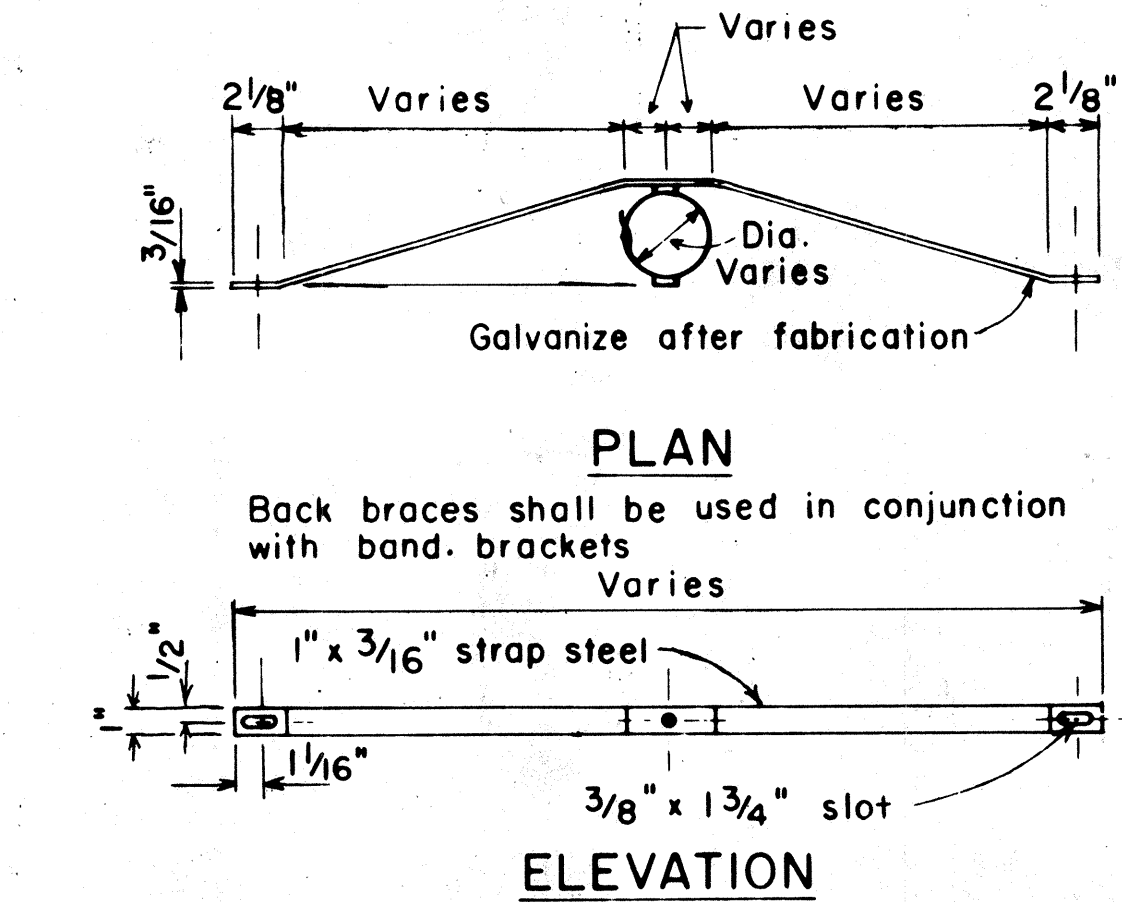


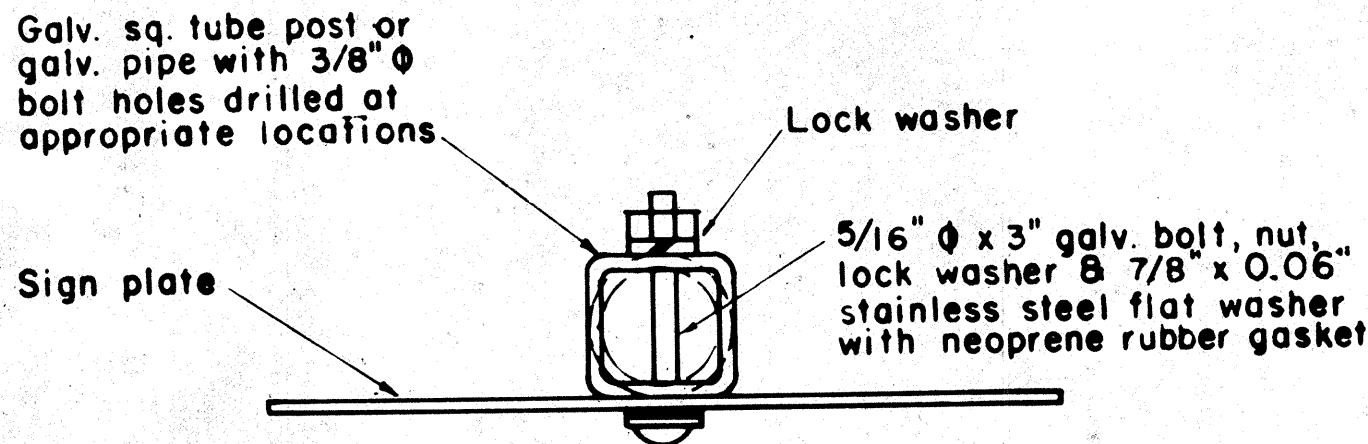
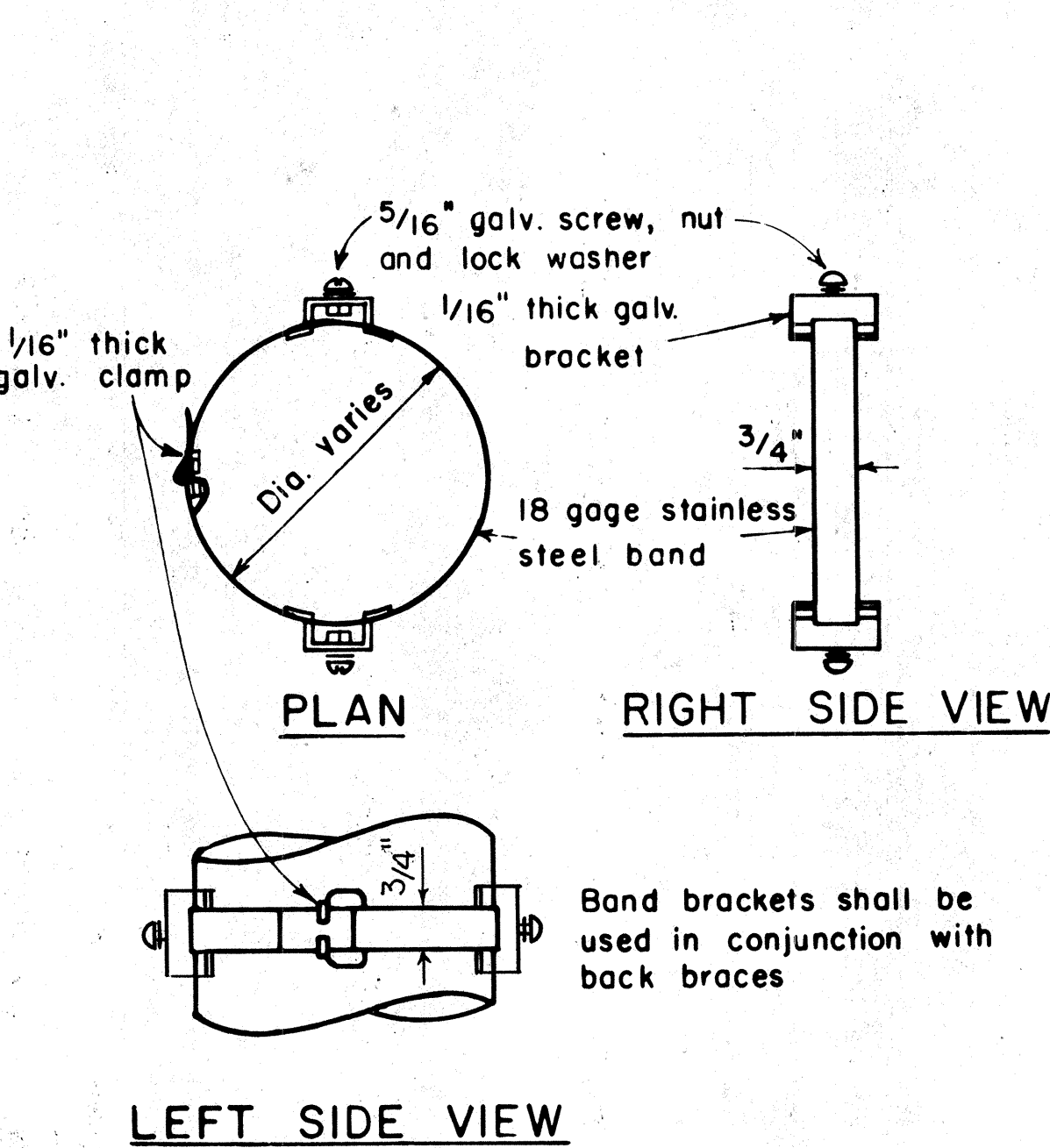
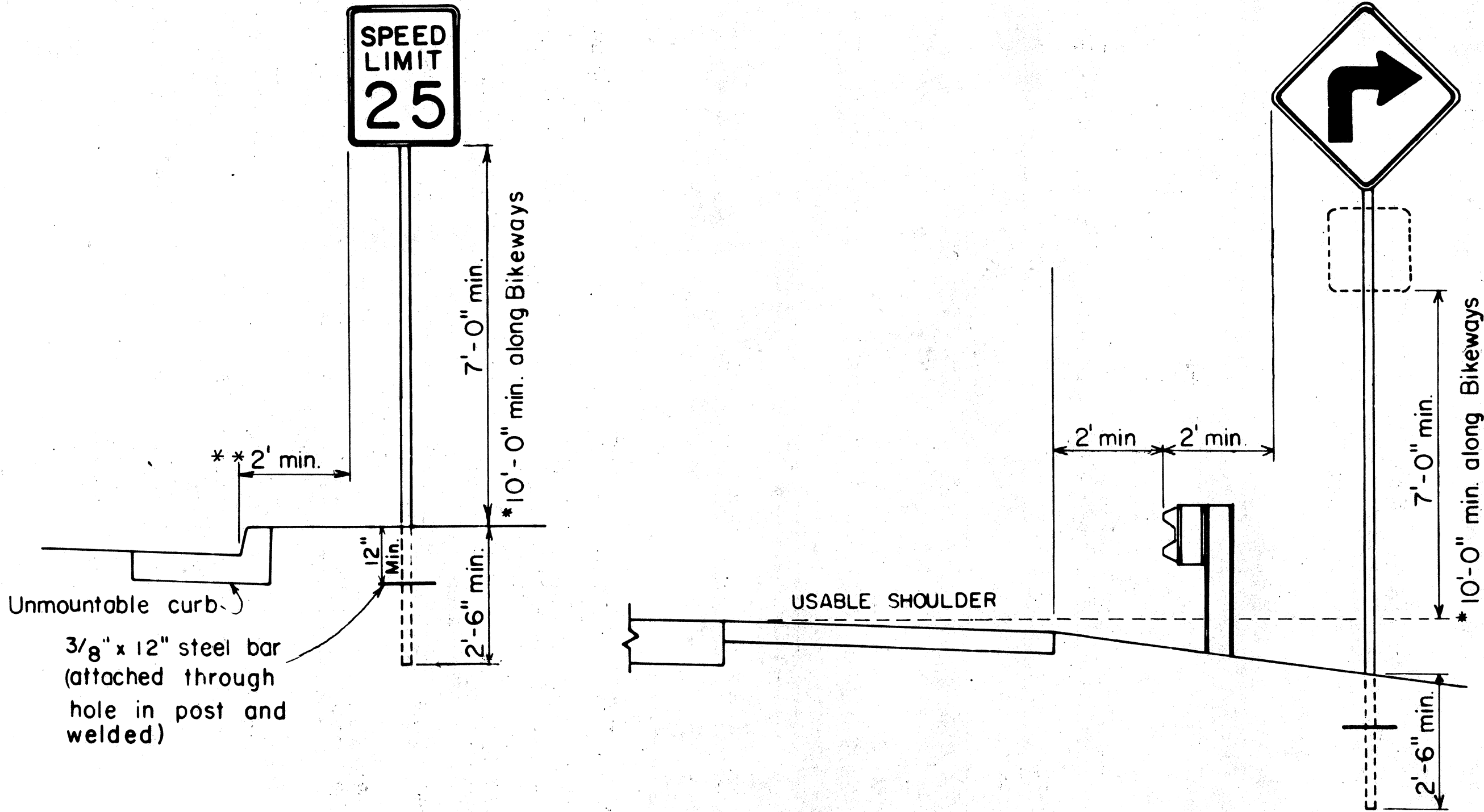
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FR-092-1(17)	1981	7	14

