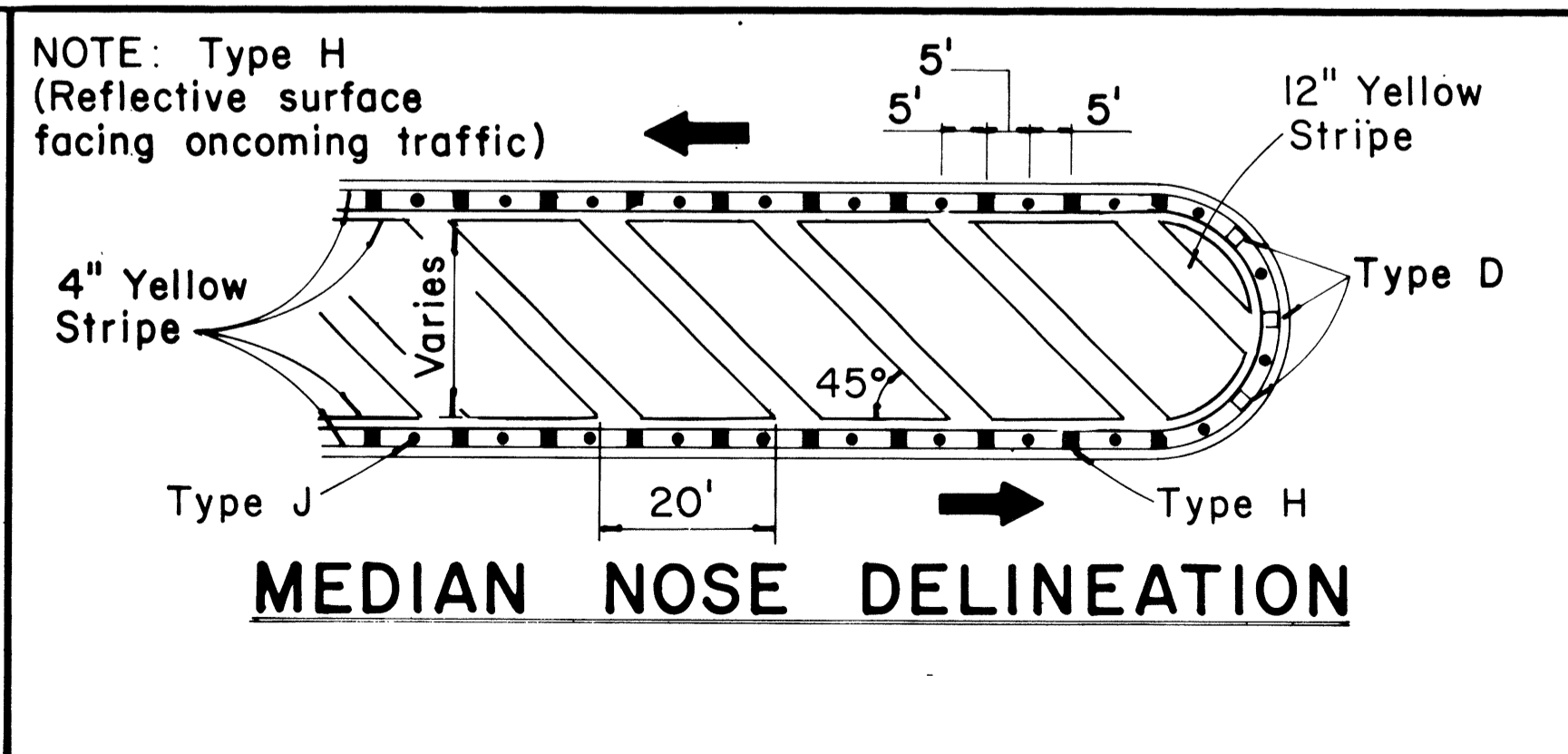
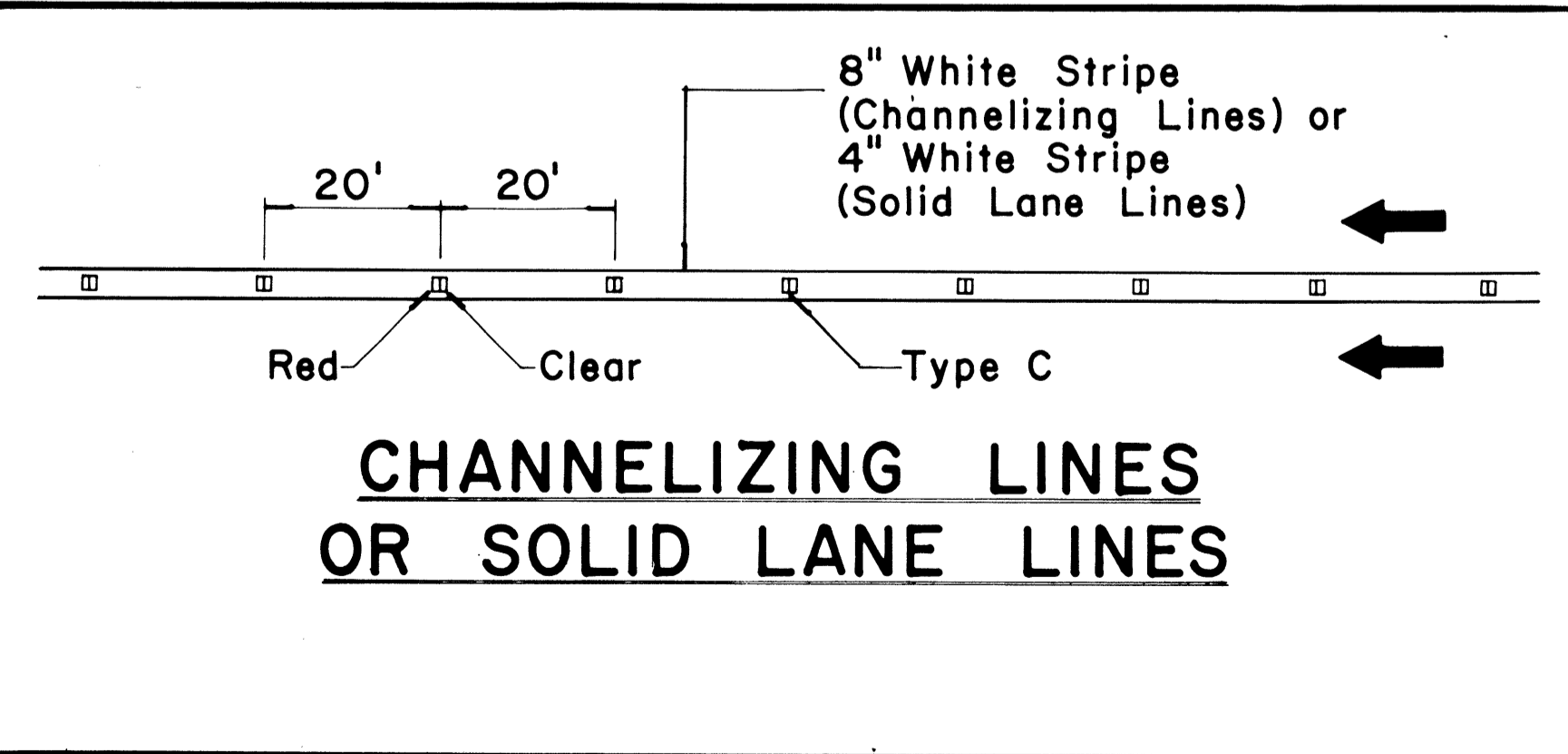
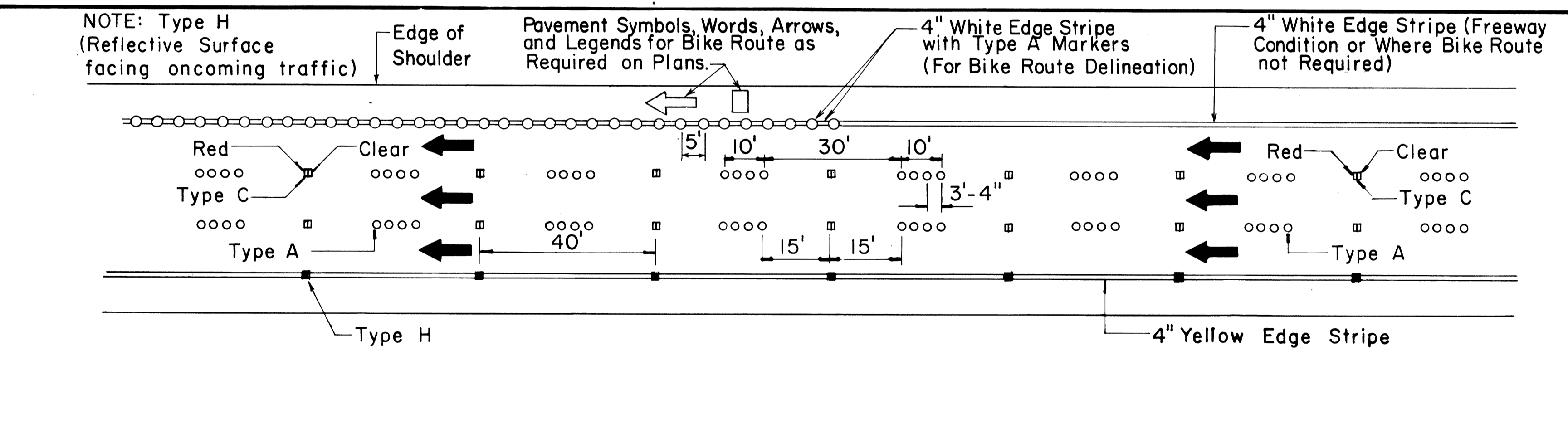
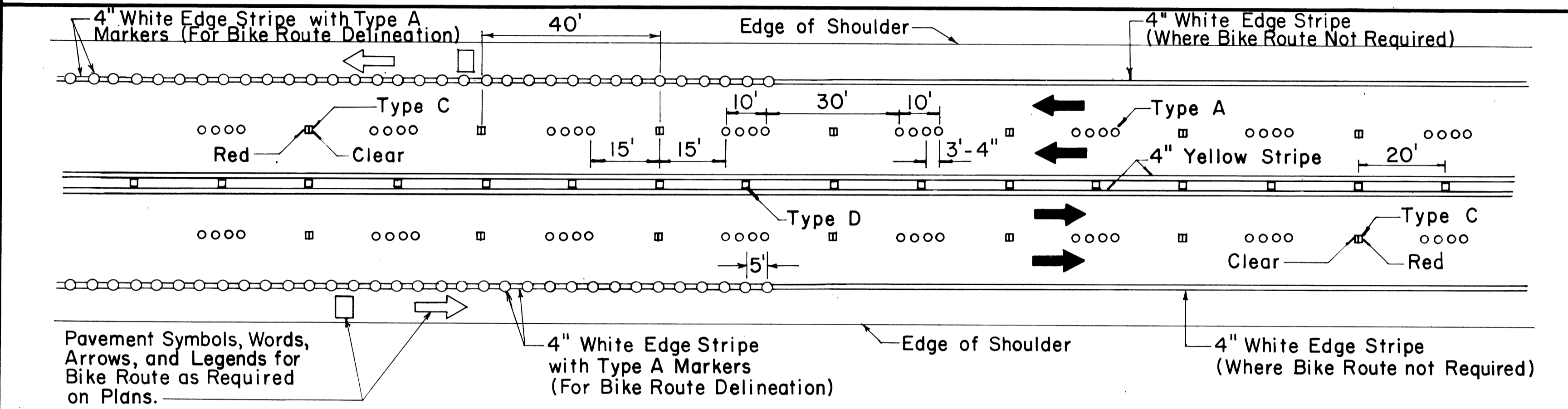
