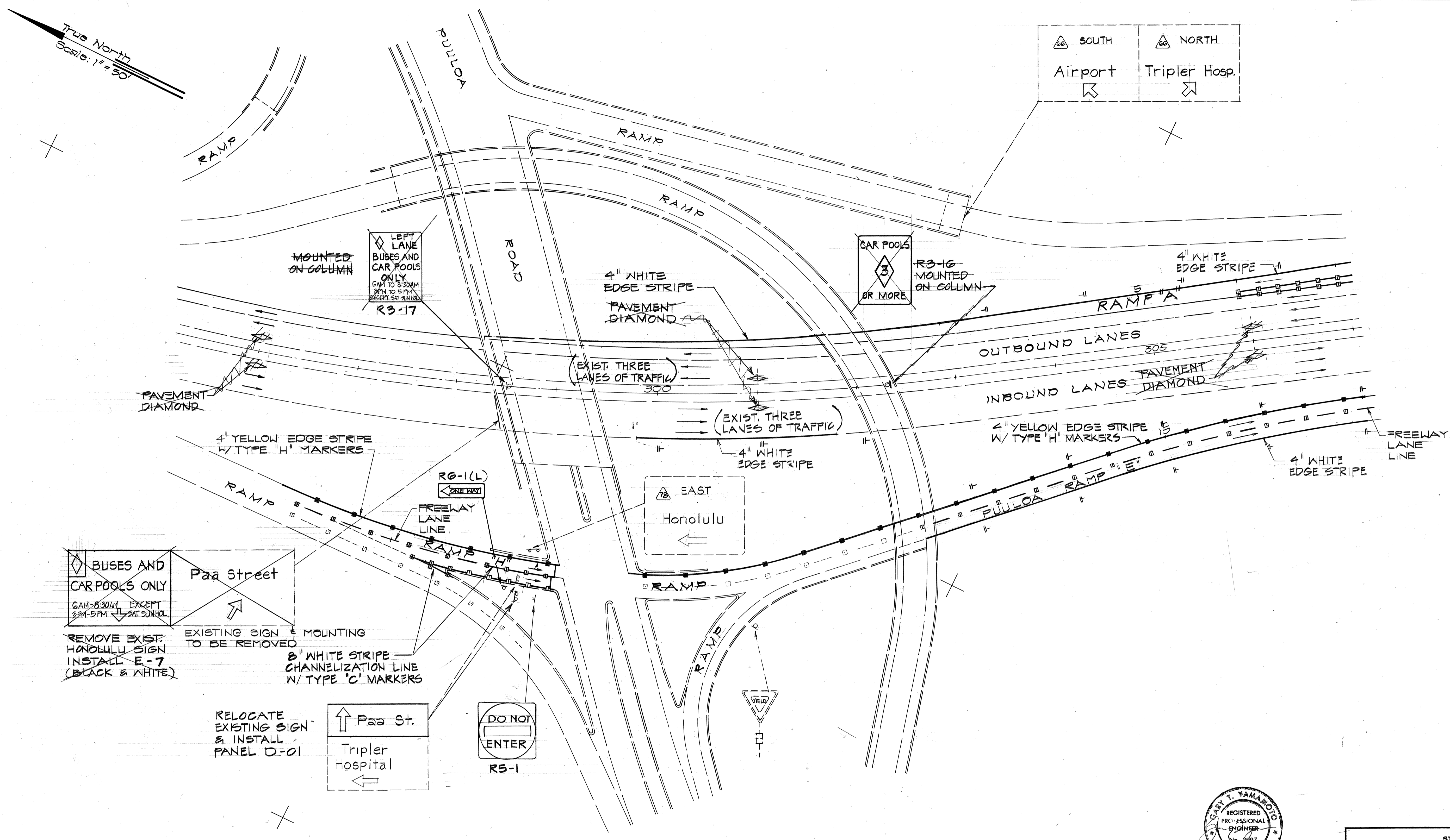
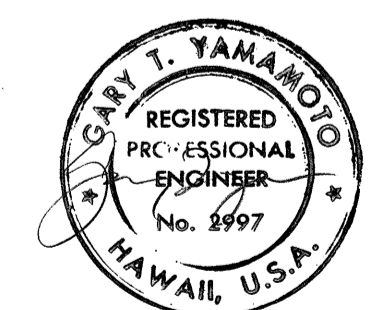


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(18)	1978	79	266



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

PLAN
Scale: 1"=50'



WILBERT J. TAKAMIZU
THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

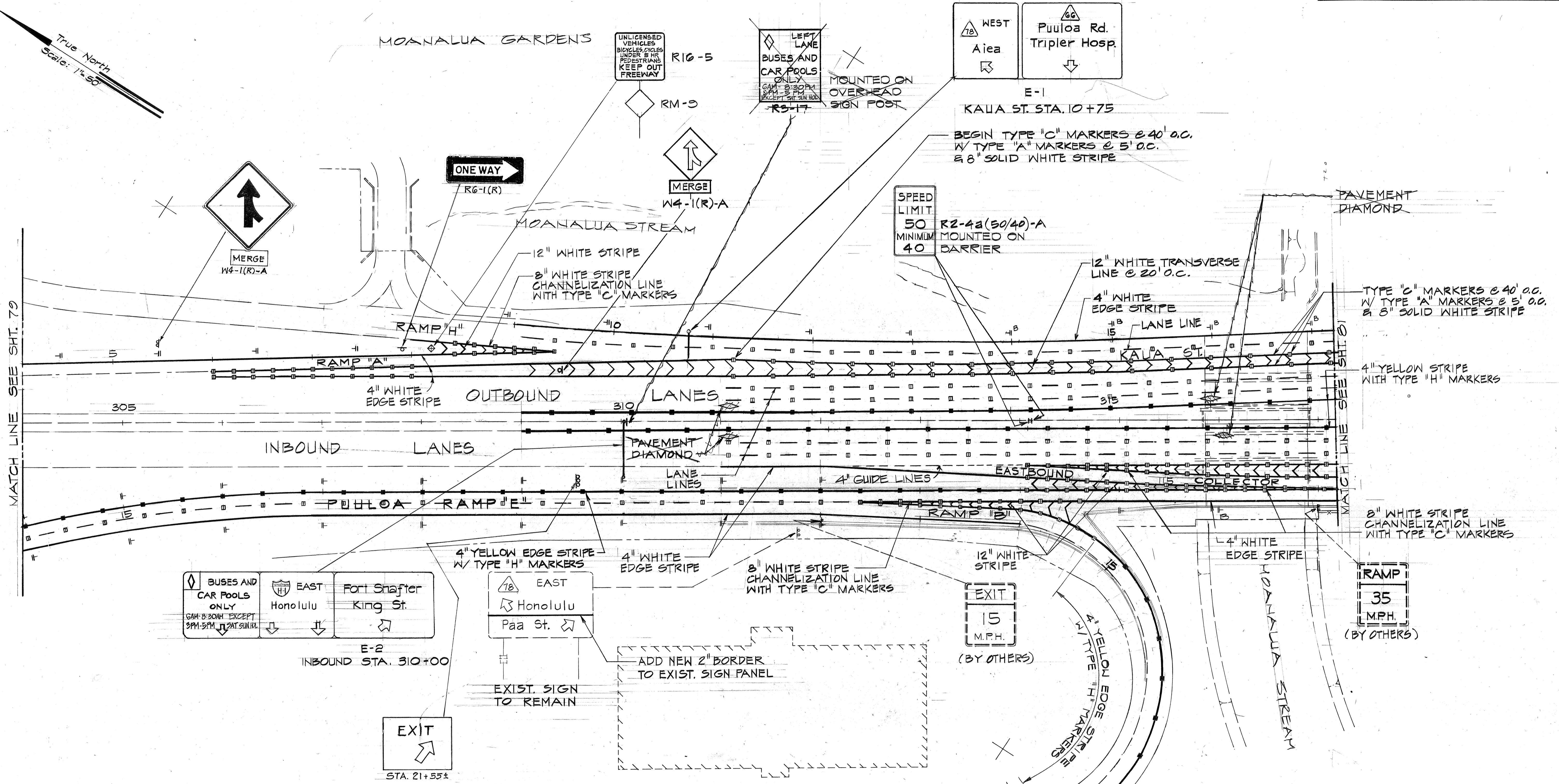
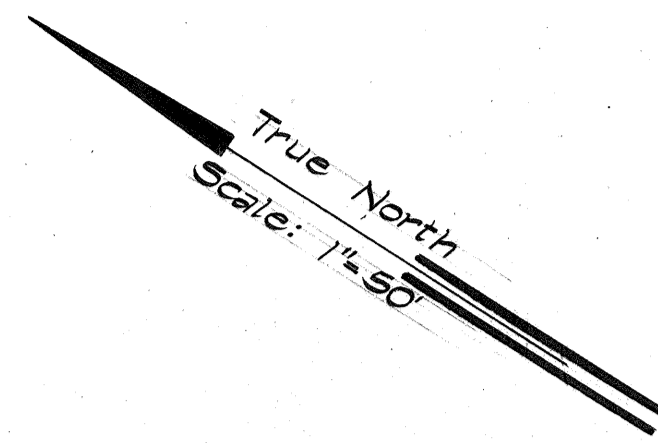
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING AND PAVEMENT MARKING PLAN

MOANALUA ROAD
PULLOA I.C. TO MIDDLE ST. - UNIT 3A
F.A. Proj. NO. TQ-F-078-1(18)
SCALE: AS SHOWN DATE: NOV. 15, 1978

SHEET NO. 2 OF 5 SHEETS

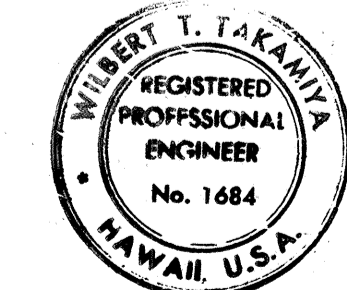
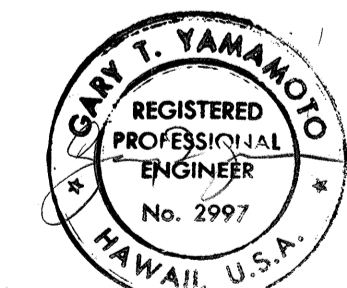
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F078-1(18)	1978	80	266



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

11/3/79	DELETE EXIT DESIGNATION "3B"
DATE	REVISION

PLAN
Scale: 1" = 50'



Willbert T. Takahira
THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

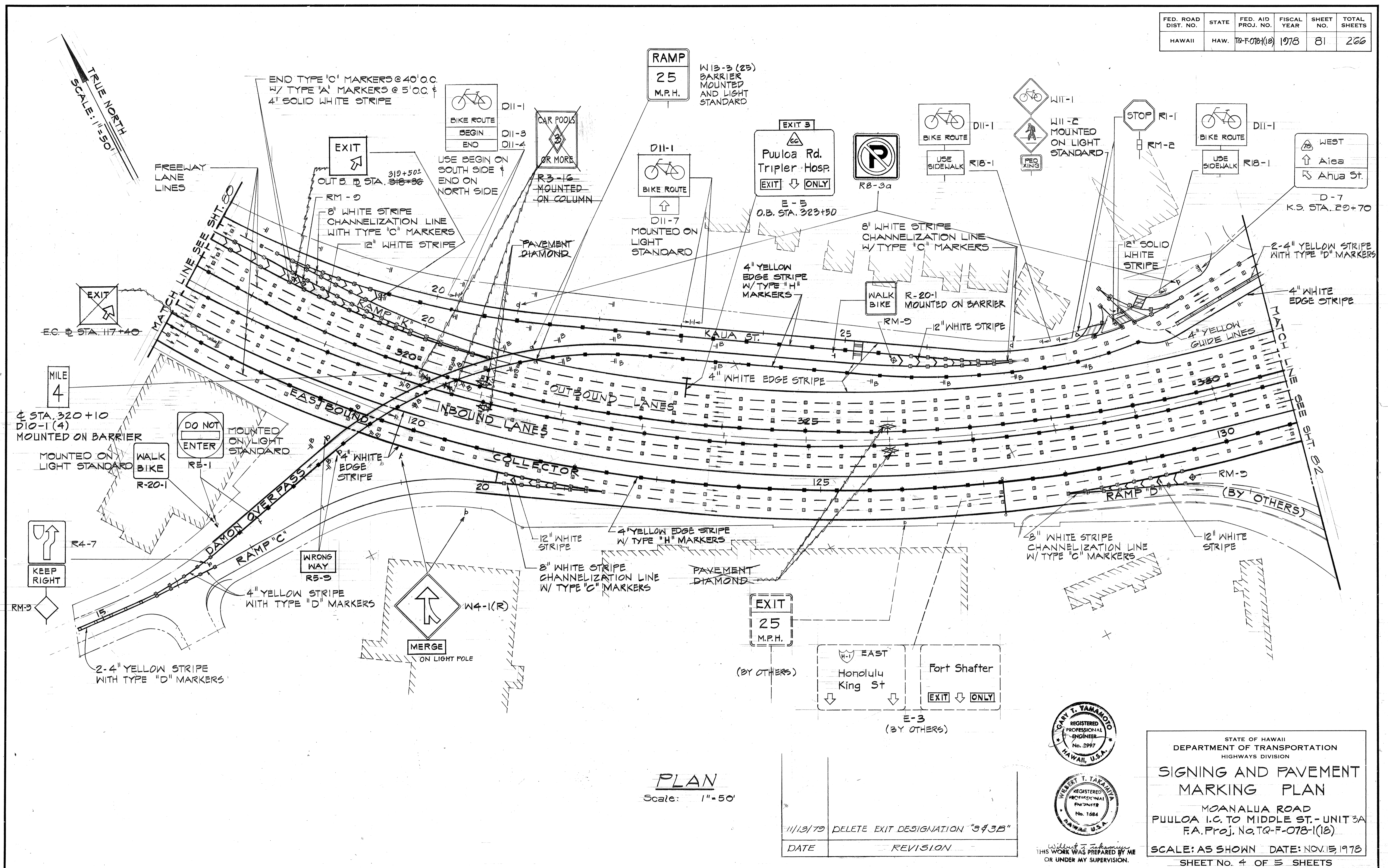
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING AND PAVEMENT MARKING PLAN

MOANALUA ROAD
PUULOA I.C. TO MIDDLE ST. - UNIT 3A
F.A. Proj. NO. TQ-F-078-1(18)

SCALE: AS SHOWN DATE: NOV. 5, 1978
SHEET NO. 3 OF 5 SHEETS

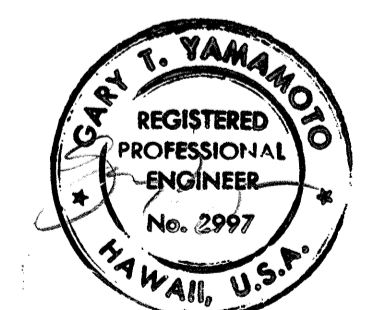
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(18)	1978	81	266



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

PLAN
Scale: 1" = 50'

11/13/79	DELETE EXIT DESIGNATION "343B"
DATE	REVISION



WILBERT T. TAKAMAI
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OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING AND PAVEMENT MARKING PLAN

MOANALUA ROAD
PUULOA I.C. TO MIDDLE ST. - UNIT 3A
F.A. Proj. No. TQ-F-078-1(18)

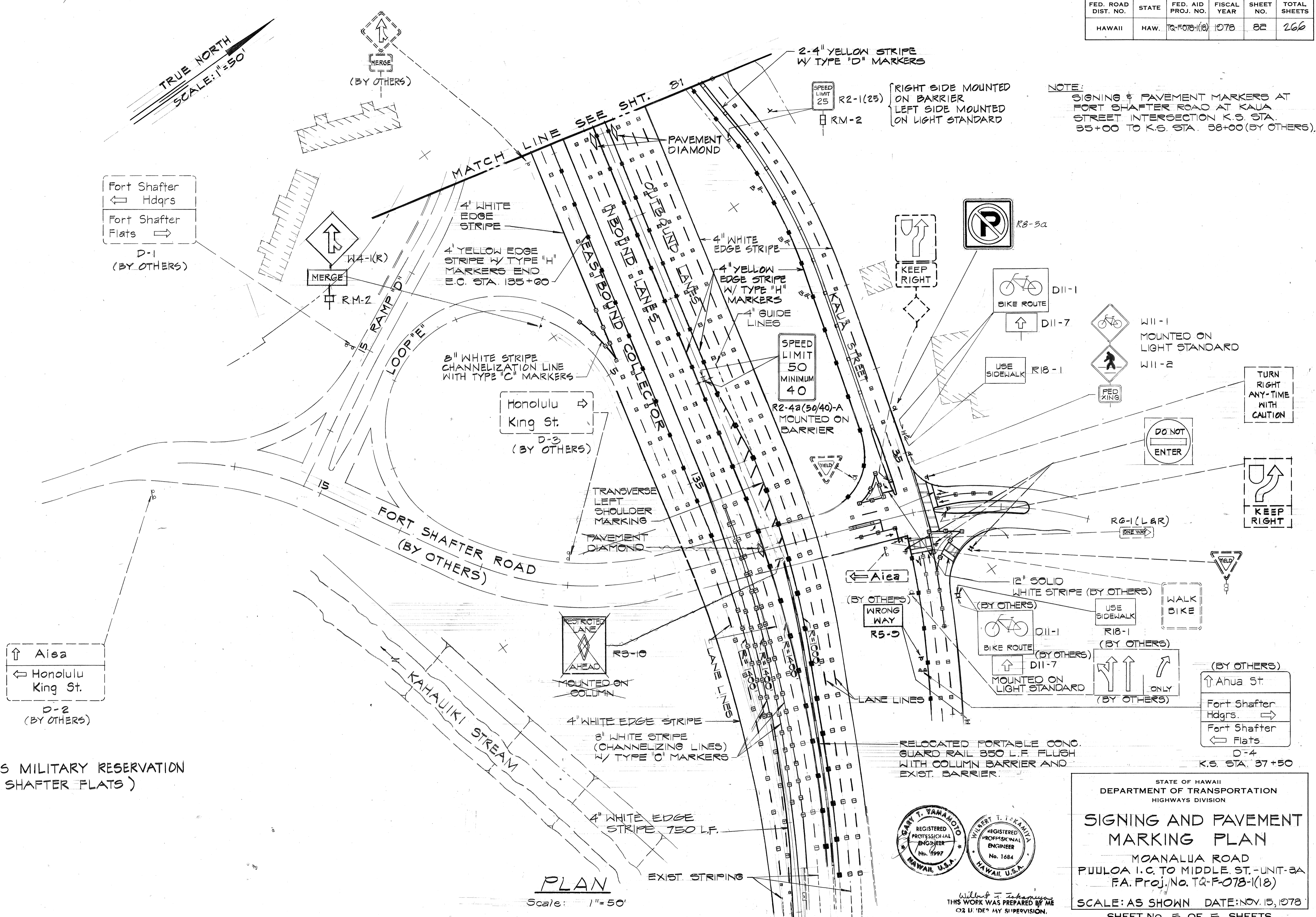
SCALE: AS SHOWN DATE: NOV. 15, 1978
SHEET NO. 4 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(18)	1978	82	266

TRUE NORTH
SCALE: 1"=50'

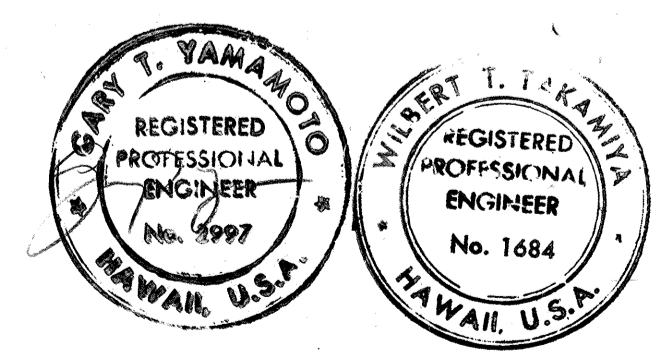
NOTE:
SIGNING & PAVEMENT MARKERS AT
FORT SHAFTER ROAD AT KALUA
STREET INTERSECTION K.S. STA.
35+00 TO K.S. STA. 38+00 (BY OTHERS).

DATE
DRAWN BY
CHECKED BY
DESIGNED BY
QUANTITIES BY
CREATED BY



UNITED STATES MILITARY RESERVATION
(FORT SHAFTER FLATS)

PLAN
Scale: 1"=50'



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGNING AND PAVEMENT MARKING PLAN

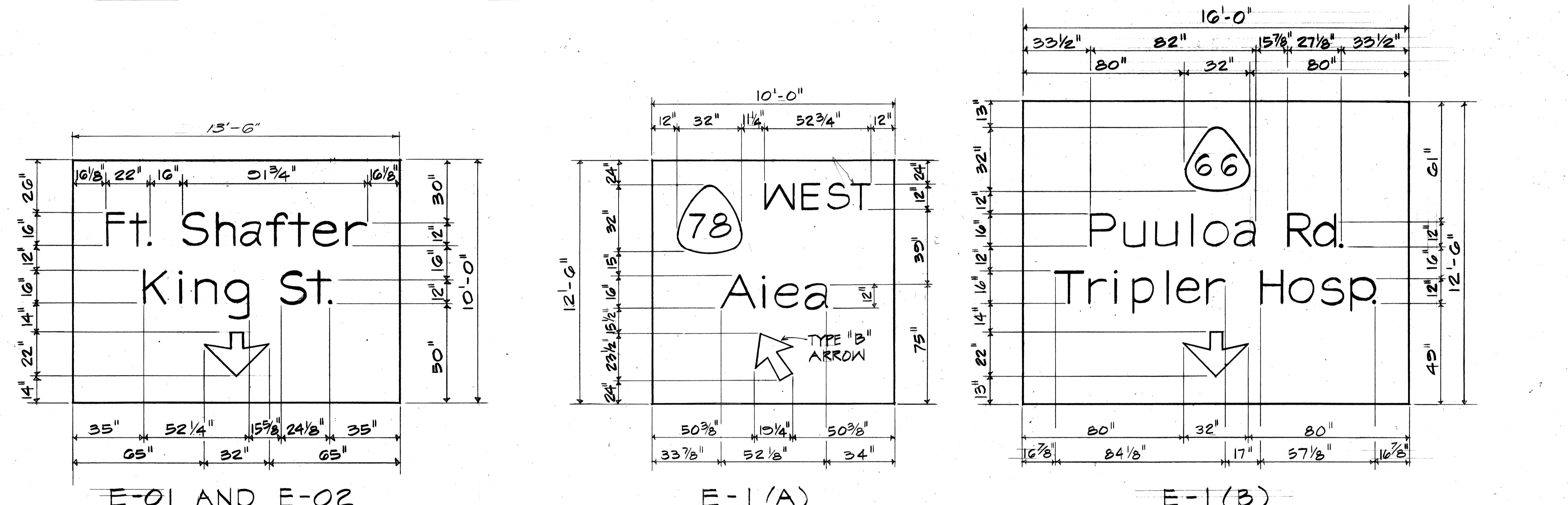
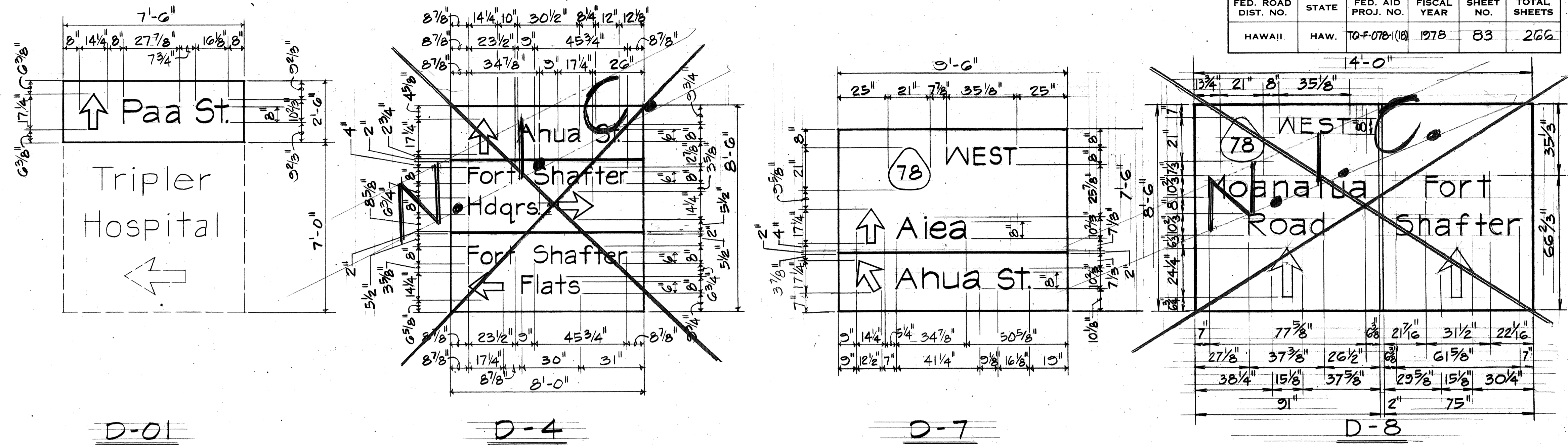
MOANALUA ROAD
PUULOA I.C. TO MIDDLE ST.-UNIT-3A
F.A. Proj. No. TQ-F-078-1(18)

SCALE: AS SHOWN DATE: NOV. 15, 1978
SHEET NO. 5 OF 5 SHEETS

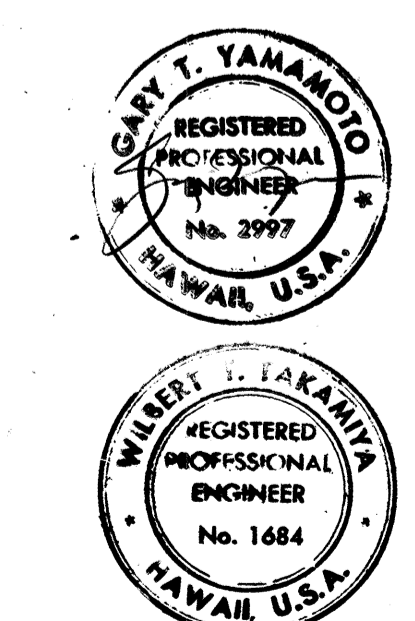
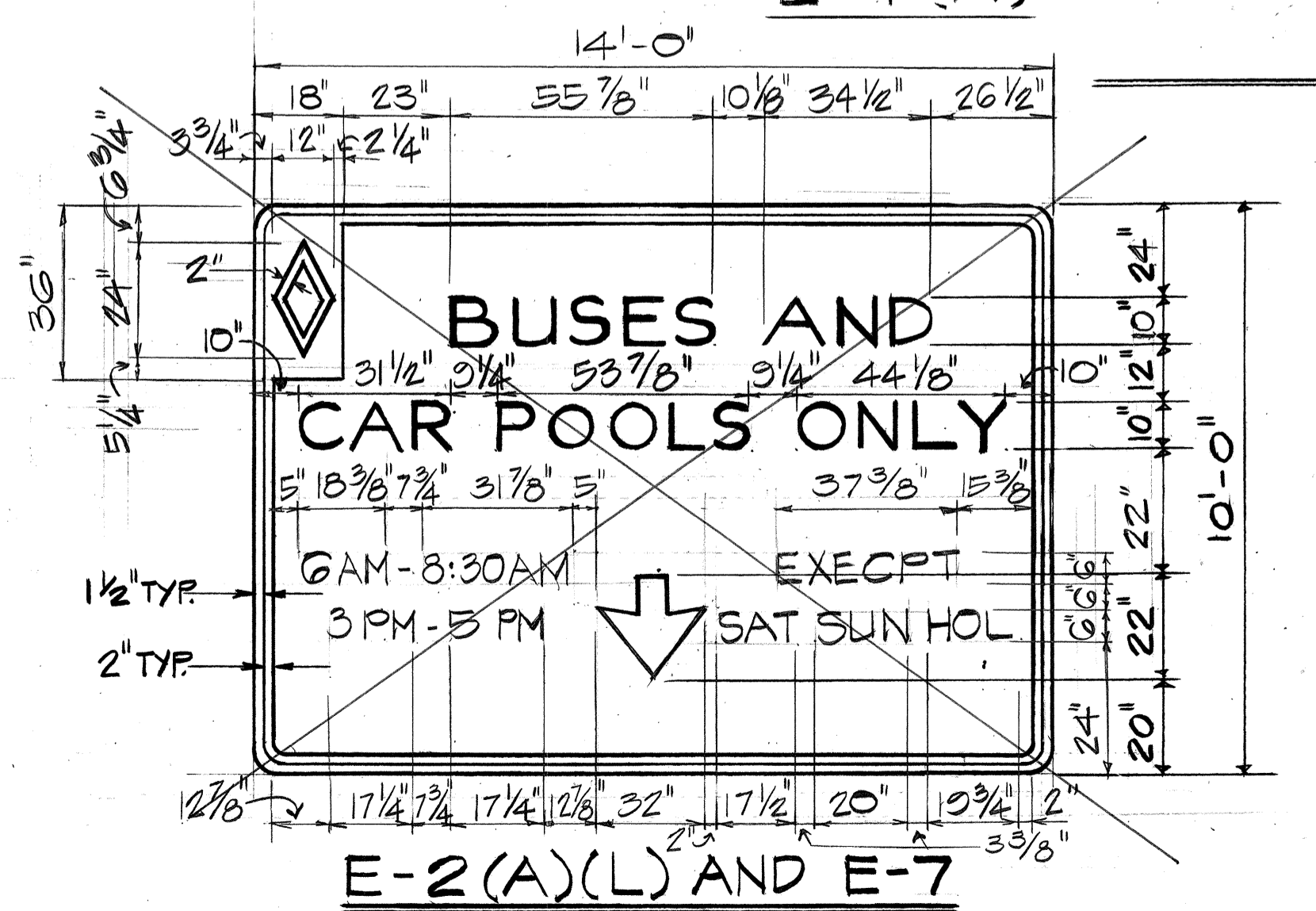
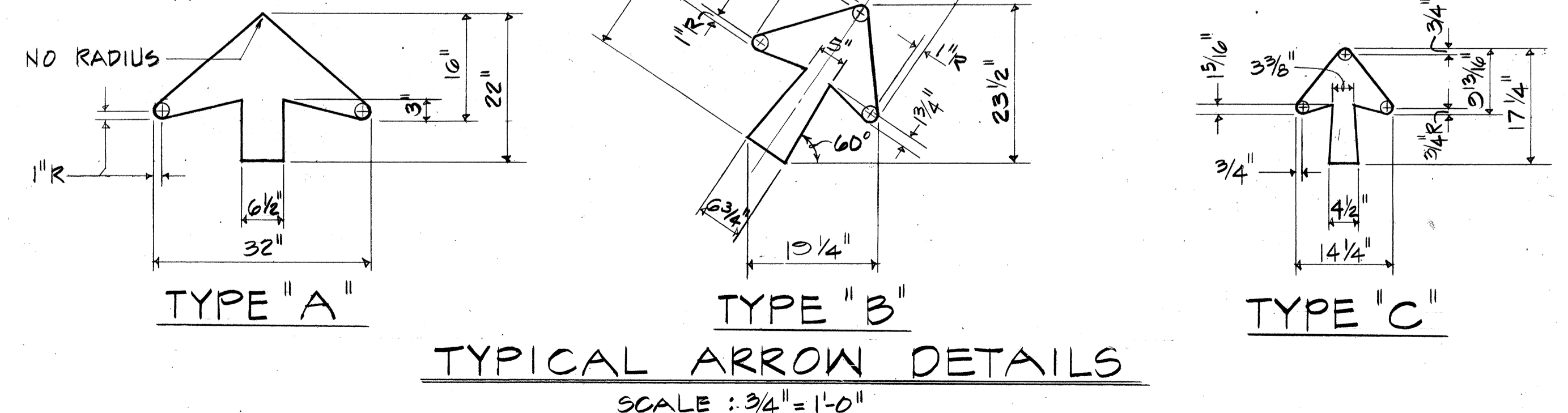
GENERAL NOTES :

- LETTERS SHALL CONFORM TO THE MODIFIED SERIES "E" LETTERS SHOWN IN THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS," BUREAU OF PUBLIC ROADS, 1966.
- ARROWS, BORDERS AND ROUTE MARKERS SHALL CONFORM WITH DETAILS AS SHOWN ON PLANS.
- LETTERS, NUMERALS, SYMBOLS AND BORDERS SHALL BE DEMOUNTABLE ALUMINUM CUT-OUTS WITH WHITE REFLECTIVE SHEETING OR CLEAR REFLEX REFLECTORS, AND SHALL BE FASTENED ON THE SIGN PANEL WITH BLIND RIVETS, SEE SPECIAL PROVISIONS.
- EXPRESSWAY SIGNS (E) SHALL HAVE EITHER WHITE REFLECTIVE SHEETING ON ALUMINUM CUT-OUTS OR CLEAR REFLEX REFLECTORS SET IN WHITE PORCELAIN ENAMELED ALUMINUM CUT-OUTS. BACKGROUND FOR THE EXPRESSWAY SIGNS SHALL BE GREEN PORCELAIN ENAMEL.
- DESTINATION SIGNS (D) SHALL HAVE WHITE REFLECTIVE SHEETING ON ALUMINUM CUT-OUTS ON GREEN REFLECTIVE SHEETING BACKGROUND.
- "EXIT ONLY" PANELS SHALL BE DEMOUNTABLE ALUMINUM CUT-OUTS WITH BLACK LEGEND ON YELLOW REFLECTIVE SHEET BACKGROUND.
- SEE SHEET 86 FOR FRAME LAYOUT AND SHEET 88 FOR SUPPORT FOUNDATION DETAILS.
- PROVIDE INSULATION BETWEEN ALL DISSIMILAR METALS.
- EXCEPTIONS TO NOTES 3 & 4 OR AS FOLLOWS :
 1. BUS-CAR POOLS EXPRESSWAY SIGNS SHALL HAVE BLACK LEGENDS, BORDERS AND ARROWS ON WHITE REFLECTIVE SHEETING BACKGROUND.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-07B-1(18)	1978	83	266



- NOTES :**
- ALL ARROWS ON EXPRESSWAY (E) SIGNS SHALL BE TYPE "A" UNLESS OTHERWISE NOTED.
 - ALL ARROWS ON DESIGNATION (D) SIGNS SHALL BE TYPE "C".



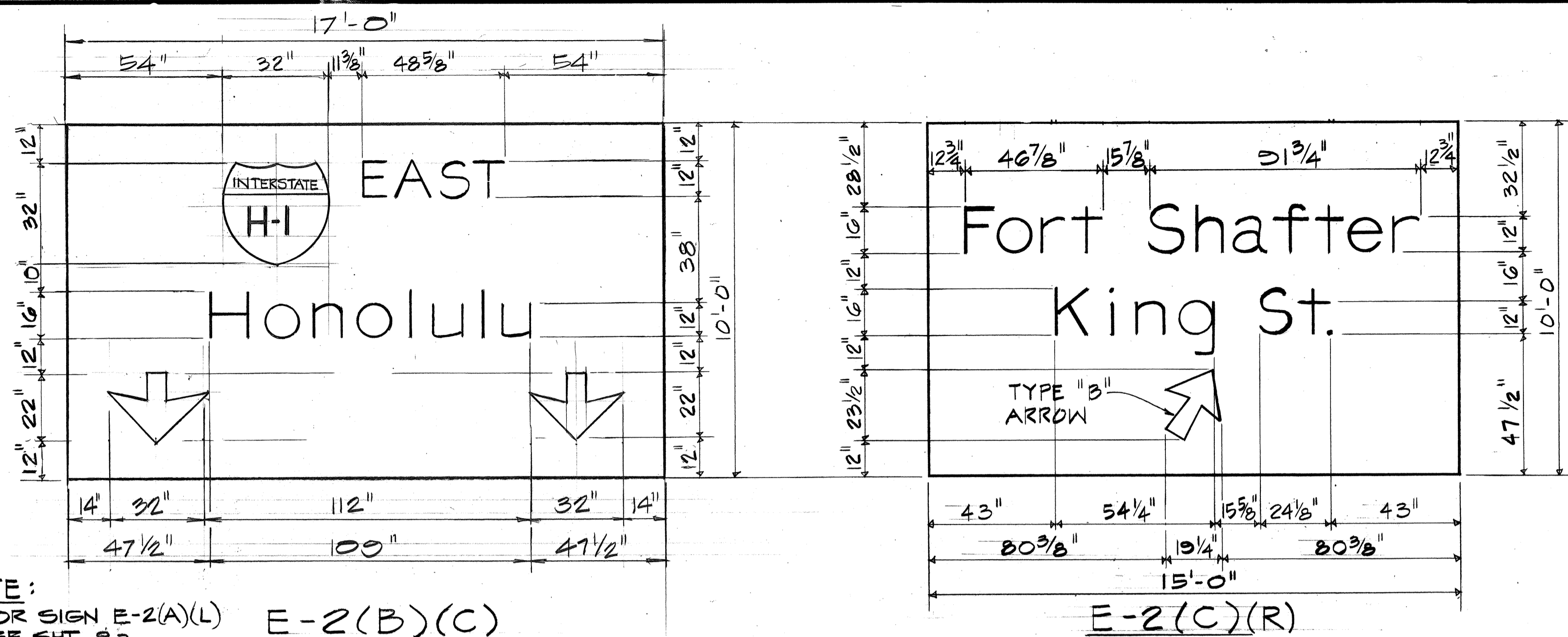
11/13/79 DELETE EXIT DESIGNATION "35"
 DATE REVISION

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

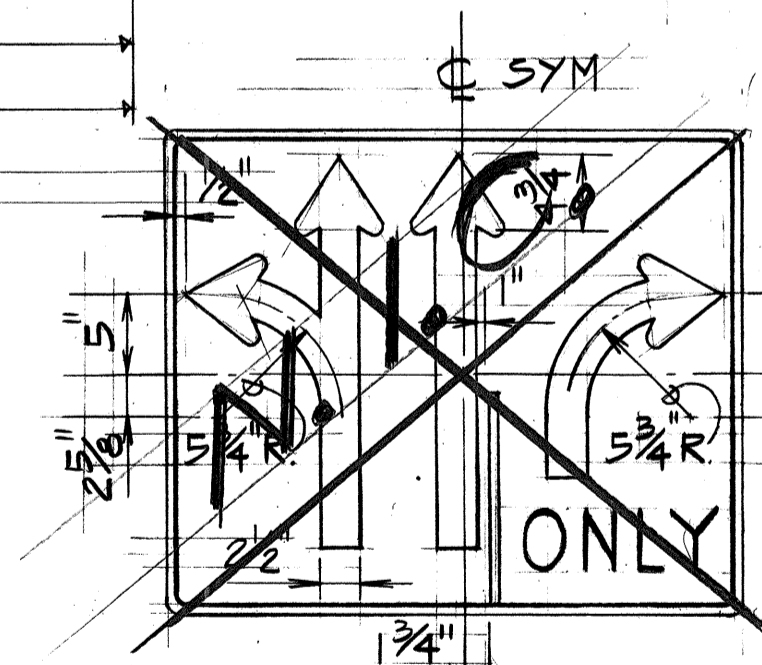
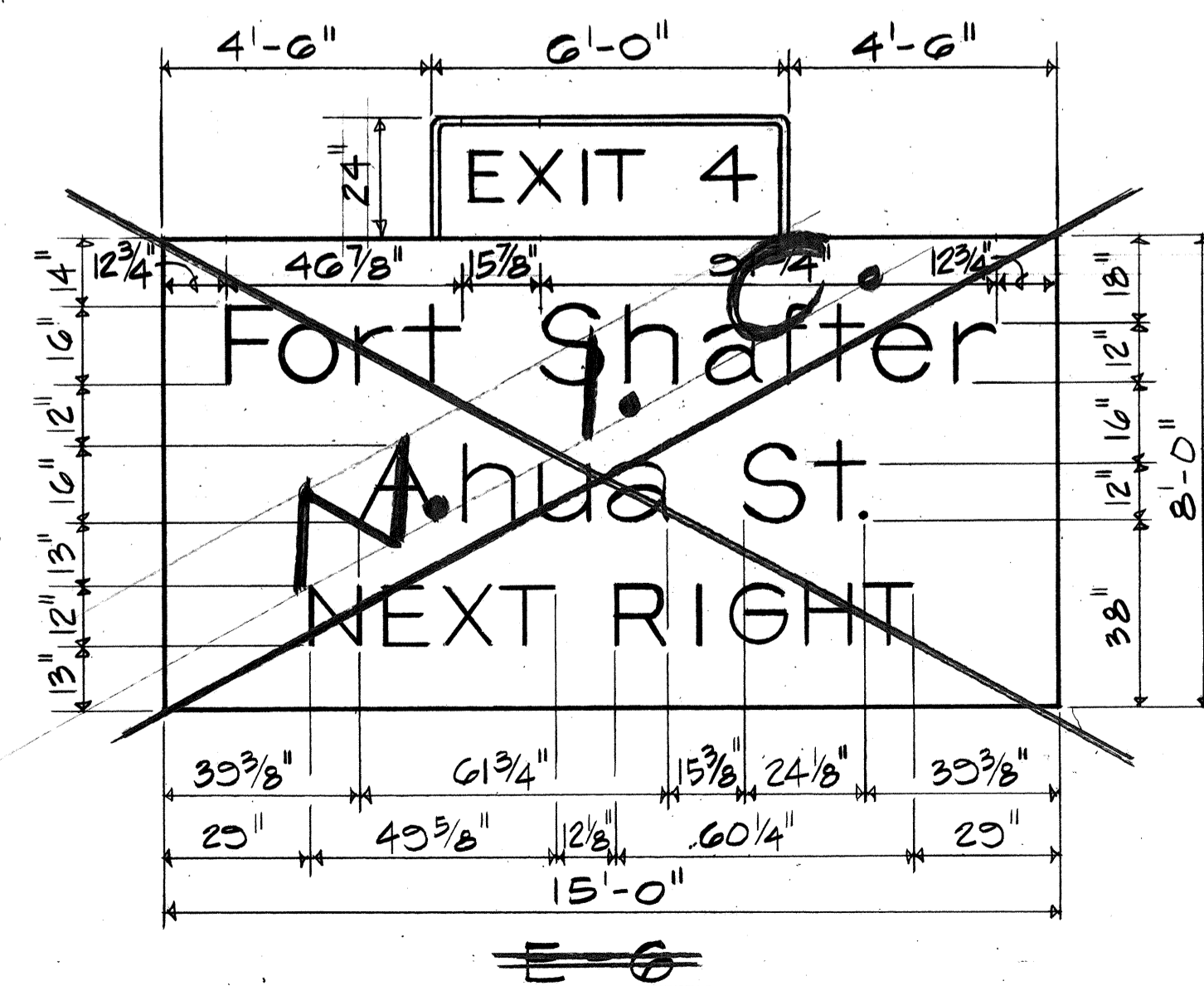
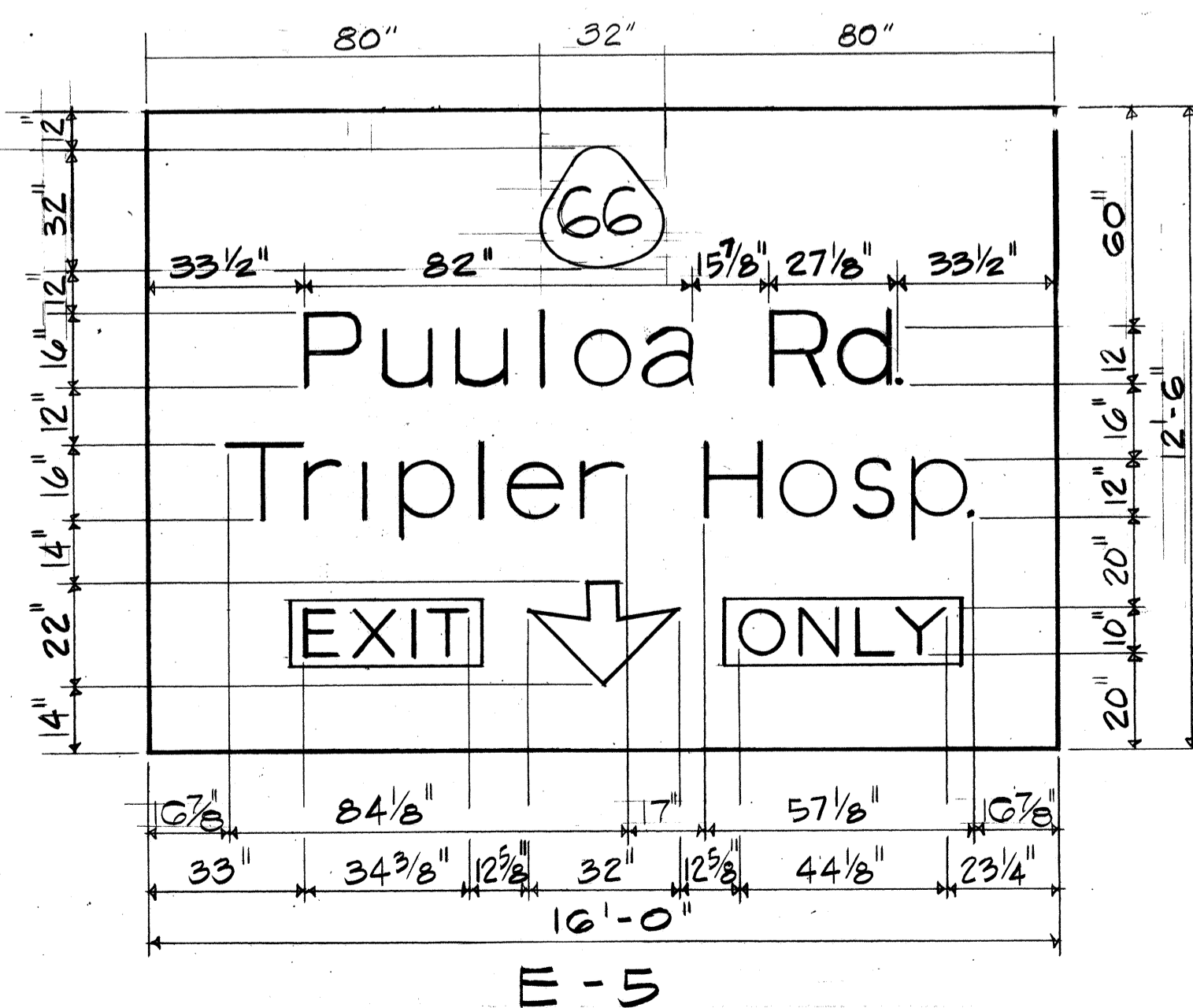
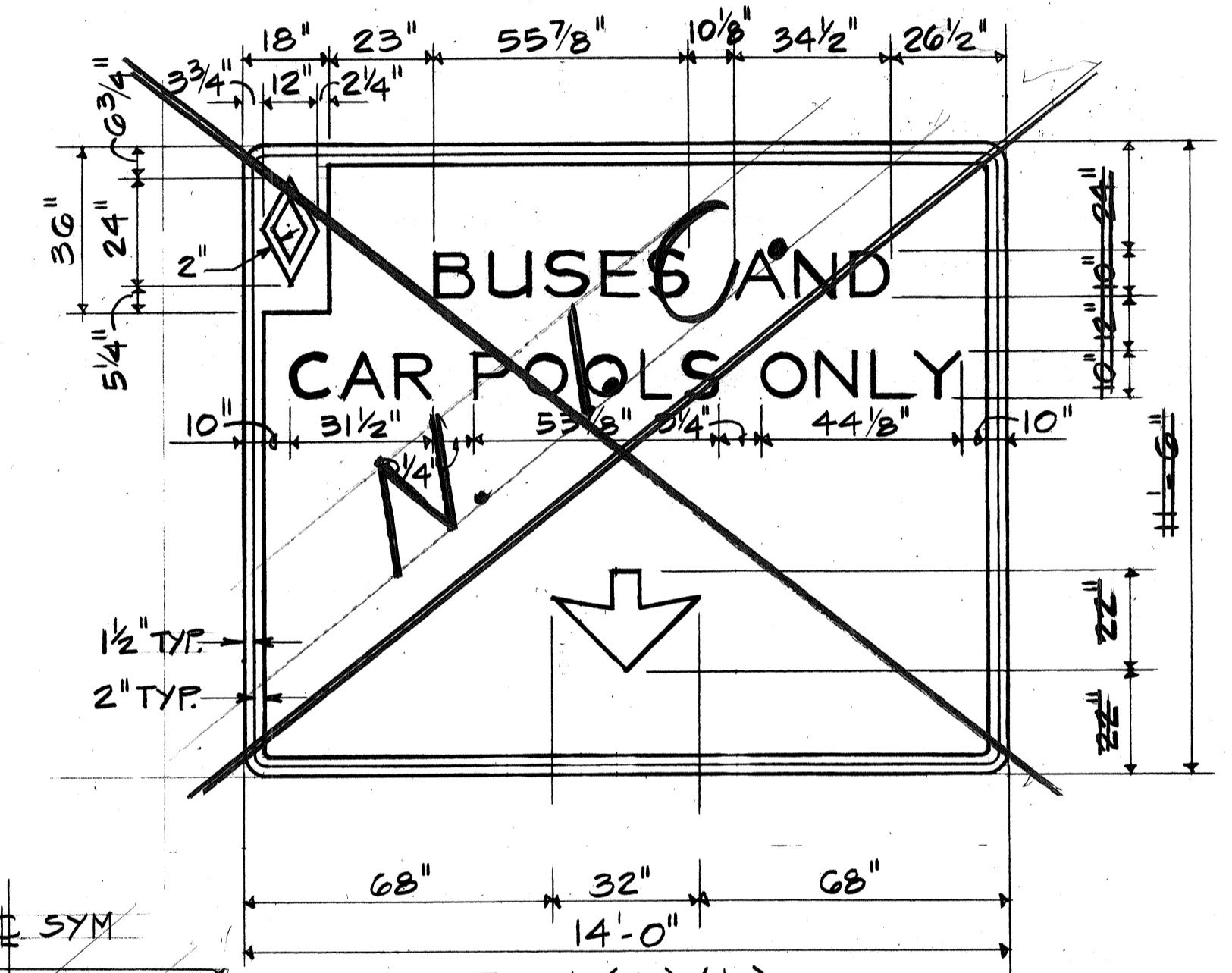
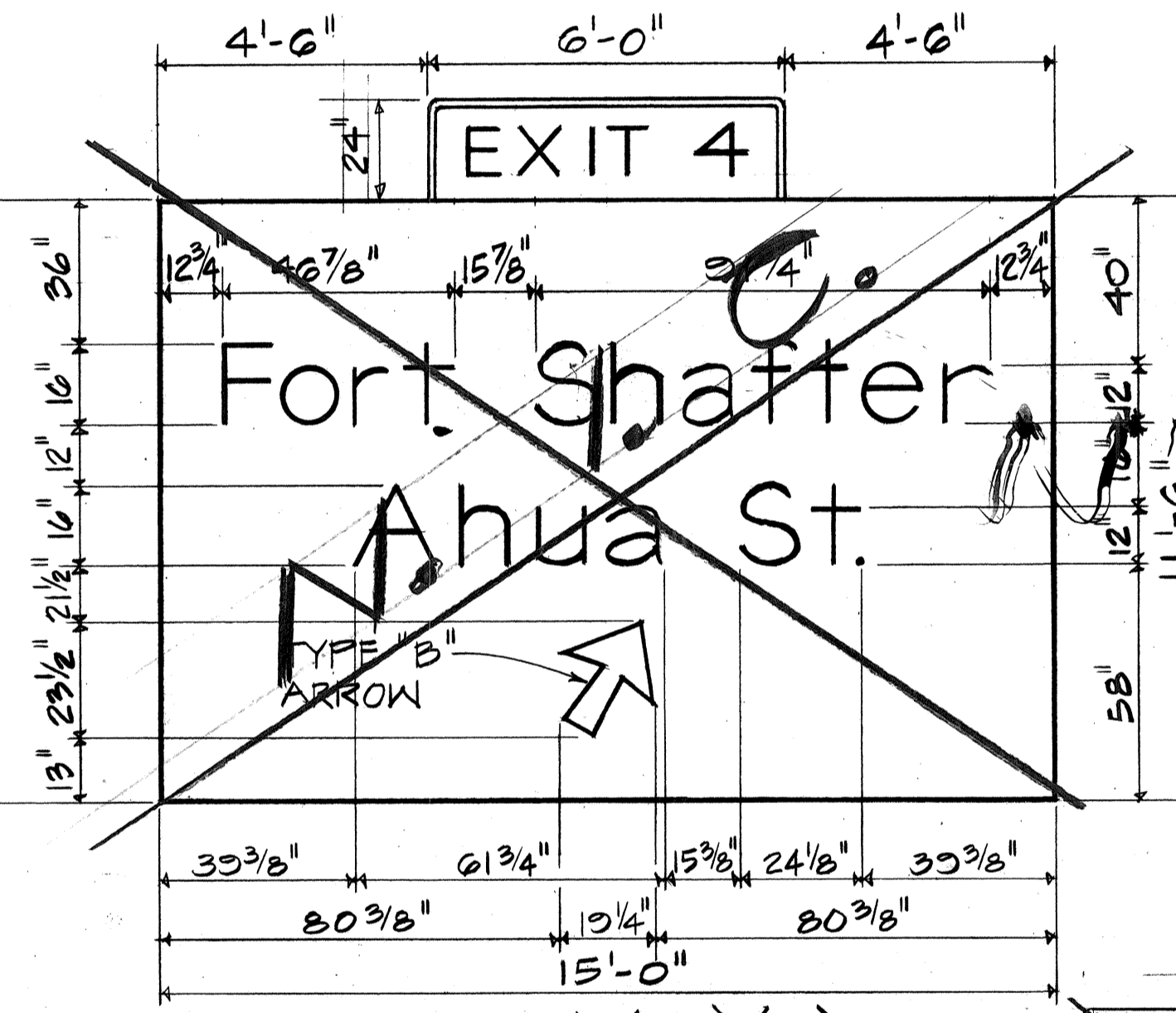
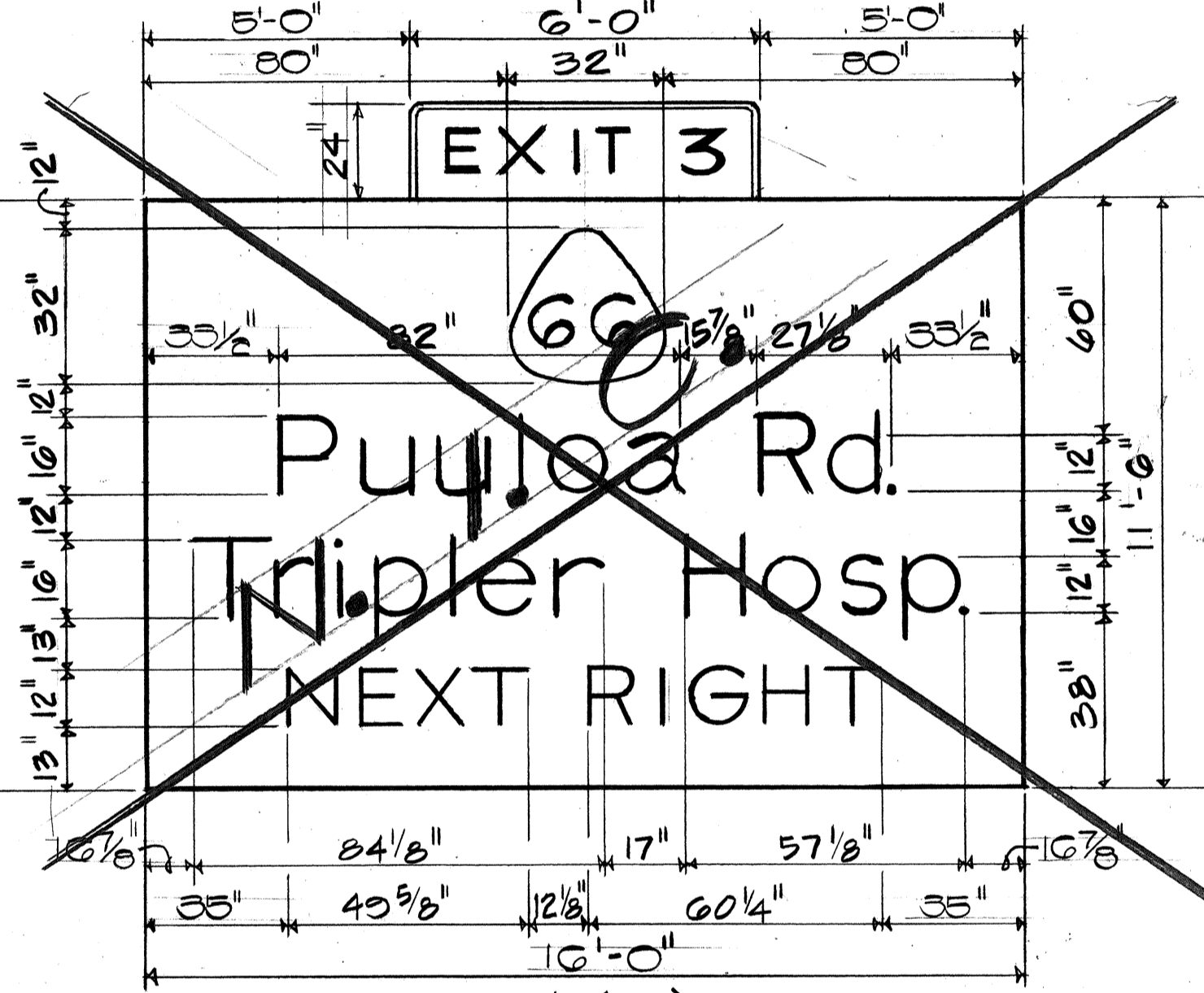
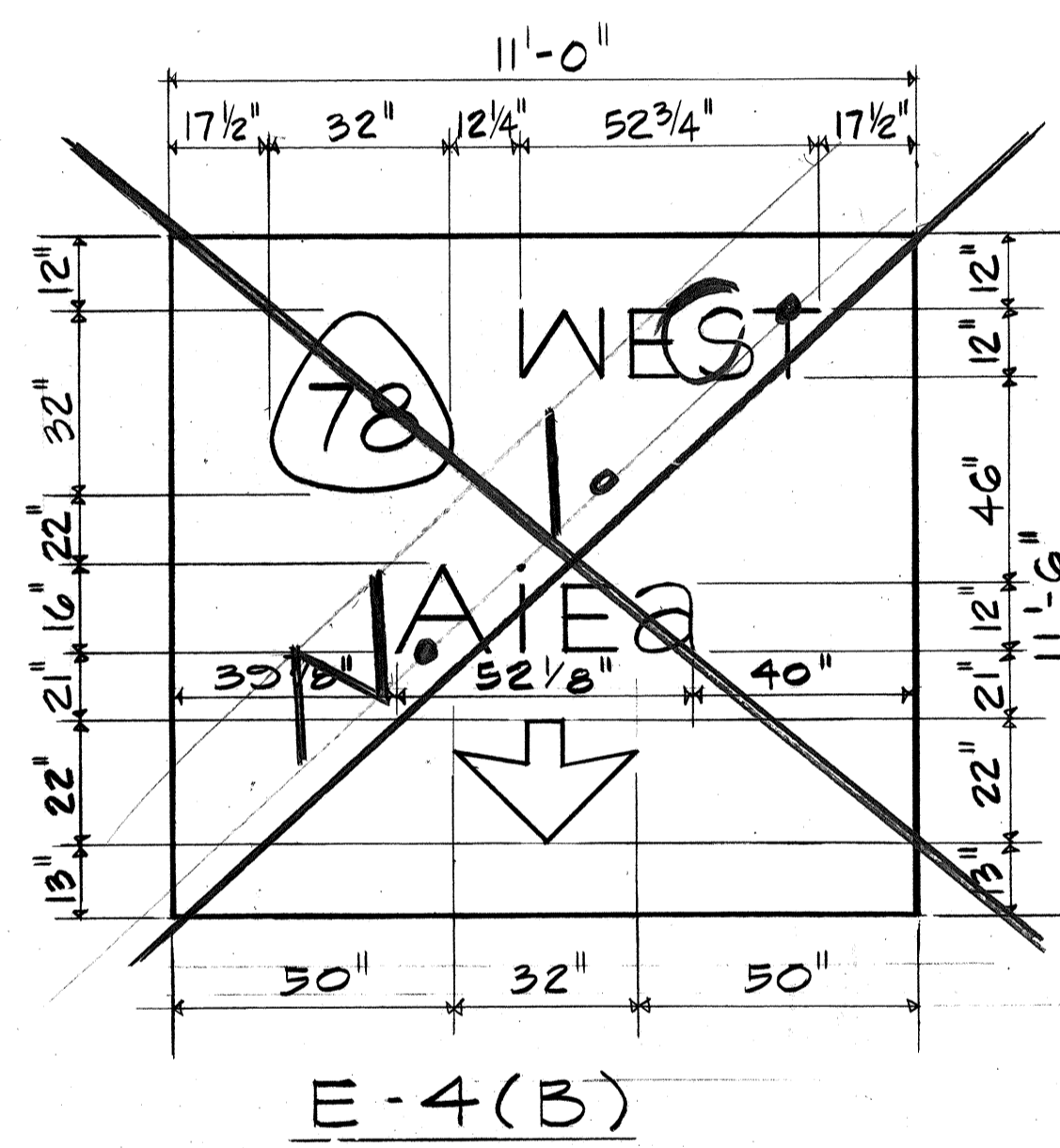
PANEL LAYOUT

MOANALUA ROAD
 PUULOA I.C. TO MIDDLE ST. - UNIT 3A
 F.A. PROJ. NO. TQ-F-07B-1(18)
 SCALE: AS SHOWN DATE: NOV. 15, 1978
 SHEET NO. 1 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(18)	1978	84	266



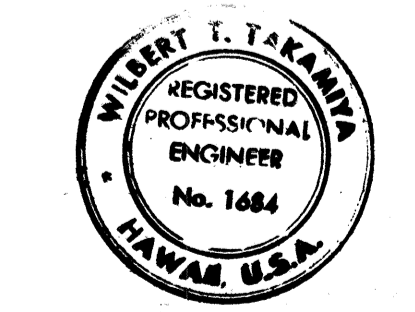
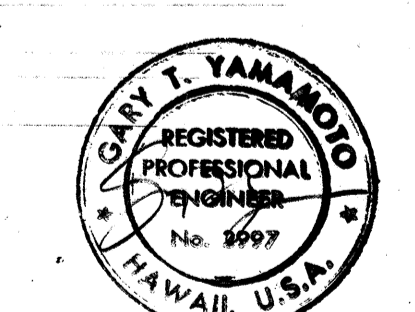
NOTE:
FOR SIGN E-2(A)(L) E-2(B)(C)
SEE SHT. 83



WALK
BIKE

4" SERIES
'E' LETTERS

R-20-1
18" x 18"