GENERAL NOTES

- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts except as noted below.
- Signs 48" and wider or larger than 10 sq. ft. in area may be mounted on other than two sign posts (i.e. on highway lighting poles)
 - Signs larger than 10 sq. ft. and less than 28 sq. ft. in area shall be mounted with a minimum of two sets of band brackets and back braces.
 - Signs larger than 28 sq. ft. in area shall be mounted with a minimum of three sets of band brackets and back braces.
- All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
- Sign posts shall extend 3 1/2" above each sign, where required, for attachment of City and County street name signs.
- (R) or (L) indicates right or left and shall be shown on the plans.
- See plans for special details.
- The minimum lateral distances shown are guidelines and shall be exceeded whenever possible. The Contractor shall place signs at the maximum practical lateral distance from the edge of the traveled way up to 30 feet and shall utilize protected locations whenever possible. Final locations of all signs shall be approved by the Engineer.
- Signs in medians shall be placed at midpoint of median up to a maximum distance of 30 feet from the edge of traveled way. When appropriate, signs for opposing directions shall be placed back to back.



BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



GALVANIZED SQUARE TUBE POST (OR GALVANIZED PIPE)

BAND BRACKET TYPICAL MOUNTING DETAILS NOT TO SCALE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT-100 approved 12/30/69	H.T.	11/15/11
2	Revised depth of signpost	H.T.	5/8/19
3	Added Notes No. 8 & No. 9	H.T.	5/18/19
4	Revised Gen. Note #4 & Mounting Details	H.T.	4/23/80
5	Revised General Notes, Lateral Sign Locations and Mounting Details	H.T.	5/15/81

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

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

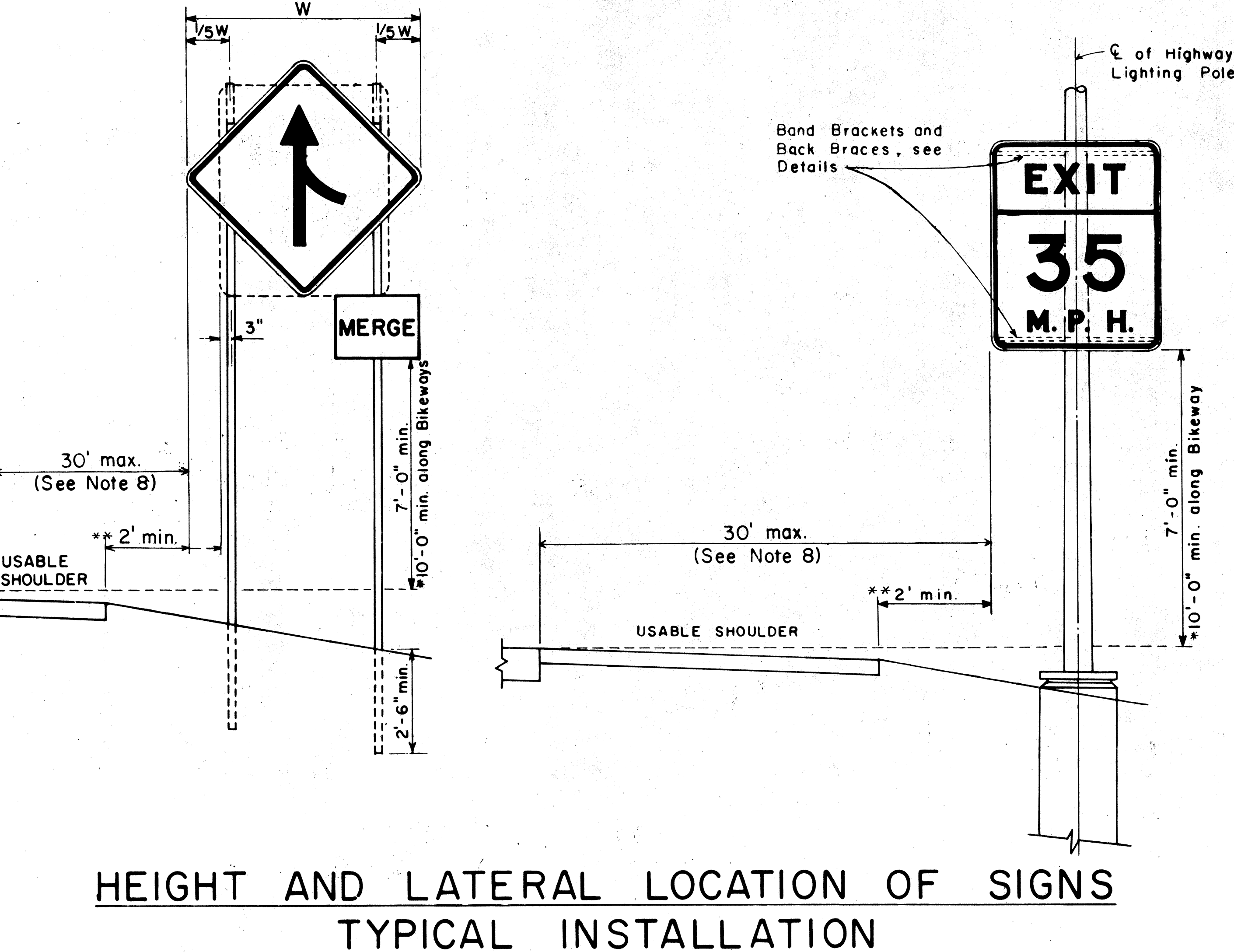
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977