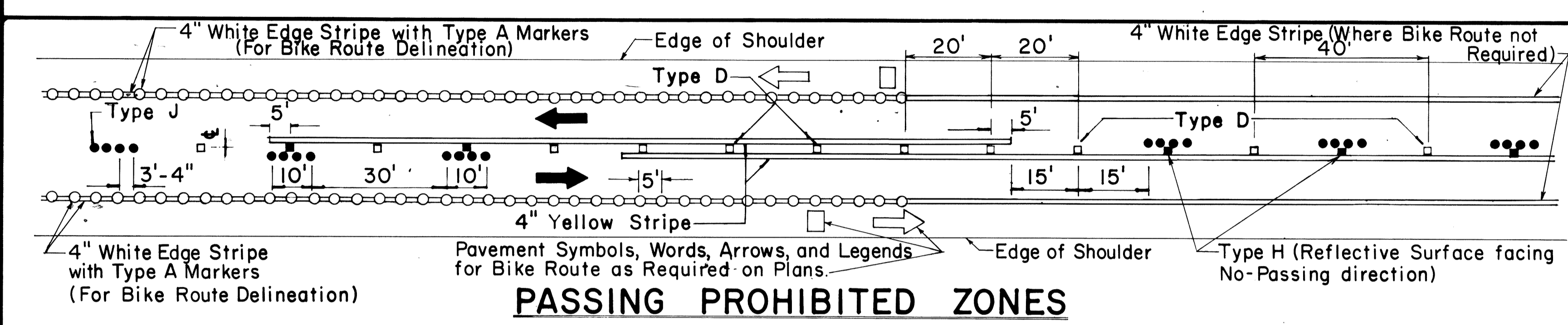
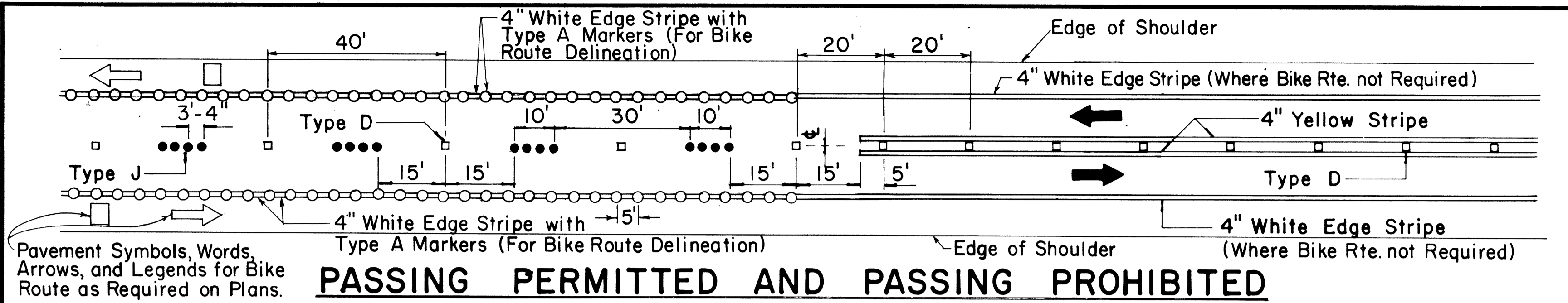
APPROVED:
[Signature] 12-30-69
ASSISTANT CHIEF, ENGINEERING DATE

