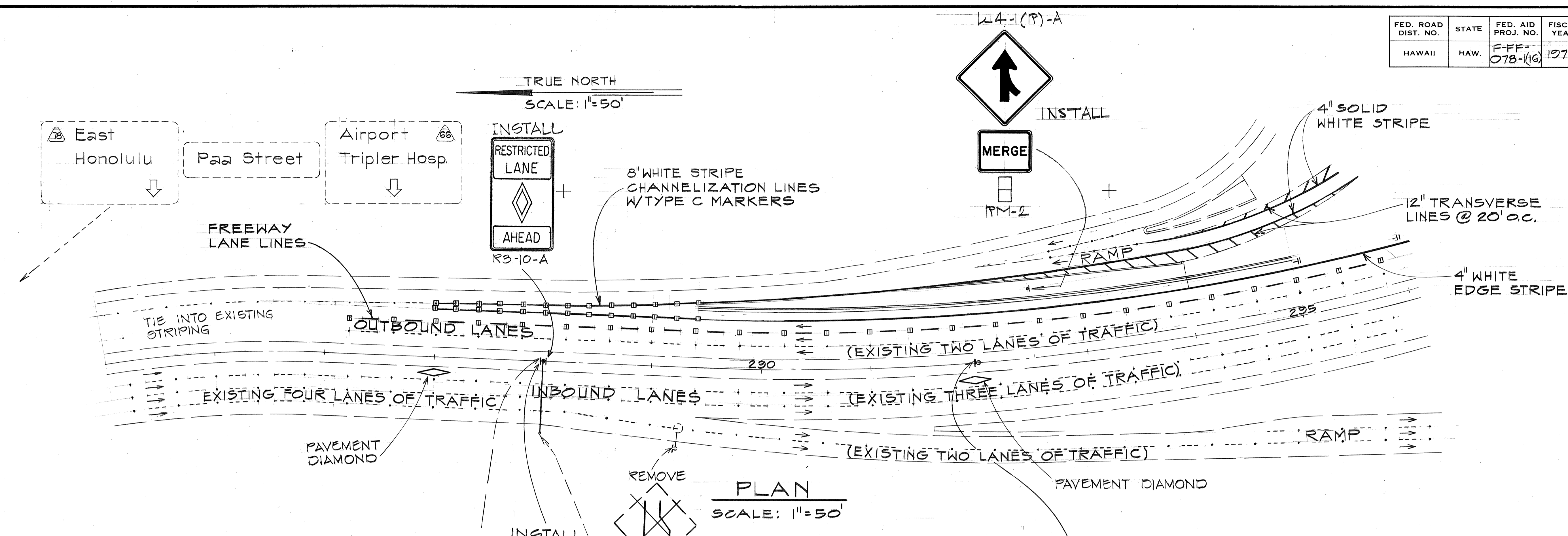


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(16)	1977	53	147



**GENERAL NOTES:**

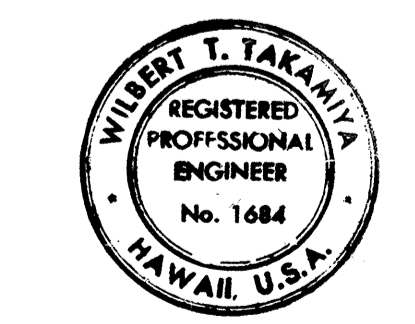
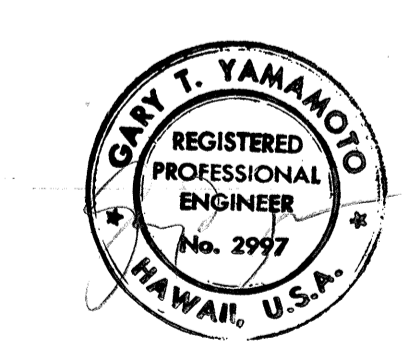
- UNLESS OTHERWISE DIRECTED, UPON COMPLETION OF CONSTRUCTION, SIGNS, BARRICADES, ETC., SHALL BECOME THE PROPERTY OF THE STATE AND SHALL BE DELIVERED TO THE FIELD OFFICE.
- EXISTING CONSTRUCTION SIGNS, PAVEMENT MARKERS, STRIPING AND SIGNS NOT COMPATIBLE WITH THE TRAFFIC PATTERN SHALL BE REMOVED. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO CONTRACT ITEM PAVEMENT STRIPING.

**LEGEND**

- 4" WHITE EDGE STRIPE
- CHANNELIZATION LINES W/TYPE C MARKERS
- FREEWAY LANE LINES
- 4" YELLOW EDGE STRIPE W/TYPE H MARKERS
- - - 4" WHITE GUIDE LINES
- |-|- RM-2
- ↖ WHITE PAINTED PAVEMENT ARROW
- ← DIRECTION OF TRAFFIC
- ||| CROSSWALK
- W|F RM-2 WALL MOUNTED

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

DATE	REVISION
2-23-78	INSTALL BUS - CAR POOL SIGNS AND MARKINGS
9-28-77	INSTALL W4-1(R)-A SIGN.



WILBERT T. TAKAMIYA  
THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

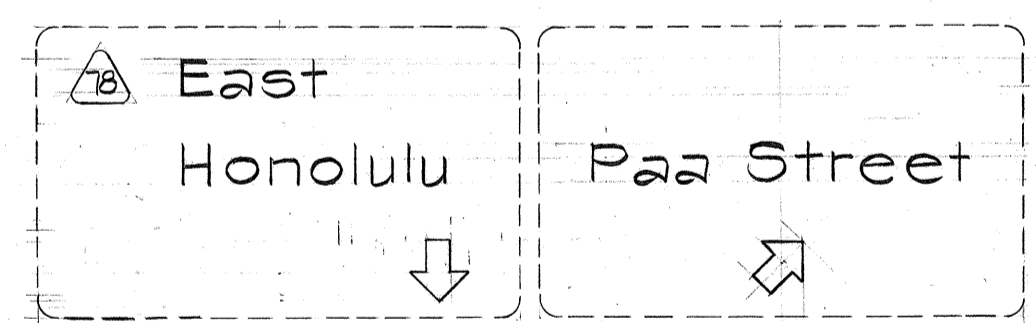
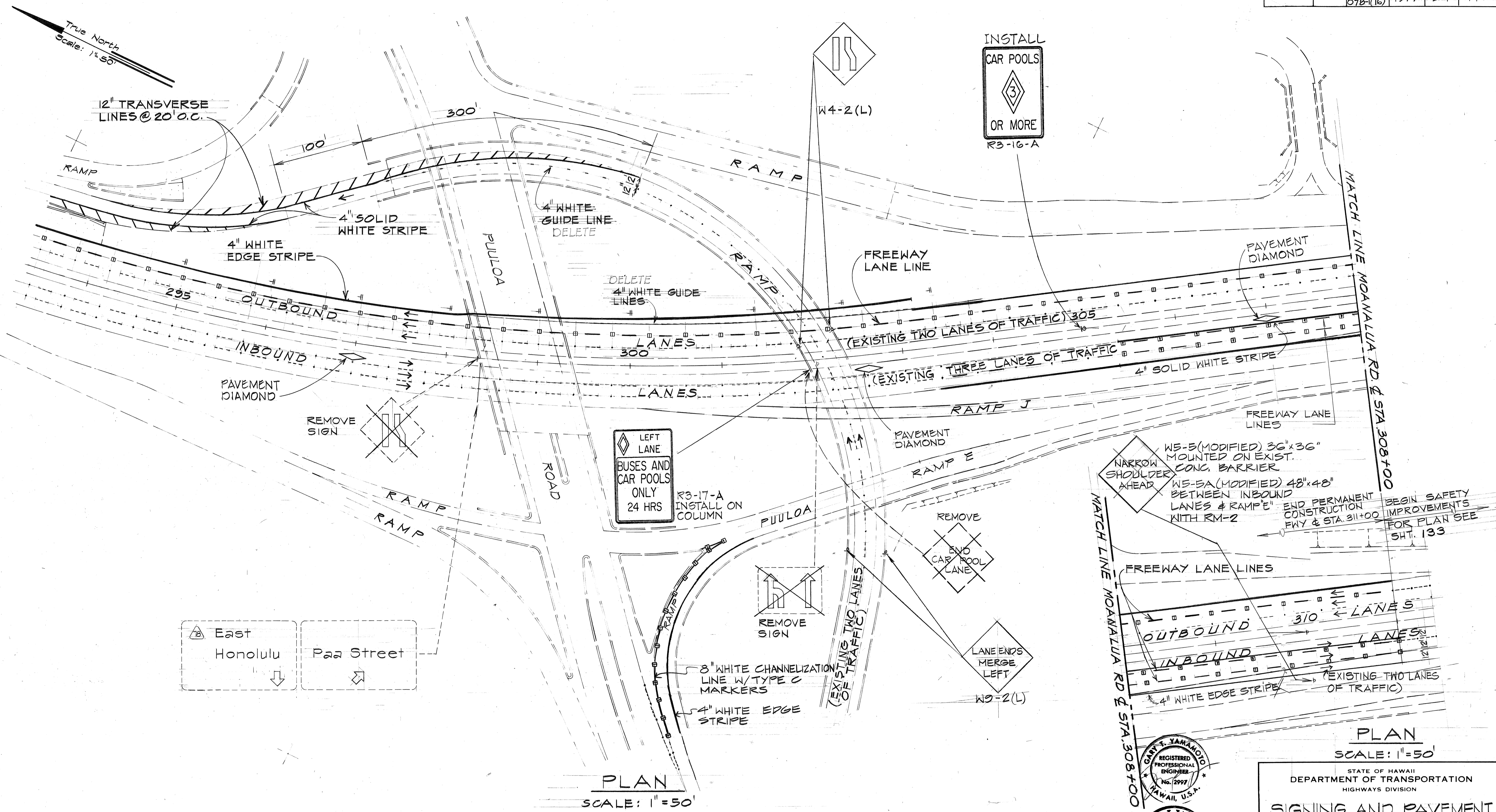
**SIGNING AND PAVEMENT MARKING PLAN**

MOANALUA ROAD  
PUULOA I.C. TO MIDDLE ST.-UNIT 1A  
F.A. Proj. NO. F-FF-078-1(16)

SCALE: AS SHOWN DATE: DEC. 17, 1976  
SHEET NO. 1 OF 4 SHEETS

C.O. 53

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(16)	1977	54	147



PLAN  
SCALE: 1"=50'

PLAN  
SCALE: 1"=50'

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

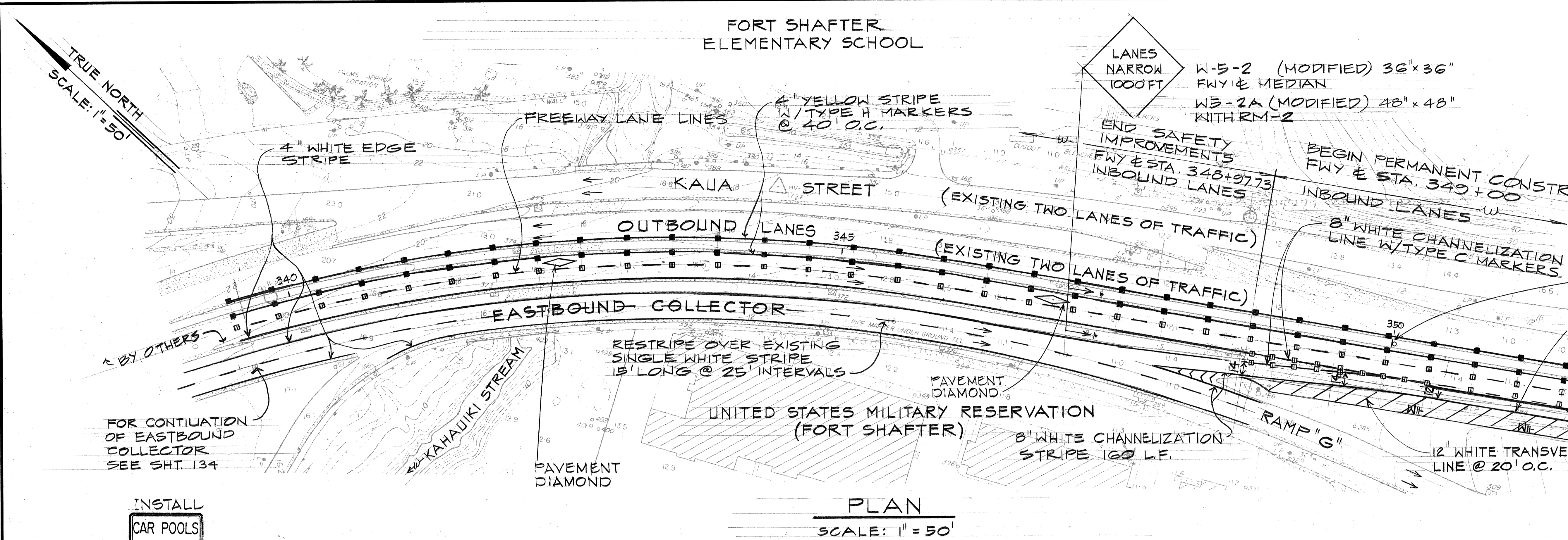
DATE	REVISION
8/29/78	STRIPING ADJUSTMENT
2/23/78	INSTALL BUS-CAR POOL SIGNS AND MARKINGS

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 1A  
 F.A. PROJ. NO. F-FF-078-1(16)  
 SCALE: AS SHOWN      DATE: DEC. 17, 1976  
 SHEET No. 2 OF 4 SHEETS

C.O. 54

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(6)	1977	55	147

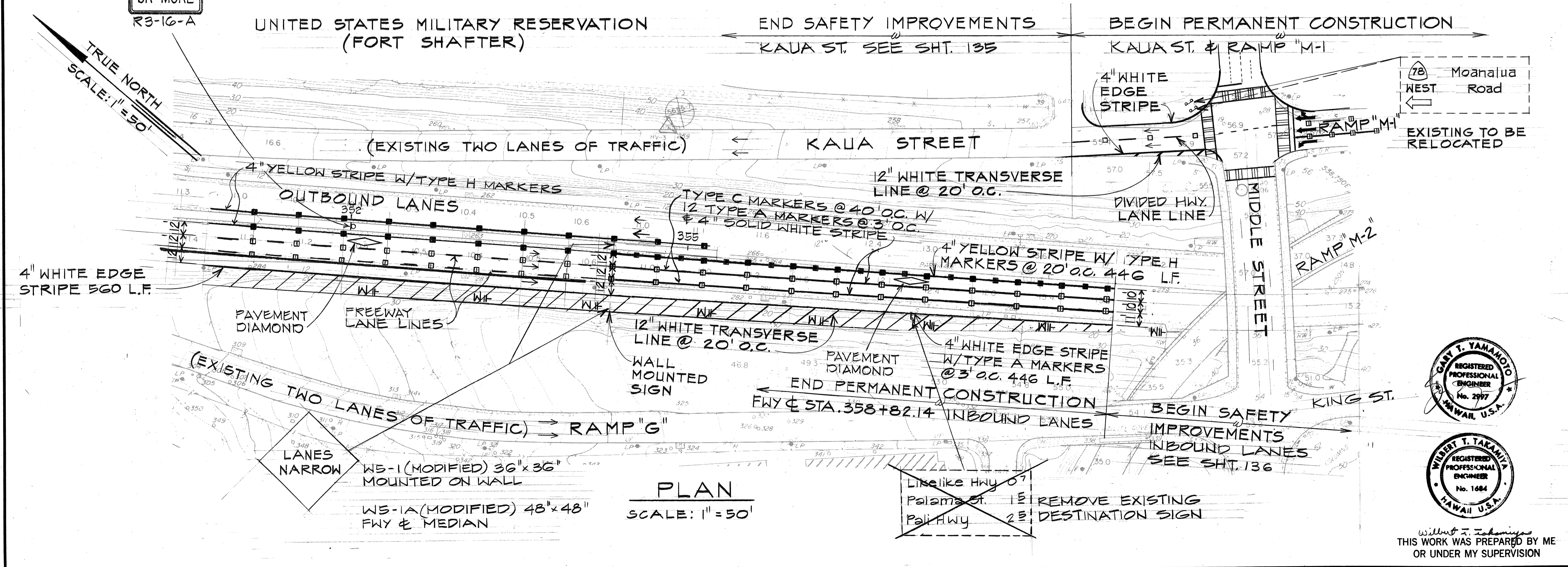


**PLAN**  
SCALE: 1" = 50'

INSTALL  
LEFT LANE  
BUSES AND  
CAR POOLS  
ONLY  
24 HRS  
R3-17-A

INSTALL LANE  
RESTRICTION STRIPING  
SEE PLAN SHT. C.O. 50

INSTALL  
CAR POOLS  
OR MORE  
R3-16-A



**PLAN**  
SCALE: 1" = 50'

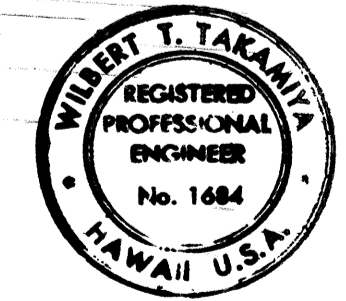
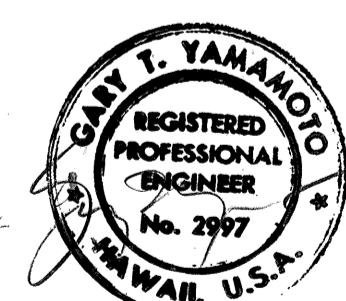
DATE	REVISION
8-23-78	STRIPING ADJUSTMENT
2/23/78	INSTALL BUS - CAR POOL SIGNS & MARKINGS

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGNING AND PAVEMENT MARKING PLAN**

MOANALUA ROAD  
PUULOA I.C. TO MIDDLE ST.-UNIT 1A  
F.A. PROJ. NO.

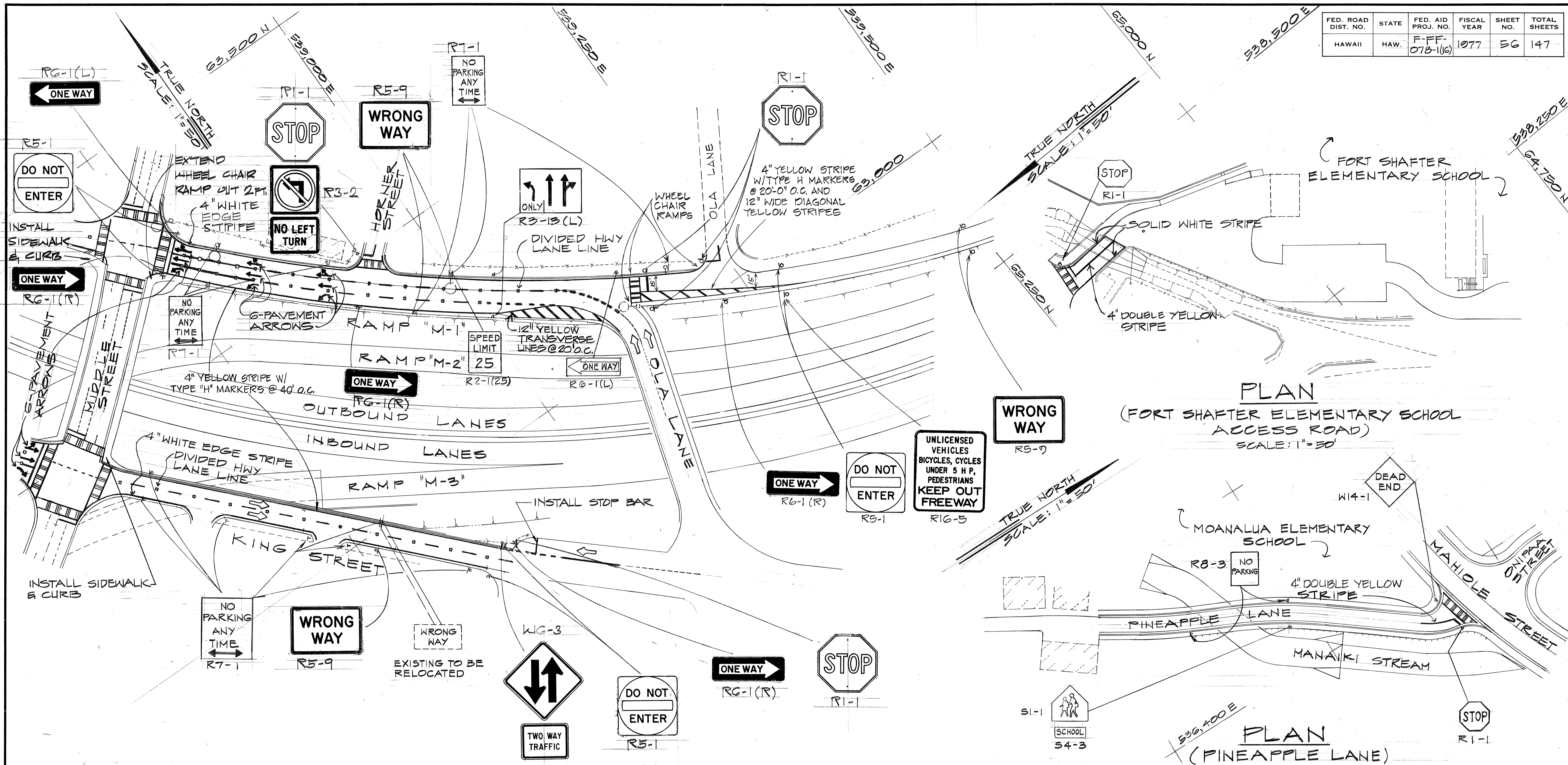
SCALE: AS SHOWN DATE: DEC. 17, 1976  
SHEET No. 3 OF 4 SHEETS



THIS WORK WAS PREPARED BY ME  
OR UNDER MY SUPERVISION

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(16)	1977	56	147



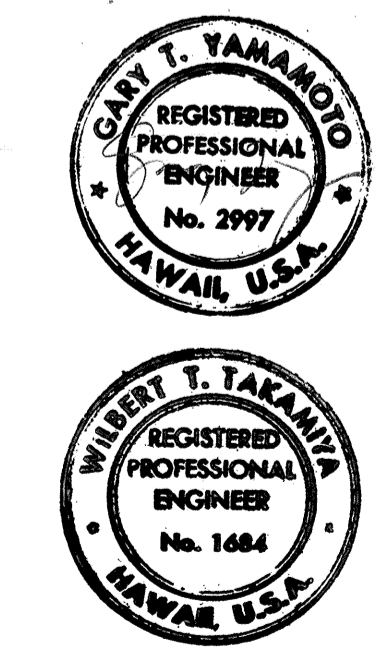
**PLAN**  
(FORT SHAFTER ELEMENTARY SCHOOL ACCESS ROAD)  
SCALE: 1" = 50'

**PLAN**  
(PINEAPPLE LANE)  
SCALE: 1" = 50'

**PLAN**  
SCALE: 1" = 50'

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

DATE	REVISION
8/23/78	REMOVE HAZARDOUS W/C RAMP & INSTALL STRIPING
5/18/78	REVISE SIGNING & STRIPING TO KEEP OLA LANE OPEN
9-28-77	REVISE SIGNING LAYOUT, UPGRADE SIGNS TO MEET LATEST STANDARD DETAILS & SPECIFICATIONS.