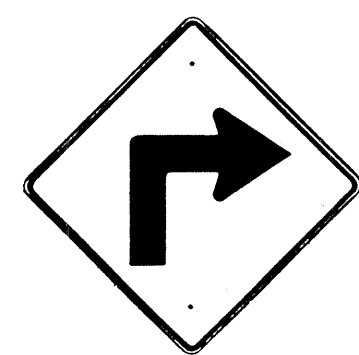
SHEET NO. 1 OF 8 SHEETS DT 100



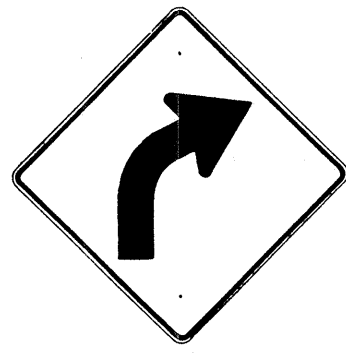
HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

DATE	11/15/11
SURVEY PLATTED BY	H.T.
DRAWN BY	H.T.
DESIGNED BY	H.T.
NOTE BOOK	H.T.
QUANTITIES BY	H.T.
CHECKED BY	H.T.
NO.	1

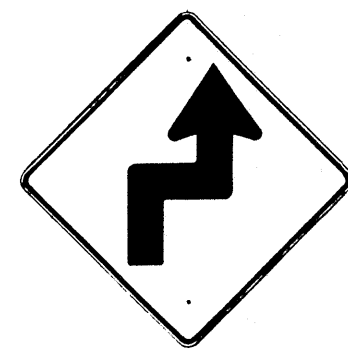
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII *	HAW.	FR-092-1(07)	1981	8	14



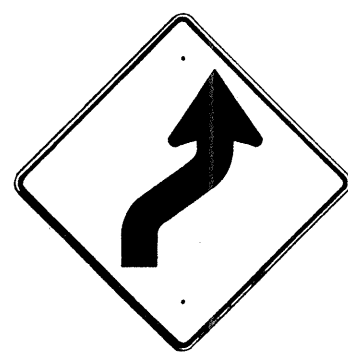
W1-1(R) 30" x 30"
W1-1(R)-A 48" x 48"



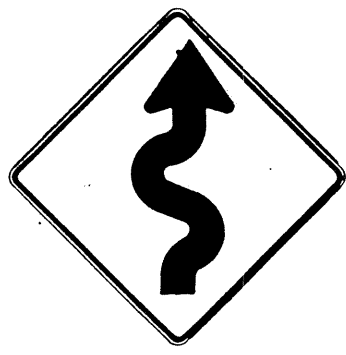
W1-2(R) 30" x 30"
W1-2(R)-A 48" x 48"



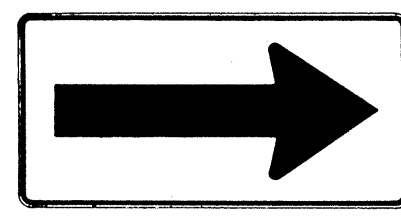
W1-3(R) 30" x 30"
W1-3(R)-A 48" x 48"



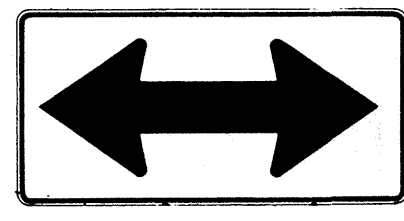
W1-4(R) 30" x 30"
W1-4(R)-A 48" x 48"



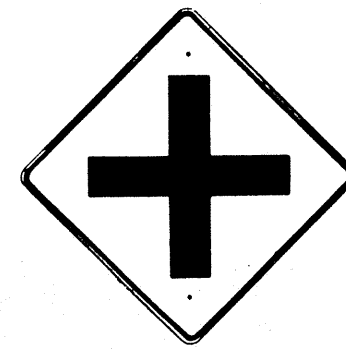
W1-5(R) 30" x 30"
W1-5(R)-A 48" x 48"



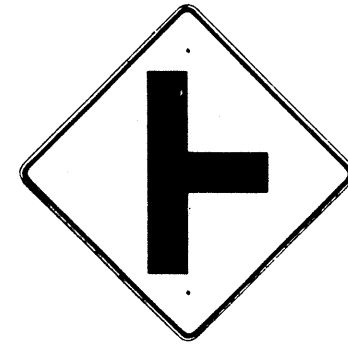
W1-6 48" x 24"



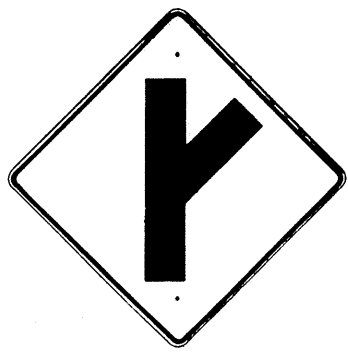
W1-7 48" x 24"



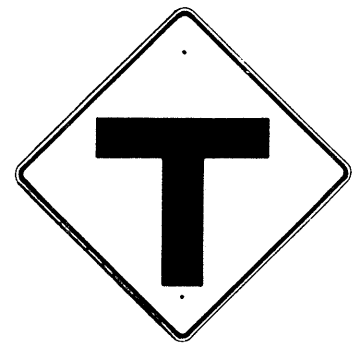
W2-1 30" x 30"
W2-1-A 48" x 48"



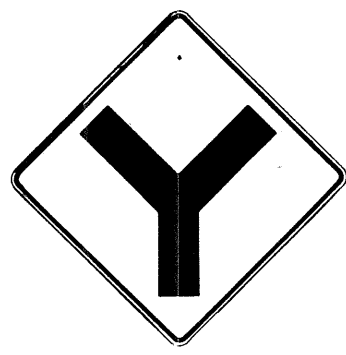
W2-2 30" x 30"
W2-2-A 48" x 48"



W2-3(R) 30" x 30"
W2-3(R)-A 48" x 48"



W2-4 30" x 30"
W2-4-A 48" x 48"



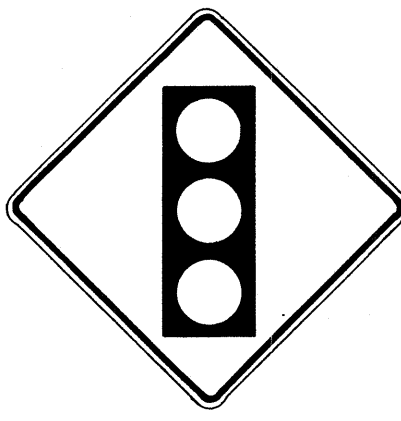
W2-5 30" x 30"
W2-5-A 48" x 48"



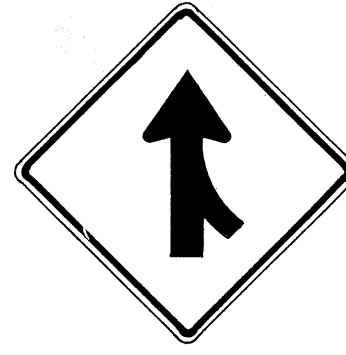
W3-1 30" x 30"
W3-1-A 36" x 36"



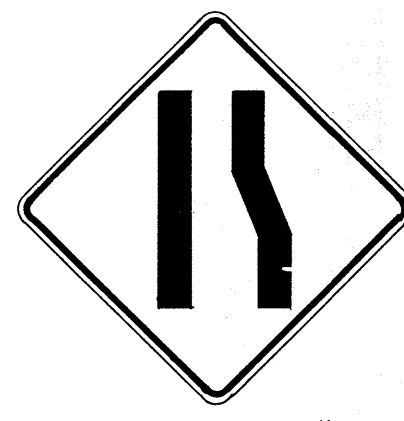
W3-2 30" x 30"
W3-2-A 36" x 36"



W3-3 36" x 36"
24" x 18"



W4-1(R) 30" x 30"
24" x 18"
W4-1(R)-A 48" x 48"
24" x 18"



W4-2(R) 36" x 36"
W4-2(R)-A 48" x 48"



W5-1 36" x 36"



W5-2 30" x 30"
W5-2-A 36" x 36"



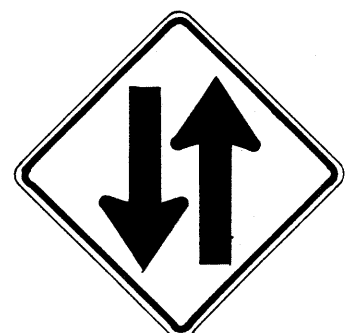
W5-3 36" x 36"



W6-1 36" x 36"
24" x 18"



W6-2 36" x 36"
24" x 18"



W6-3 30" x 30"
24" x 18"
W6-3-A 36" x 36"
24" x 18"
W6-3-B 48" x 48"
24" x 18"



W7-1 30" x 30"
24" x 18"
W7-1-A 36" x 36"
24" x 18"



W7-2 24" x 18"



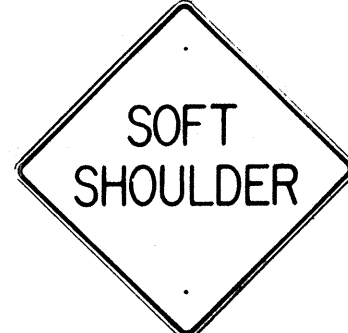
W8-1 30" x 30"
W8-1-A 36" x 36"



W8-2 30" x 30"
W8-2-A 36" x 36"



W8-3 30" x 30"
W8-3-A 36" x 36"



W8-4 30" x 30"
W8-4-A 36" x 36"