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:

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-(47):17	1980	109	338

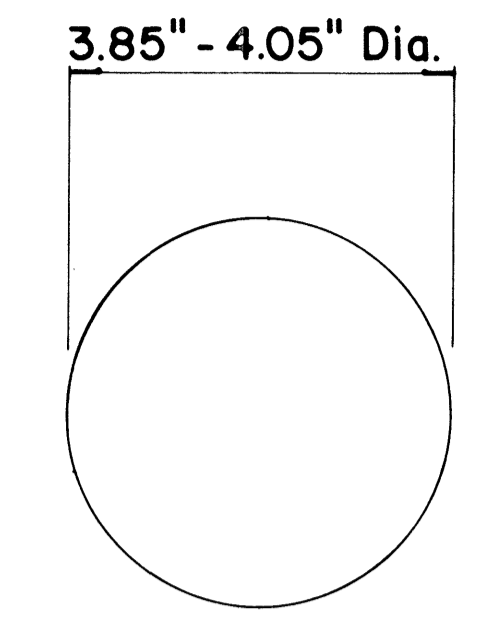


TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

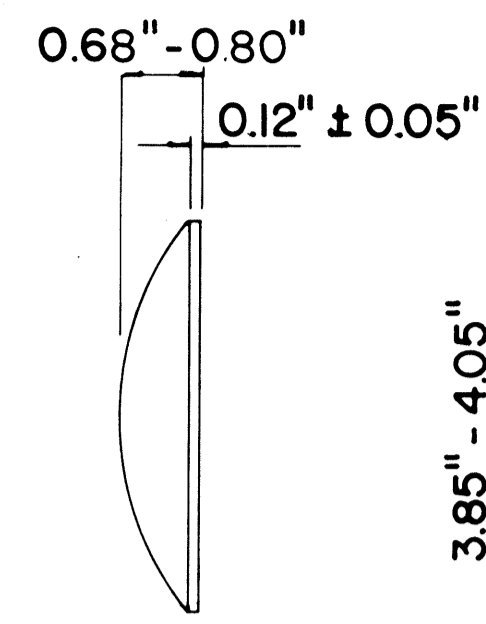
MISCELLANEOUS



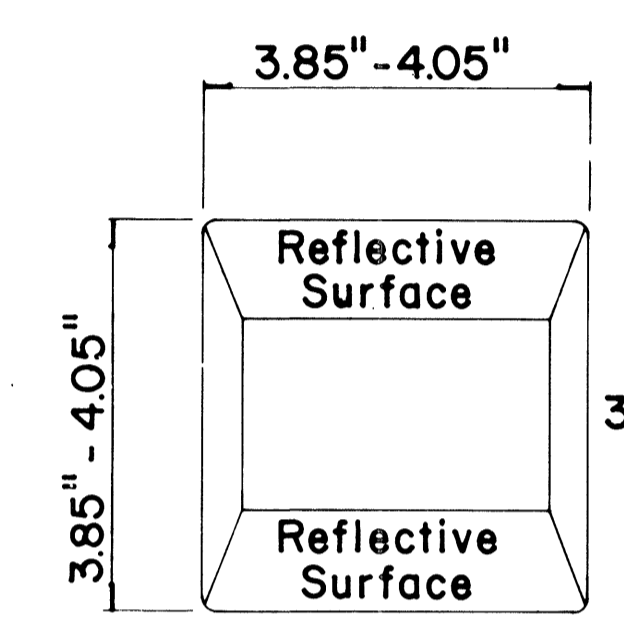
TYPE A
NON-REFLECTIVE WHITE MARKER



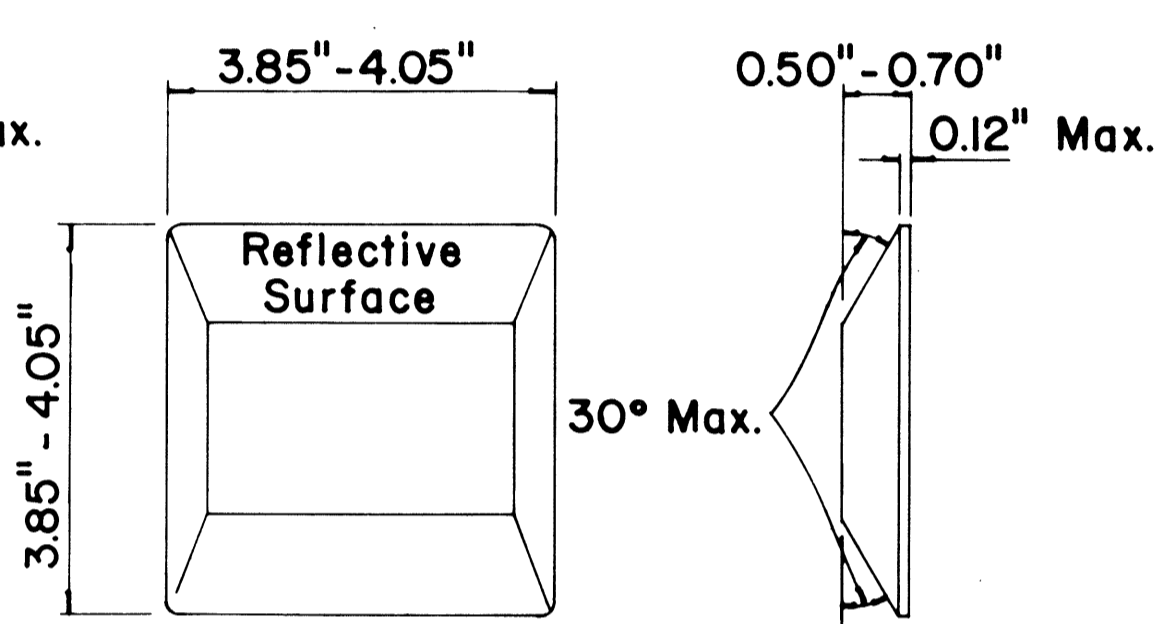
TYPE J
NON-REFLECTIVE YELLOW MARKER



TYPE C
RED-CLEAR REFLECTIVE MARKER



TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER



TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER

GENERAL NOTES

1. Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
2. Layout and installation of pavement marking and striping shall be done by the Contractor. The Contractor shall check the layouts with the Engineer prior to performing work.

LEGEND

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

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

APPROVED:
Herbert J. Zaleski 1/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.T.	1/24/78

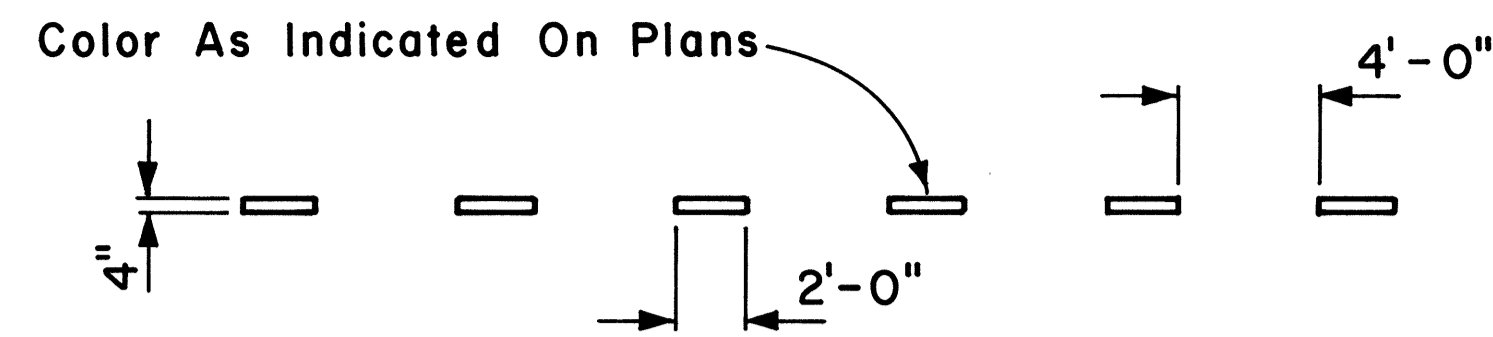
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