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**SIGNING AND PAVEMENT MARKING PLAN**

MOANALUA ROAD  
PUULOA I.C. TO MIDDLE ST. - UNIT 1A  
F.A. Proj. No. F-FF-078-1(16)  
SCALE: AS SHOWN DATE: DEC. 17, 1976  
SHEET NO. 4 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(16)	1977	57	147

### RAISED PAVEMENT MARKERS SUMMARY

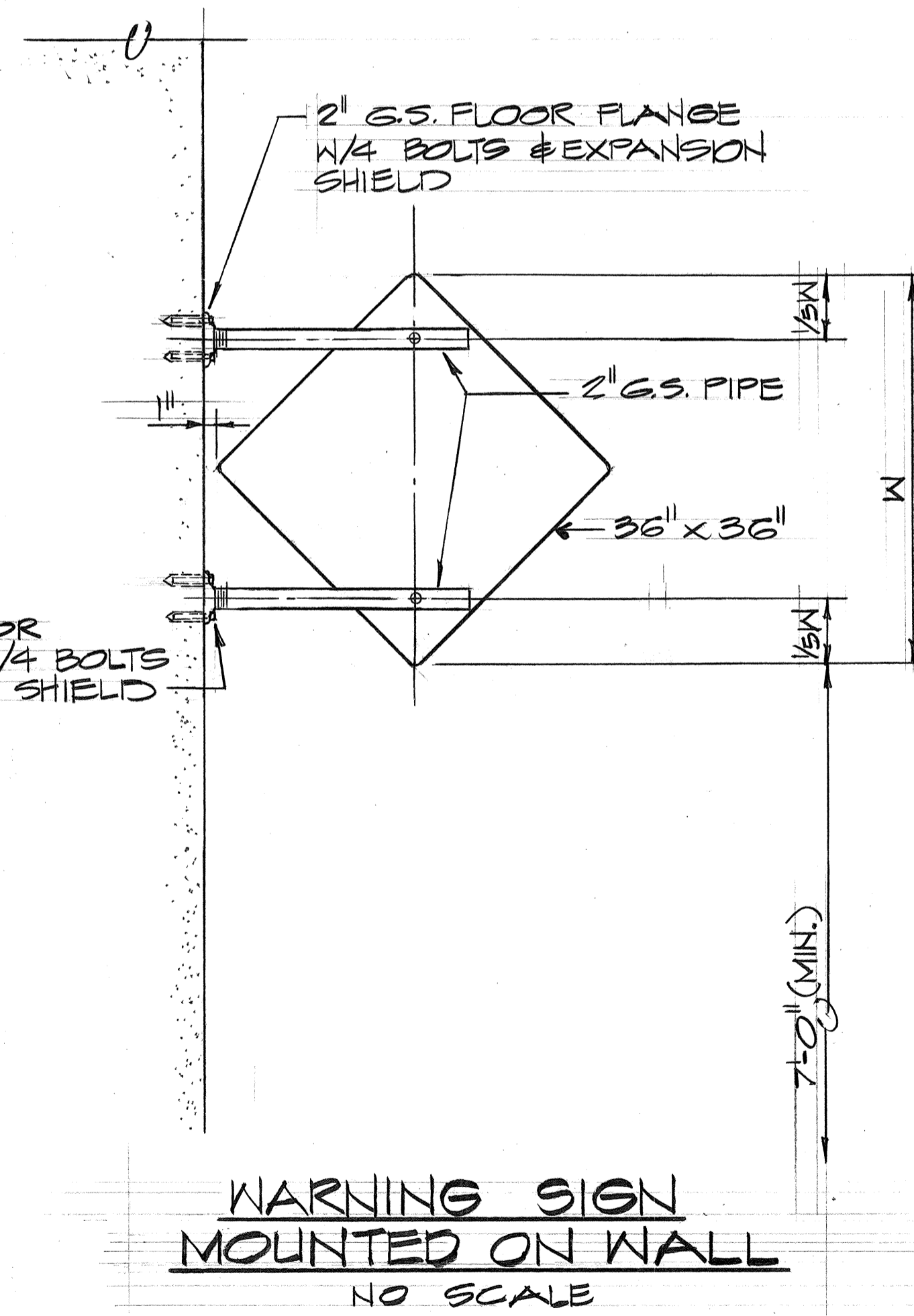
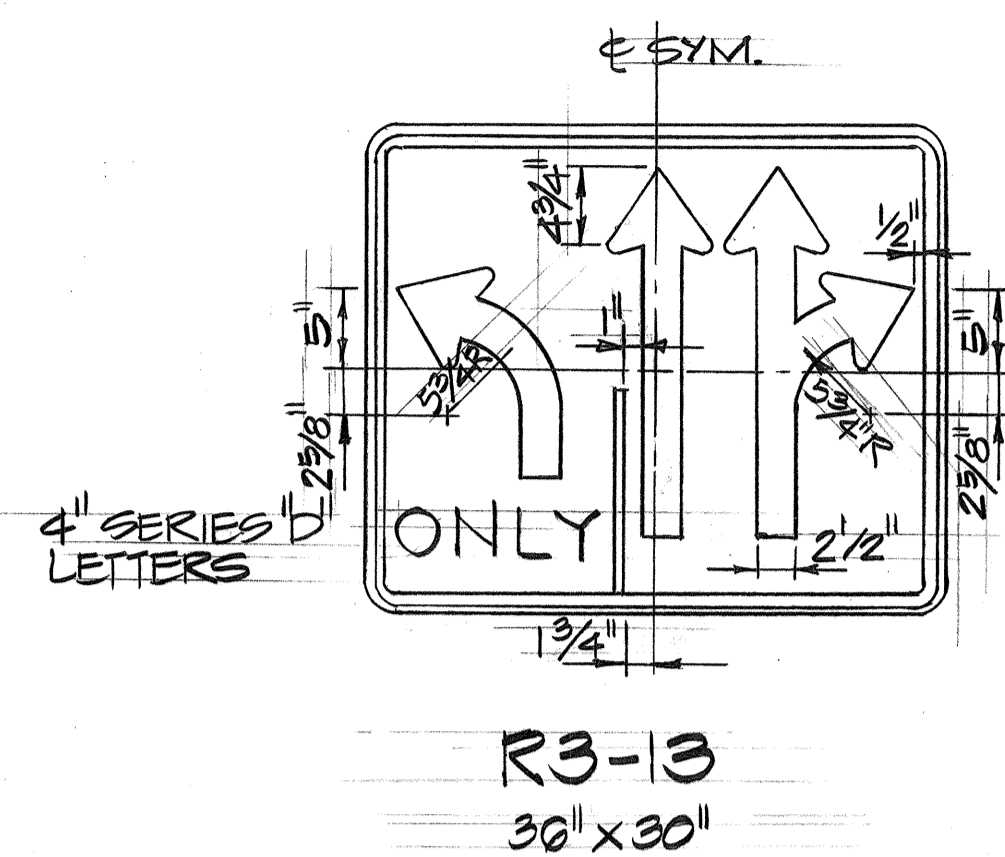
SHEET NO.	QUANTITIES		
	TYPE A	TYPE C	TYPE H
1	108	54	
2	240	73	
3	360	63	54
4	162	36	
<b>TOTAL</b>	<b>870</b>	<b>226</b>	<b>54</b>

### PAVEMENT SIGNING SUMMARY

TYPE	DESCRIPTION	QUANTITY	
		W/P	W/O/P
R1-1	STOP	2	
R3-13(L)	↑↑↑ ONLY	2	
R7-1	NO PARKING ANY TIME		5
R8-3	NO PARKING	2	
W4-2(L)			2
W5-1 MODIFIED	LANES NARROW		1
W5-1A MODIFIED	LANES NARROW		1
W5-5 MODIFIED	NARROW SHOULDER AHEAD		1
W5-5A MODIFIED	NARROW SHOULDER AHEAD	1	
W9-2(L)	LANE ENDS MERGE LEFT		2
W14-1	DEAD END	1	2
S1-1		1	
S4-3	SCHOOL		1
<b>TOTAL</b>		<b>9</b>	<b>15</b>

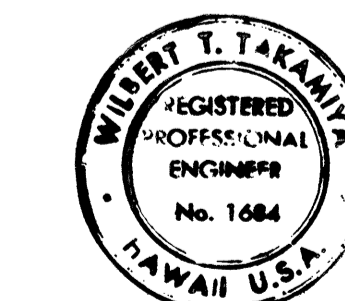
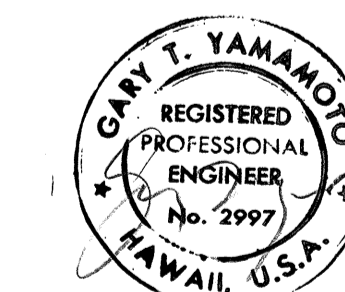
### BUS-CAR POOL SIGN SUMMARY

TYPE	DESCRIPTION	QUANTITY	
		W/P	W/O/P
R3-10-A	RESTRICTED LANE AHEAD		1
R3-16-A	CAR POOLS 3 OR MORE	3	
R3-17-A	LEFT LANE BUSES AND CAR POOLS ONLY 24 HOURS	1	2



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

**WARNING SIGN  
MOUNTED ON WALL**  
NO SCALE



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2/23/78	ADD BUS - CAR POOL SIGNING AND MARKING SCHEDULES
DATE	REVISION

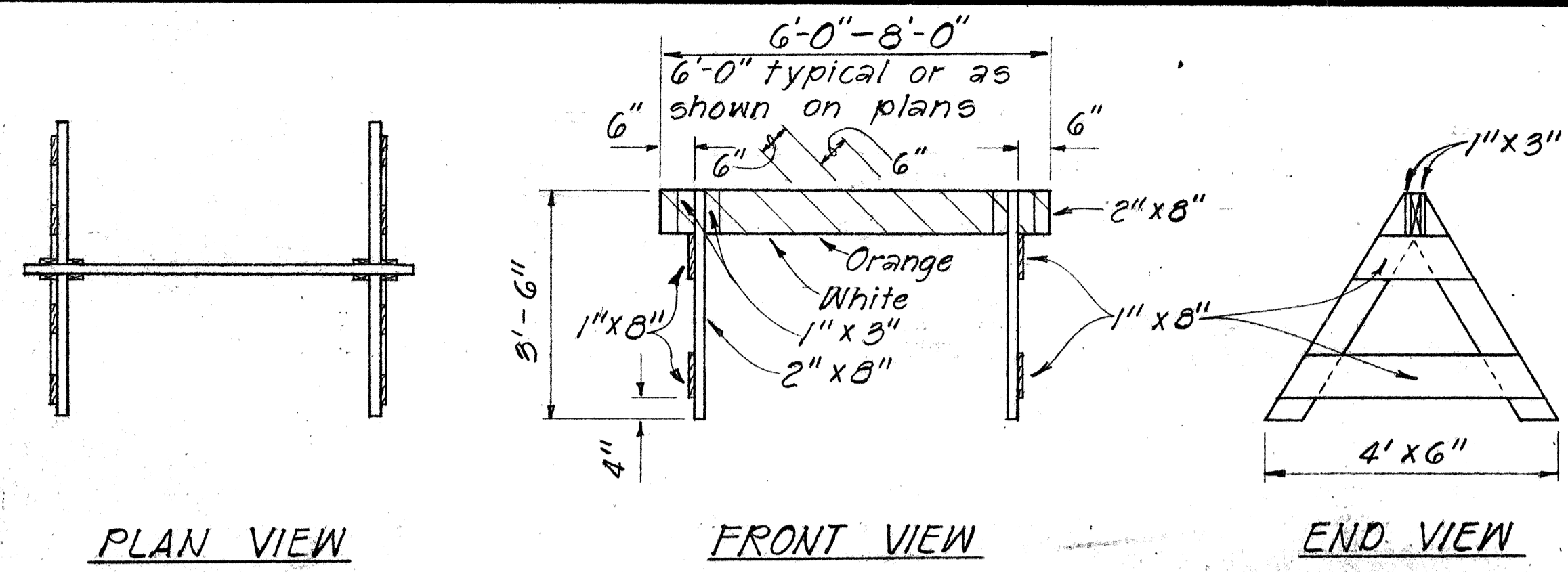
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

### SIGNING DETAILS

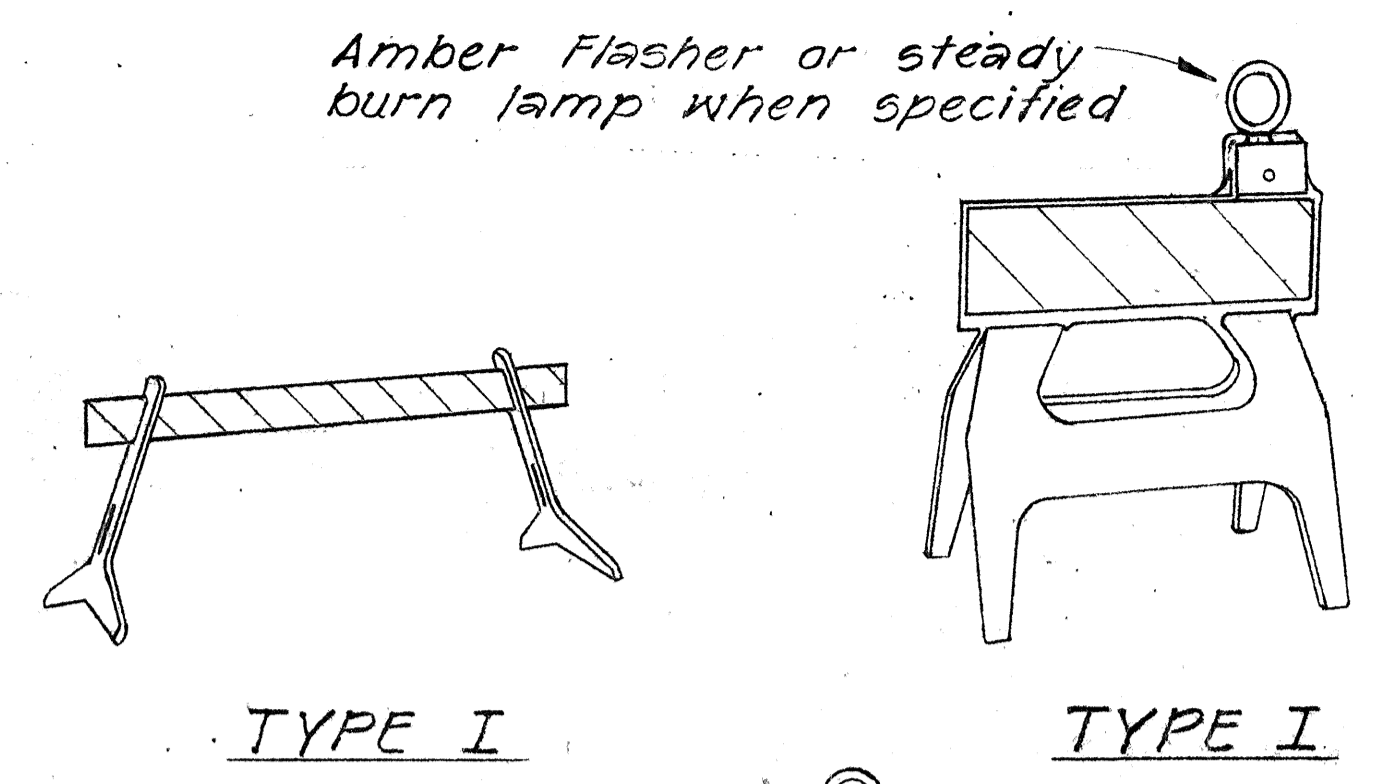
MOANALUA ROAD  
PUULOA I.C. TO MIDDLE ST. UNIT 1A  
F.A. Proj. No. F-FF-078-1(16)

SCALE: AS SHOWN    DATE: DEC. 17, 1976  
SHEET No. 1 OF 11 SHEETS

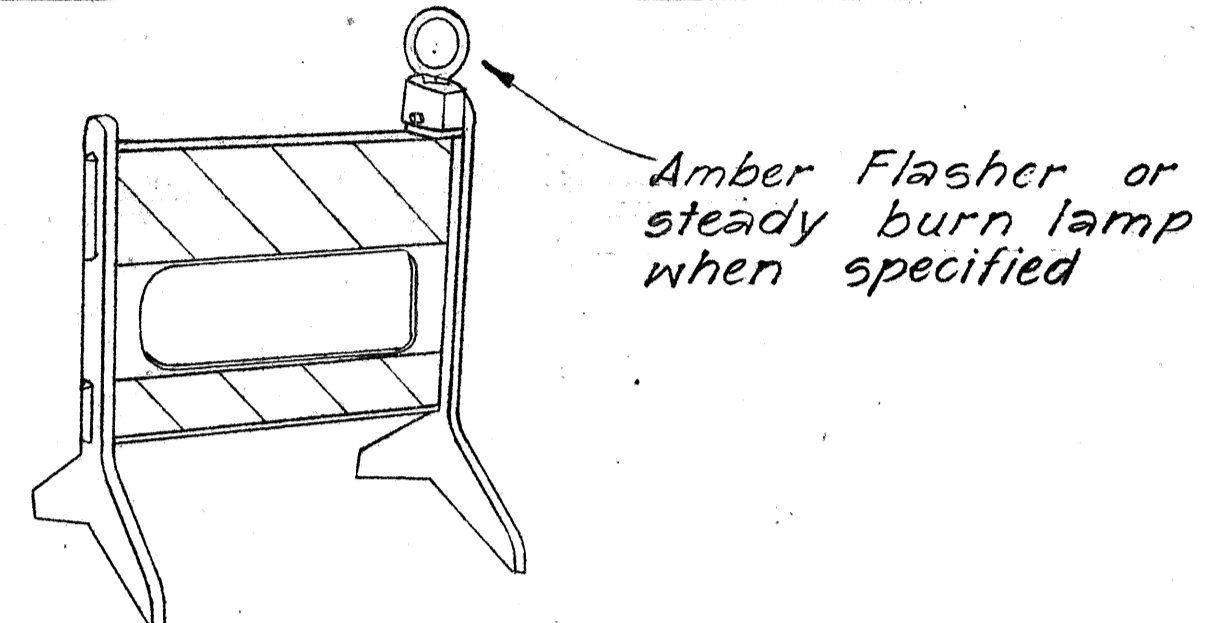
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-F-078-1(6)	1977	58	147



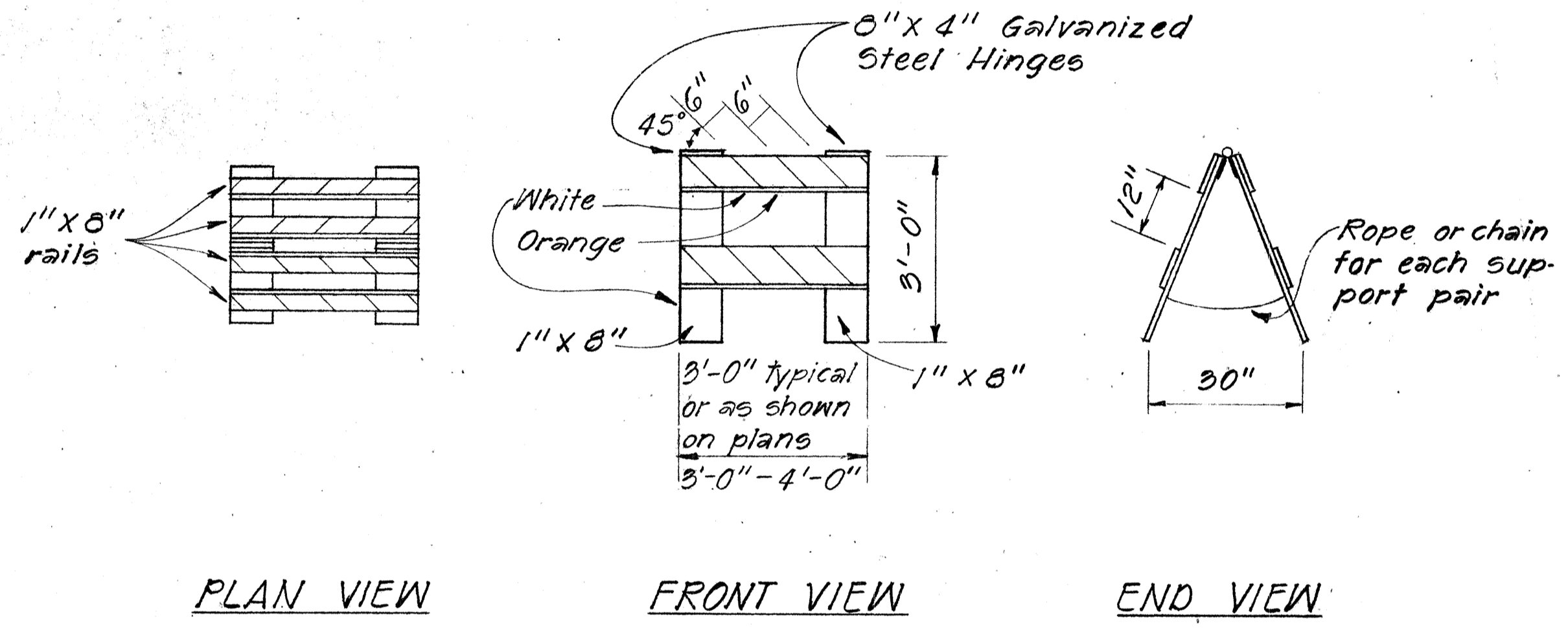
**TYPE I BARRICADE**  
Scale: 1/2" = 1'-0"



TYPE I TYPE I



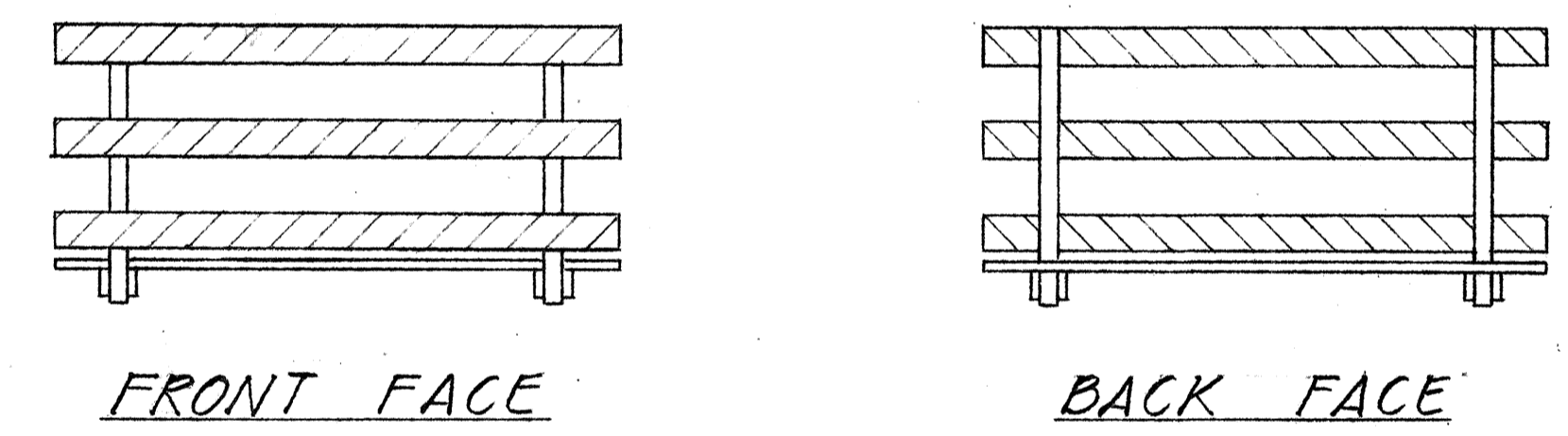
TYPE II



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

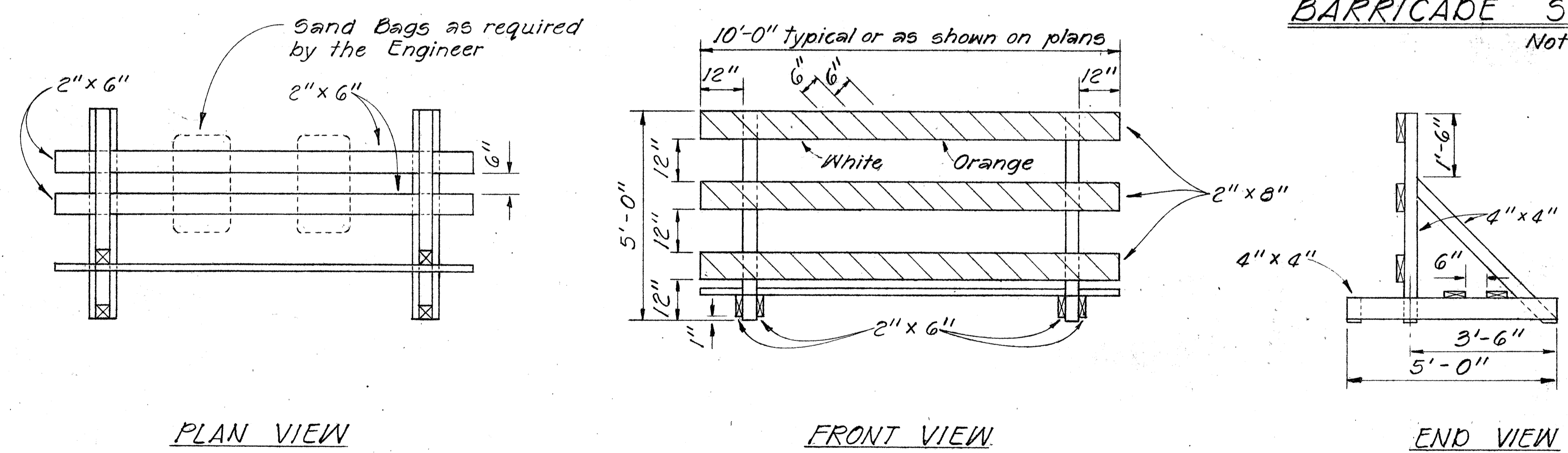
**PLASTIC MOLDED BARRICADE OPTIONS \***

Not to Scale  
\* Shop Drawings must be submitted for approval.



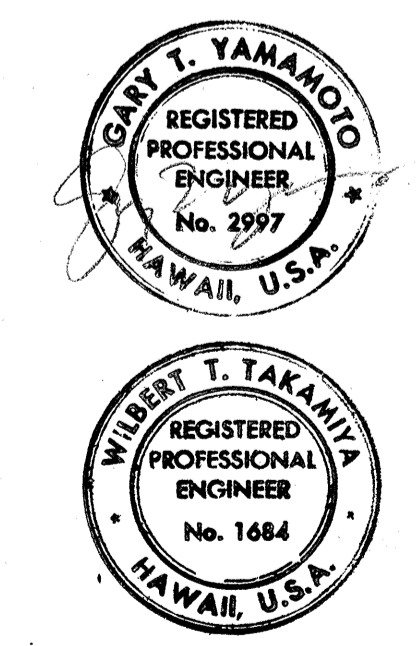
FRONT FACE BACK FACE

**BARRICADE STRIPING DETAILS**  
Not to Scale



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

- GENERAL NOTES**
- The Contractor shall construct, install and maintain the barricades at the locations shown on the Plans.
  - The barricades shall be left in place or relocated upon completion of the project as ordered by the Engineer and are to become State property, unless otherwise specified.
  - The orange and white stripes shall slant downward toward the side on which traffic is to pass and shall be reflectorized with reflective sheeting.
  - Both faces of the barricade rails shall be striped. See Striping Detail Arrangement.
  - Contractor may submit alternate designs for approval.
  - Barricade details shall conform to the "Manual on Uniform Traffic Control Devices for Streets and Highways," 1971, by the Federal Highway Administration and as amended.
  - If wooden rails are used, 26 ga. galv. steel sheet shall be first tacked on to the rails and then overlaid with reflective sheeting.