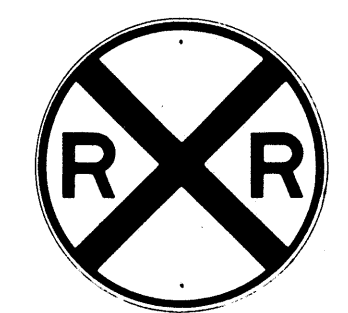
W8-5 30" x 30"
24" x 18"
W8-5-A 36" x 36"
24" x 18"



W9-1(R) 30" x 30"
W9-1(R)-A 36" x 36"
W9-1(R)-B 48" x 48"



W9-2(L) 36" x 36"
W9-2(L)-A 48" x 48"



W10-1 36" Diameter



W11-1 30" x 30"
24" x 18"
W11-1-A 36" x 36"
24" x 18"



W11-2 30" x 30"
24" x 18"
W11-2-A 36" x 36"
24" x 18"



W11-4 30" x 30"
24" x 18"
W11-4-A 36" x 36"
24" x 18"



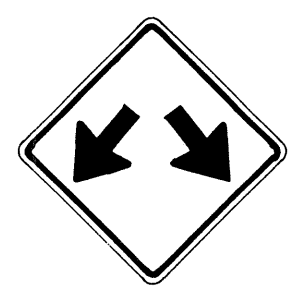
W11-5 30" x 30"
24" x 18"
W11-5-A 36" x 36"
24" x 18"



W14-1 30" x 30"



W14-3 36" x 48" x 48"



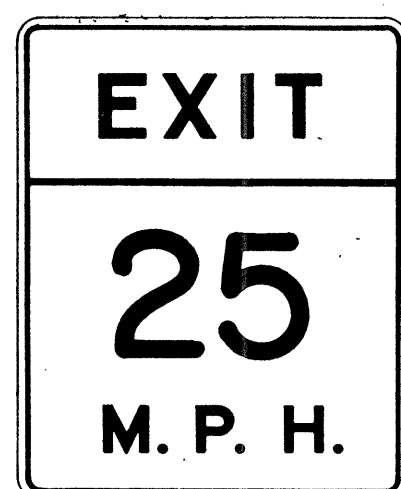
W12-1 24" x 24"
W12-1-A 36" x 36"
W12-1-B 48" x 48"



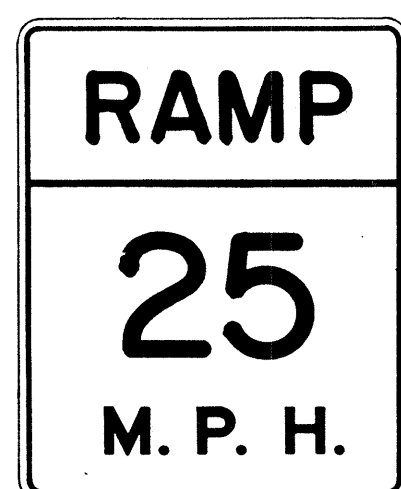
W12-2(12'-6") 36" x 36"
24" x 18"



W13-1(25) 18" x 18"
W13-1(25)-A 24" x 24"



W13-2(25) 48" x 60"



W13-3(25) 48" x 60"

NOTE

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

GENERAL NOTES

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

APPROVAL RECOMMENDED:
E. J. Tanaka
TRAFFIC ENGINEER

3/17/12
DATE

APPROVED:
Walter J. J. J.
ASSISTANT CHIEF, ENGINEERING

3-20-12
DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 102 Approved 12-30-69	H.T.	3/20/12
2	Revised General Note 1	H.T.	10/16/14
3	Revised General Note 5	Mf	9-16-75
4	Revised General Note 5	H.T.	9-14-70
5	Added Note 1	H.T.	11-7-71

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS
WARNING SIGNS
NOT TO SCALE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FR-092-1(17)	1981	9	14



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"



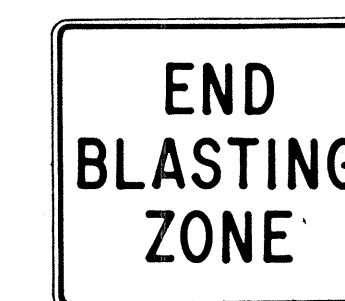
CW21-6 30" x 30"



CW22-1b 48" x 48"



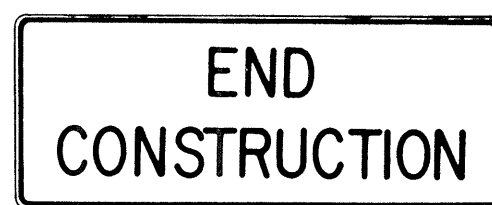
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



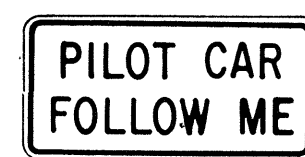
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



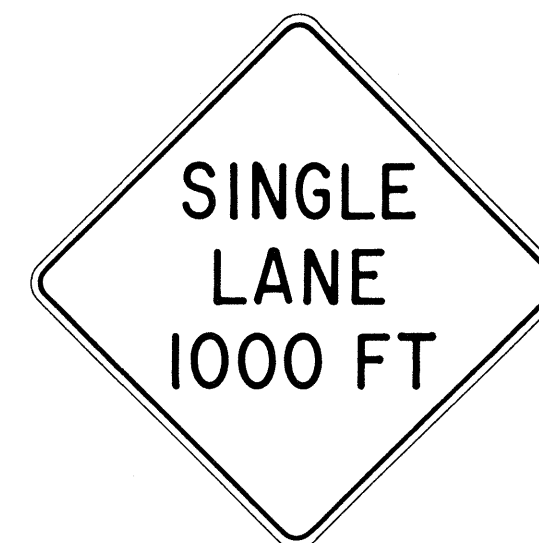
CM4-10(R) 48" x 18"



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

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	H.T.	9-16-75
4	Revised General Note 2 and sign CG20-1(5)	H.T.	9-14-76

APPROVAL RECOMMENDED:

Erich Tanaka
TRAFFIC ENGINEER

3/21/72
DATE

APPROVED:

William Salsich
ASSISTANT CHIEF, ENGINEERING

3/23/72
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

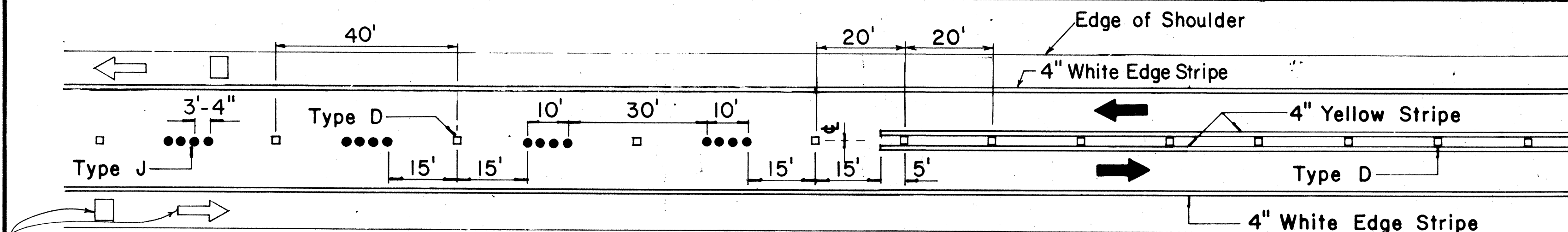
STANDARD DETAILS CONSTRUCTION SIGNS

NOT TO SCALE

SHEET No. 9 OF 8 SHEETS DT 104

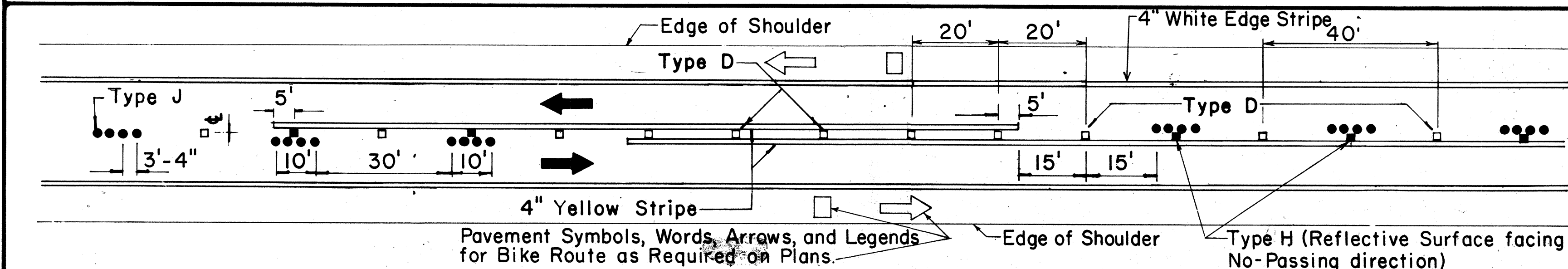
DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
NO.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FR-0924(17)	1981	10	14