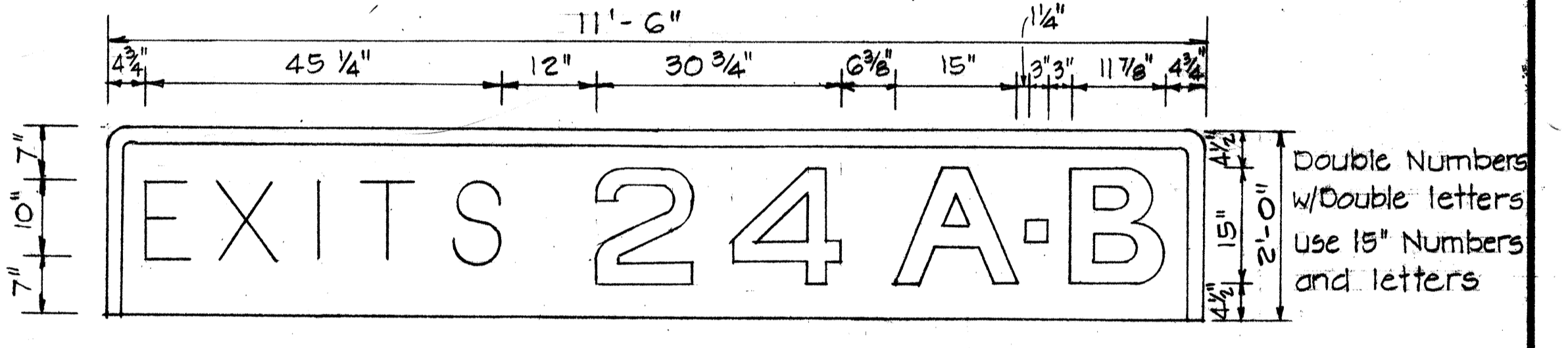
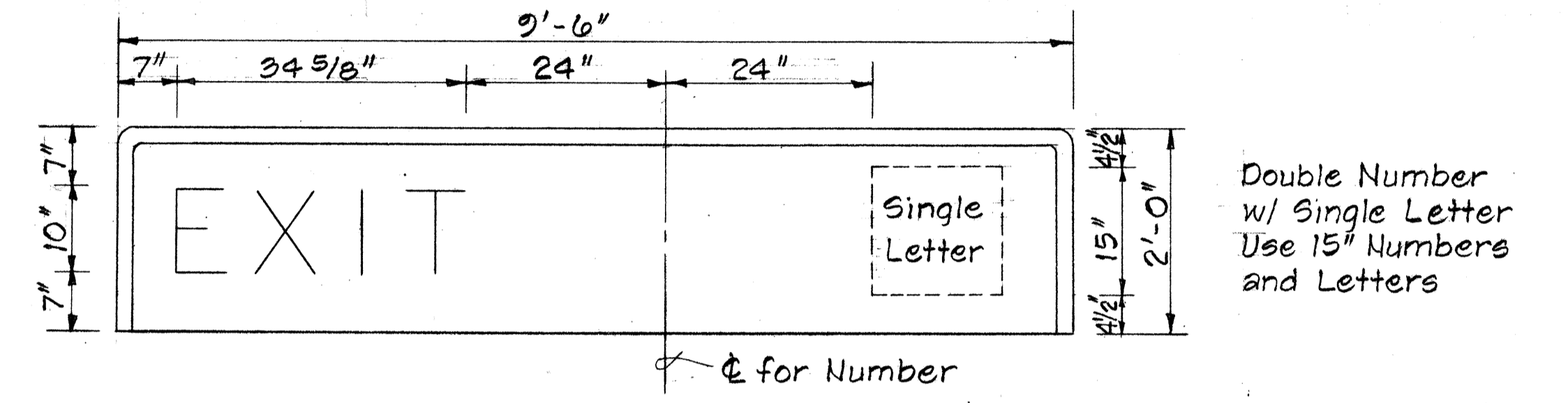
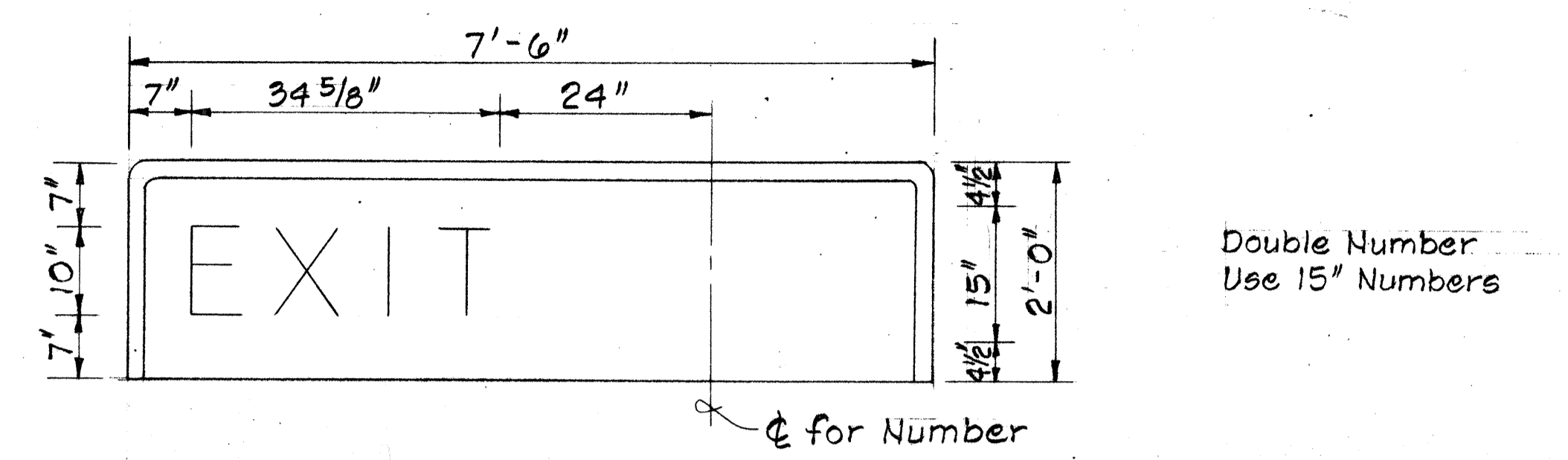
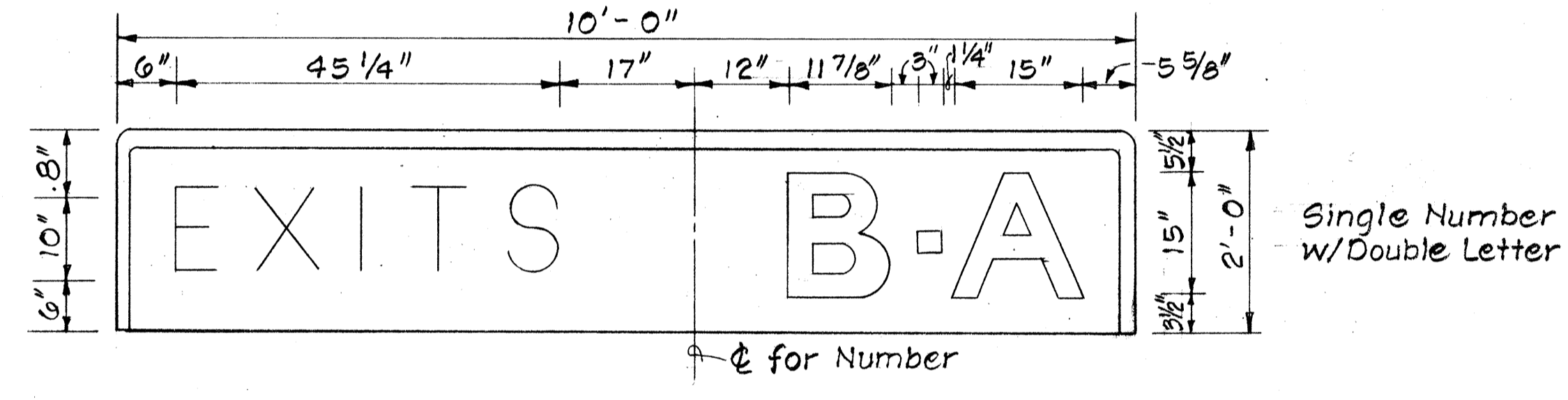
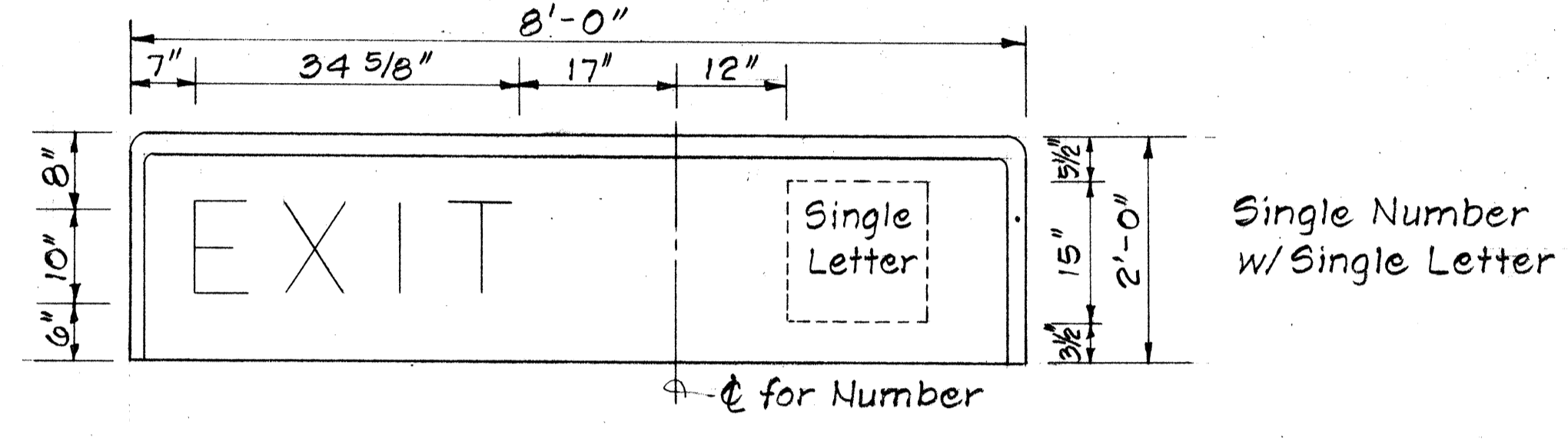
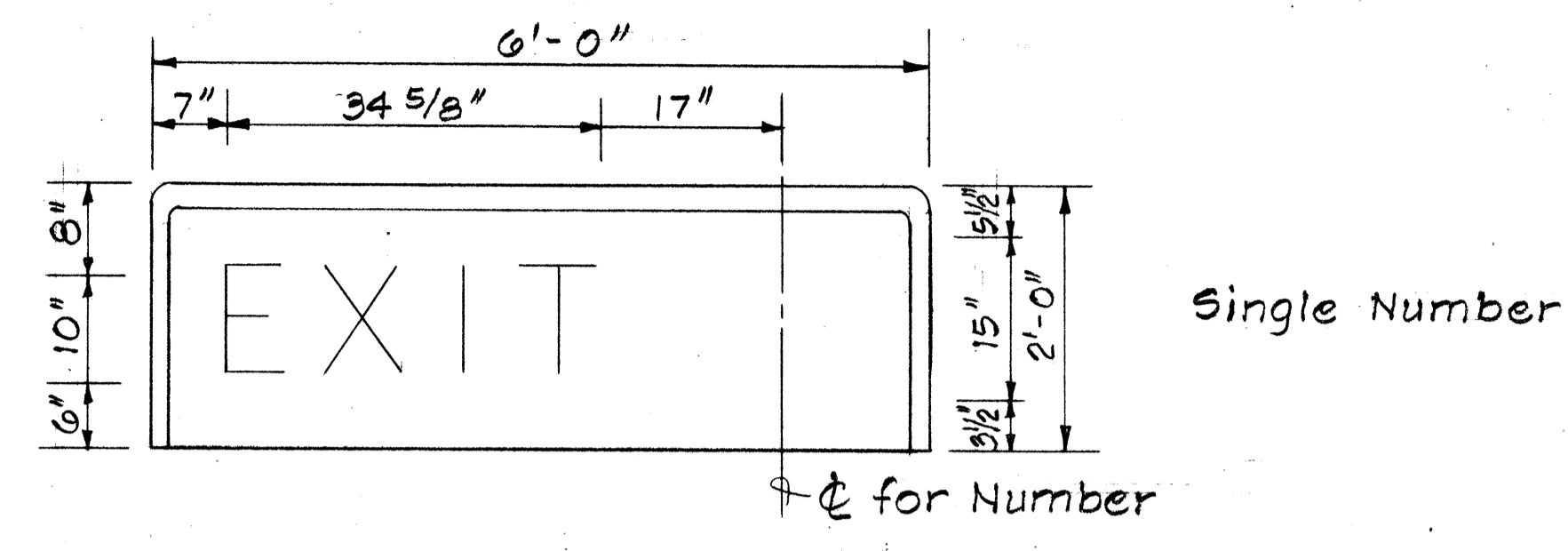
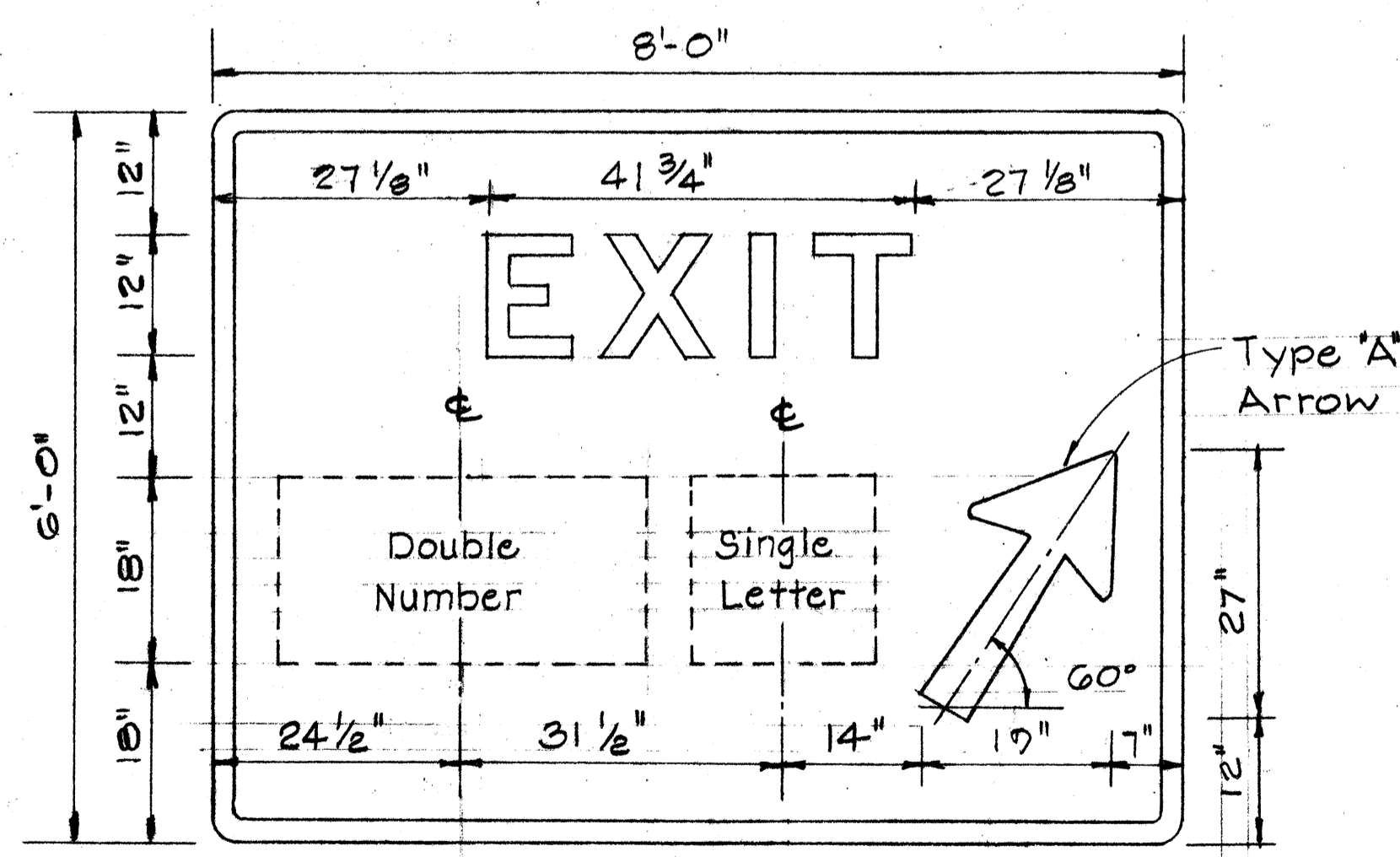
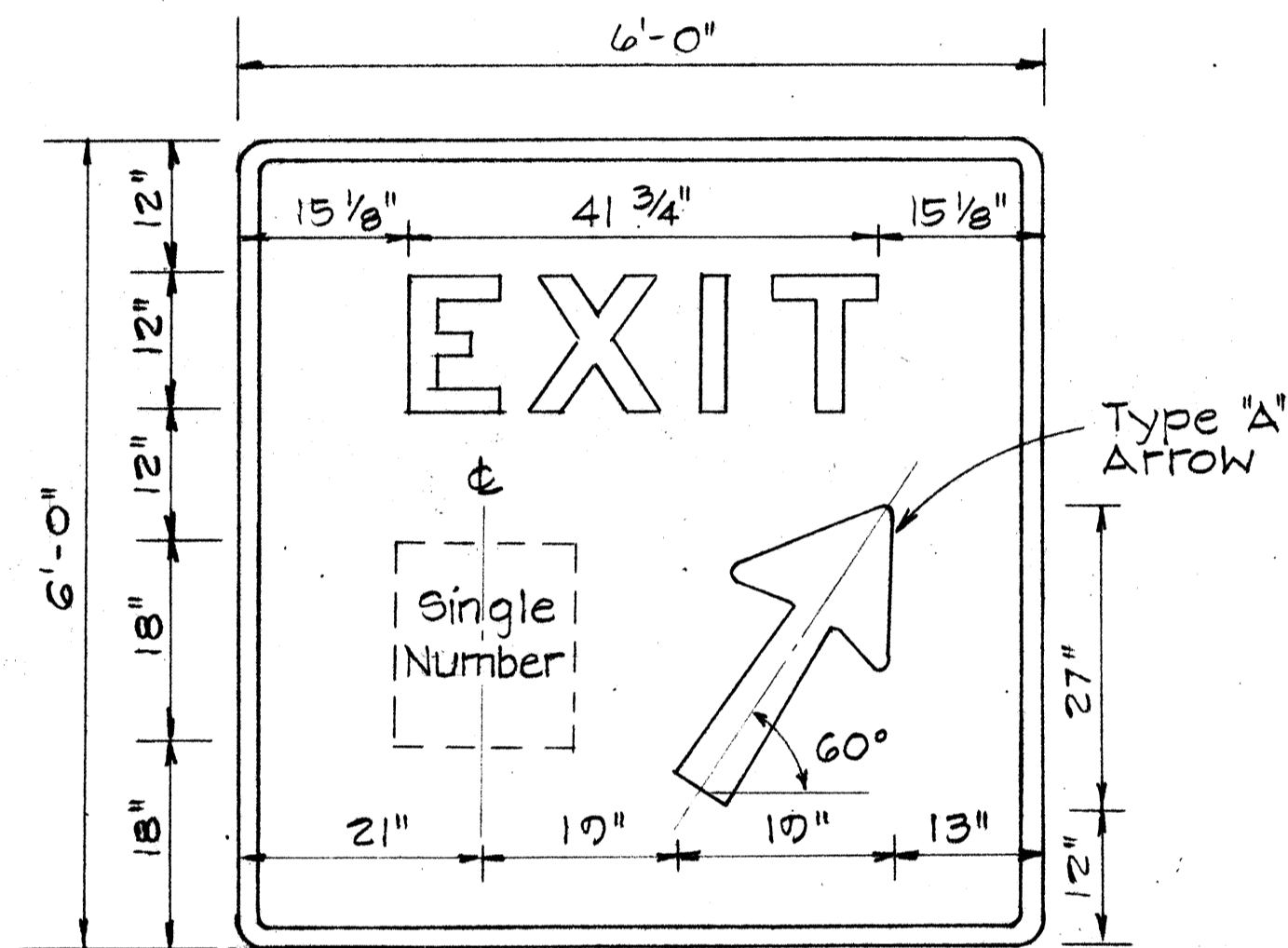
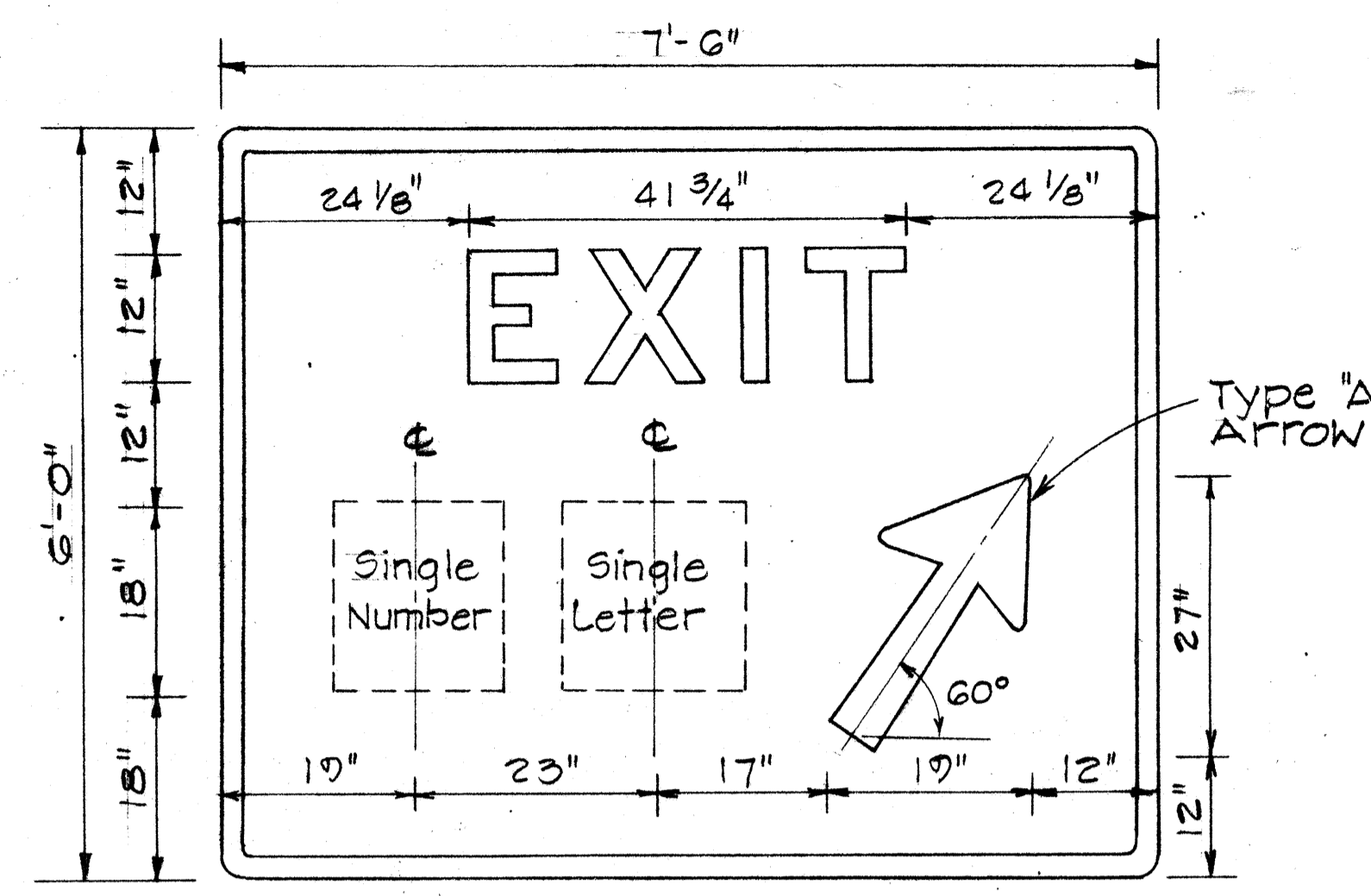
Wilbert F. Takama
THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

11/13/79 DELETE EXIT DESIGNATION "343B"
DATE REVISION

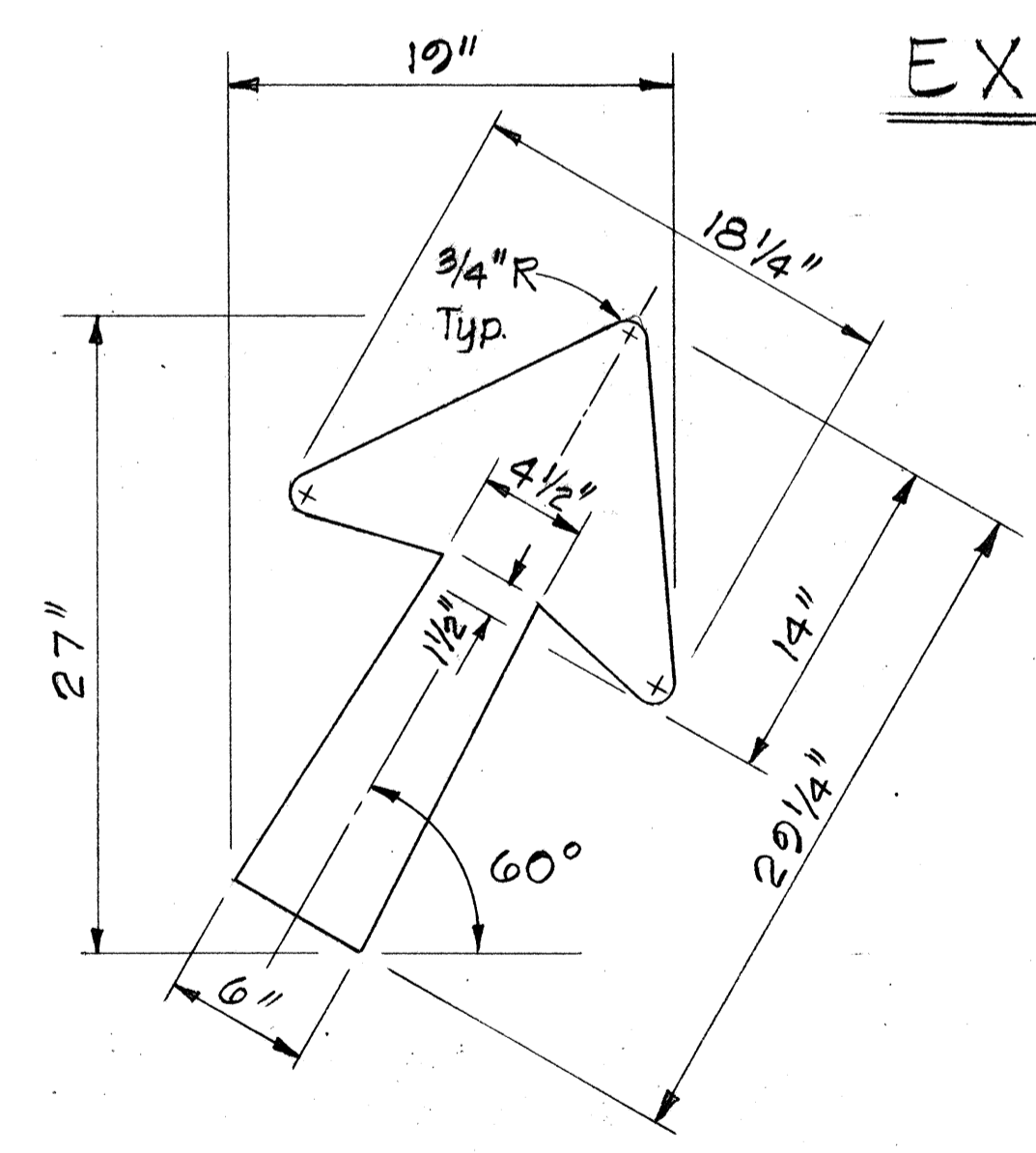
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PANEL LAYOUT
MOANALUA ROAD
PUULOA I.C. TO MIDDLE ST. - UNIT 3A
F.A. PROJ. NO. TQ-F-078-1(18)
SCALE: AS SHOWN DATE: NOV. 15, 1978
SHEET NO. 2 OF 4 SHEETS

DATE
SURVEY PLOTTED BY
DRAWN BY
DESIGNED BY
NOTED 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.	10-F-078-1(18)	1978	85	266



EXIT NUMBER PANELS
Scale: 3/4" = 1'-0"

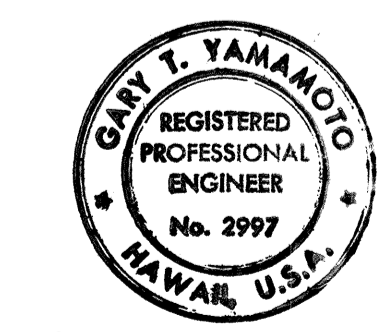


TYPE "A" DIAGONAL
ARROW DETAIL
N.T.S.

1. Design of Exit Number Panels shall conform to plans and specifications for either the Expressway or Destination sign to which the Exit Number Panel will be attached.
2. Sign message shall be lettered in uppercase according to Standard Alphabets for Highway Signs, FHWA, 1966. Use Series "E" letters unless otherwise noted.
3. Arrows, borders, and route markers shall conform with details as shown on plans.
4. Contractor shall submit for approval, shop drawings for the attachment of Exit Number Panels to sign panels.

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

GORE EXIT SIGNS
Scale: 3/4" = 1'-0"



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

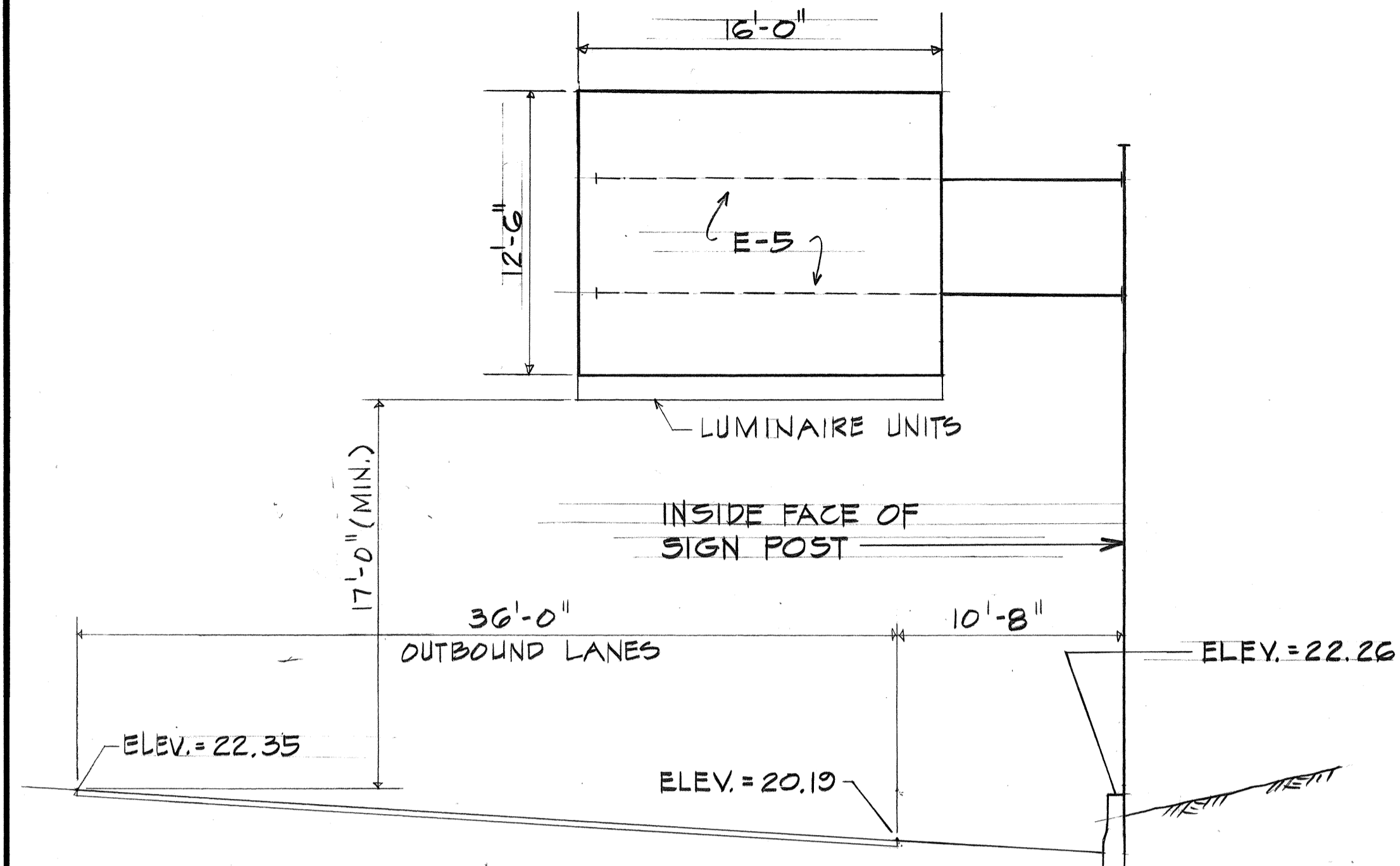
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SIGN PANEL LAYOUT

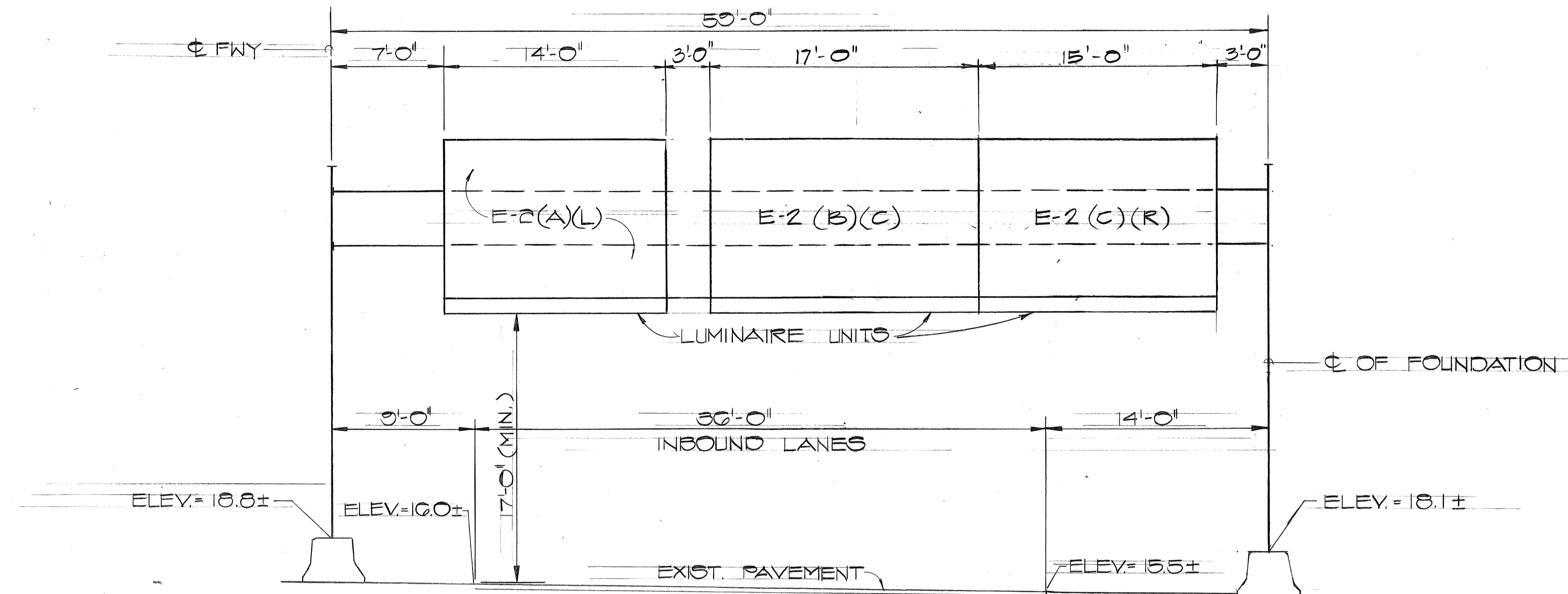
MOANALUA ROAD
PUULOA I.C. TO MIDDLE ST.-UNIT 3A
F.A. Proj. No. TQ-F-078-1(18)
Scale: As Shown Date: NOV. 15, 1978

SHEET NO. 3 OF 4 SHEETS

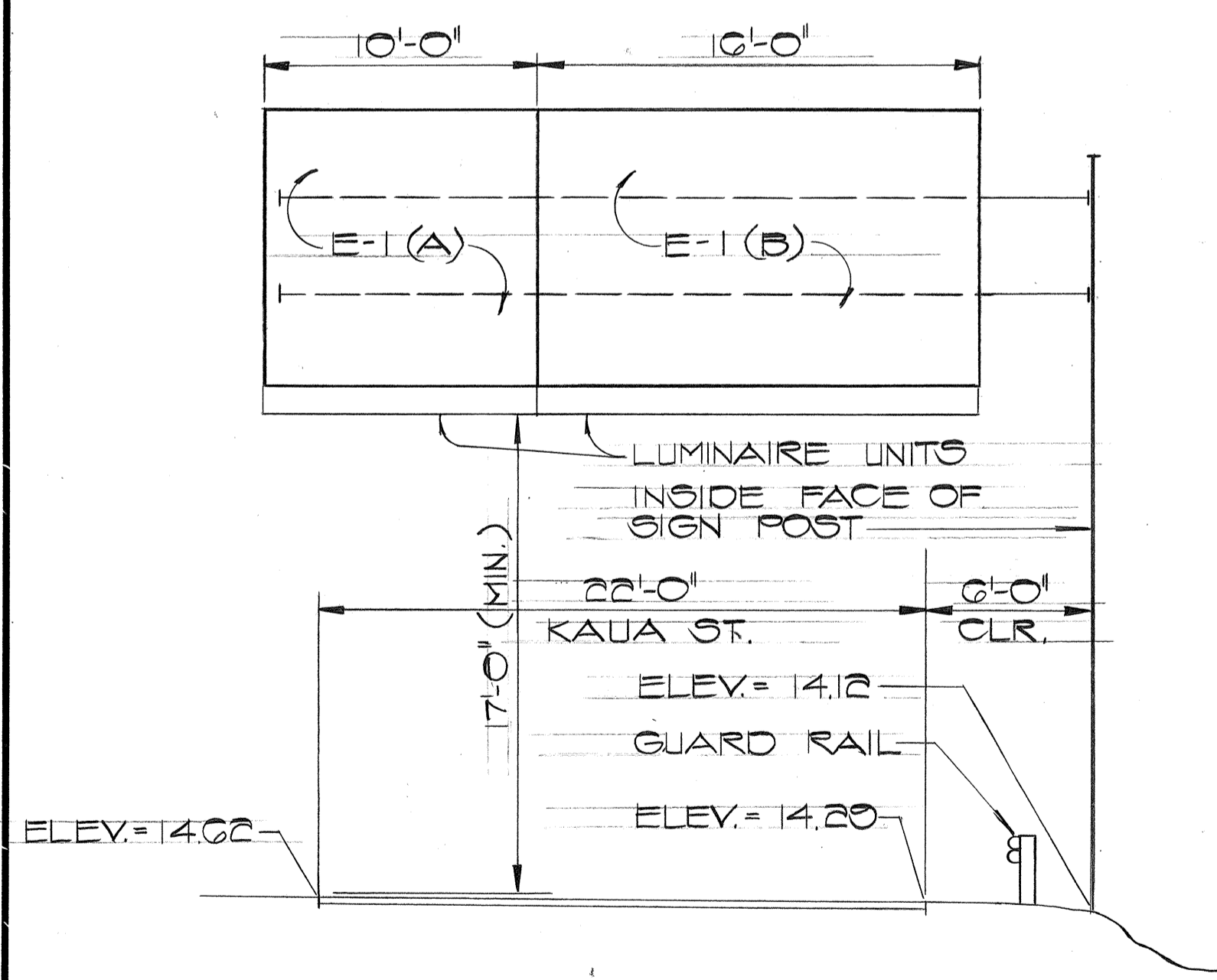
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	10-F-078-1(18)	1978	86	266



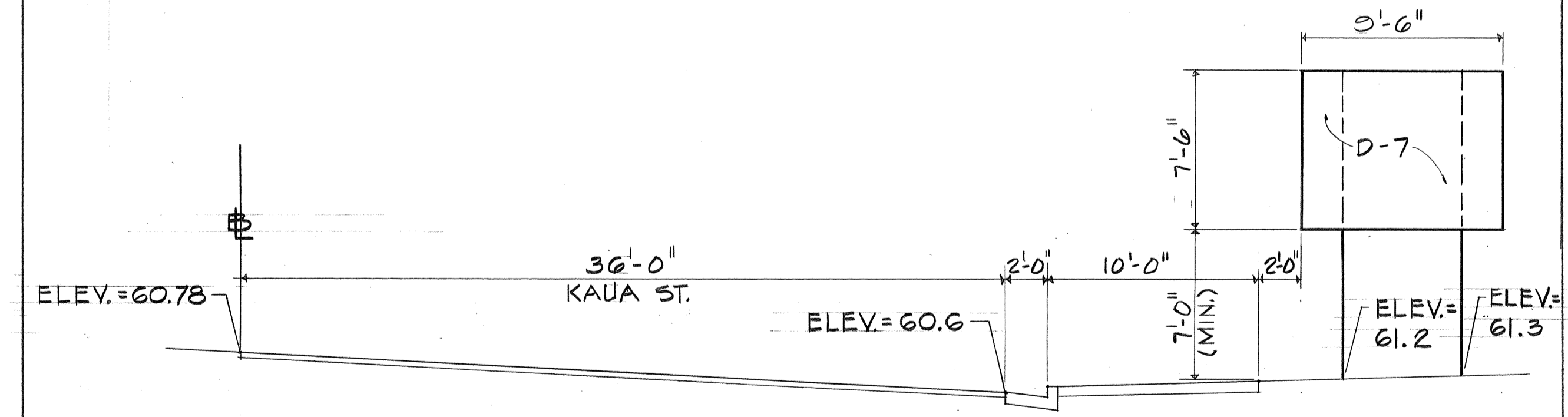
SIGN E-5
FWY. O.B. STA. 323+50



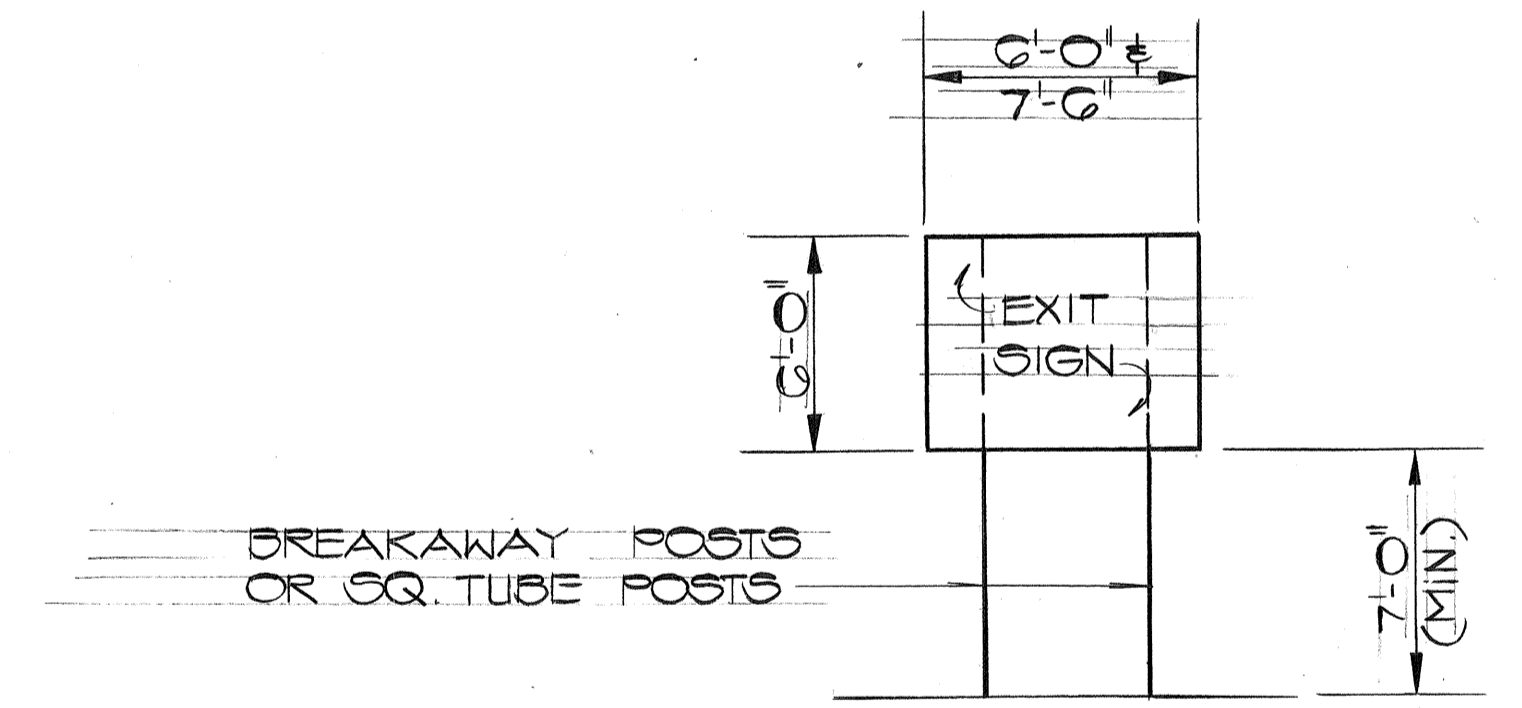
SIGN E-2
FWY. I.B. STA. 310+00



SIGN E-1
K.S. # STA. 10+75

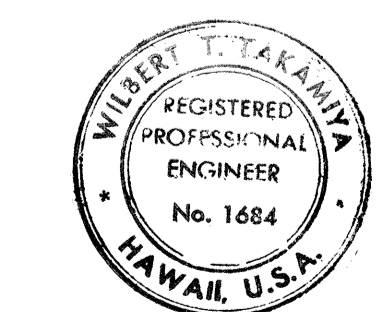


SIGN D-7
K.S. # STA. 29+55



EXIT FRAME LAYOUT

NOTE:
FOR EXIT PANEL LAYOUT
SEE OHT.



WILBERT T. YAMAMOTO
THIS WORK WAS PREPARED FOR ME
OR UNDER MY SUPERVISION.

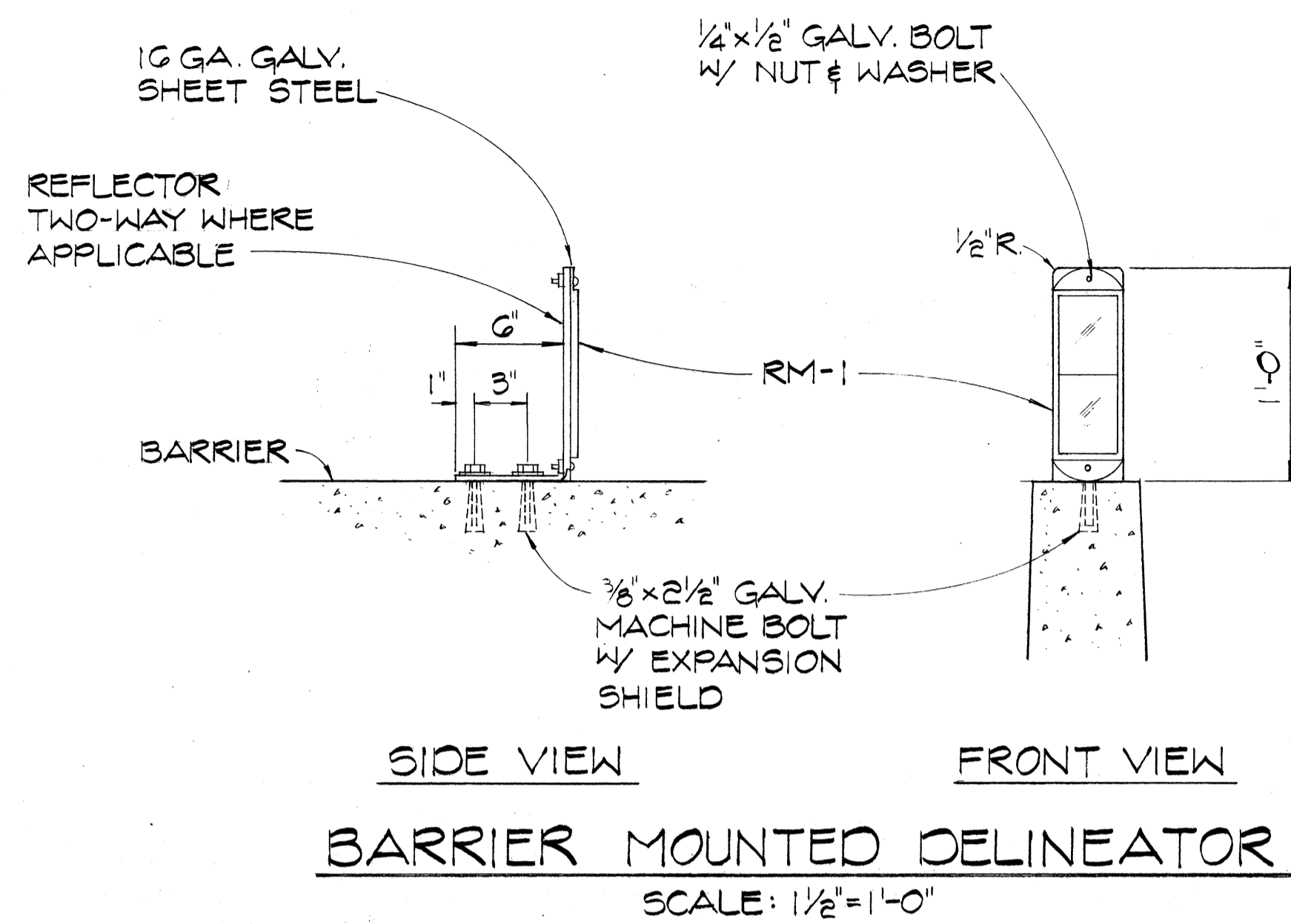
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FRAME LAYOUT

MOANALUA ROAD
PUULOA I.C. TO MIDDLE ST.-UNIT 3A
F.A. Proj. No. TQ-F-078-1(18)

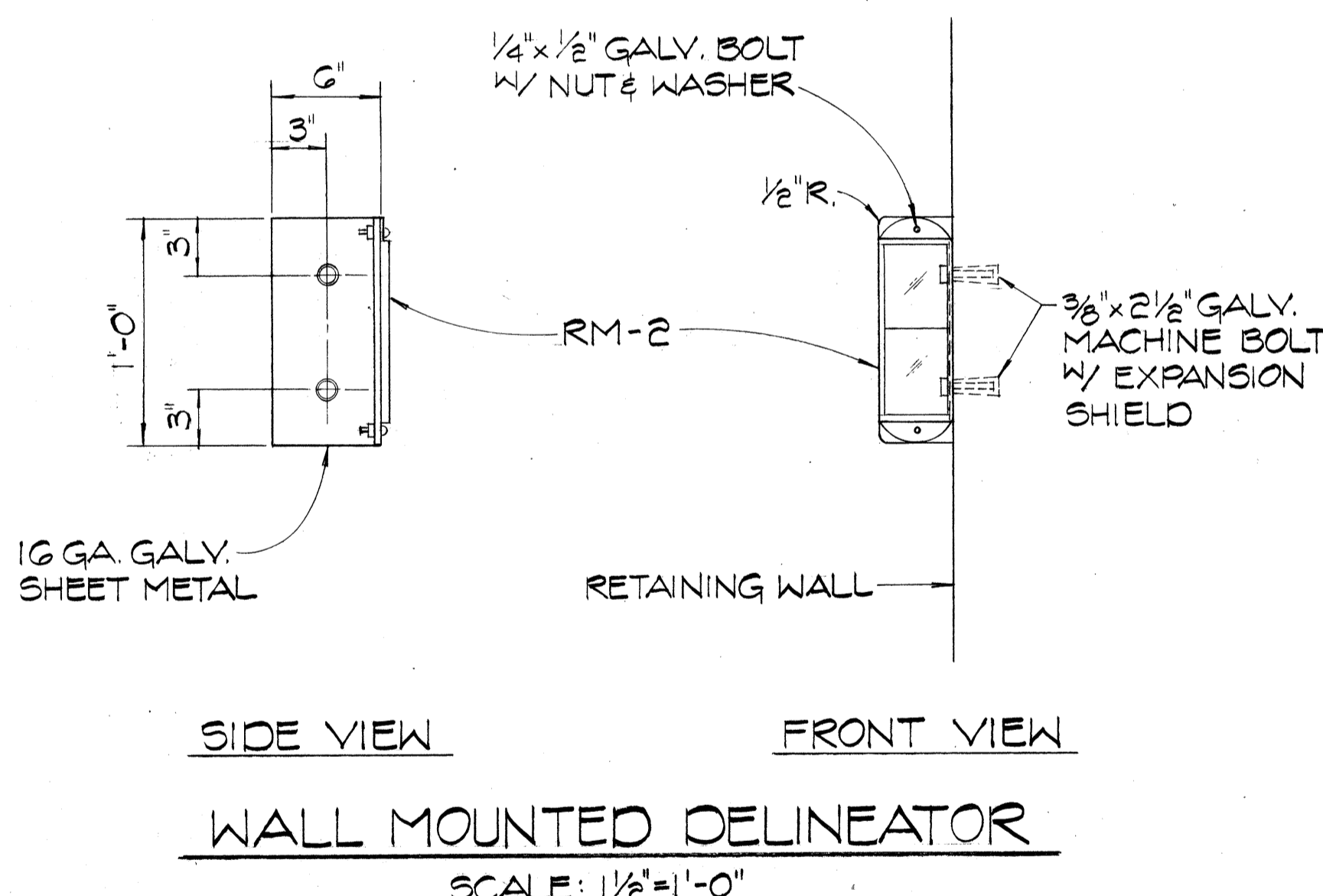
SCALE: AS SHOWN DATE: NOV. 15, 1978
SHEET No. 4 OF 4 SHEETS

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



SIGN NO.	DESCRIPTION	SQ. FT.
E-1(A)	AIEA	125.00
(B)	PULLOA RD. TRIPLER HOSP.	200.00
E-2(A)(L)	BUSES & CAR POOLS ONLY - HONOLULU	140.00
(B)(C)	FORT SHAFTER KING STREET	170.00
(C)(R)		150.00
E-4(A)(L)	BUSES & CAR POOLS ONLY	161.00
(A)(R)	AIEA	126.50
(B)	PULLOA RD. TRIPLER HOSP.	172.50
(C)	FORT SHAFTER AHUA ST.	172.50
E-5	PULLOA RD. TRIPLER HOSP.	200.00
E-6	FORT SHAFTER AHUA ST.	120.00
E-7	BUSES & CAR POOLS ONLY	140.00
E-01	FORT SHAFTER KING STREET	135.00
E-02	FORT SHAFTER KING STREET	135.00
TOTAL		1395.00

TYPE	DESCRIPTION	QUANTITY		
		W/P	WO/P	
R1-1	STOP	1		
R2-1(25)	SPEED LIMIT 25	1	1	
R2-4a(50/40A)	SPEED LIMIT 50 MINIMUM 40	2	2	
R3-10	RESTRICTED LANE AHEAD		1	
R3-12	RESTRICTED LANE ENDS			
R3-13(R)	WALK ONLY			
R3-16	CAR POOLS \diamond OR MORE		3	
R3-17	\diamond LANE BUSES AND CAR POOLS ONLY, ETC.		2	
R4-7	KEEP RIGHT	1		
R5-1	DO NOT ENTER	2	1	
R5-9	WRONG WAY	2		
R6-1(L)	ONE WAY	1		
R7-4-A	NO STOPPING OR STANDING			
R16-5	UNLICENSED VEHICLES, BICYCLES, ETC.	1		
R18-1	USE SIDEWALK		3	
R20-1	WALK BIKE	1	1	
W4-1(R)	MERGE	2		
W4-1(R)A	MERGE	1		
W11-1	BIKE XING		2	
W11-2	PED XING		2	
W13-3(25)	25 MPH			
W13-3(35)	RAMP 35 MPH			
W13-3(25)	RAMP 25 MPH	1	1	
D11-1	BIKE ROUTE	4	4	
D11-3	BEGIN		1	
D11-4	END		1	
D11-7	\uparrow		4	
		* > 10' 5 W/P, 3 WO/P	20	24

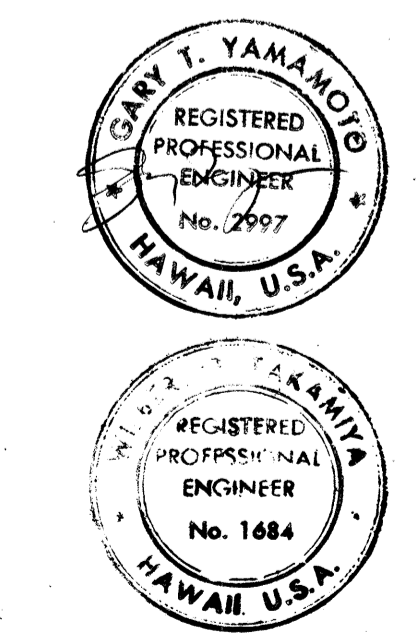


SIGN NO.	DESCRIPTION	SQ. FT.
D-01	FAA ST.	18.75
D-4	AHUA ST. FORT SHAFTER HOOKS FORT SHAFTER FLATS	66.00
D-7	AIEA AHUA ST.	71.25
D-8	MOANALUA RD. FORT SHAFTER	119.00
	EXIT 3A	45.00
	EXIT 3B	45.00
	EXIT 3	36.00
	EXIT 4	36.00
TOTAL		210.00

SHEET NO.	RM-2				RM-9	
	W/P	WO/P	O/B	O/W	W/P	WO/P
2	11					
3	23		5			1
4	12	1	20		3	1
5		3	3			
TOTAL	46	4	28		3	2

SIGN NO.	DESCRIPTION	SQ. FT.
E-01(C)	EXIT 3B	16.00
E-01(R)	EXIT 3A	16.00
E-02(C)	EXIT 3B	16.00
E-02(R)	EXIT 3A	16.00
E-2(B)	EXIT 3B	16.00
E-5	EXIT 3	12.00
TOTAL		92.00

SHEET NO.	TYPE A	TYPE C	TYPE D	TYPE H
2	48	27		22
3	612	251		70
4	936	322	21	150
5	504	187	11	68
TOTAL	2100	787	32	310



Willmet T. Ikehara
THIS WORK WAS PREPARED BY
OR UNDER MY SUPERVISION

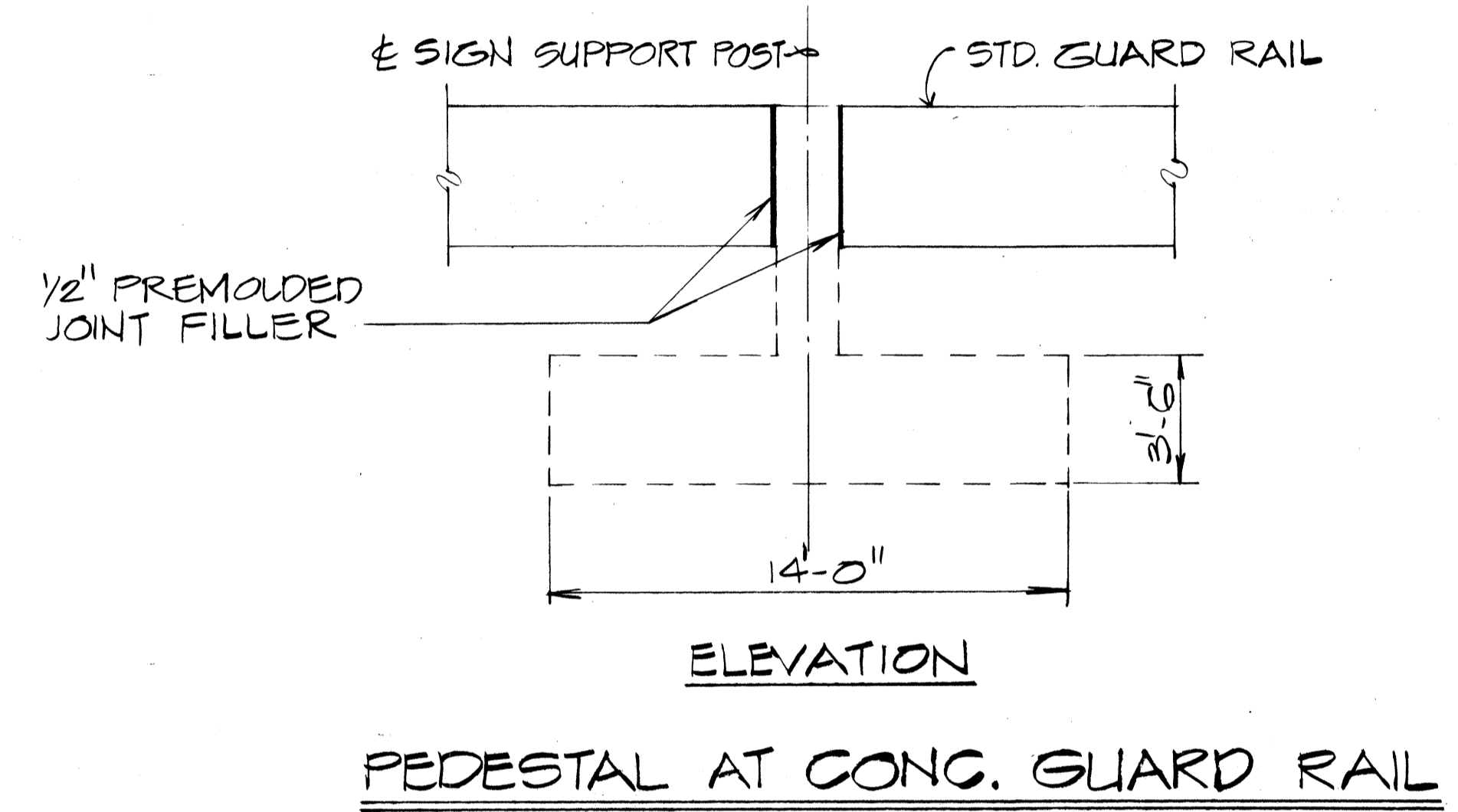
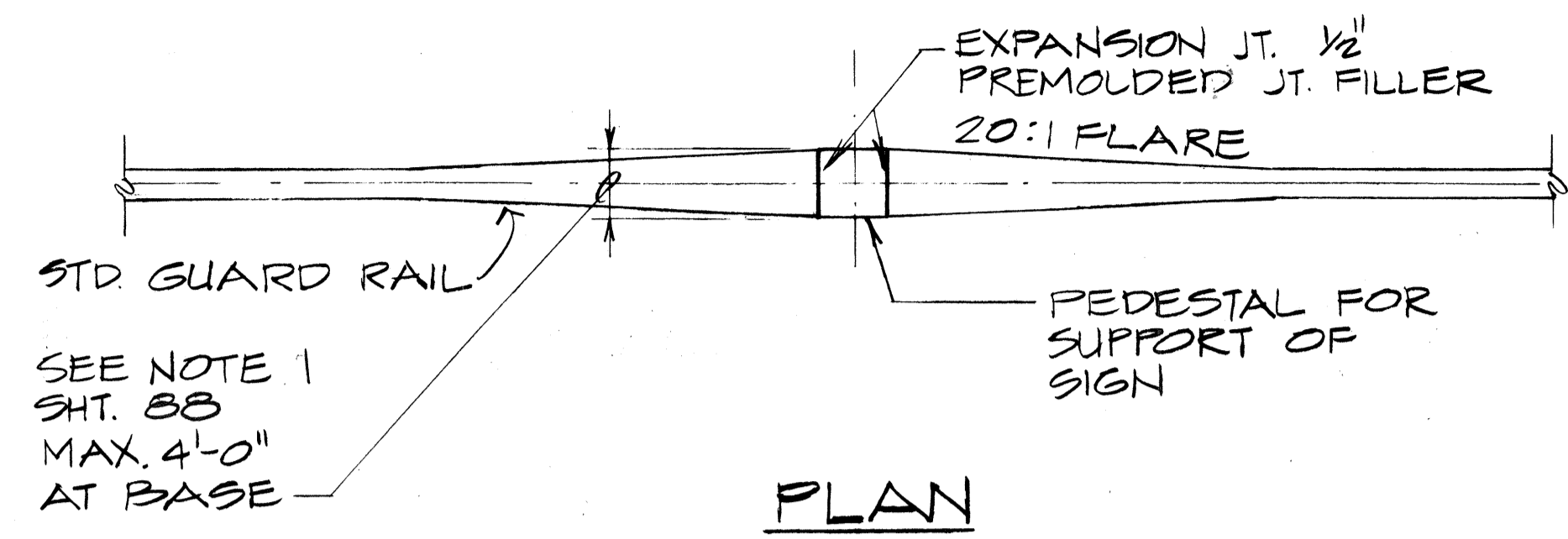
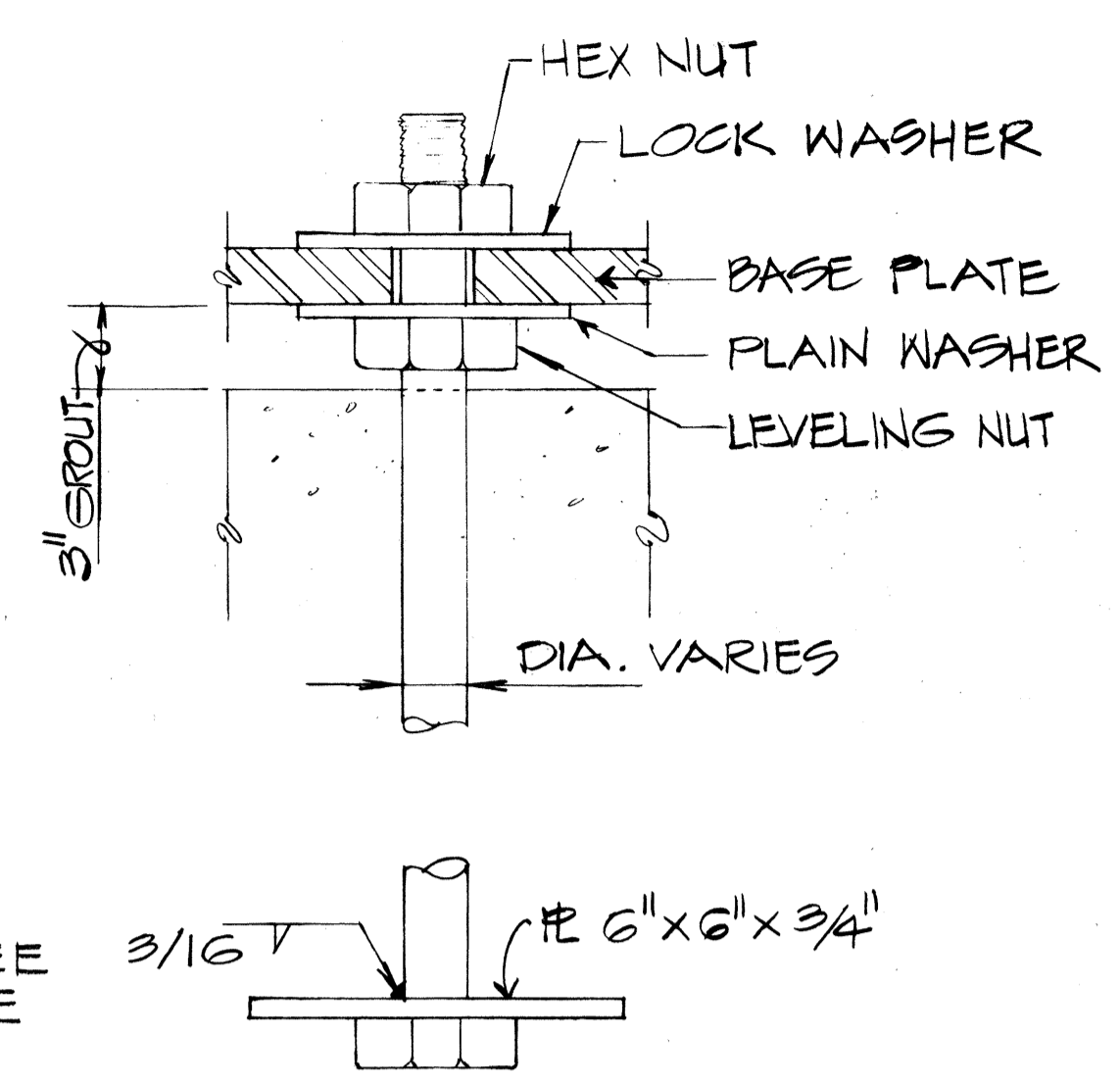
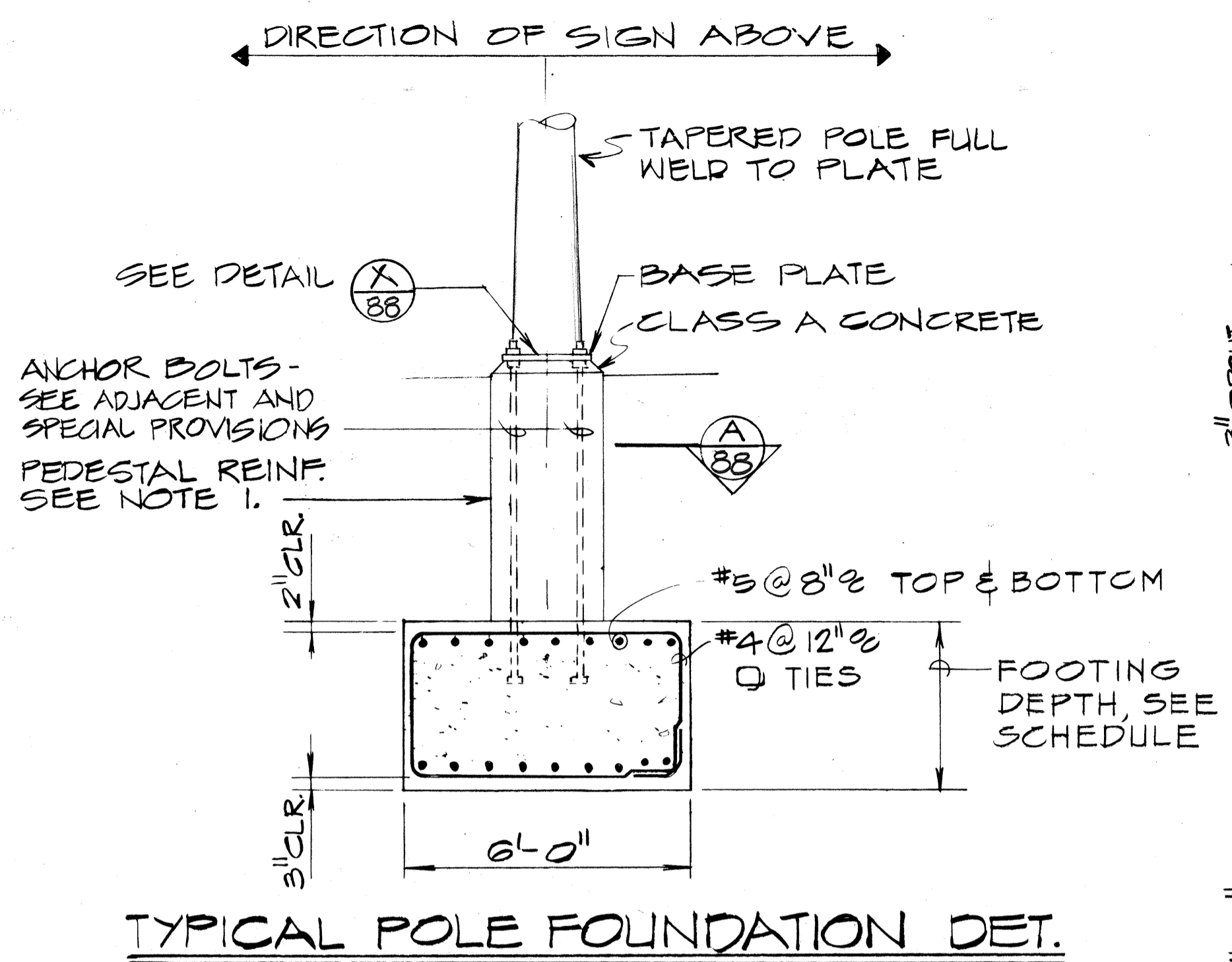
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
**SIGNING & PAVEMENT MARKING
MISCELLANEOUS DETAILS**
MOANALUA ROAD
PULLOA I.C. TO MIDDLE ST. - UNIT 3A
P.A. Proj. No. TQ-F-078-1(18)
SCALE: AS SHOWN DATE: NOV. 15, 1978
SHEET No. 1 OF 27 SHEETS