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

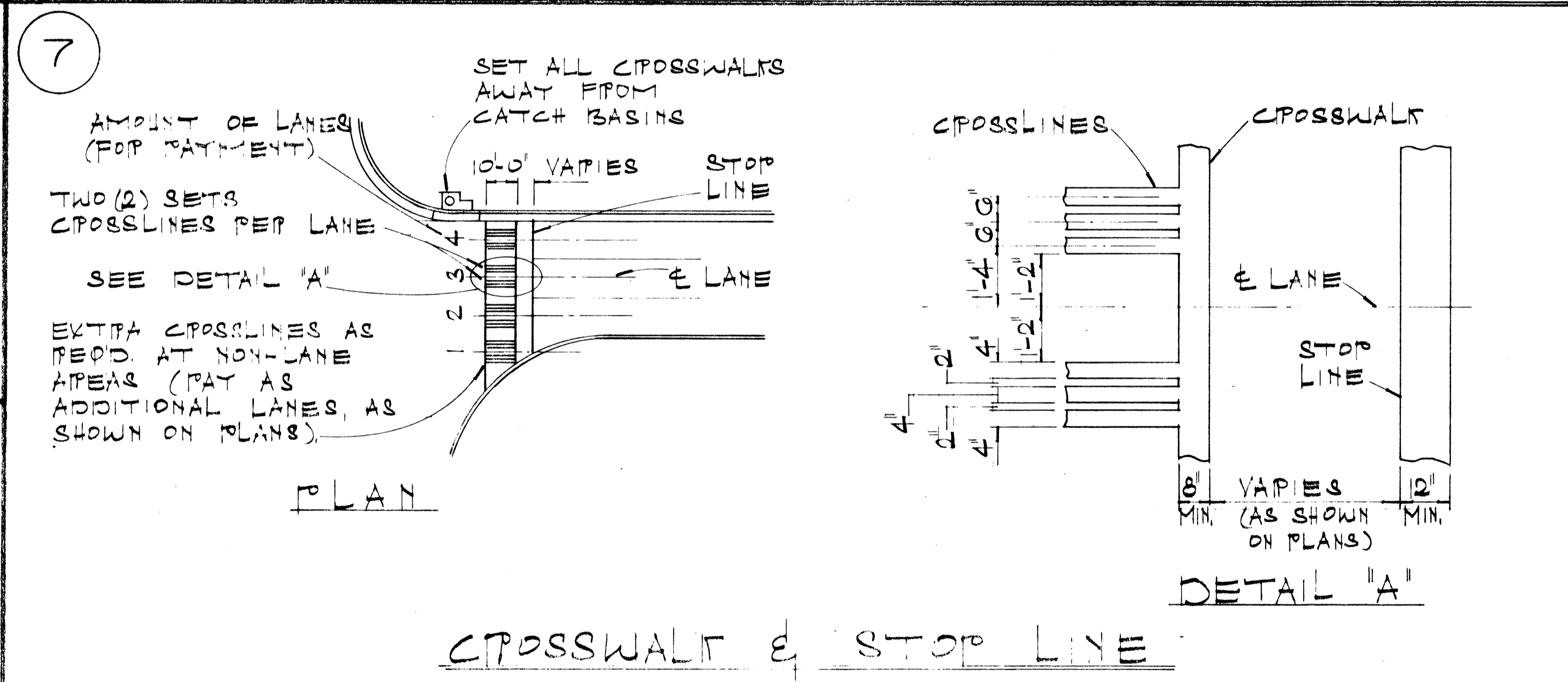
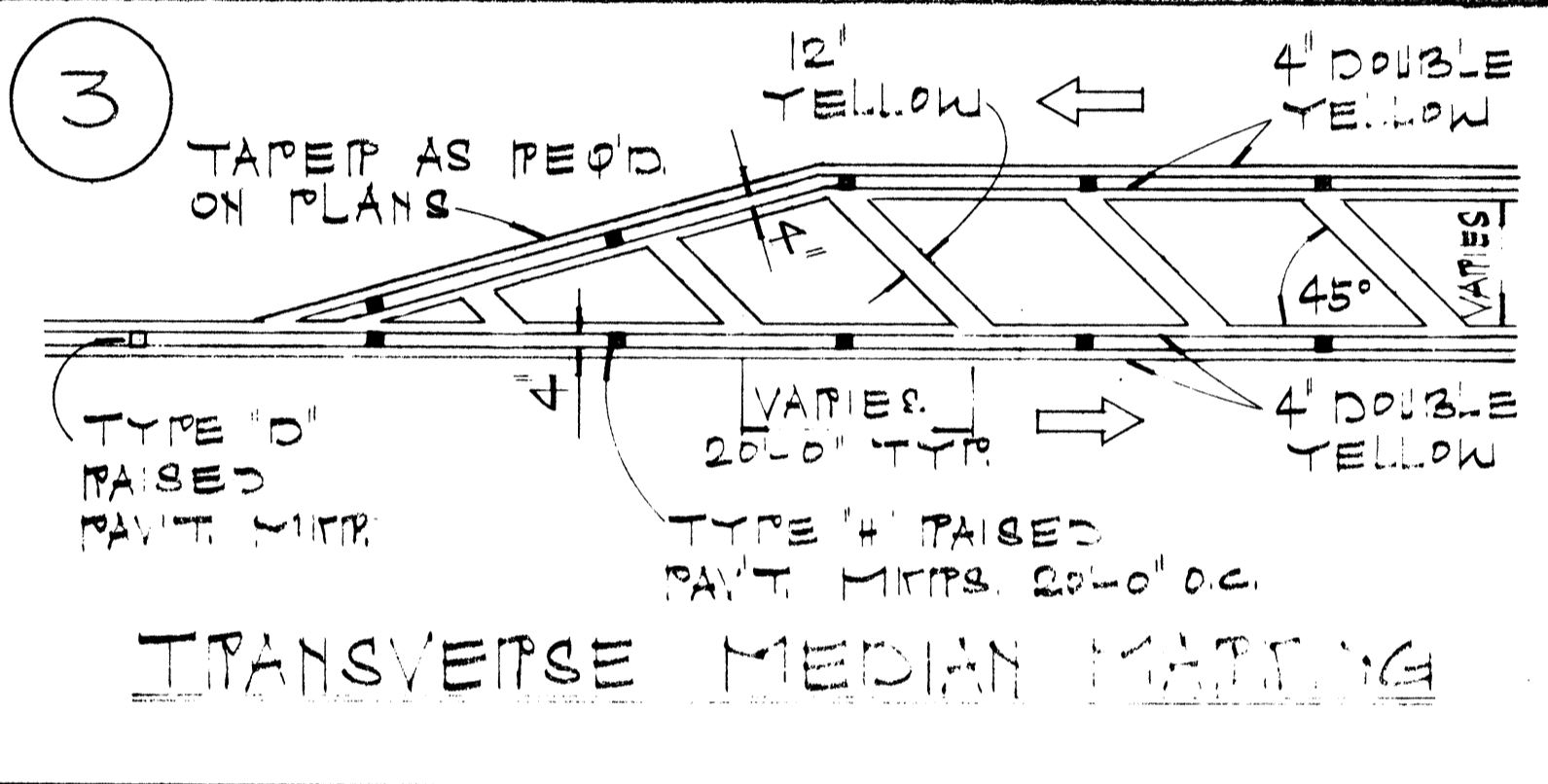
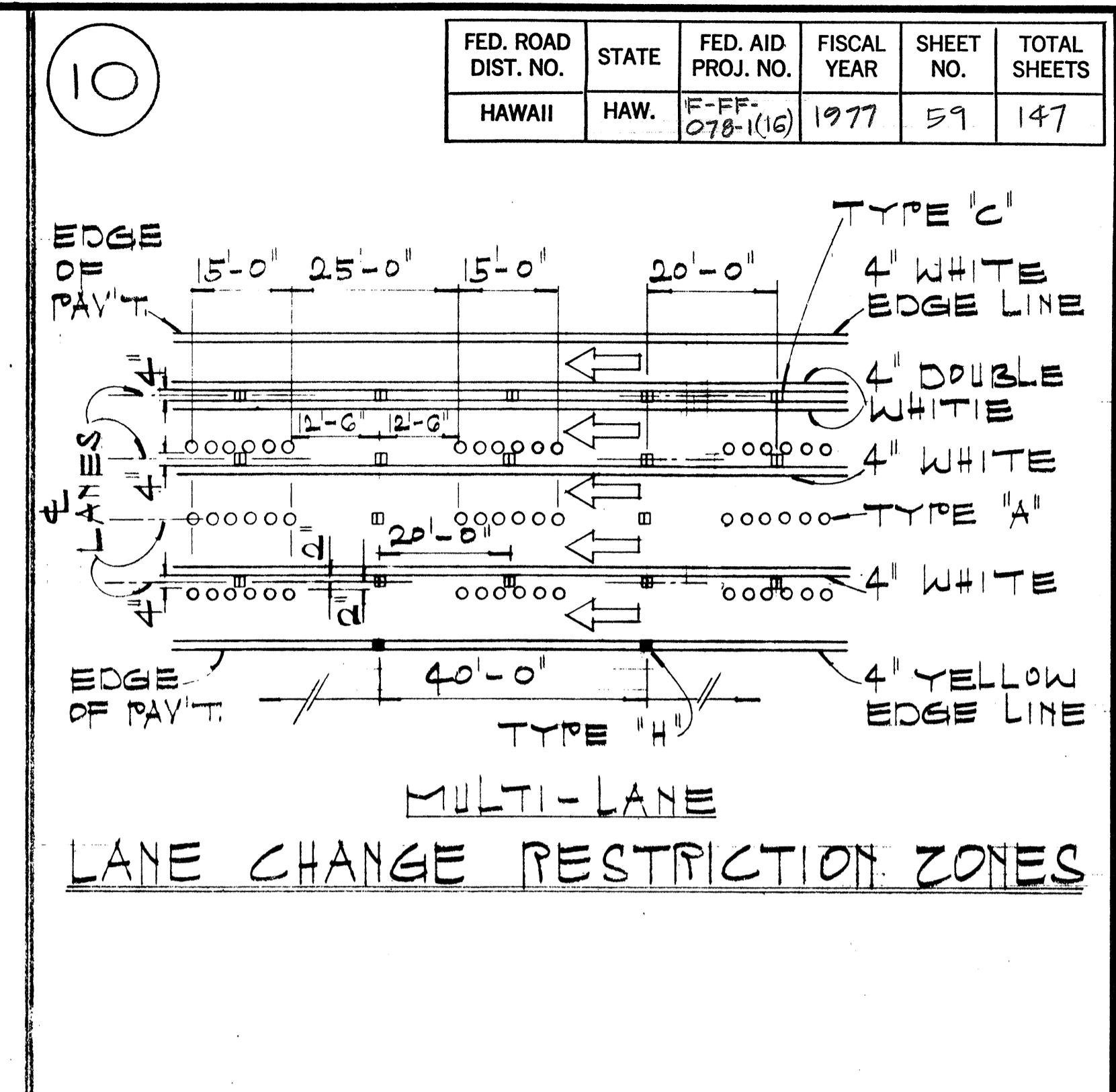
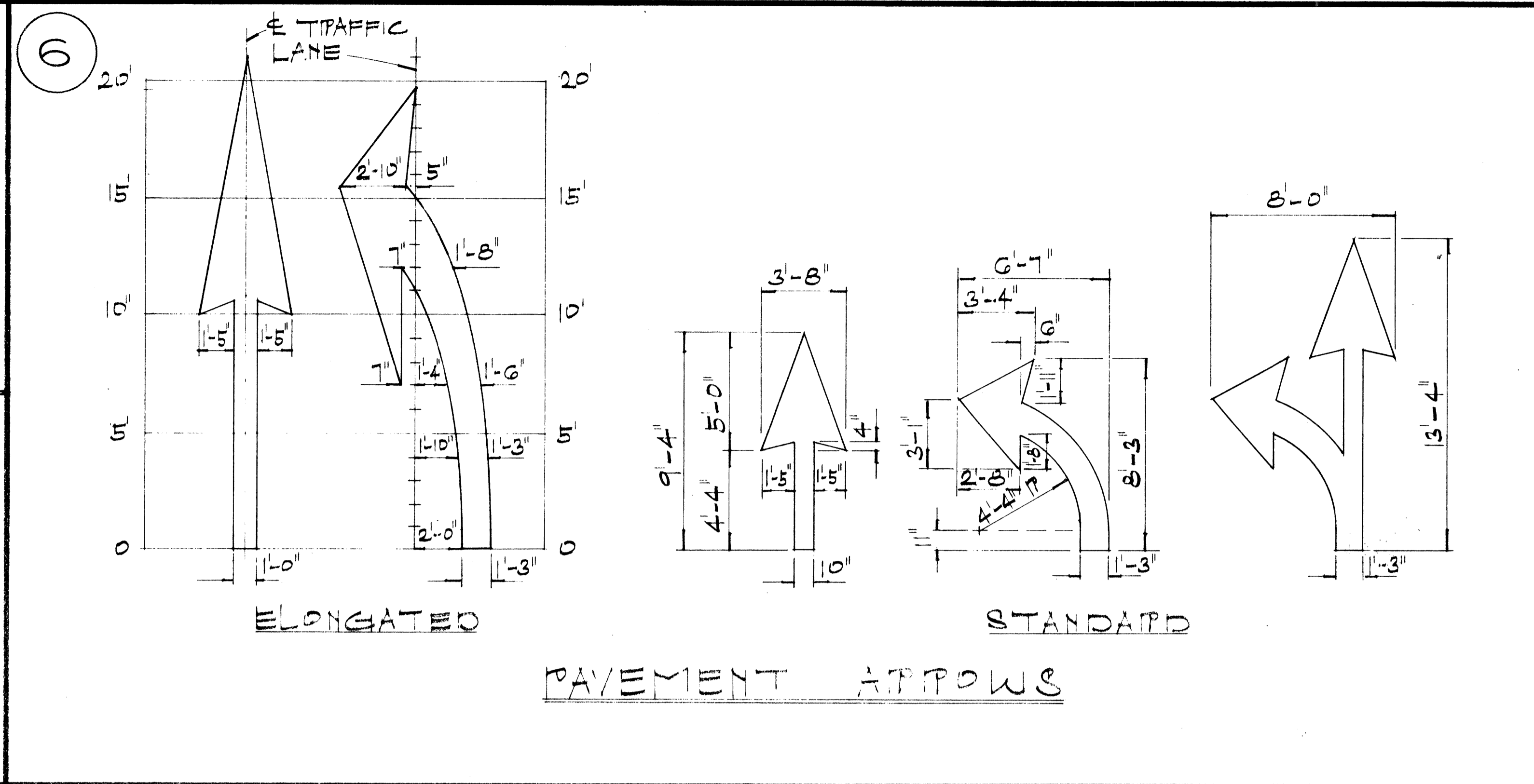
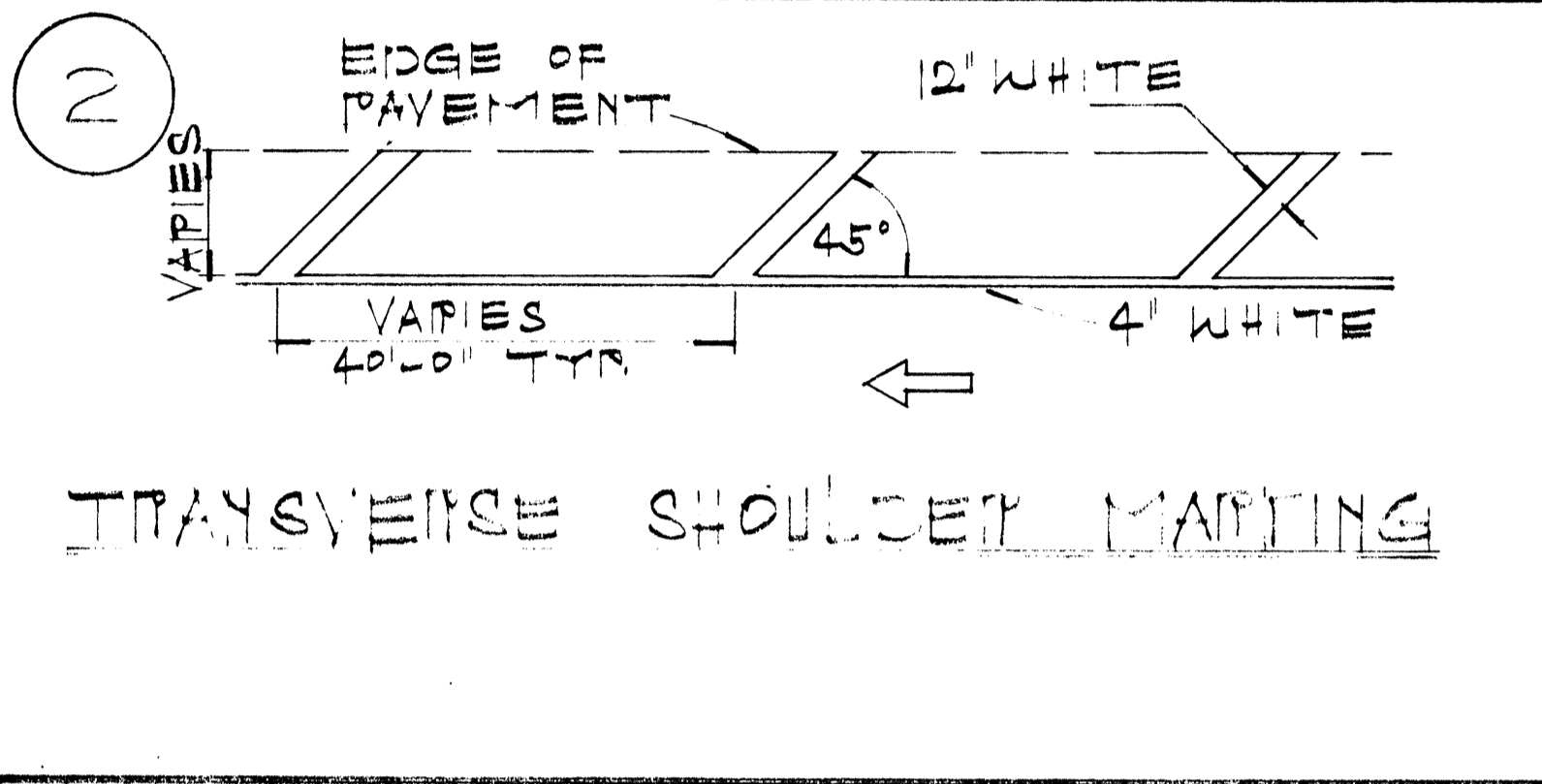
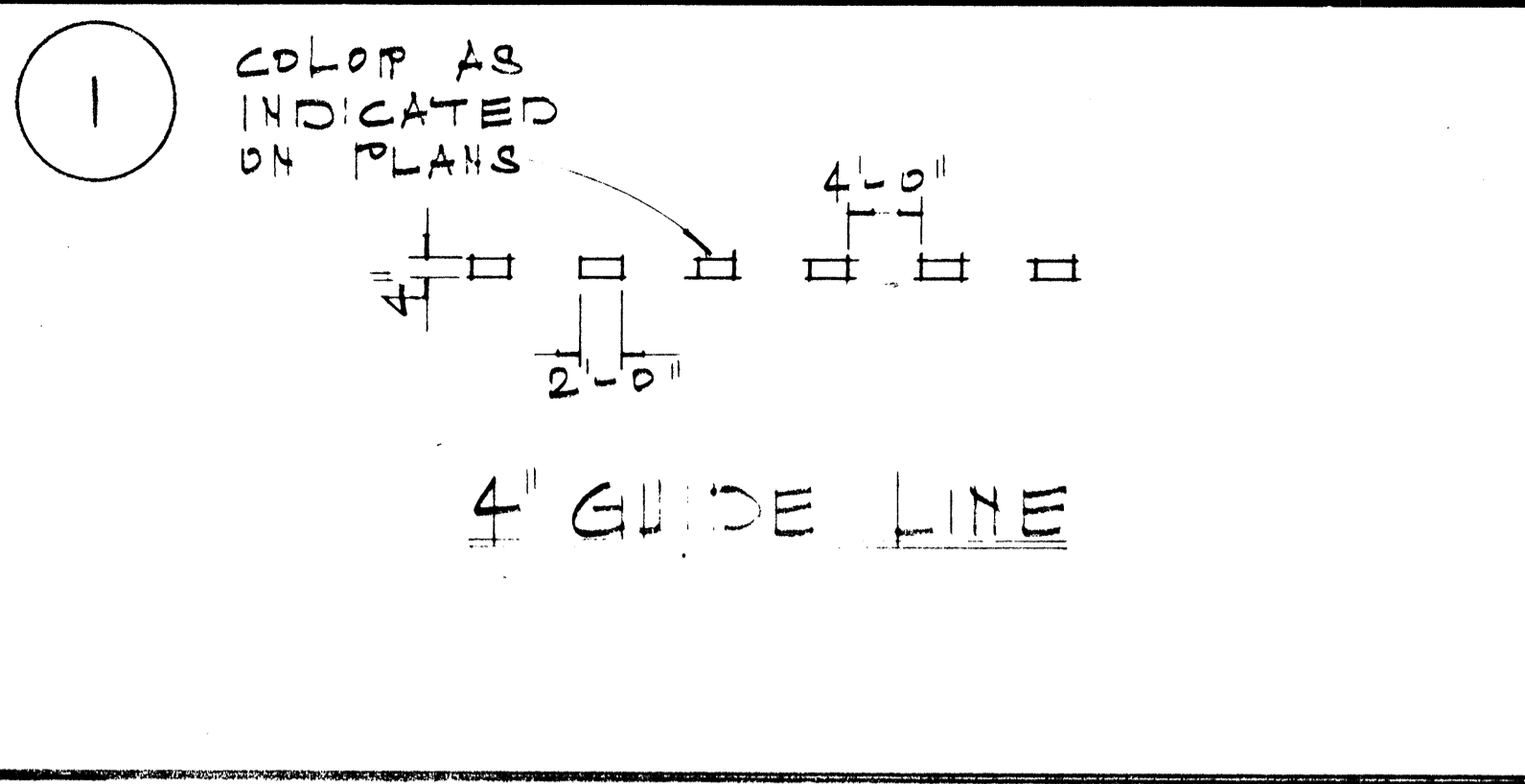
**TYPICAL DETAILS**