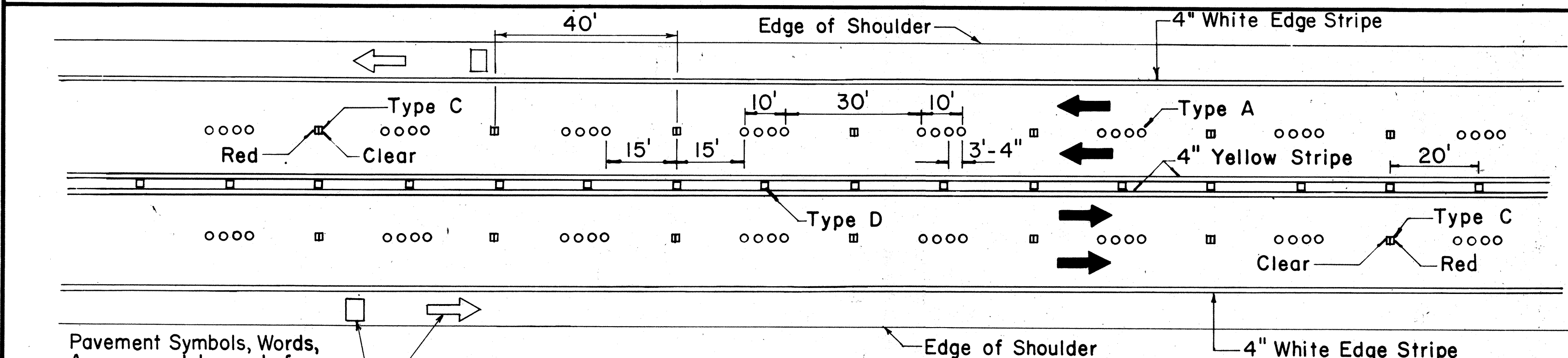
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PERMITTED AND PASSING PROHIBITED

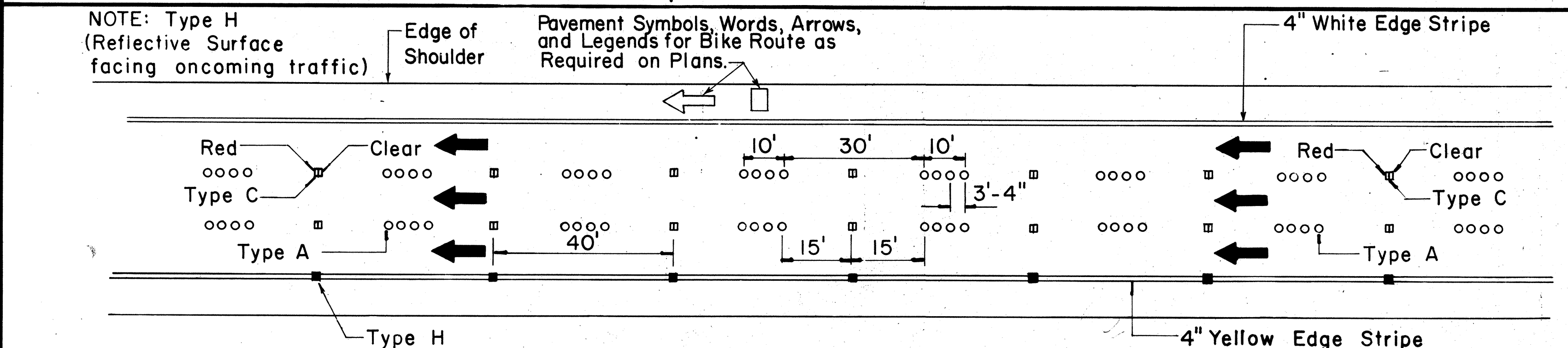


Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

PASSING PROHIBITED ZONES

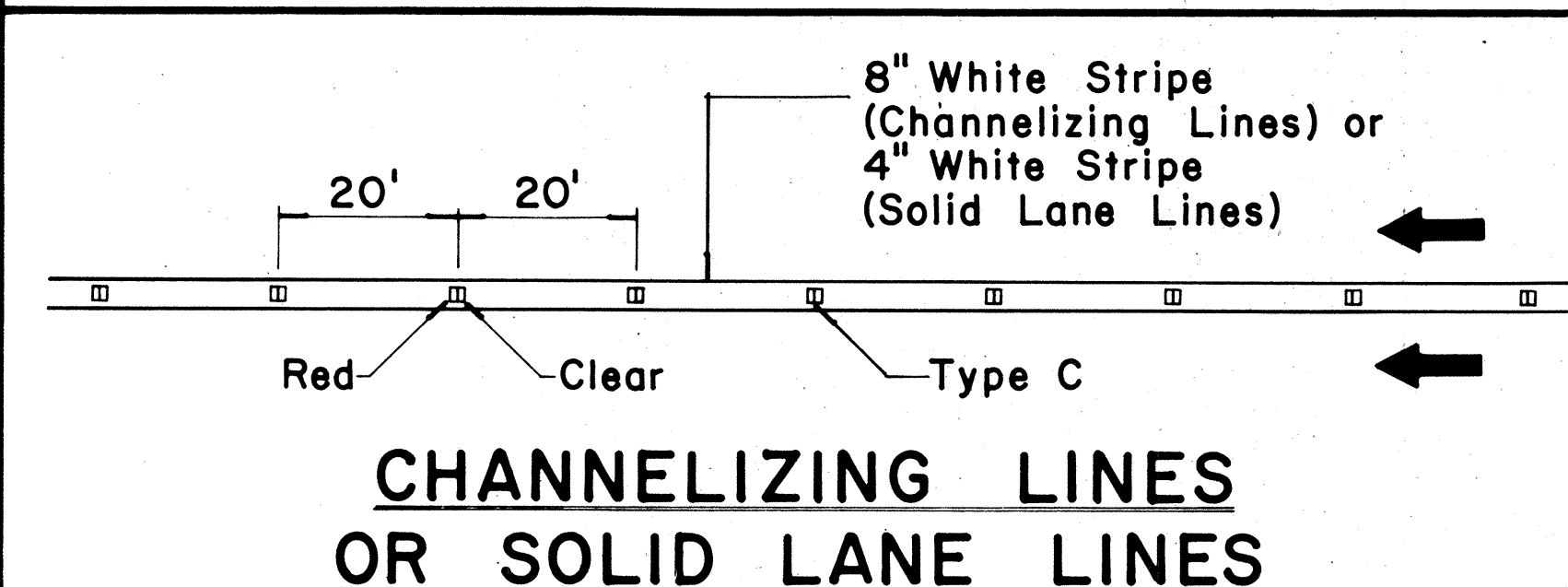


Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

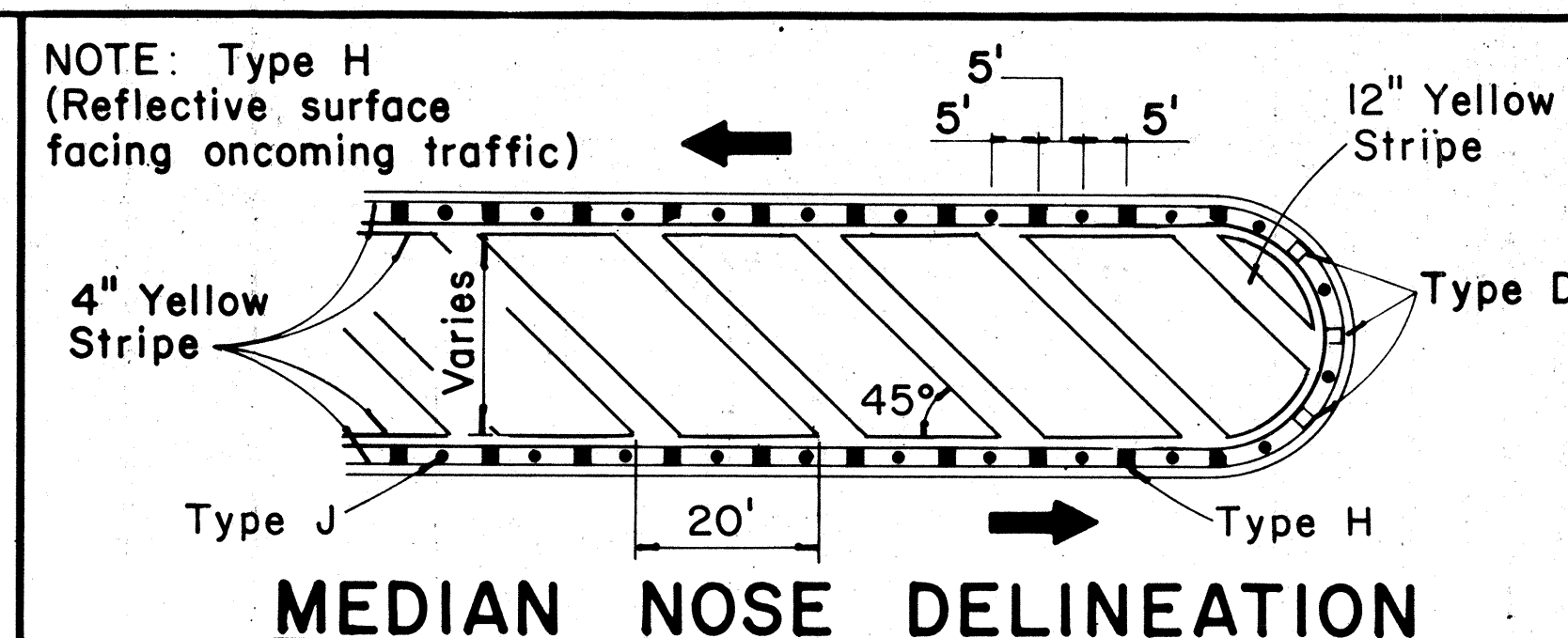


NOTE: Type H (Reflective Surface facing oncoming traffic)

Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.