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.	TQ-F-078-1(18)	1978	88	266

NOTES:

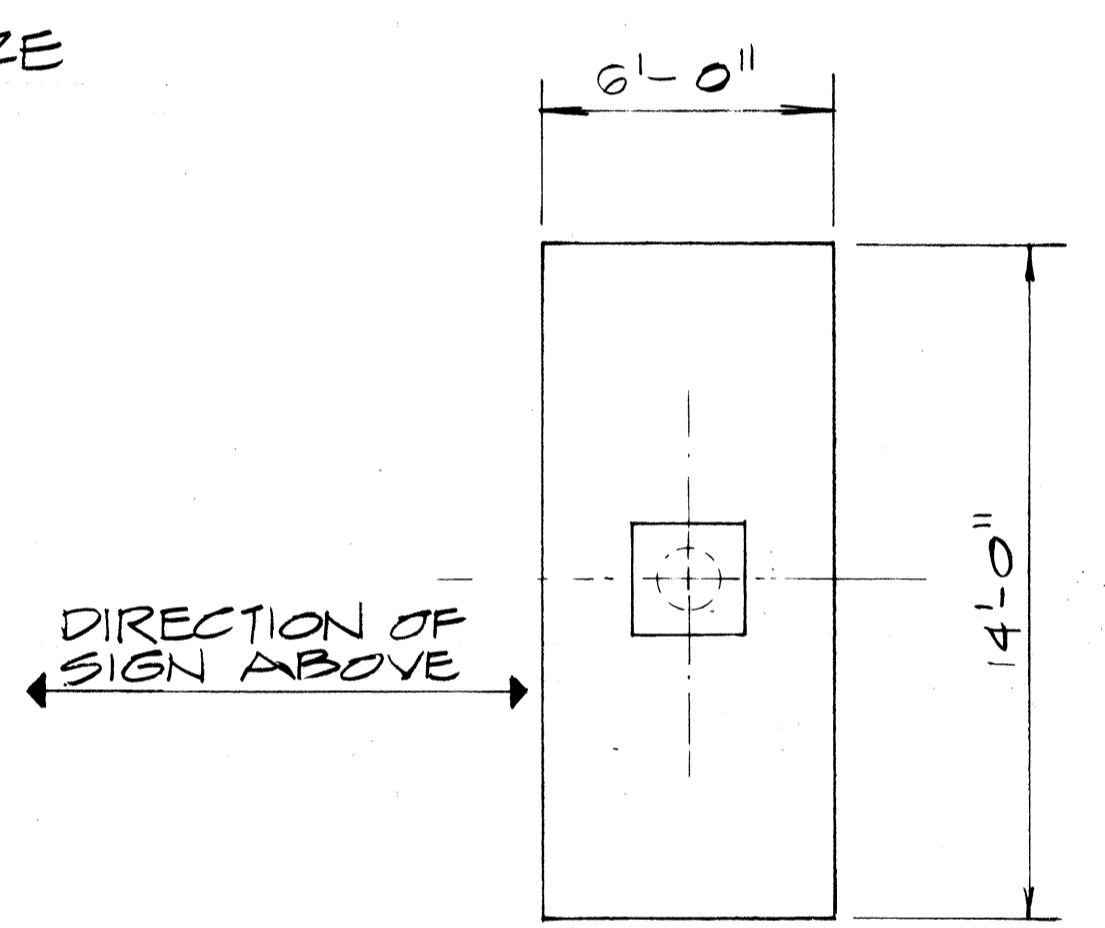
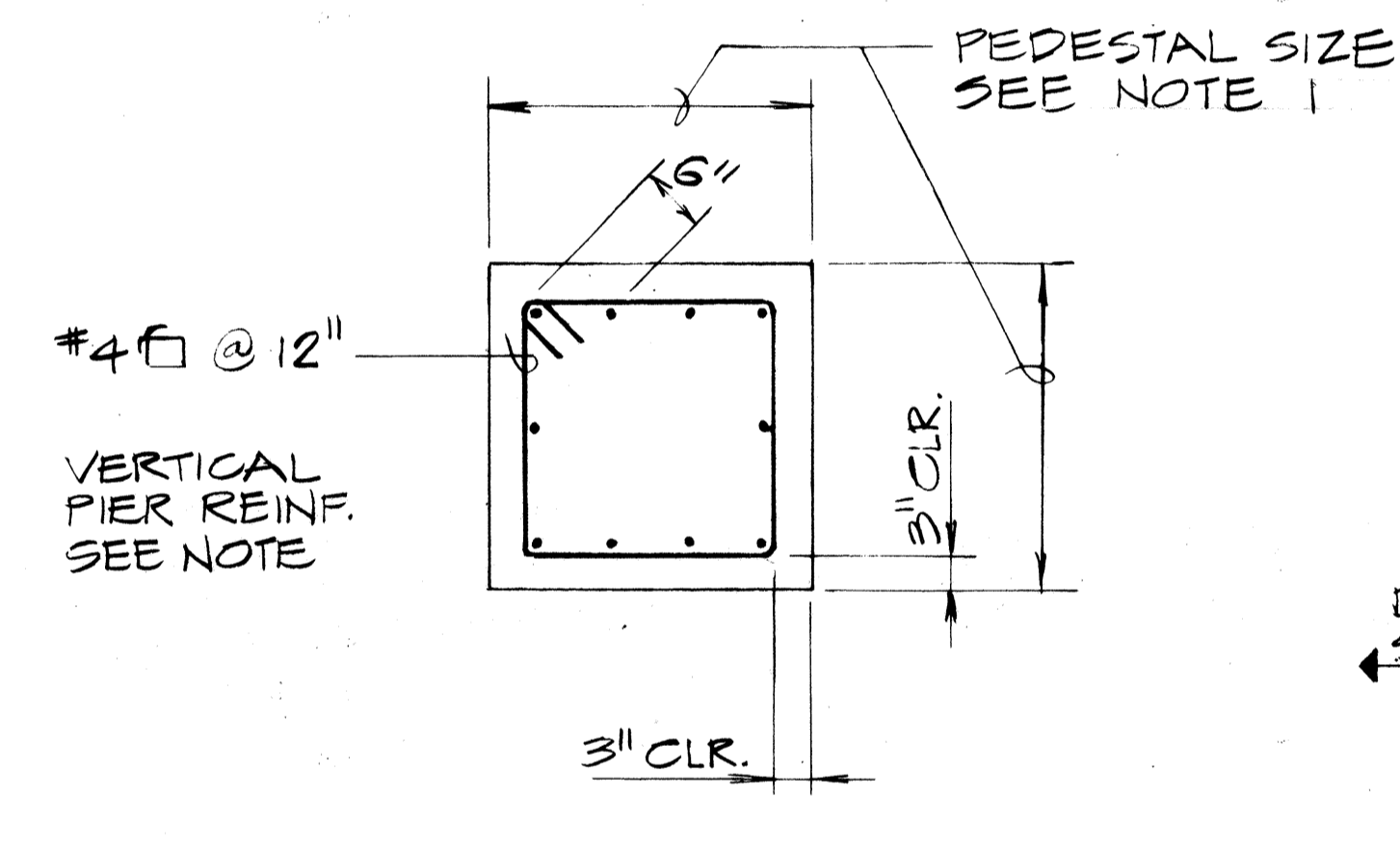
- EXCEPT SPECIFIED OTHERWISE, CONTRACTOR SHALL DETERMINE THE DETAIL REQUIREMENTS OF THE PEDESTAL, BASE PLATE & ANCHOR BOLTS IN ACCORD WITH TYPE OF SIGN POST SELECTED.
- TOTAL NUMBER OF CONDUITS INTO POLE FOUNDATION AS INDICATED ON LIGHTING PLANS. CONDUITS SHALL SLOPE AWAY FROM POLE FOUNDATION. CONDUIT SHALL STUB OUT 5'-0" MIN. FOR DIRECT BURIAL ENTRY.
- GROUNDING CONDUCTOR SHALL BE BONDED TO SIGN SUPPORT.
- STRUCTURAL EXCAVATION FOR SIGN FOOTING TO BE CONSIDERED INCIDENTAL TO VARIOUS CONTRACT ITEMS.



TYPICAL POLE FOUNDATION DET.

TYPICAL ANCHOR BOLT DETAIL

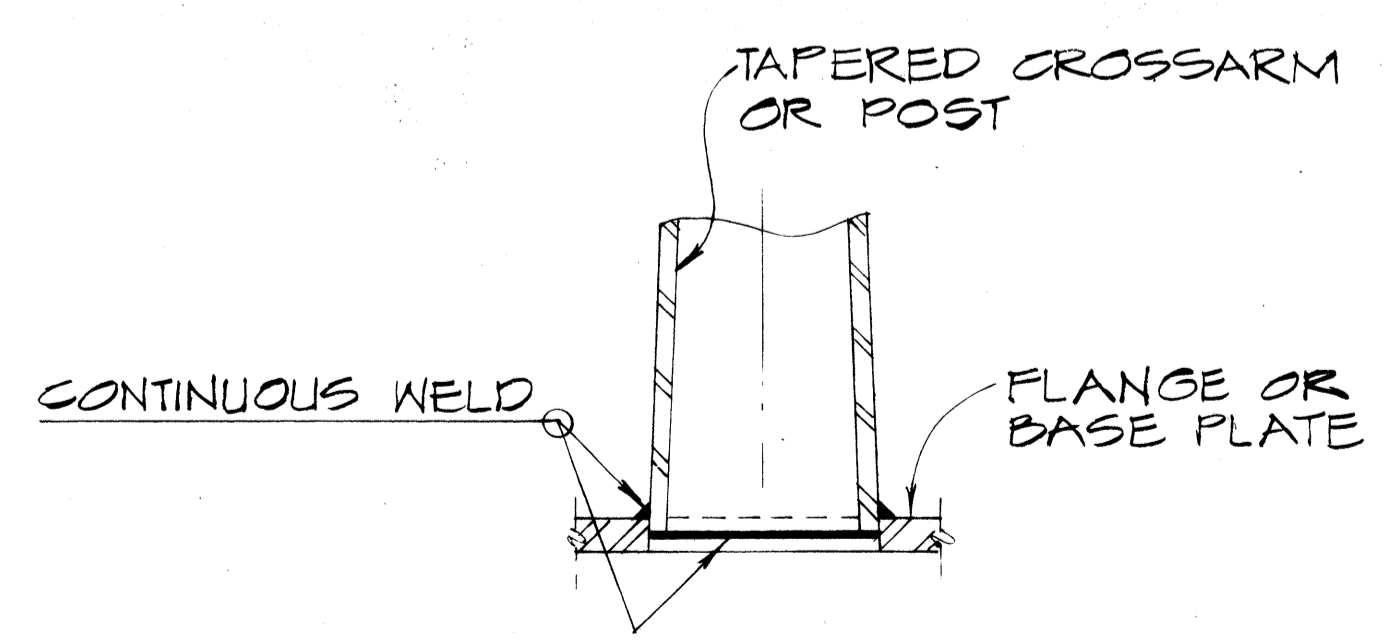
PEDESTAL AT CONG. GUARD RAIL



SECTION A 88

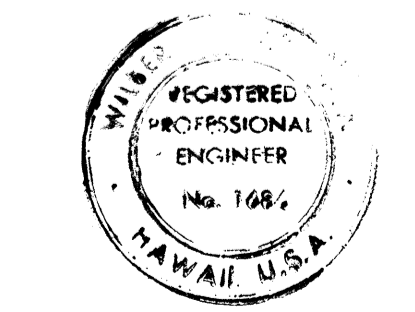
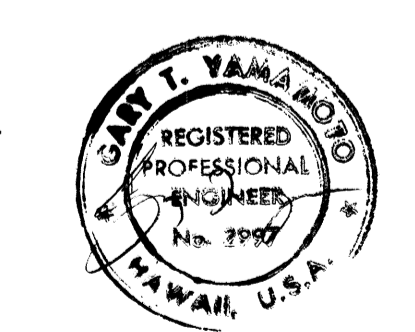
PEDESTAL PLAN

TYPICAL FOOTING DETAIL



DETAIL X 88

SIGN	SUPPORT TYPE	FOUNDATION		CLASS A CONG. OTHER THAN IN BRIDGES ITEM NO. 503.0000 (CU. YD)
		L X W	DEPTH	
E-1	C	6' X 14'	5'-6"	17.1
E-2	D OR F	6' X 14'	3'-6"	21.8
E-5	C	6' X 14'	4'-0"	12.4
				51.3 TOTAL



Wilbur T. Inoué
THIS WORK WAS PREPARED BY/IN MY SUPERVISION

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD SIGN SUPPORT FOUNDATION DETAILS

MOANALUA ROAD
PULUOA I.C. TO MIDDLE ST.-UNIT 3A
F.A. Proj. No. TQ-F-078-1(18)
SCALE: AS SHOWN DATE: NOV. 15, 1978

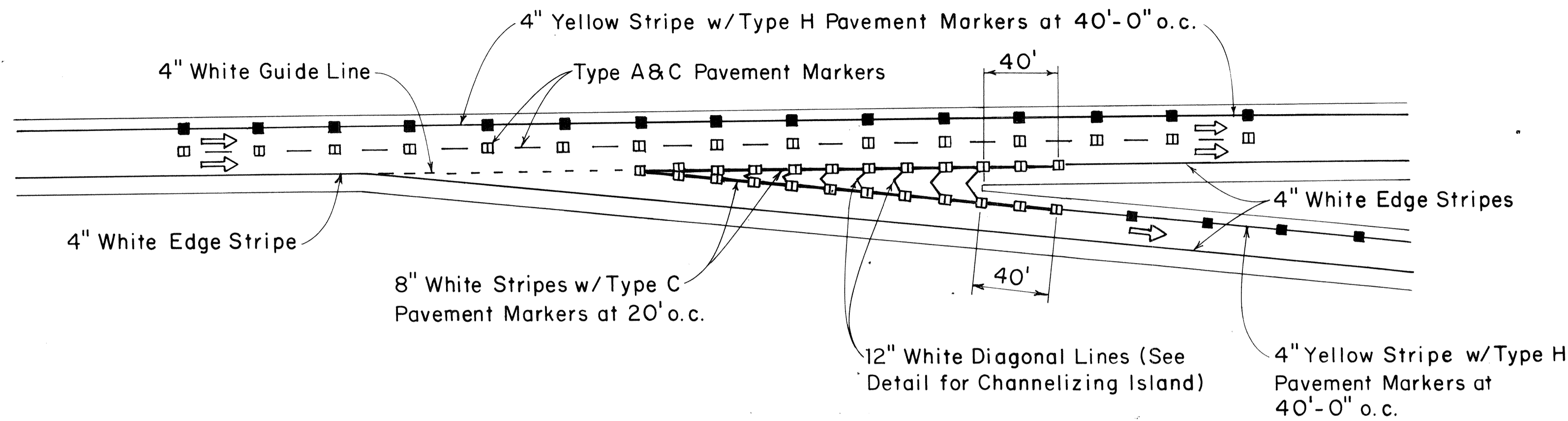
SHEET NO. 2 OF 27 SHEETS

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQF-F-078-(10)	1978	89	266

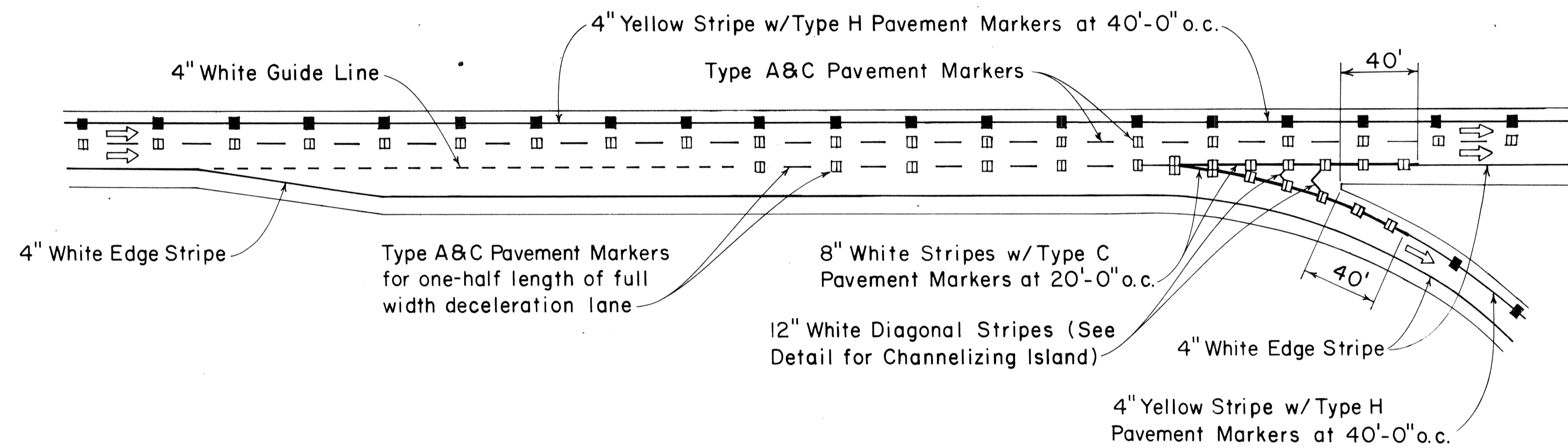
GENERAL NOTES:

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



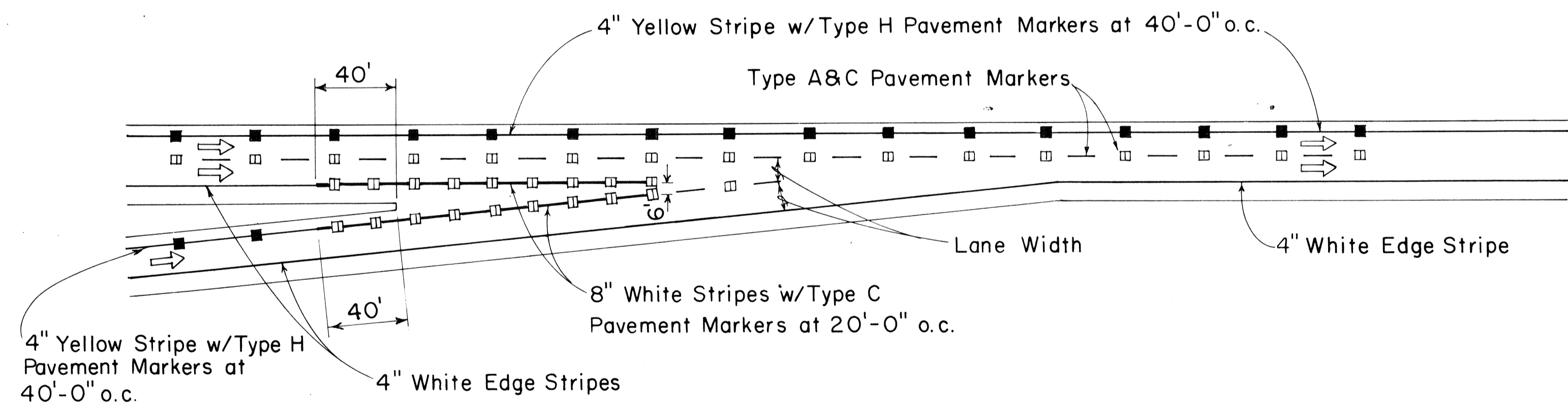
TAPERED DECELERATION LANE

TYPICAL ROADWAY EXIT MARKINGS

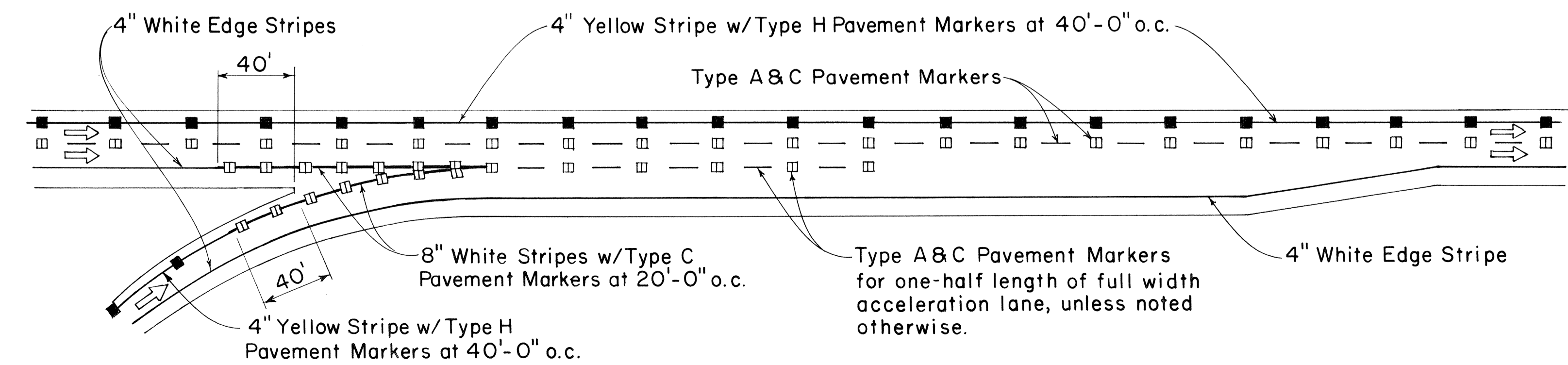


PARALLEL DECELERATION LANE

TYPICAL ROADWAY ENTRANCE MARKINGS



TAPERED ACCELERATION LANE



PARALLEL ACCELERATION LANE

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

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

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

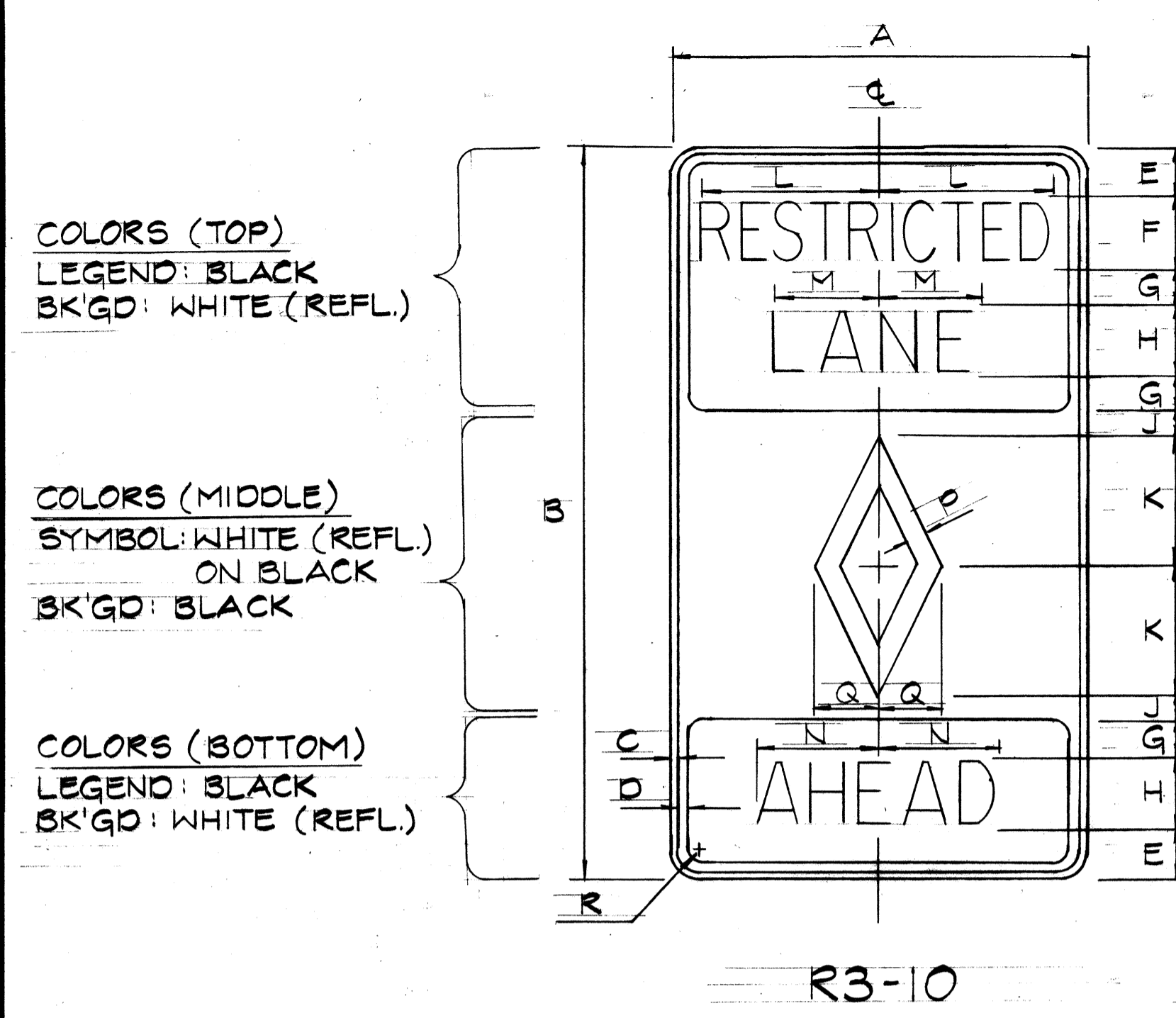
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

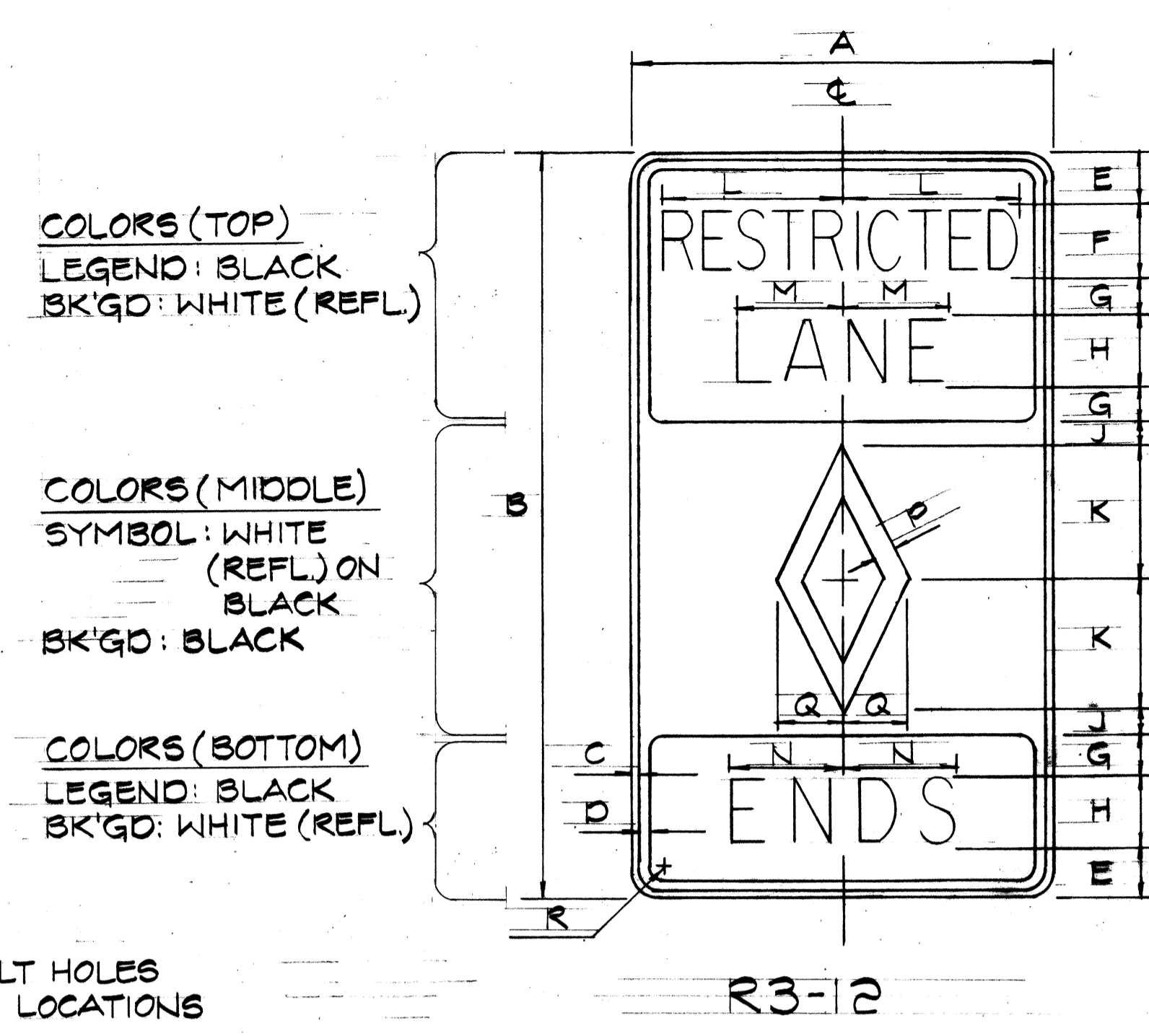
STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Not to Scale July 1978
 SHEET No. 3 OF 27 SHEETS DT 304

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(10)	1978	90	266

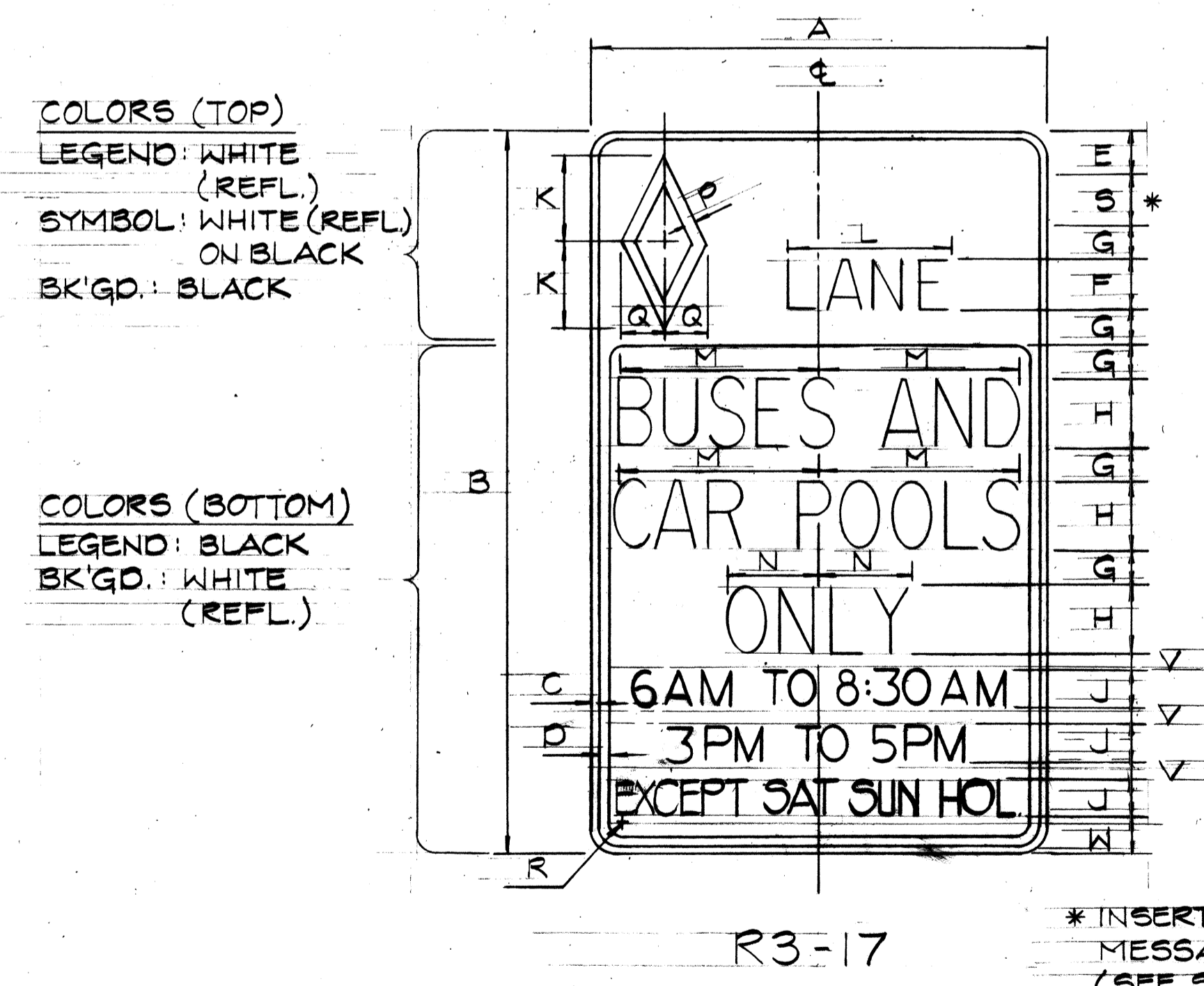
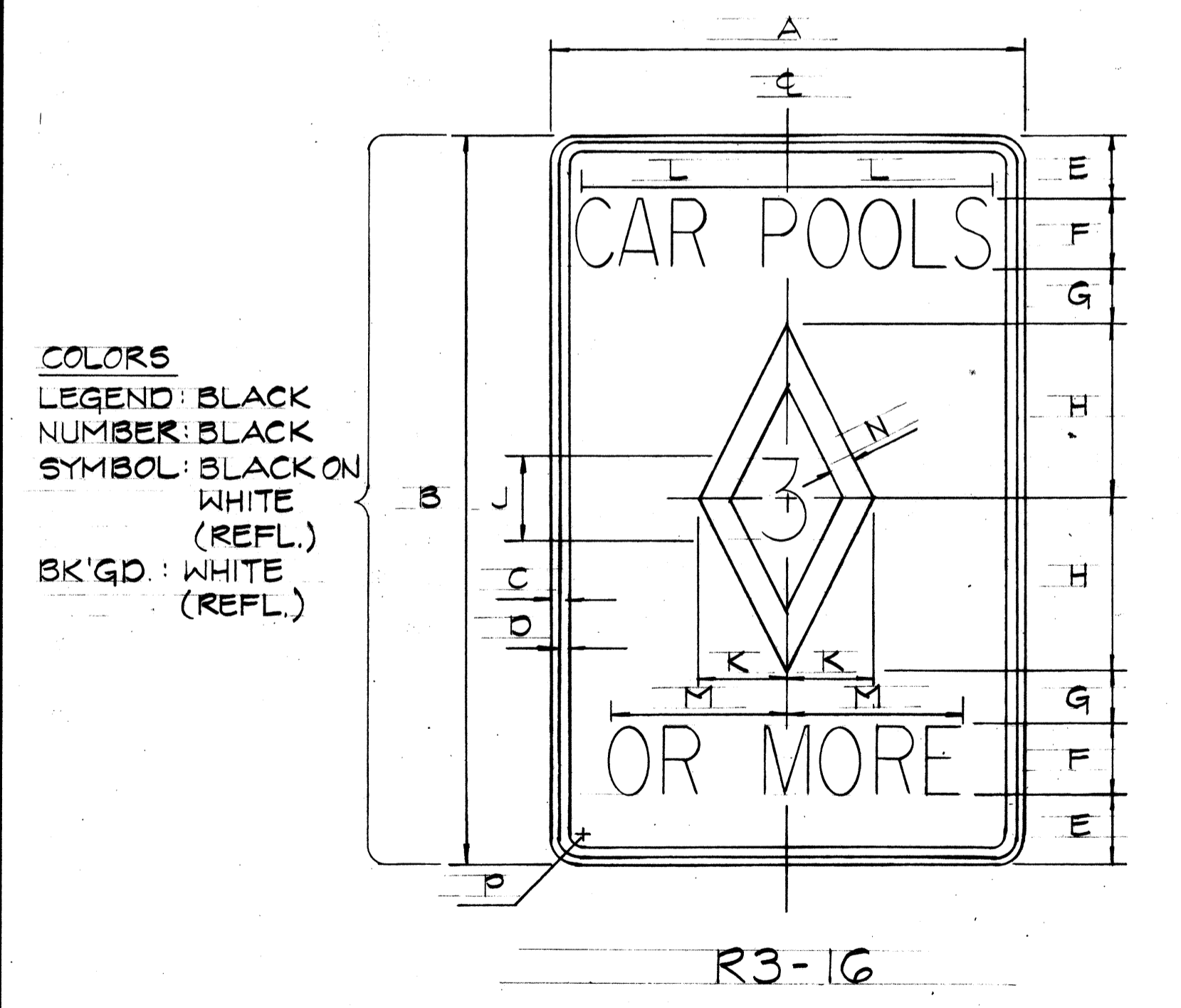
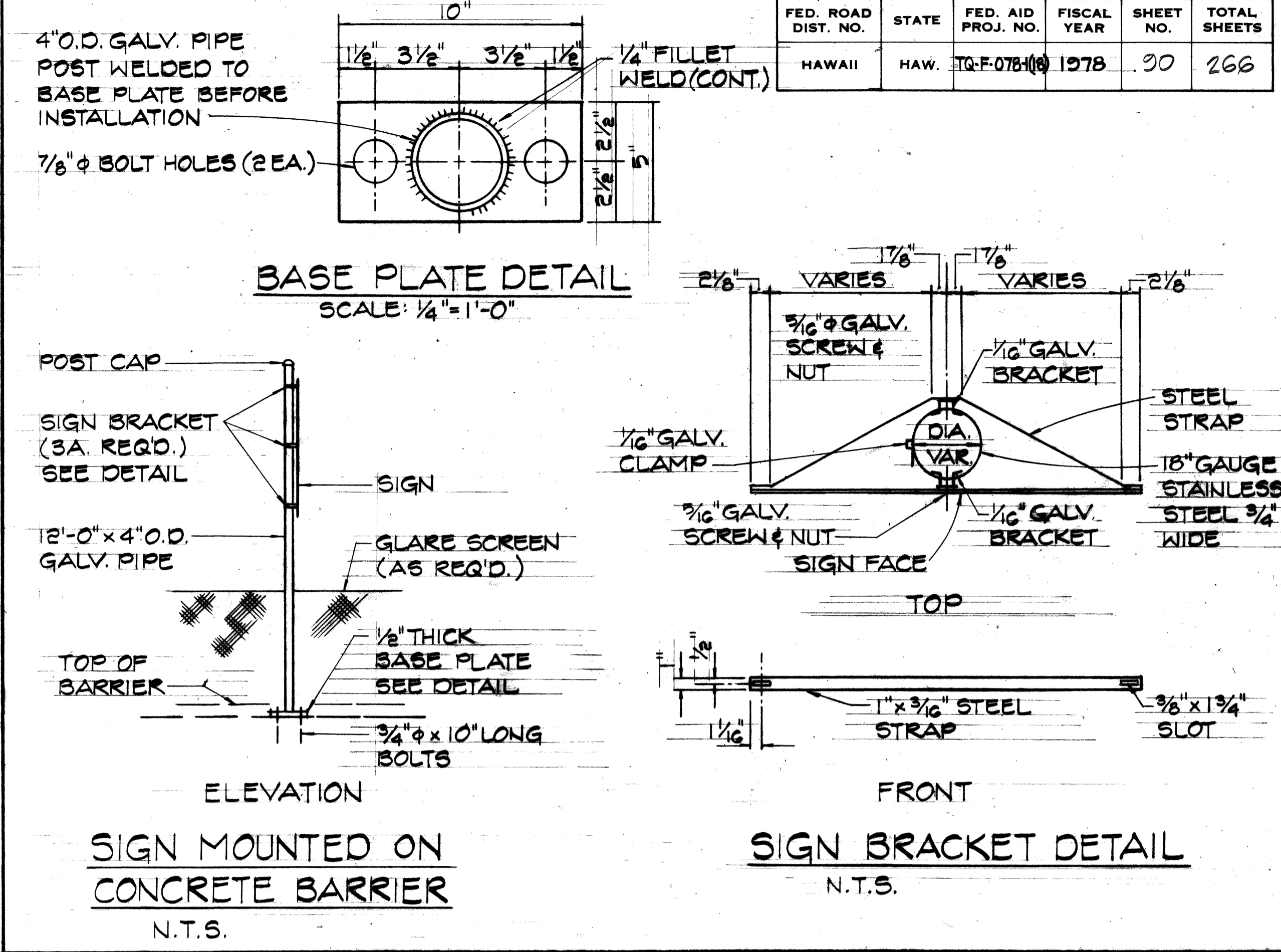


NOTE:
DRILL 3/8" φ BOLT HOLES
APPROPRIATE LOCATIONS



SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
R3-10	30	42	1/2	3/4	3/4	4B	2	4C	1 1/4	7 1/2	10 3/8	G	8 3/4	1 1/8	3 3/4	1 7/8
R3-10-A	36	60	3/8	7/8	4 1/2	6B	3	6C	2	10	15 1/2	9	10 1/2	1 1/2	5	2 1/4

SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
R3-12	30	42	1/2	3/4	3/4	4B	2	4C	1 1/4	7 1/2	10 3/8	G	6 1/2	1 1/8	3 3/4	1 7/8
R3-12-A	36	60	3/8	7/8	4 1/2	6B	3	6C	2	10	15 1/2	9	9 3/4	1 1/2	5	2 1/4



* INSERT ALTERNATE MESSAGE
MESSAGE
(SEE SCHEDULE)

ALTERNATE MESSAGE	SPACE	R3-17		R3-17-A	
		SERIES	DIM.	SERIES	DIM.
LEFT	S	3" D	8 7/8"	4" D	11 3/4"
CONED	S	3" D	12 1/2"	4" D	16 3/4"
SIGNED	S	3" D	13 3/4"	4" D	18 1/2"
WHEN CONED	J	4" B	24"	6" B	36 3/4"
WHEN SIGNED	J	4" B	24"	6" B	38 3/4"
24 HRS.	J	4" C	17 1/2"	6" C	27"

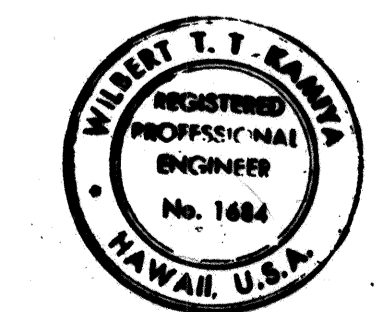
NOTE:
ALL ALTERNATE MESSAGES
SHALL BE VISUALLY CENTERED
AT APPROPRIATE LOCATIONS.

GENERAL NOTES:

- SIGN DETAILS SHALL CONFORM TO THE FOLLOWING FHWA PUBLICATIONS: "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS," 1971, "STANDARD HIGHWAY SIGNS," 1972, "STANDARD ALPHABETS FOR HIGHWAY SIGNS," 1966 & FHWA NOTICES N 3160.8 & N 3160.11
- FOR ADDITIONAL DETAILS SEE SHT. # QT 100

SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P		
R3-16	30	42	1/2	3/4	4	4C	3	10	5C	5	12	10 1/4	1 1/2	1 7/8		
R3-16-A	42	60	3/8	7/8	5	6C	4	15	8D	7 1/2	18	16	2	2 1/4		

SIGN	DIMENSIONS (INCHES)																				
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W
R3-17	30	42	1/2	3/4	2 1/2	3D	2	4C	11 1/2	5	9 3/8	12	5 1/2	3/4	2 1/2	1 7/8	3				
R3-17-A	42	60	3/8	7/8	4	4D	3	6C	15	7 1/2	12 1/4	18	8 1/4	1 1/8	3 3/4	2 1/4	4	5B	1 1/4	1	2 3/4



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TYPICAL DETAILS
BUS-CAR POOL SIGNS**

MOANALUA ROAD
PUULOA I.C. TO MIDDLE ST. - UNIT 3A
F.A. PROJ. NO. TQ-F-078-1 (10)

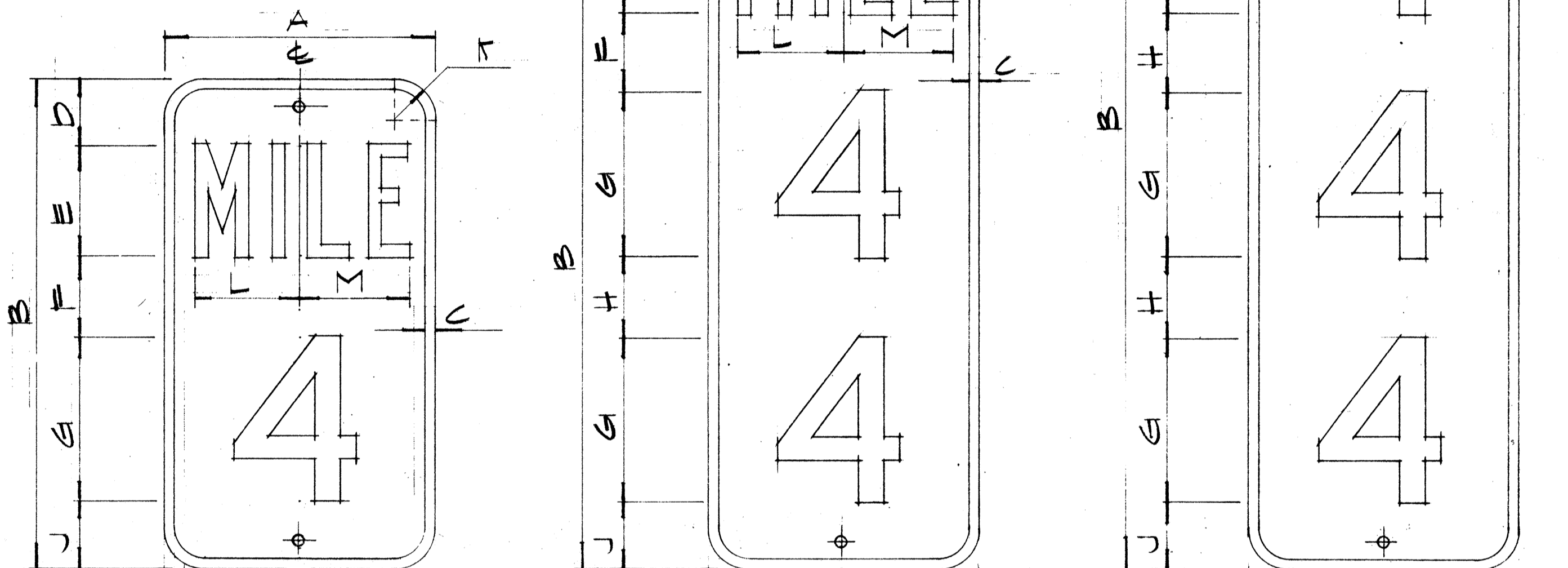
SCALE: AS SHOWN DATE: NOV. 15, 1978

SHEET NO. 4 OF 27 SHEETS

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

NOTE:

- LETTERS AND NUMERALS SHALL CONFORM TO THE 'STANDARD ALPHABETS FOR HIGHWAY SIGNS', BUREAU OF PUBLIC ROADS, 1966.
- MILEPOST PLATES SHALL BE .0063" THICK ALUMINUM ALLOY 6061-T6 WITH REFLECTORIZED WHITE BORDERS & LEGEND ON A REFLECTORIZED GREEN BACKGROUND.
- DILL 3/8" BOLT HOLES AT APPROPRIATE LOCATIONS.



D10-1 10' x 18"
D10-4 12' x 24"
D10-2 10' x 27"
D10-5 12' x 36"
D10-3 10' x 36"
D10-6 12' x 48"

MILEPOST PLATES

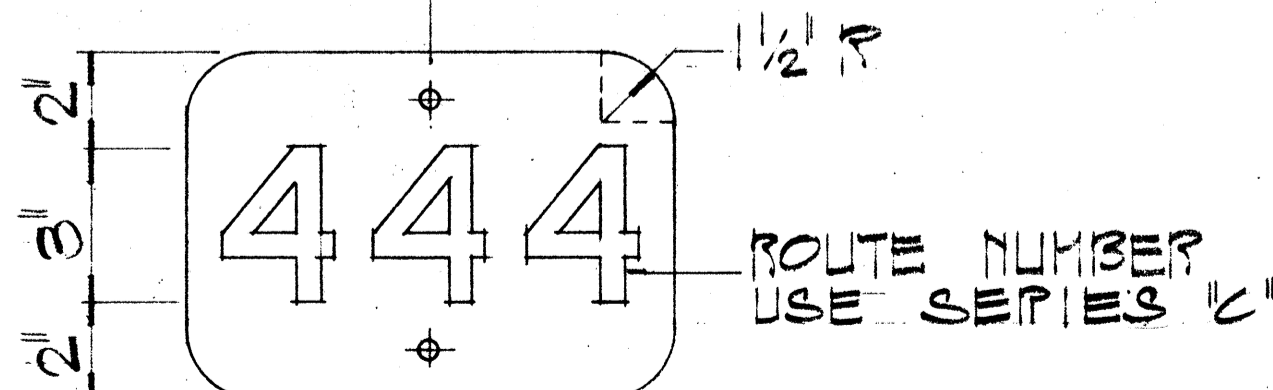
Scale: 1/4" = 1"

MILEPOST PLATE SCHEDULE
IN INCHES

NAME	SIZE	A	B	C	D	E	F	G	H	J	K	L	M	LETTER SERIES	NUMERAL SERIES
D10-1 D10-4	10 x 18 12 x 24	10 12	18 24	1/2 1/2	2 3	4 4	2 3	0 0		4 4	1 1/2 1 1/2	3 3/8 4 1/8	3 1/8 4 1/8	B C	C C
D10-2 D10-5	10 x 27 12 x 36	10 12	27 36	1/2 1/2	2 3	4 4	2 3	0 0	3 3	4 4	1 1/2 1 1/2	3 3/8 4 1/8	3 3/8 4 1/8	B C	C C
D10-3 D10-6	10 x 36 12 x 48	10 12	36 48	1/2 1/2	2 3	4 4	2 3	0 0	3 2 1/2	4 3	1 1/2 1 1/2	3 3/8 4 1/8	3 3/8 4 1/8	B C	C C

NOTE:

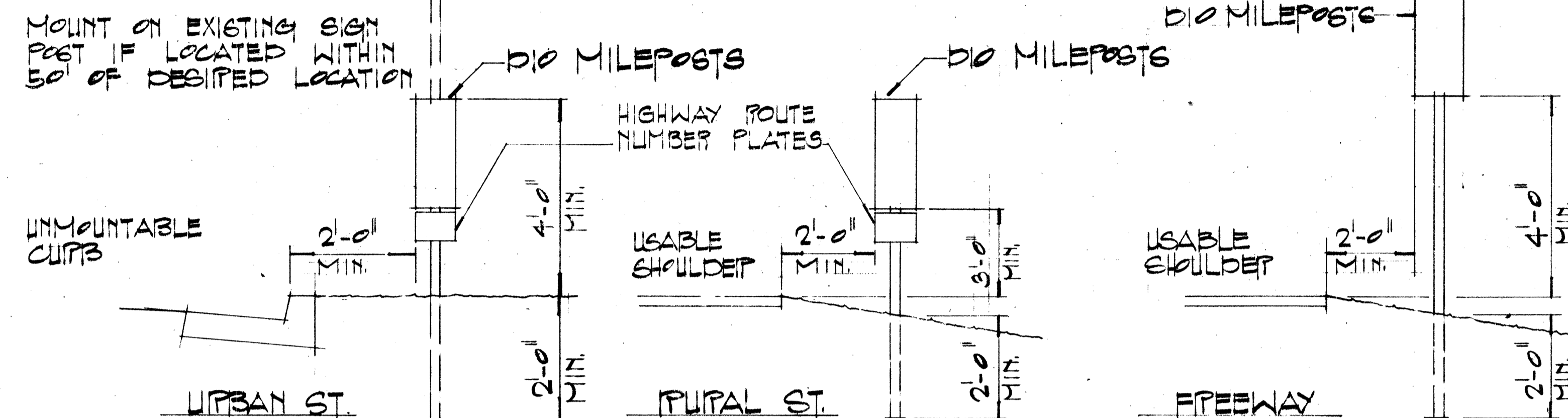
HIGHWAY ROUTE NUMBER PLATES FOR URBAN & RURAL STREET MILEPOSTS SHALL BE .0063" THICK ALUMINUM ALLOY 6061-T6 WITH BLACK NUMERALS & BORDERS ON A REFLECTORIZED WHITE BACKGROUND.



D10-7 10' x 7"
HIGHWAY ROUTE NUMBER PLATE
(FOR URBAN & RURAL STREET MILEPOSTS)

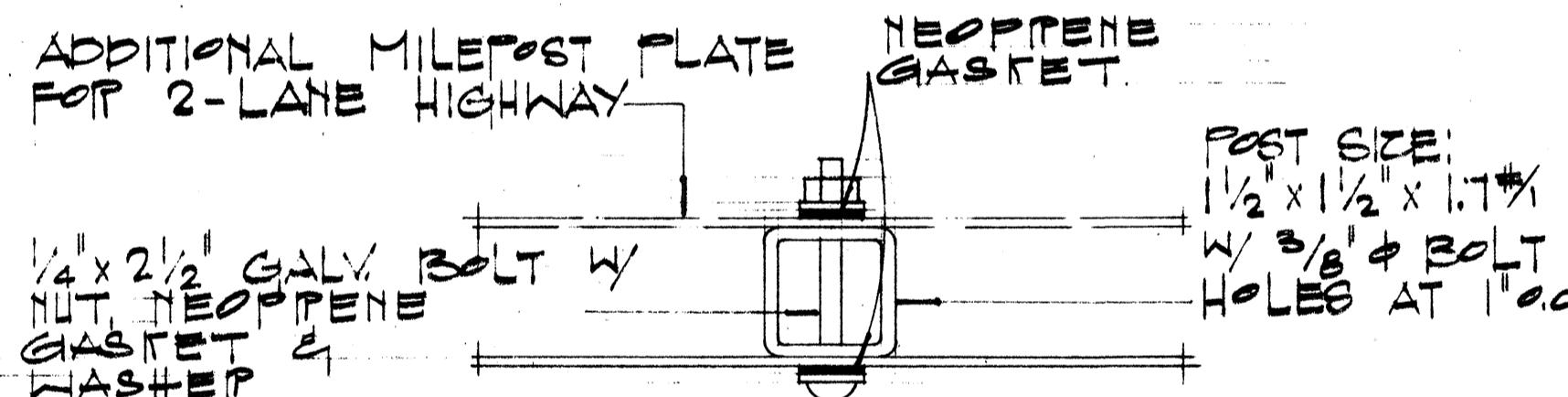
NOTE:
ON MULTI LANE ROADWAYS - ONE MILEPOST ON EACH SIDE OF ROADWAY.
ON TWO LANE ROADWAYS - ONE MILEPOST ON EACH SIDE OF ROADWAY (VIEW FROM SIDE OF ROADWAY IN DIRECTION OF INCREASING MILEAGE).