**BARRICADES**

SCALE: As Shown  
SHEET NO. 2 OF 11 SHEETS

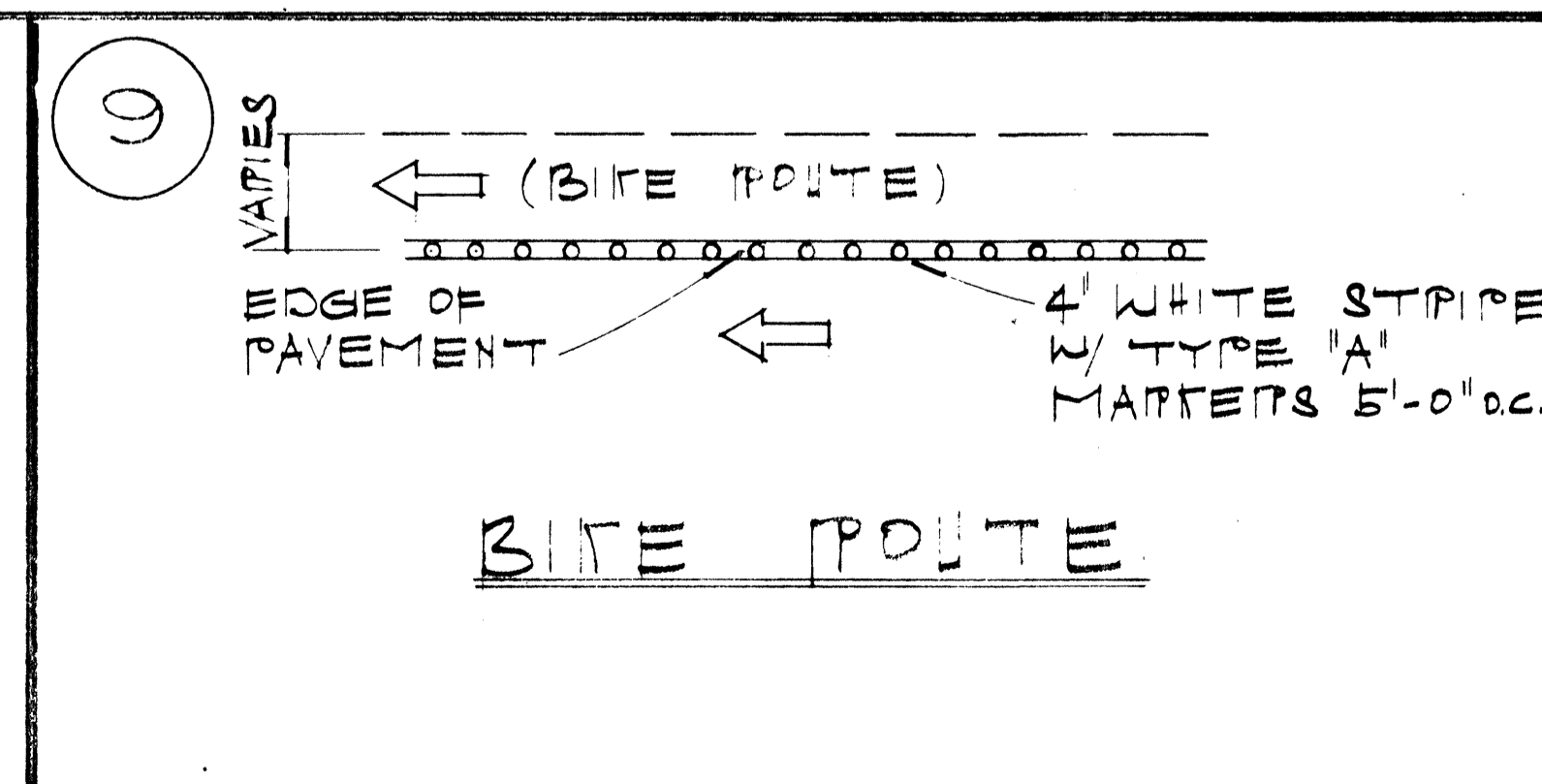
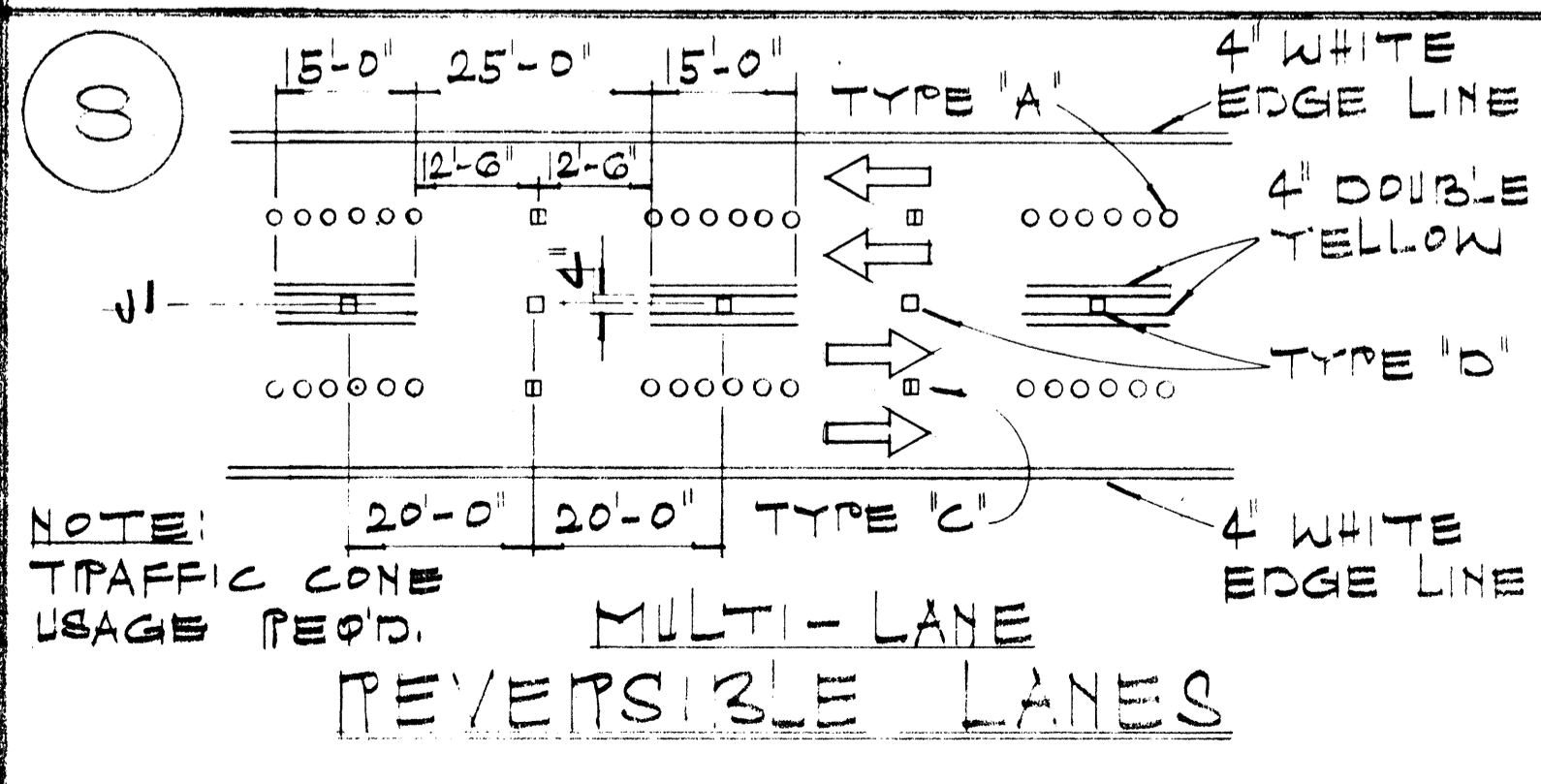
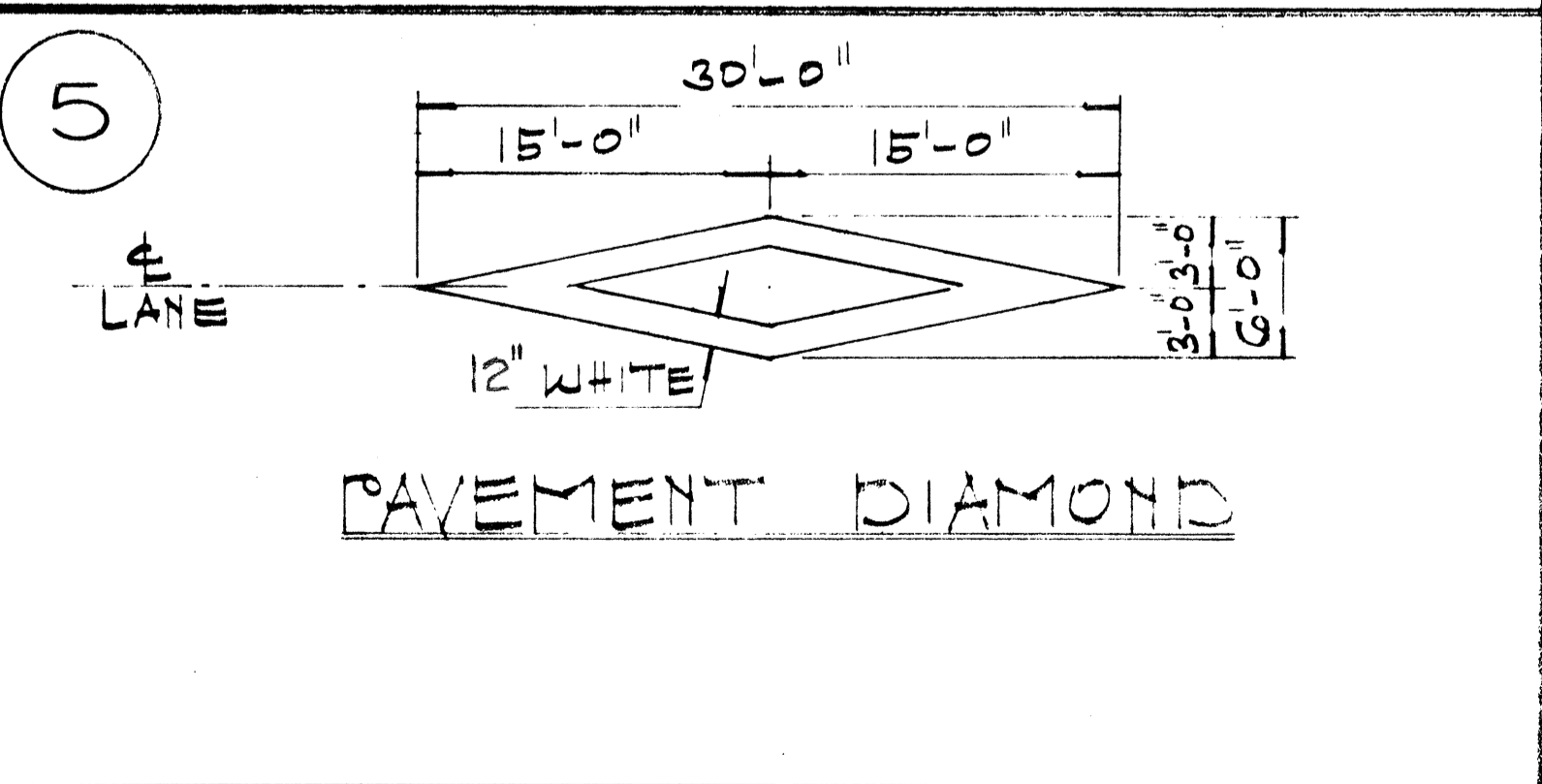
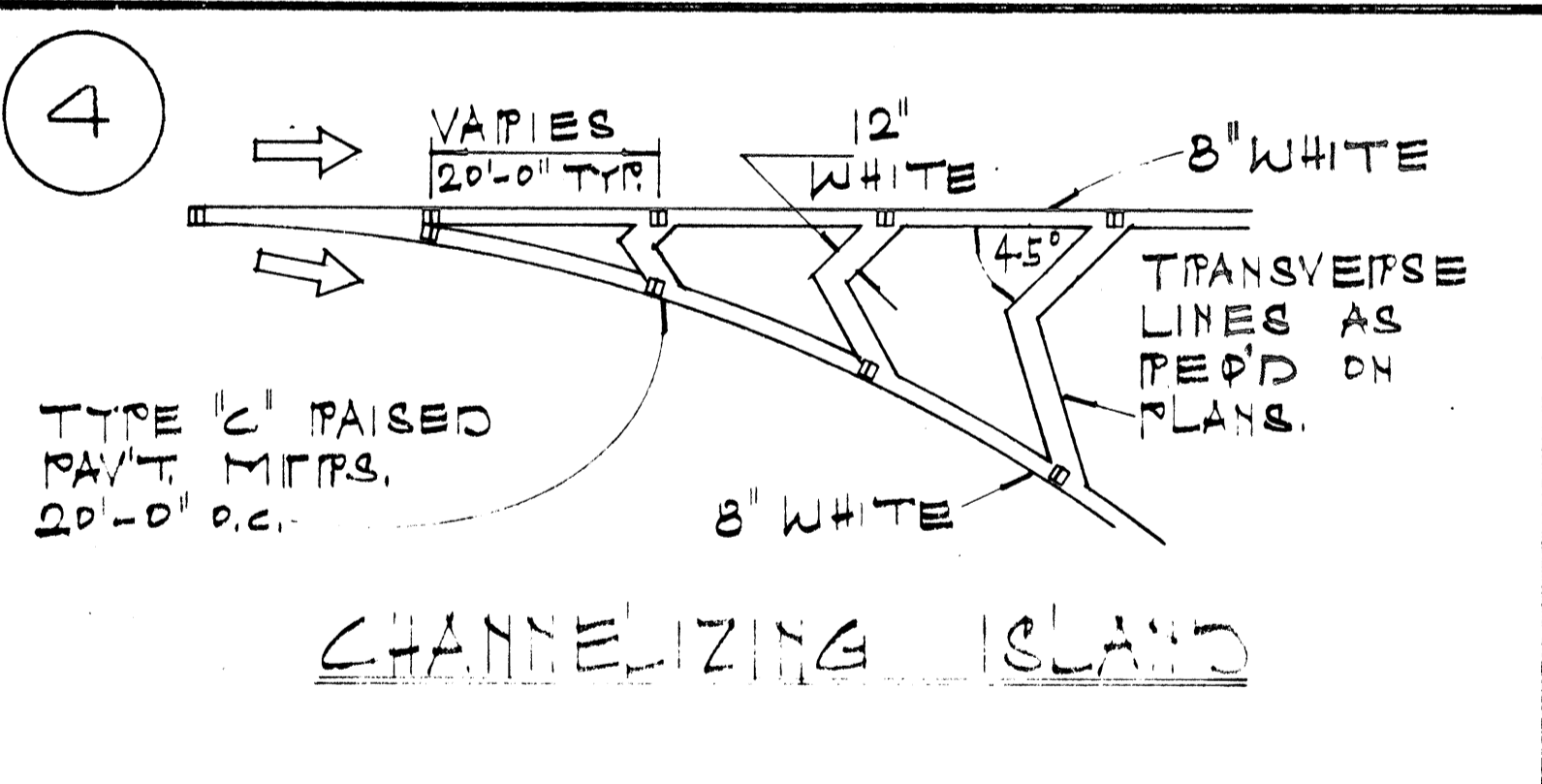
DATE	.....
SURVEY PLOTTED BY	.....
DRAWN BY	.....
DESIGNED BY	.....
QUANTITIES BY	.....
NOTE BOOK	.....
CHECKED BY	.....
No.	.....

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(16)	1977	59	147

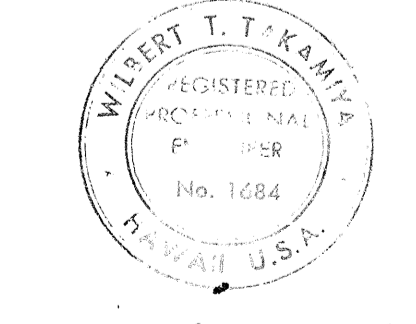
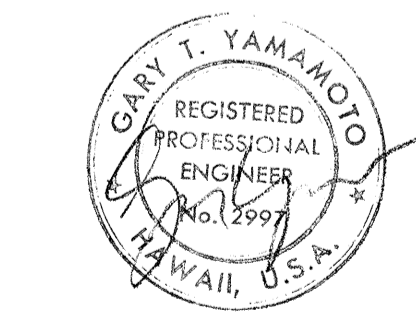


GENERAL NOTES:

- PAVEMENT MARKINGS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS & HIGHWAYS" 1971 (MUTCD), SUBSEQUENT REVISIONS TO THE MUTCD & AS SHOWN ON THE PLANS.
- LAYOUT OF PAVEMENT MARKINGS & STRIPING SHALL BE DONE BY THE CONTRACTOR. THE CONTRACTOR SHALL CHECK LAYOUT OF MARKINGS & STRIPING WITH THE ENGINEER PRIOR TO PERFORMING WORK.
- FOR ADDITIONAL PAVEMENT MARKING DETAILS SEE SH. # DT300



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



2/23/78	REVISE DETAIL #5
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

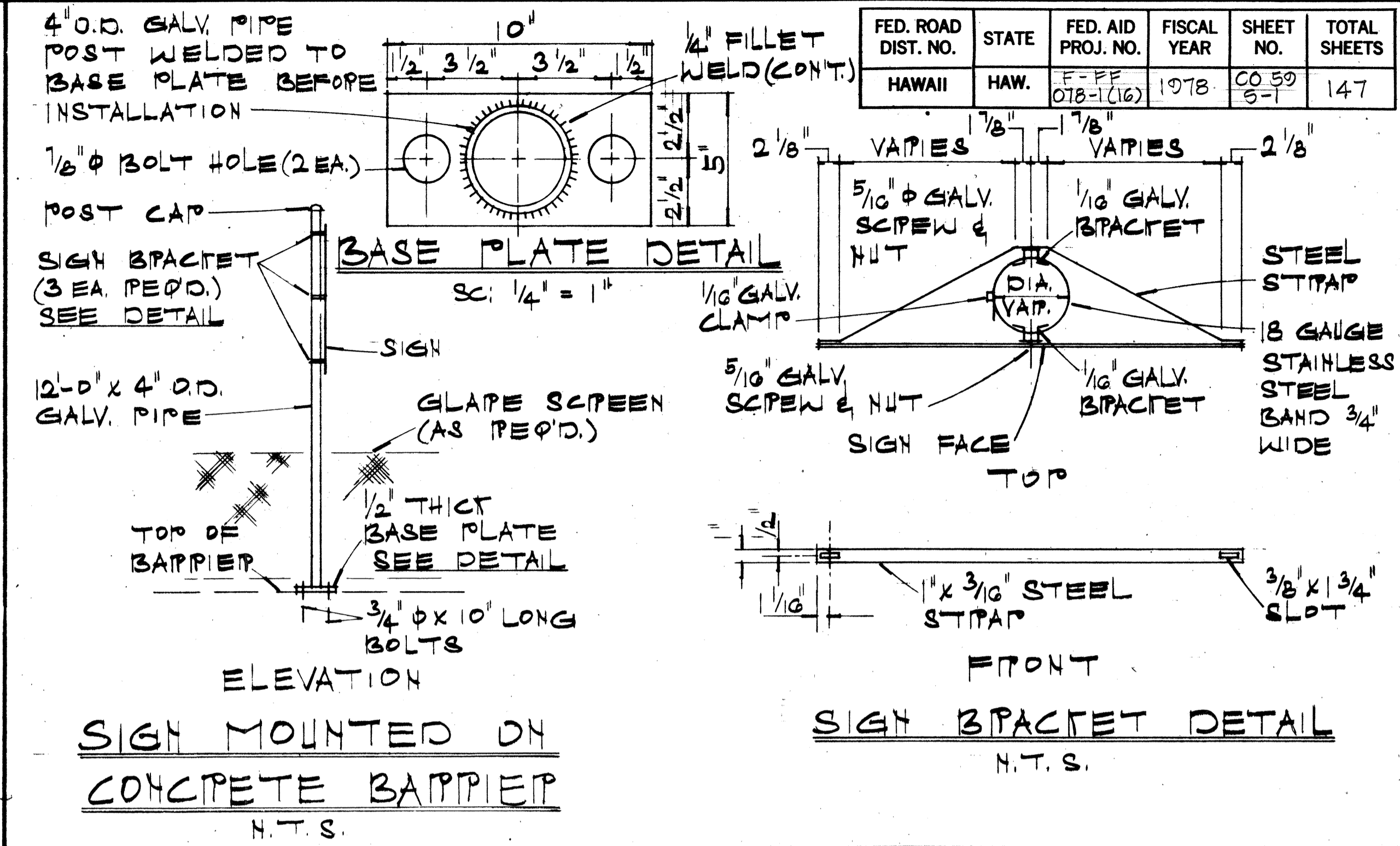
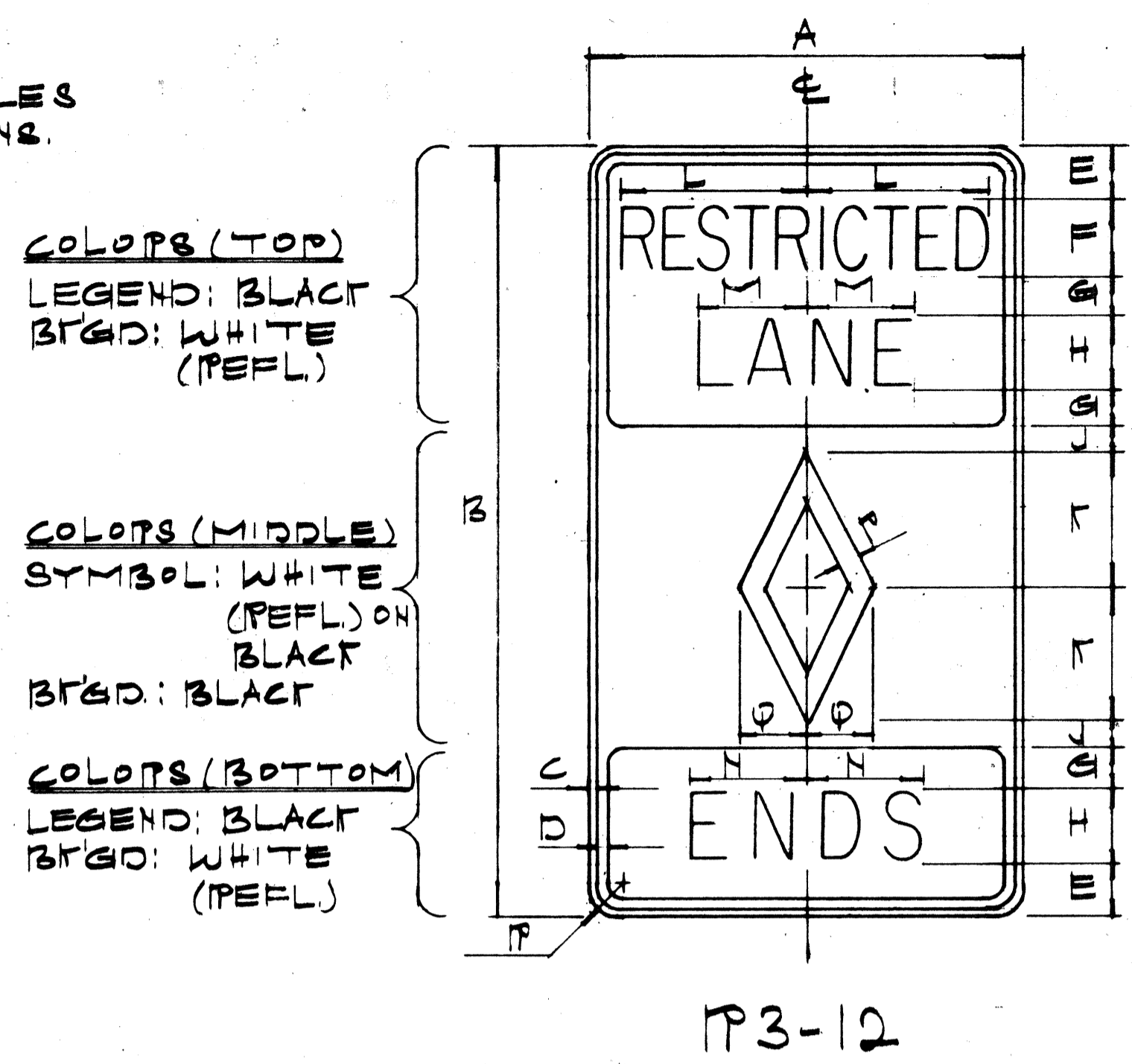
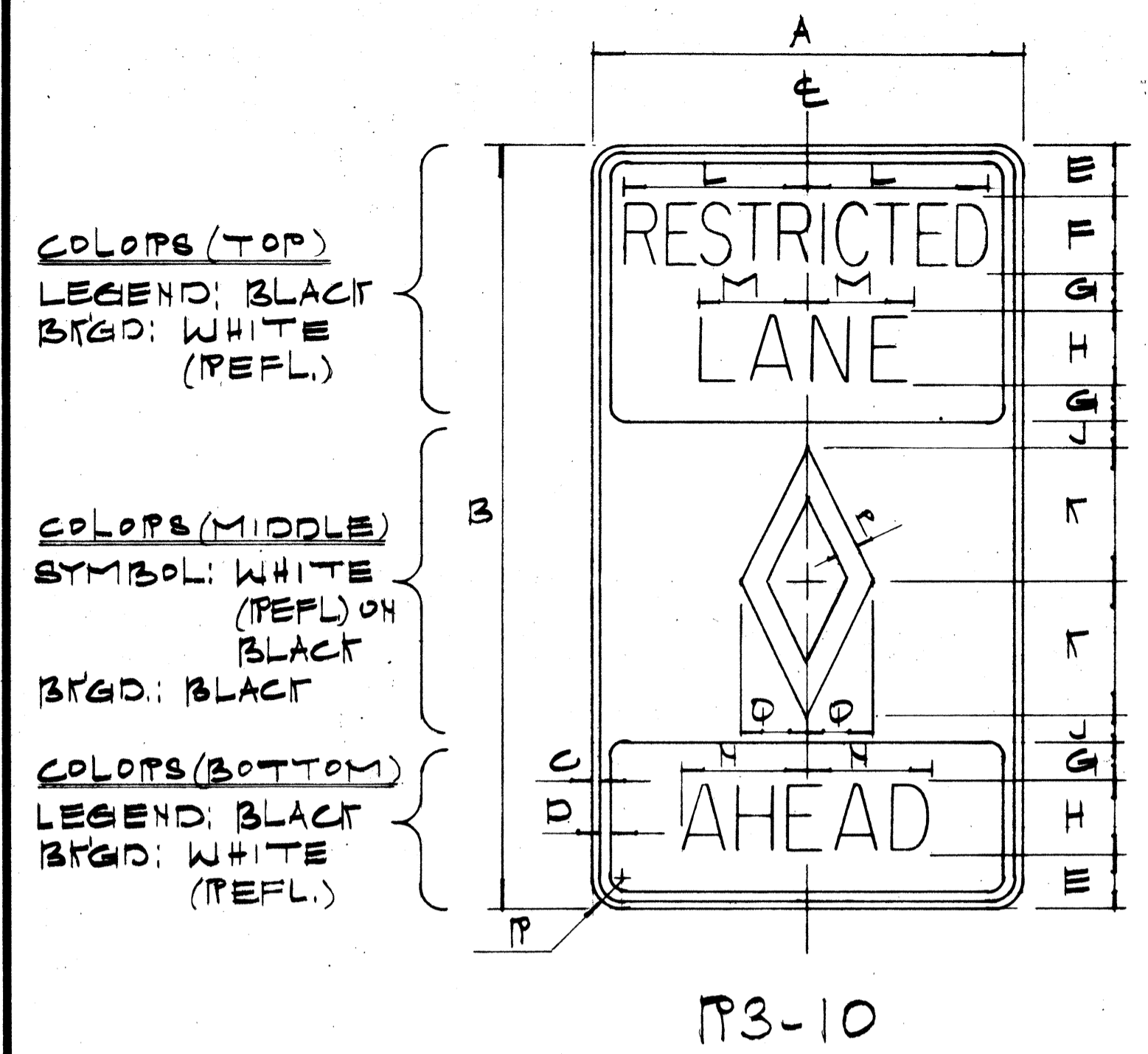
TYPICAL DETAILS  
MISCELLANEOUS  
PAVEMENT MARKINGS

NOT TO SCALE JULY 1976

SHEET NO. 3 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(16)	1978	CO. 59 S-1	147