CHANNELIZING LINES OR SOLID LANE LINES



NOTE: Type H (Reflective surface facing oncoming traffic)

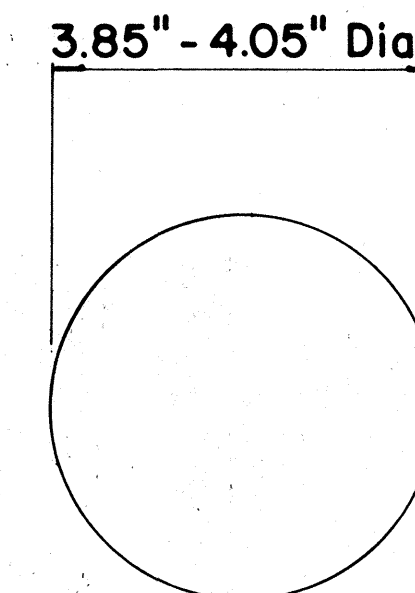
MEDIAN NOSE DELINEATION

TWO - LANE

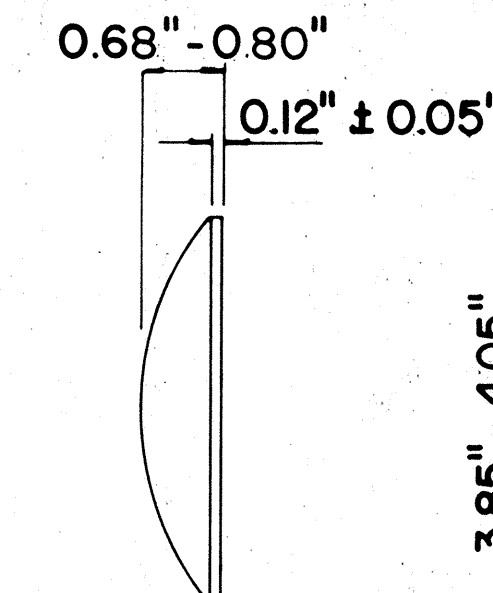
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

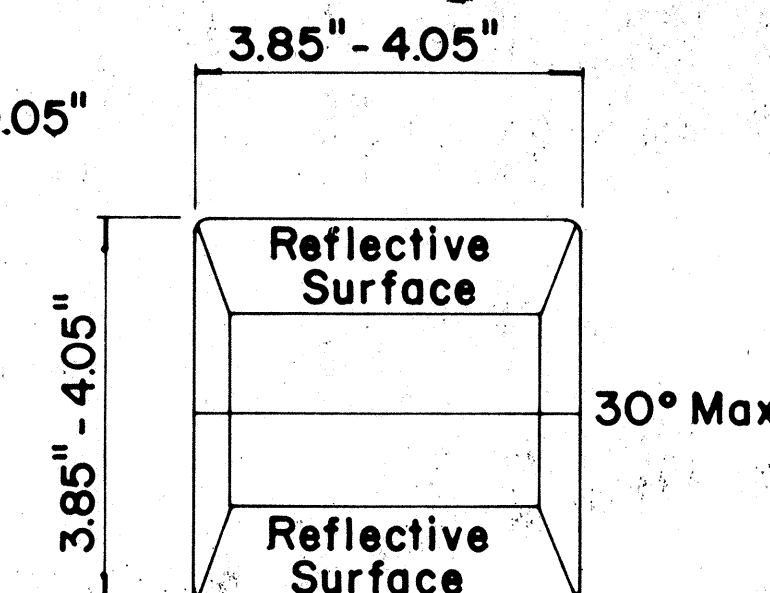
MISCELLANEOUS



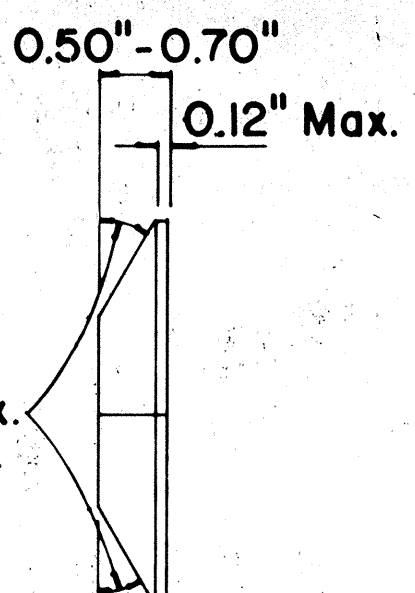
TYPE A
NON-REFLECTIVE WHITE MARKER



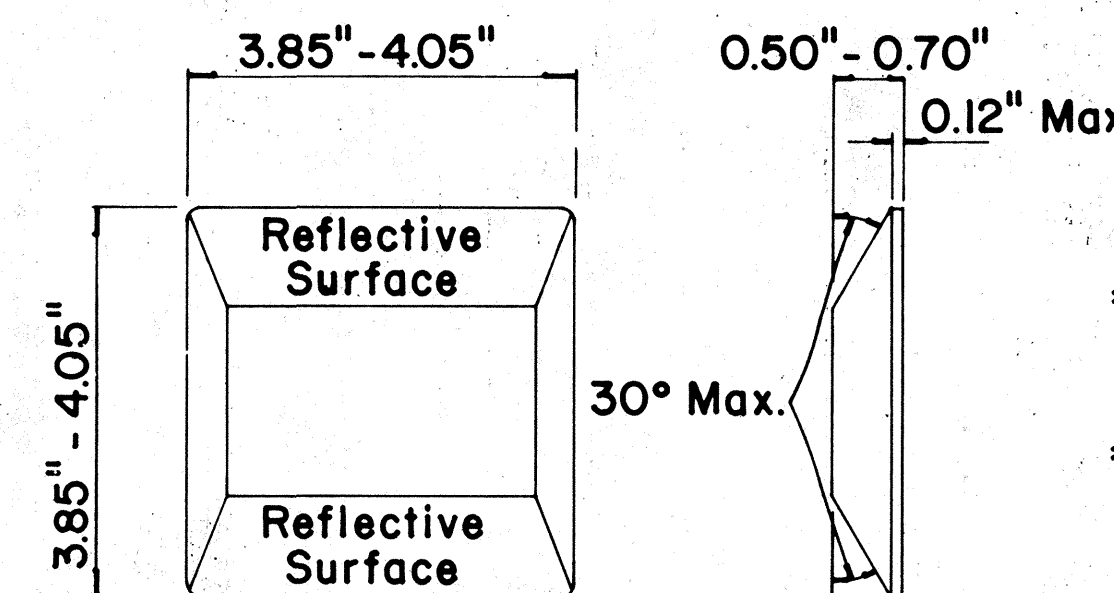
TYPE J
NON-REFLECTIVE YELLOW MARKER



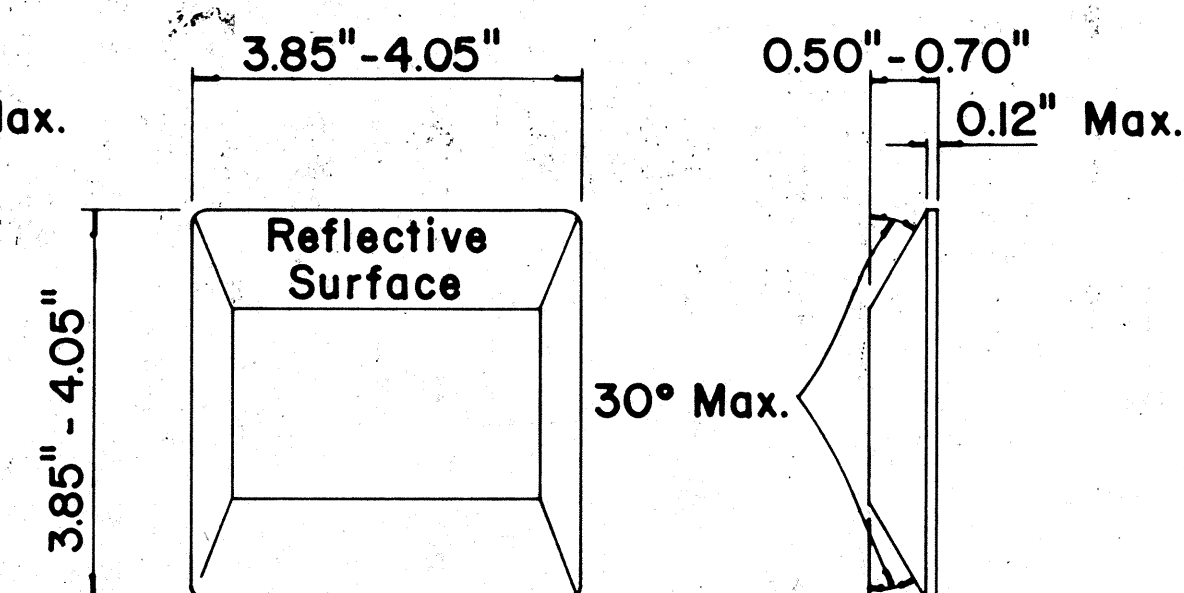
TYPE C
RED-CLEAR REFLECTIVE MARKER



TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER



TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER



GENERAL NOTES

- Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- 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:

Ericki Tanaka
TRAFFIC ENGINEER

7/21/78
DATE

APPROVED:

Herbert J. Zalechko
ASSISTANT CHIEF, ENGINEERING

1/24/78
DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.T.	1/24/78
2	Delete Type A Markers from Bike Route Delineation.	H.T.	10/15/79