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TRF-078-116	1978	91	266

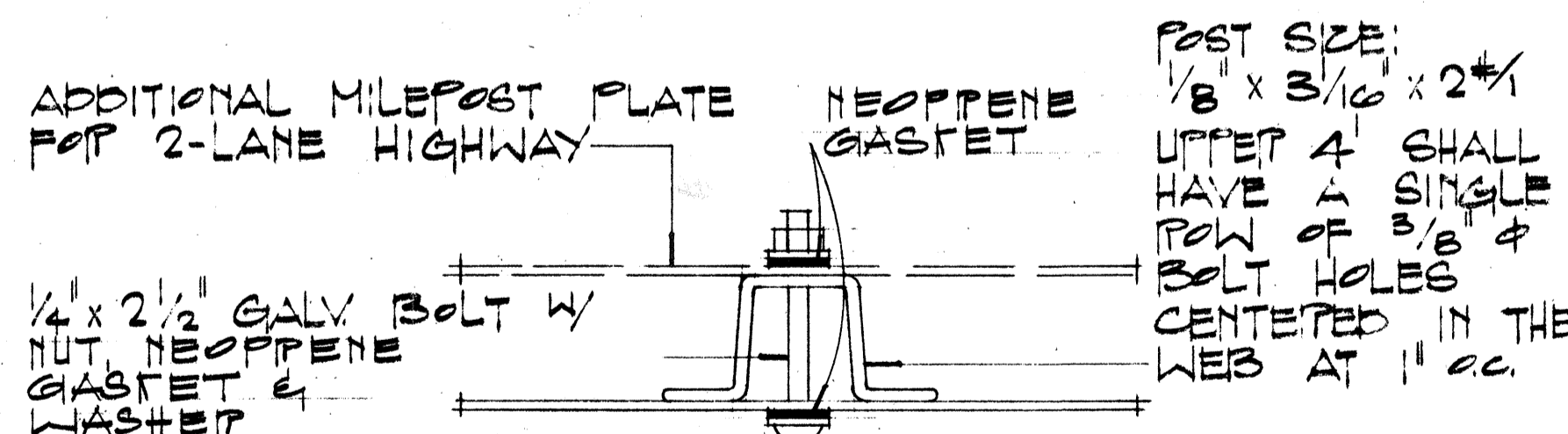


TYPICAL ROADSIDE INSTALLATION

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



GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

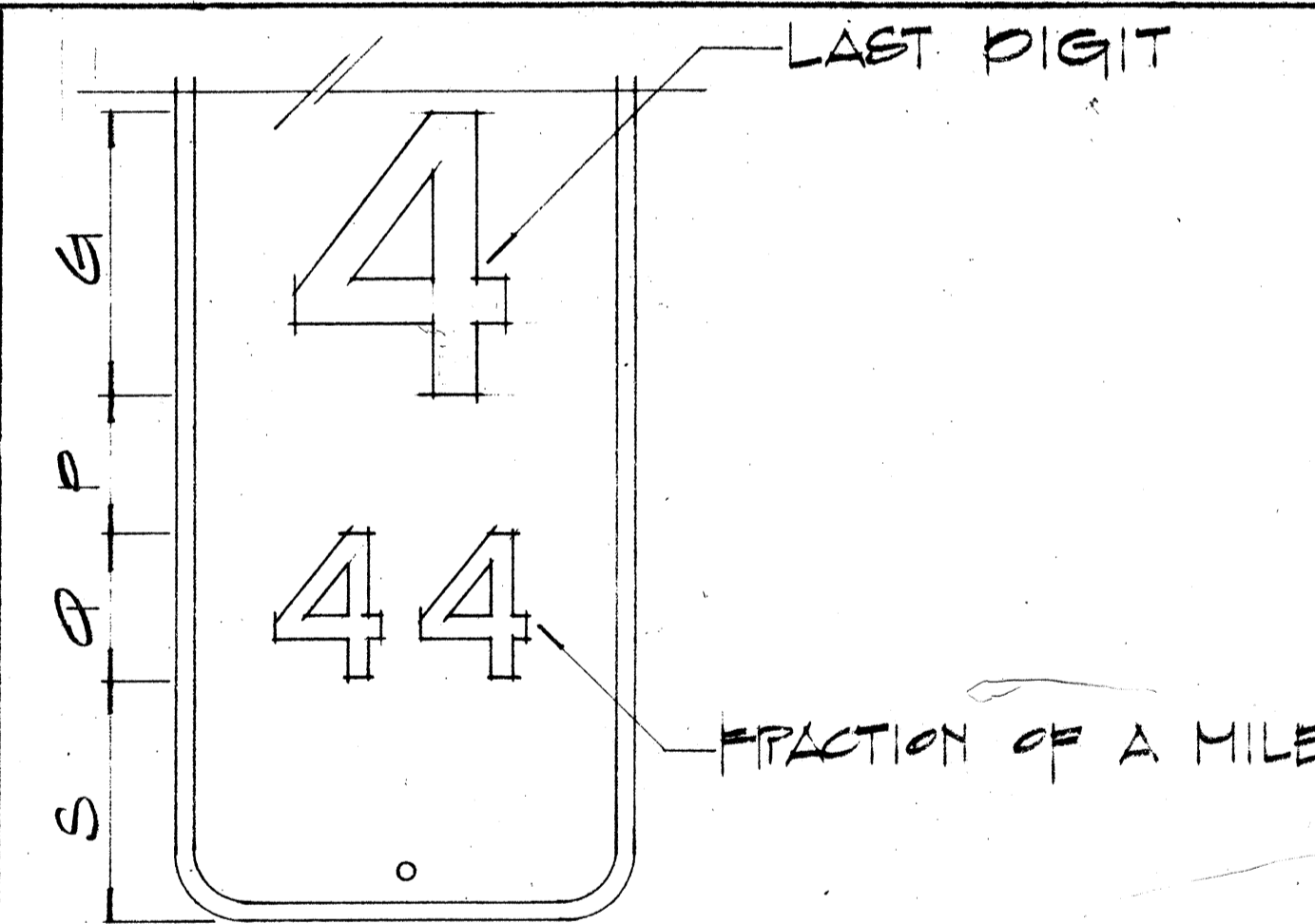
TYPICAL MOUNTING DETAILS

Scale: 1/2" = 1"



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No.	REVISION	APPROVED BY	DATE
1	REVISED PLATE DIMENSIONS		



MILEPOST PLATE SCHEDULE WITH FRACTION OF A MILE (LAST STATIONS)

NAME	SIZE	G	P	Φ	S	NUMERAL SERIES
D10-1 FT	10' x 27"	10"	4"	5"	10"	C
D10-4 FT	12' x 36"	12"	4"	5"	10"	C
D10-2 FT	10' x 36"	10"	4"	5"	10"	C
D10-5 FT	12' x 48"	12"	4"	5"	10"	C
D10-3 FT	10' x 48"	10"	4"	5"	10"	C
D10-6 FT	12' x 60"	12"	4"	5"	10"	C

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MILEPOSTS

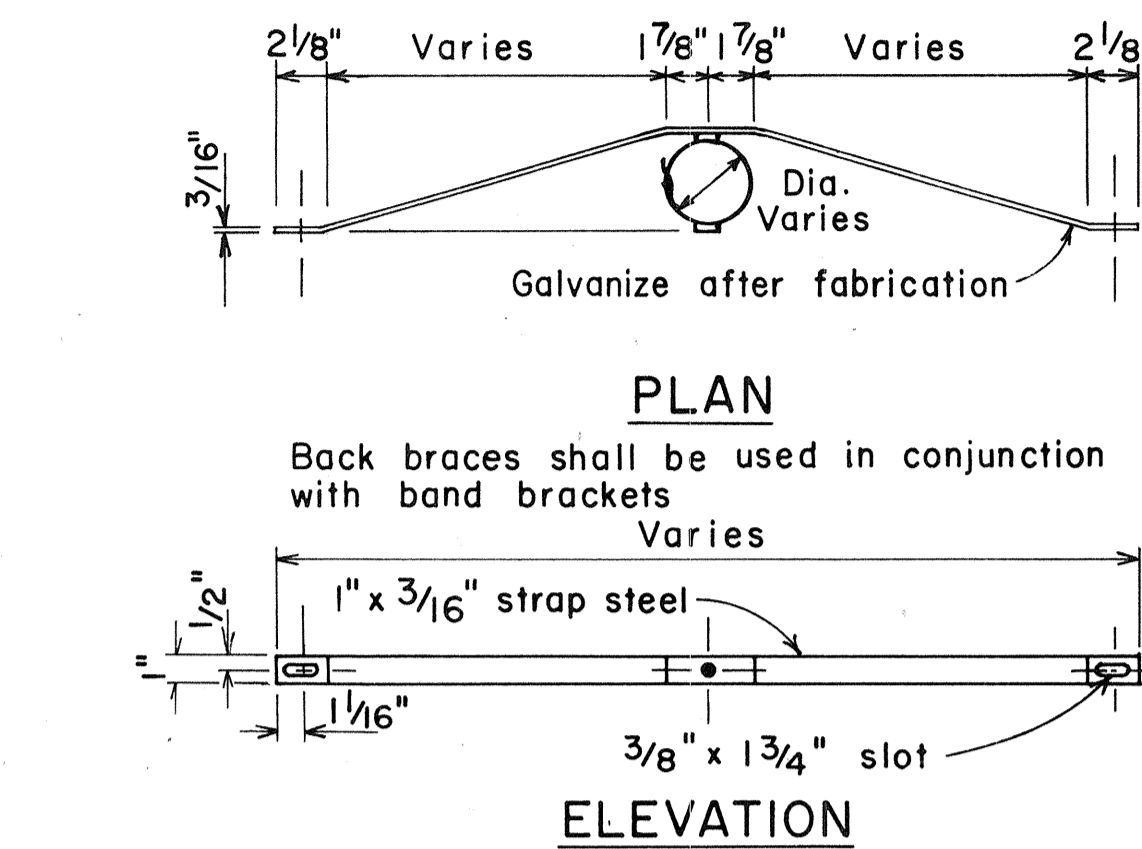
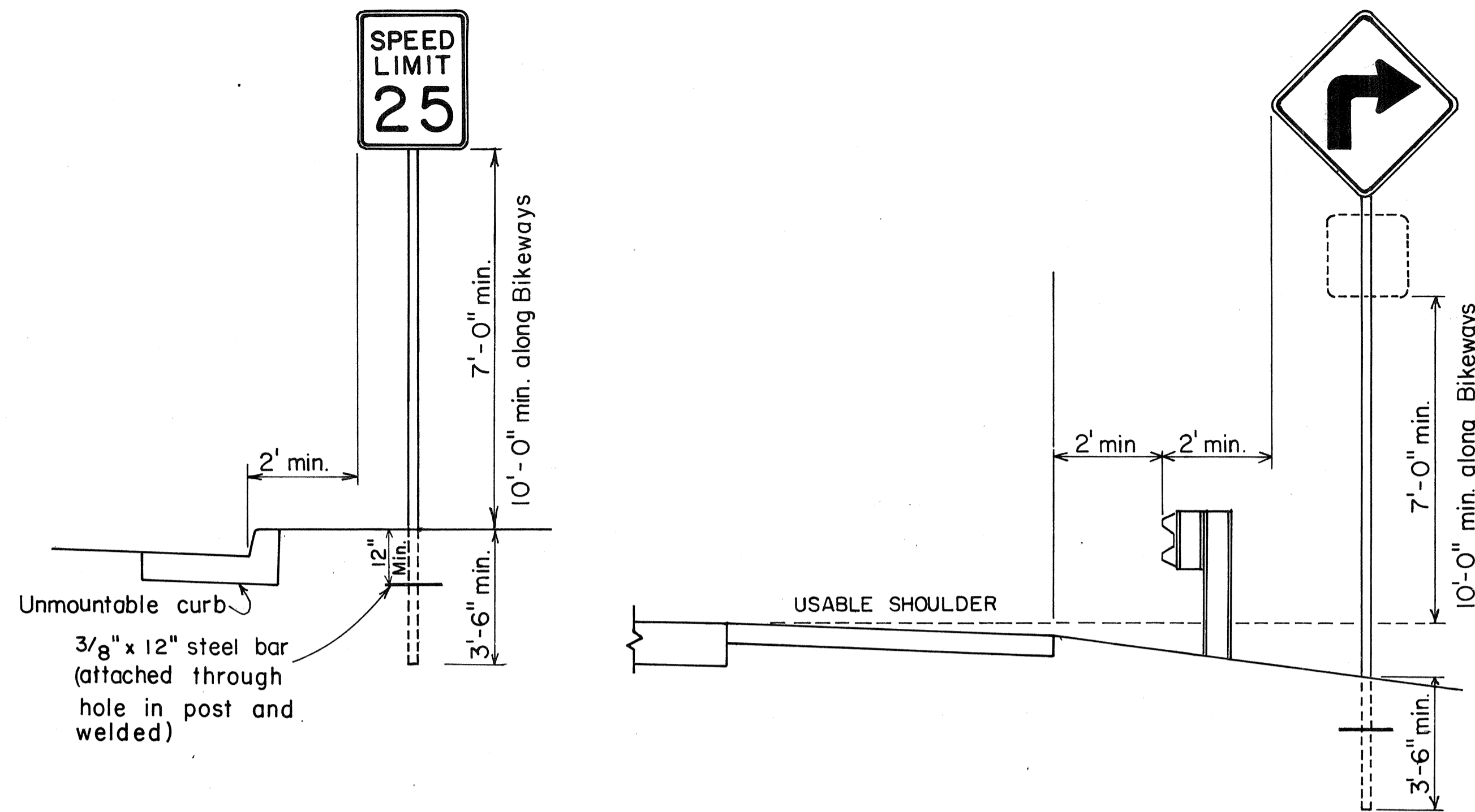
Scale: As Shown January 1972

SHEET No. 5 OF 27 SHEETS

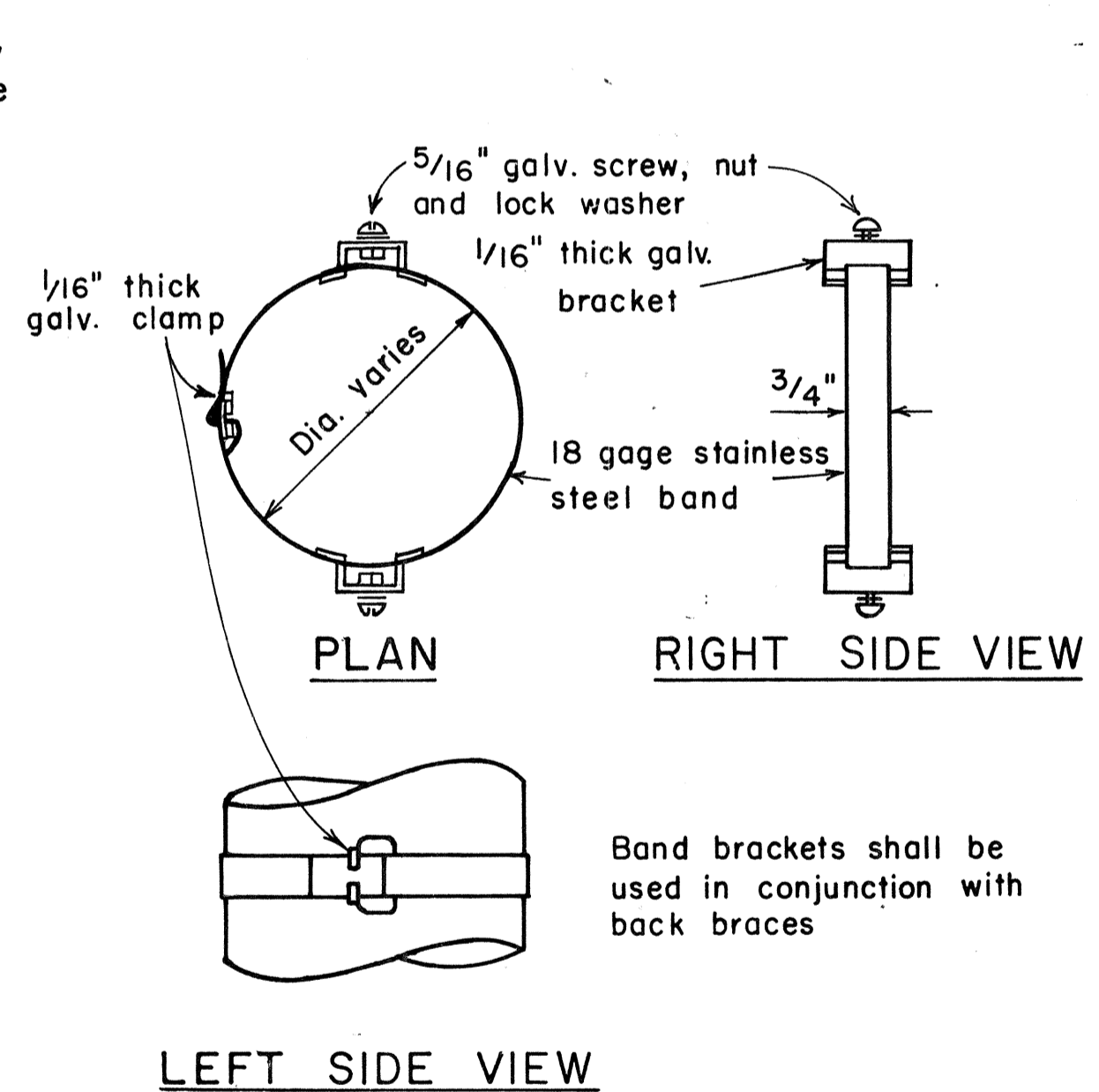
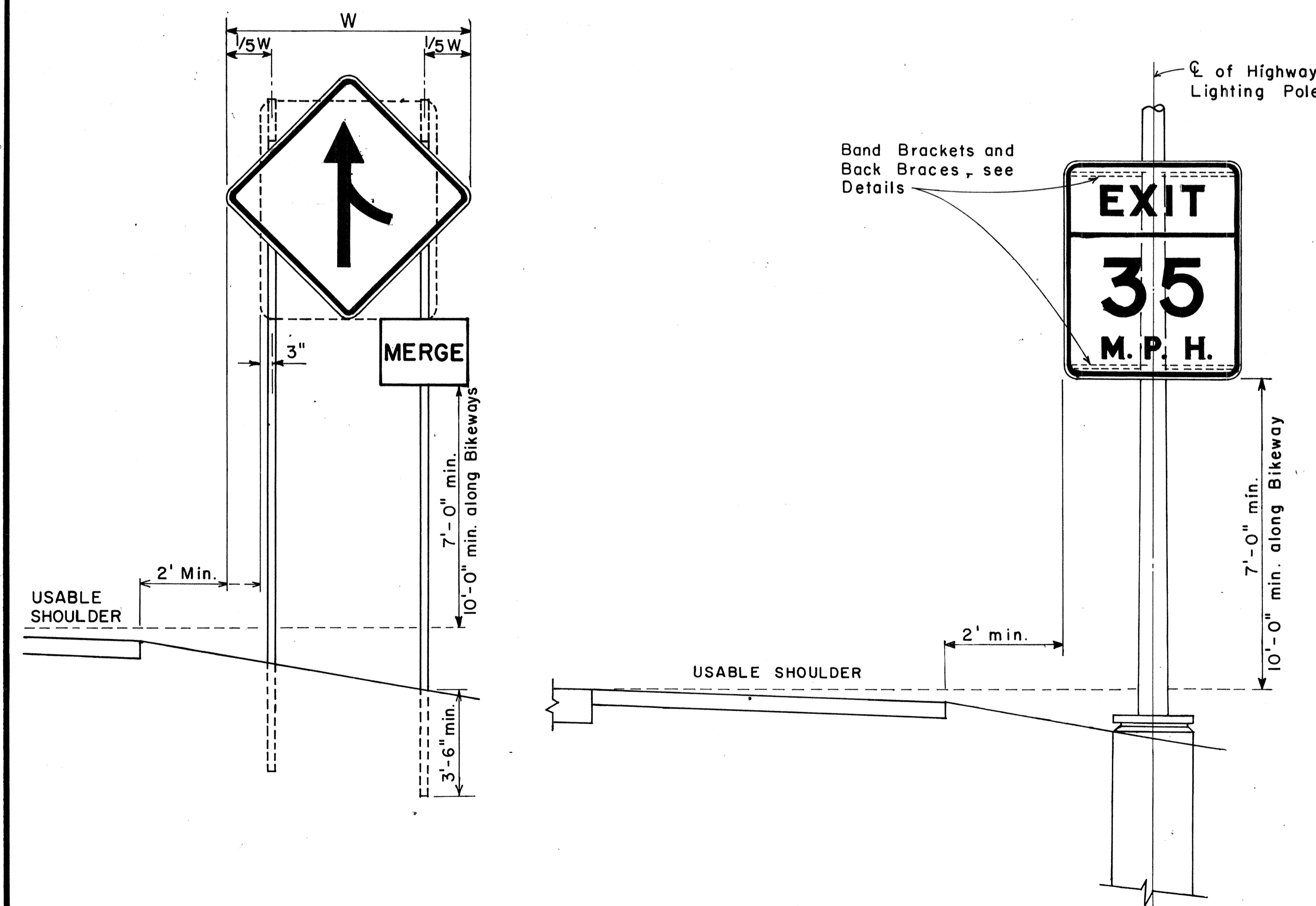
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	10-F078-110	1978	92	206

GENERAL NOTES

1. Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts.
2. 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.
3. 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.
4. Signs shall be attached to post with 5/16" galv. bolts with nuts and 7/8" x 0.06" stainless steel washers with neoprene rubber gasket.
5. Sign posts shall extend 3 1/2" above sign where required for City and County street name signs.
6. (R) or (L) indicates right or left and shall be as shown on the plans.



BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS

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

APPROVED:
Herbert B. 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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

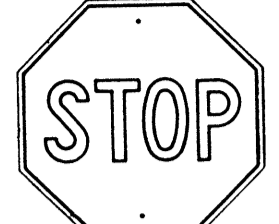
STANDARD DETAILS
 MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977

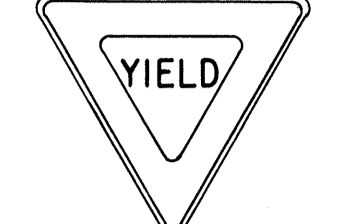
HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

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

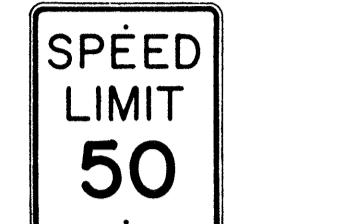
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	10-F-078-1(8)	1978	93	266



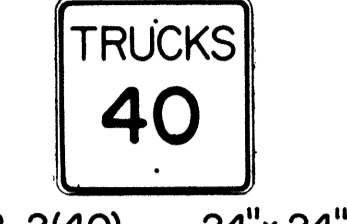
R1-1 30" x 30"
R1-1-A 36" x 36"
4-WAY
R1-3 12" x 6"
R1-3-A 18" x 9"



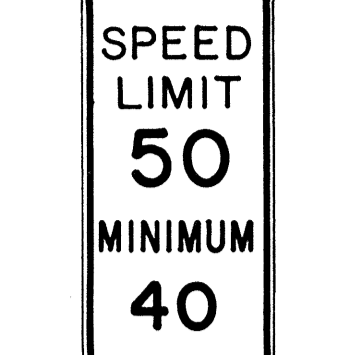
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



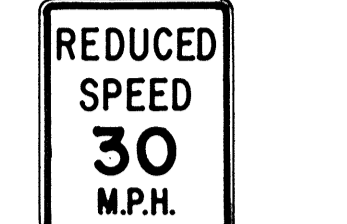
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



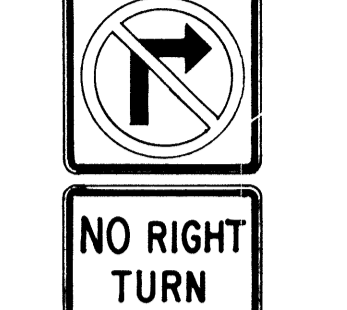
R2-2(40) 24" x 24"
R2-2(40)-A 48" x 48"




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




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




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




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



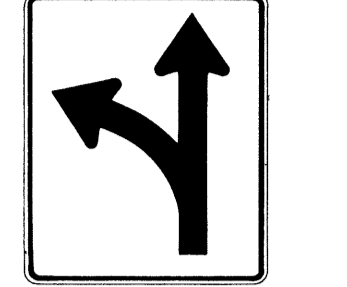
R3-3 24" x 24"
R3-3-A 48" x 48"




R3-4 24" x 24"
24" x 18"
R3-4-A 48" x 46"
48" x 36"



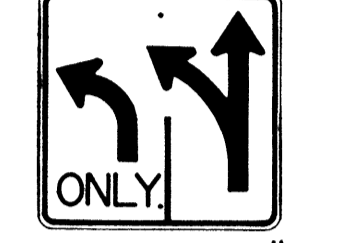
R3-5(L) 30" x 36"
R3-5(L)-A 48" x 60"



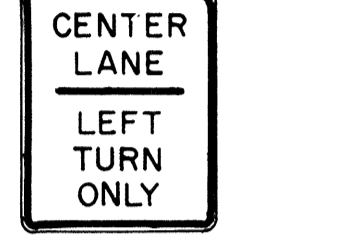
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"




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




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



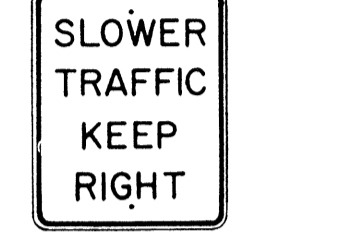
R3-9 24" x 30"



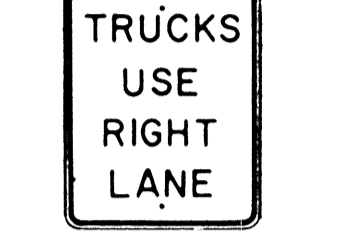
R4-1 24" x 30"




R4-2 24" x 30"



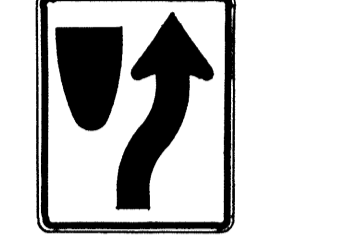
R4-3 24" x 30"
R4-3-A 48" x 60"



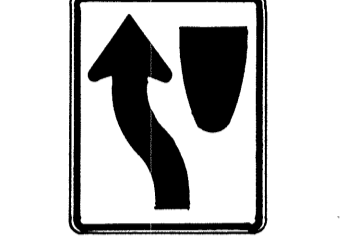
R4-5 24" x 30"



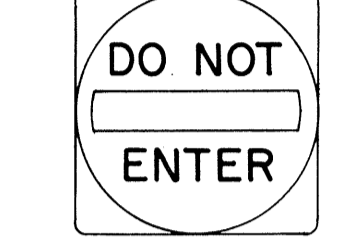
R4-6(500) 24" x 30"




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



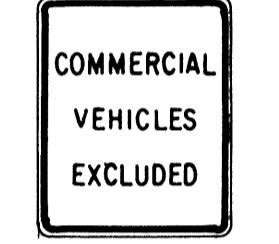
R4-8 24" x 30"
24" x 18"




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




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



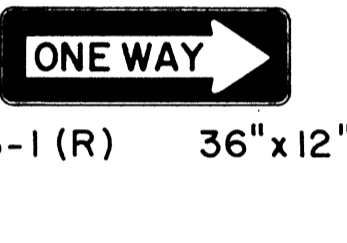
R5-4 24" x 30"




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




R5-9 36" x 24"



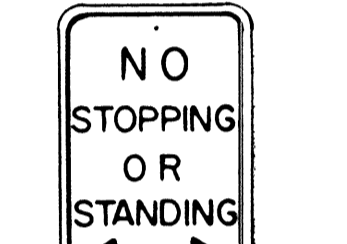
R6-1(R) 36" x 12"




R6-2(R) 18" x 24"




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



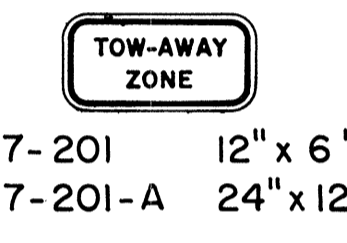
R7-4 12" x 18"
R7-4-A 24" x 30"



R7-107(R) 12" x 18"




R7-108 12" x 18"



R7-201 12" x 6"
R7-201-A 24" x 12"




R8-1 24" x 30"




R8-2 24" x 30"




R8-3 24" x 30"




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




R8-5 24" x 30"




R8-6 24" x 30"




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




R9-1 18" x 24"



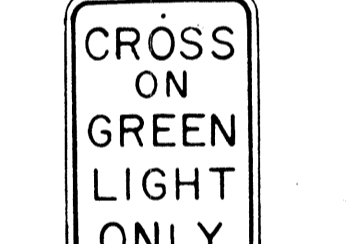
R9-2 12" x 18"



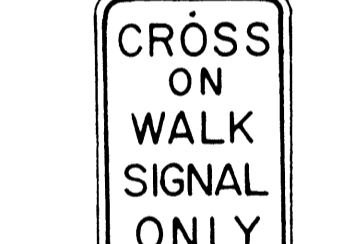
R9-3 12" x 18"



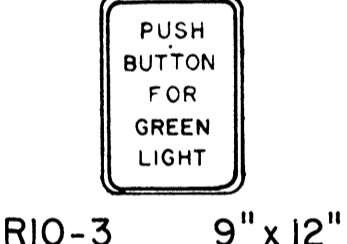
R9-4 18" x 24"



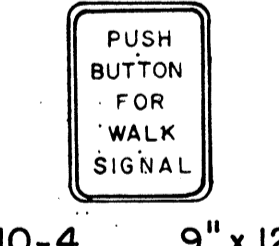
R10-1 12" x 18"




R10-2 12" x 18"




R10-3 9" x 12"



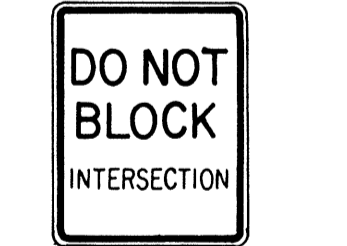
R10-4 9" x 12"




R10-5 24" x 30"



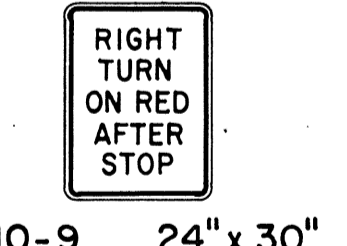
R10-6 24" x 36"



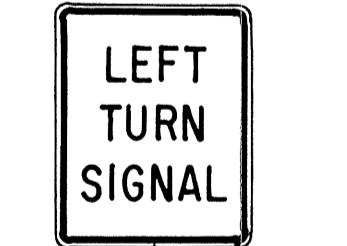
R10-7 24" x 30"




R10-8 24" x 30"



R10-9 24" x 30"



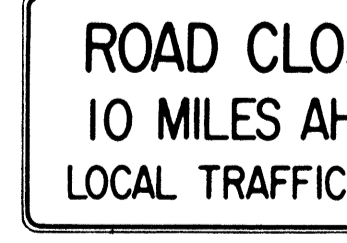
R10-10 24" x 30"



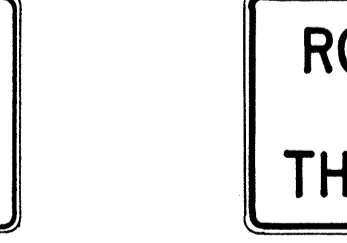
R11-1 24" x 30"




R11-2 48" x 30"



R11-3(10) 60" x 30"



R11-4 60" x 30"



R12-1(10) 24" x 30"

GENERAL NOTES

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

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

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

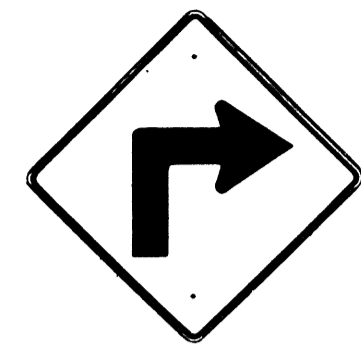
NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 101 Approved 12-30-69	H.L.	3/20/72
2	Revised General Note 1.	H.L.	10/14/74

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

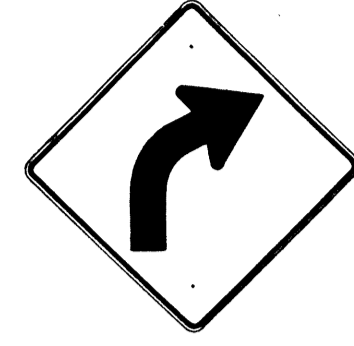
STANDARD DETAILS
REGULATORY SIGNS

NOT TO SCALE
SHEET No. 7 OF 27 SHEETS DT 101

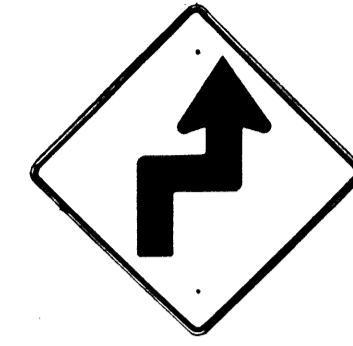
SURVEY PLOTTED BY: _____ DATE: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN No. _____
 NOTE BOOK No. _____



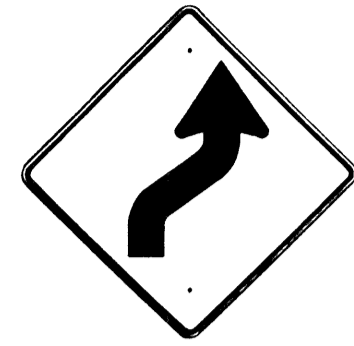
W1-1(R) 30"x30"
W1-1(R)-A 48"x48"



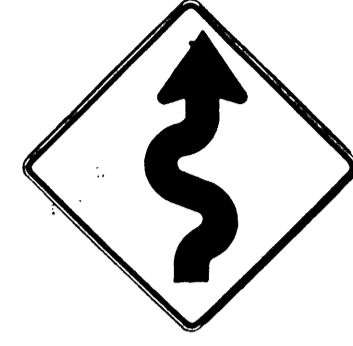
W1-2(R) 30"x30"
W1-2(R)-A 48"x48"



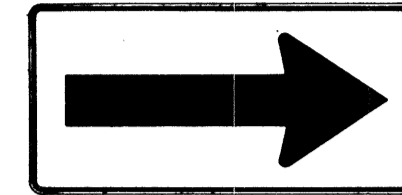
W1-3(R) 30"x30"
W1-3(R)-A 48"x48"



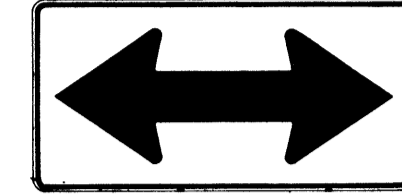
W1-4(R) 30"x30"
W1-4(R)-A 48"x48"



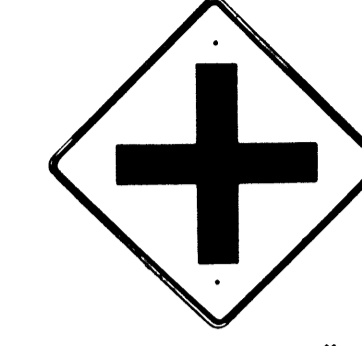
W1-5(R) 30"x30"
W1-5(R)-A 48"x48"



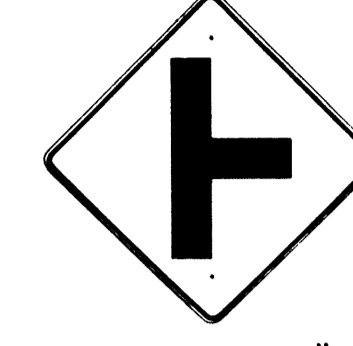
W1-6 48"x24"



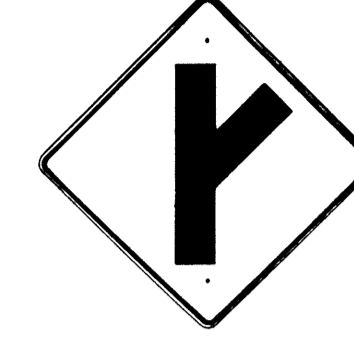
W1-7 48"x24"



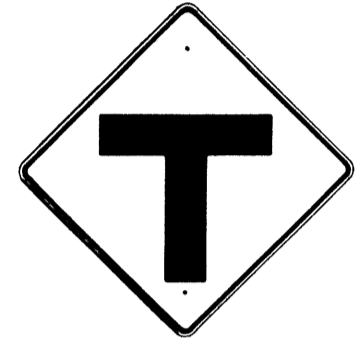
W2-1 30"x30"
W2-1-A 48"x48"



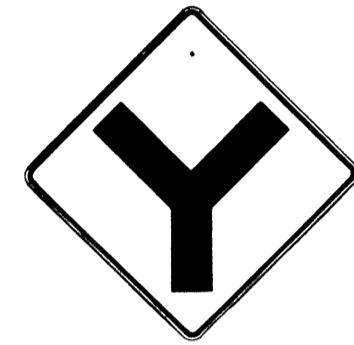
W2-2 30"x30"
W2-2-A 48"x48"



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



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



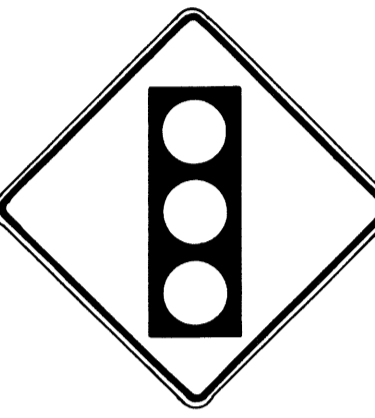
W2-5 30"x30"
W2-5-A 48"x48"



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



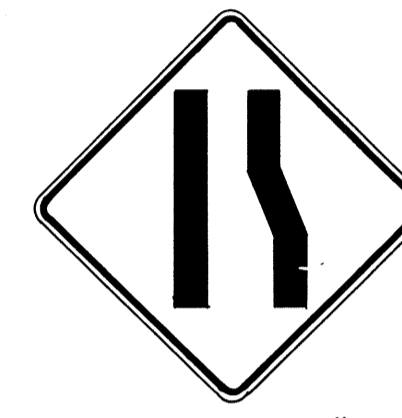
W3-2 30"x30"
W3-2-A 36"x36"



W3-3 36"x36"
24"x18"



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



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



W5-1 36"x36"



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



W5-3 36"x36"



W6-1 36"x36"
24"x18"



W6-2 36"x36"
24"x18"



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



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



W7-2 24"x18"



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



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



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



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



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



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



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



W10-1 36" Diameter



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



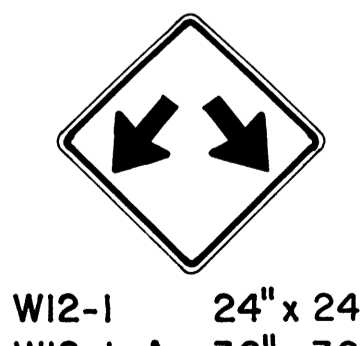
W11-2 30"x30"
24"x18"
W11-2-A 36"x36"
24"x18"



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



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



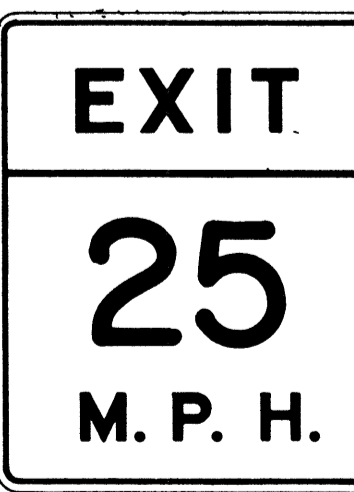
W12-1 24"x24"
W12-1-A 36"x36"
W12-1-B 48"x48"



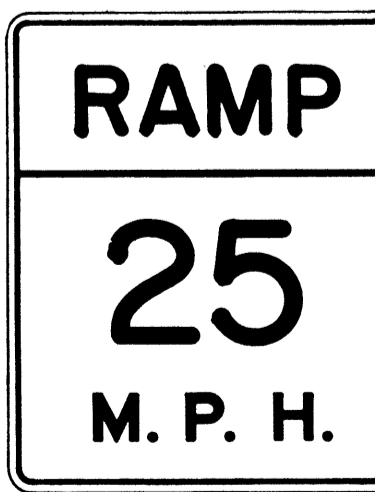
W12-2(12'-6") 36"x36"
24"x18"



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



W13-2(25) 48"x60"



W13-3(25) 48"x60"



W14-1 30"x30"



W14-3 36"x48"x48"

GENERAL NOTES

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

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

APPROVED:
William Rasch 3-20-72
 ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE

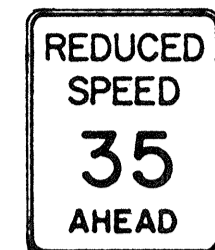
DATE _____
 SURVEY PLOTTED BY _____
 PLAN _____
 DESIGNED BY _____
 NOTE BOOK _____
 QUANTITIES BY _____
 CHECKED BY _____
 No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-118	1978	95	266

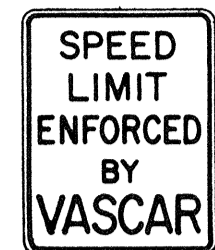
General Notes

- 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.

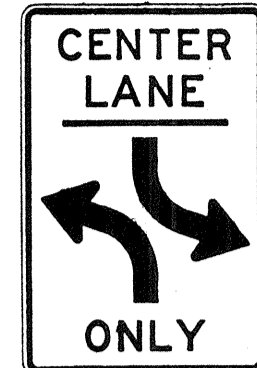
ALL WAY
R1-4 18"x 6"



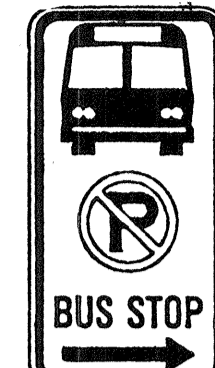
R2-5d(35) 24"x 30"
R2-5d(35)-A 48"x 60"



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"



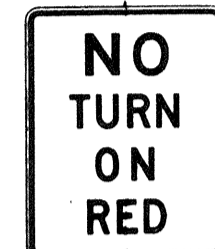
R9-3a 18"x 18"
18"x 12"
R9-3a-A 24"x 24"
24"x 18"



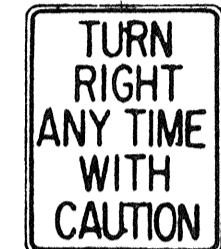
R9-3b(R) 18"x 12"



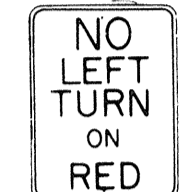
R9-3b(L) 18"x 12"



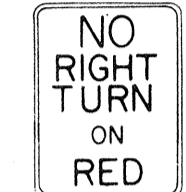
R10-11a 24"x 30"



R16-1 24"x 30"



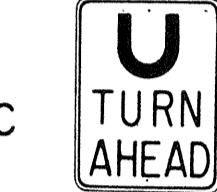
R16-3 18"x 24"



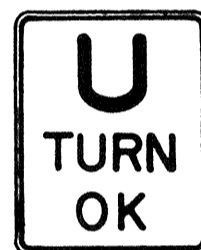
R16-4 18"x 24"



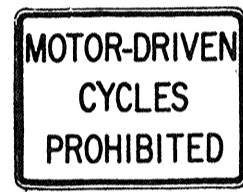
R16-5 36"x 42"



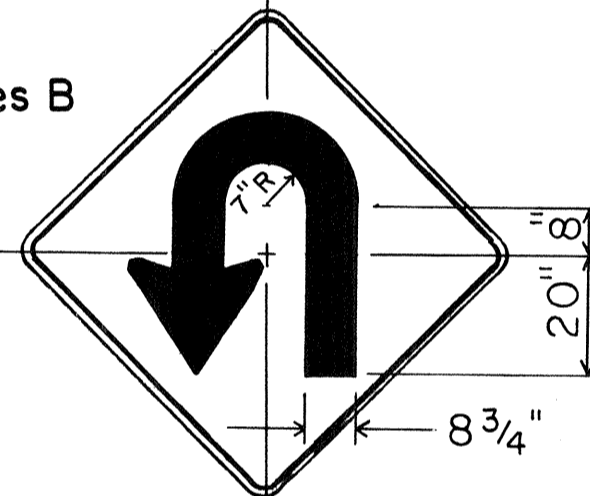
R16-6 24"x 30"



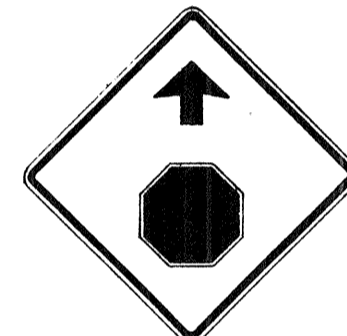
R16-7 24"x 30"



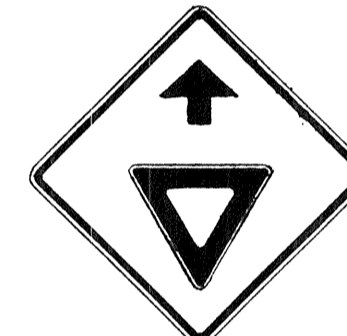
R5-8 30"x 24"



W17-1(L) 60"x 60"



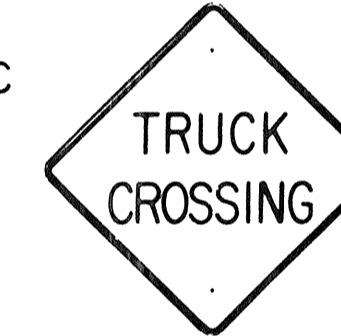
W3-1a 36"x 36"
24"x 18"
W3-1a-A 48"x 48"
24"x 18"



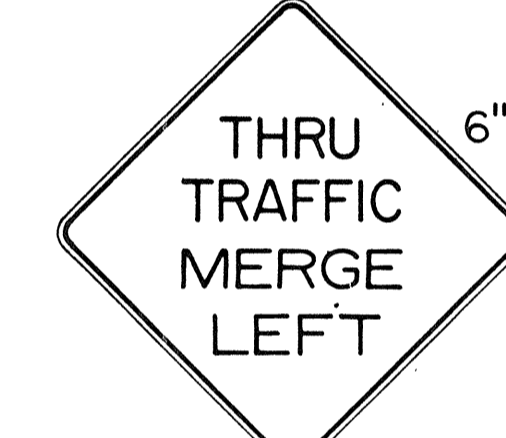
W3-2a 36"x 36"
24"x 18"
W3-2a-A 48"x 48"
24"x 18"



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"



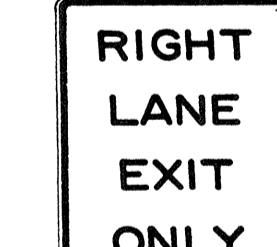
W15-1 24"x 24"



W15-2 24"x 24"



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



W18-1 48"x 60"

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

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

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

NO.	REVISION	APPROVED BY	DATE
	Supersedes Sht. DT103 approved 3/20/72	H.F.	5/3/78

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978
SHEET No. 9 OF 27 SHEETS DT 103



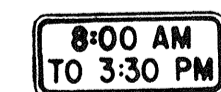
S1-1 36"x 36"



S2-1 36"x 36"



S3-1 30"x 30"



S4-1 24"x 10"



S4-2 24"x 10"



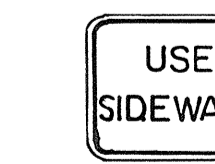
S4-3 24"x 8"



S4-4 24"x 10"



CW23-4 48"x 48"



R18-1 24"x 18"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1A-F-078-1(10)	1978	96	266



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"



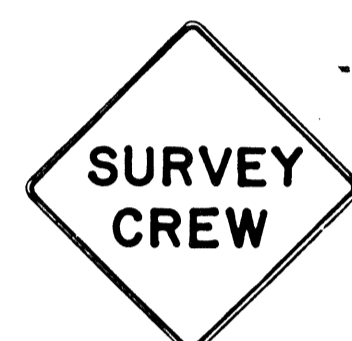
CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



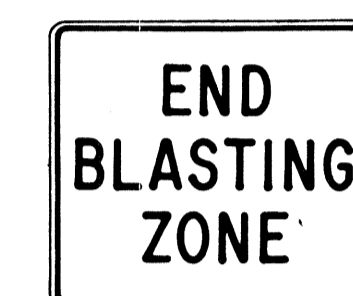
CW21-6 30" x 30"



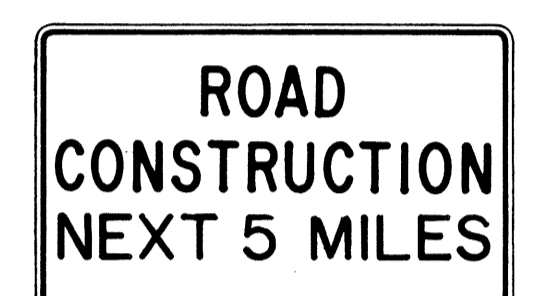
CW22-1b 48" x 48"



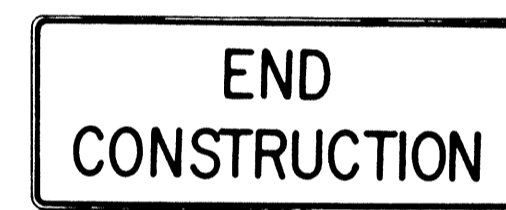
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



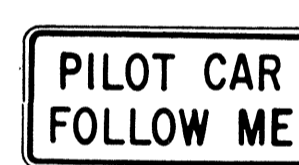
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



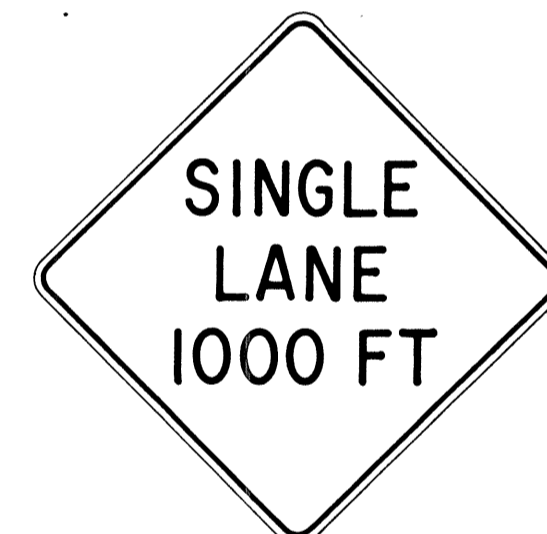
CM4-10(R) 48" x 18"



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:
Shigeru Sakai 3/23/72
ASSISTANT CHIEF, ENGINEERING DATE

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

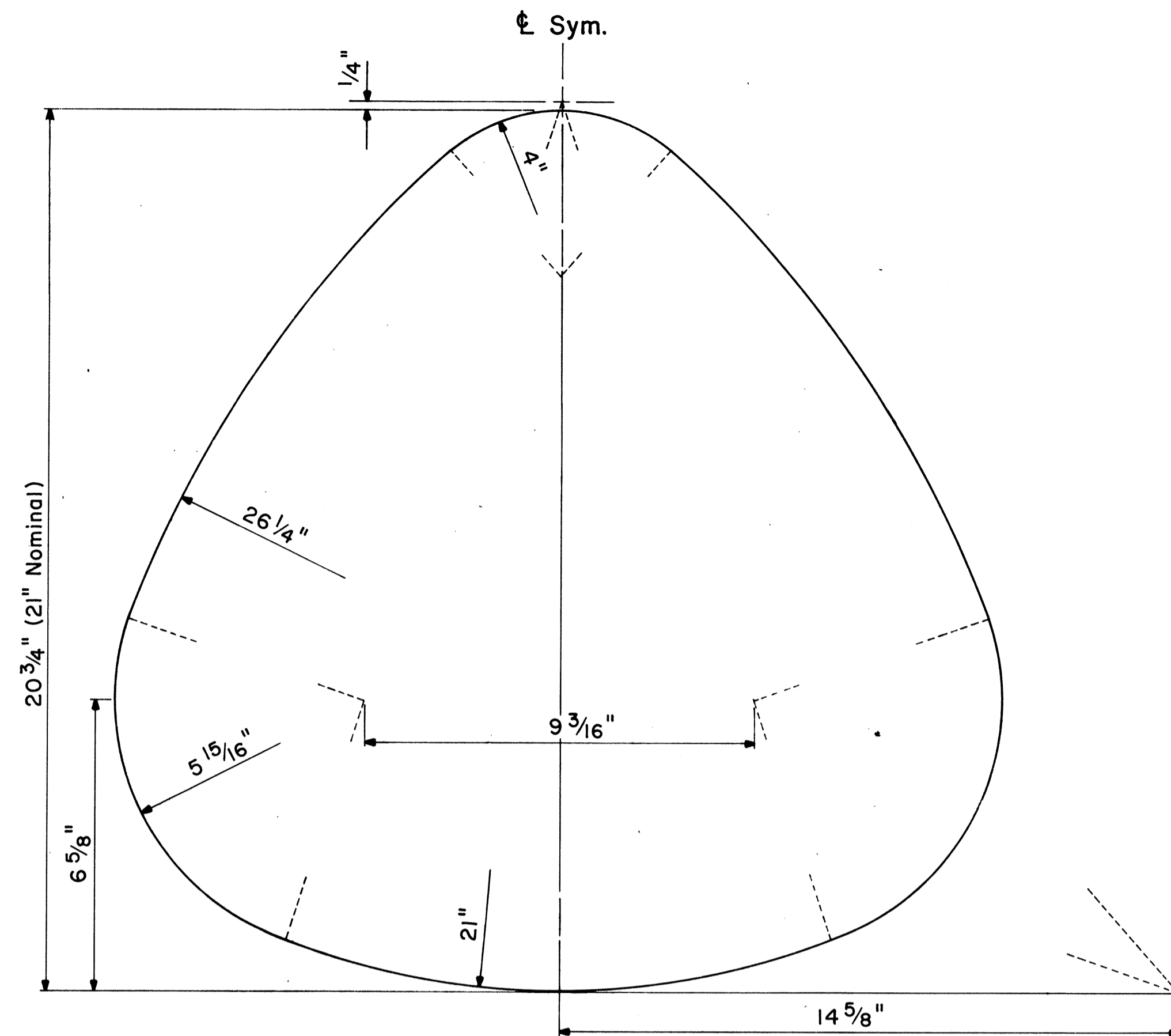
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
CONSTRUCTION SIGNS

NOT TO SCALE

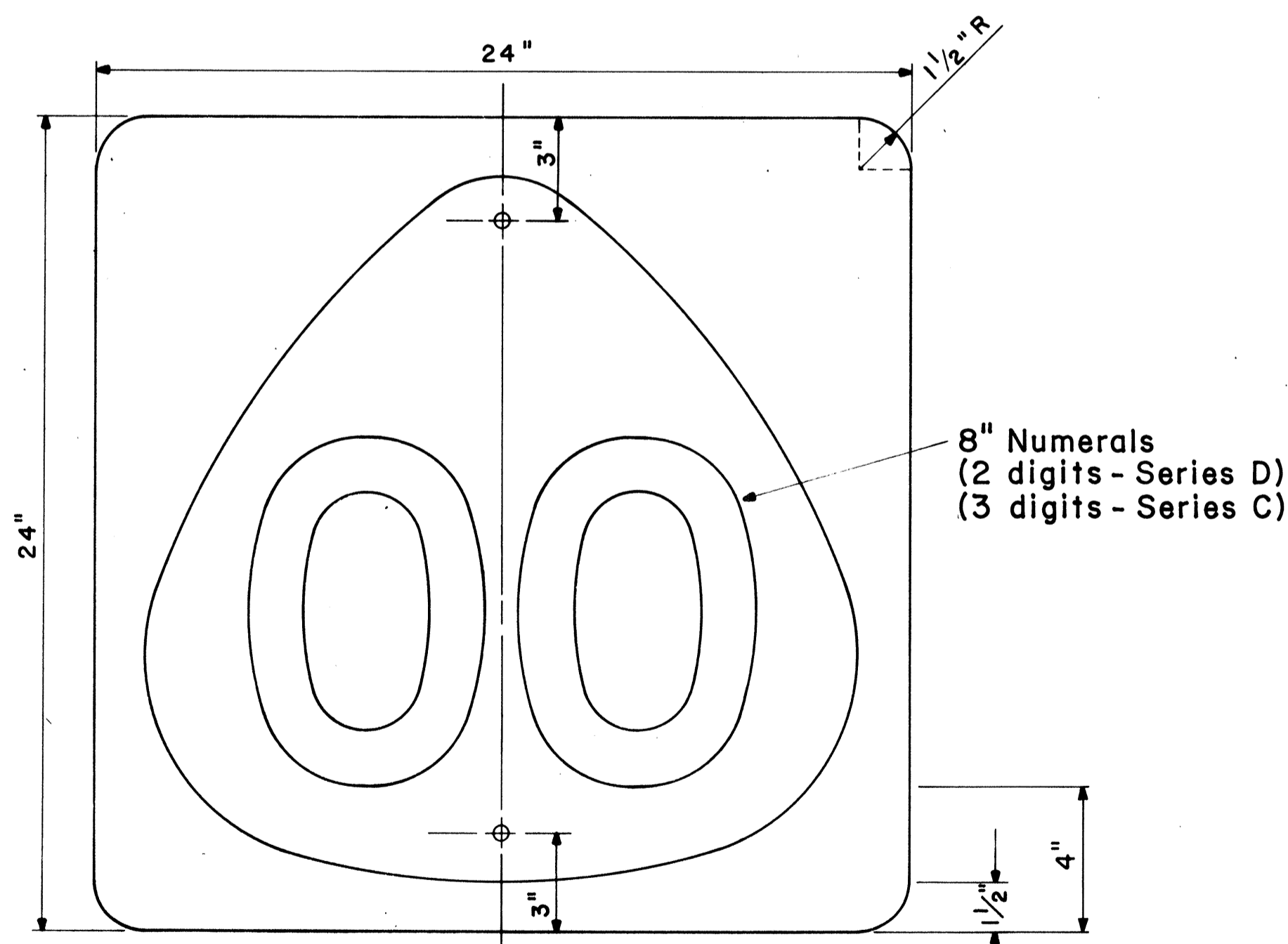
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTE BOOK	_____
QUANTITIES BY	_____
CHECKED BY	_____
No.	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(18)	1978	97	266



STATE ROUTE MARKER DETAIL

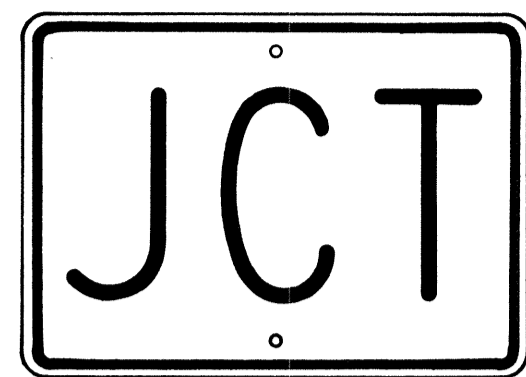
Not to Scale



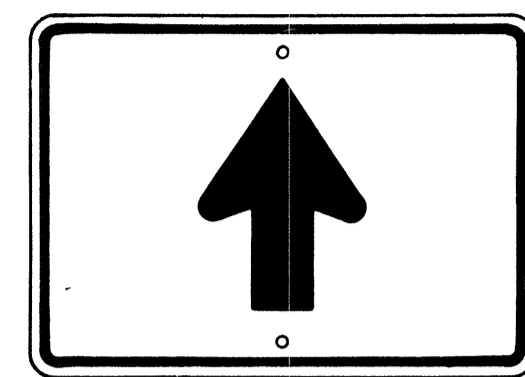
STATE ROUTE MARKER

MI-6 (00) 24" x 24"

Scale: 1/4" = 1"



M2-1 21" x 15"



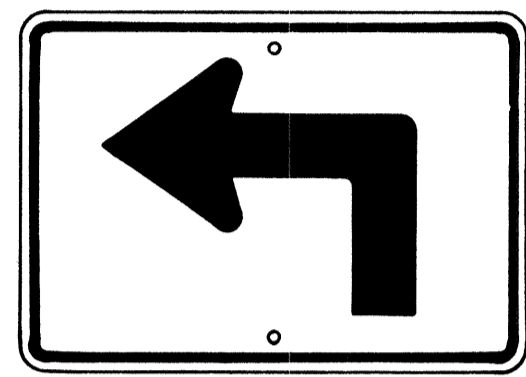
M6-3 21" x 15"



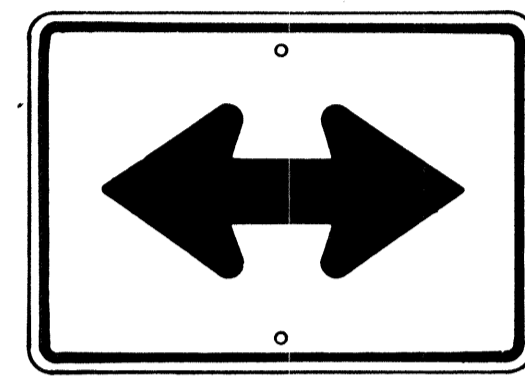
M3-1 24" x 12"
M3-1-A 36" x 18"



M4-1 24" x 12"



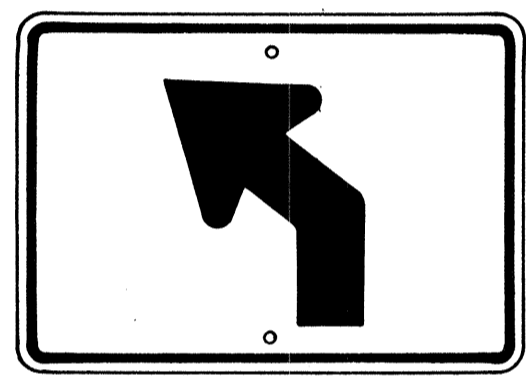
M5-1(L) 21" x 15"



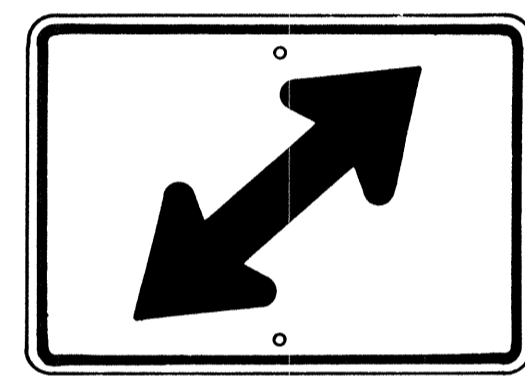
M6-4 21" x 15"



M4-2 24" x 12"



M5-2(L) 21" x 15"



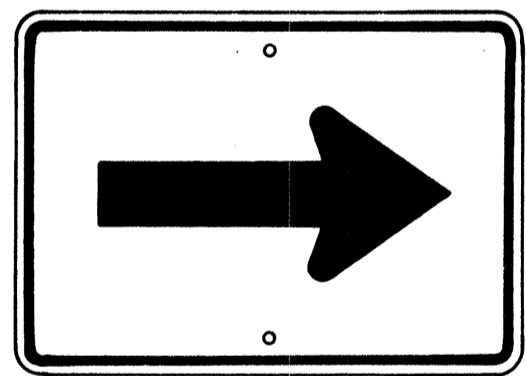
M6-5(R) 21" x 15"



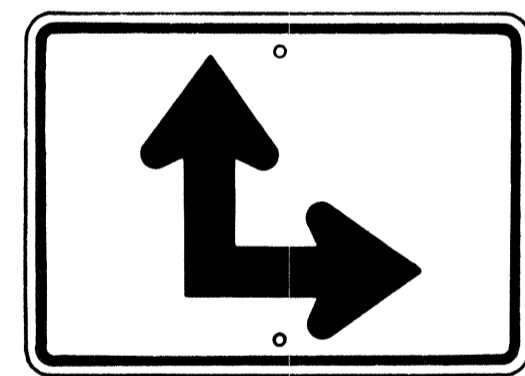
M4-3 24" x 12"



M4-5 24" x 12"



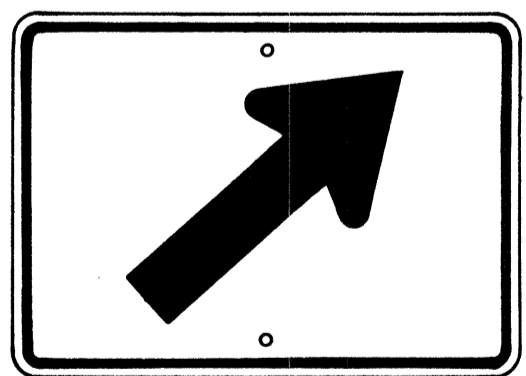
M6-1 21" x 15"



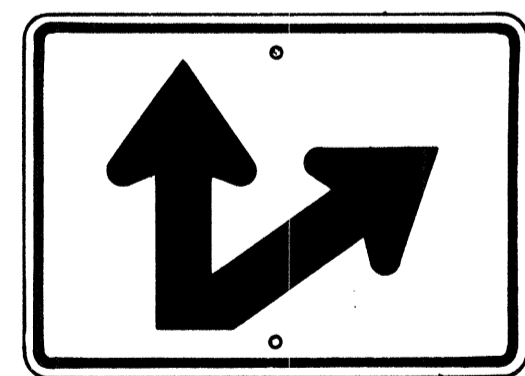
M6-6(R) 21" x 15"



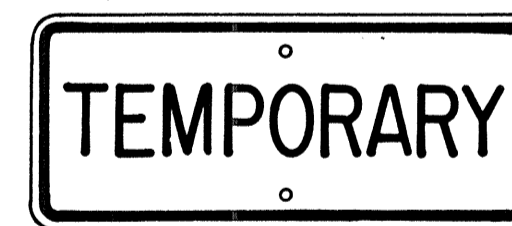
M4-6 24" x 12"



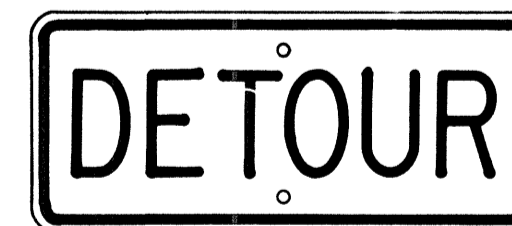
M6-2(R) 21" x 15"



M6-7(R) 21" x 15"



M4-7 24" x 12"



M4-8 24" x 12"

GENERAL NOTES

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

AUXILIARY MARKERS

Not to Scale

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

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

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

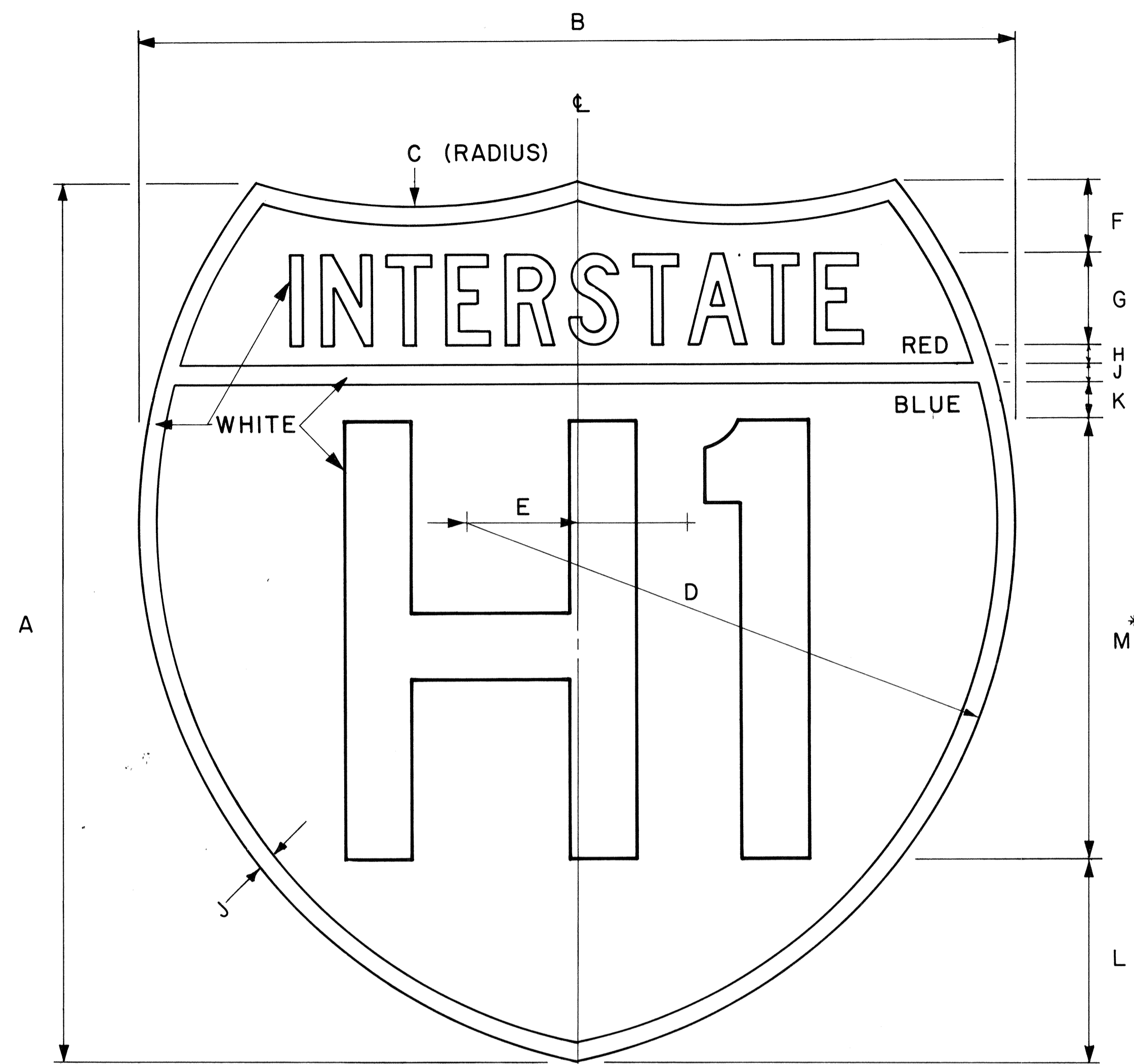
APPROVED:
Arthur S. Sakai 6-1-72
 ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
STATE ROUTE MARKER
AND AUXILIARY MARKERS