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

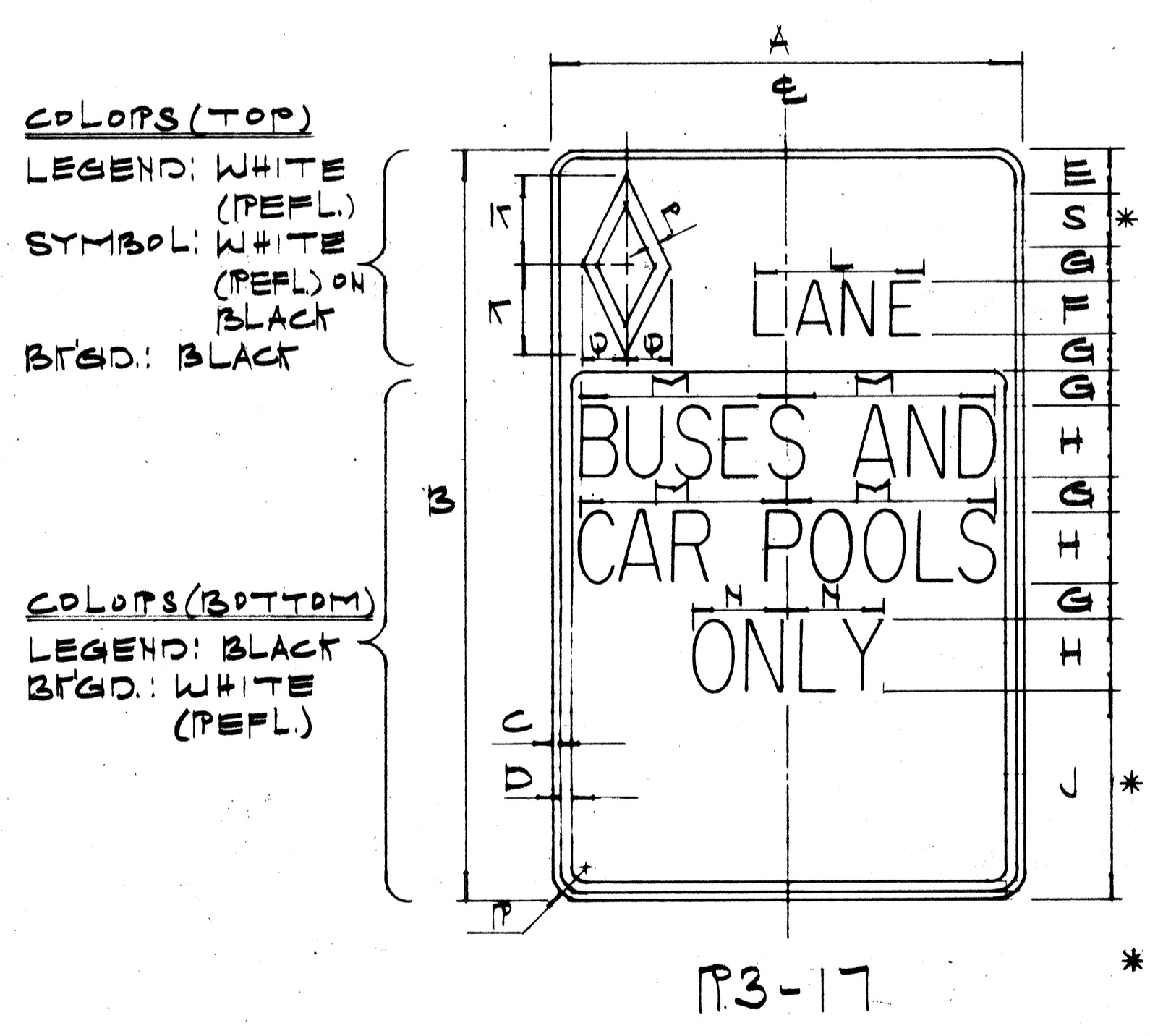
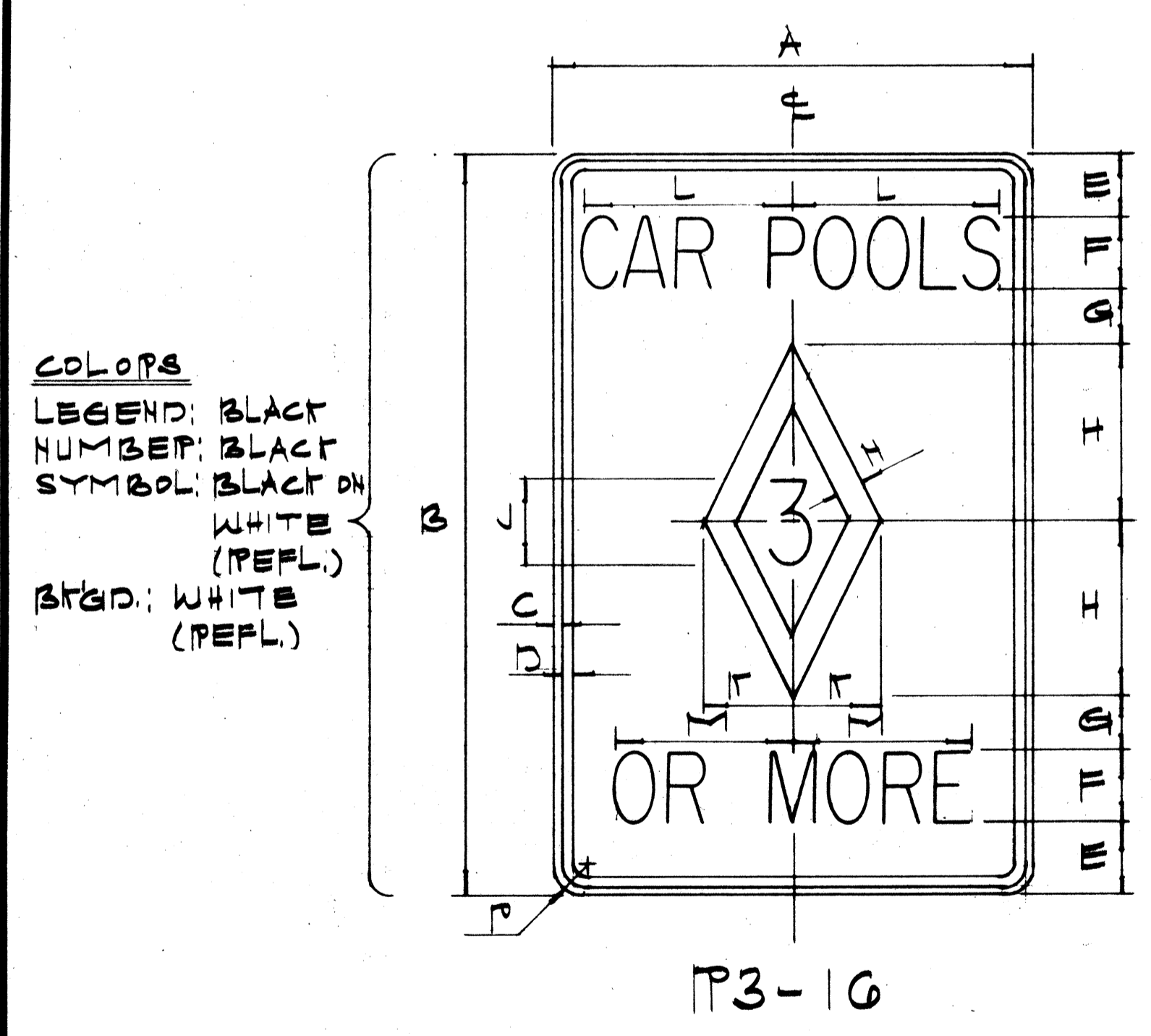


SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	φ	P
P3-10	30	42	1/2	3/4	3 1/4	4B	2	4C	1 1/4	7 1/2	10 3/8	G	8 3/4	1 1/8	3 3/4	1 7/8
P3-10-A	36	60	5/8	7/8	4 1/2	6B	3	6C	2	10	15 1/2	9	10 1/2	1 1/2	5	2 1/4

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

**GENERAL NOTES:**

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



ALTERNATE MESSAGE	SPACE	P3-17		P3-17-A	
		SERIES	DIM.	SERIES	DIM.
LEFT	S	3" D	8 7/8"	4" D	11 3/4"
CONED SIGNED	S	3" D	12 1/2"	4" D	16 3/4"
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.

DATE: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_

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

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

\* INSERT ALTERNATE MESSAGE (SEE SCHEDULE)

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

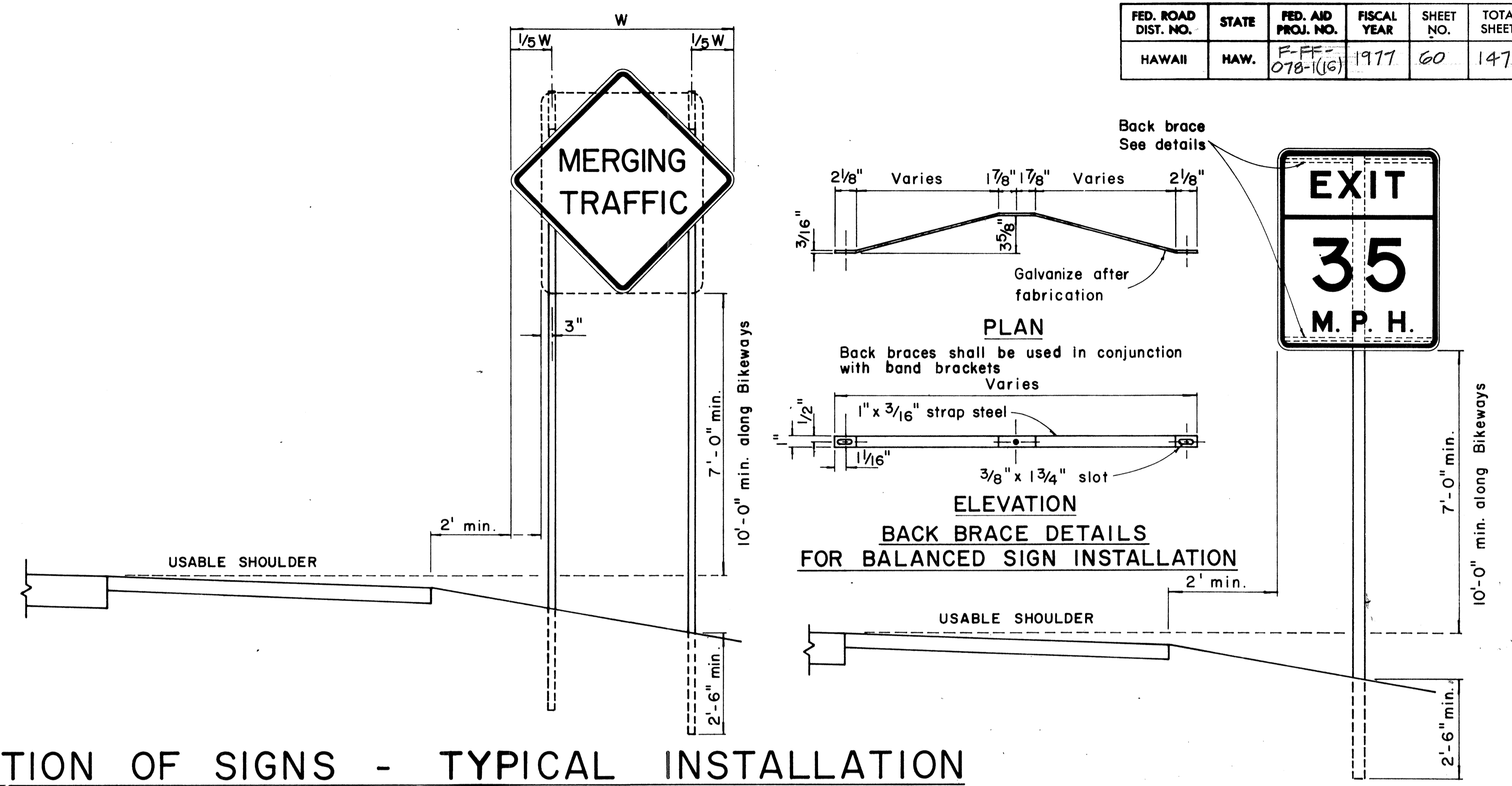
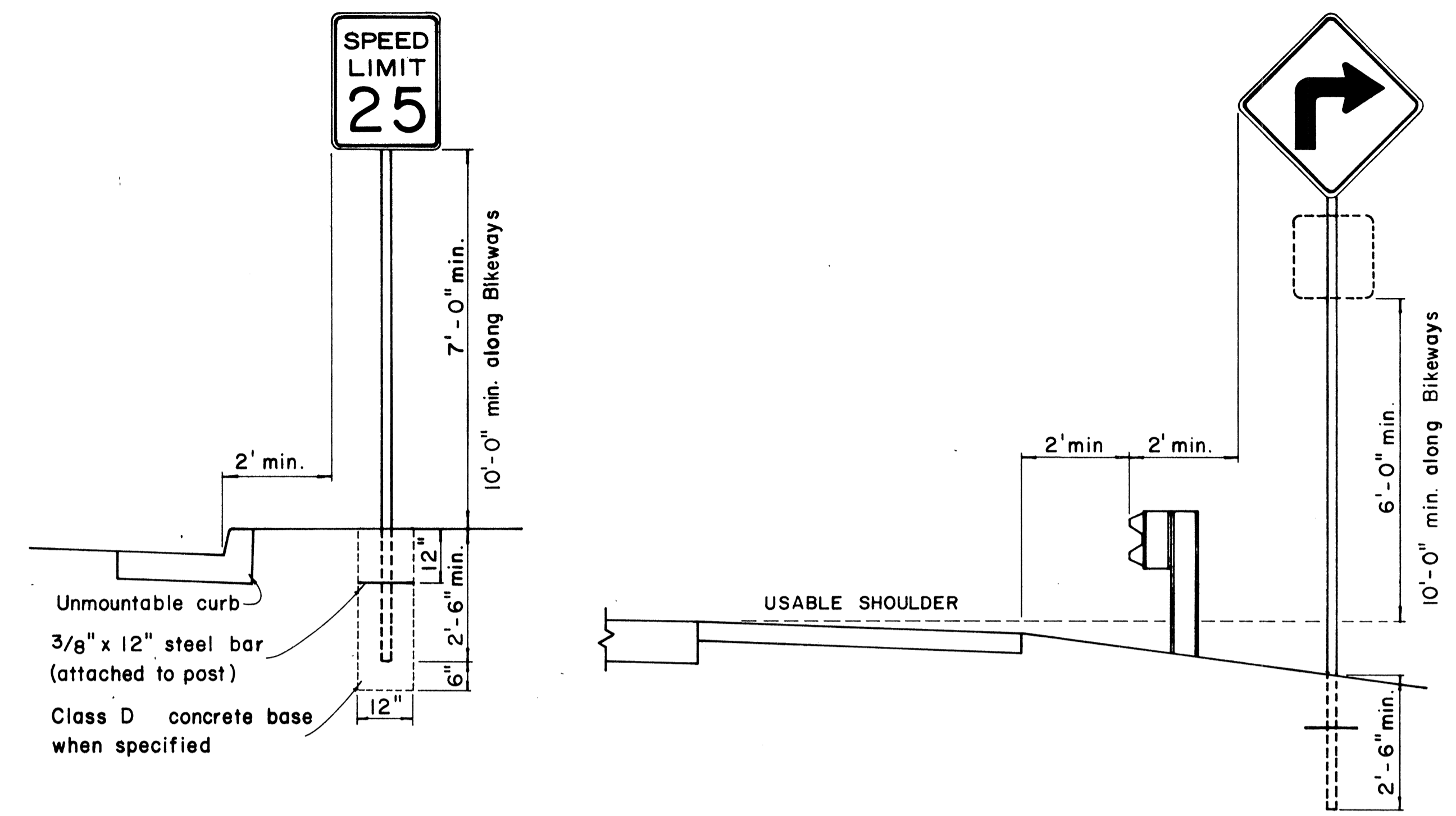
**TYPICAL DETAILS**  
**BUS-CAR POOL SIGNS**

F.A.R. NO. F-FF-078-1(16)

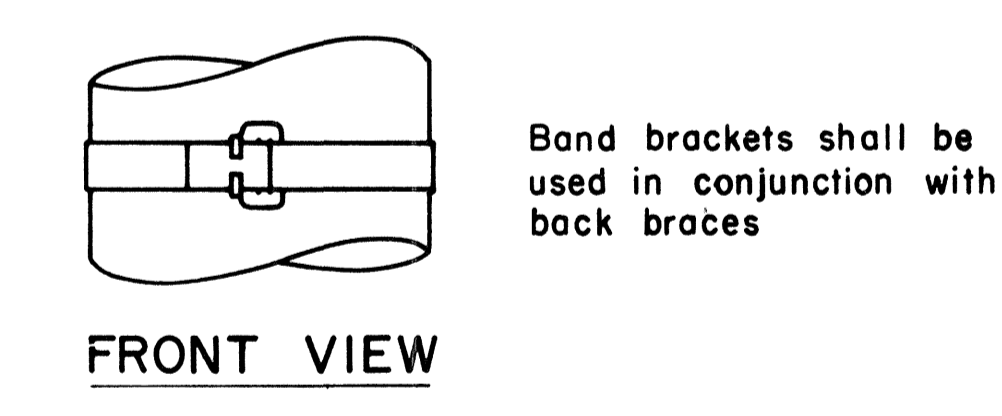
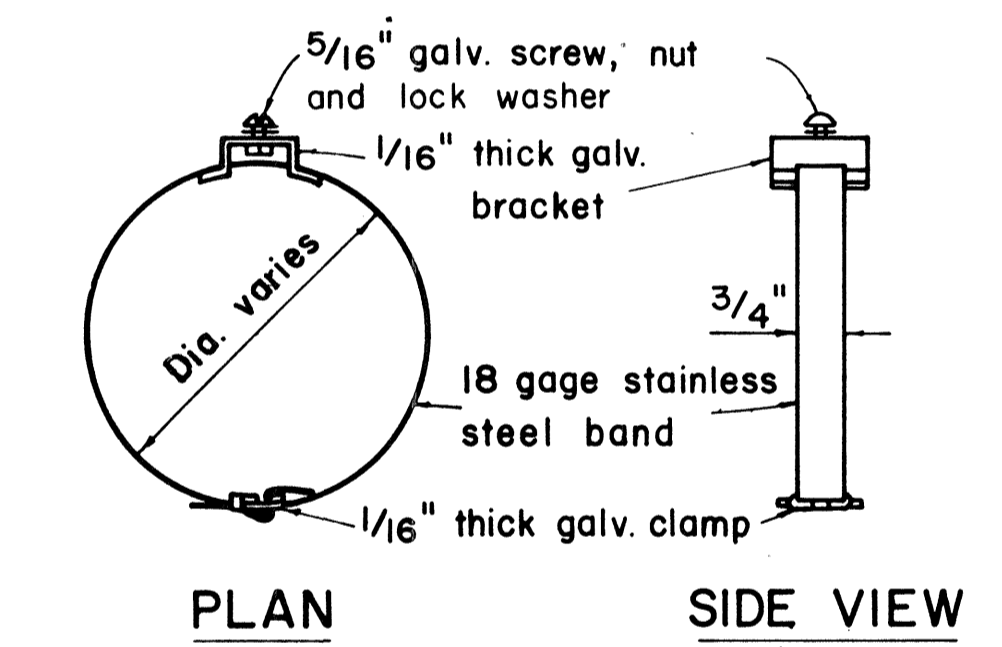
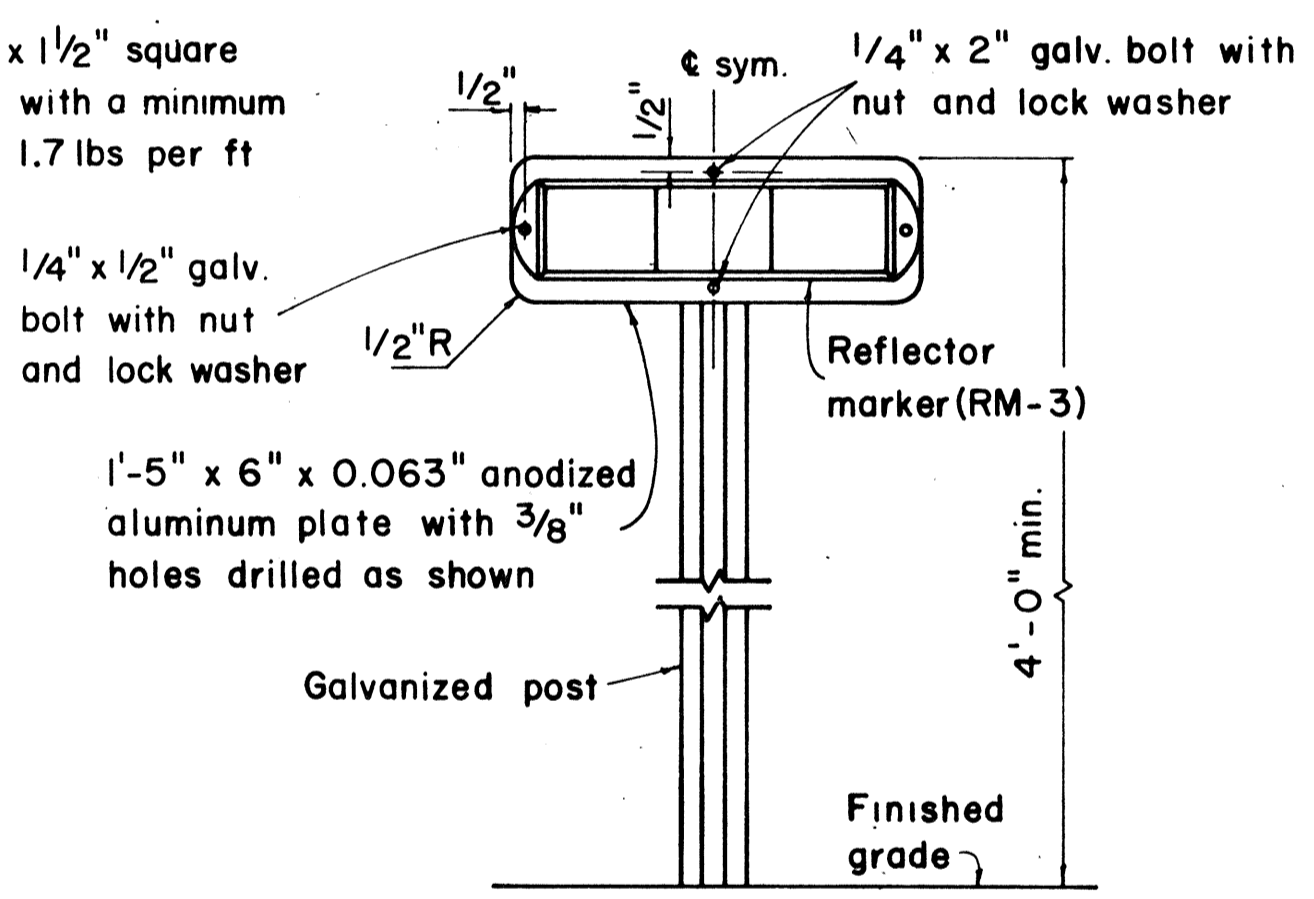
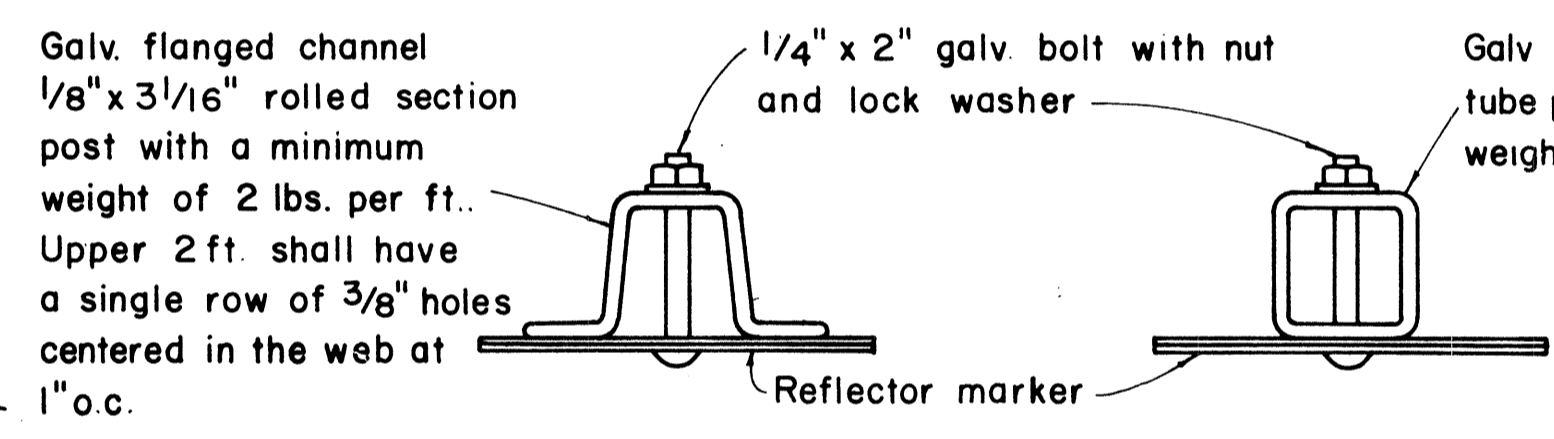
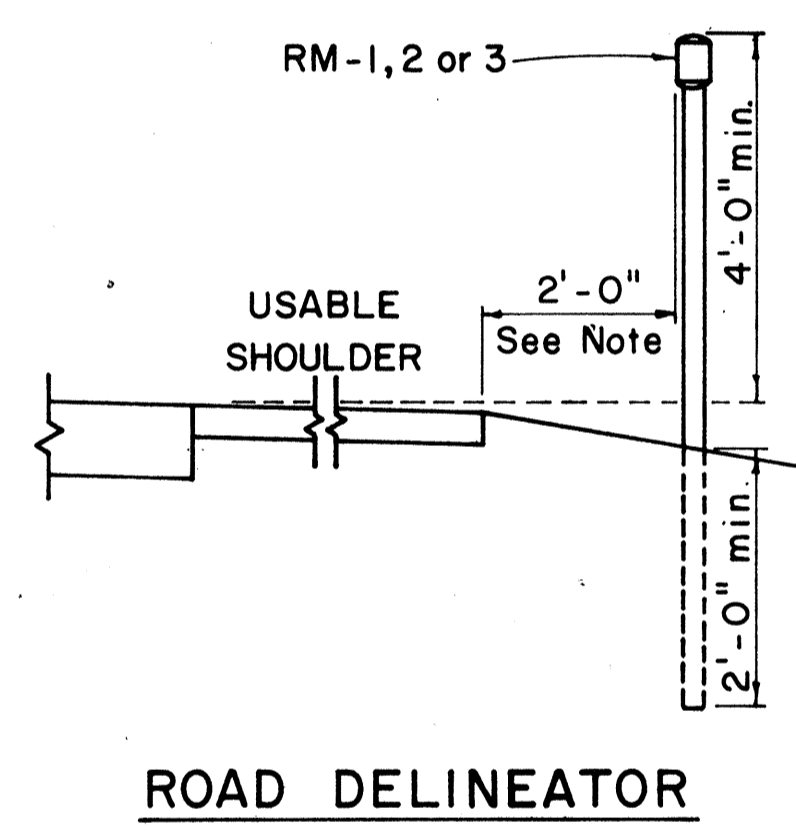
NOT TO SCALE DATE: July, 1977

SHEET No. 34 OF 11 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(16)	1977	60	147



## HEIGHT AND LATERAL LOCATION OF SIGNS - TYPICAL INSTALLATION



## TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS

- GENERAL NOTES:
- Sign posts shall be 2" galv. standard pipe or 2" x 2" galv. sq. tube post.
  - Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two 2" galv. standard pipe or two 2" x 2" galv. sq. tube post.
  - 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.
  - Sign posts shall extend 3 1/2" above sign where required for City and County street name signs.
  - Reflector markers RM-1, 2, 3 shall be glass sphere reflector markers with 4" x 5" reflector units (as shown) or plastic prismatic reflector markers with 3" diameter reflector units.
  - Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
  - (R) or (L) indicates right or left and shall be as shown on the plans.