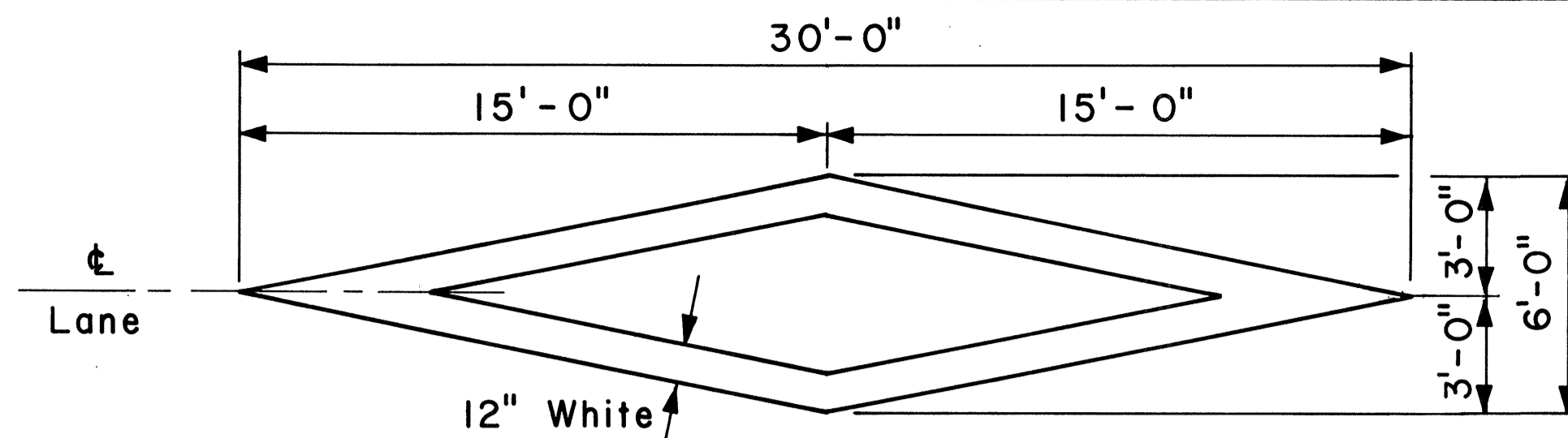
Not to Scale July 1978
 SHEET No. P-37 OF 40 SHEETS DT 300

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(47)	1980	110	338



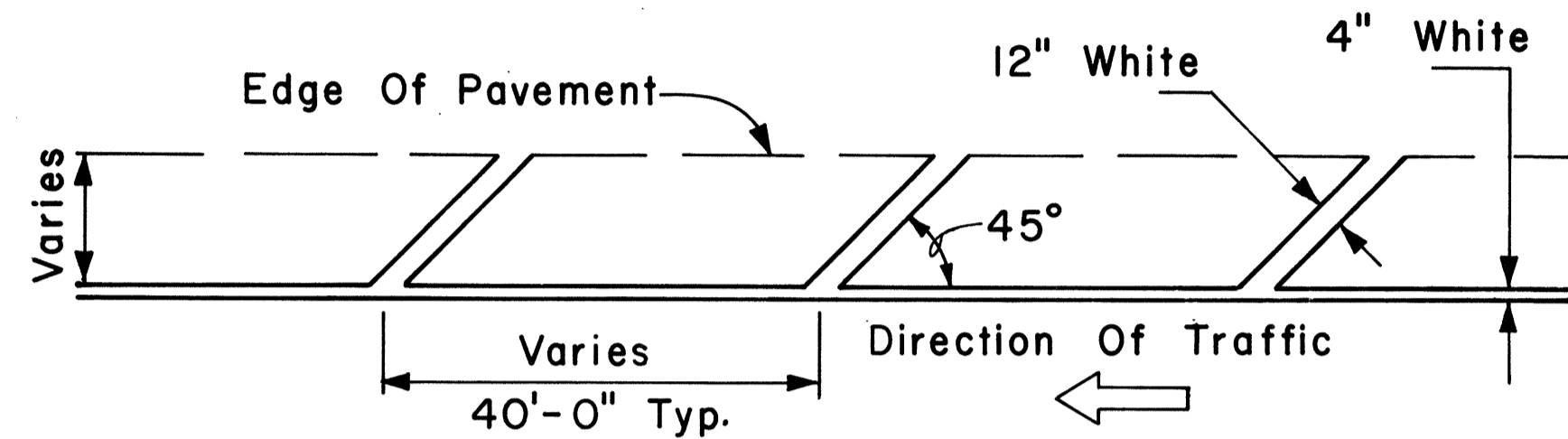
4" GUIDE LINE



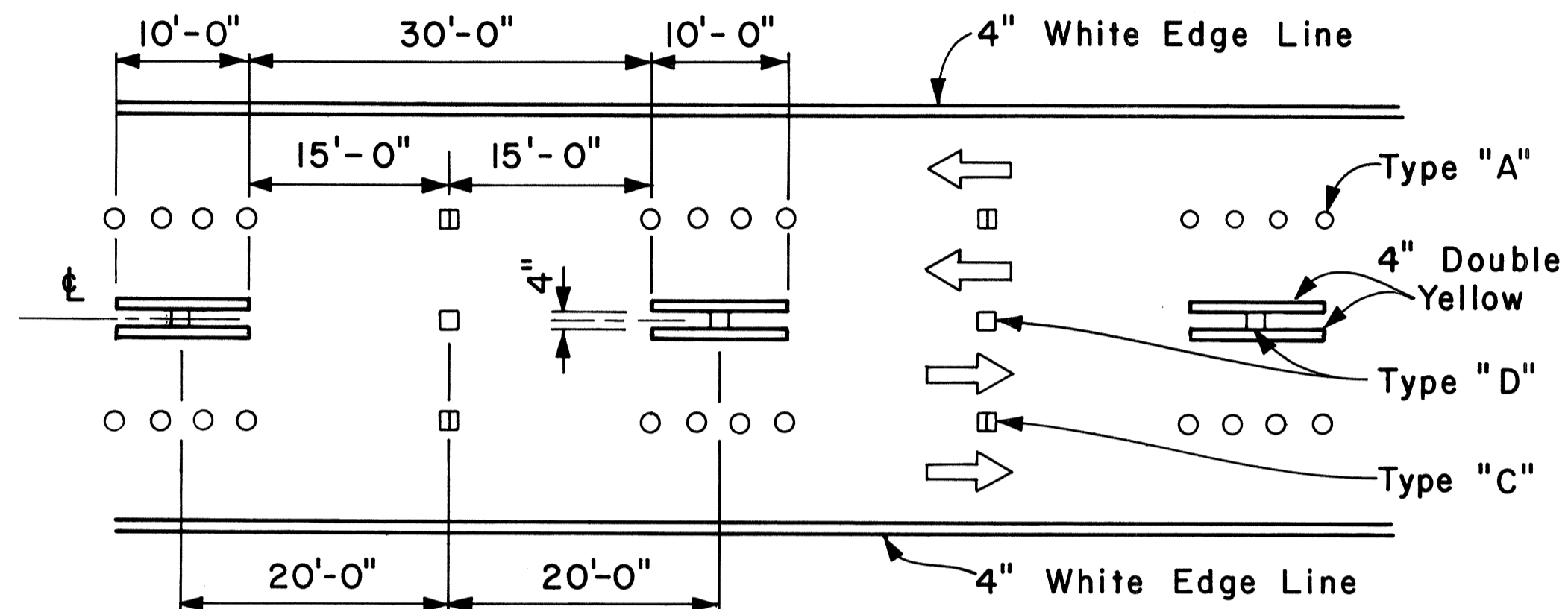
PAVEMENT DIAMOND

GENERAL NOTES:

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

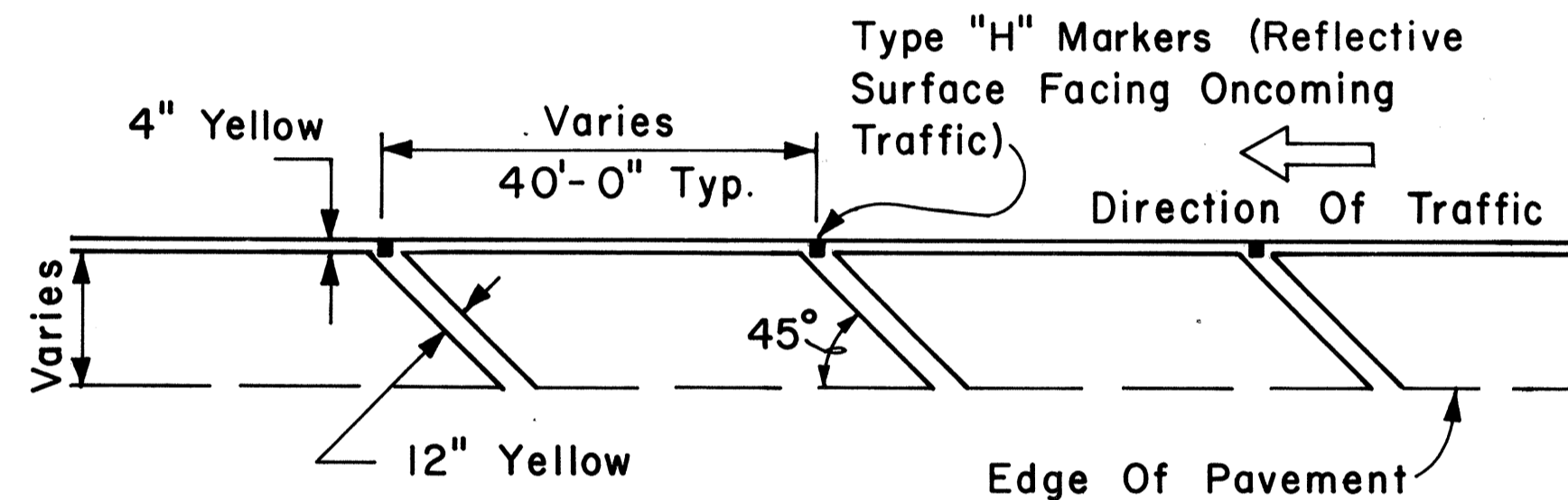


TRANSVERSE RIGHT SHOULDER MARKING

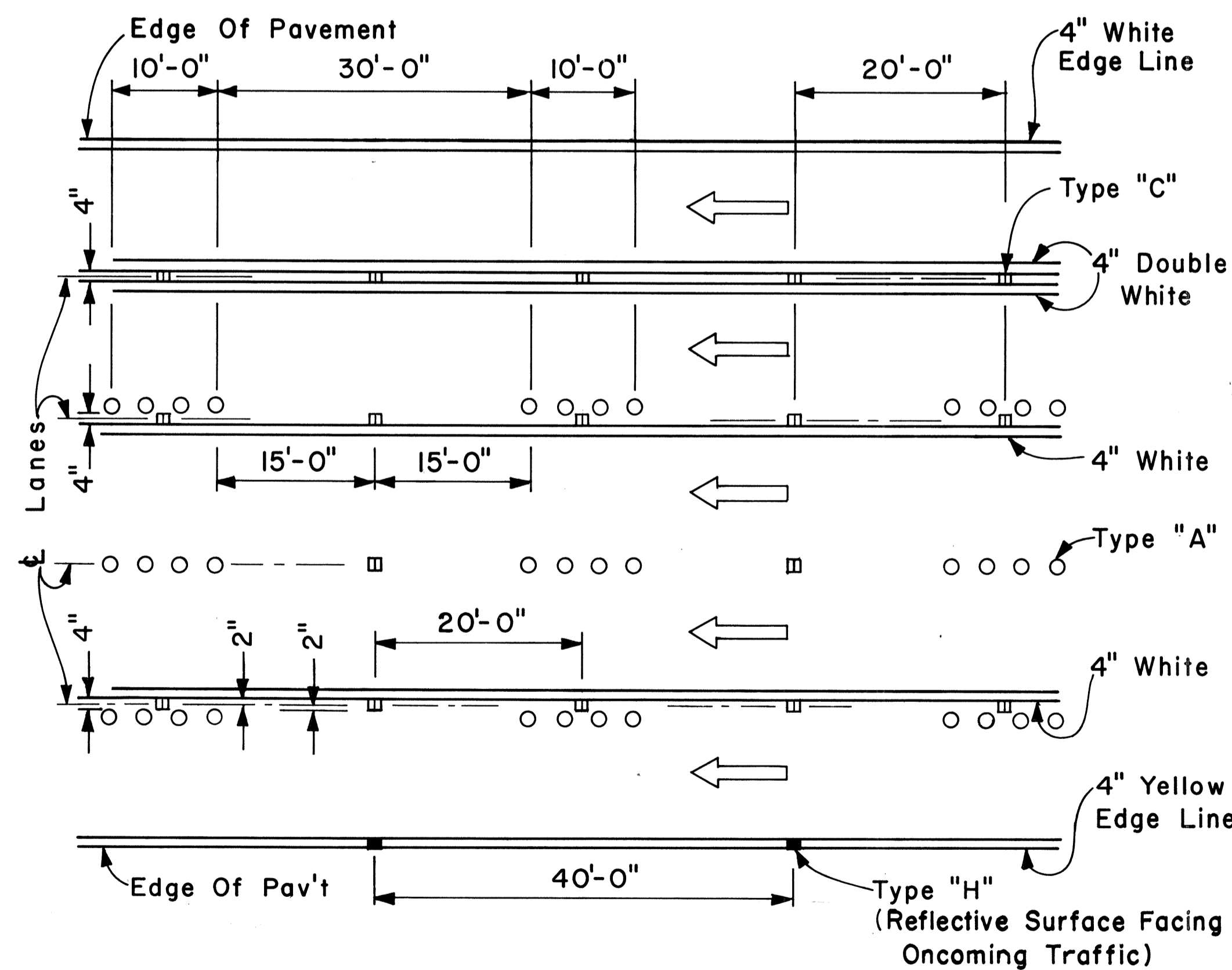


NOTE: Traffic Cone Usage Required.

MULTI-LANE REVERSIBLE LANES



TRANSVERSE LEFT SHOULDER MARKING



MULTI-LANE LANE CHANGE RESTRICTION ZONES

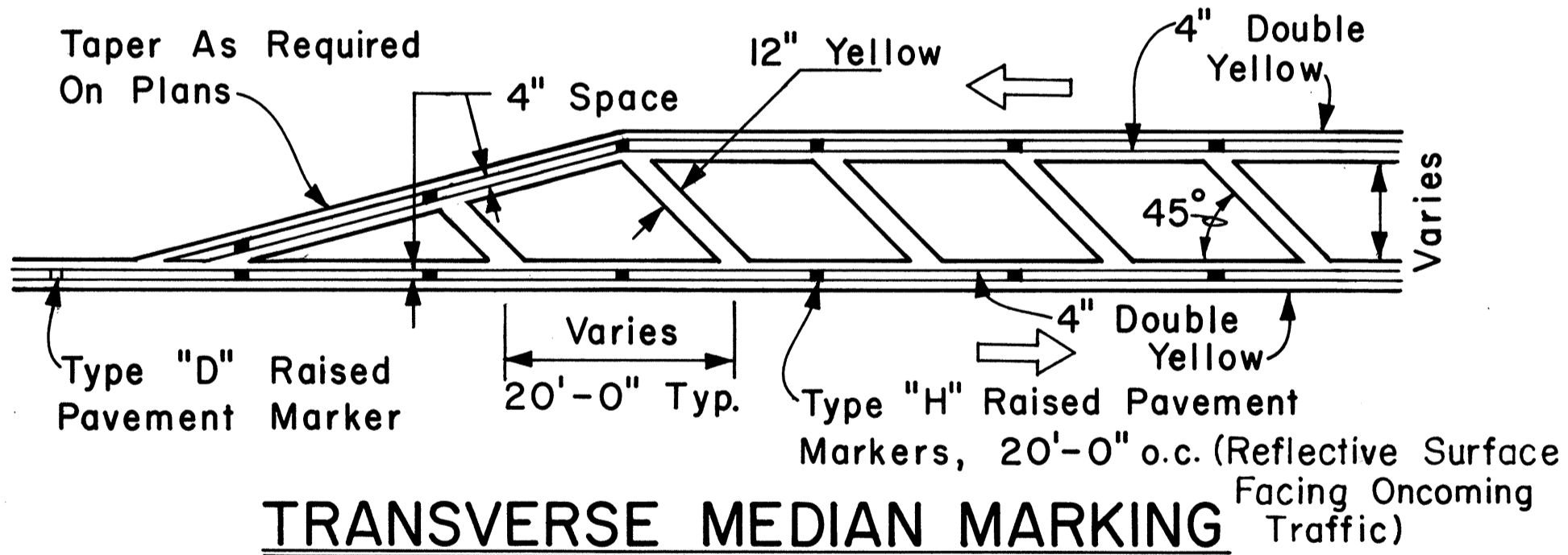
APPROVAL RECOMMENDED:
Eiichi Tanaka 5/2/78
 TRAFFIC ENGINEER DATE