Scale: As Shown
 SHEET NO. 11 OF 27 SHEETS DT 105

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(16)	1978	98	266



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

GENERAL NOTES

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

INTERSTATE ROUTE MARKER SCHEDULE
 (INCHES)

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

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

APPROVAL RECOMMENDED:

Etschi Tanaka 4/17/78
 TRAFFIC ENGINEER DATE

APPROVED:

Herbert S. Zaleski 4/18/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Replaces DT106 Approved 12/30/69.	H.T.	4-18-78

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
INTERSTATE ROUTE MARKER

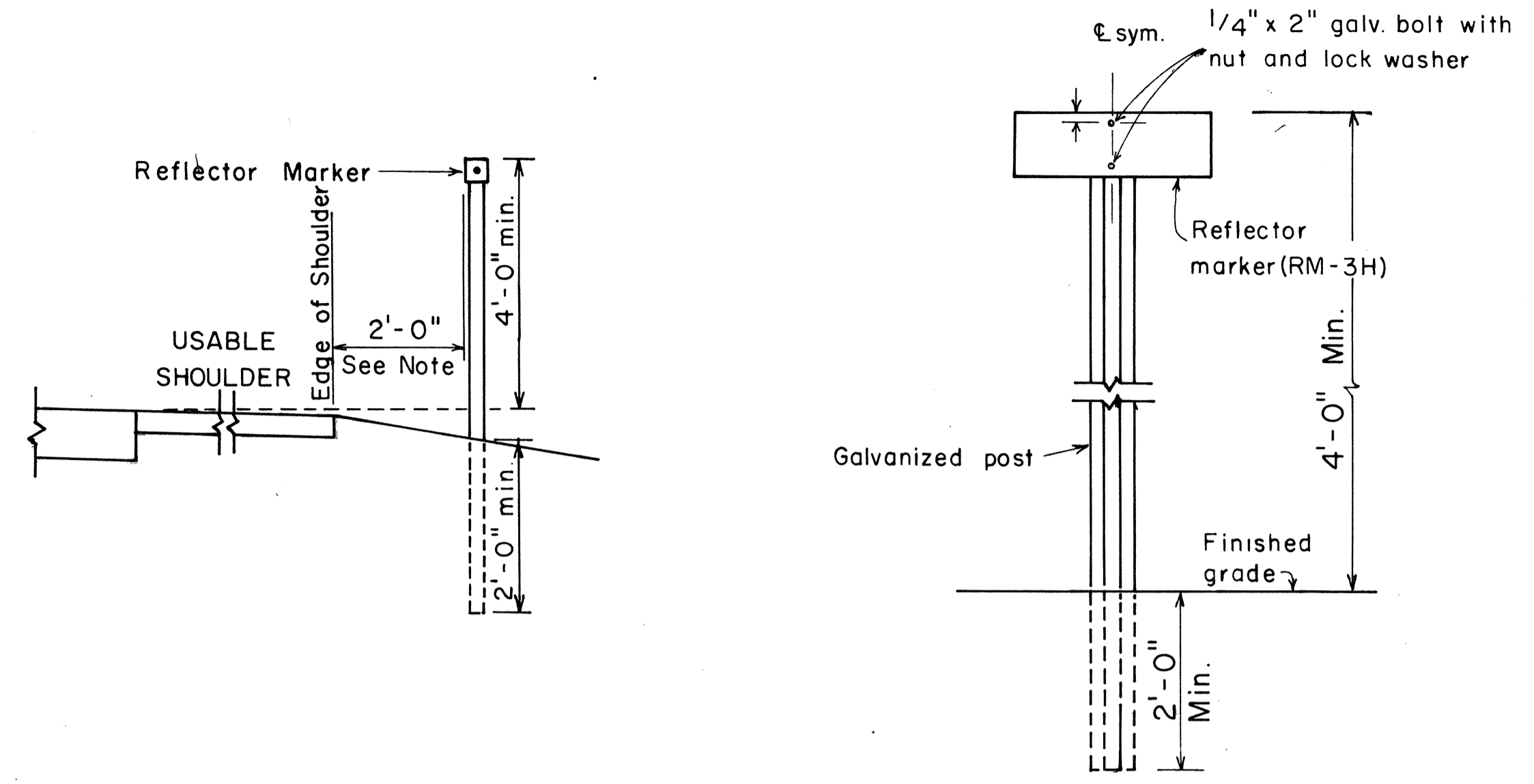
Scale: 3/8" = 1" Date: January, 1978

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

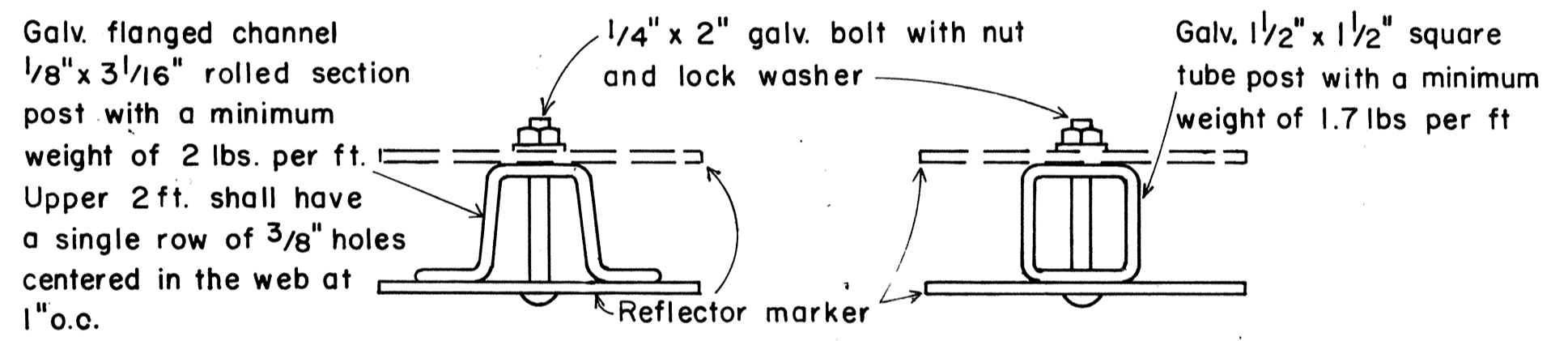
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	T&F-07B-1110	1978	99	200

GENERAL NOTES:

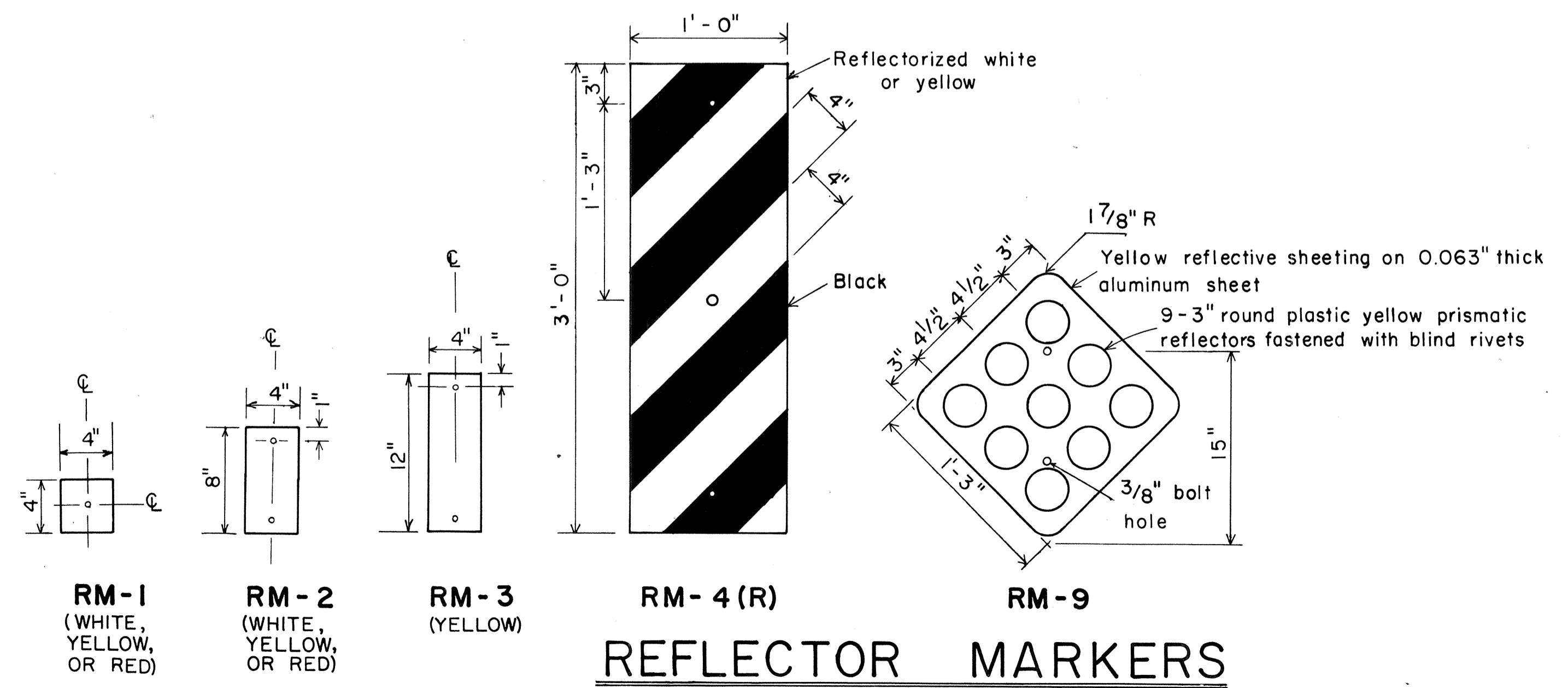
1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
2. (R) or (L) indicates right or left and shall be as shown on the plans.
3. Reflector markers RM-1 and RM-2 shall be:
 - a) Yellow if placed along the left edge of divided 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



TYPICAL SECTION OF ROAD DELINEATOR



REFLECTOR MARKERS

APPROVAL RECOMMENDED:
Eichi Tanaka 11/15/77
 TRAFFIC ENGINEER DATE

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
 MISCELLANEOUS REFLECTOR MARKERS

Not to scale June, 1977
 SHEET NO. 13 OF 27 SHEETS DT 110

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	T&F-078-110	1978	100	266

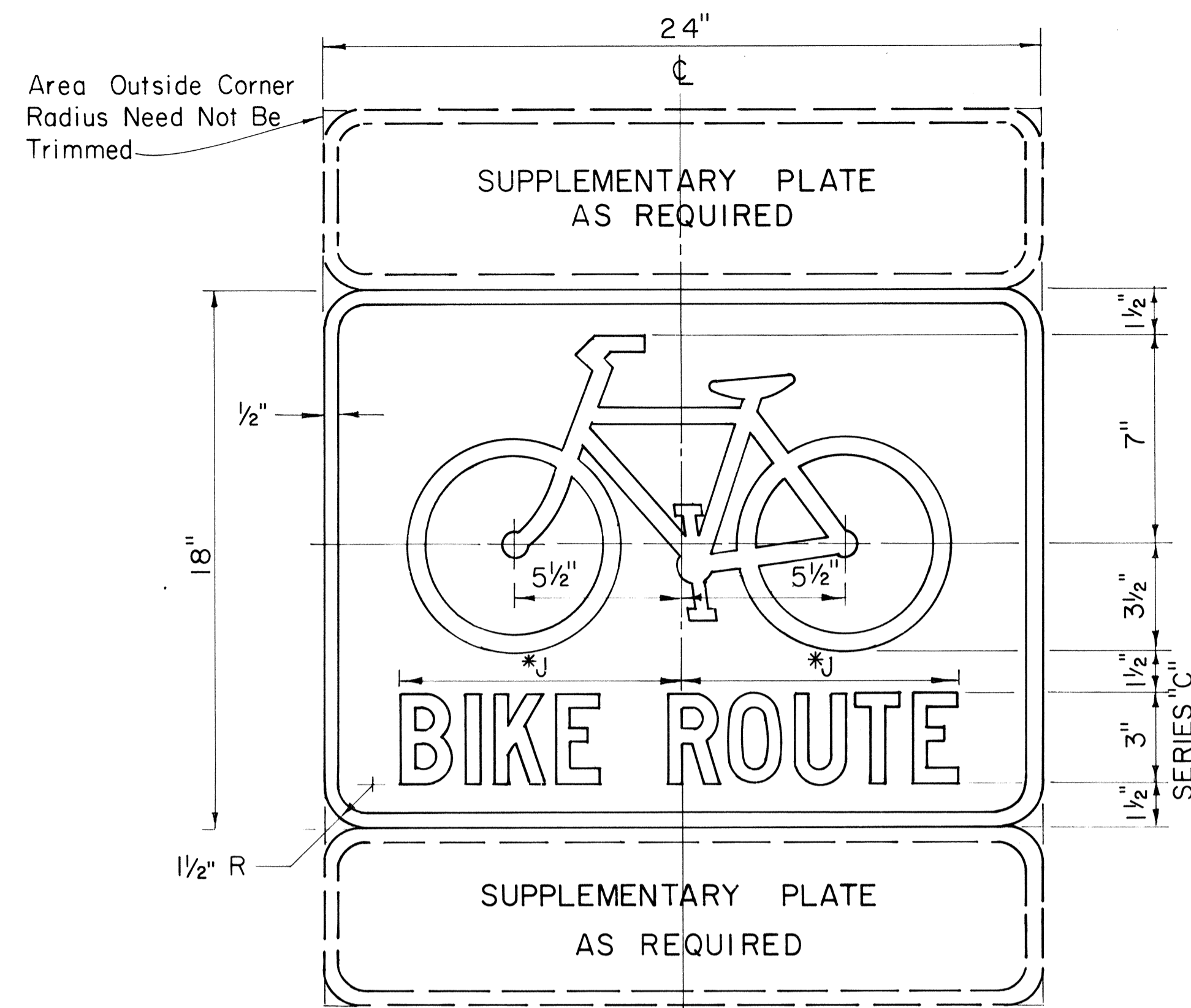
GENERAL NOTES BIKE ROUTE SIGN & SUPPLEMENTARY PLATES

- Sign details shall conform to the latest edition of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways", "Standard Highway Signs" and "Standard Alphabets for Highway Signs" and as amended.
- Legend and borders shall be white (reflectORIZED) on a green (reflectORIZED) background.
- Drill $\frac{3}{8}$ " ϕ bolt holes (for mounting) at appropriate locations.
- When Supplementary Plates (DII-2 to DII-6 only) are required with Bike Route Sign (DII-1 or Alternate), the Sign Assembly shall be mounted on a single metal plate (24" x 24" or 24" x 30") and shall be arranged as shown on the plans.

*5. Alternate sign messages shall be denoted by the following:

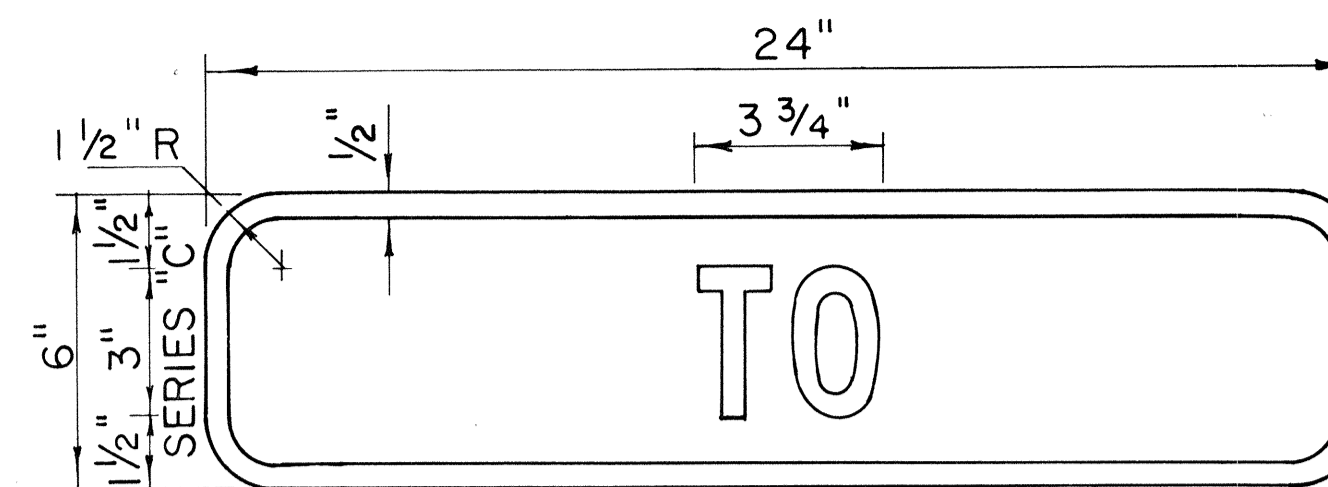
DII-1a: Bike Lane
DII-1b: Bike Path
DII-1c: Bikeway

Dimension "J" varies. Visually center Alternate message.

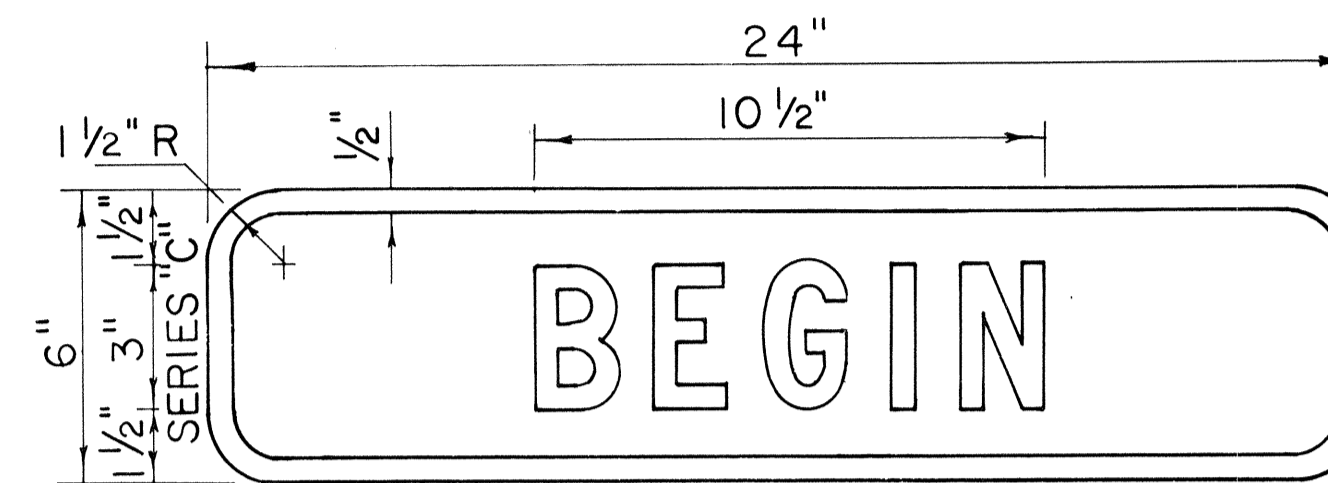


DII-1
BIKE ROUTE SIGN

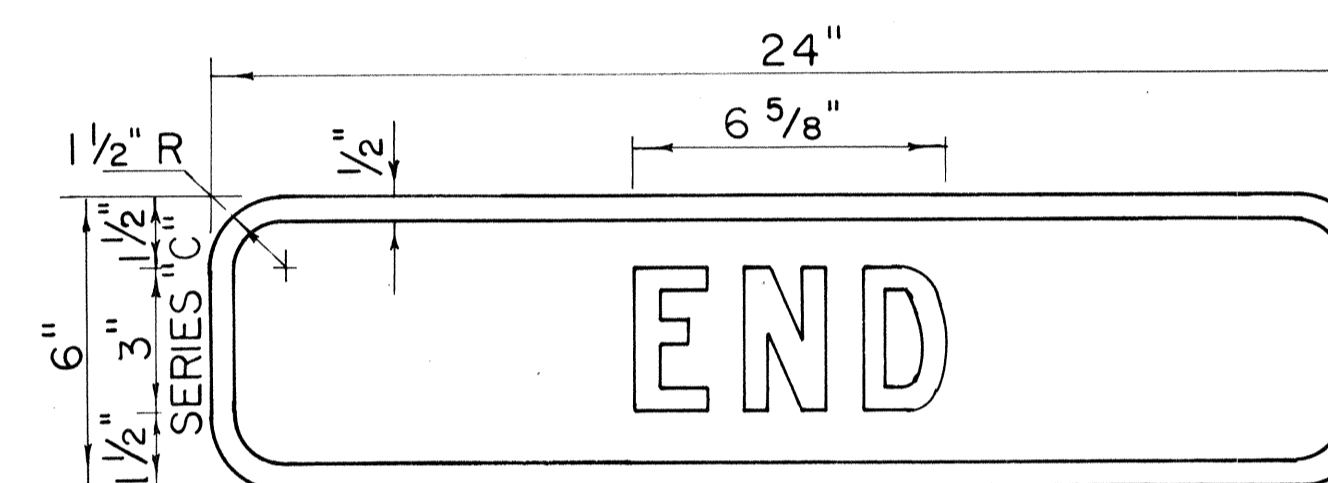
Scale: 3" = 1'-0"



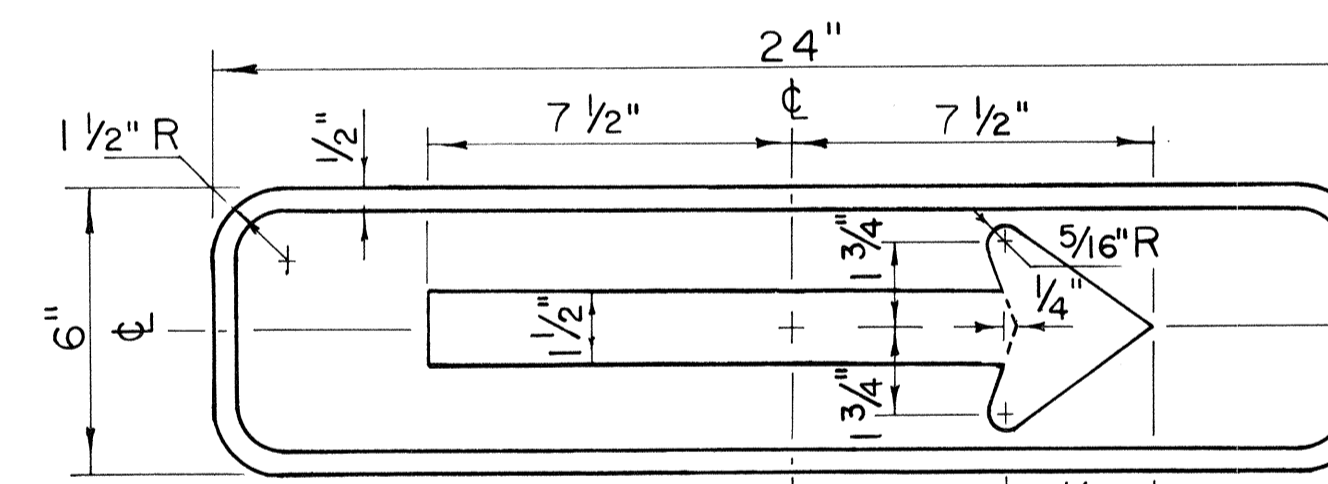
DII-2



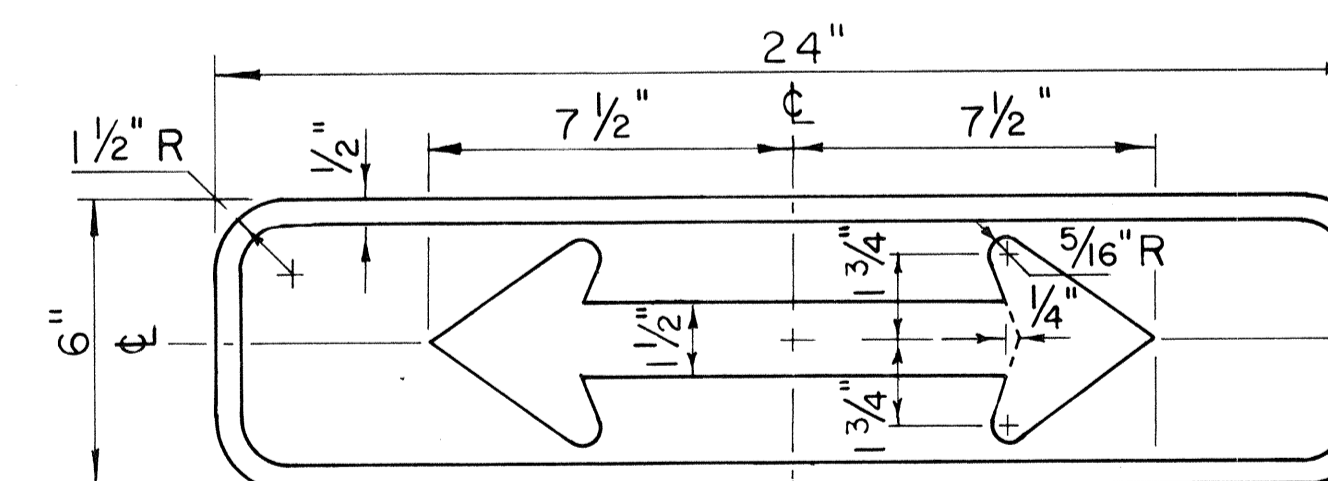
DII-3



DII-4



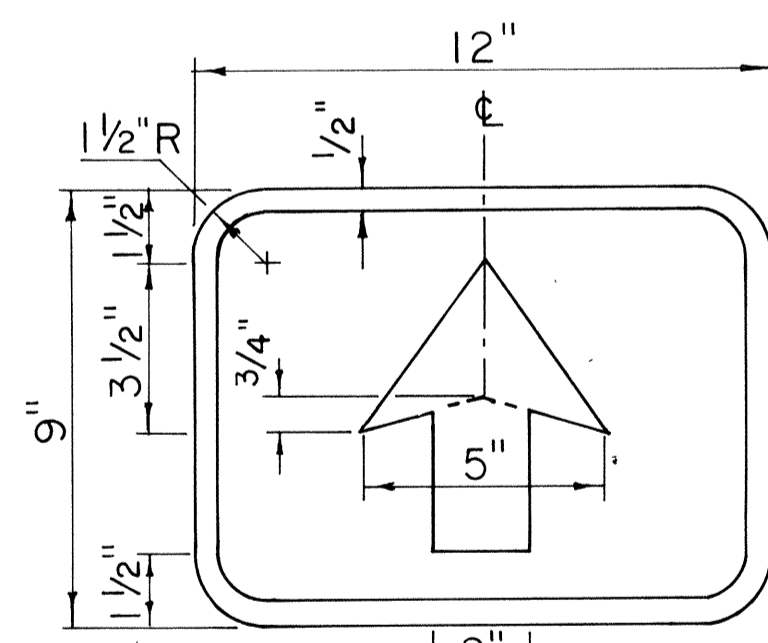
DII-5(R)



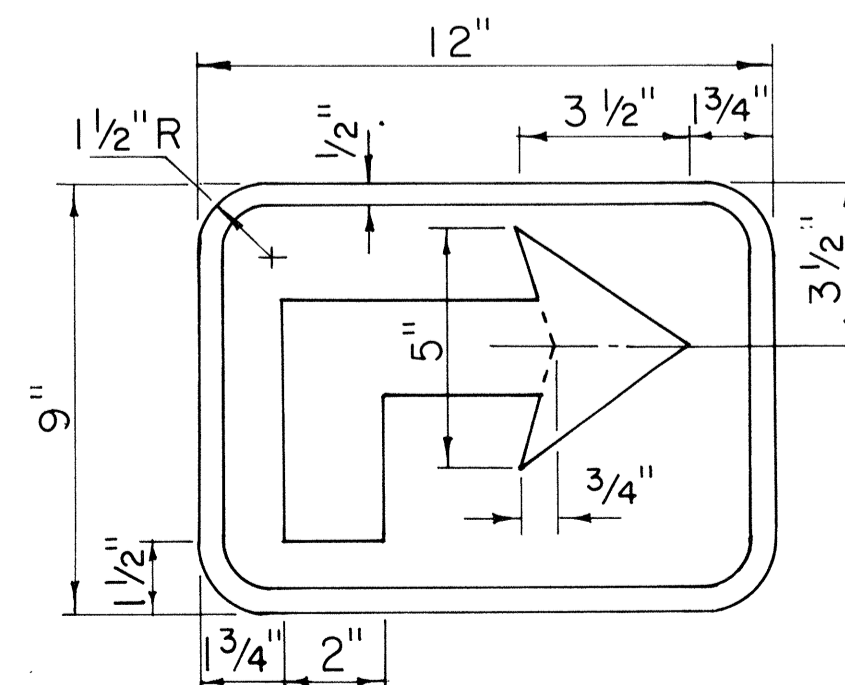
DII-6

SUPPLEMENTARY PLATES

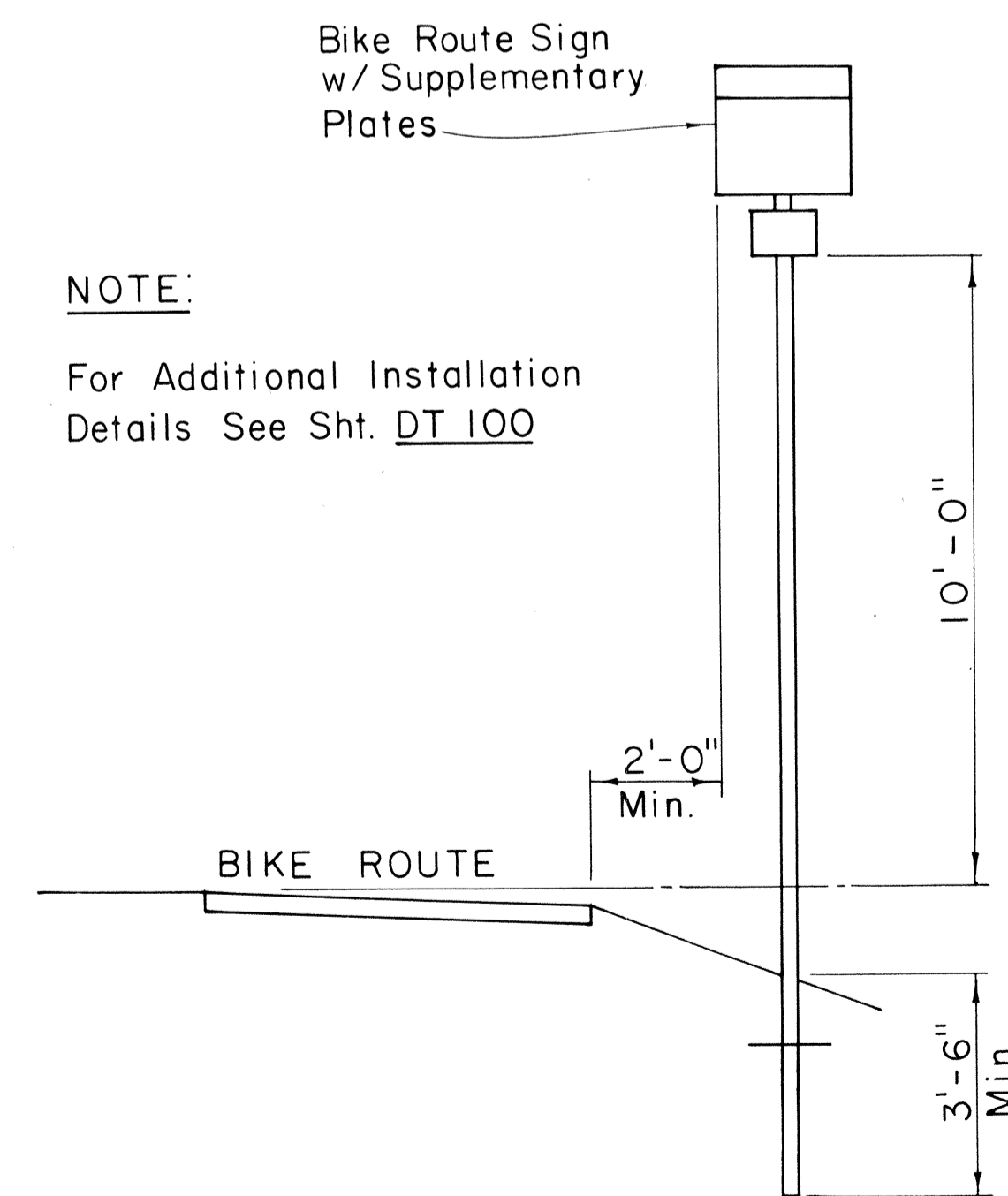
Scale: 3" = 1'-0"



DII-7



DII-8(R)



TYPICAL INSTALLATION

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

NOTE:

For Additional Installation
Details See Sht. DT 100

APPROVAL RECOMMENDED:

TRAFFIC ENGINEER

DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING

DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

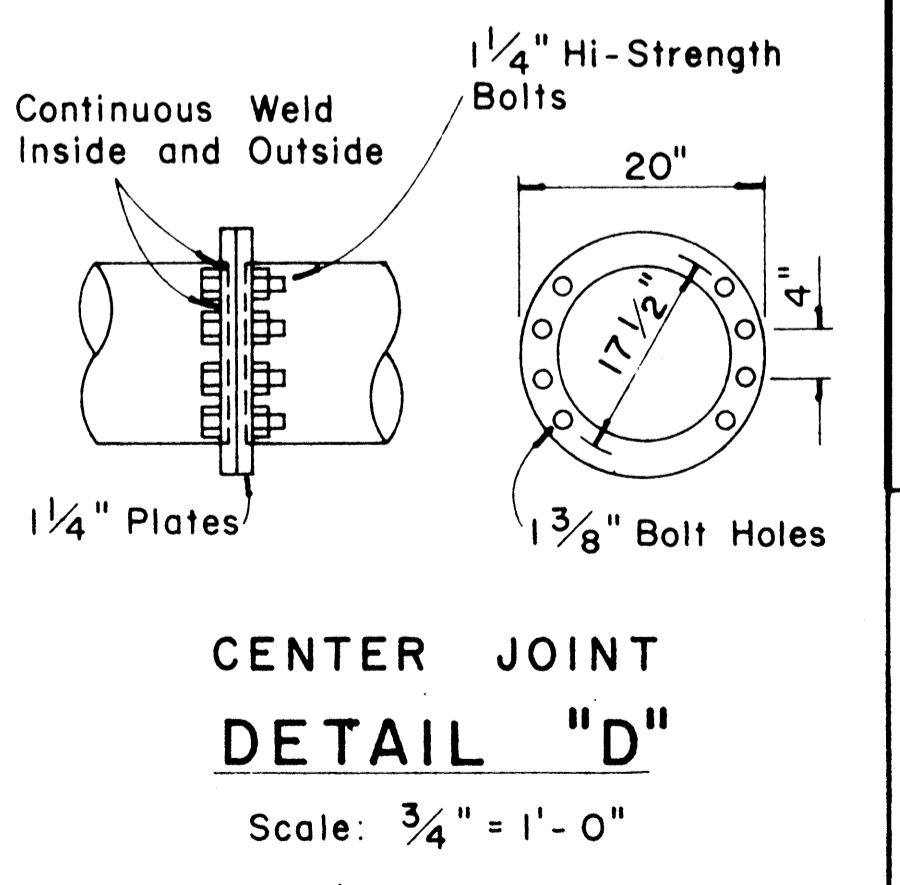
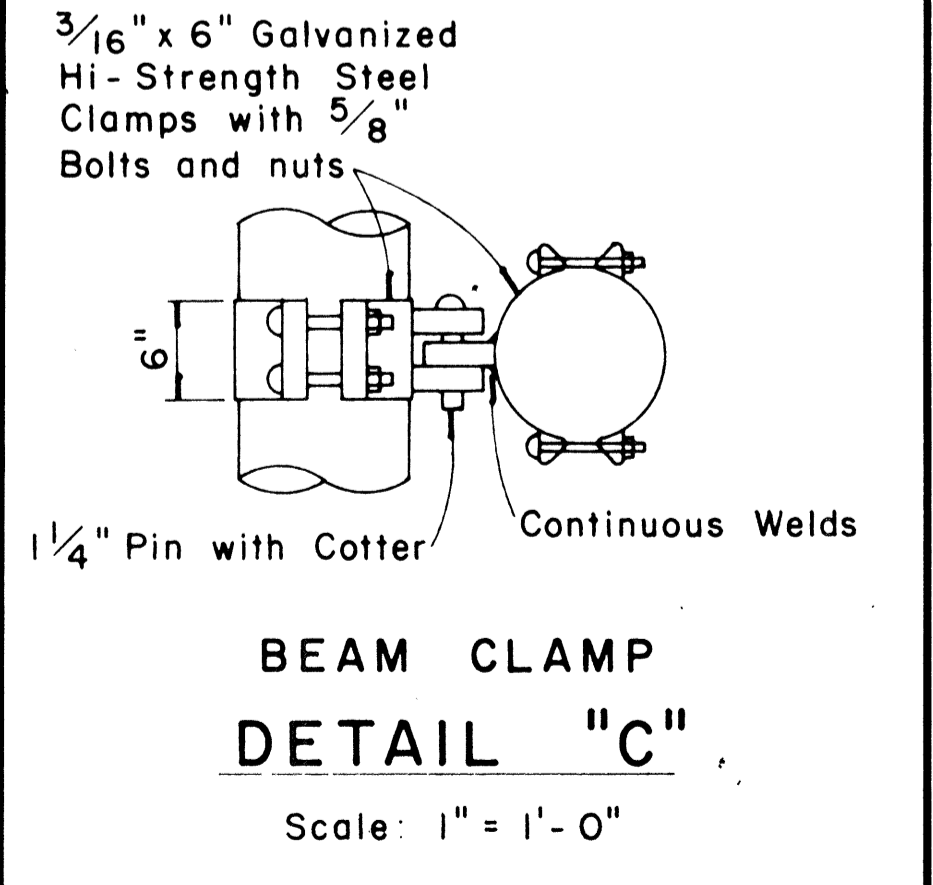
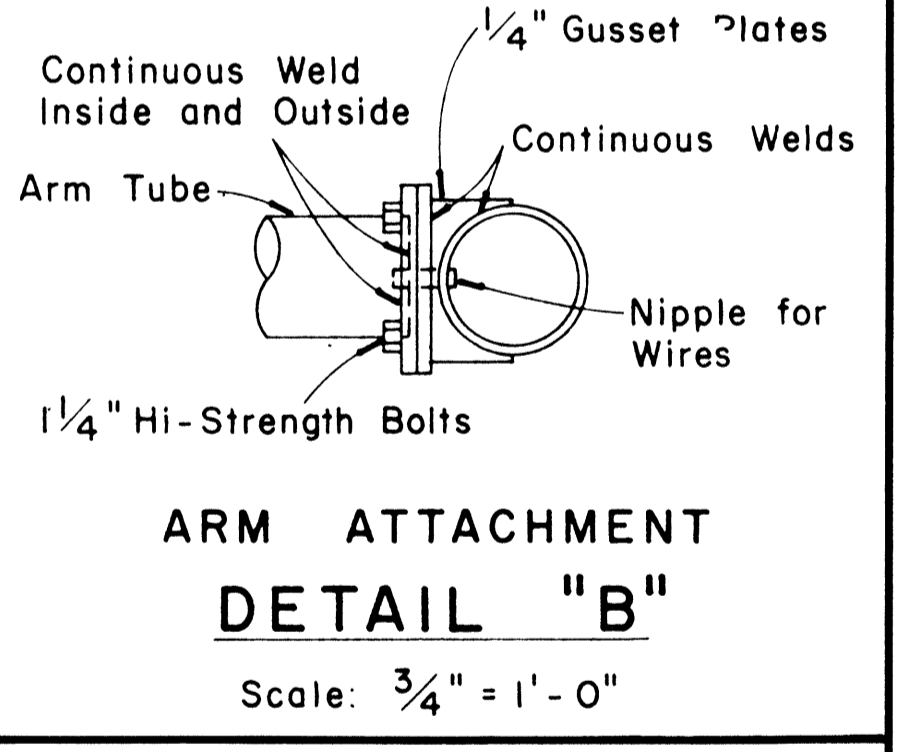
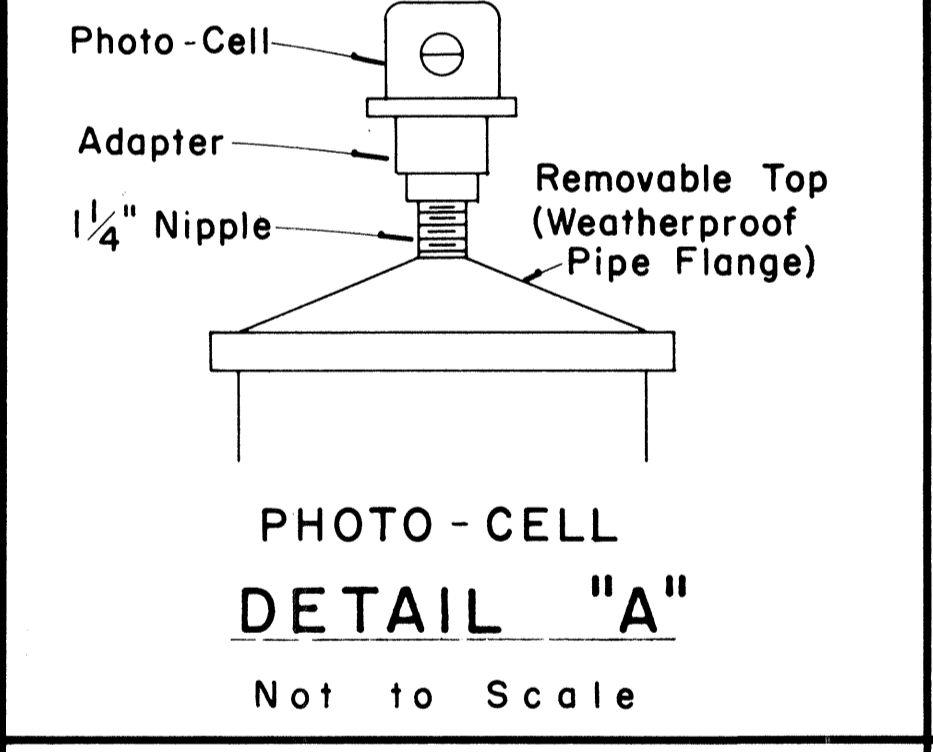
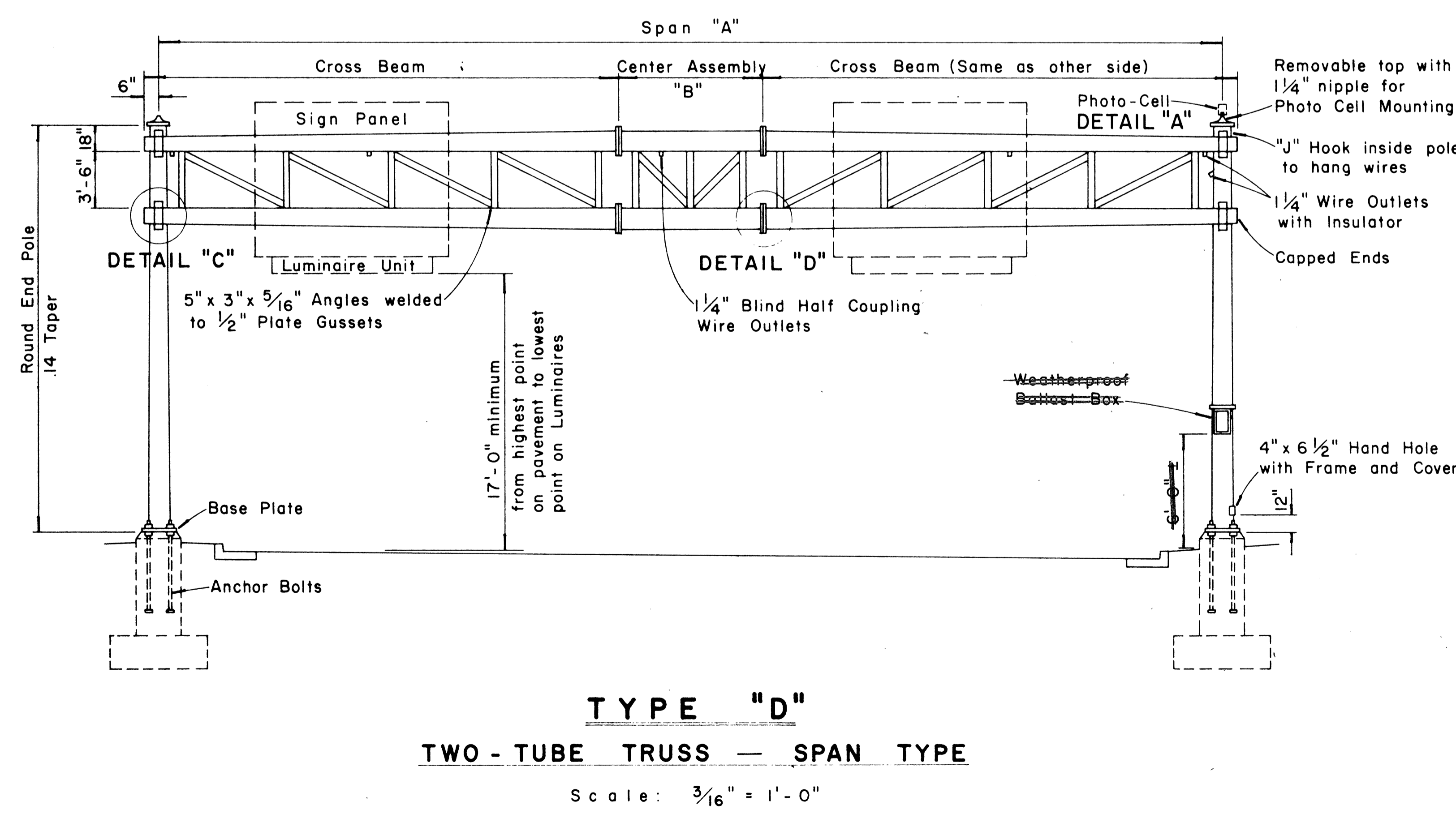
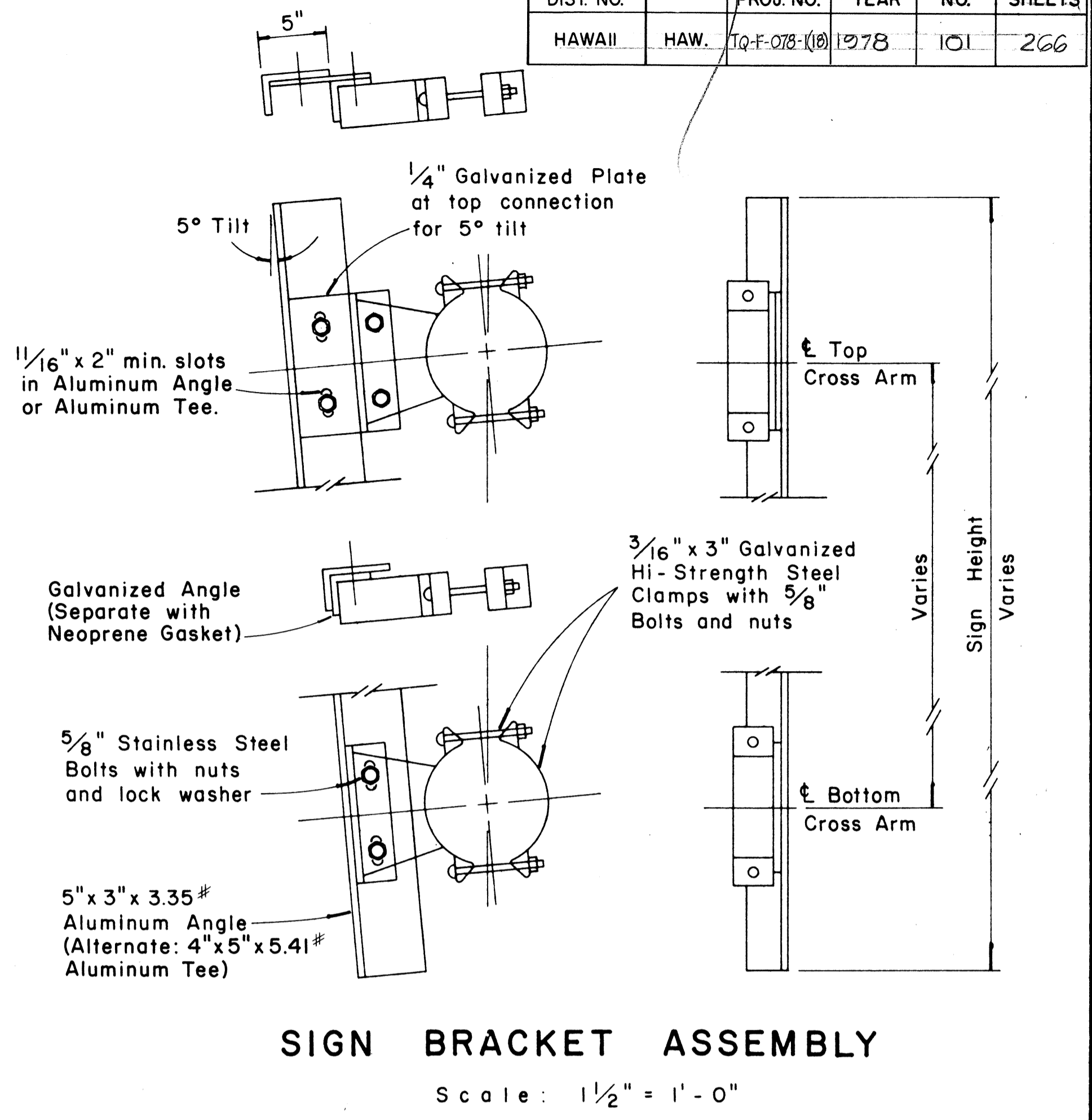
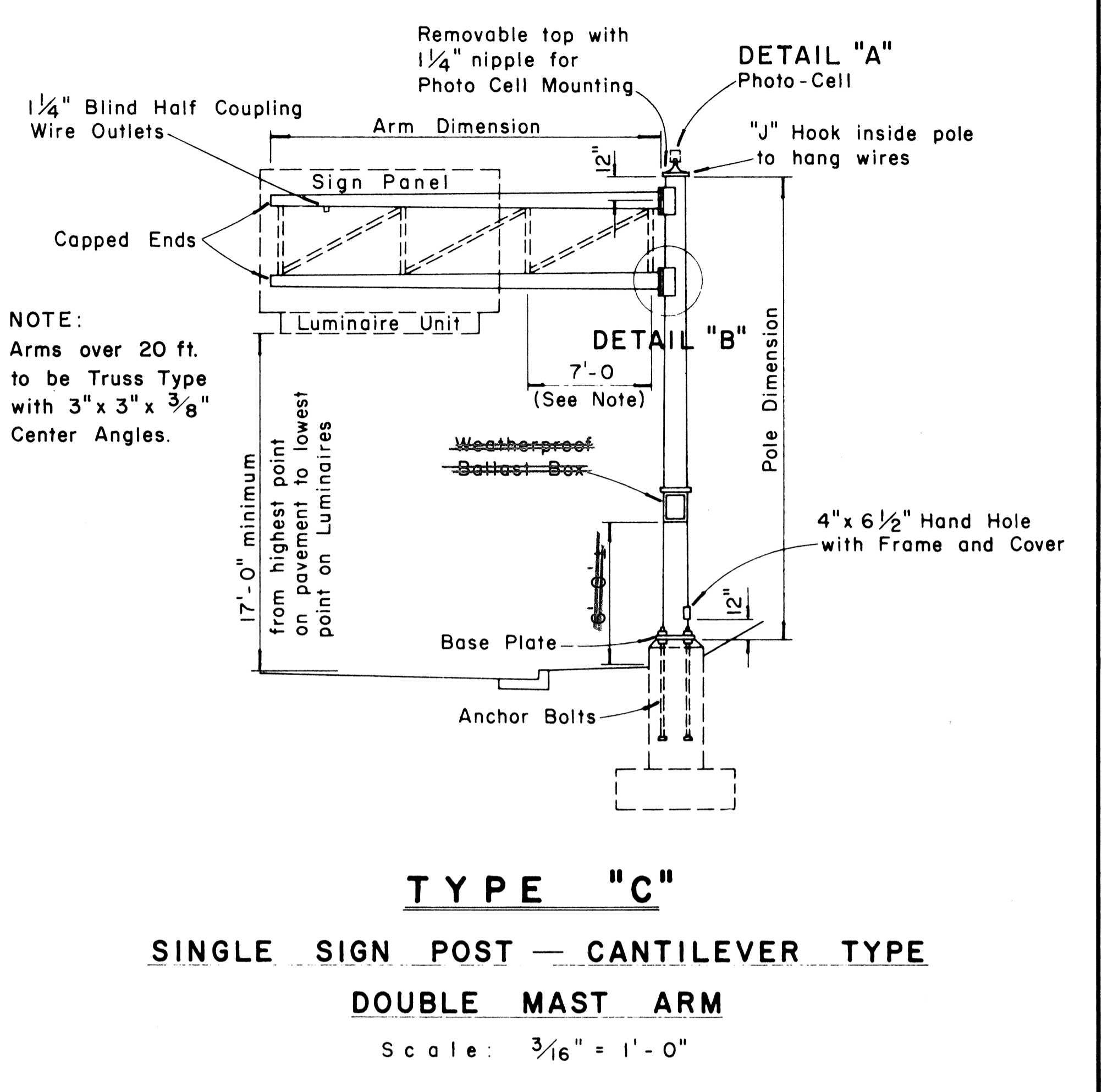
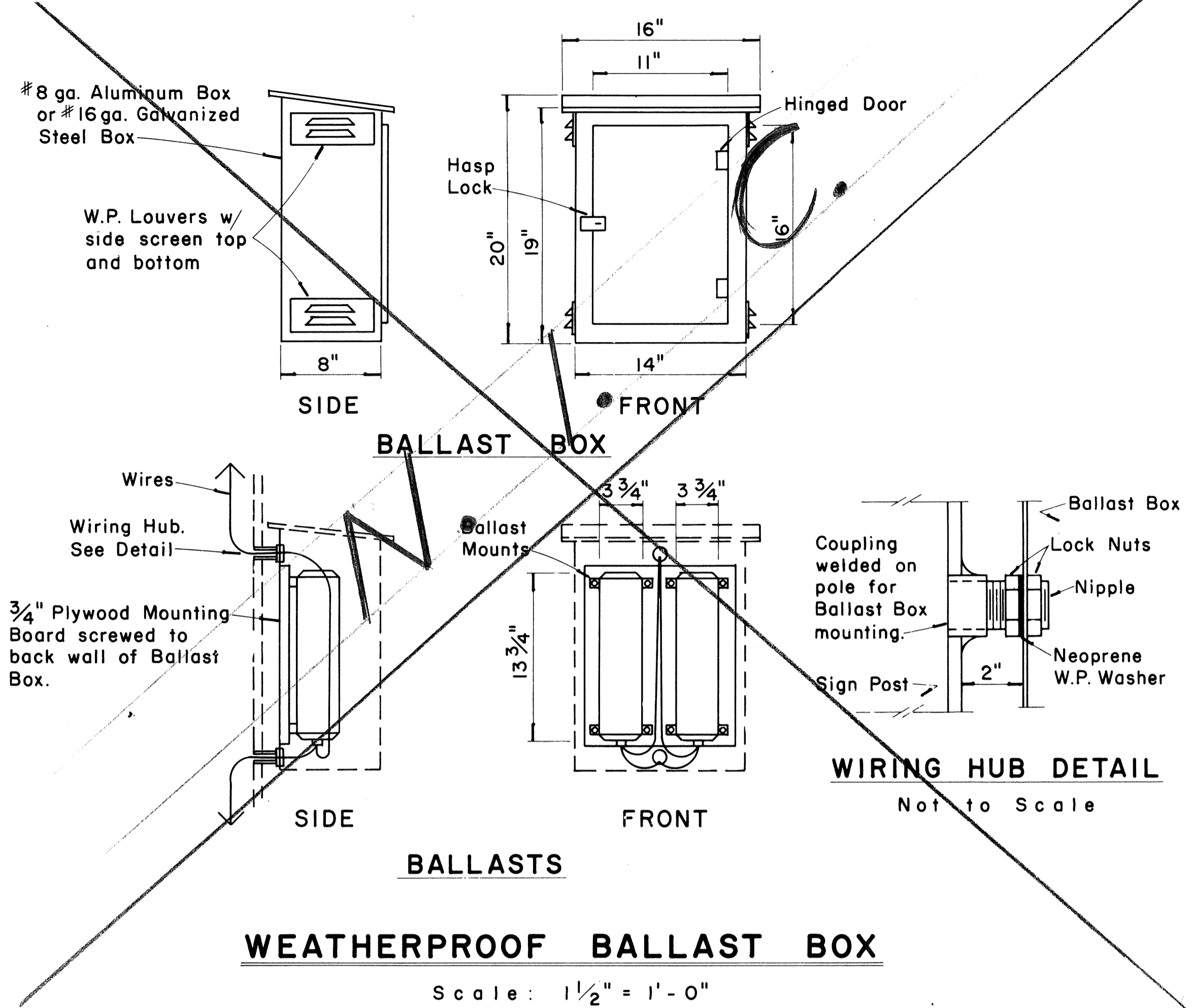
BIKE ROUTE SIGN
& SUPPLEMENTARY PLATES

Scale: As Shown

June 1977

SHEET NO. 14 OF 27 SHEETS DT 114

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(10)	1978	101	266



APPROVAL RECOMMENDED:
Eichi Tanaka 12/27/69
TRAFFIC ENGINEER DATE

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

NO.	REVISION	APPROVED BY	DATE

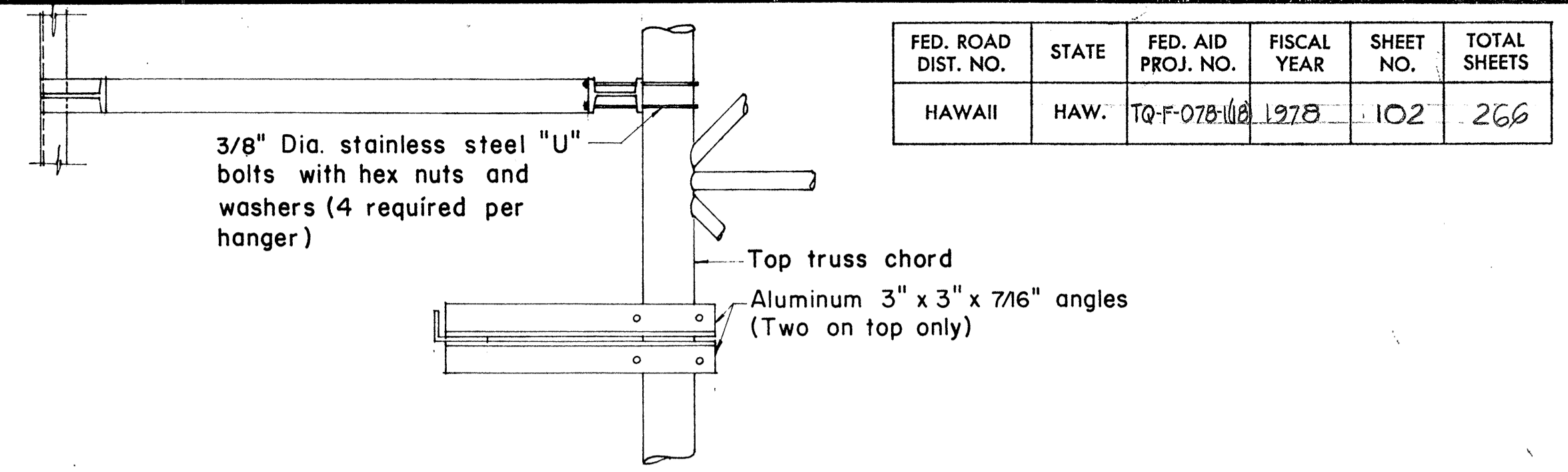
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
OVERHEAD SIGN SUPPORTS

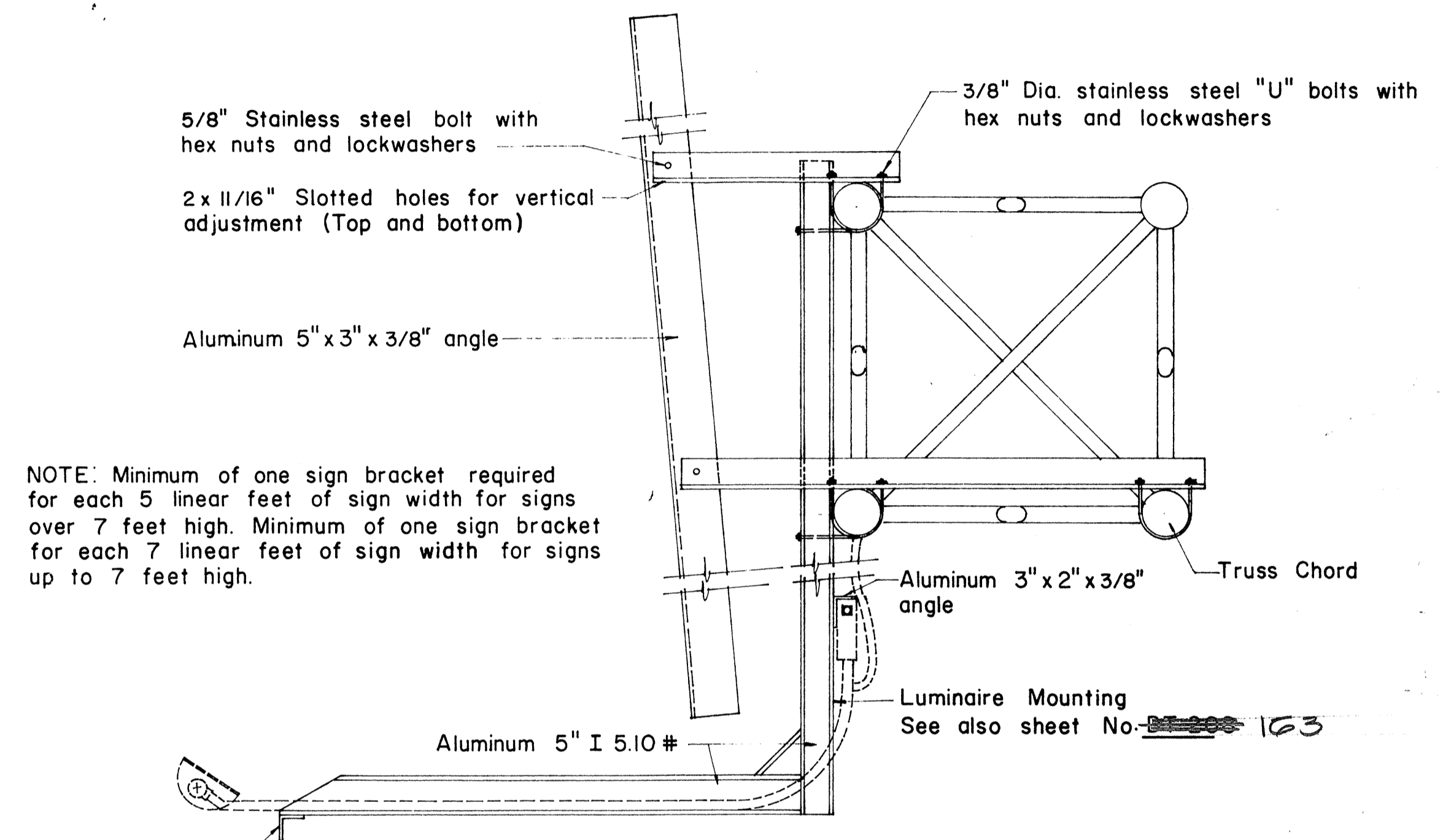
Scale: As Shown
SHEET No. 15 OF 27 SHEETS DT 200

DATE	
SURVEY PLOTTED BY	
DRAWN 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.	TQ-F-078-102	1978	102	266



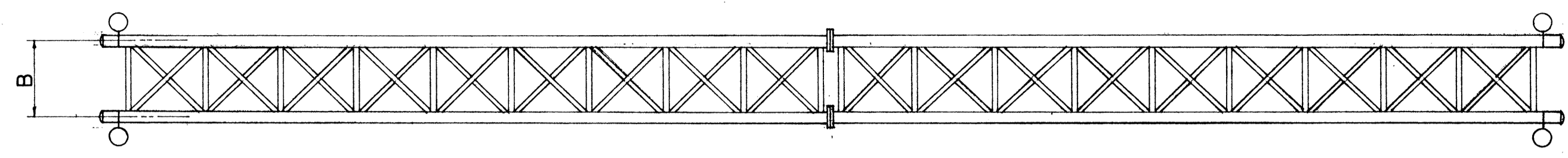
PLAN



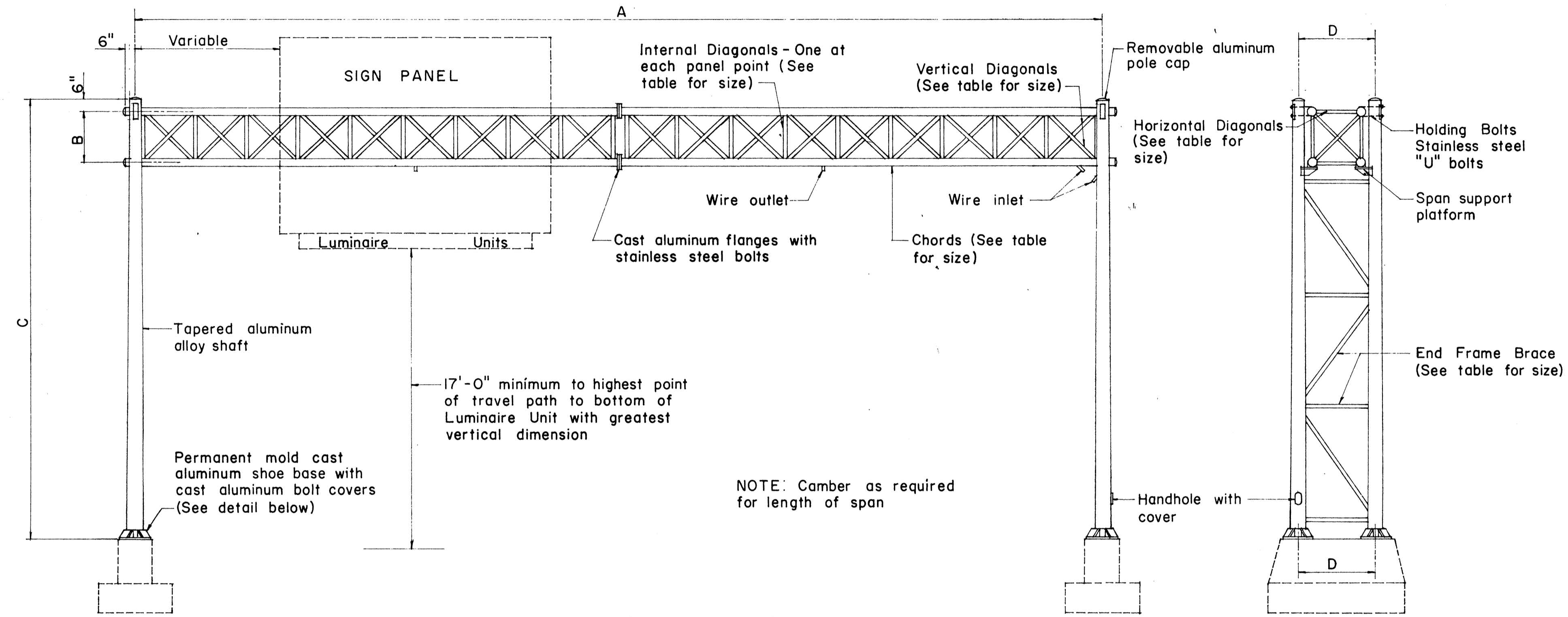
ELEVATION

SIGN BRACKET ASSEMBLY

NOTE: Minimum of one sign bracket required for each 5 linear feet of sign width for signs over 7 feet high. Minimum of one sign bracket for each 7 linear feet of sign width for signs up to 7 feet high.