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

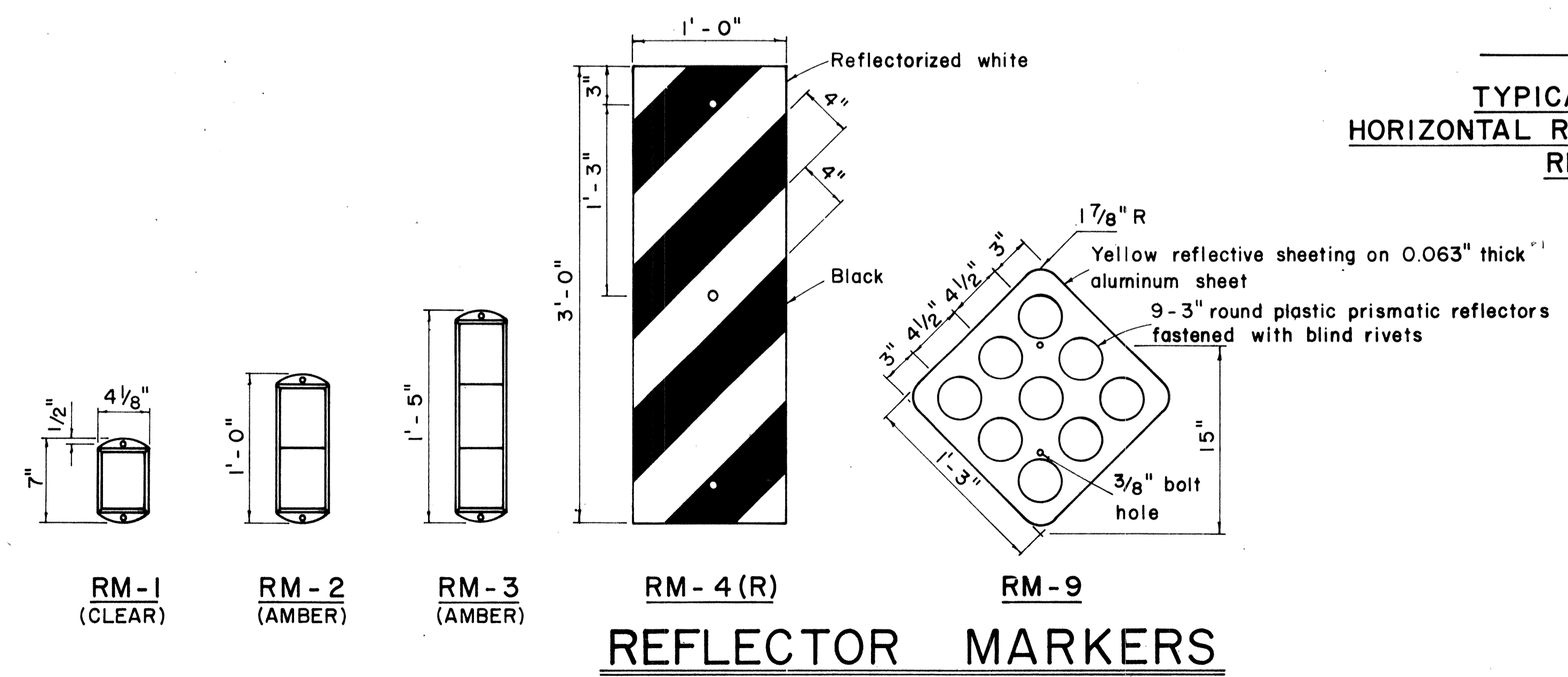
APPROVED:  
*[Signature]* 12-30-69  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1.	Revised Details.	H.F.	9-14-70

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION


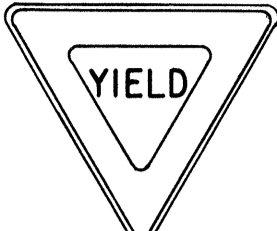


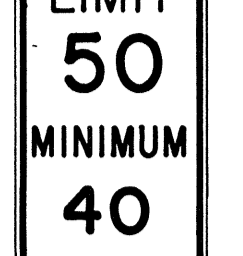
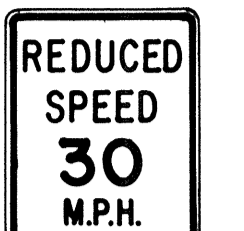



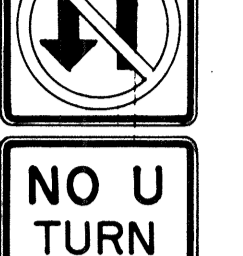

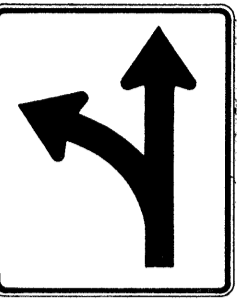


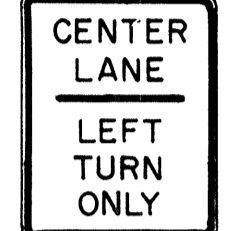


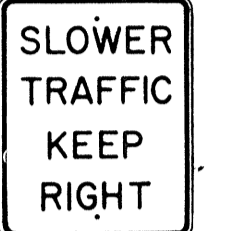
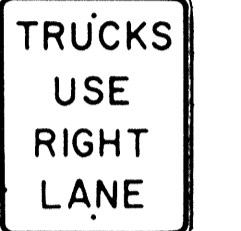
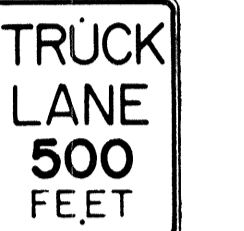
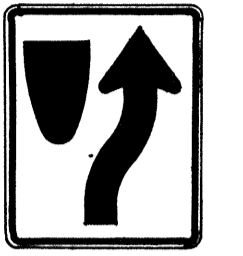
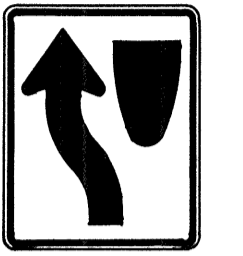
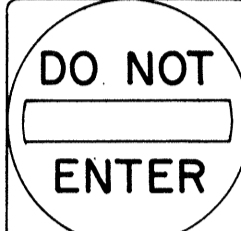
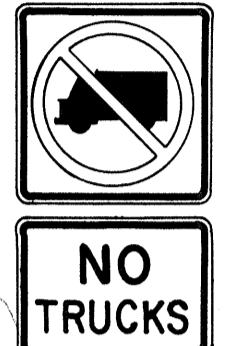
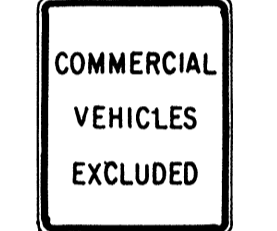
















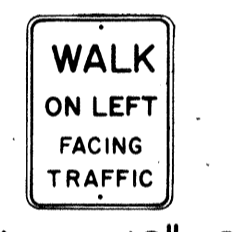
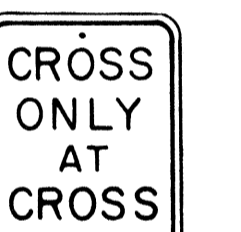


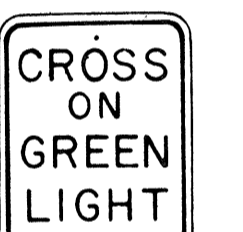

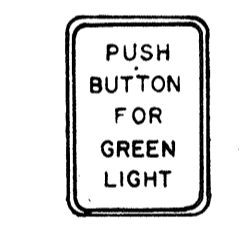
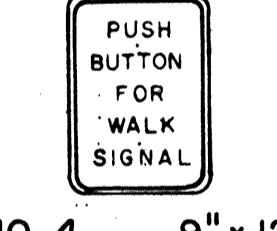


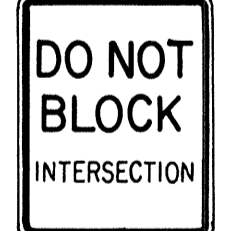
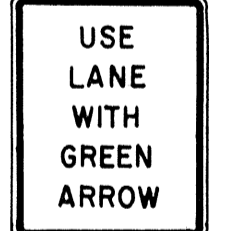
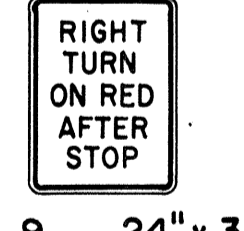
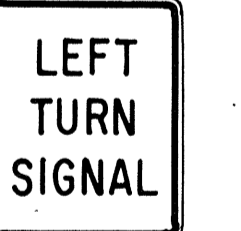
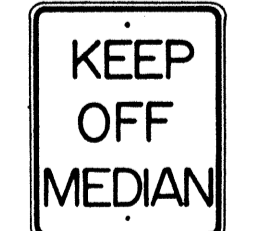

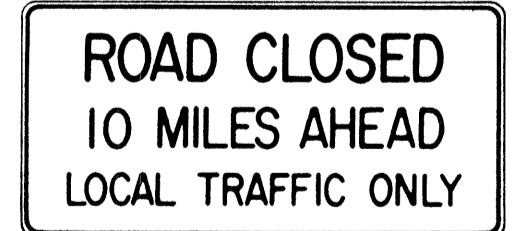
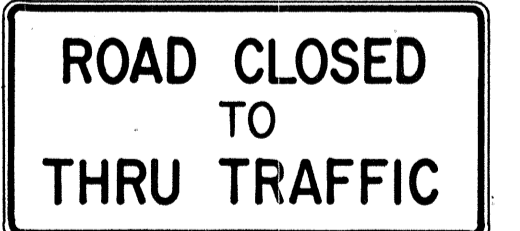

**STANDARD DETAILS**  
MISCELLANEOUS SIGN DETAILS

Not to scale March, 1968



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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(6)	1977	61	147

 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:  
*Etsuko Tanaka* 3/17/72  
 TRAFFIC ENGINEER DATE

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

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

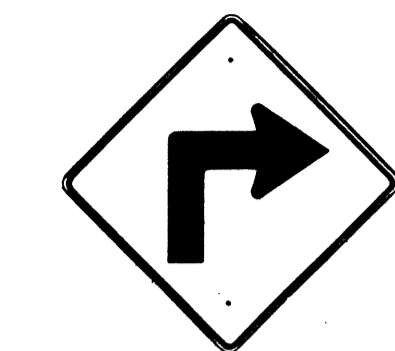
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS  
 REGULATORY SIGNS**

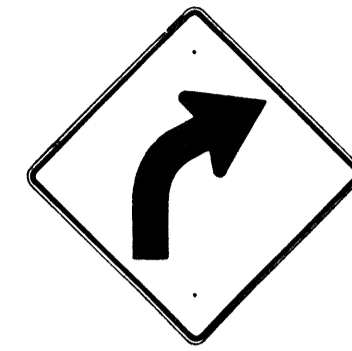
NOT TO SCALE

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

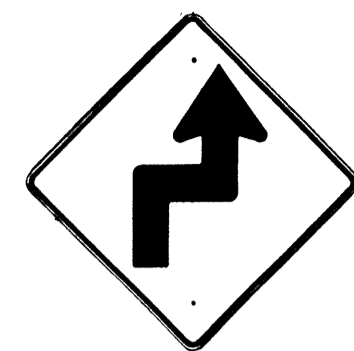
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII*	HAW.	F-FF-078-1(6)	1977	62	147



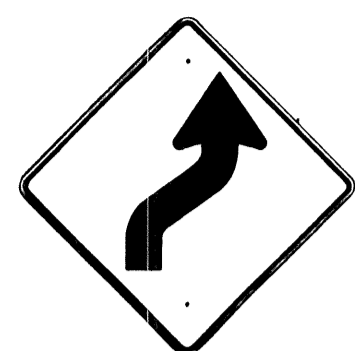
W1-1(R) 30"x30"  
W1-1(R)-A 48"x48"



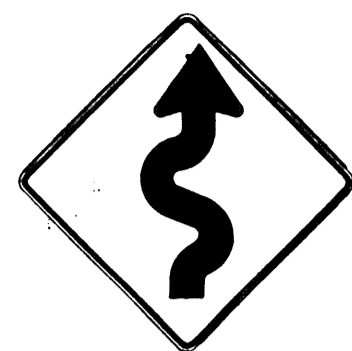
W1-2(R) 30"x30"  
W1-2(R)-A 48"x48"



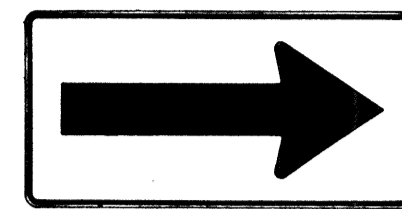
W1-3(R) 30"x30"  
W1-3(R)-A 48"x48"



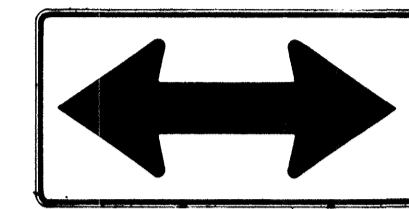
W1-4(R) 30"x30"  
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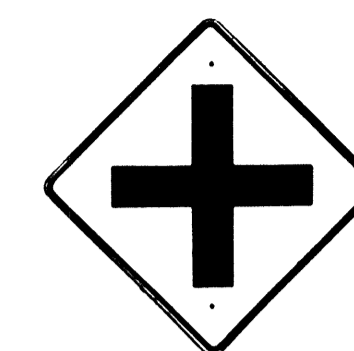
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W1-5(R)-A 48"x48"



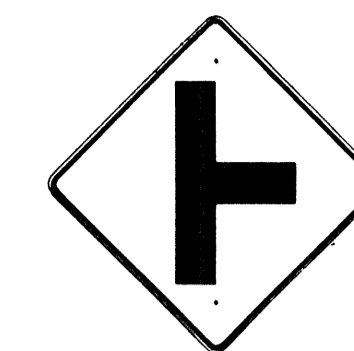
W1-6 48"x24"



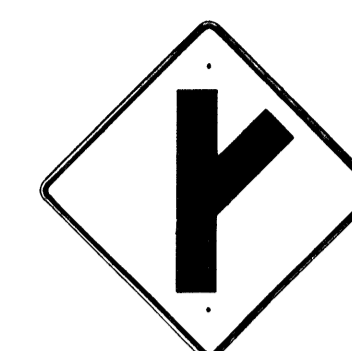
W1-7 48"x24"



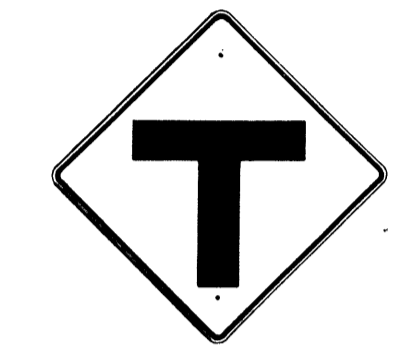
W2-1 30"x30"  
W2-1-A 48"x48"



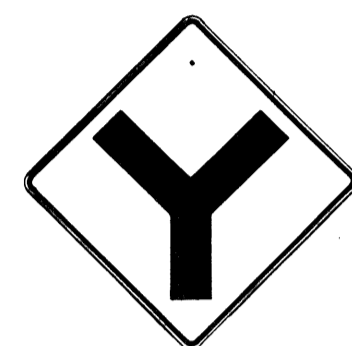
W2-2 30"x30"  
W2-2-A 48"x48"



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



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



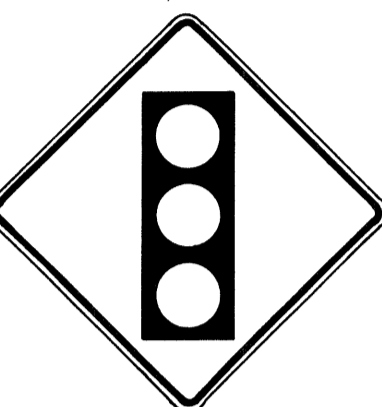
W2-5 30"x30"  
W2-5-A 48"x48"



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



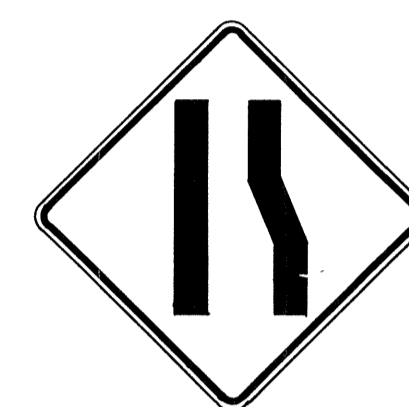
W3-2 30"x30"  
W3-2-A 36"x36"



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"



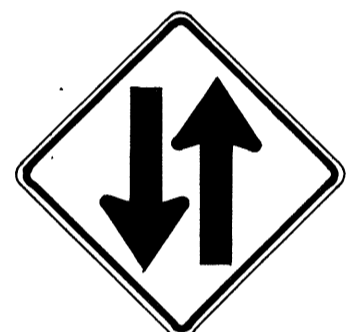
W5-3 36"x36"



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"



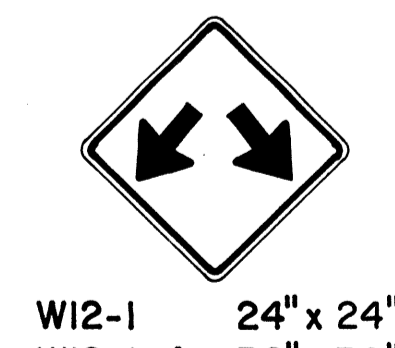
W11-2 30"x30"  
24"x18"  
W11-2-A 36"x36"  
24"x18"



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



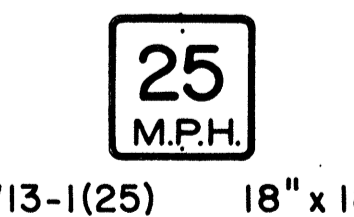
W11-5 30"x30"  
24"x18"  
W11-5-A 36"x36"  
24"x18"



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



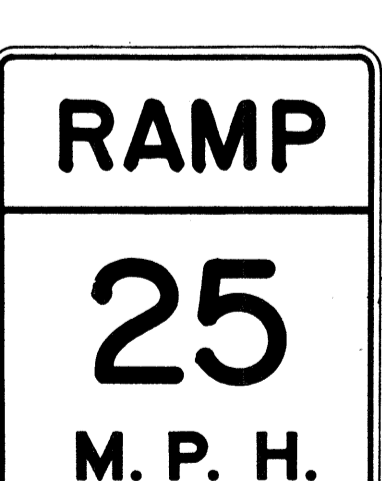
W12-2(12'-6") 36"x36"  
24"x18"



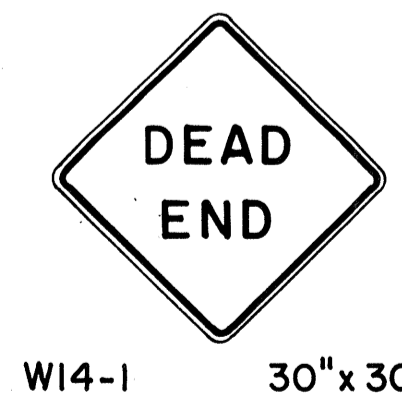
W13-1(25) 18"x18"  
W13-1(25)-A 24"x24"



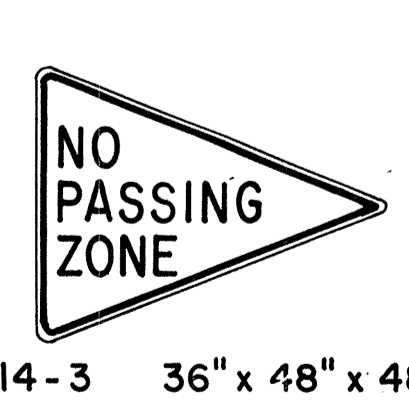
W13-2(25) 48"x60"



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:  
*Eric Tanaka* 3/17/72  
TRAFFIC ENGINEER DATE

APPROVED:  
*Shirley Salsin* 3-20-72  
ASSISTANT CHIEF, ENGINEERING DATE

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

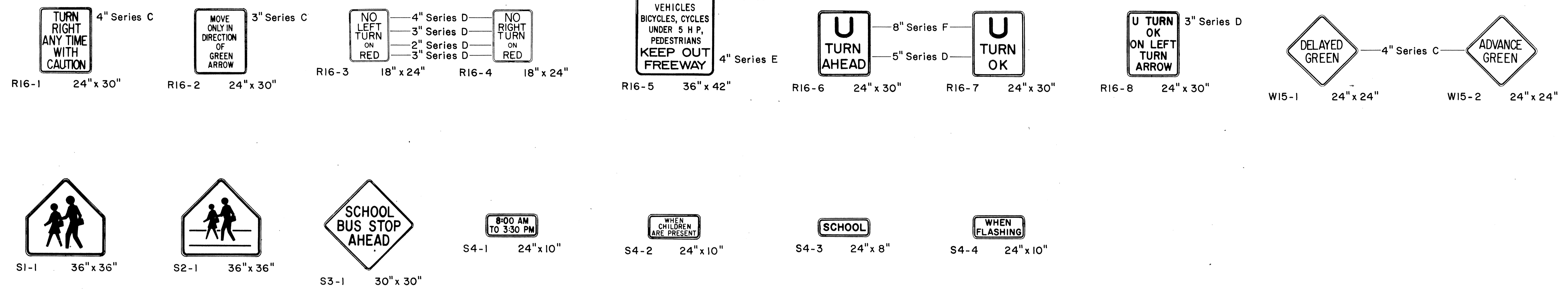
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**  
**WARNING SIGNS**

NOT TO SCALE

DATE  
DESIGNED BY  
CHECKED BY  
NO.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-F-078-1(6)	1977	63	147



**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 and warning signs shall be reflectorized unless otherwise specified.
3. All regulatory and warning signs shall have 3/8" bolt holes drilled at appropriate locations.
4. Numerals in ( ) indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.

APPROVAL RECOMMENDED:  
*Erich Tanaka* 3/17/72  
 TRAFFIC ENGINEER DATE

APPROVED:  
*Robert Ralside* 2-20-72  
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 103 Approved 12-30-69	H.T.	3/20/72
2	Revised General Note 1	H.T.	10/16/74

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS**  
**MISCELLANEOUS**  
**REGULATORY & WARNING SIGNS**

NOT TO SCALE

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(6)	1977	64	147



CW20-1a 48"x 48"



CW20-2d 48"x 48"



CW20-3b 48"x 48"



CW20-4d 48"x 48"



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



CW20-7c 48"x 48"



CW21-1 30"x 30"



CW21-2 30"x 30"



CW21-3 36"x 36"



CW21-4 36"x 36"



CW21-5 30"x 30"



CW21-6 30"x 30"



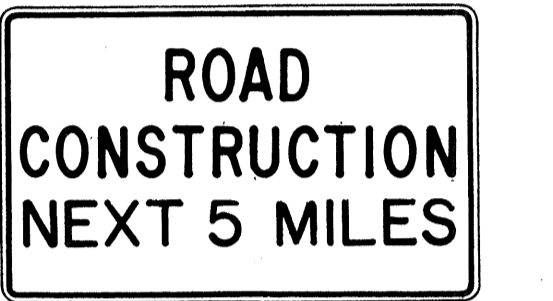
CW22-1b 48"x 48"



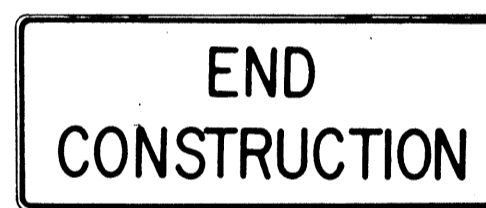
CW22-2 42"x 36"



CW22-3 42"x 36"



CG20-1(5) 60"x 36"



CG20-2 60"x 24"



CM4-9(R) 30"x 24"



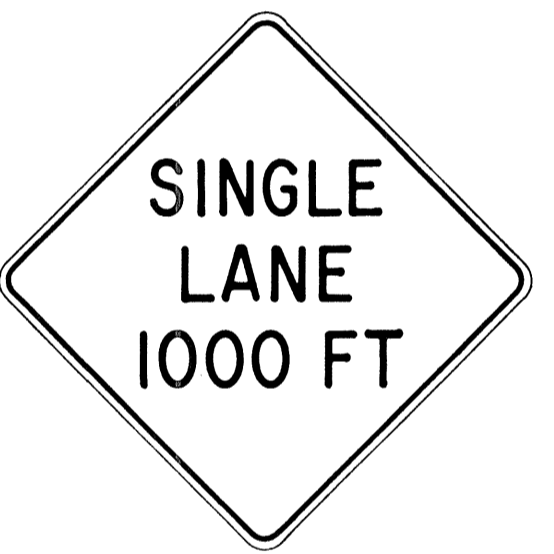
CM4-10(R) 48"x 18"



CG20-4 36"x 18"



CW23-1 36"x 36"



CW23-2b 48"x 48"



CW23-3(R) 48"x 48"

**GENERAL NOTES**

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

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

APPROVED:  
*Walter S. Salsich* 3/23/72  
ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