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS RAISED PAVEMENT MARKERS AND STRIPING

Not to Scale July 1978

SHEET No. 4 OF 8 SHEETS DT 300

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FR-092-1(17)	1981	11	14

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

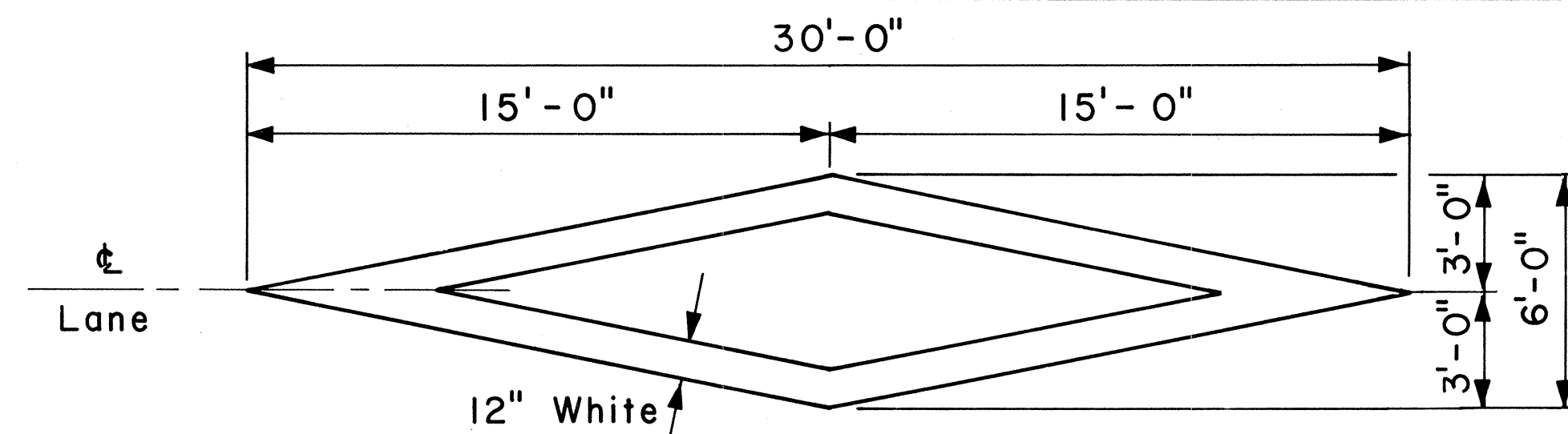
APPROVED:
Harbour 2.2afialw 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

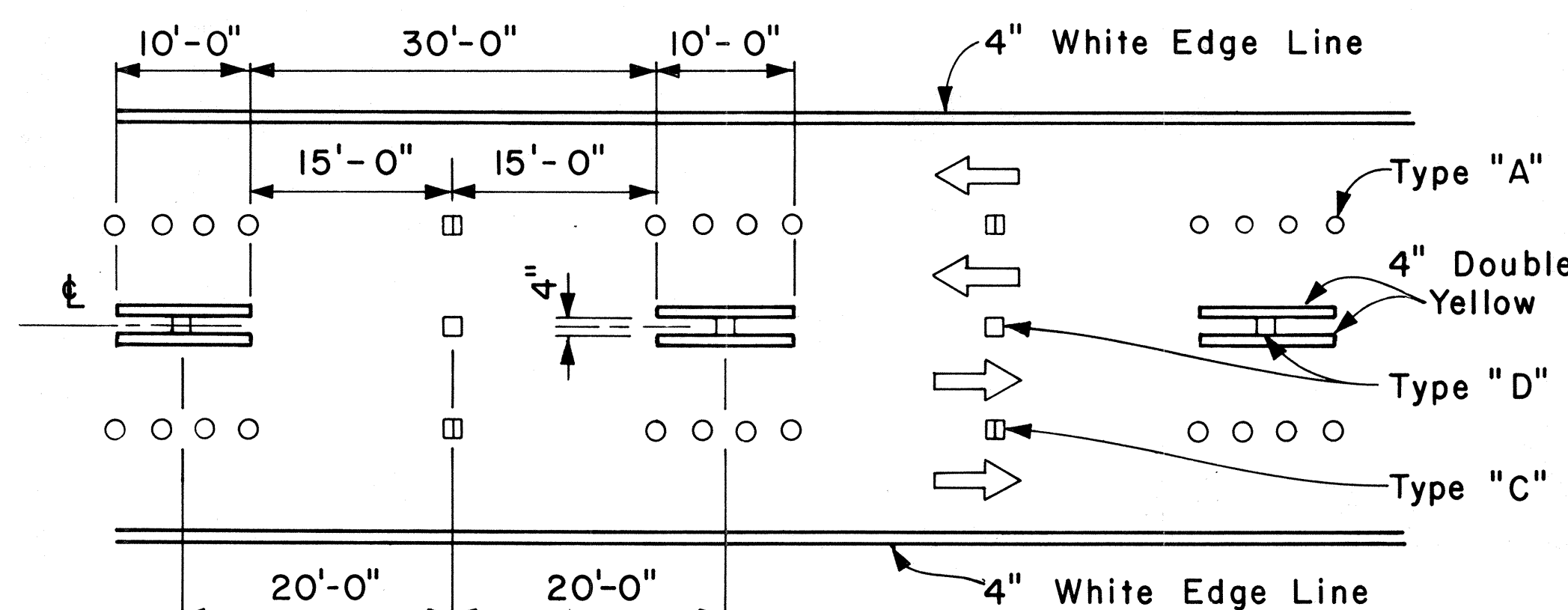
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION DIVISION

STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Scale: Not to Scale Date: April, 1978
SHEET No. 5 OF 8 SHEETS DT 302