PLAN



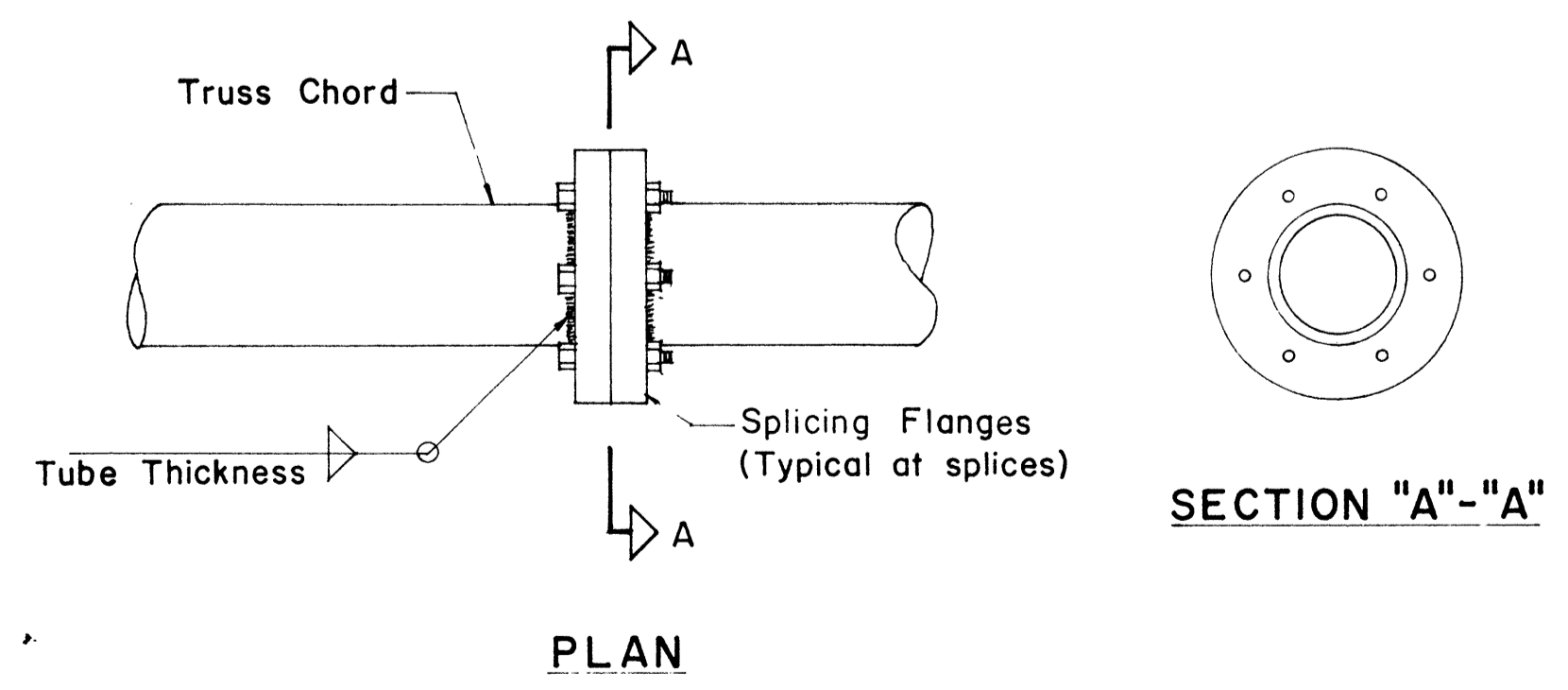
ELEVATION

END VIEW

TYPE "F"

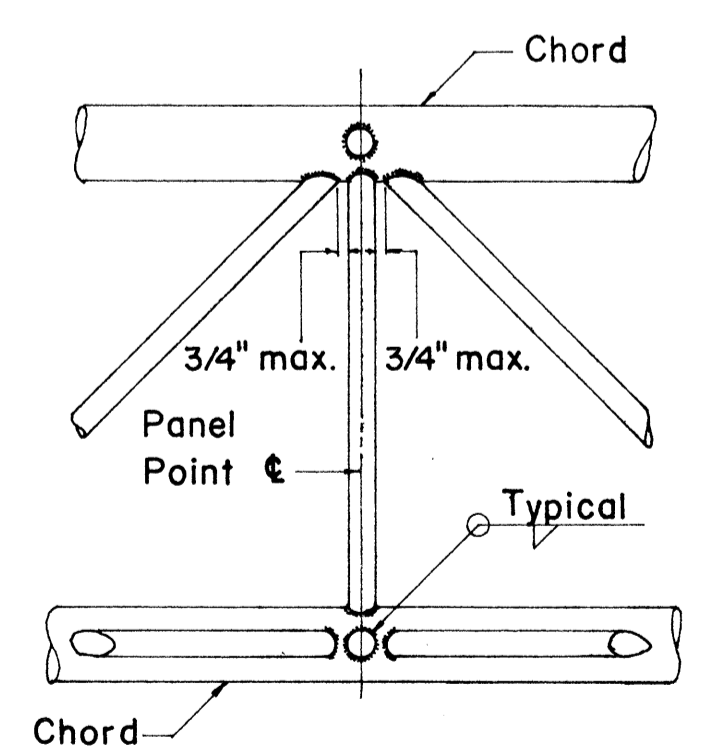
NOTE: Camber as required for length of span

SIGN NO.	A	B	C	D	E	F	SPAN SECTIONS REQ'D.	CHORD SIZE	END FRAME SHAFT SIZE AND TAPER	VERTICAL DIAGONAL SIZE	HORIZONTAL DIAGONAL SIZE	INTERNAL DIAGONAL SIZE	END FRAME BRACE SIZE	BOLT CIRCLE DIA.	ANCHORAGE



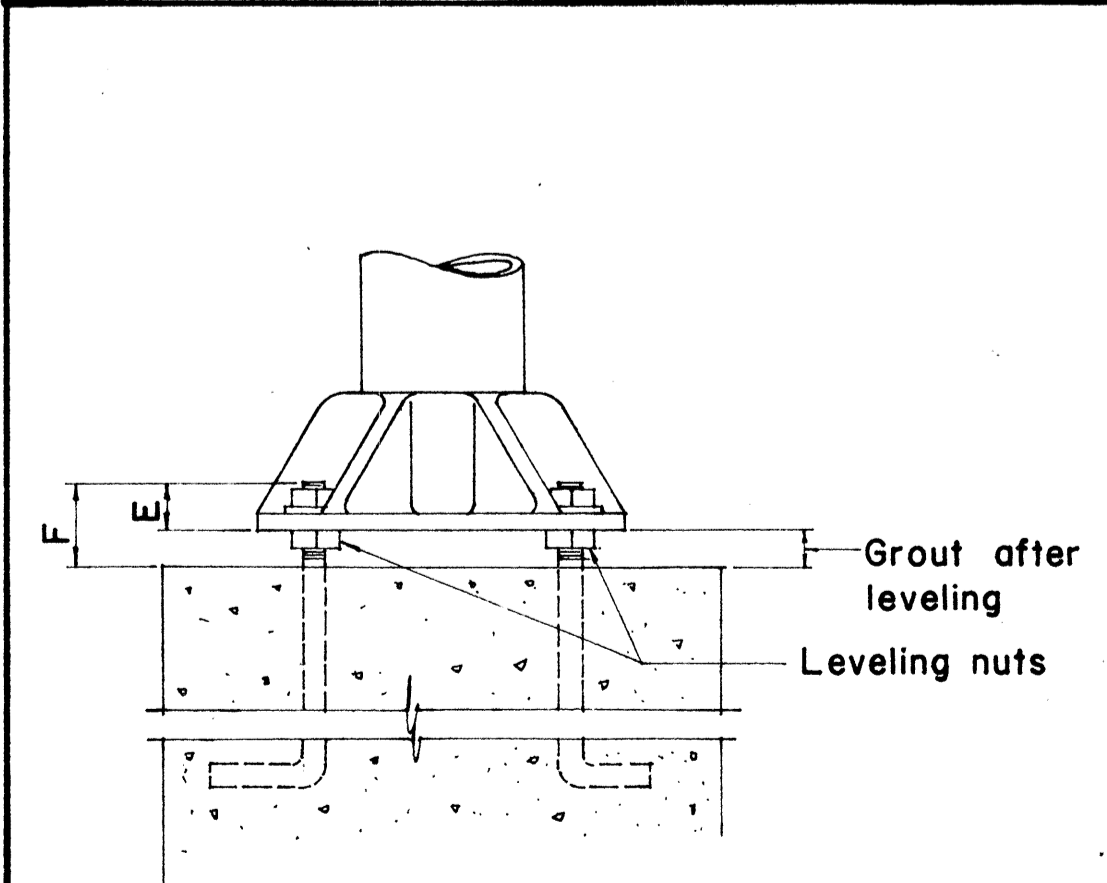
PLAN

DETAIL OF CHORD SPLICES



NOTE: Fillet weld size to be tube thickness plus 1/16".

TYPICAL JOINT DET.



DETAIL OF BASE

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

APPROVED:
Alan J. ...
 ASSISTANT CHIEF, ENGINEERING 12-30-69
 DATE

NO.	REVISION	APPROVED BY	DATE

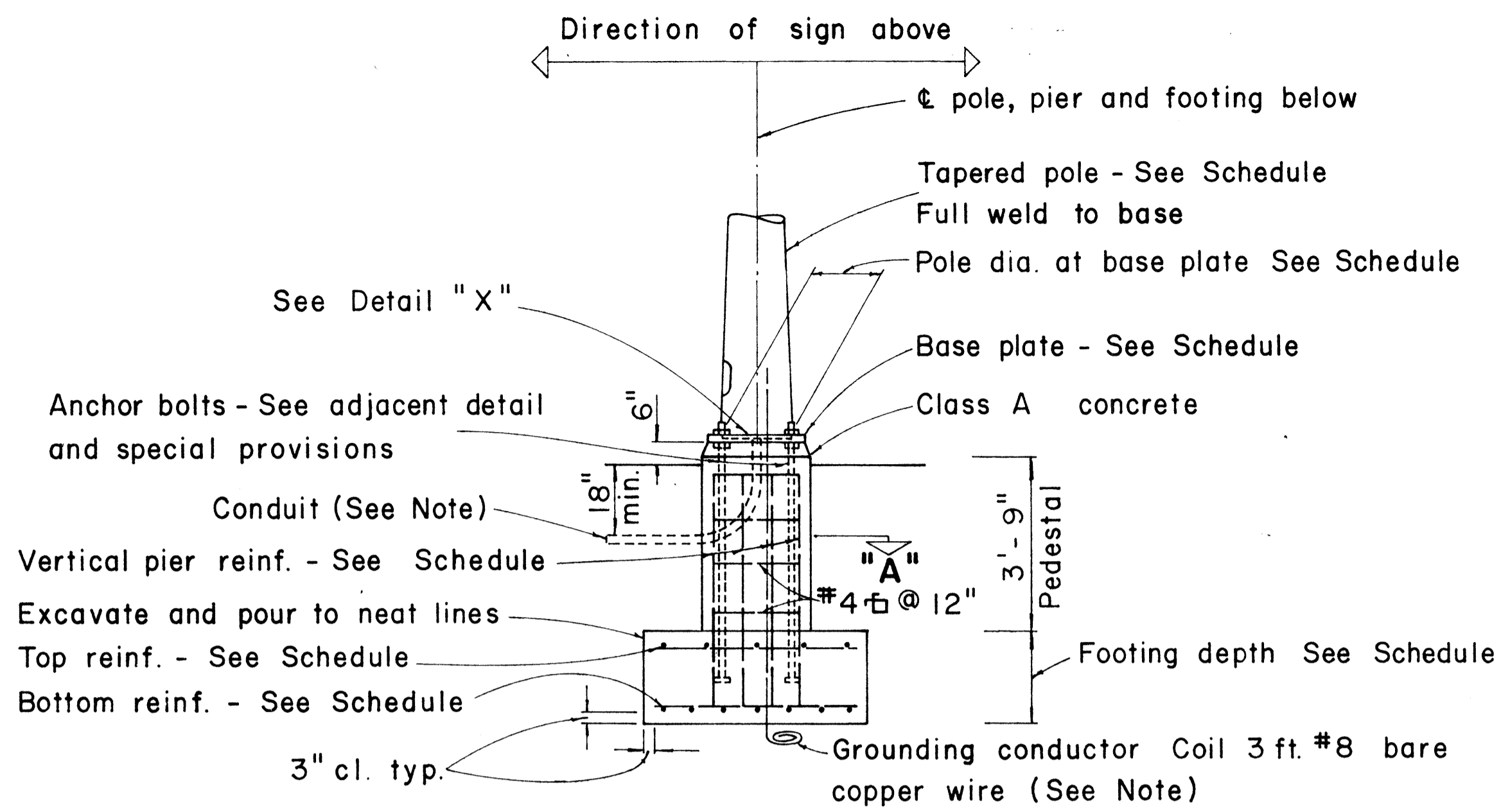
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

TYPE "F"
OVERHEAD SIGN SUPPORT
BOX TRUSS TYPE
ALUMINUM

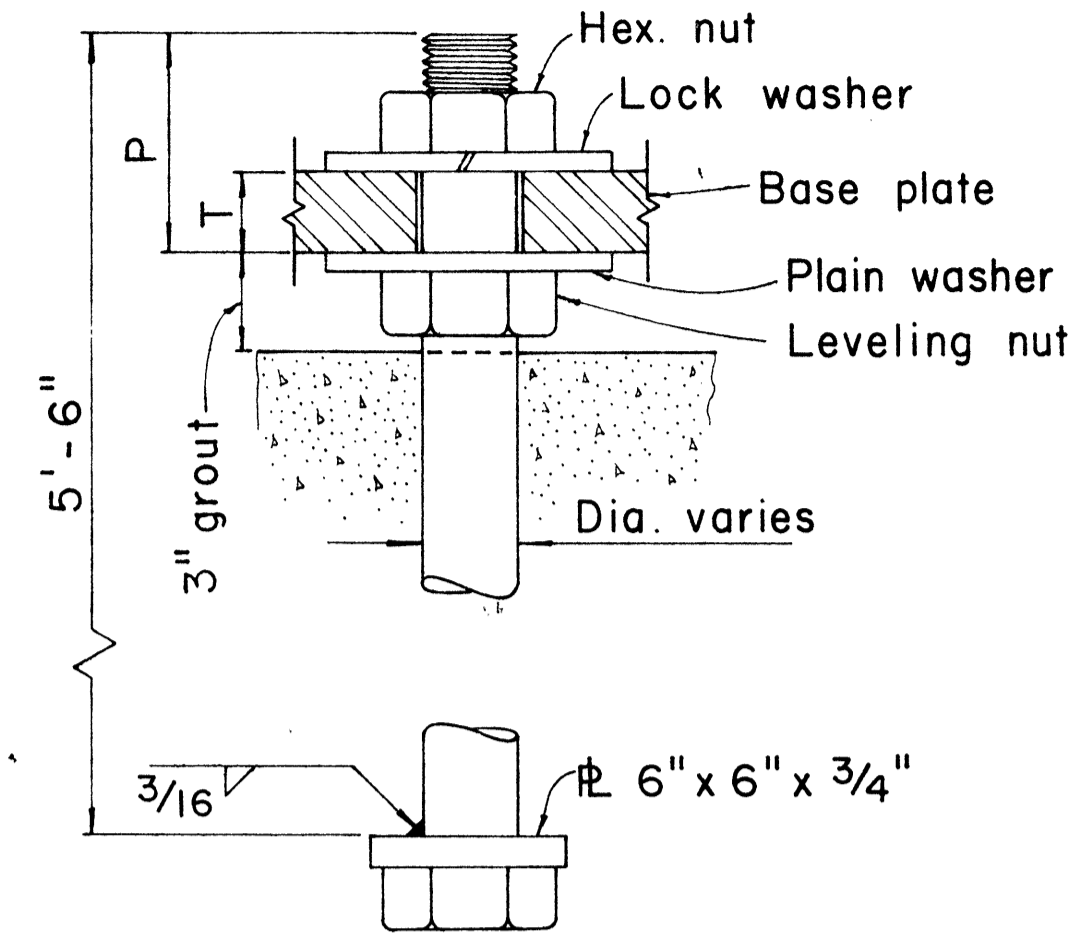
SHEET No. 16 OF 27 SHEETS DT 201

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

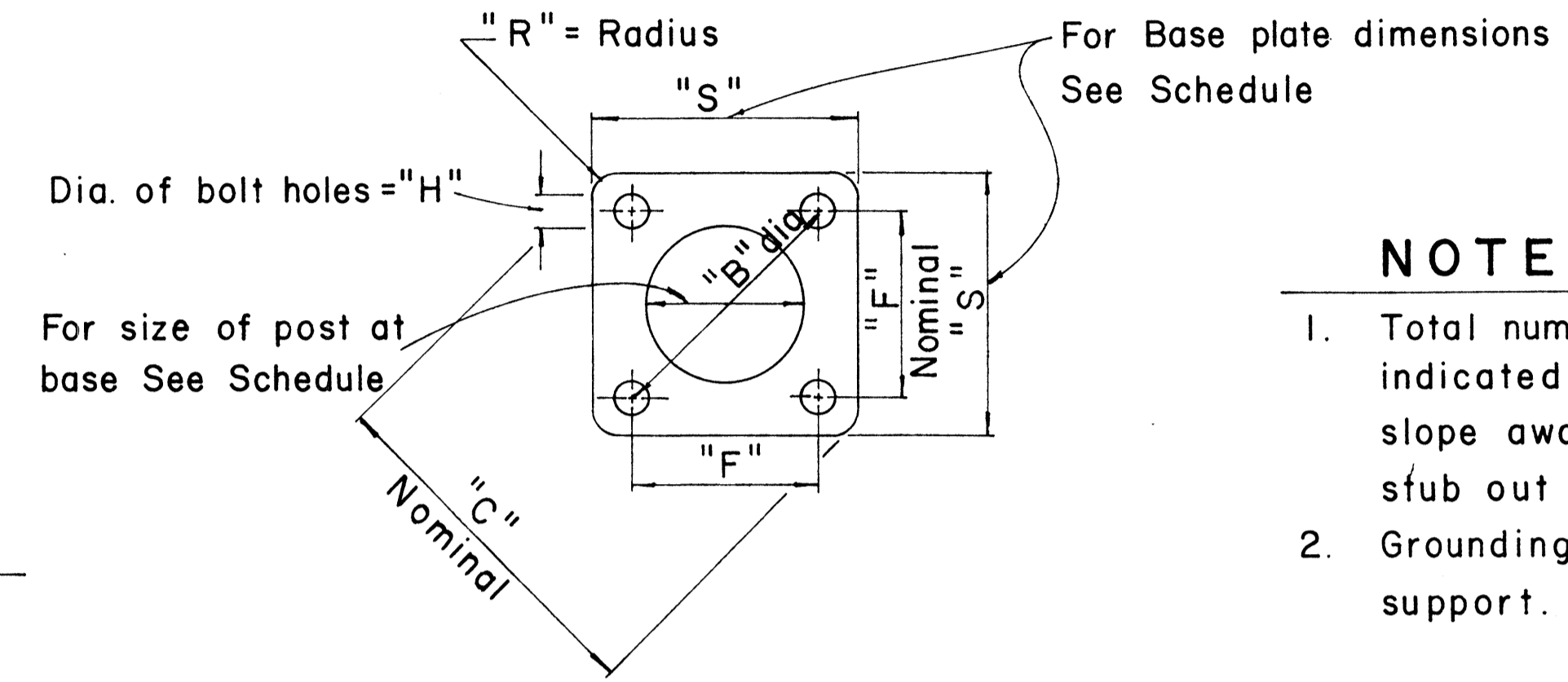
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078(18)	1978	103	266



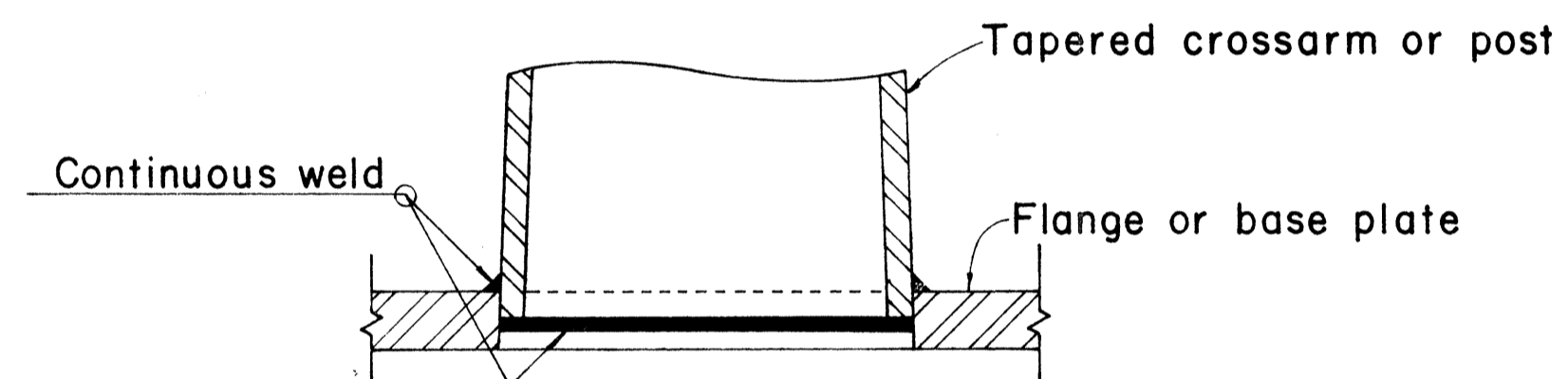
TYPICAL POLE FOUNDATION DETAIL



TYPICAL ANCHOR BOLT 4 REQ'D



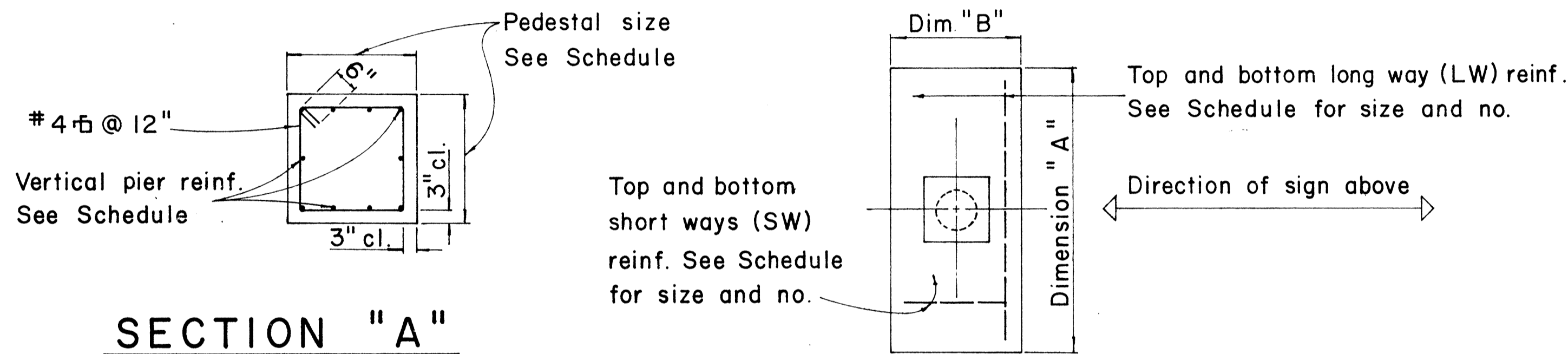
TYPICAL BASE PLATE



DETAIL "X"

NOTE:

- Total number of conduits into pole foundation as indicated on Lighting plans. Conduits shall slope away from pole foundation. Conduit shall stub out 5'-0" min. for direct burial entry.
- Grounding conductor shall be bonded to sign support.



TYPICAL FOOTING DETAIL

SECTION "A"

FOUNDATION SCHEDULE

Type	Dimension		Depth	Bot Reinf.		Top Reinf.		Pedestal	
	A	B		L. W.	S. W.	L. W.	S. W.	Size	Vert. Reinf.
I	7'-0"	3'-0"	2'-0"	3-#6	8-#4	#4 @ 12 each way		1'-11"	10-#5
II	9'-0"	4'-6"	2'-0"	6-#6	10-#4	Do.		2'-6"	10-#7
III	10'-0"	5'-0"	2'-0"	5-#8	11-#4	Do.		2'-6"	10-#8
IV	12'-0"	6'-0"	2'-0"	7-#9	13-#4	Do.		2'-9"	10-#10
V	14'-0"	7'-0"	2'-0"	8-#11	19-#4	Do.		2'-9"	10-#11

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

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

NO.	REVISION	APPROVED BY	DATE
1	Foundation Schedule	H.C.	8/14/70

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

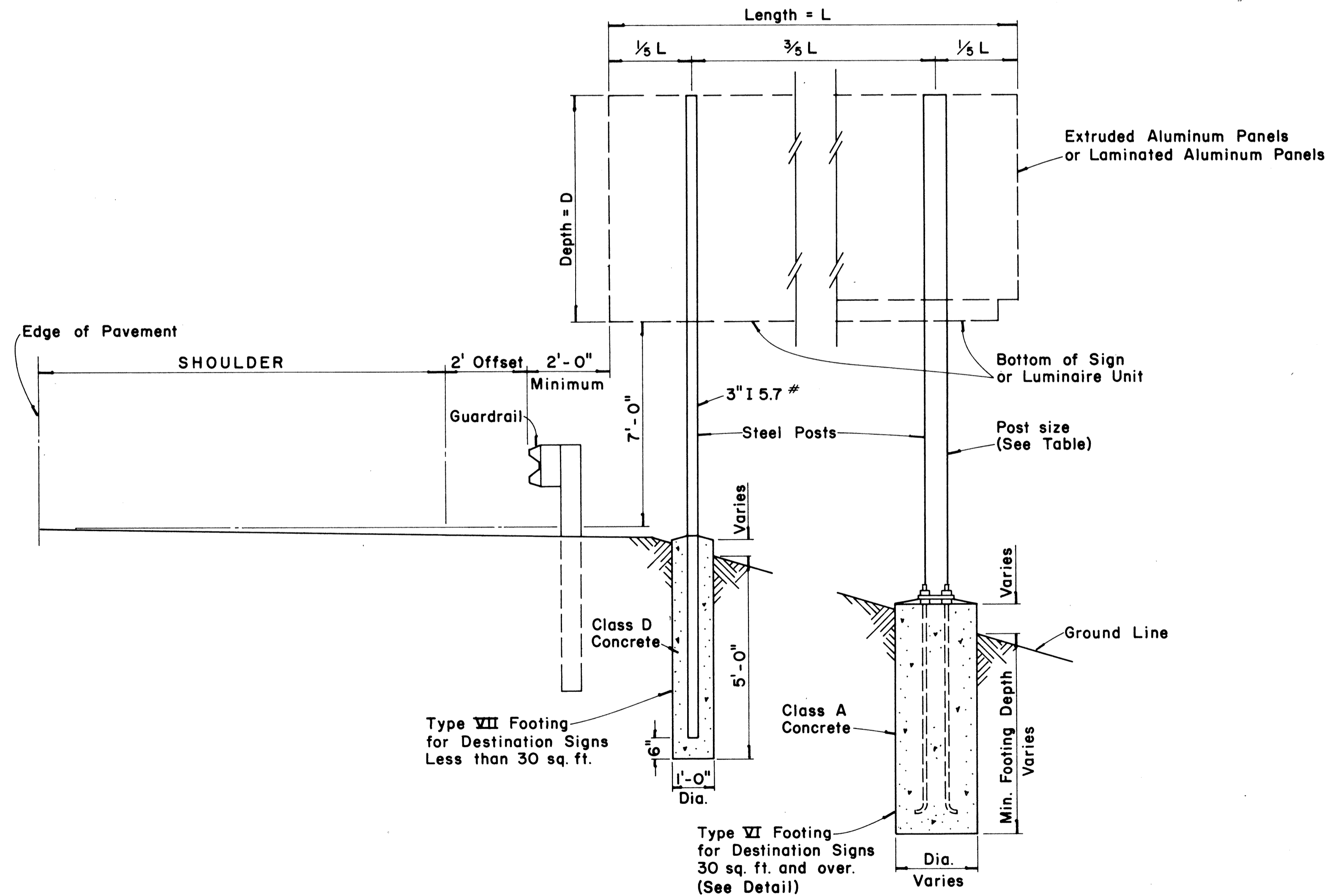
DETAILS & SCHEDULES

NOT TO SCALE

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

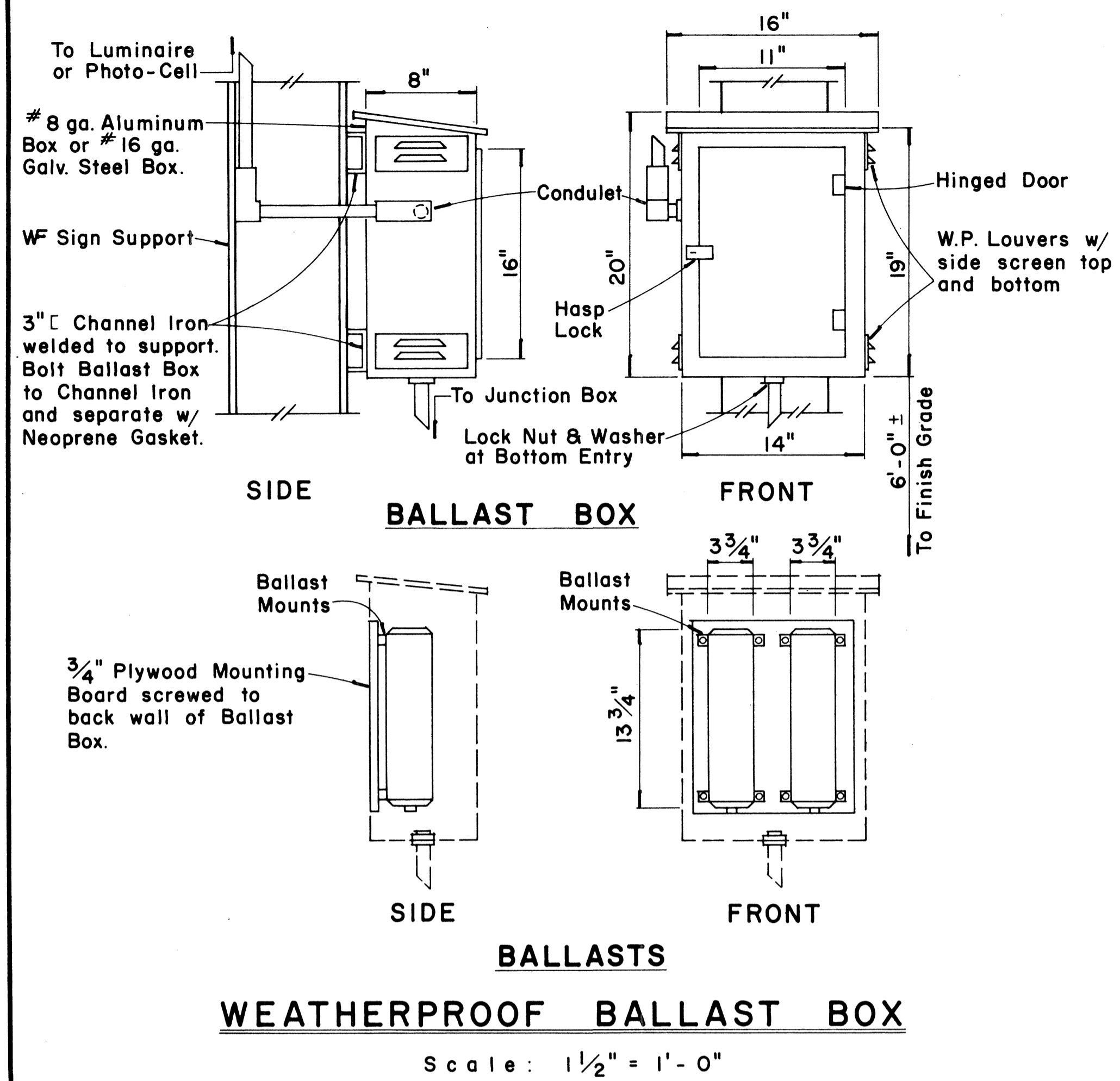
* For moment calculations only. Post shall be from top of foundation to top of sign.
 ** For fills with side slopes flatter than 4:1, Minimum Footing Depth shall be 4½ feet.

POST SIZE	MAXIMUM SIGN AREA	POST HEIGHT TOP OF FOUNDATION TO CENTER OF SIGN *	DIMENSIONS													ANCHOR BOLT DIA.	MINIMUM FOOTING DEPTH	
			H	J	K	M	N	O	P	S	T	U	V	W	CUT		FILL**	
8 J10	50 sq. ft.	14'	14"	5"	24"	17¼"	15⅝"	6"	1¼"	9"	6"	10"	2"	1"	1⅝" ∅	4½'	4½'	
8 WF24	90 sq. ft.	21'															5'	
8 WF35	190 sq. ft.	15'	16½"	6¾"	30"	20"	1¾"	6"	1⅜"	11¾"	6½"	10"	1¾"	1"	1¼" ∅	6'	7'	
10 WF45	190 sq. ft.	25'																
10 WF45	200 sq. ft.	25'																
12 WF50	230 sq. ft.	25'																
12 WF50	250 sq. ft.	23'																



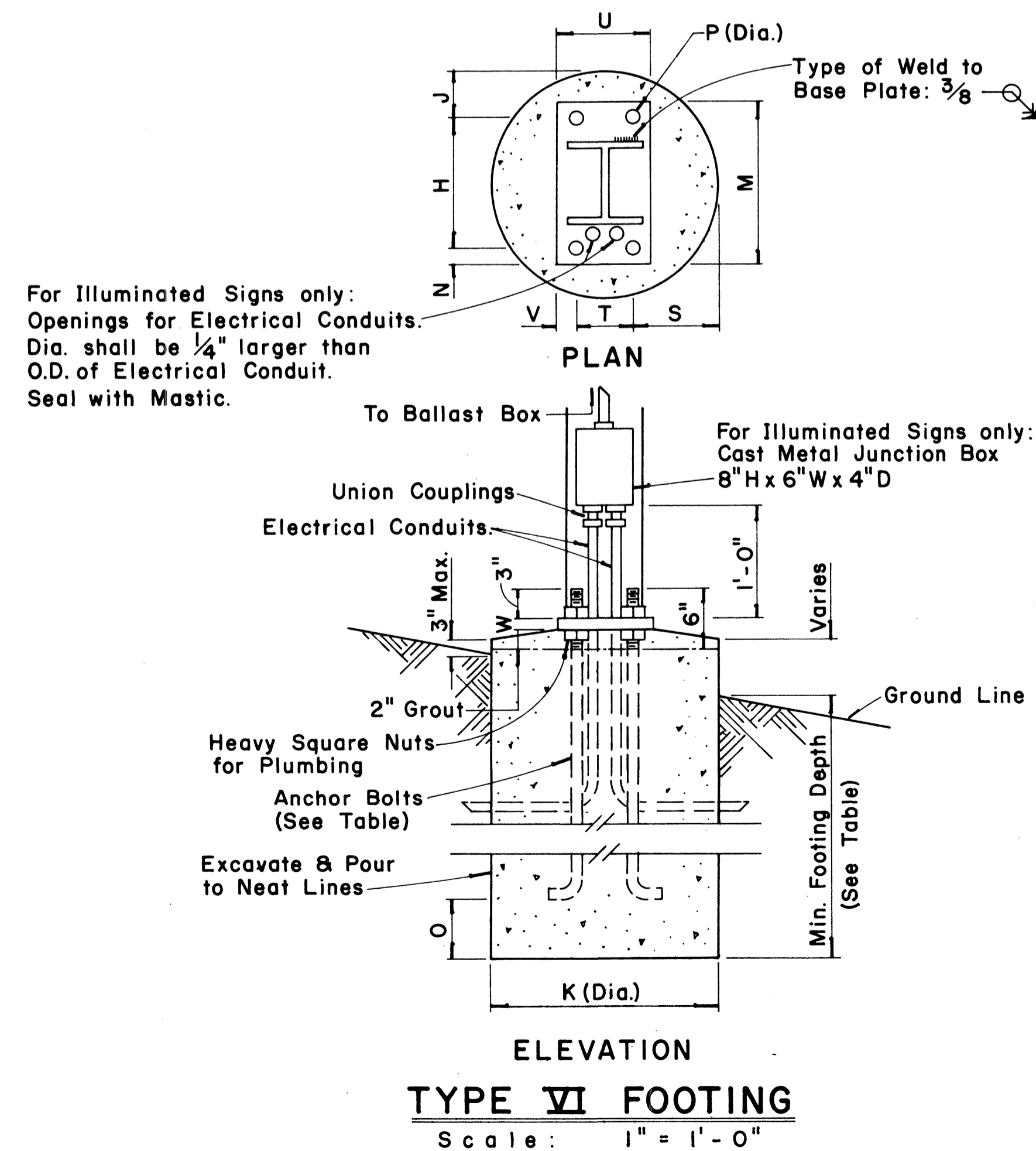
TYPICAL DESTINATION & GROUND MOUNTED EXPRESSWAY SIGN

Not to Scale



WEATHERPROOF BALLAST BOX

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



TYPE VI FOOTING

Scale: 1" = 1'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	10-F-078(10)	1978	104	266

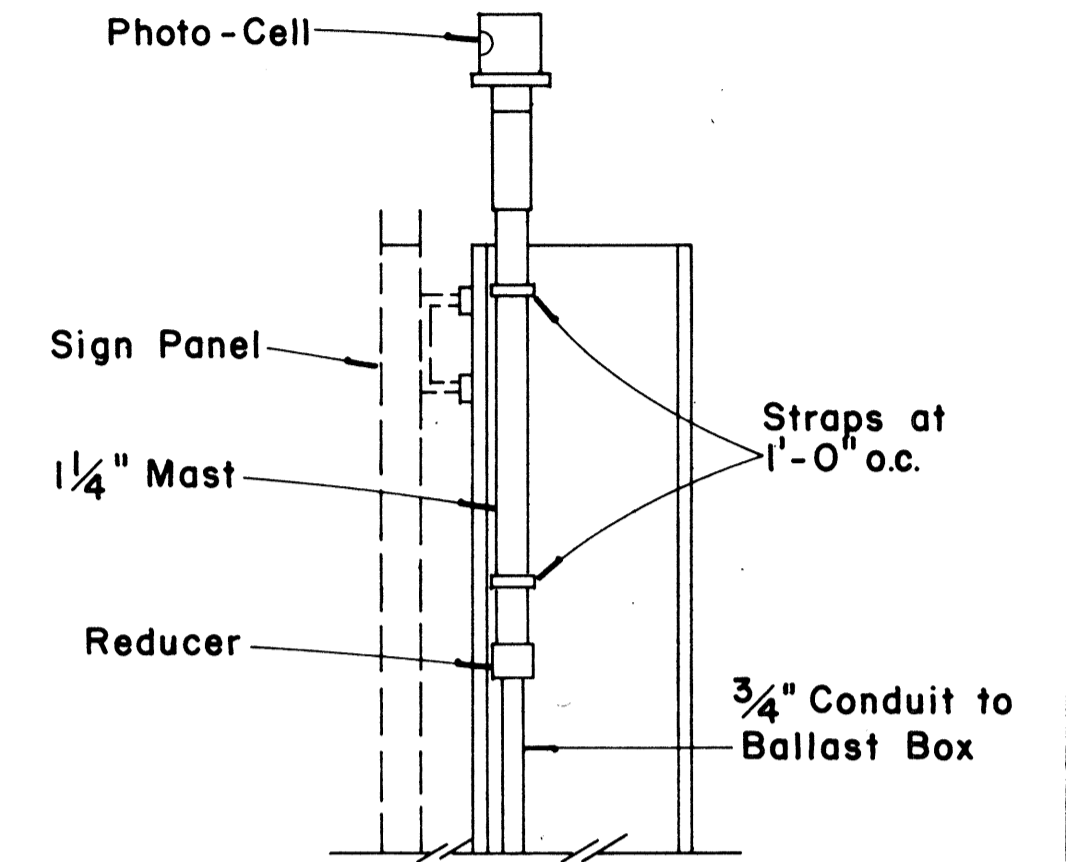


PHOTO-CELL DETAIL

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

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

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

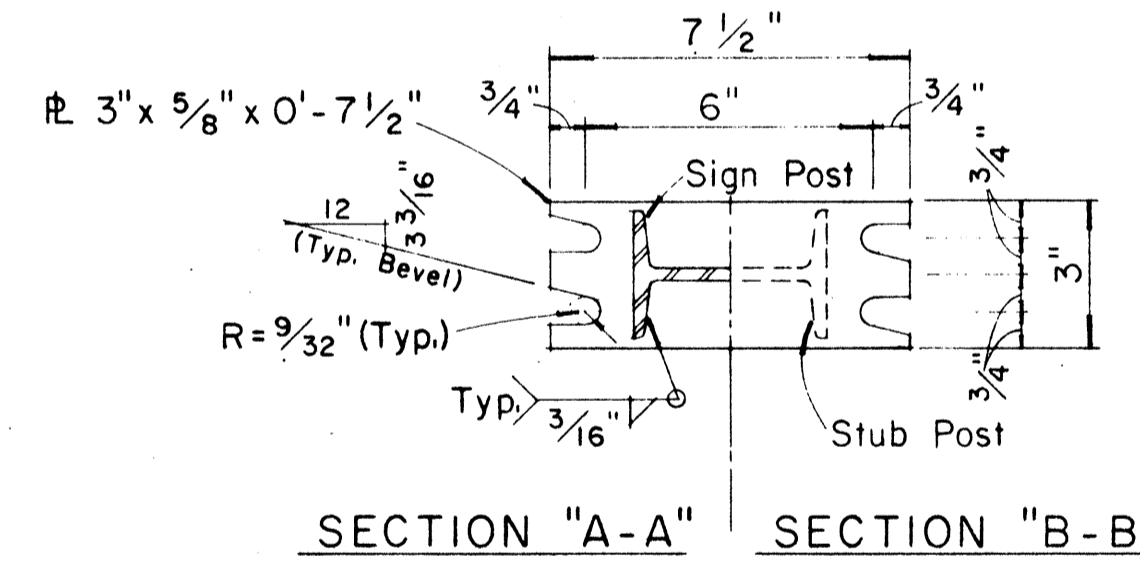
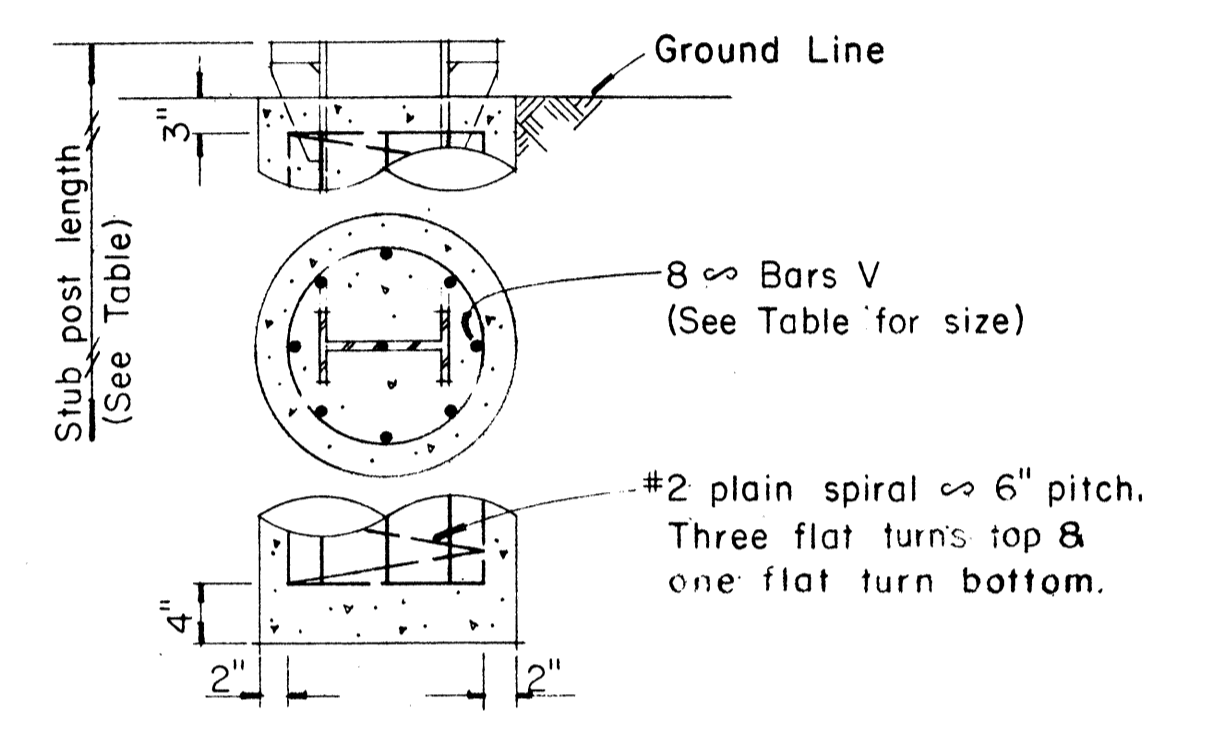
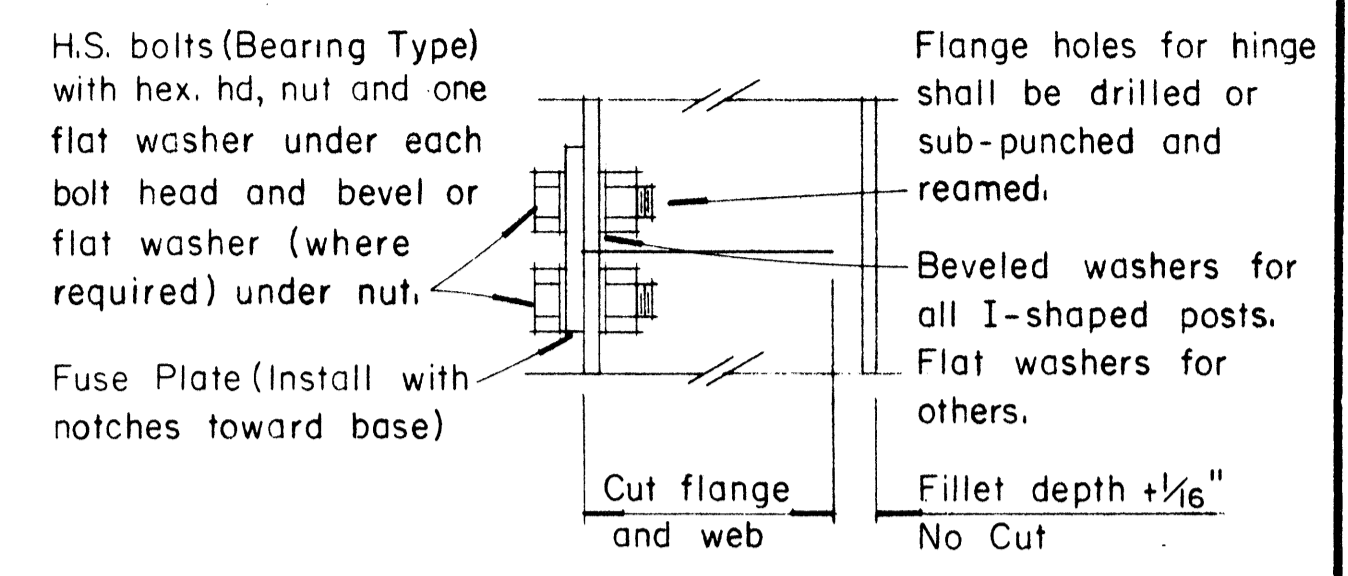
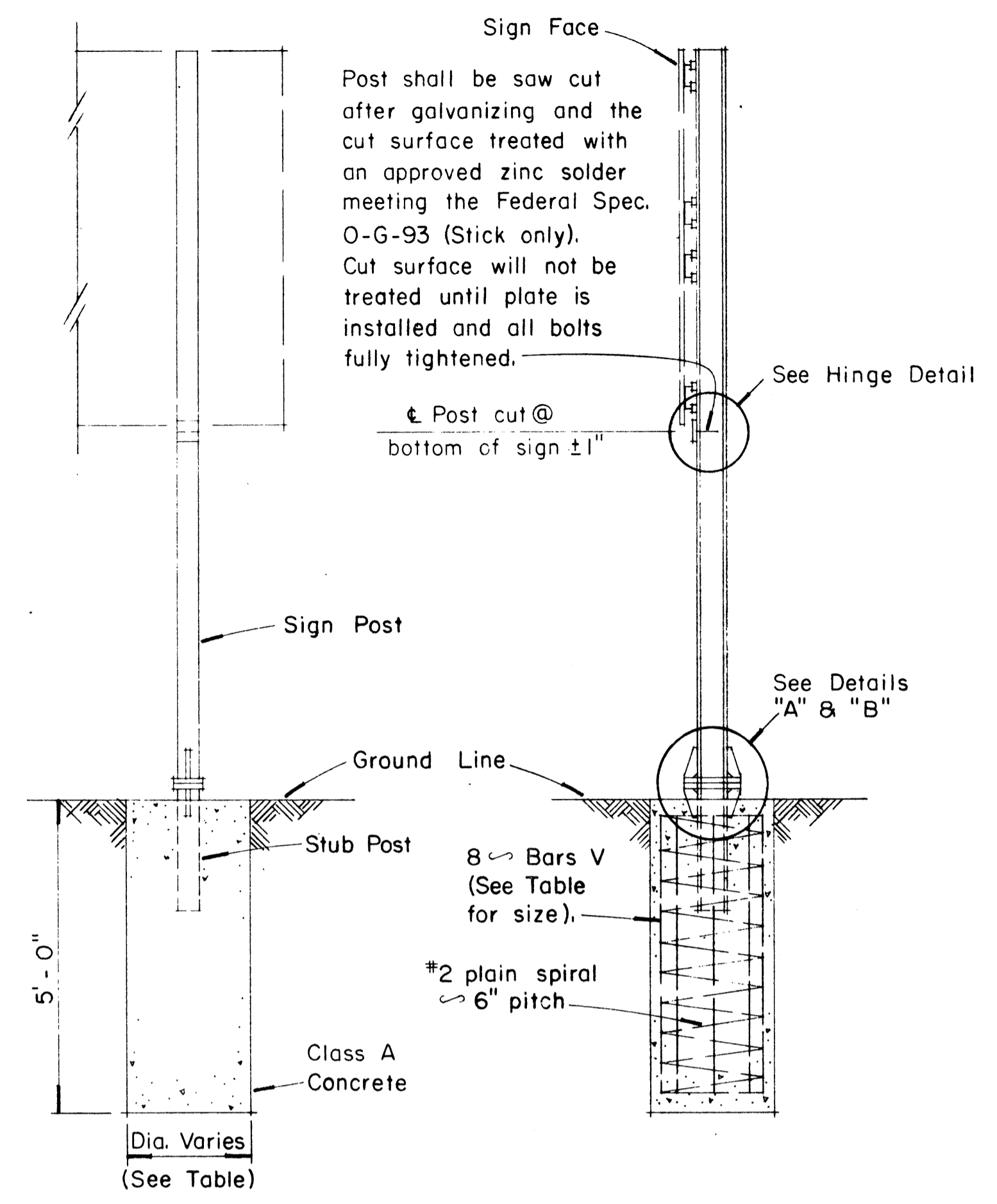
NO.	REVISION	APPROVED BY	DATE

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

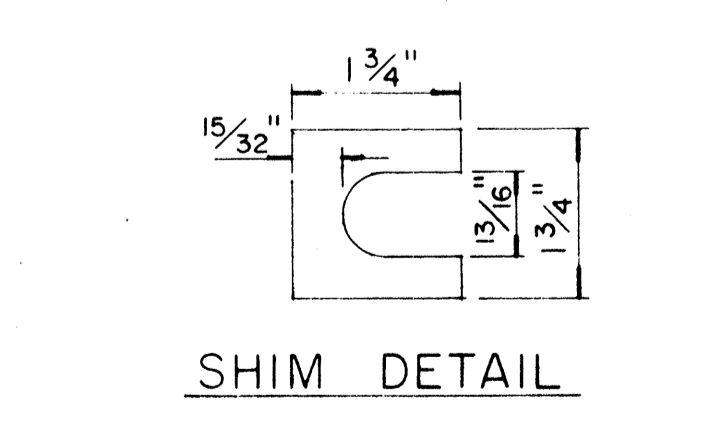
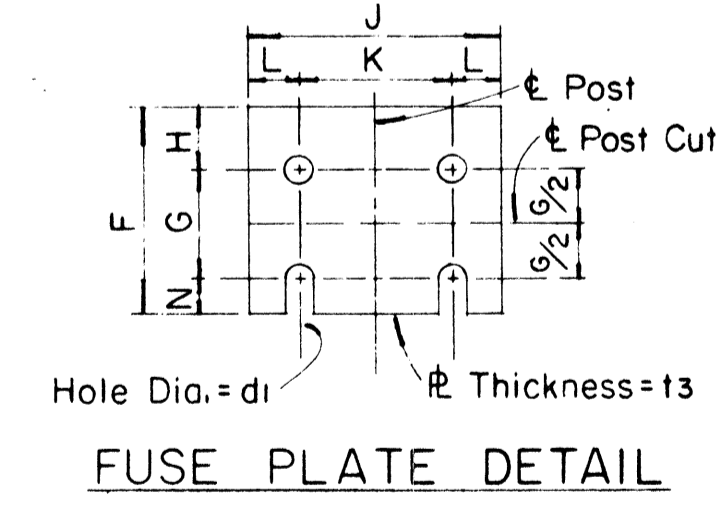
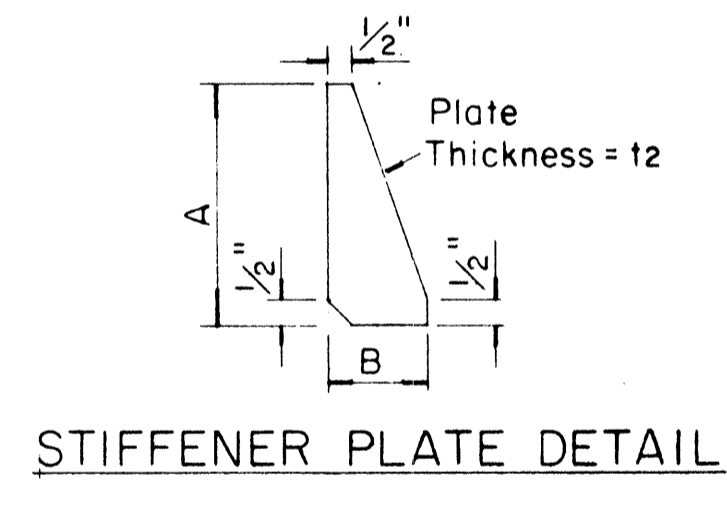
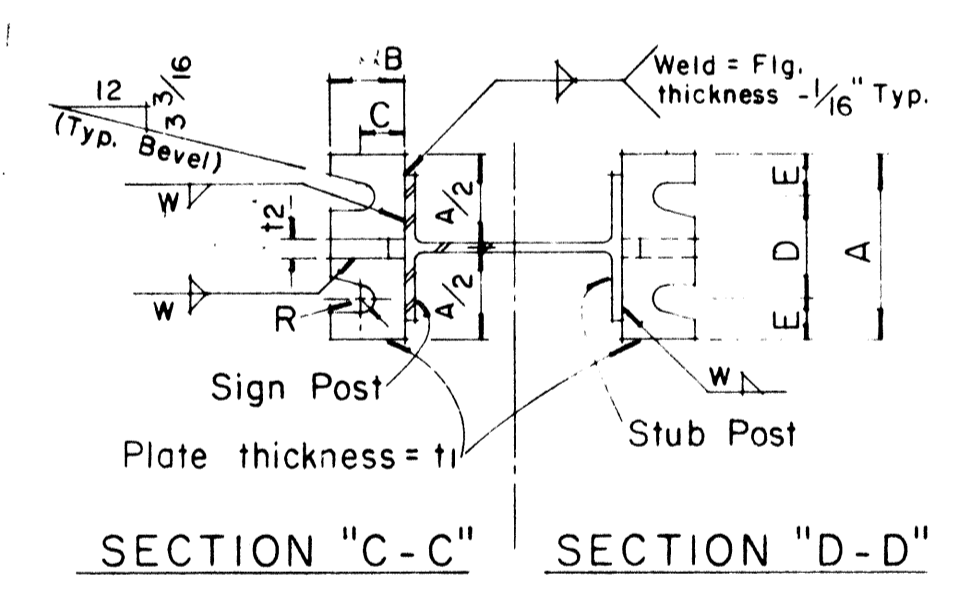
Scale: As Shown
 SHEET No. 10 OF 27 SHEETS DT 203

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(10)	1978	105	266

Post Size	BASE CONNECTION DATA TABLE										FUSE PLATE DATA TABLE										FOUNDATION DATA				
	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 lb	Stub Length	Stub Projection	Footing Diameter	Bars V Size
6 B 8.5	5/8" ϕ x 2 3/4" Torque = 450*#	5"	2"	1 1/4"	2 3/4"	1 1/8"	3/4"	1/2"	1/4"	1 1/32"	3 5/8"	2"	1 1/8"	4"	2 1/4"	7/8"	1/2"	9/16"	1/4"	1/2" ϕ	1.09*	2'-0"	3"	2'-0"	#5
6 B 12											3 3/4"	2"	1 1/8"	4"	2 1/4"	7/8"	5/8"	1 1/16"	3/8"	5/8" ϕ	1.60*	2'-0"	3"	2'-0"	#5
6 B 15.5											4 1/2"	2 1/2"	1 1/4"	6"	3 1/2"	1 1/4"	3/4"	1 3/16"	1/2"	3/4" ϕ	3.75*	2'-6"	3"	2'-0"	#6
8 WF 17											4 1/2"	2 1/2"	1 1/4"	5 1/4"	2 3/4"	1 1/4"	3/4"	1 3/16"	1/2"	3/4" ϕ	3.27*	2'-6"	3"	2'-0"	#7
8 WF 20	3/4" ϕ x 3 1/2" Torque = 750*#	6"	2 1/4"	1 3/8"	3 1/2"	1 1/4"	1"	3/4"	5/16"	1 3/32"	4 7/8"	2 1/2"	1 1/2"	5 1/4"	2 3/4"	1 1/4"	7/8"	15/16"	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"	15/16"	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"	15/16"	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"	15/16"	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 3/8"	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 3/8"	1 1/2"	1 1/8"	2 5/8"	1 1/2"	9/16"	1/2"	9/16"	1/4"	1/2" ϕ	0.64*	1'-6"	3 1/2"	1'-6"	#5									



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



GENERAL NOTES

- Design 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.

Furnish 2 \times .012" \pm thick and 2 \times .032" \pm thick shims per post. Shims shall be fabricated from brass shim stock or strip conforming to A.S.T.M. - B 36.