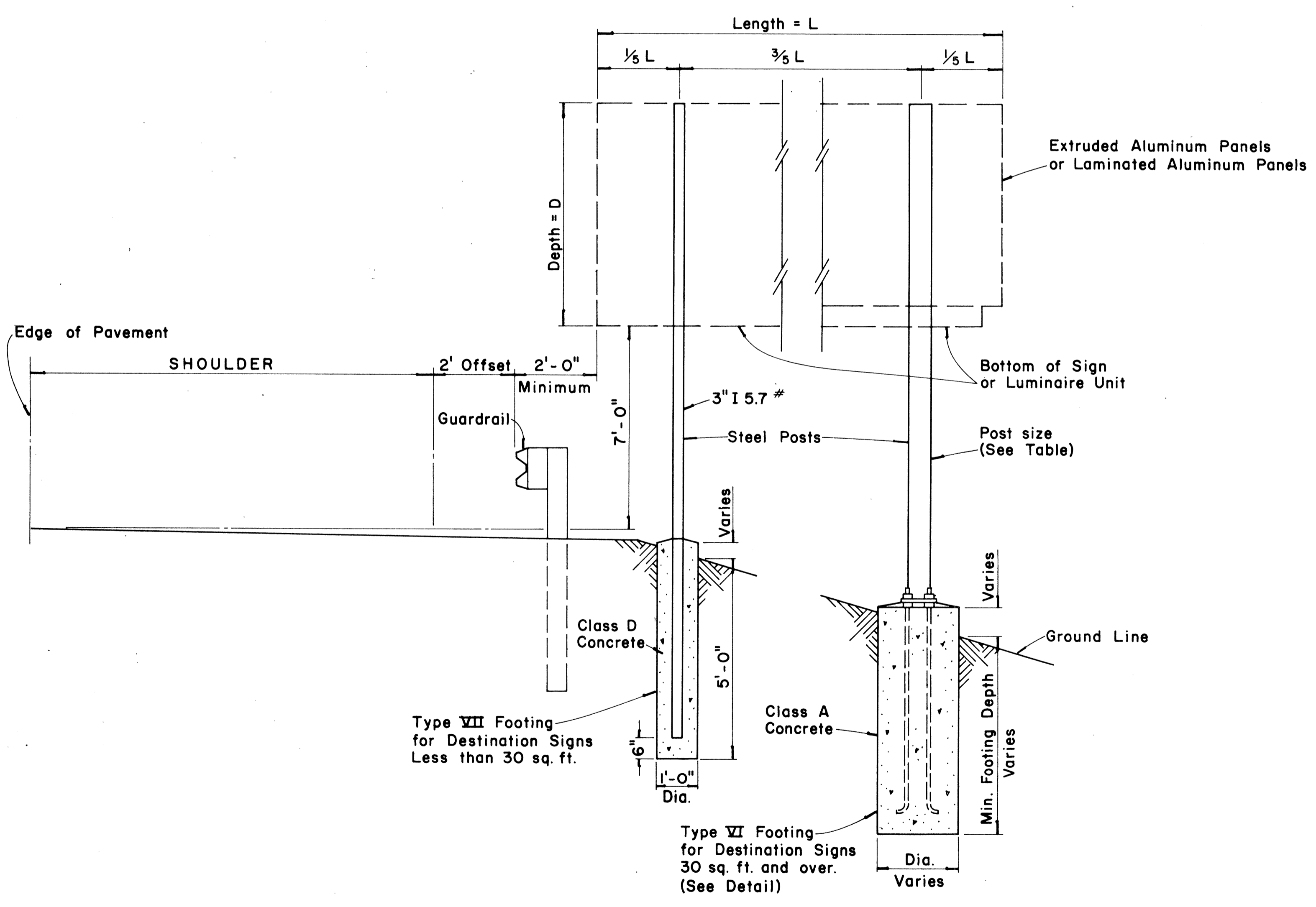
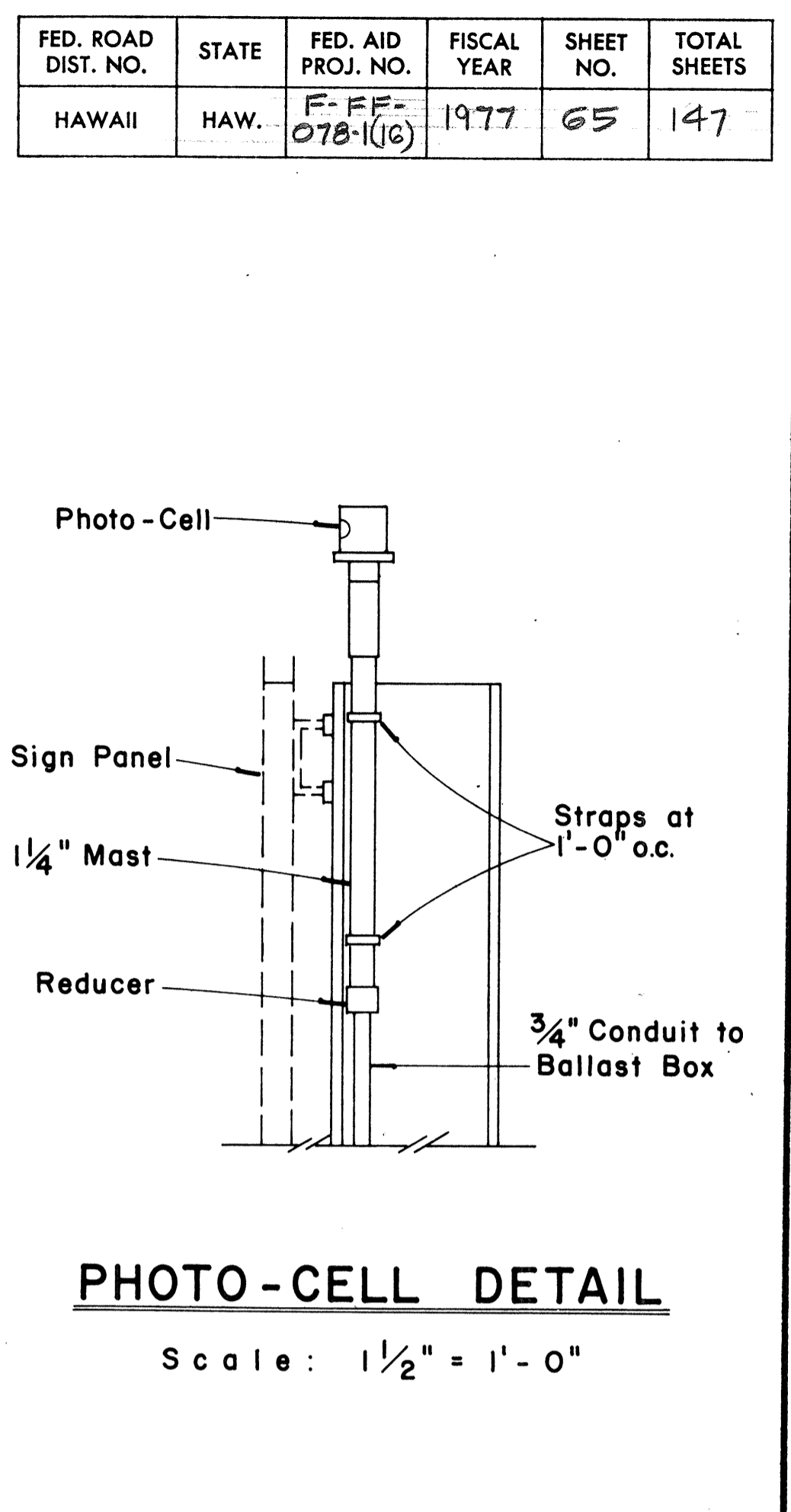
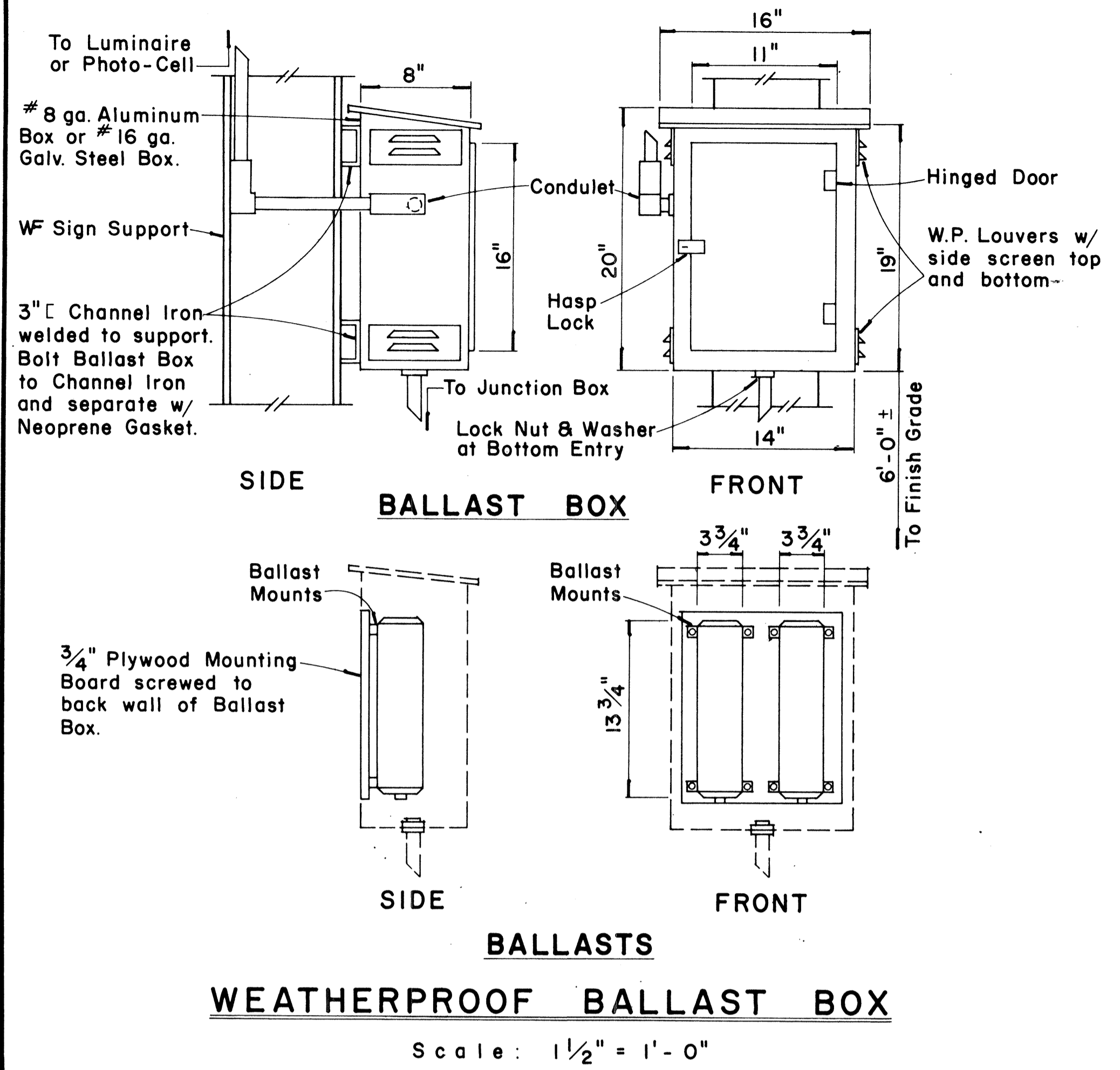
**STANDARD DETAILS**  
**CONSTRUCTION SIGNS**

NOT TO SCALE

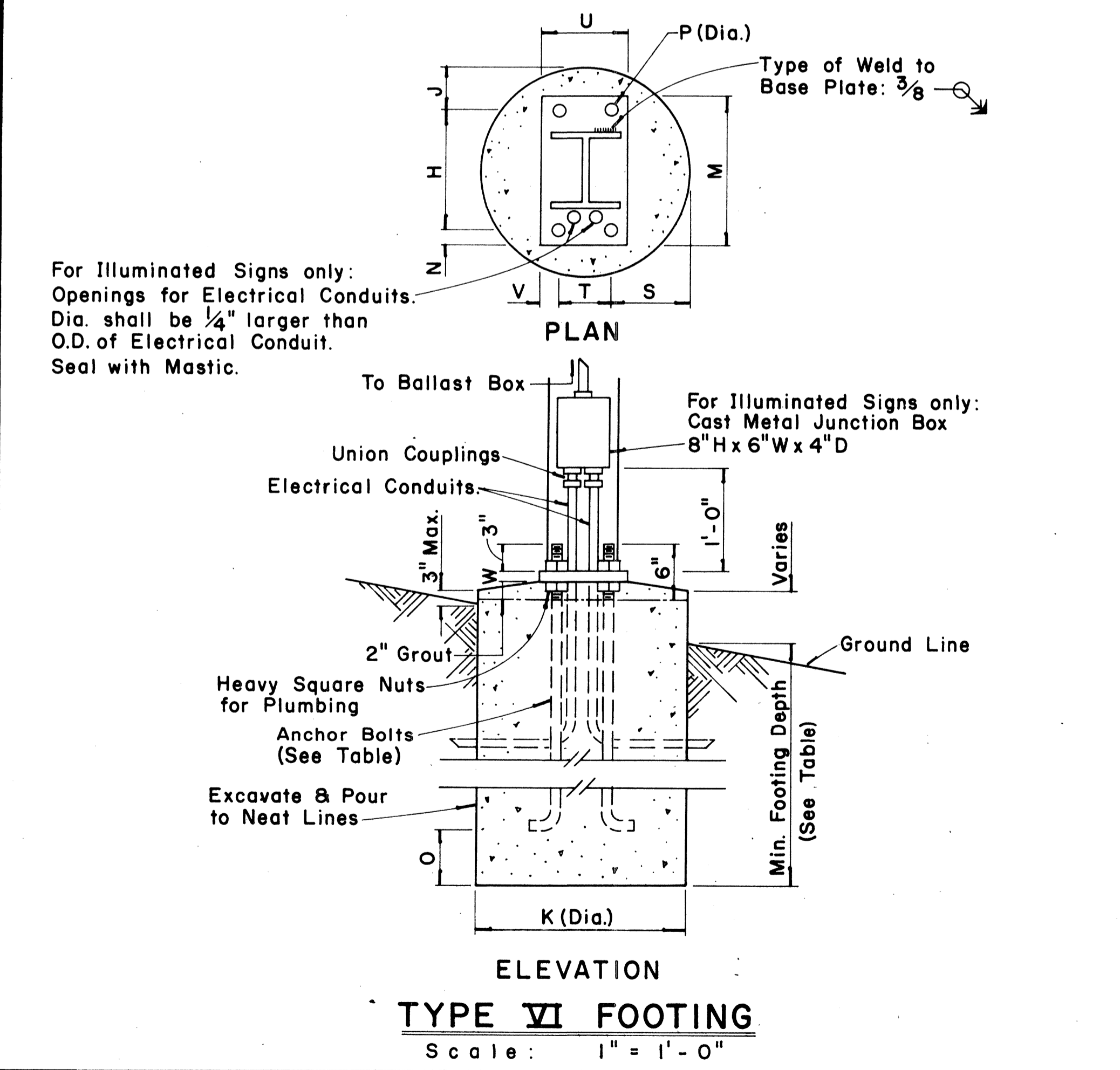
DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

\* 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 J 10	50 sq. ft.	14'	14"	5"	24"	17¼"	1⅝"	6"	1¼"	9"	6"	10"	2"	1"	1⅝" ∅	4½'	4½'	
8 WF 24	90 sq. ft.	21'	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	5'	
8 WF 35	190 sq. ft.	15'	16½"	6¾"	30"	20"	1¾"	6"	1⅜"	11¾"	6½"	10"	1¾"	1"	1¼" ∅	6'	7'	
10 WF 45	190 sq. ft.	25'	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
10 WF 45	200 sq. ft.	25'	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
12 WF 50	230 sq. ft.	25'	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
12 WF 50	250 sq. ft.	23'	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	



**TYPICAL DESTINATION & GROUND MOUNTED EXPRESSWAY SIGN**  
 Not to Scale



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

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

APPROVED:  
*Andy S. Salas* 12-29-62  
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

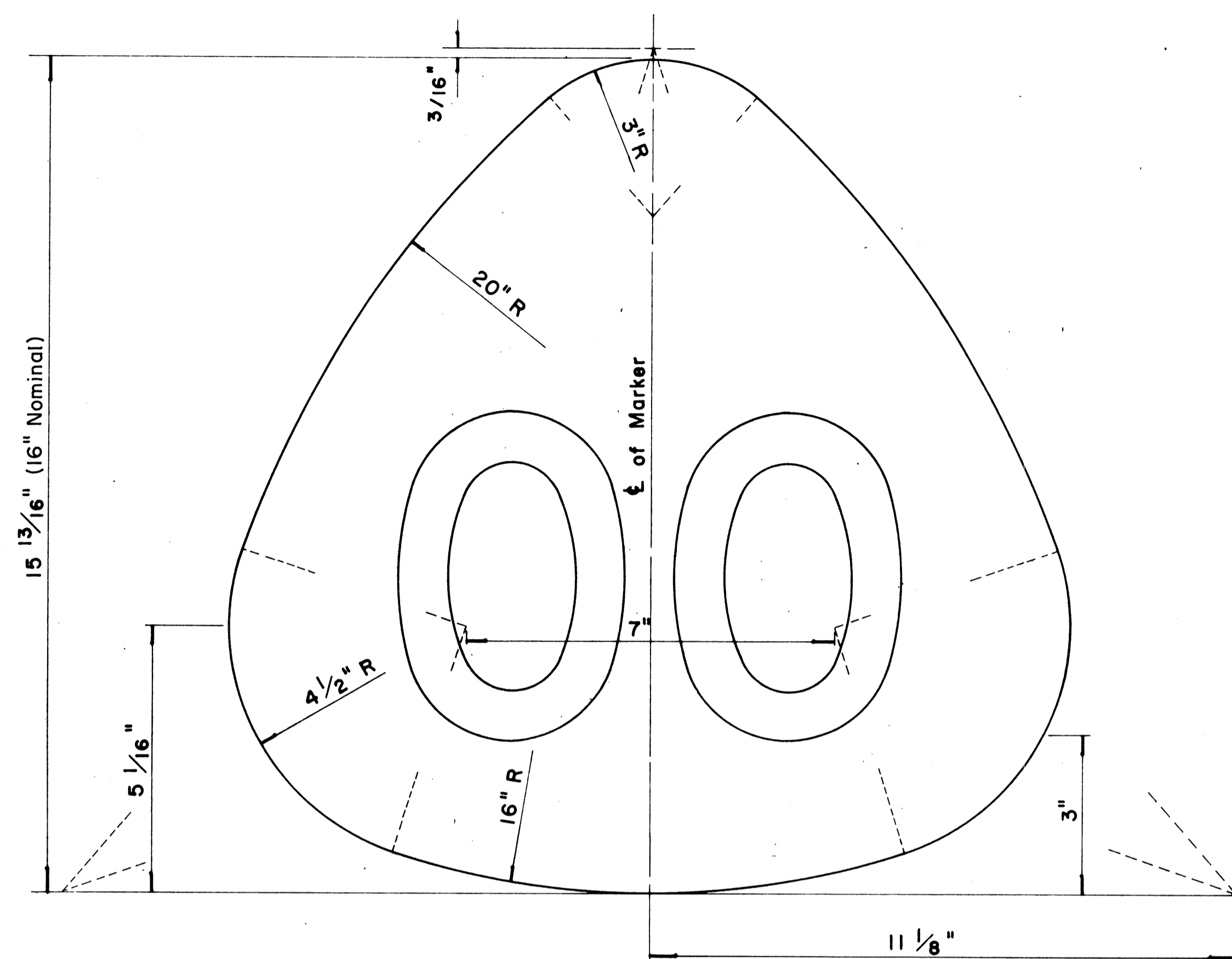
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS**  
**DESTINATION & GROUND MOUNTED EXPRESSWAY SIGNS**

Scale: As Shown  
 SHEET No. 9 OF 11 SHEETS DT 203

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

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

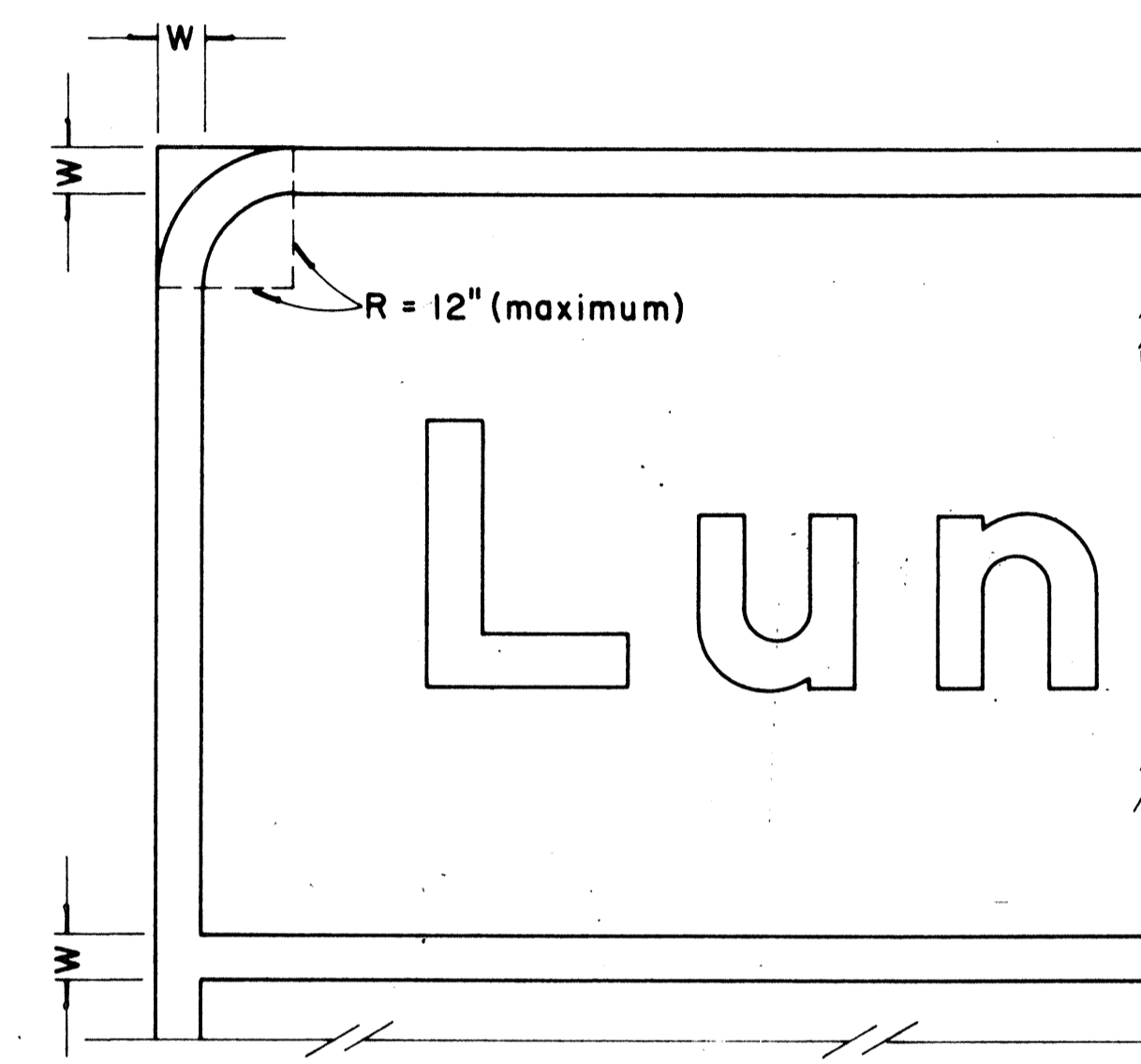
**NOTE:**

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.

DATE	.....
SURVEY PLATTED BY	.....
DESIGNED BY	.....
NOTE BOOK	.....
CHECKED BY	.....
NO.	.....

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(6)	1977	66	147

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:

*Euschi Tanaka* 4/11/72  
TRAFFIC ENGINEER DATE

APPROVED:

*Shuji S. Sakai* 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  
HIGHWAYS DIVISION