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

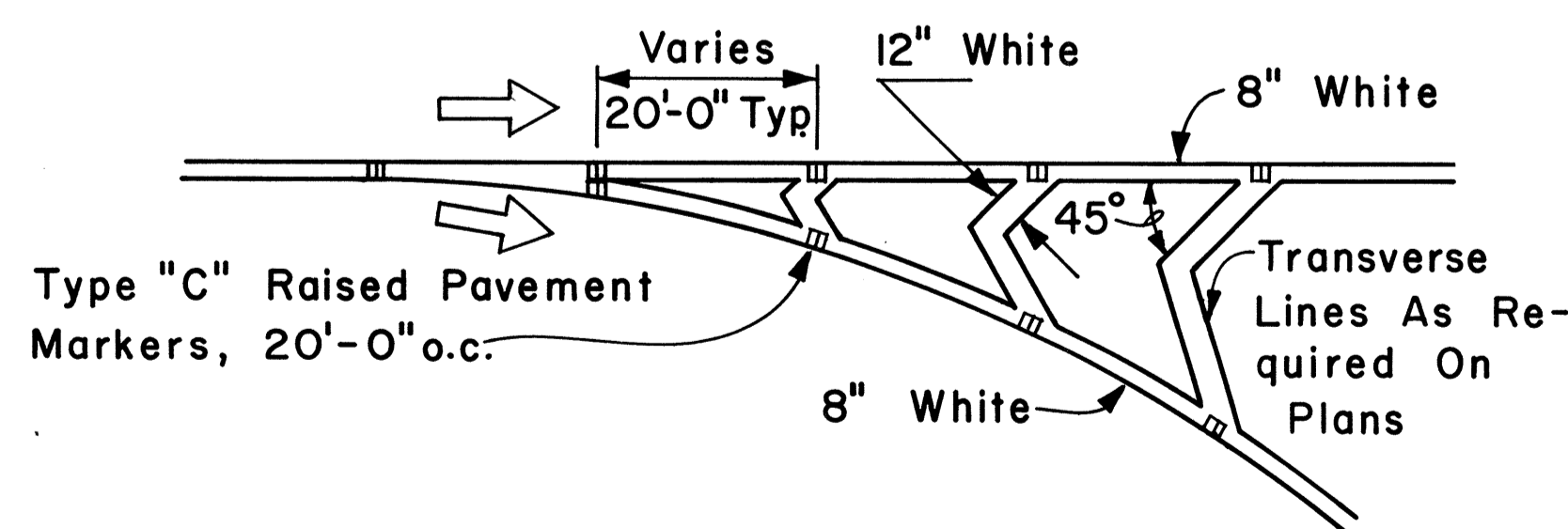
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
 MISCELLANEOUS
 PAVEMENT MARKINGS
 Scale: Not to Scale Date: April, 1978
 SHEET No. P.338 OF 40 SHEETS DT 302

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



TRANSVERSE MEDIAN MARKING



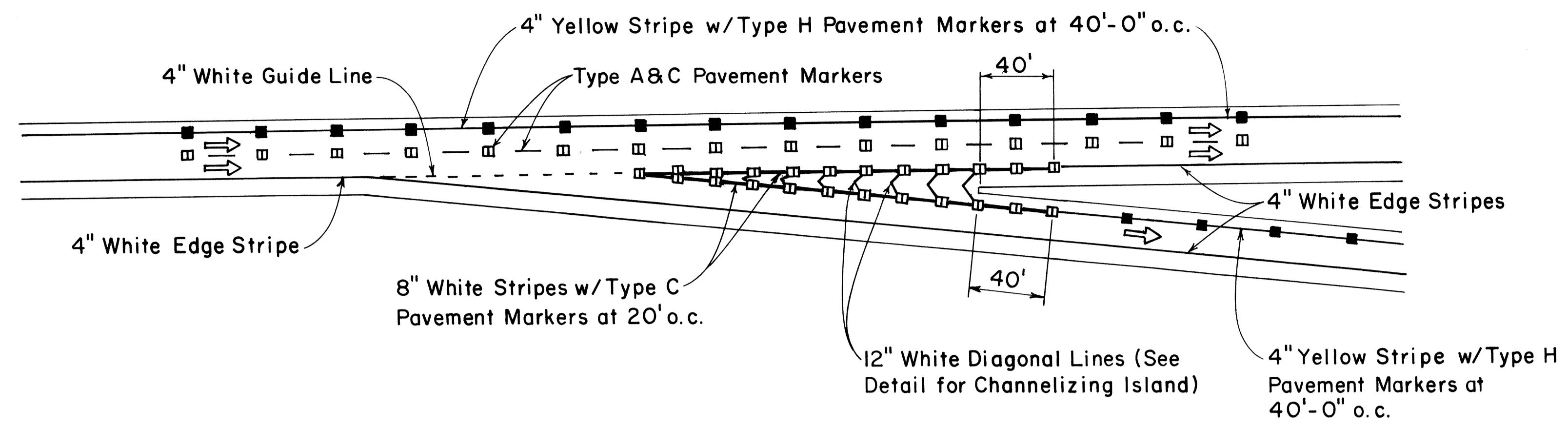
CHANNELIZING ISLAND

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-1(147)17	1980	111	338

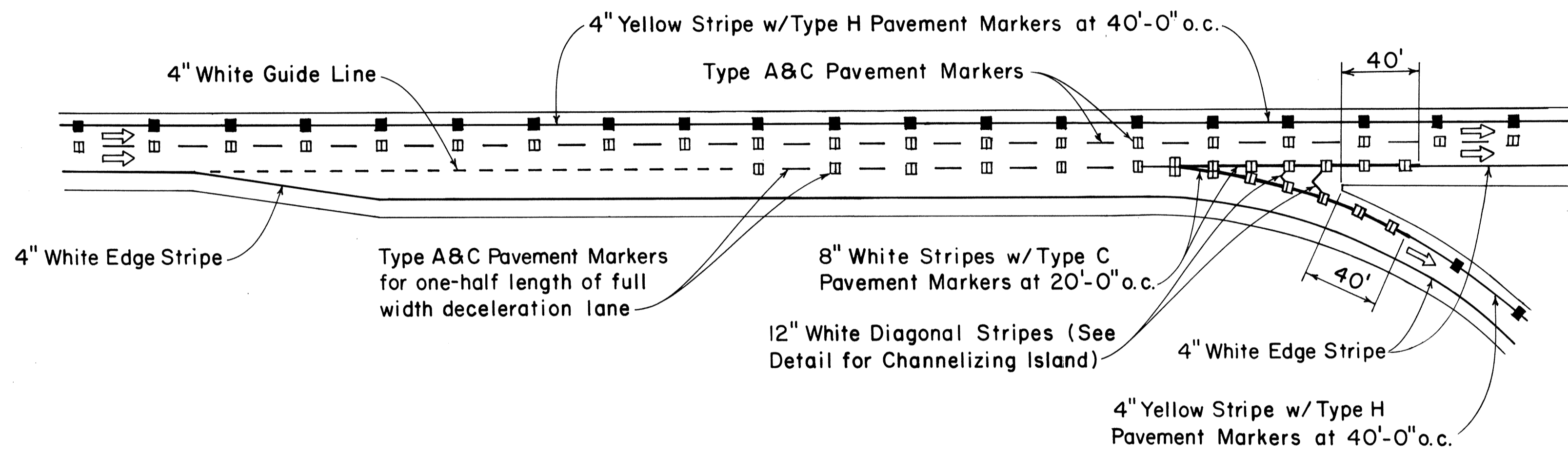
GENERAL NOTES:

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

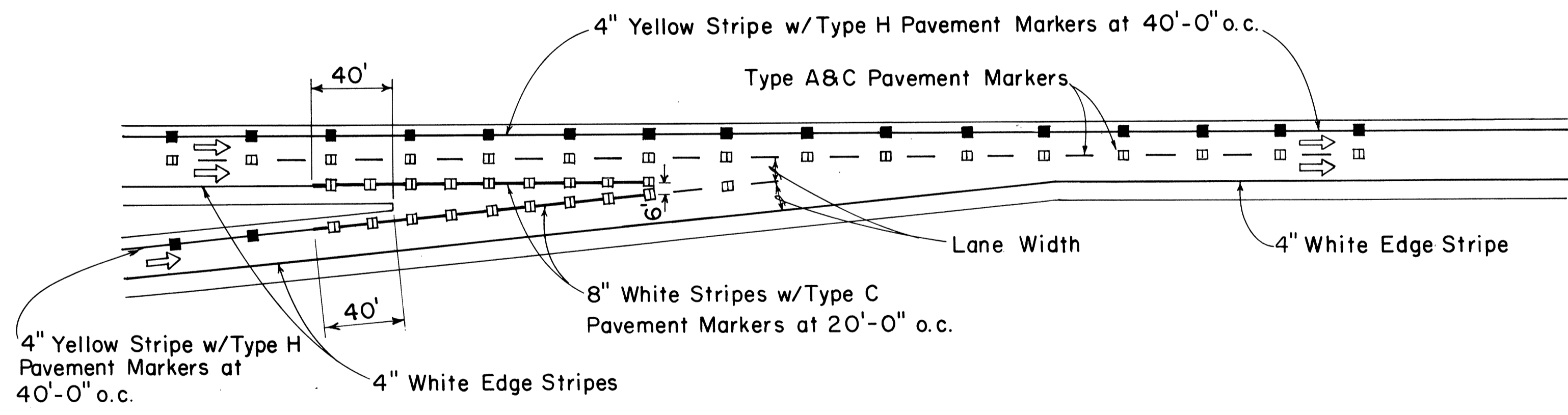
TAPERED DECELERATION LANE



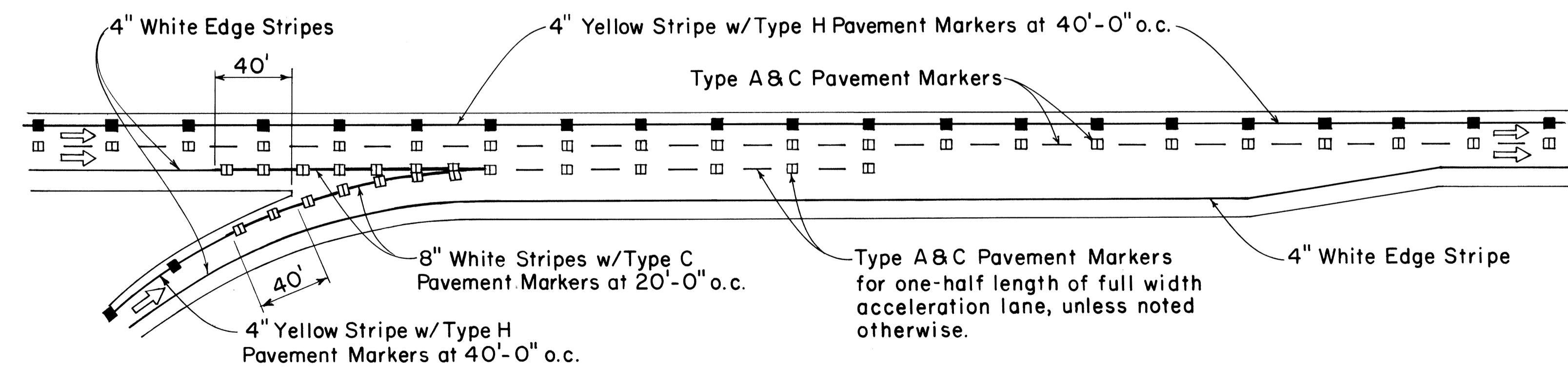
PARALLEL DECELERATION LANE



TAPERED ACCELERATION LANE



PARALLEL ACCELERATION LANE



TYPICAL ROADWAY EXIT MARKINGS

TYPICAL ROADWAY ENTRANCE MARKINGS

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

APPROVAL RECOMMENDED:
Eishi Tanaka 1/21/78
 TRAFFIC ENGINEER DATE

APPROVED:
Robert S. Sakaiishi 1/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

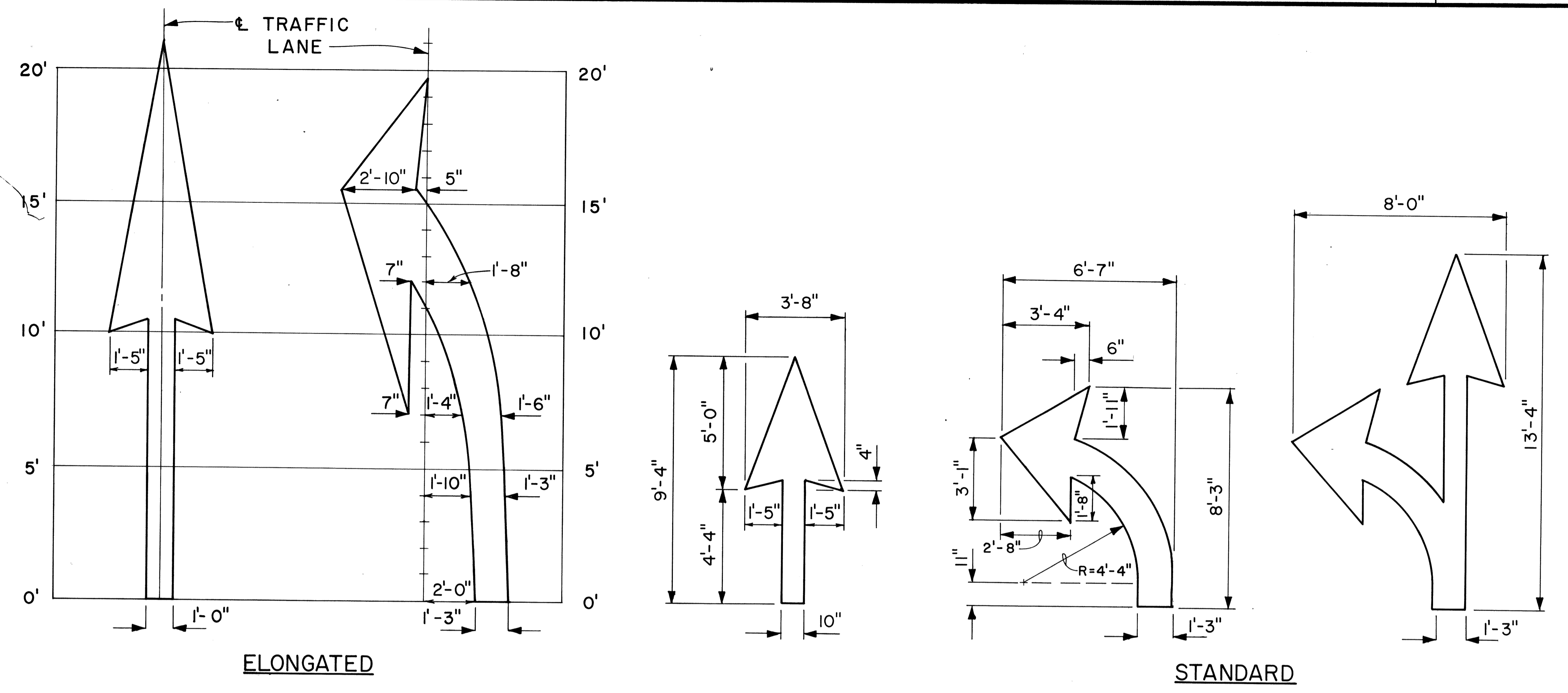
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Not to Scale July 1978
 SHEET No. P-39 OF 40 SHEETS DT 304