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

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

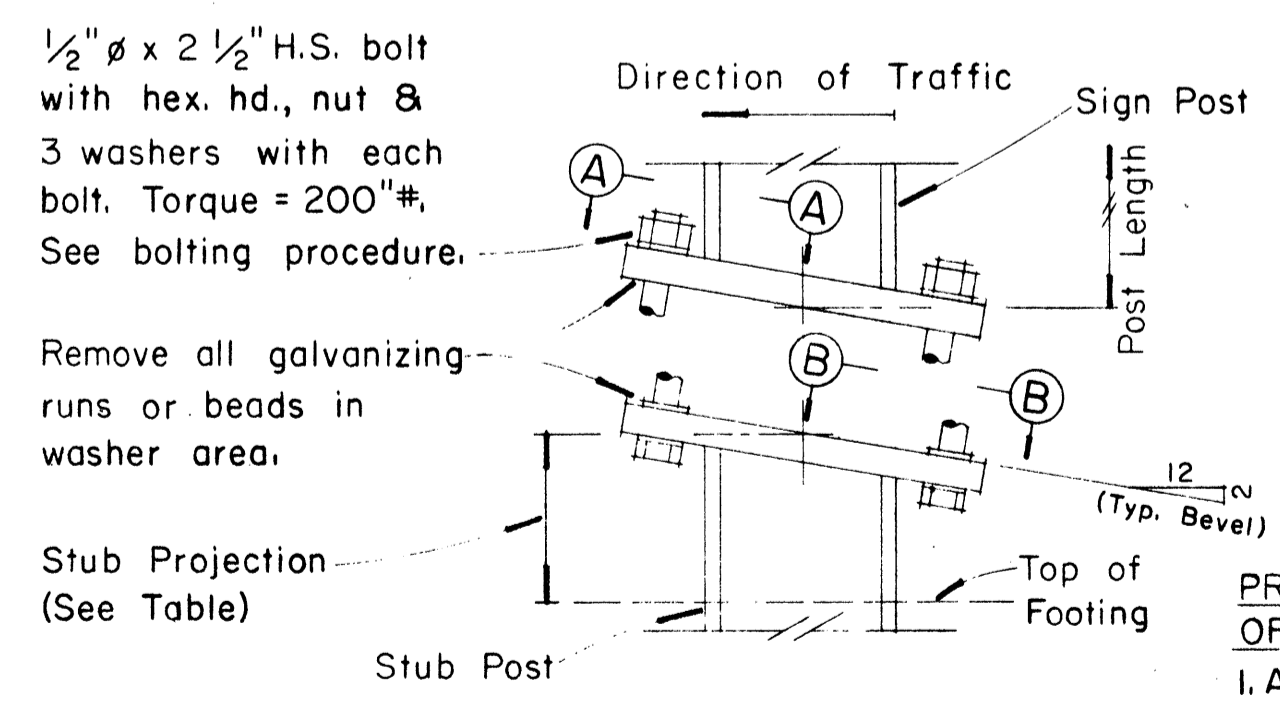
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

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

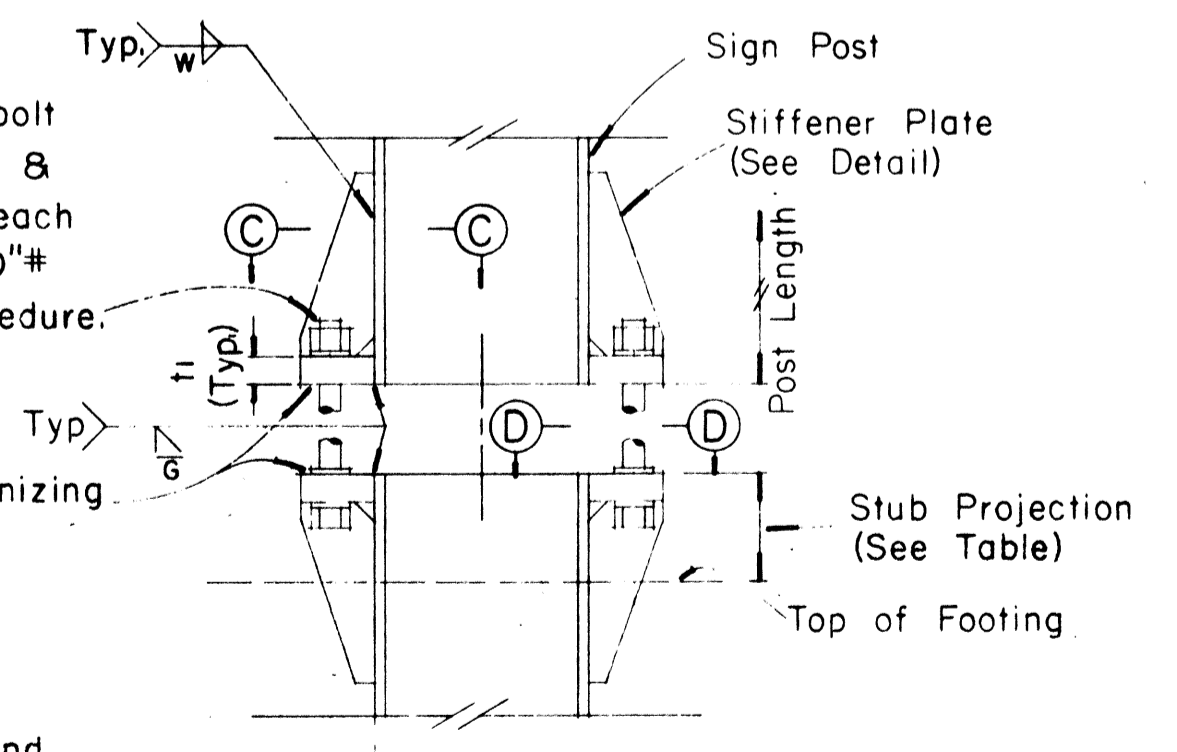
Not to Scale

DATE
DESIGNED BY
CHECKED BY
NO.



DETAIL "A"
SIGN POST & STUB POST
(For 417.7 and 315.7 Shapes)

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



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.	TQ-F-018-1(10)	1978	106	266

(OVERHEAD SIGNS)
SUPPORT SPACING TABLE

PANEL THICK.	LENGTH OF SIGN A	NO. OF SUPPORTS	OVERHANG B	SUPPORT SPACING C or C ₁
1"	6'-0"	2	12"	48"
1"	6'-6"	2	15"	48"
1"	7'-0"	2	15"	54"
1"	7'-6"	2	18"	54"
1"	8'-0"	2	18"	60"
1"	8'-6"	2	20"	62"
1"	9'-0"	2	22"	64"
1"	9'-6"	2	23"	68"
1"	10'-0"	2	24"	72"
1"	10'-6"	2	24"	78"
1"	11'-0"	2	24"	84"
1"	11'-6"	2	27"	84"
1"	12'-0"	2	30"	84"
1"	12'-6"	2	30"	90"
1"	13'-0"	2	30"	96"
1"	13'-6"	2	30"	102"
1"	14'-0"	2	30"	108"
1"	14'-6"	2	36"	102"
1"	15'-0"	2	36"	108"
1"	15'-6"	3	24"	69"
1"	16'-0"	3	24"	72"
1"	16'-6"	3	24"	75"
1"	17'-0"	3	24"	78"
1"	17'-6"	3	24"	81"
1"	18'-0"	3	24"	84"
1"	18'-6"	3	27"	84"
1"	19'-0"	3	27"	87"
1"	19'-6"	3	27"	90"
1"	20'-0"	3	30"	90"
1"	20'-6"	3	30"	93"
1"	21'-0"	3	30"	96"
1"	21'-6"	3	33"	96"
1"	22'-0"	3	36"	96"
1"	22'-6"	3	36"	99"
1"	23'-0"	3	36"	102"
1"	23'-6"	3	36"	105"
1"	24'-0"	3	36"	108"

APPROVAL RECOMMENDED:

Eishi Tanaka 12/29/69
TRAFFIC ENGINEER DATE

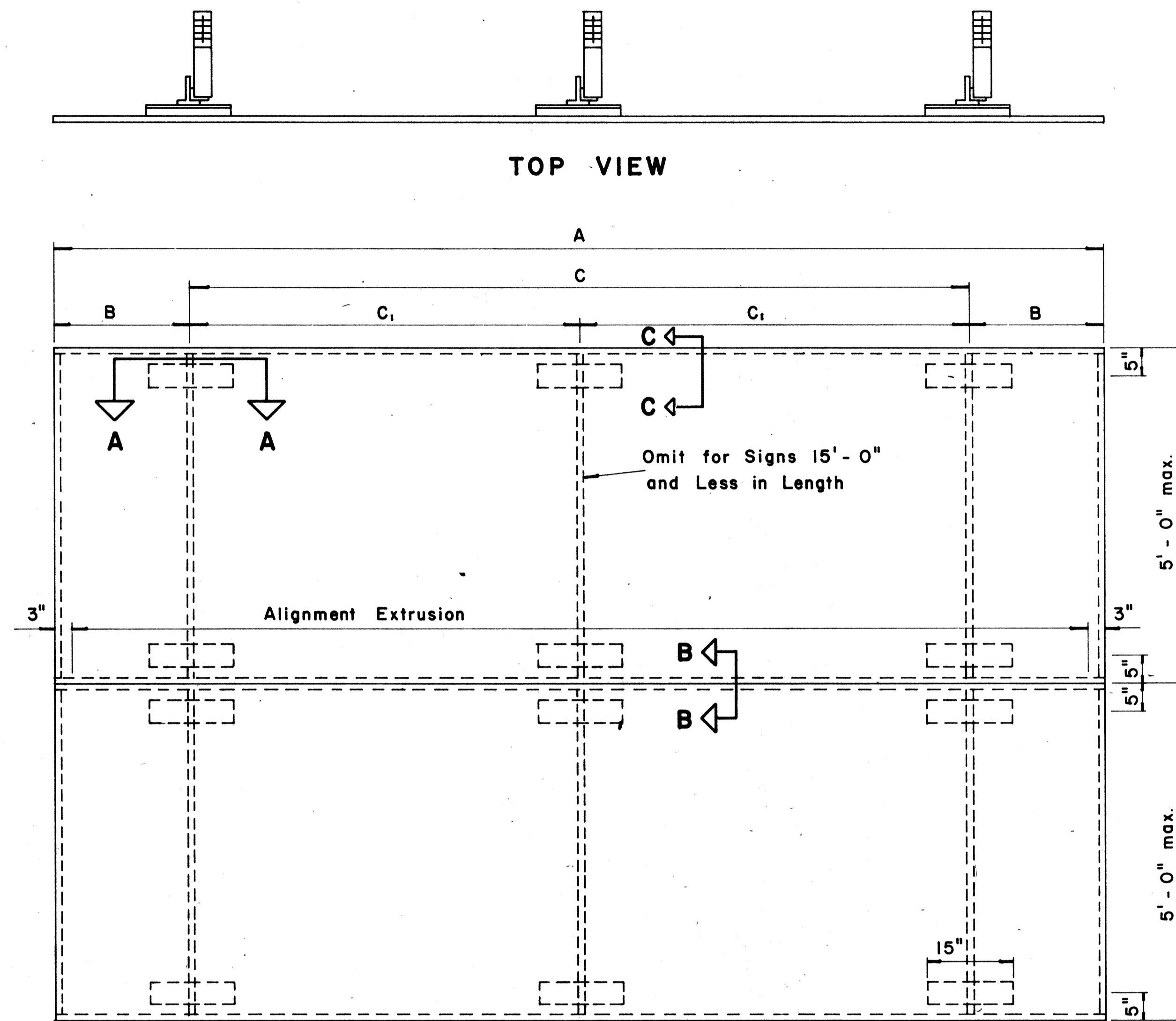
APPROVED:

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

NO.	REVISION	APPROVED BY	DATE

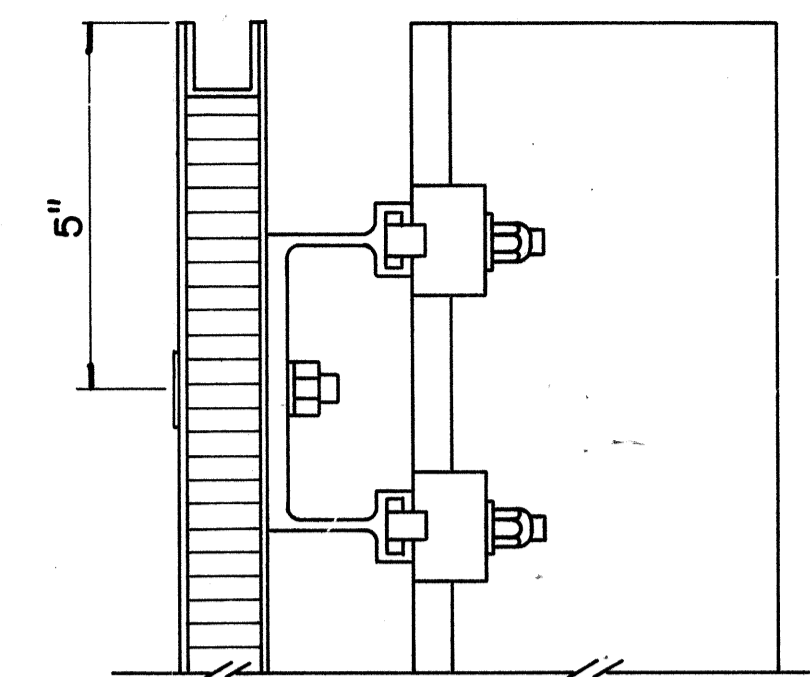
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
LAMINATED ALUMINUM
SIGN PANELS
(OVERHEAD)
Scale: As Shown

SHEET No. 20 OF 27 SHEETS DT 205



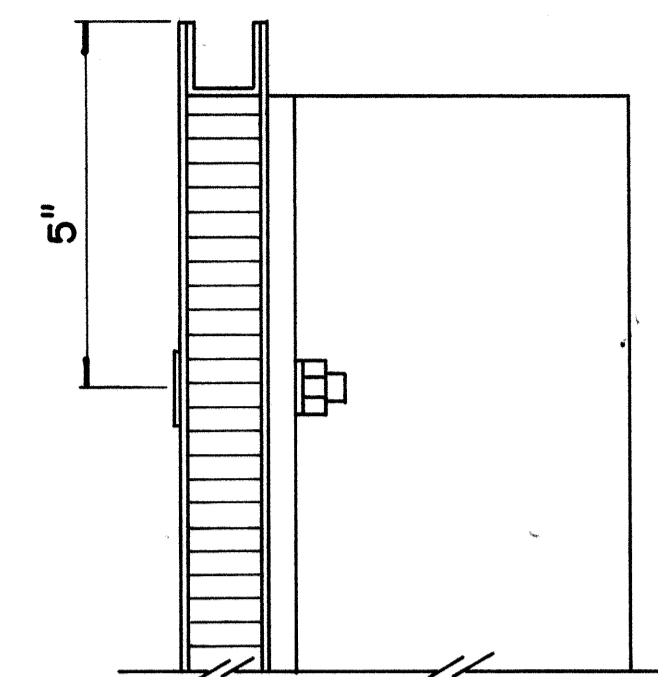
TYPICAL SIGN ASSEMBLY

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



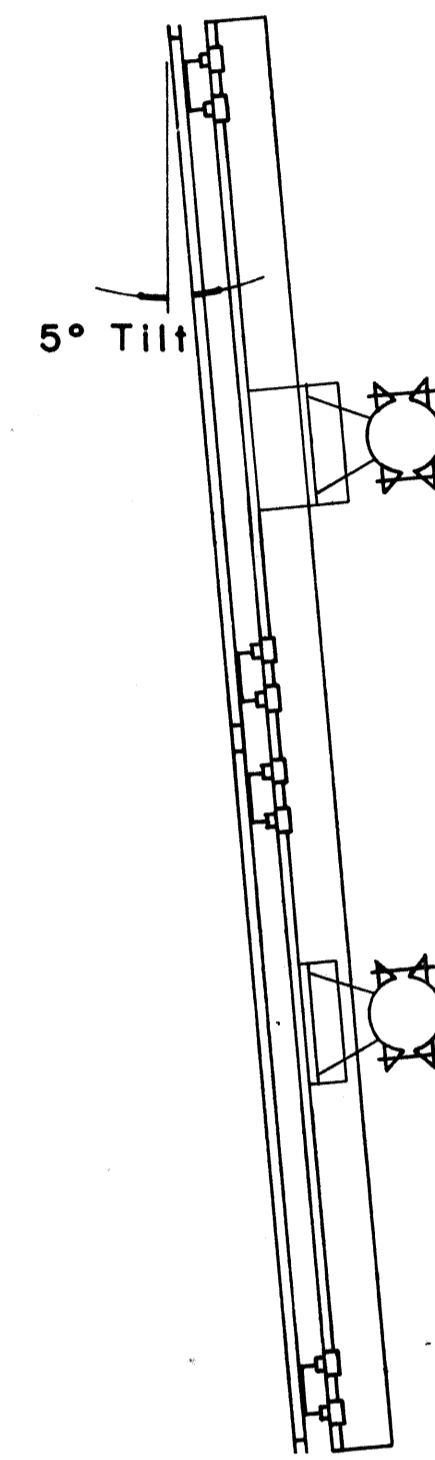
SECTION "C-C"

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



SECTION "C-C" (Alternate)

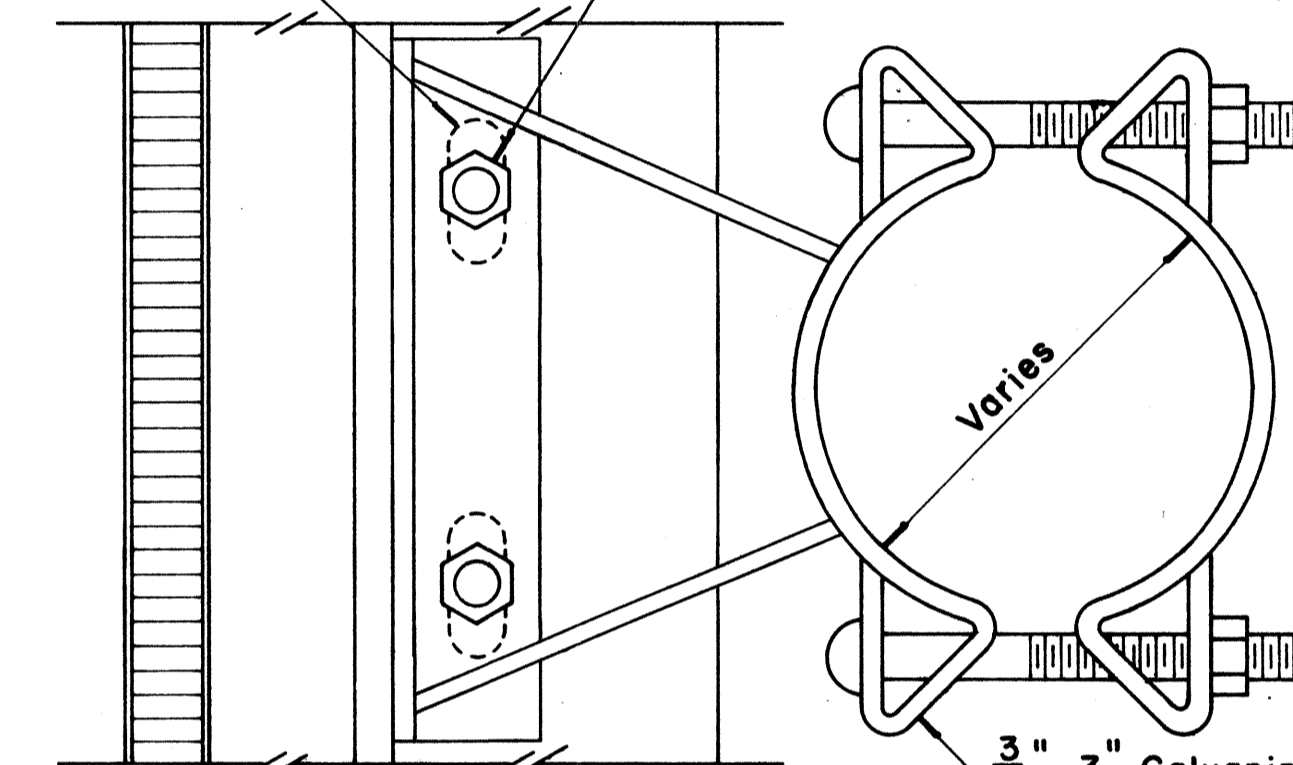
Scale: $\frac{3}{8}$ " = 1"



SIDE VIEW

$\frac{11}{16}$ x 2 min. slots in Aluminum Angle or Aluminum Tee

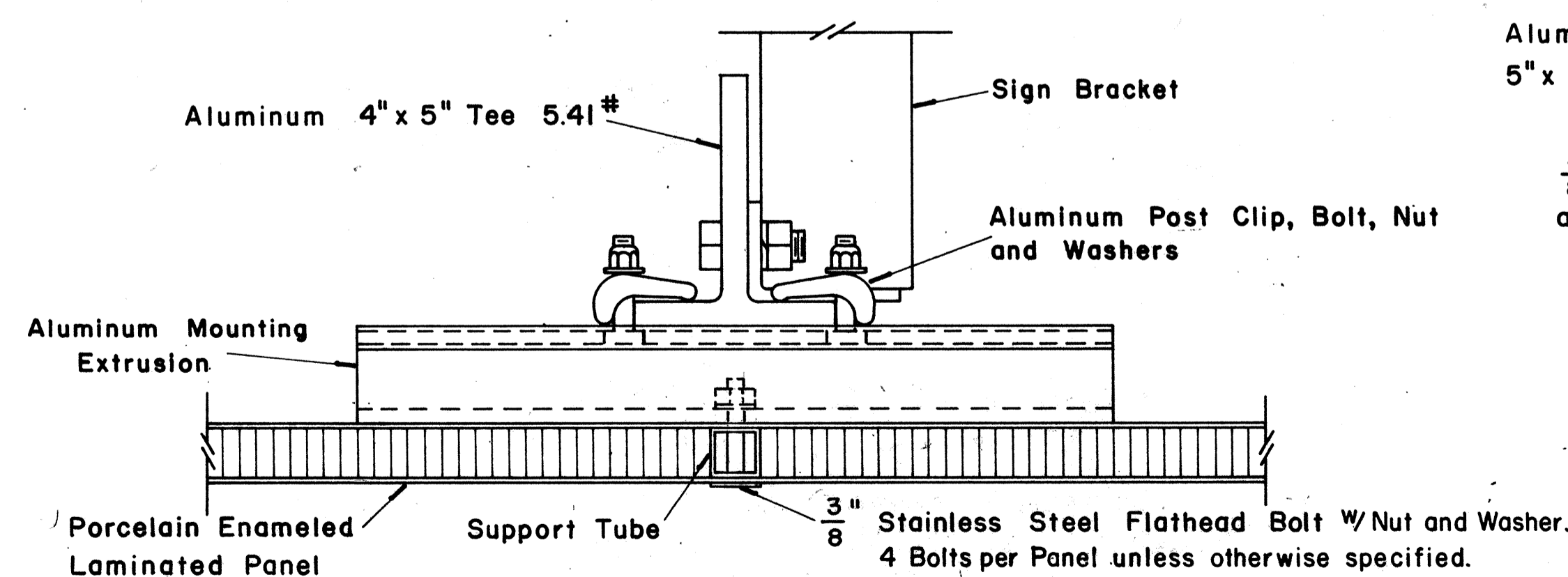
$\frac{5}{16}$ " Stainless Steel Bolts with Nuts and Lock Washer



SIGN BRACKET ASSEMBLY

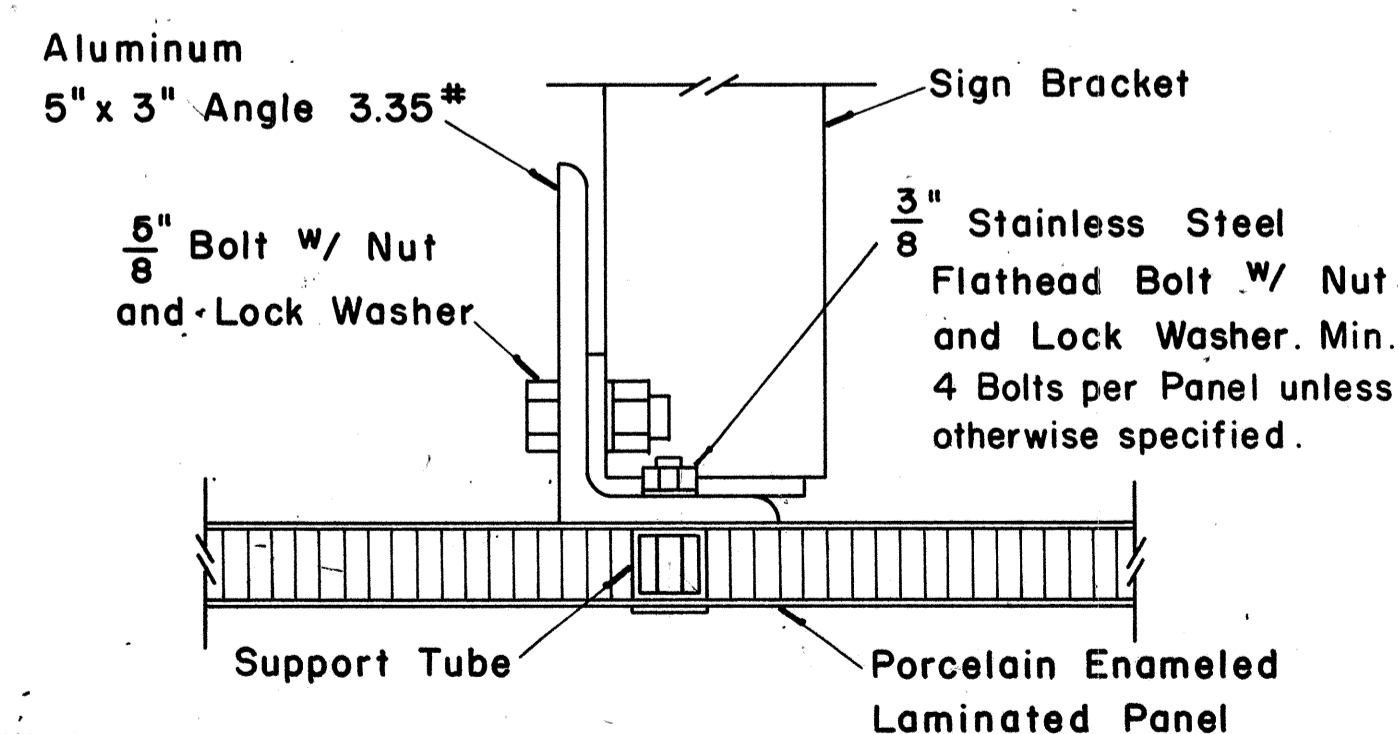
Scale: $\frac{3}{8}$ " = 1"

NOTE: For additional details of Sign Bracket Assembly, see Standard Detail Sheet "Overhead Sign Supports."



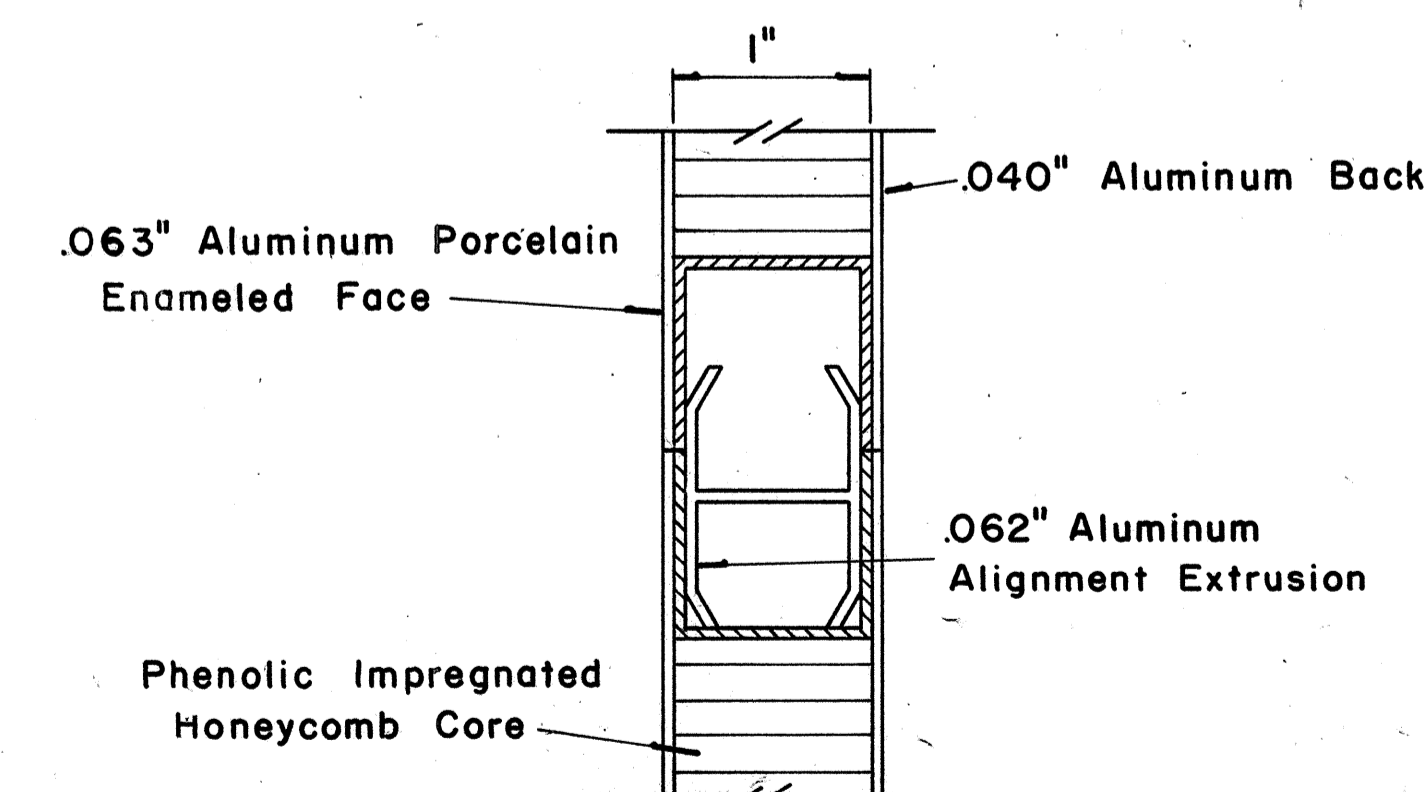
SECTION "A-A"

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



SECTION "A-A" (Alternate)

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



CLOSURE DETAIL SECTION "B-B"

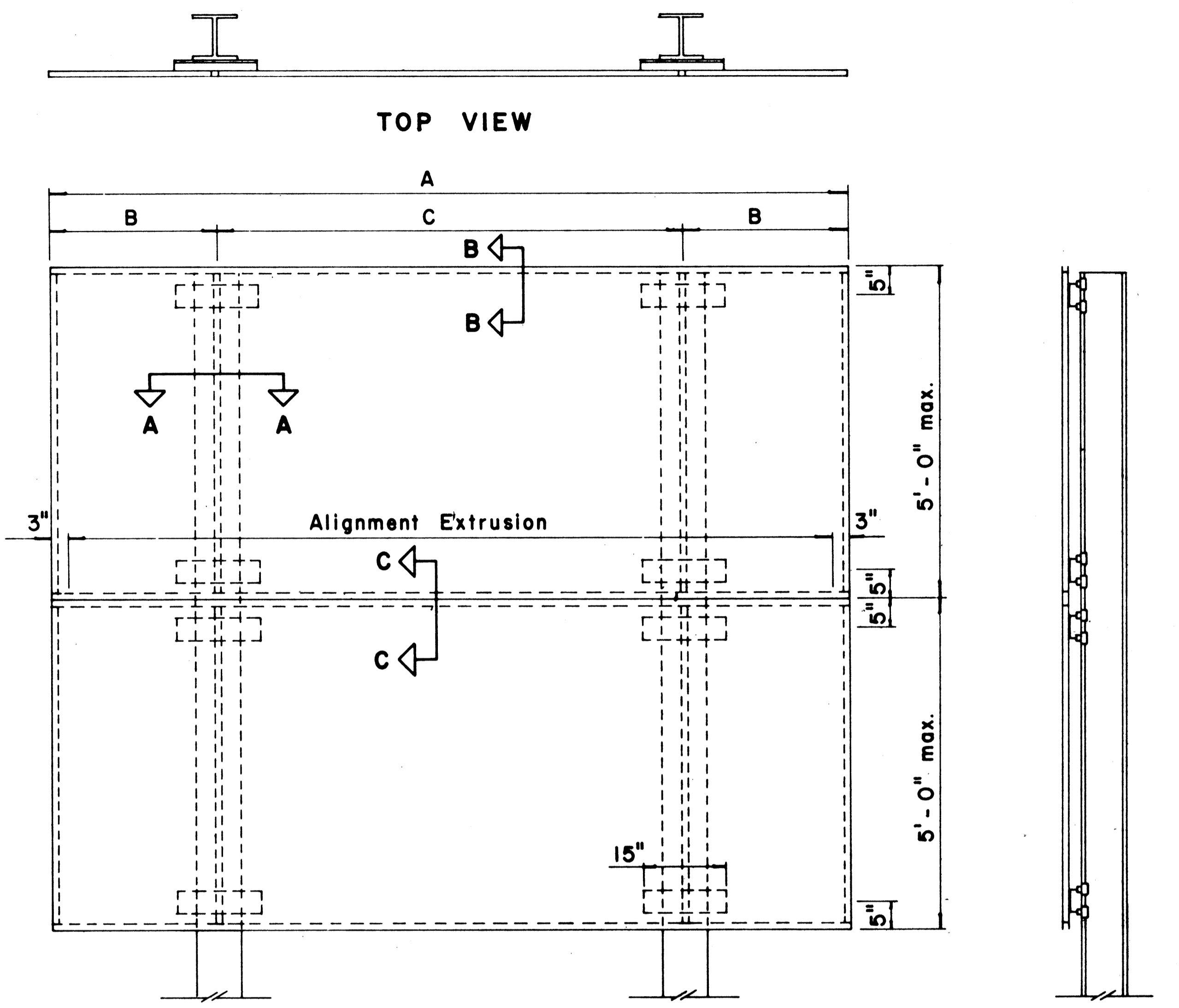
FULL SCALE

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078(10)	1978	107	266

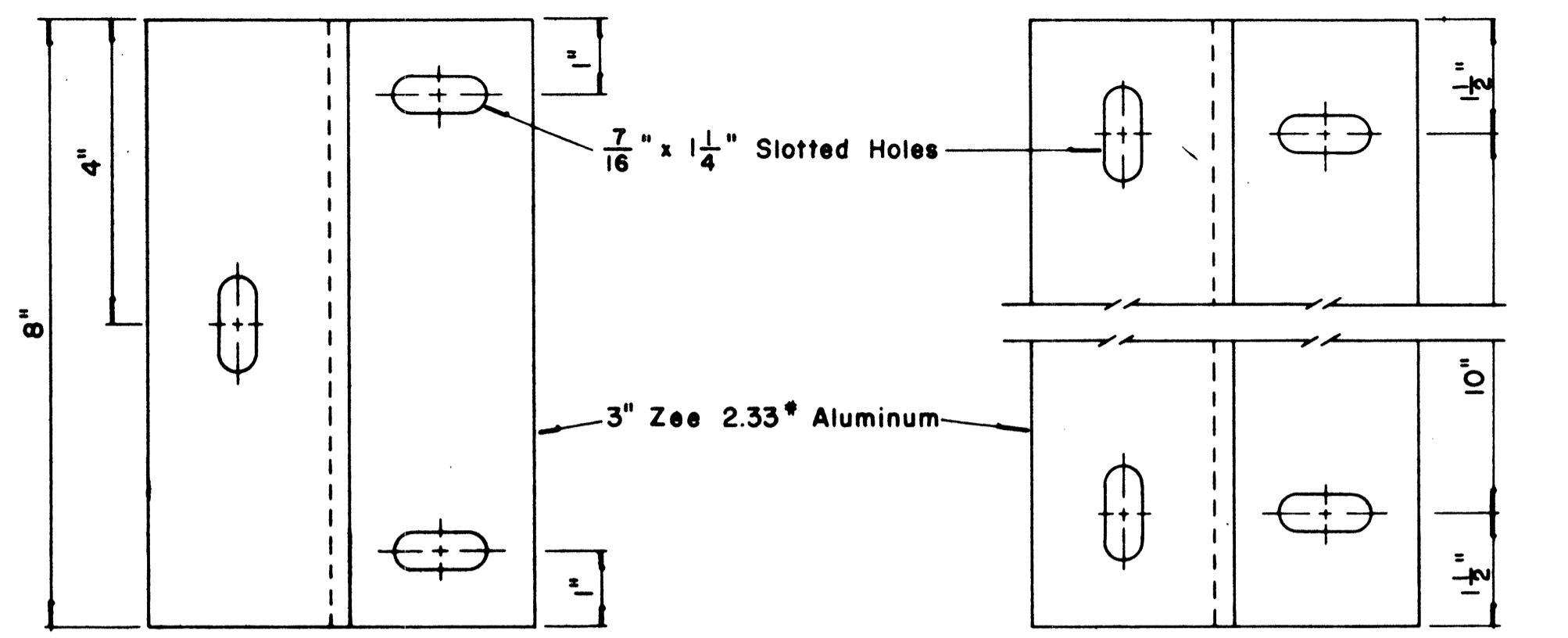
(GROUND MOUNTED SIGNS)
SUPPORT SPACING TABLE

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



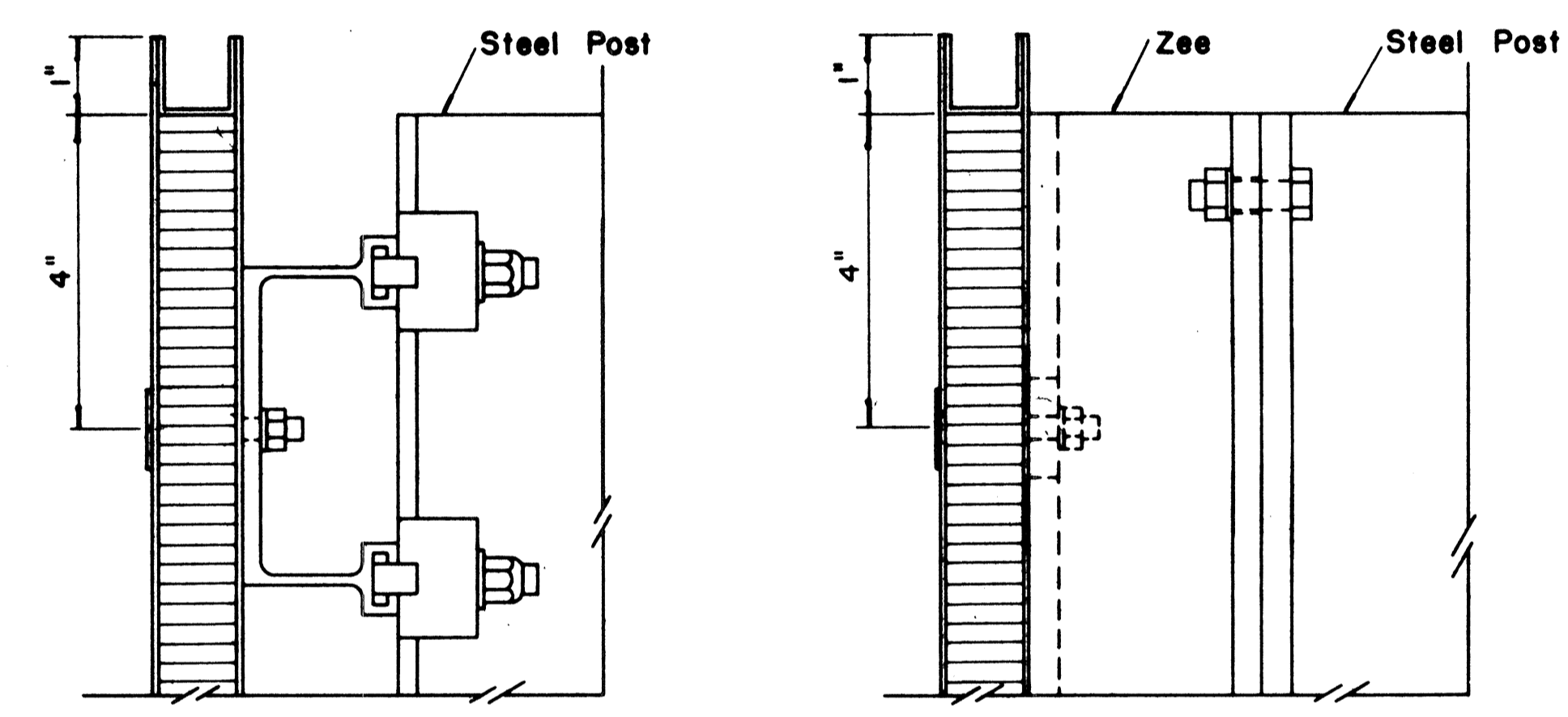
TYPICAL SIGN ASSEMBLY

Scale: 3/4" = 1'-0"



ZEE MOUNTING DETAILS

Scale: 1/2" = 1"

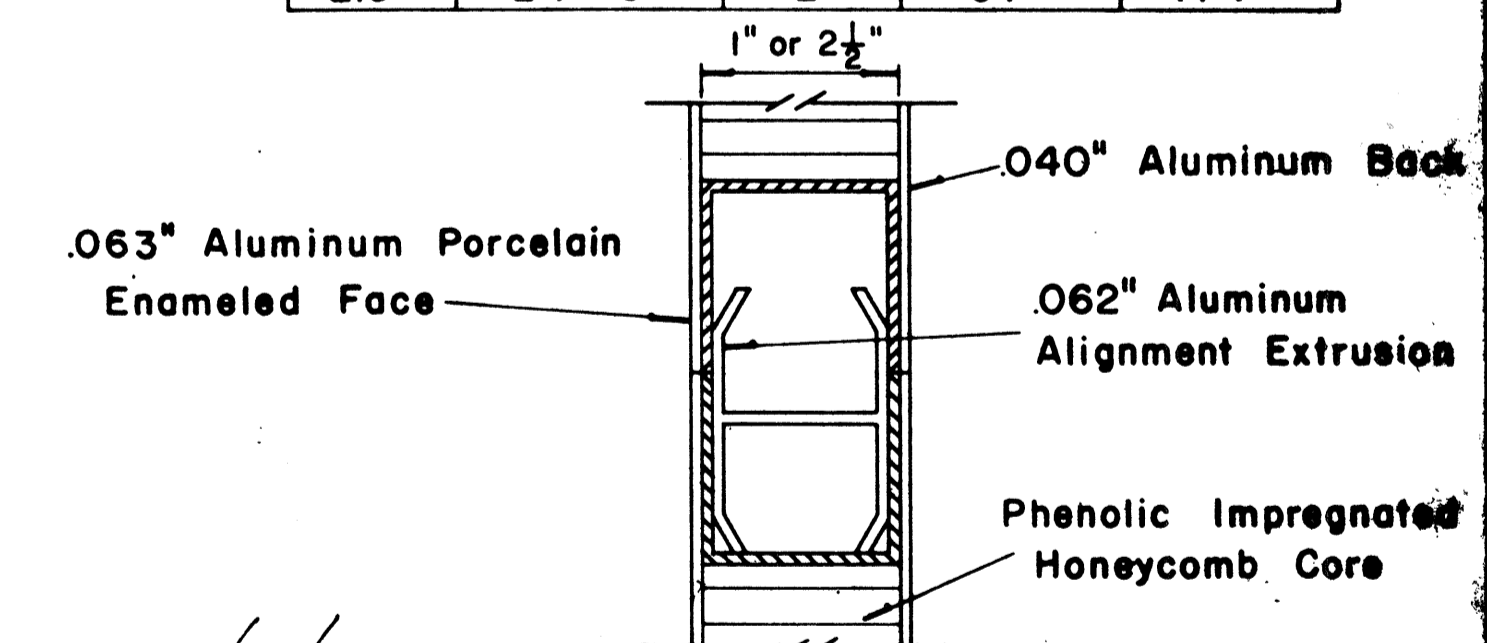


SECTION "B-B"

Scale: 1/2" = 1"

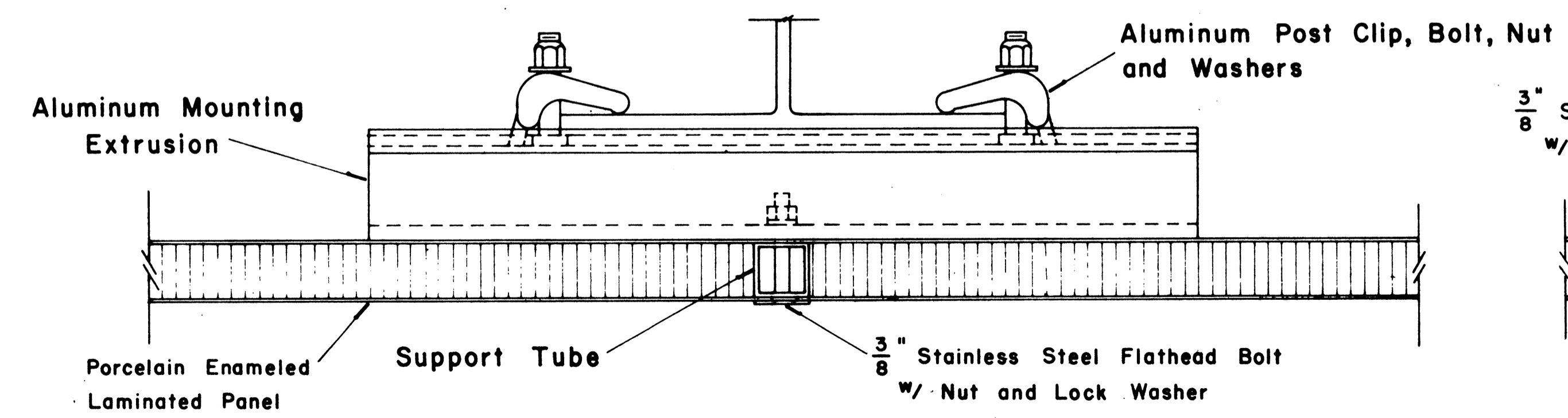
SECTION "B-B" (Alternate)

Scale: 1/2" = 1"



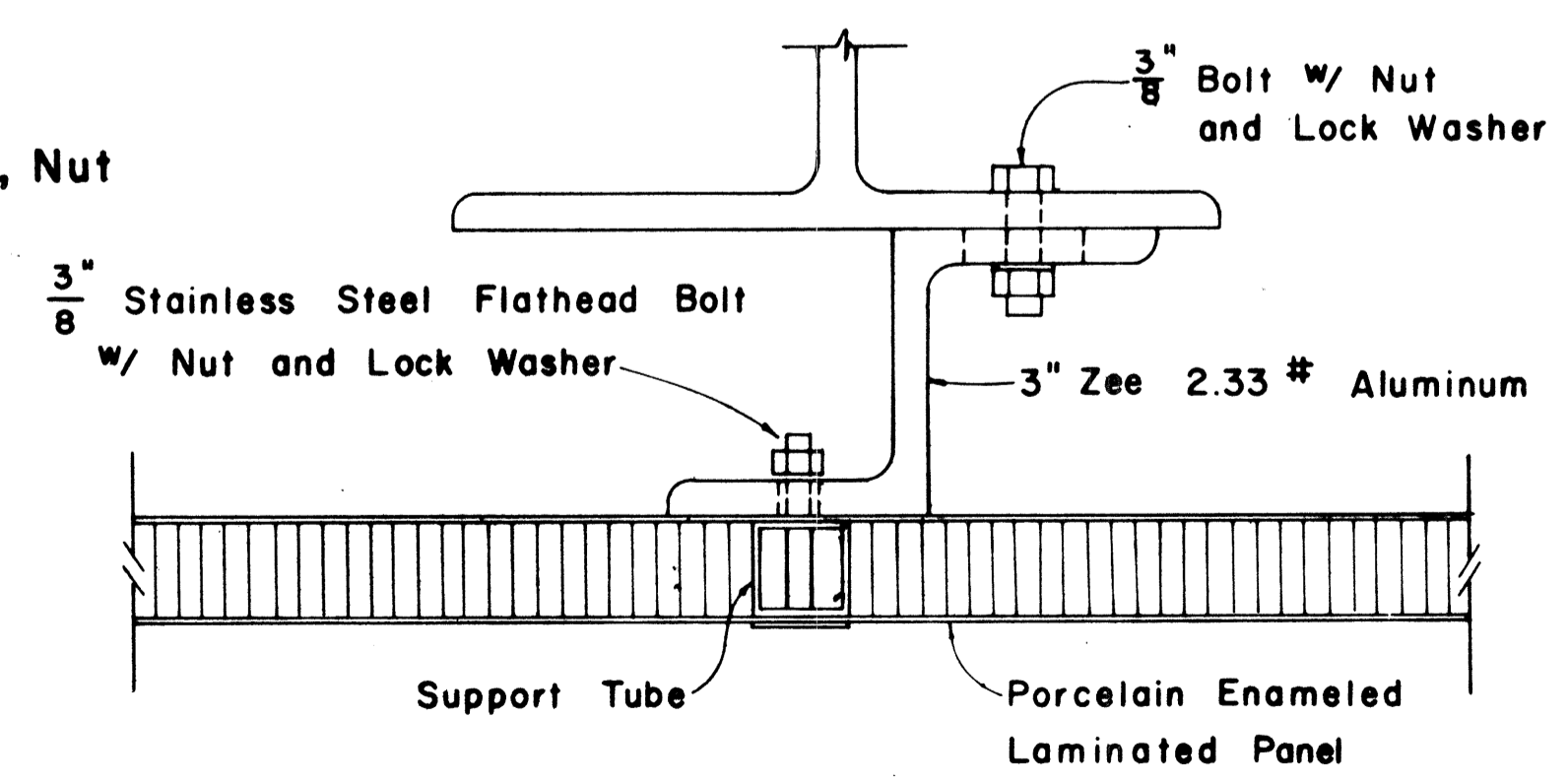
CLOSURE DETAIL SECTION "C-C"

FULL SCALE



SECTION "A-A"

Scale: 1/2" = 1"



SECTION "A-A" (Alternate)

Scale: 1/2" = 1"

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

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
LAMINATED ALUMINUM
SIGN PANELS
(GROUND MOUNTED)

Scale: As Shown

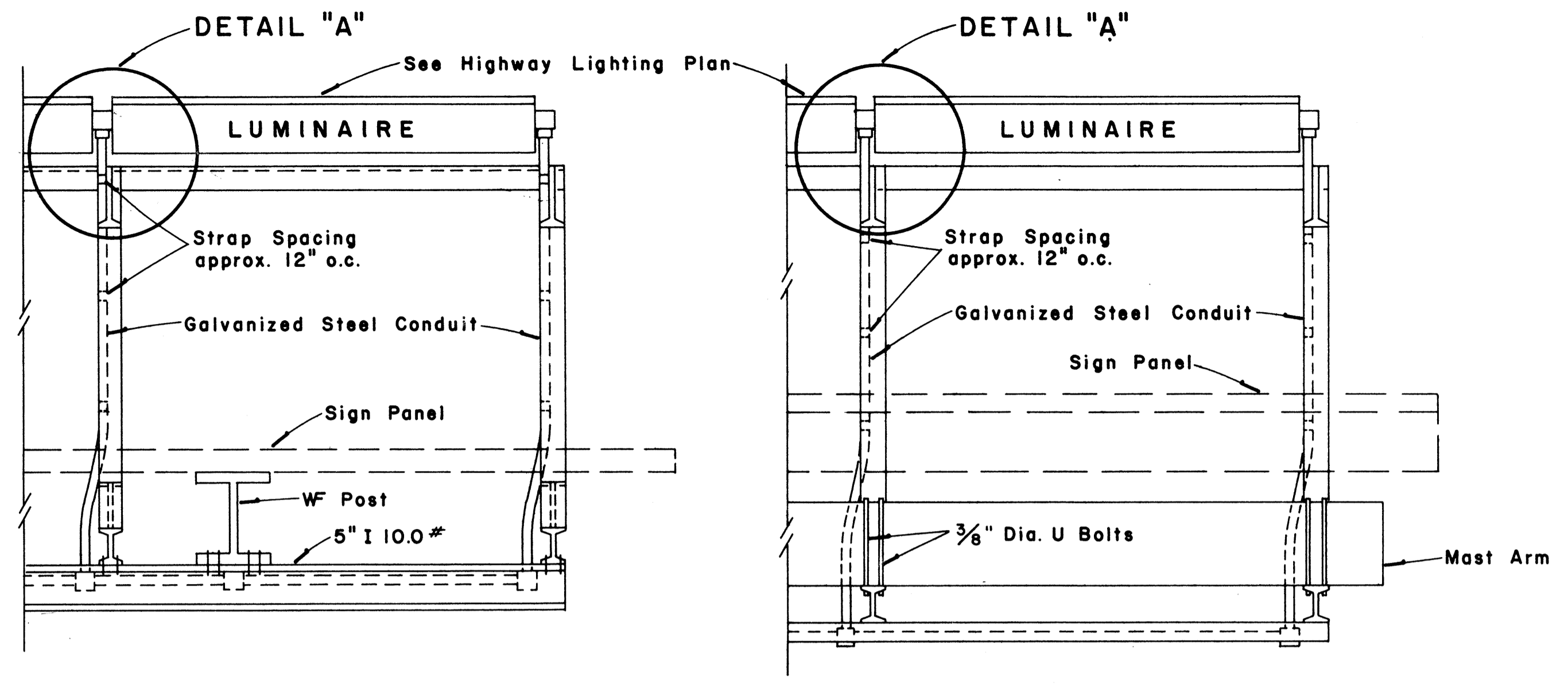
SURVEY PLOTTED BY _____ DATE _____
 ORIGINAL PLAN _____
 TRACED BY _____
 NOTE BOOK _____
 DESIGNED BY _____
 QUANTITIES BY _____
 CHECKED BY _____
 No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	10-F-078(10)	1978	109	266

GENERAL NOTES

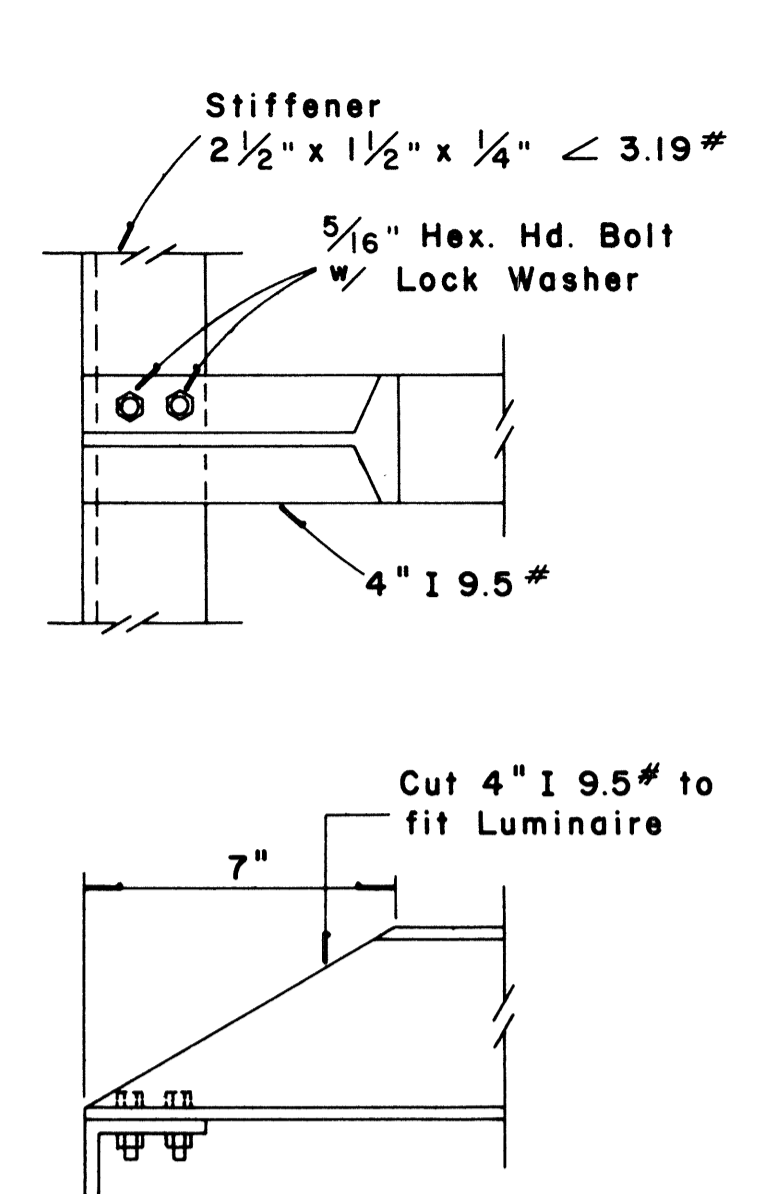
1. Conduit sizes: $\frac{3}{4}$ " diameter for one or two Luminaire Units, 1" diameter for three or more Luminaire Units.
2. Fluorescent Fixtures shall be installed as recommended by the manufacturer.
3. Luminaire brackets shall be spaced to fit 4'-0" to 6'-0" luminaires with fittings. Eight feet (8'-0") luminaires shall have an additional bracket at midpoint.
4. All parts of the bracket shall be hot-dip galvanized, prime coated with a suitable primer and painted with three coats of dark green enamel.

NOTE:
Refer to sheet 163 for other details.