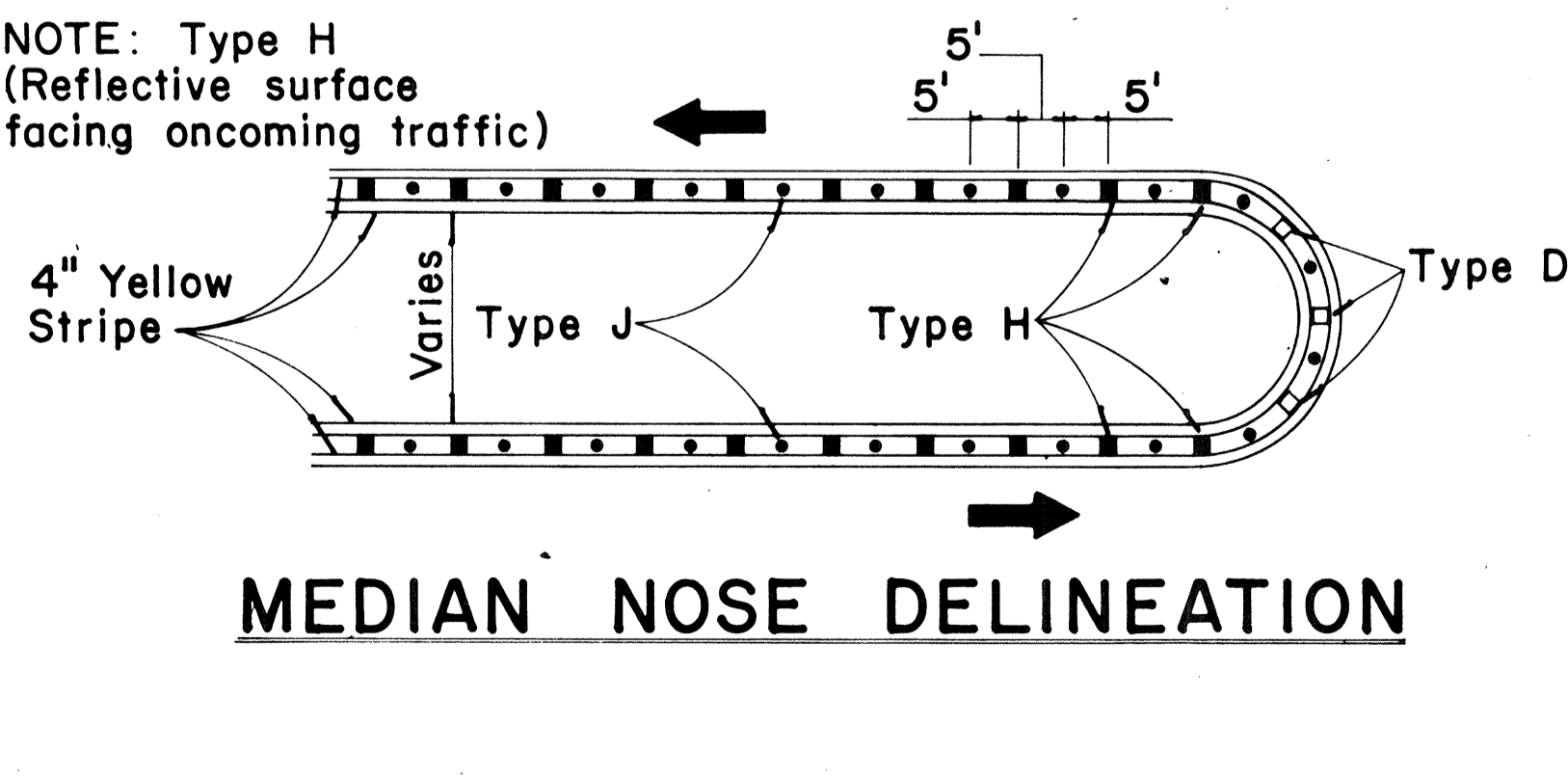
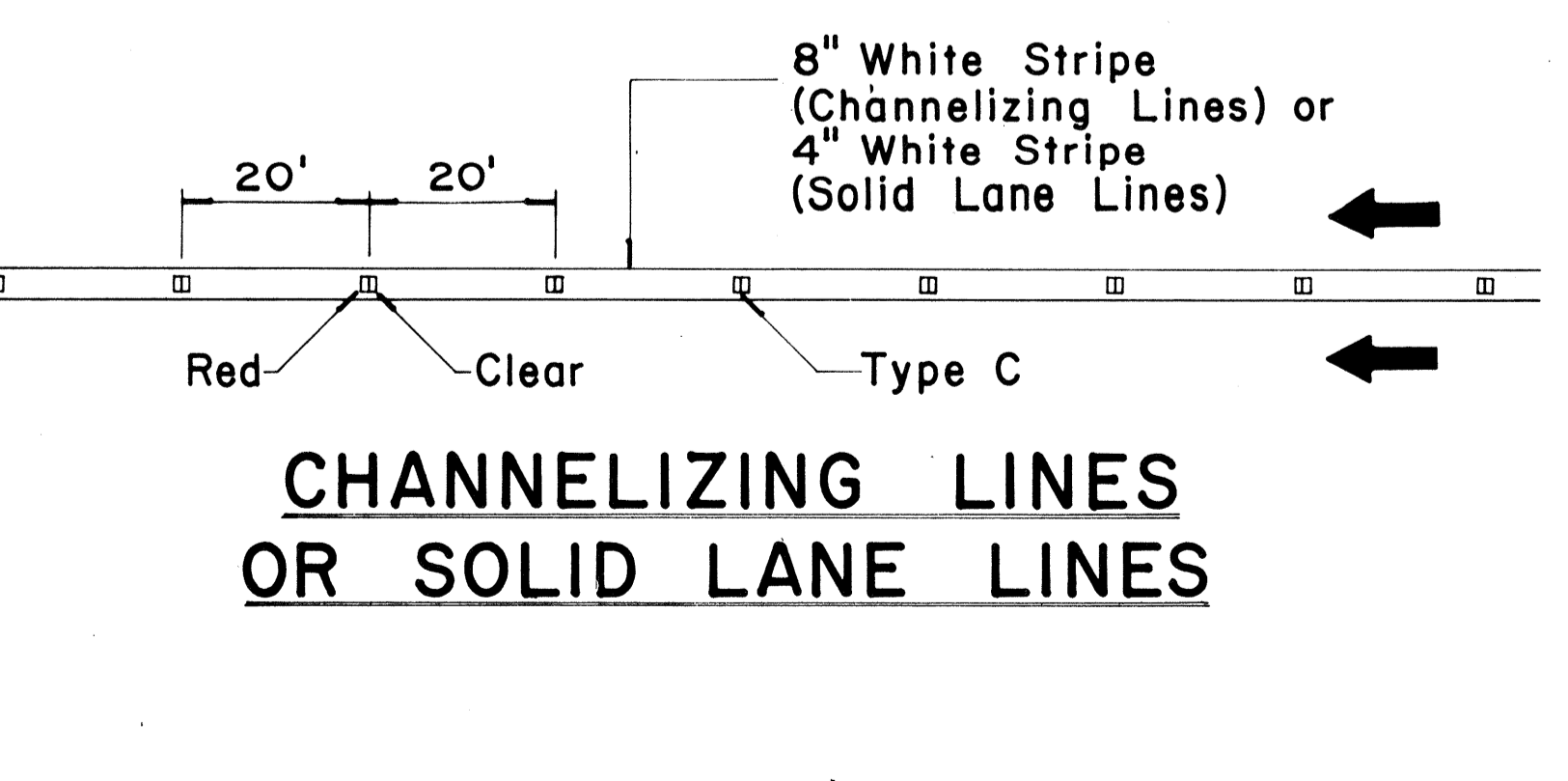
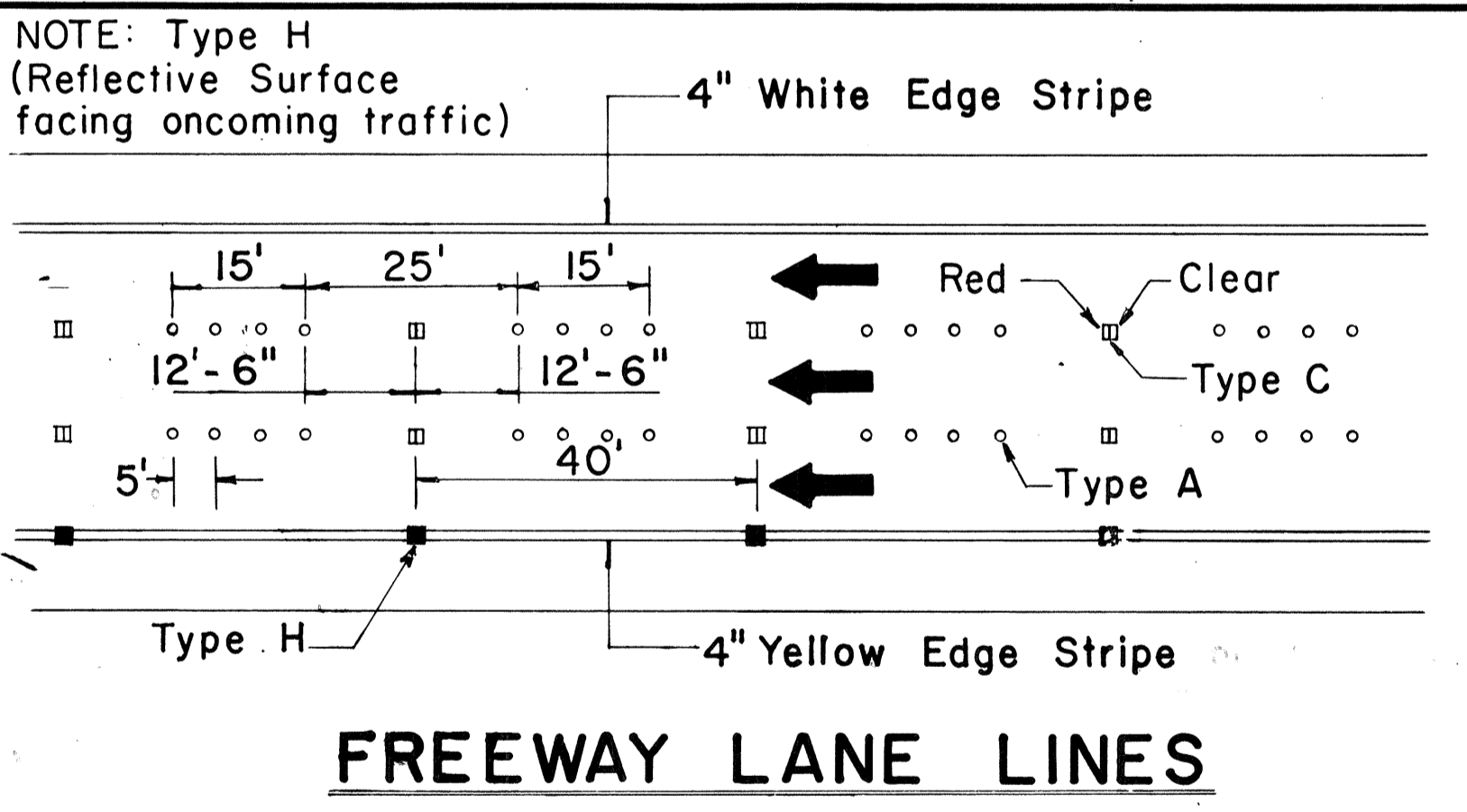
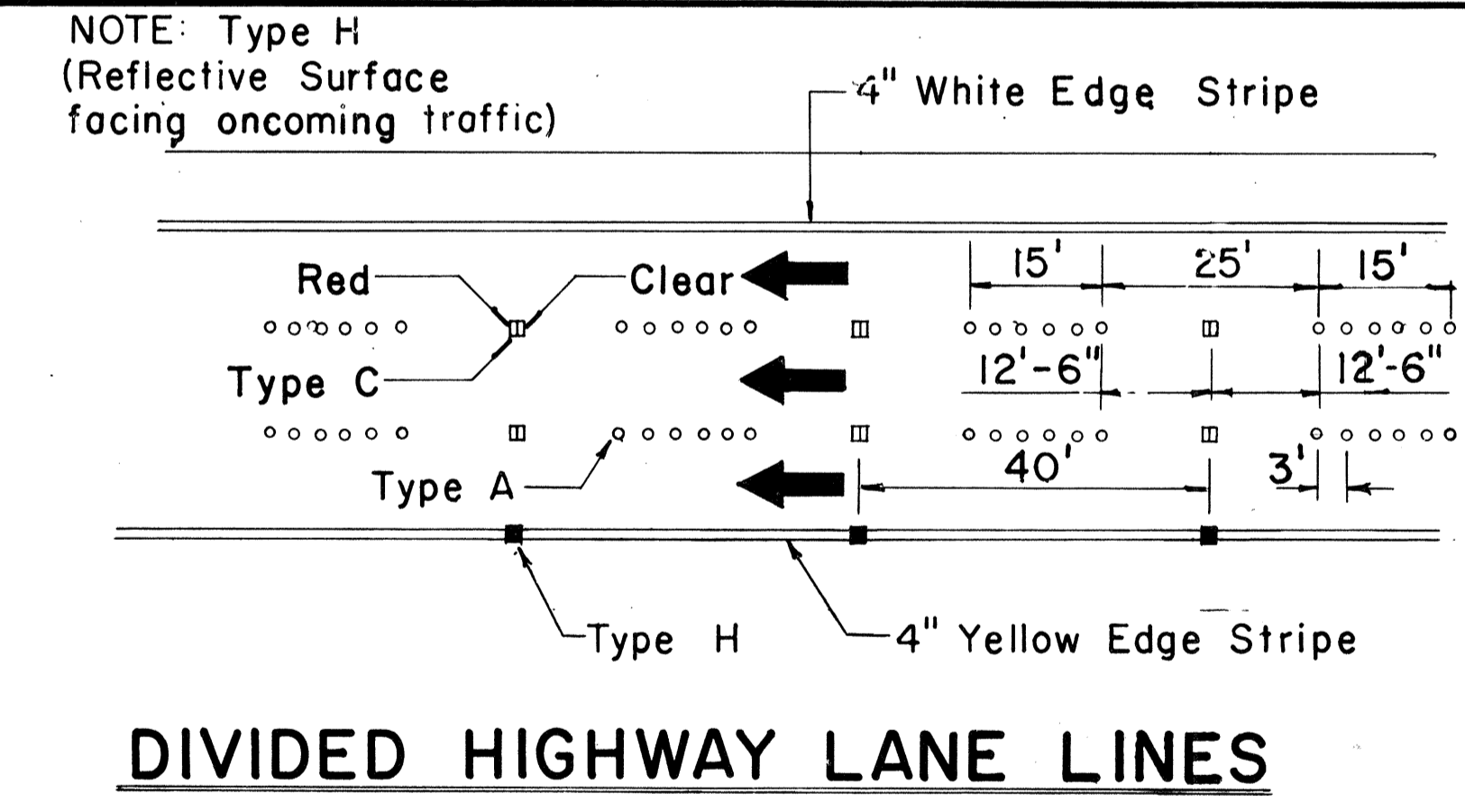
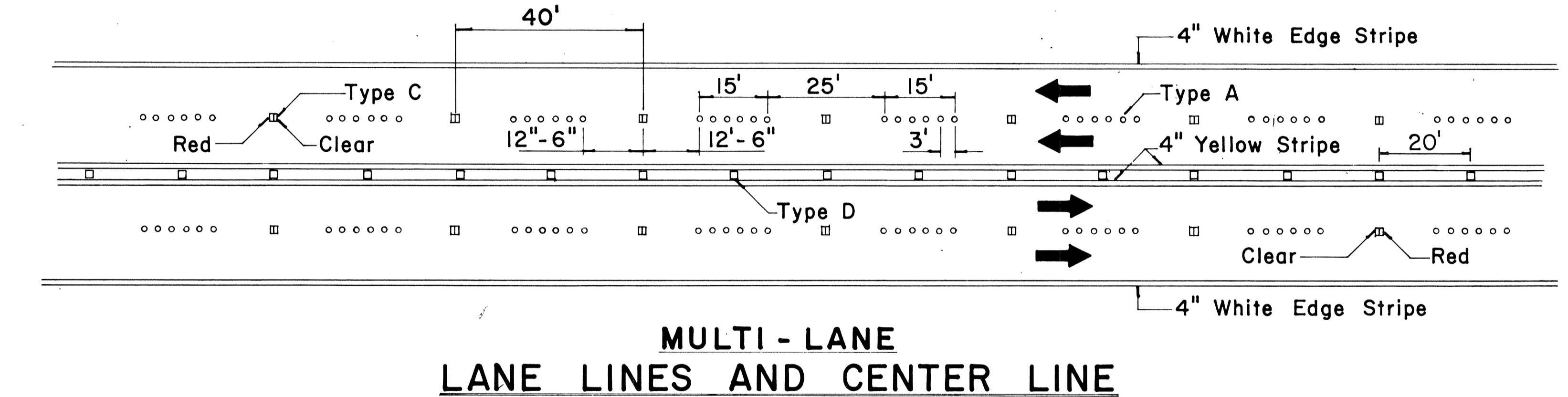
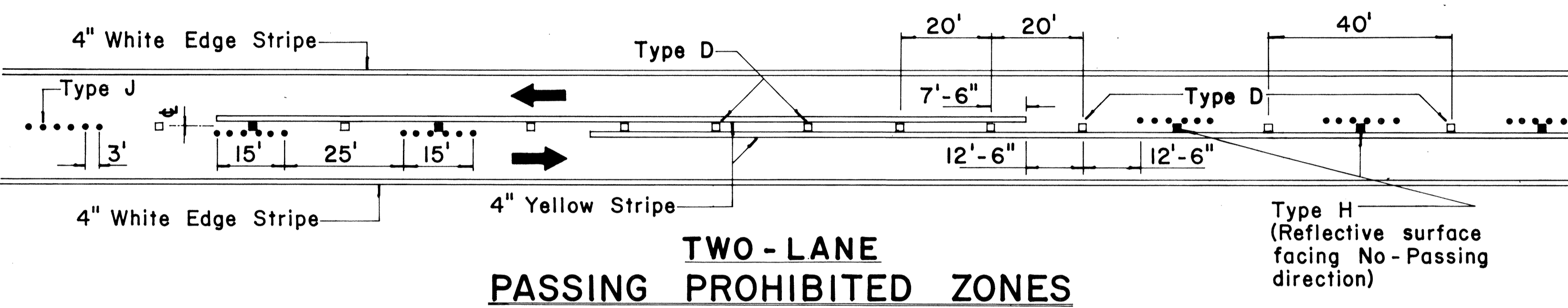
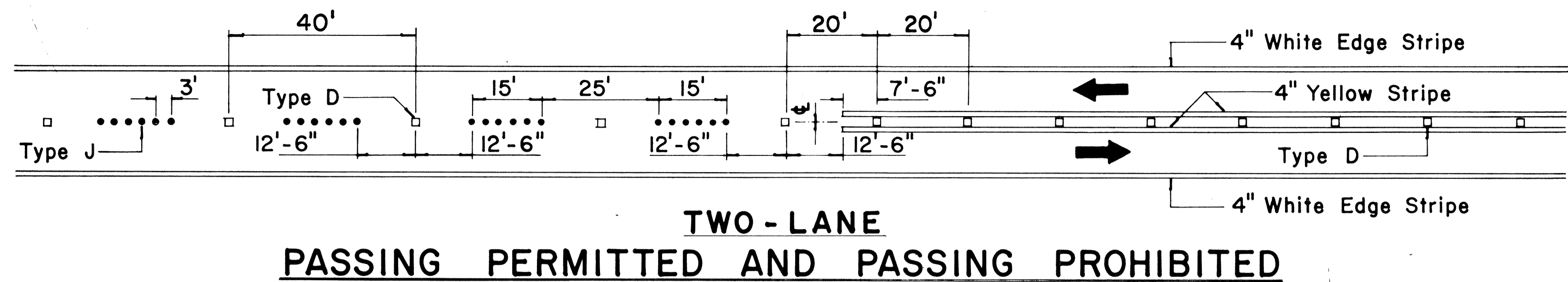
**STANDARD DETAILS**

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

Scale: As Shown

SHEET No. 10 OF 11 SHEETS DT 209

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-FF-078-1(16)	1977	67	147

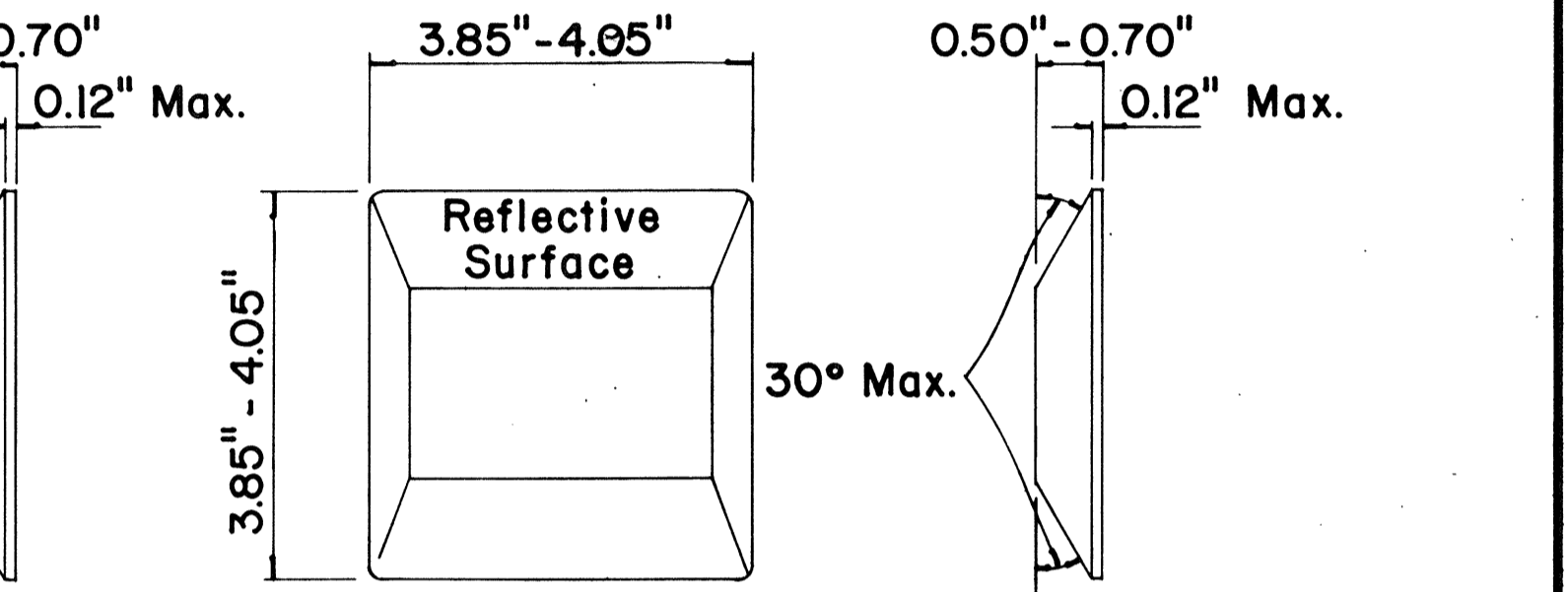
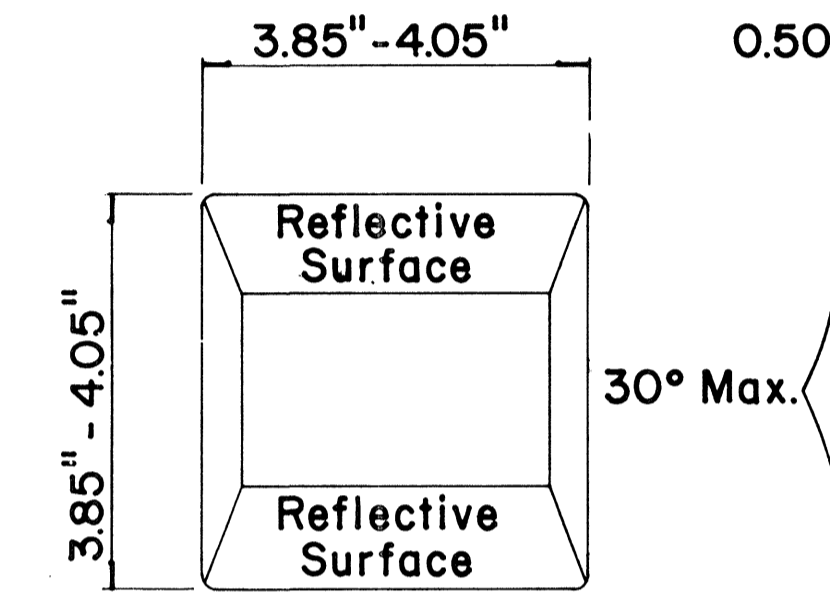
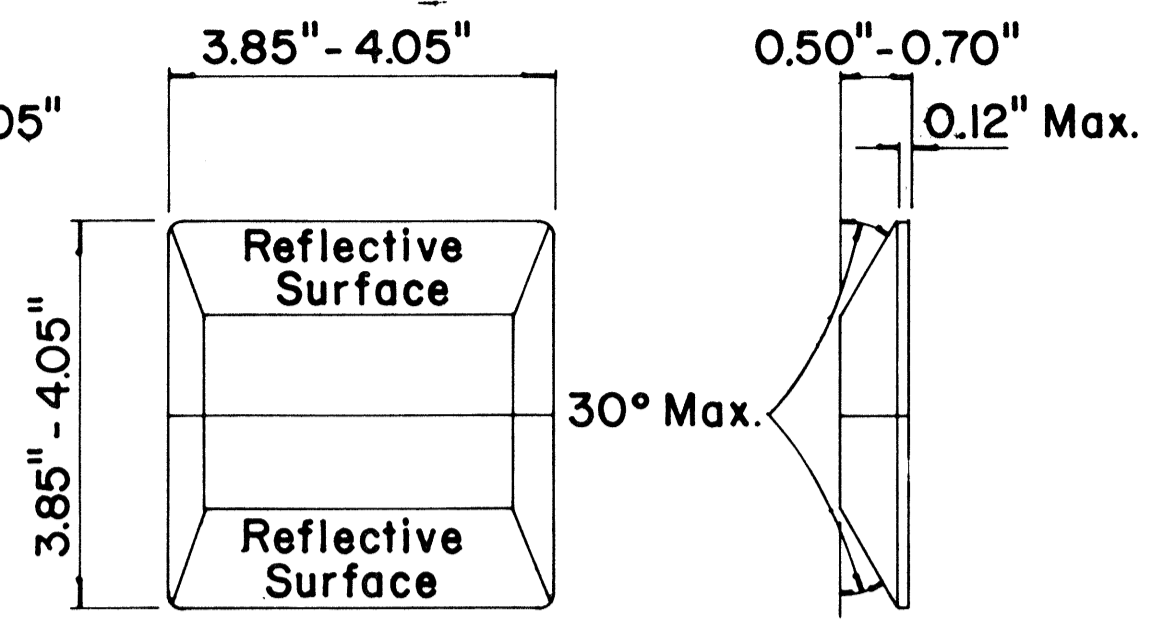
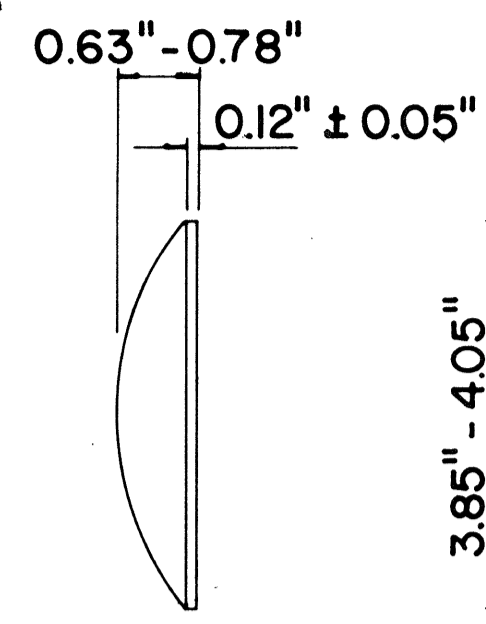
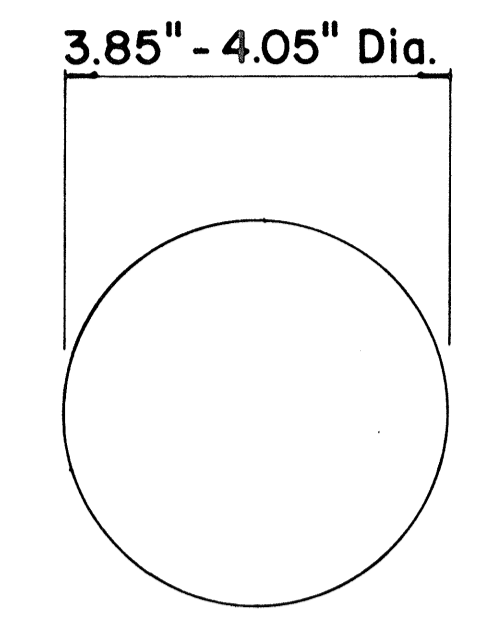


TWO - LANE

MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

MISCELLANEOUS



**GENERAL NOTES**

1. Painted stripes to be done by Contractor unless otherwise specified.

**LEGEND**

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

APPROVAL RECOMMENDED:  
*E. I. Tanaka* 11/18/71  
 TRAFFIC ENGINEER DATE

APPROVED:  
*Sheldon S. Sato* 11/18/71  
 ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Add reflector marker in each line gap.	H.I.	10-21-72
2	Revised General Notes.	H.I.	10-21-72
3	Change 4" white edge stripe to 4" solid yellow edge stripe to left edge of travel path and Add Type H Reflector Marker	H.I.	5-22-74

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS**  
**RAISED PAVEMENT MARKERS**

Not to Scale October 1971  
 SHEET No. 11 OF 11 SHEETS DT 300

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