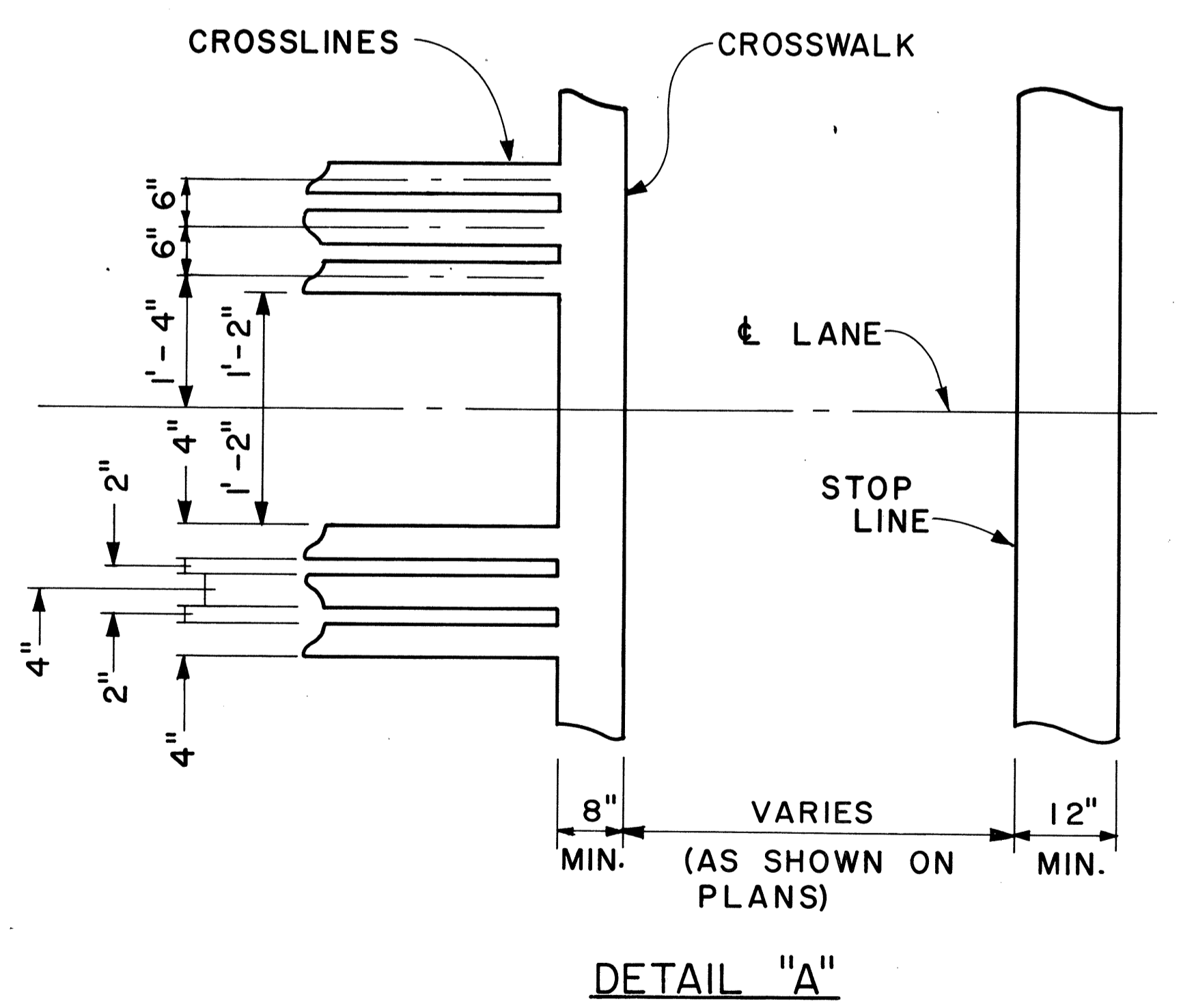
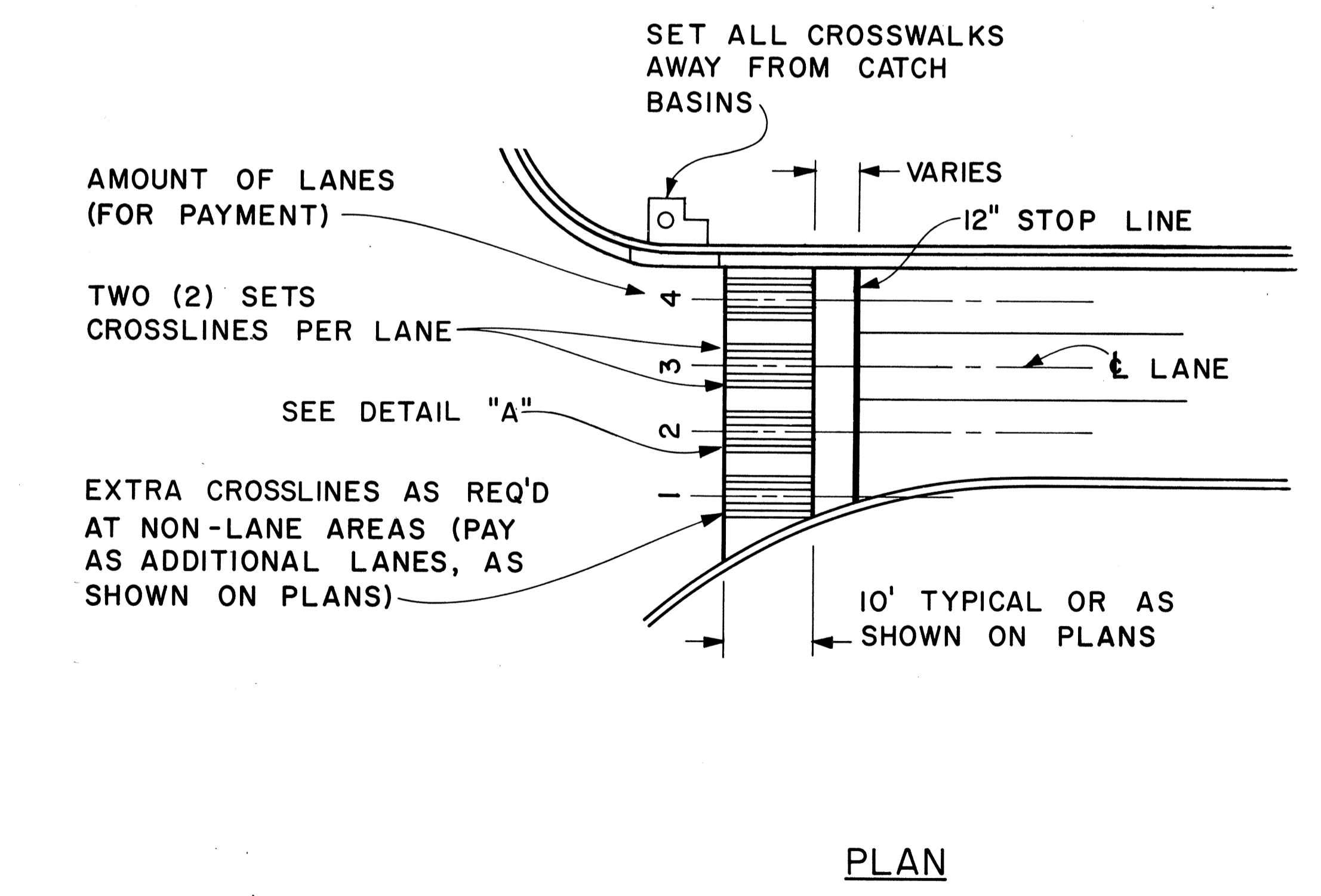
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FH-1(047)17	1980	112	338



PAVEMENT ARROWS
Scale: 3/8" = 1'

GENERAL NOTES:

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



CROSSWALK & STOP LINE
Scale: Not to Scale

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

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

MISCELLANEOUS
PAVEMENT MARKINGS

Scale: As Shown Date: March, 1978
SHEET NO. P-40 OF 40 SHEETS DT 306

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