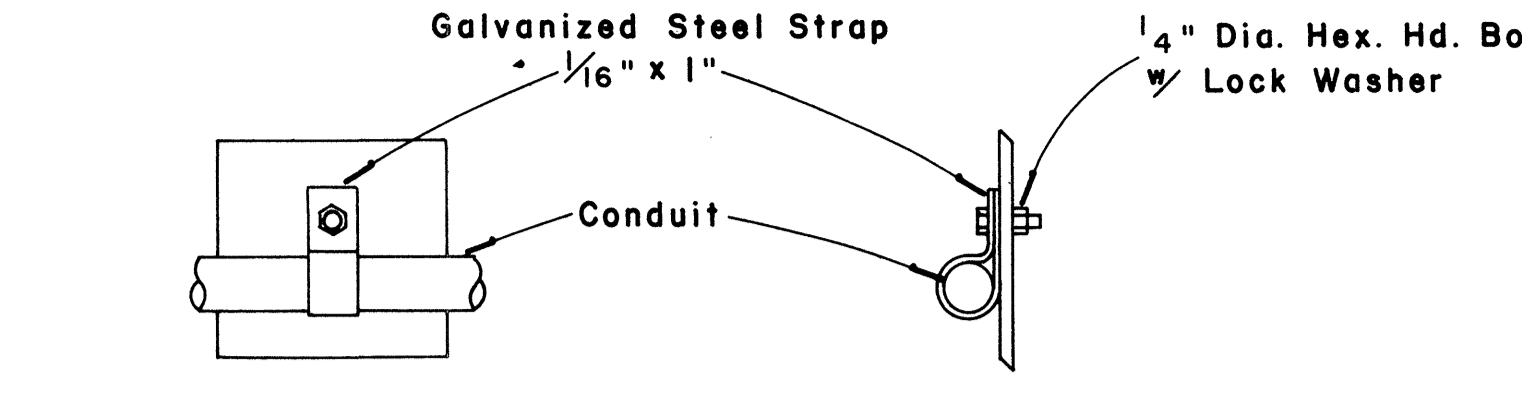
**TOP VIEW
LUMINAIRE MOUNTING**

Scale: 1" = 1'-0"



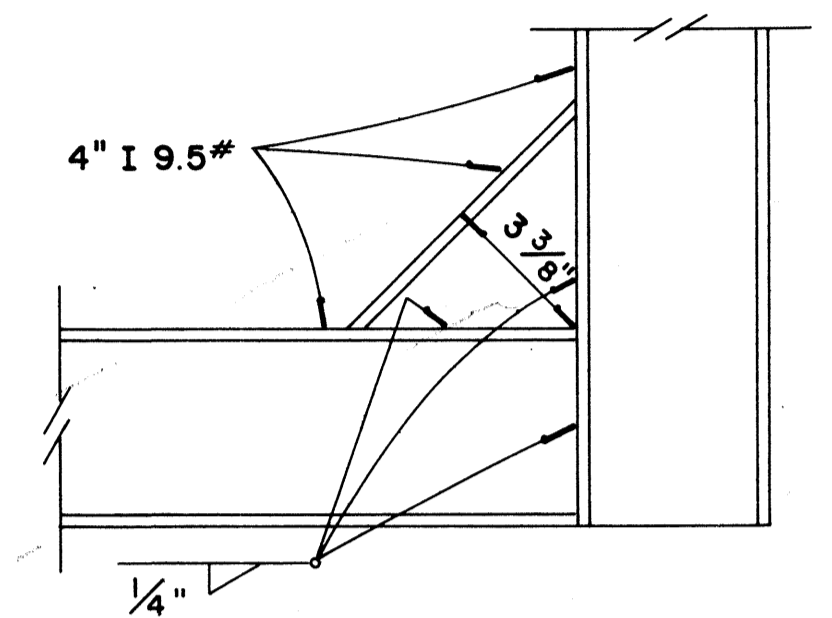
DETAIL "A"

Scale: 3" = 1'-0"



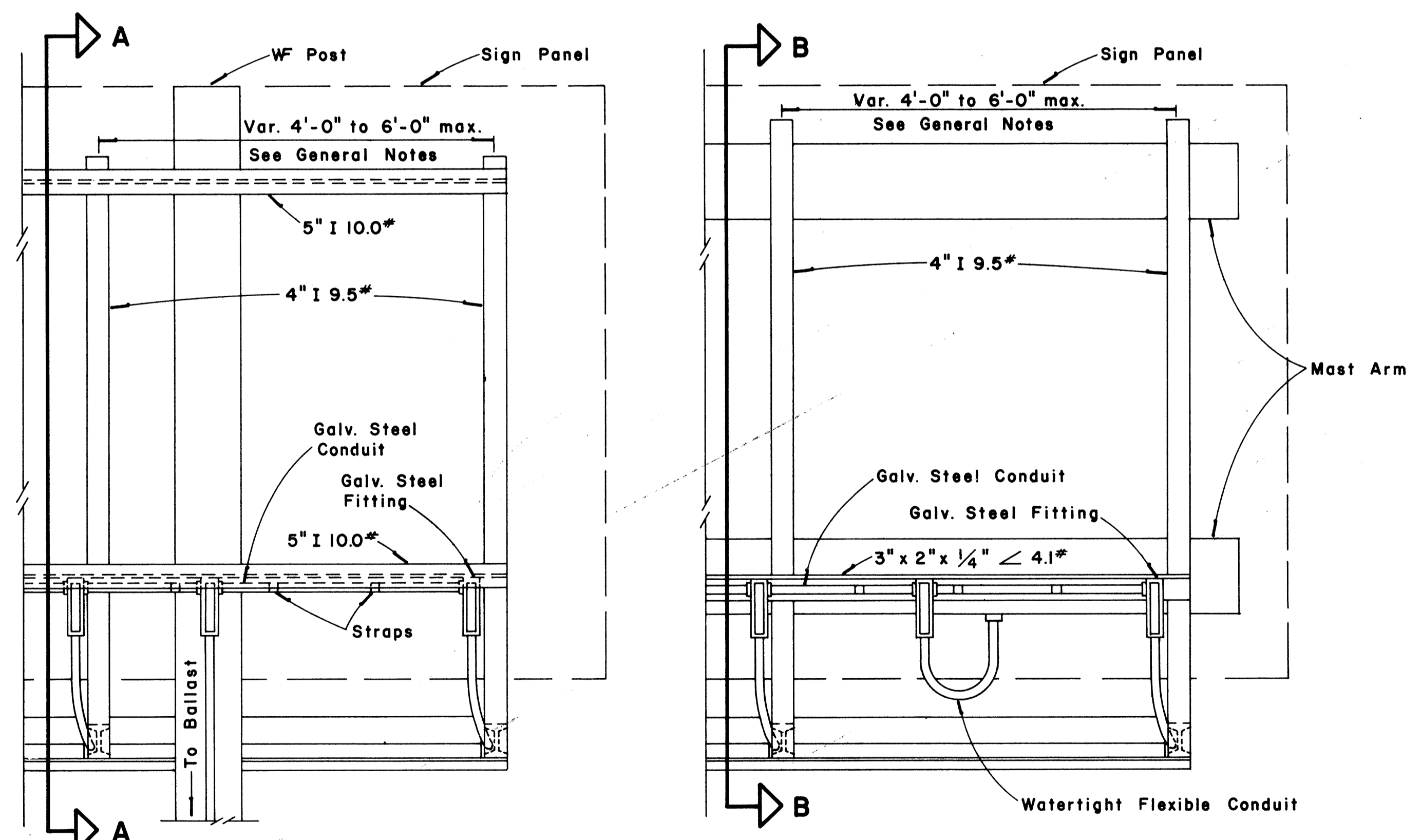
CONDUIT STRAP DETAIL

Scale: 3" = 1'-0"



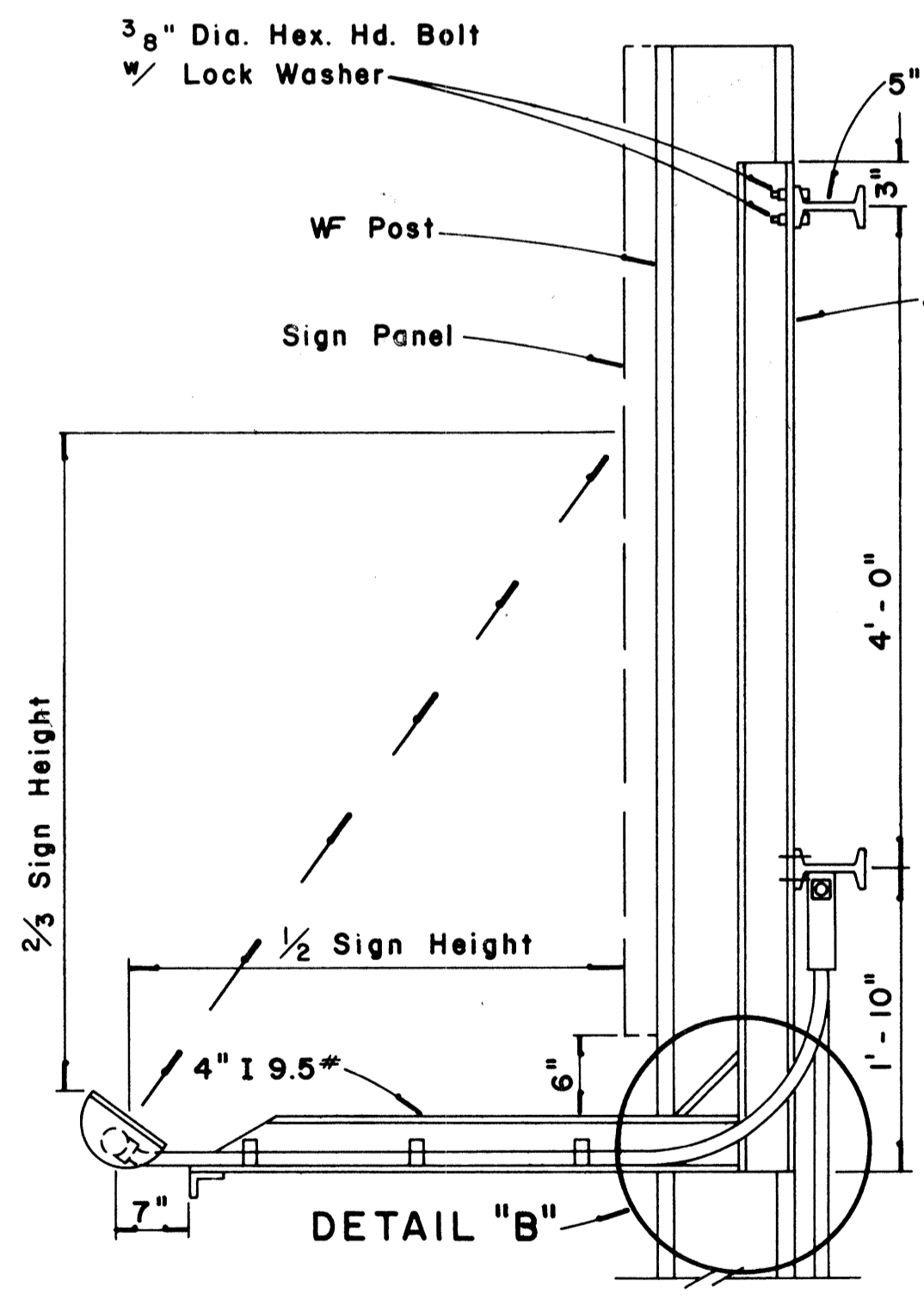
DETAIL "B"

Scale: 3" = 1'-0"



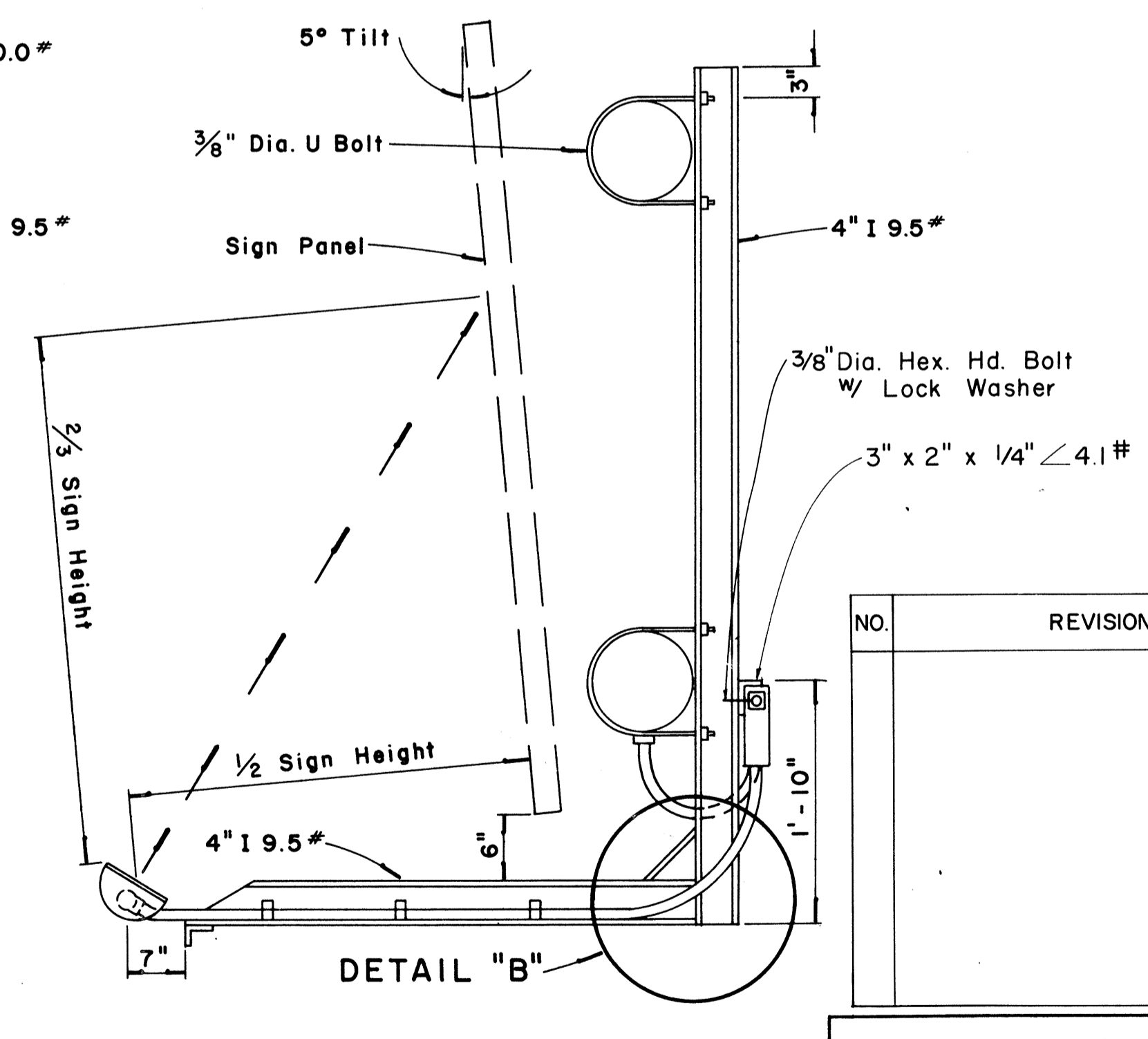
**REAR VIEW
LUMINAIRE MOUNTING**

Scale: 1" = 1'-0"



SECTION "A-A"

Scale: 1" = 1'-0"



SECTION "B-B"

Scale: 1" = 1'-0"

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

APPROVED:
John J. DeL... 12/30/69
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

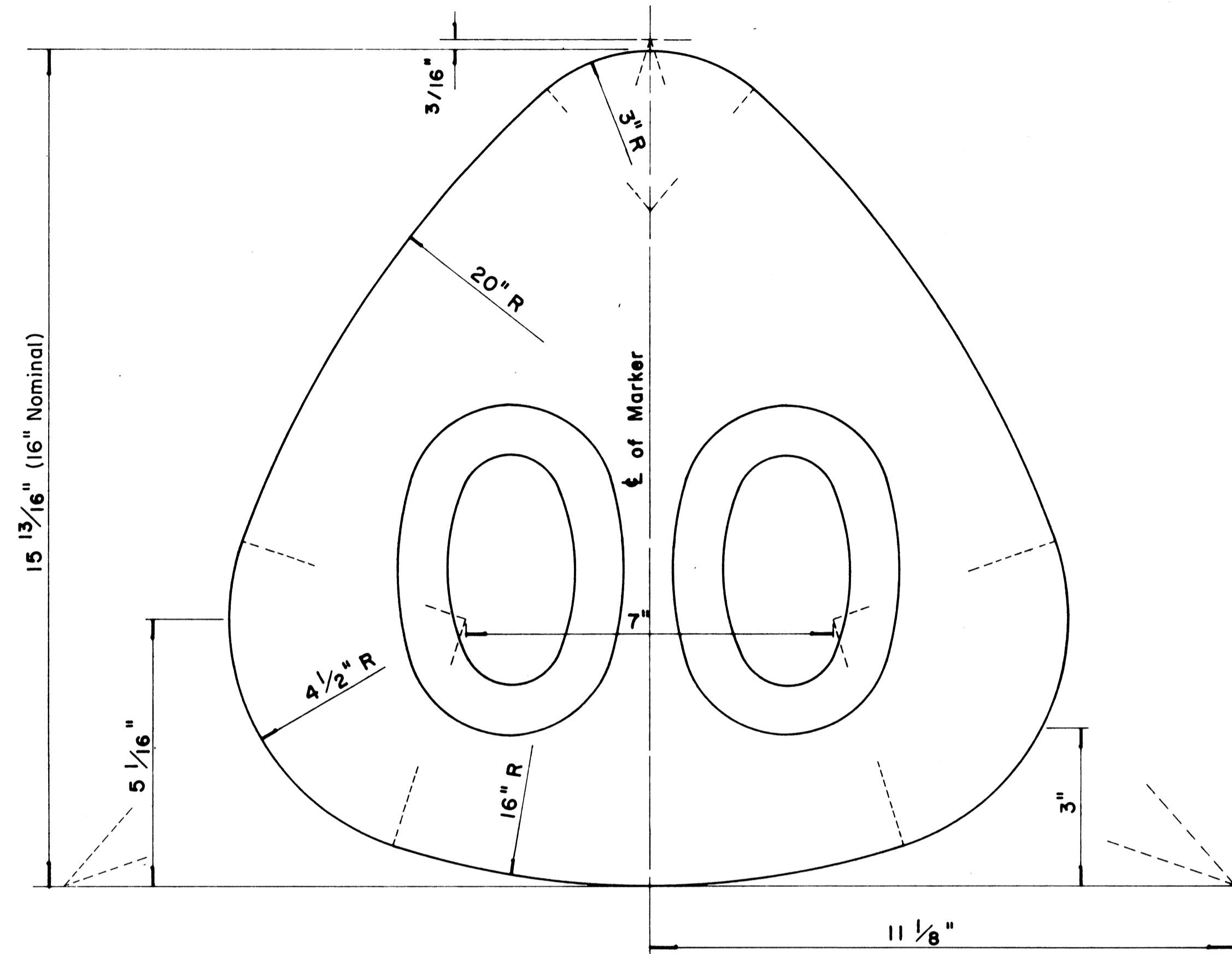
**EXPRESSWAY SIGNS
LUMINAIRE MOUNTINGS**

Scale: As Shown
SHEET No. 23 OF 21 SHEETS DT 208

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	10-F-078-1(10)	1978	110	266

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



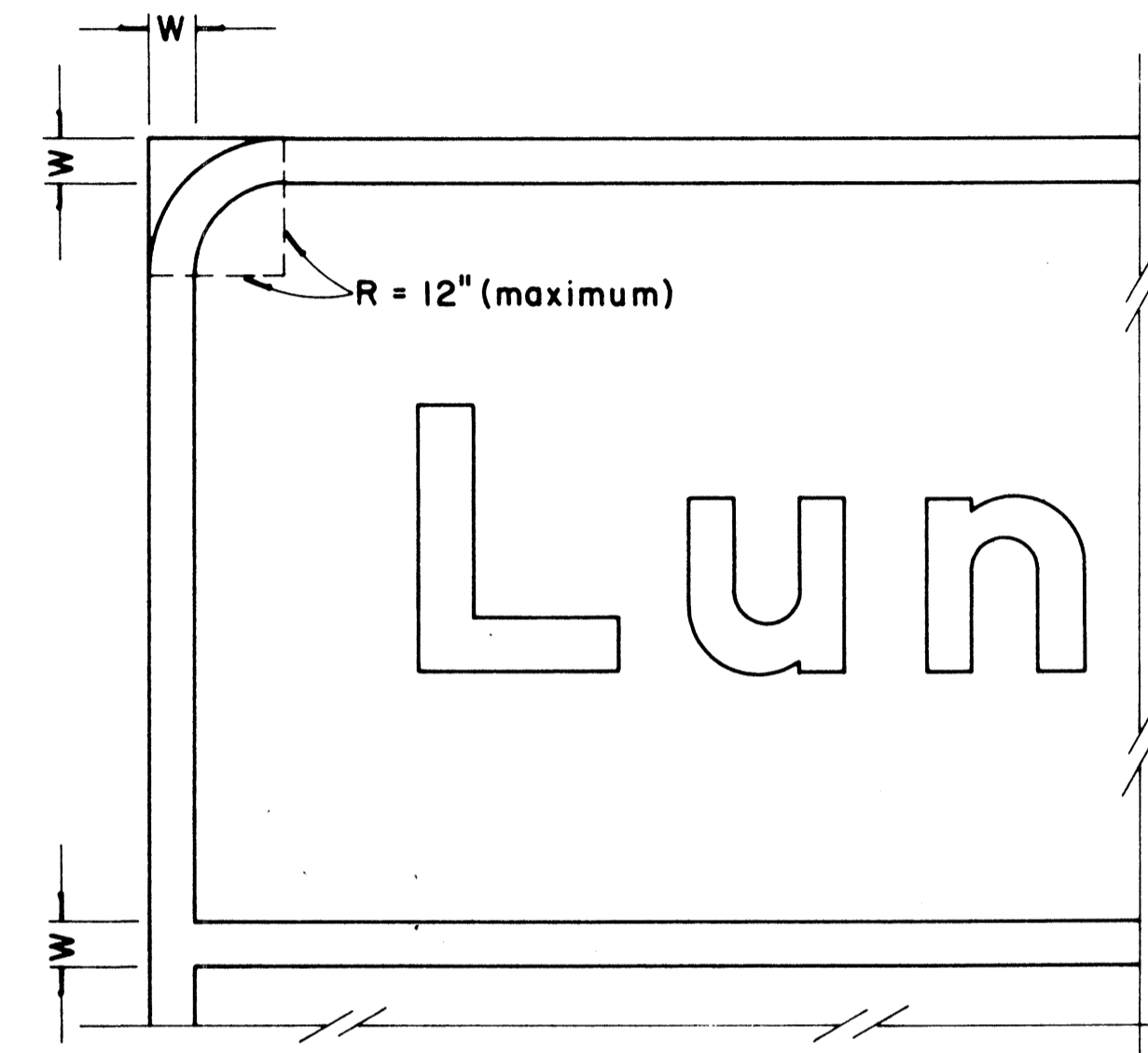
**STATE ROUTE MARKER
FOR GUIDE SIGNS**

Scale: Half Size

NOTE:

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

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



**BORDER DETAIL
FOR GUIDE SIGNS**

Not to Scale

NOTE:

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

APPROVAL RECOMMENDED:

Eishi Tanaka 4/11/72
TRAFFIC ENGINEER DATE

APPROVED:

Walter Z. Sakemi 4/12/72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 209 Approved 12-30-69	H.T.	4/12/72
2	Revised Notes and Schedules	H.T.	9-14-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

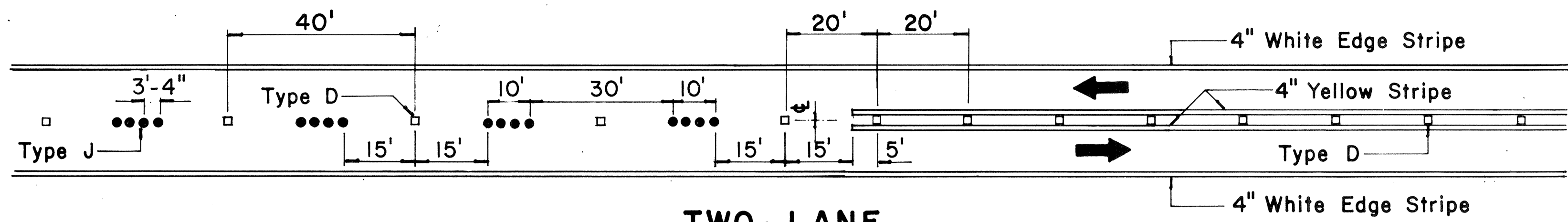
**STATE ROUTE MARKER
AND BORDER DETAIL
FOR GUIDE SIGNS**

Scale: As Shown

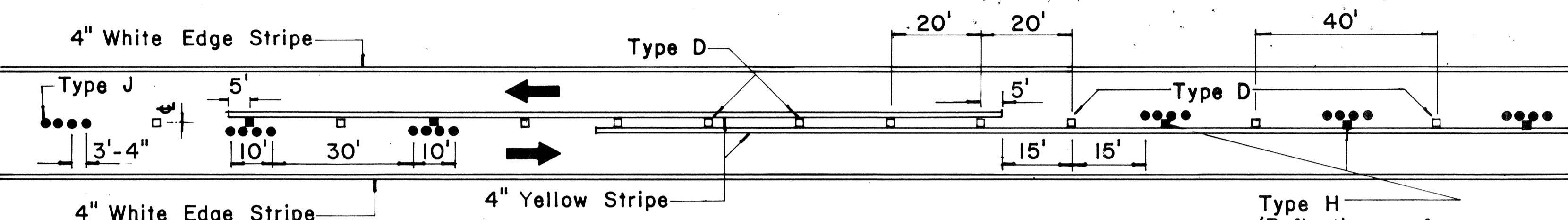
SHEET No. 24 OF 27 SHEETS DT 209

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

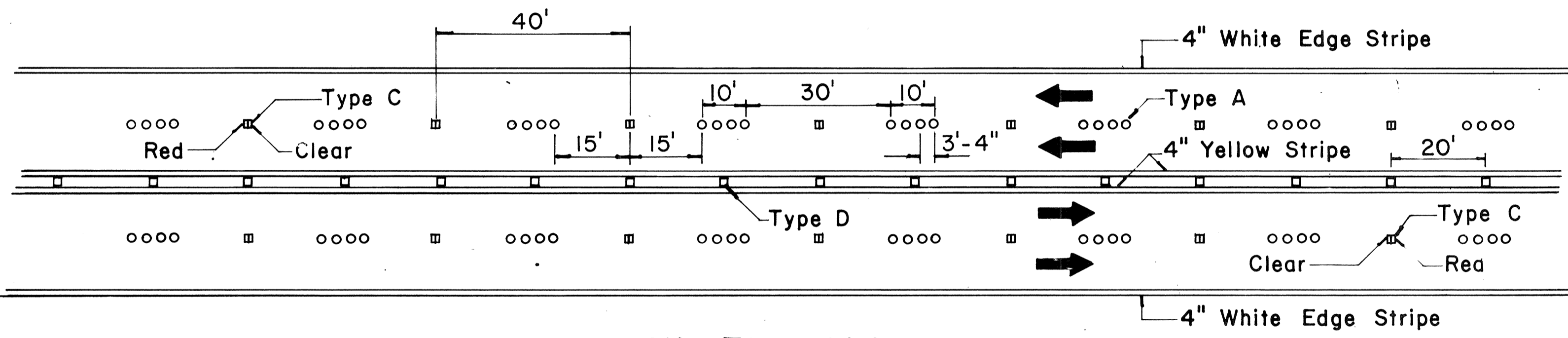
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F-078-1(8)	1978	III	200



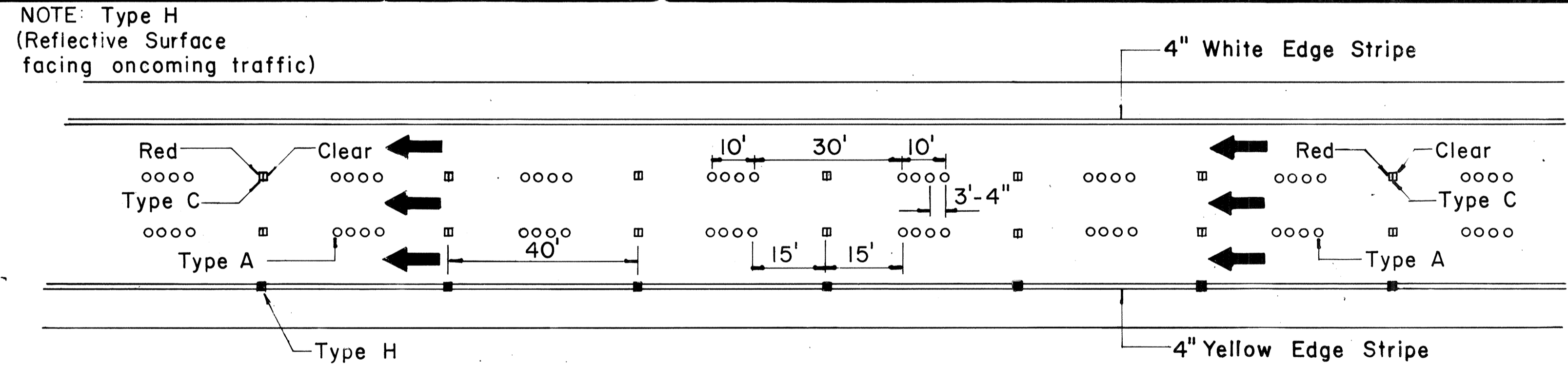
**TWO-LANE
PASSING PERMITTED AND PASSING PROHIBITED**



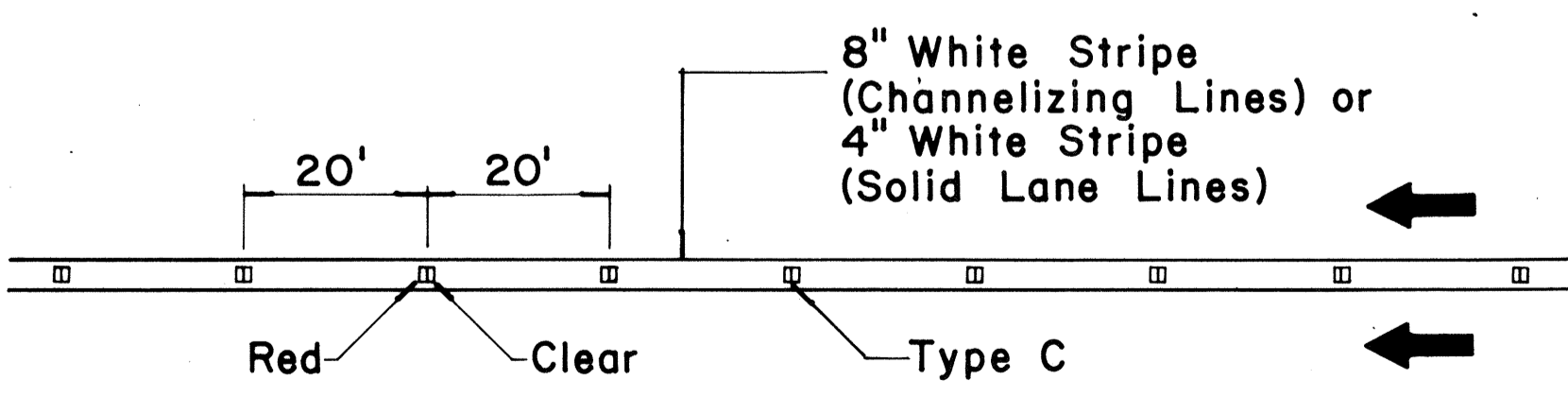
**TWO-LANE
PASSING PROHIBITED ZONES**



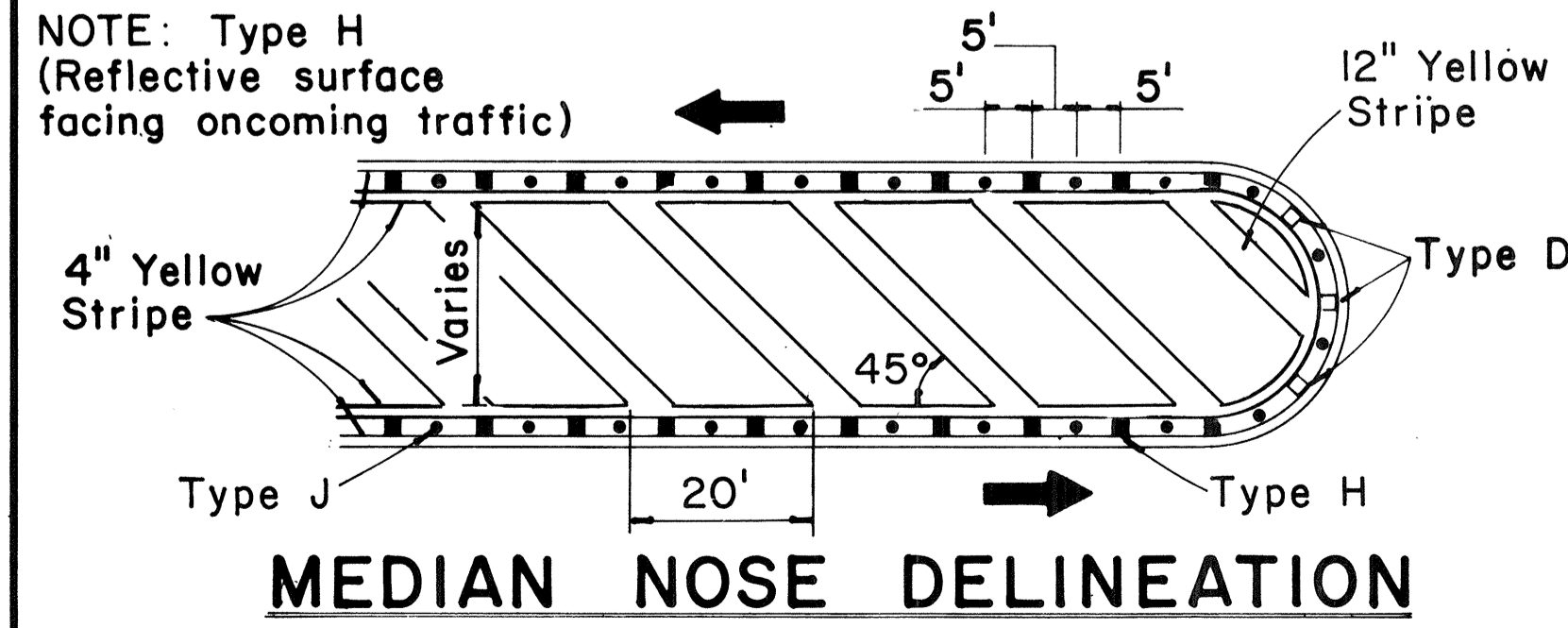
**MULTI-LANE
LANE LINES AND CENTER LINE**



**DIVIDED HIGHWAY
AND
FREEWAY**



**CHANNELIZING LINES
OR SOLID LANE LINES**



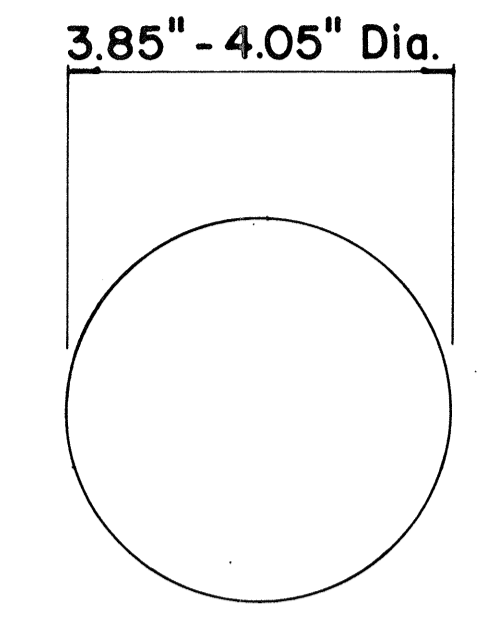
MEDIAN NOSE DELINEATION

TWO - LANE

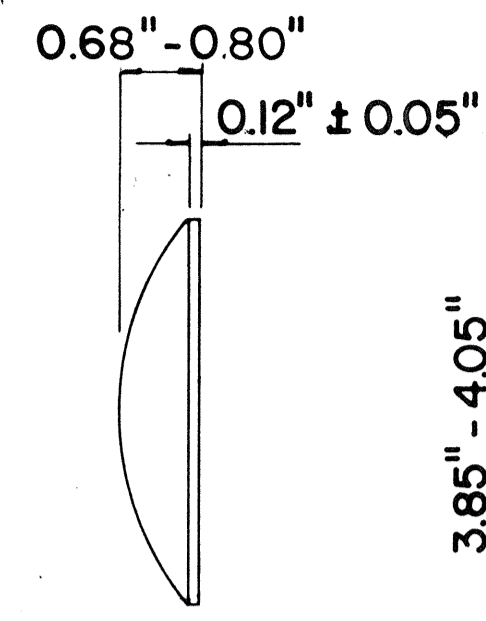
MULTI - LANE

**DIVIDED HIGHWAY
AND
FREEWAY**

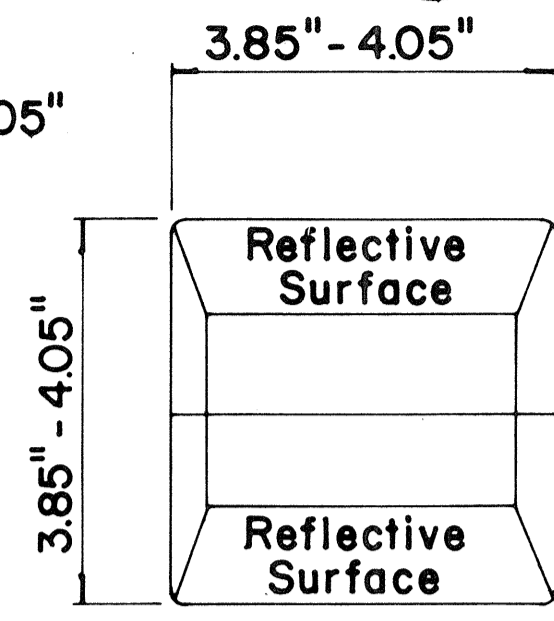
MISCELLANEOUS



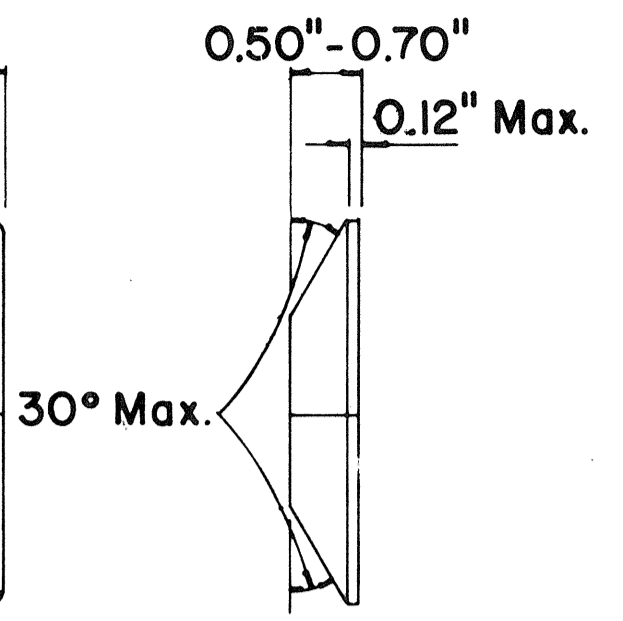
**TYPE A
NON-REFLECTIVE WHITE MARKER**



**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:
Eiichi Tanaka 11/18/71
TRAFFIC ENGINEER DATE

APPROVED:
Shelton Zaleski 11/18/71
ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Add reflector marker in each line gap.	H.C.	10-21-72
2	Revised General Notes.	H.C.	10-21-72
3	Change 4" white edge stripe to 4" solid yellow edge stripe to left edge of a travel path and Add Type H Reflector Marker.	H.C.	8-22-74
4	Revised details, General Notes & Title Box.	H.C.	1-13-77
5	Revised dimensions on Type A & J Markers	H.C.	4-18-78

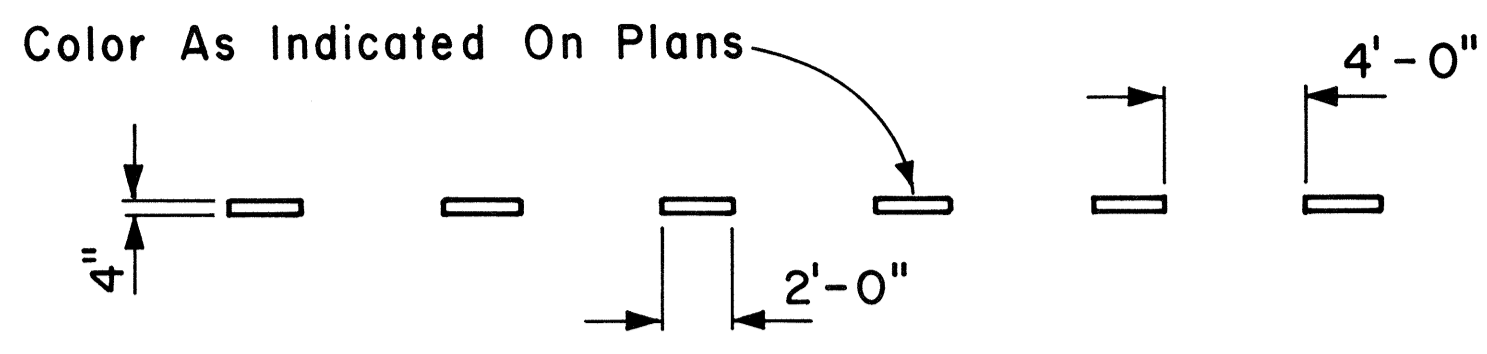
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
**RAISED PAVEMENT MARKERS
AND STRIPING**

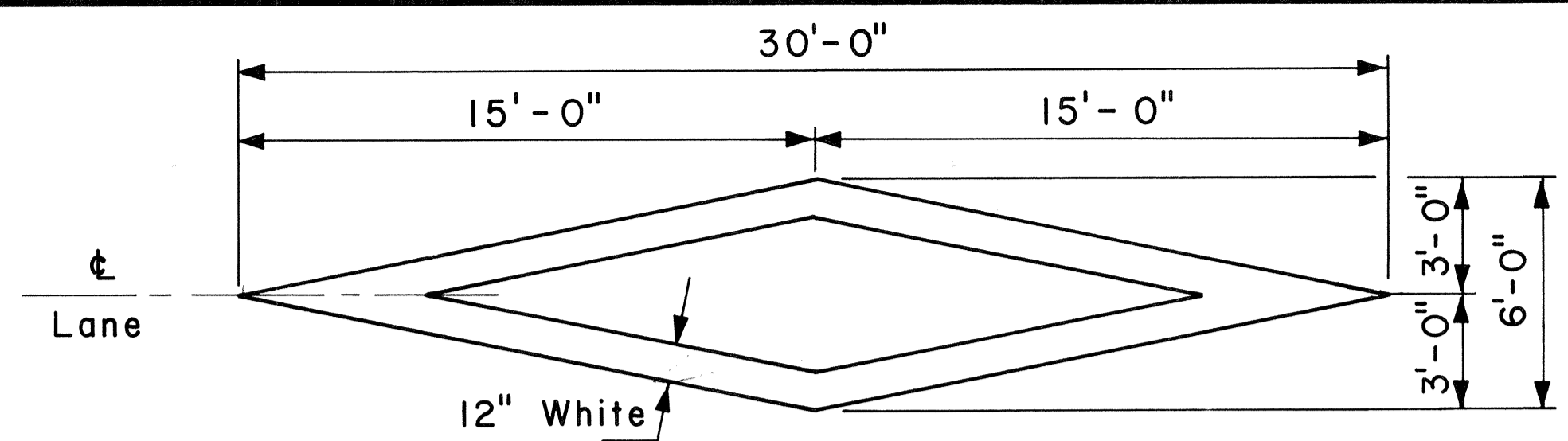
Not to Scale October 1971
SHEET No. 25 OF 27 SHEETS DT 300

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

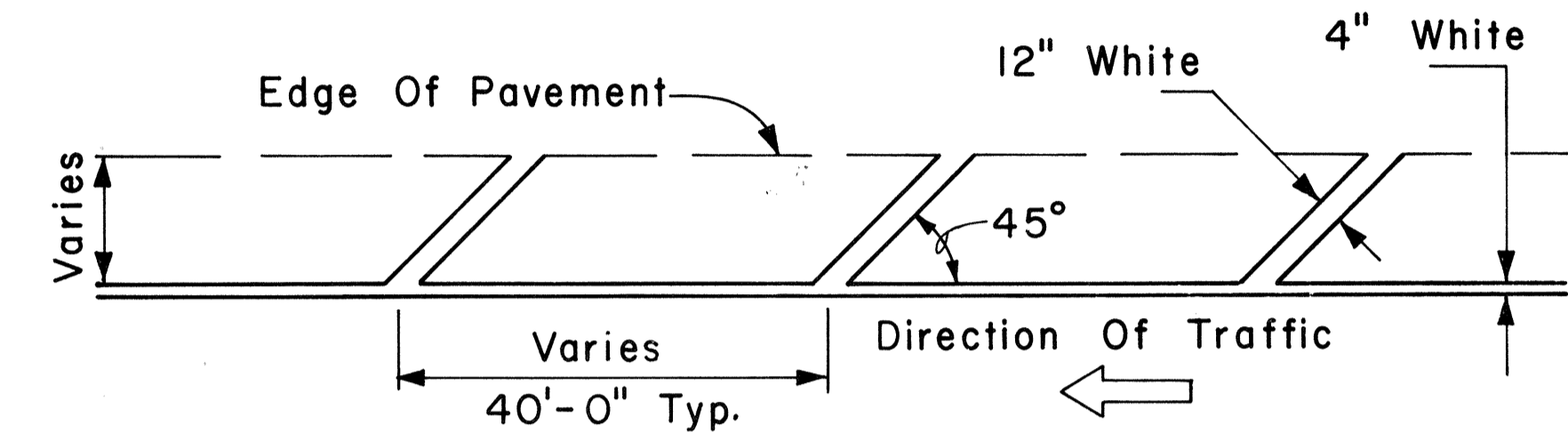
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQF-078-1(8)	1978	112	266



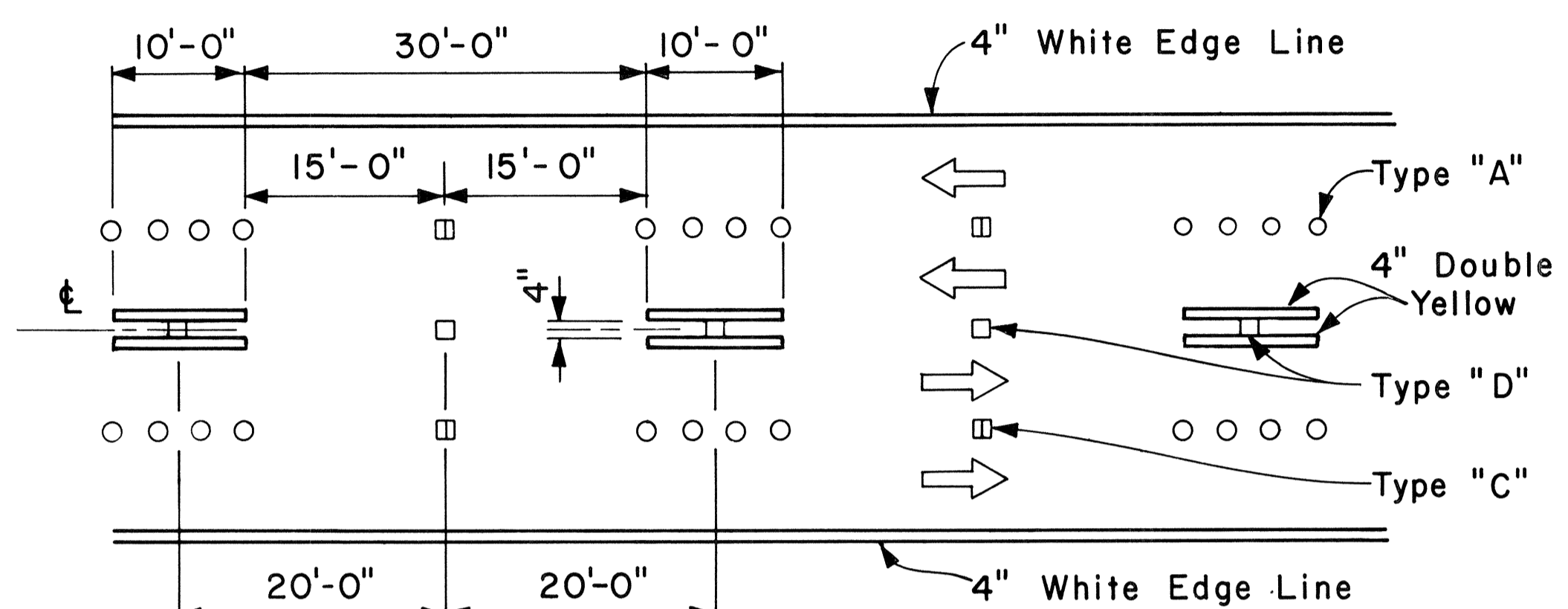
4" GUIDE LINE



PAVEMENT DIAMOND

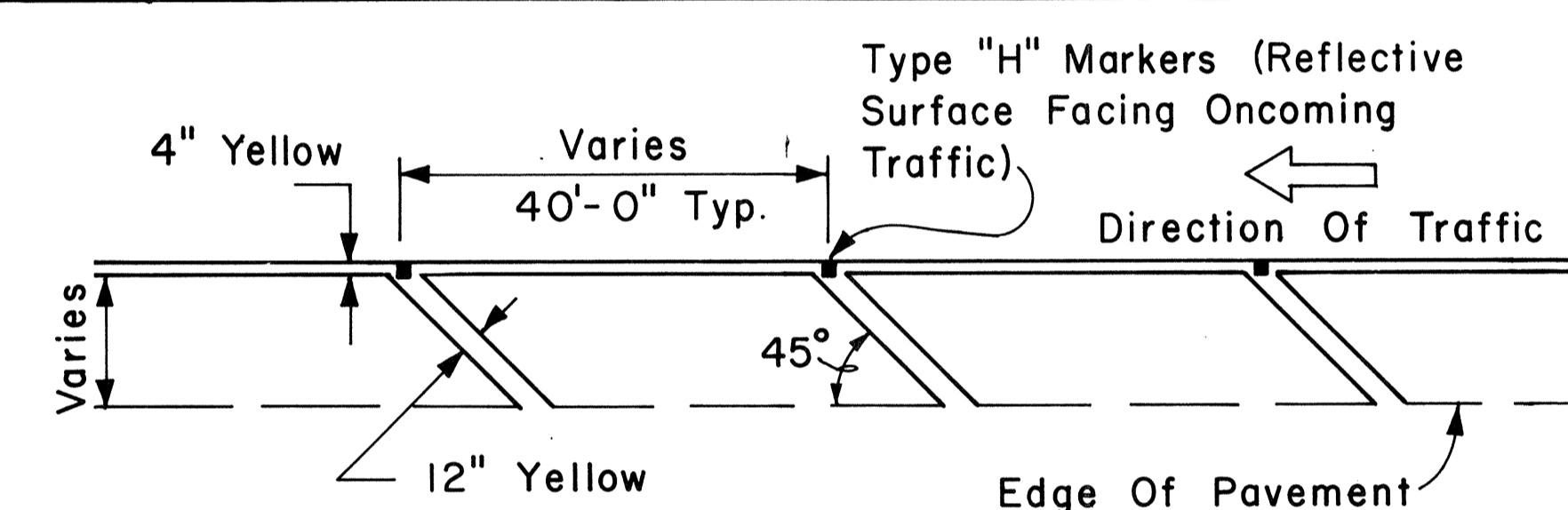


TRANSVERSE RIGHT SHOULDER MARKING

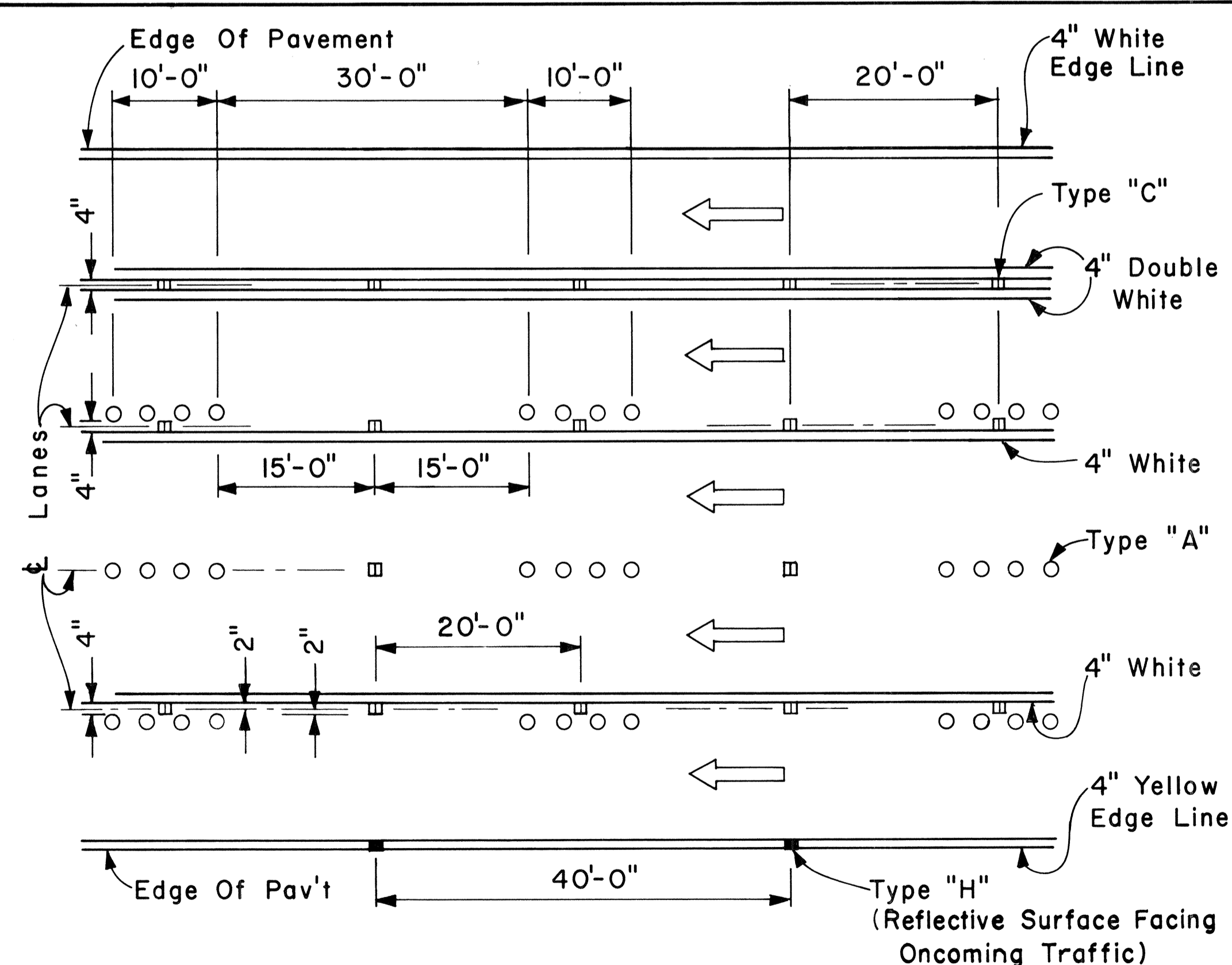


NOTE: Traffic Cone Usage Required.

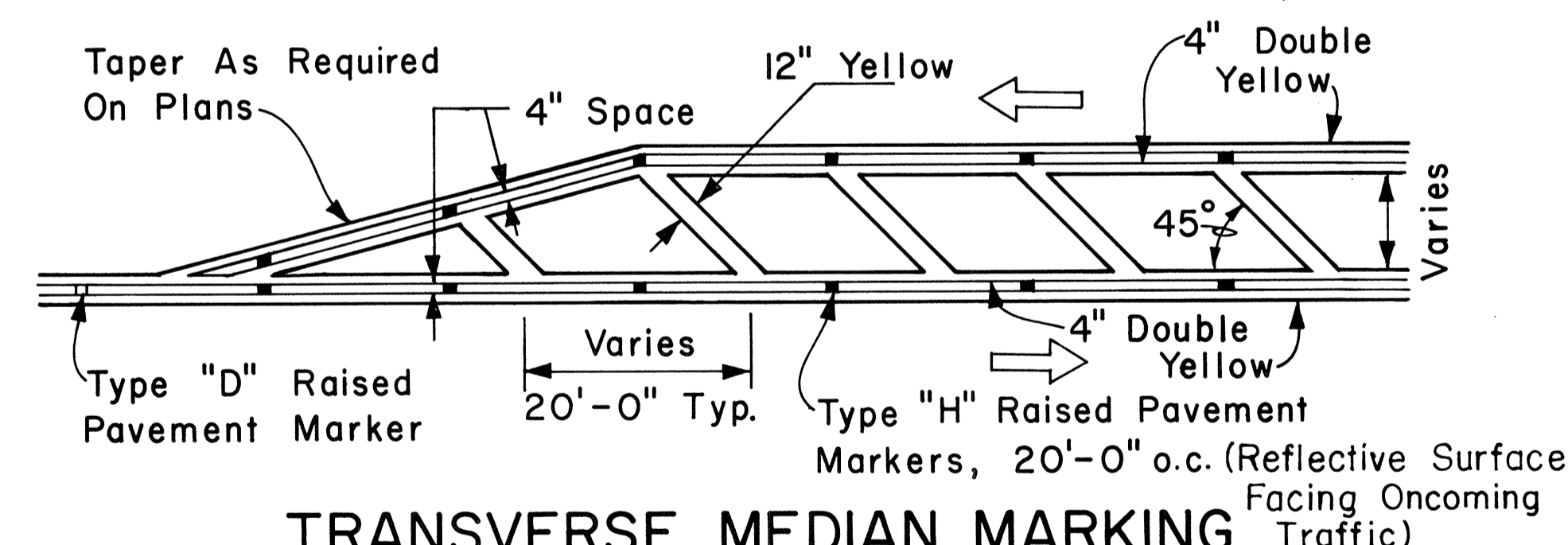
MULTI-LANE REVERSIBLE LANES



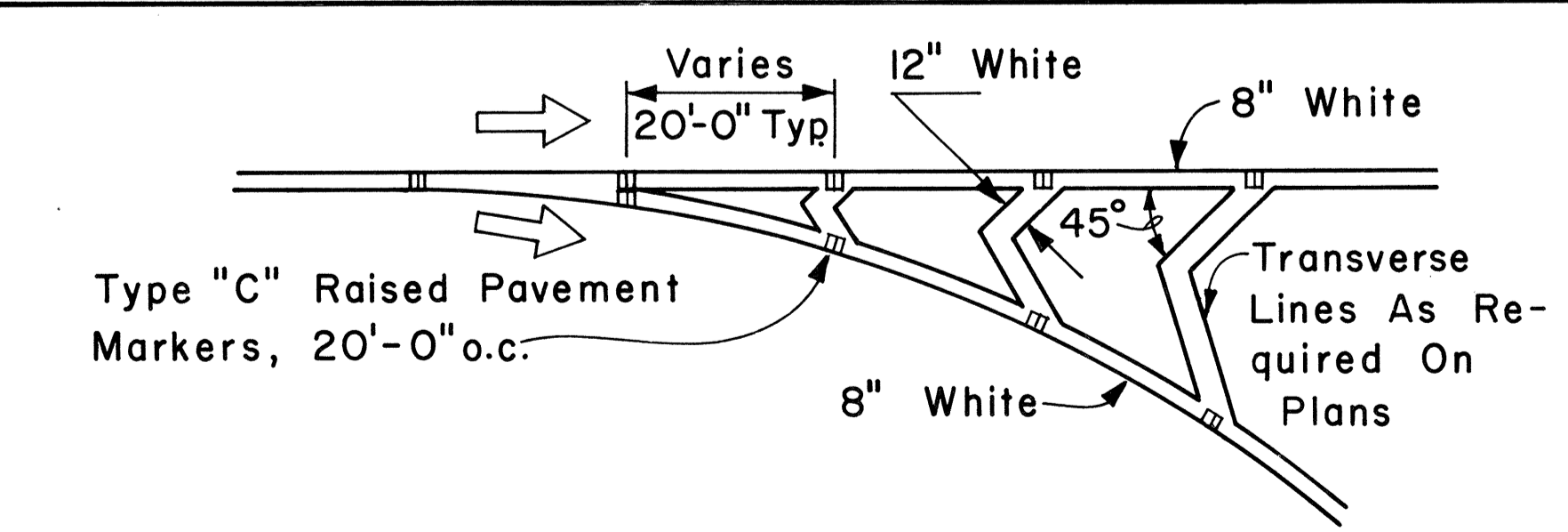
TRANSVERSE LEFT SHOULDER MARKING



MULTI-LANE LANE CHANGE RESTRICTION ZONES



TRANSVERSE MEDIAN MARKING



CHANNELIZING ISLAND

GENERAL NOTES:

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

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

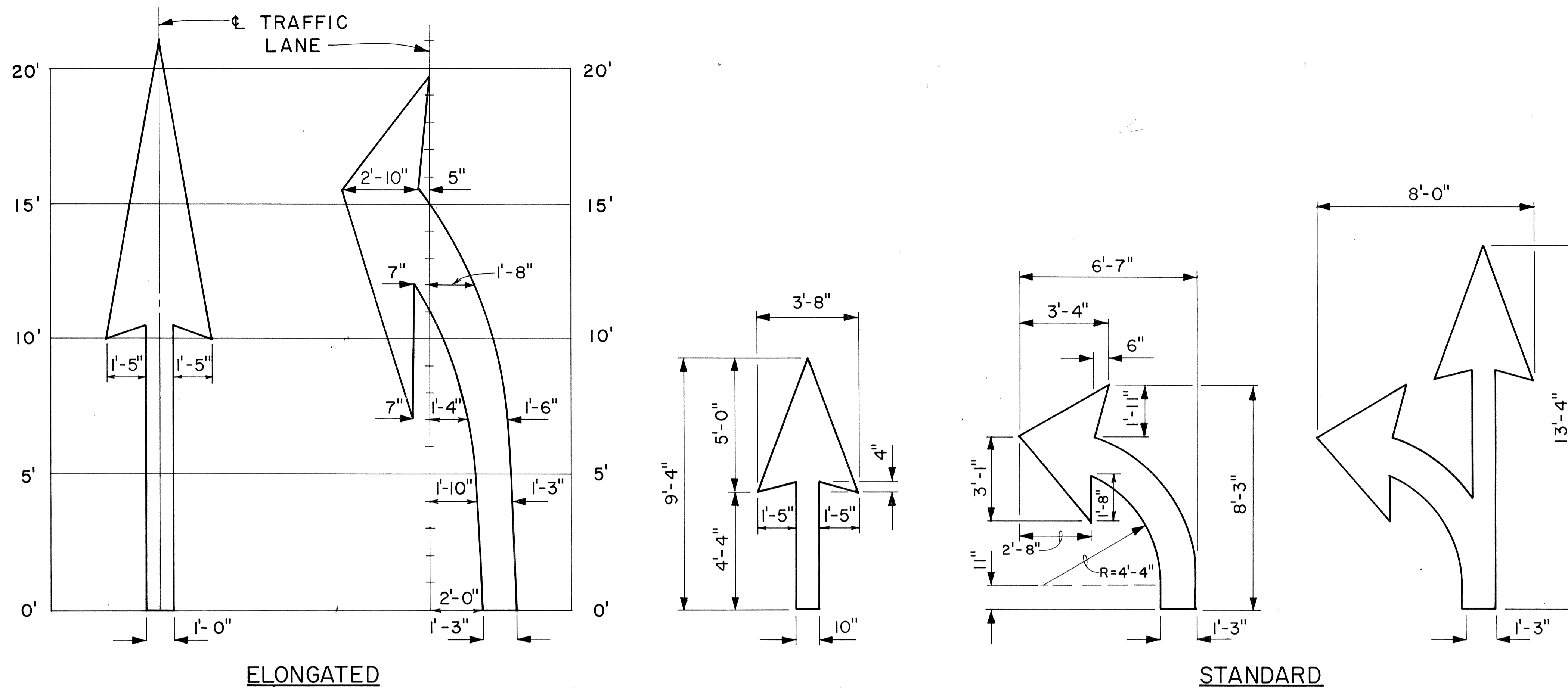
APPROVED:
Harbert S. Zalskiw 5/2/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
 MISCELLANEOUS
 PAVEMENT MARKINGS
 Scale: Not to Scale Date: April, 1978
 SHEET No. 26 OF 27 SHEETS DT 302

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	TQ-F078-113	1978	113	266

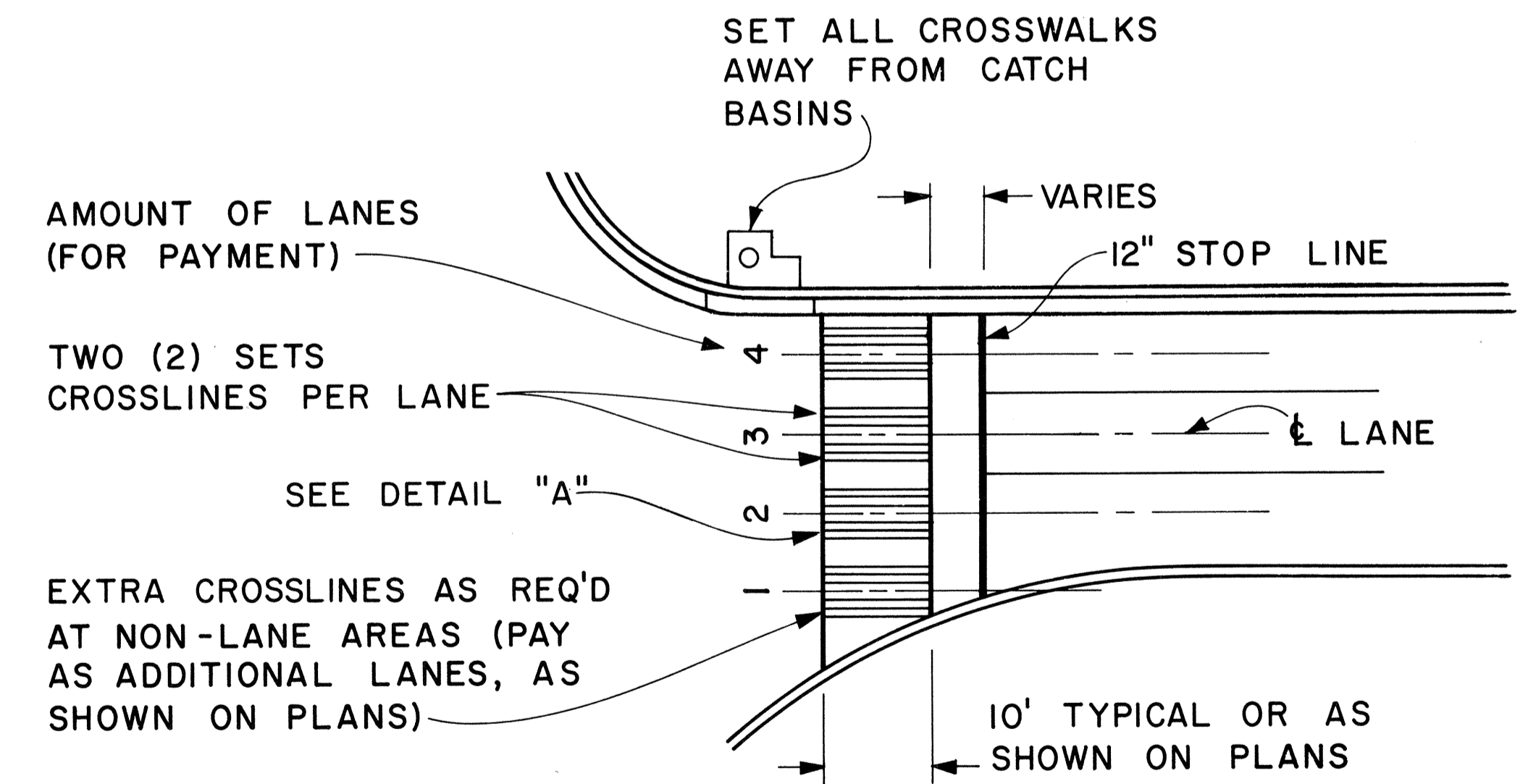


PAVEMENT ARROWS

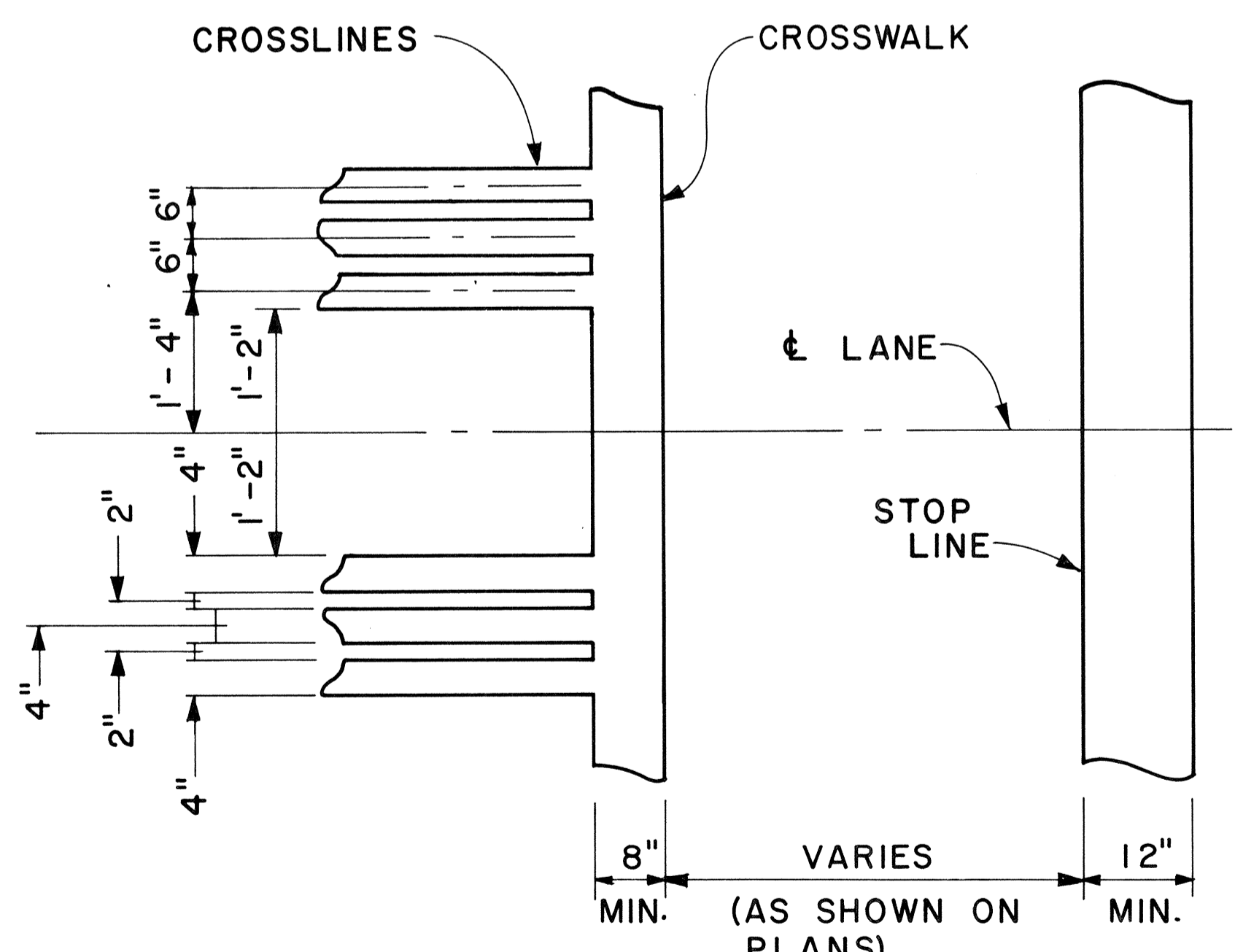
Scale: 3/8" = 1'

GENERAL NOTES:

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



PLAN



DETAIL "A"

CROSSWALK & STOP LINE

Scale: Not to Scale

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

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
 MISCELLANEOUS
 PAVEMENT MARKINGS
 Scale: As Shown Date: March, 1978
 SHEET NO. 27 OF 27 SHEETS DT 306

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