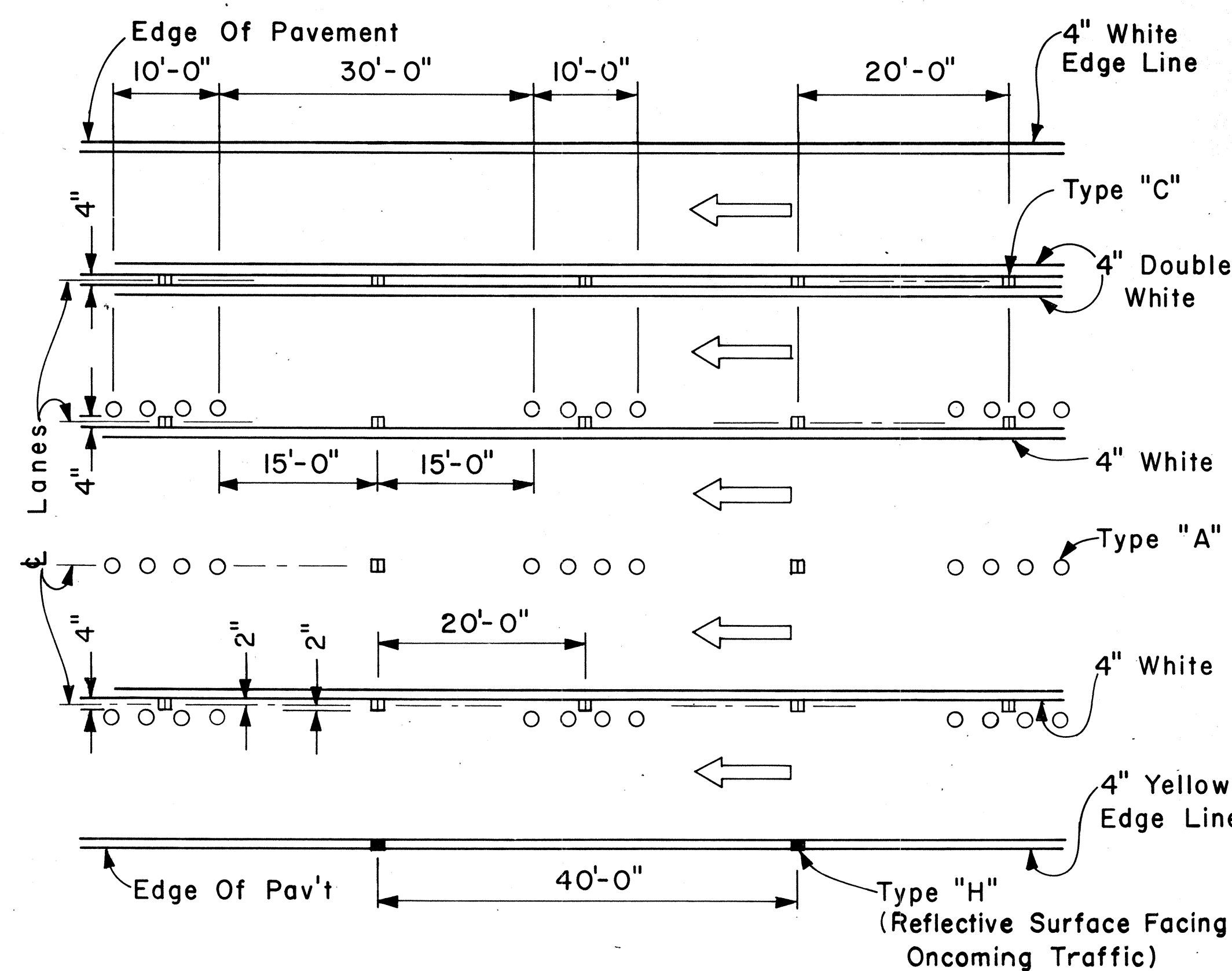


PAVEMENT DIAMOND

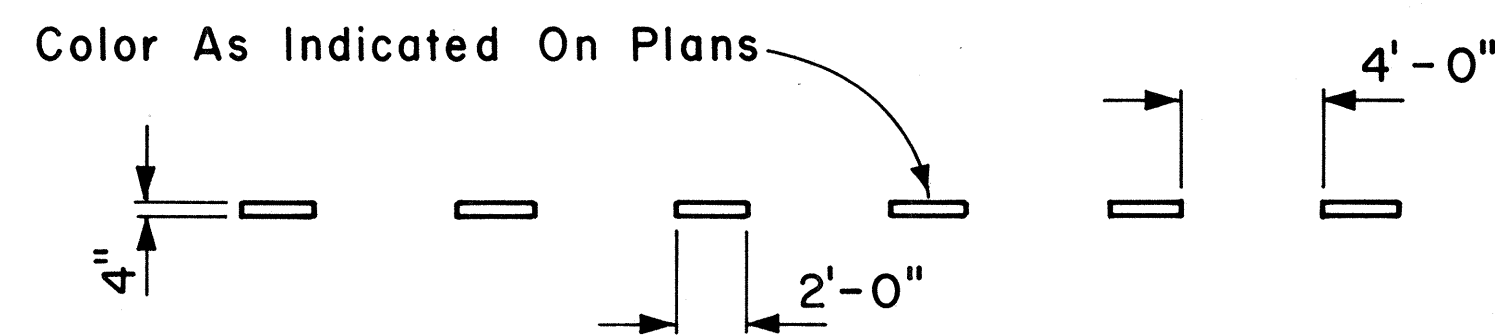


NOTE: Traffic Cone Usage Required.

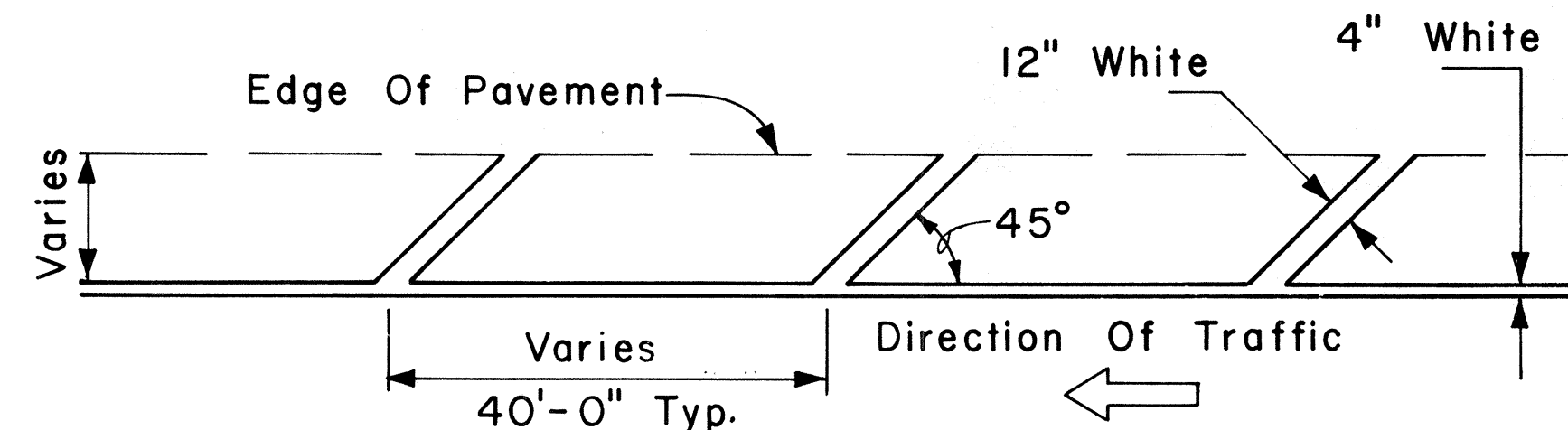
MULTI-LANE REVERSIBLE LANES



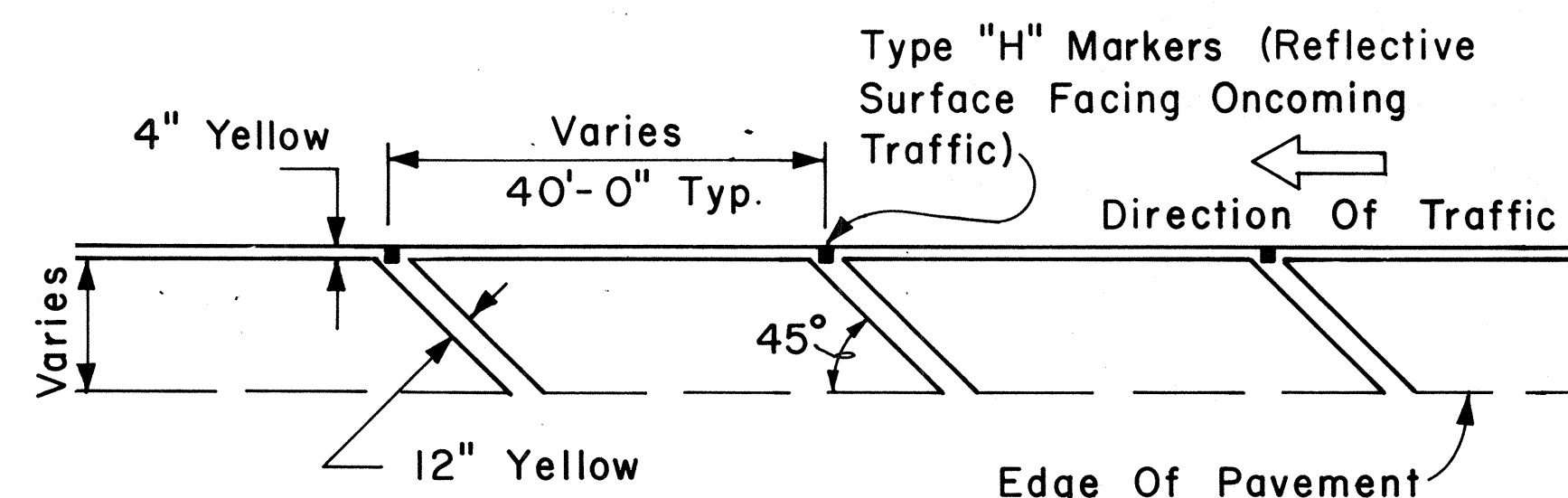
MULTI-LANE LANE CHANGE RESTRICTION ZONES



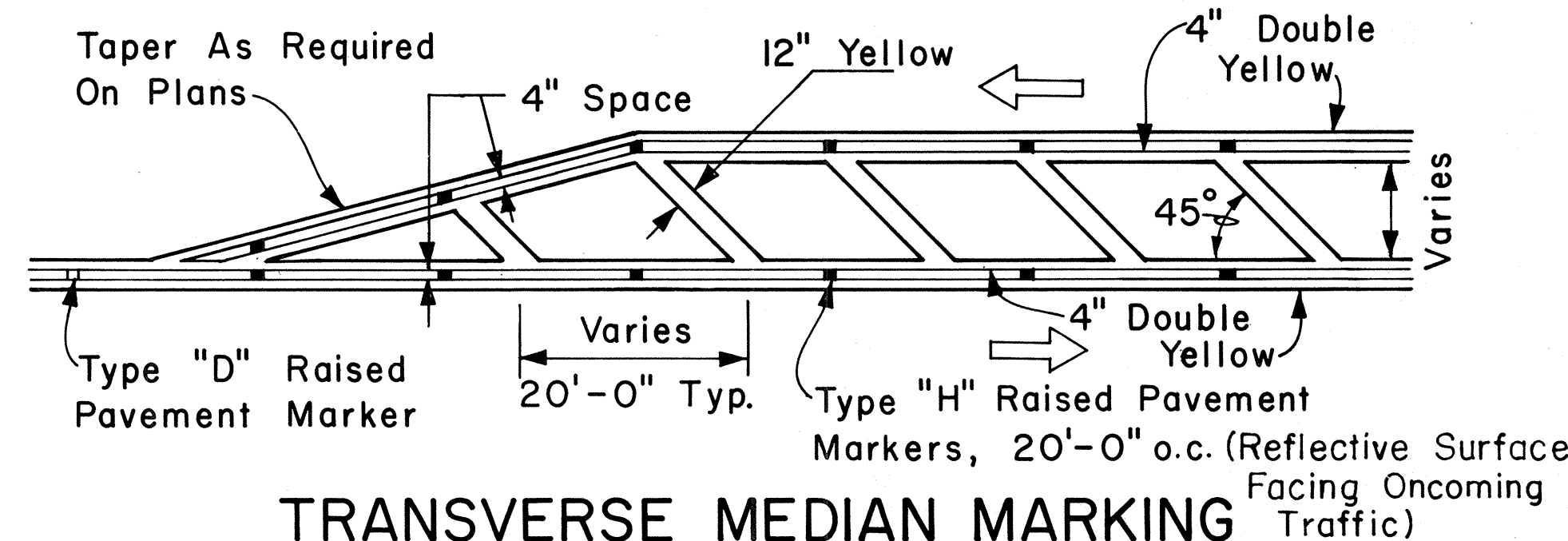
4" GUIDE LINE



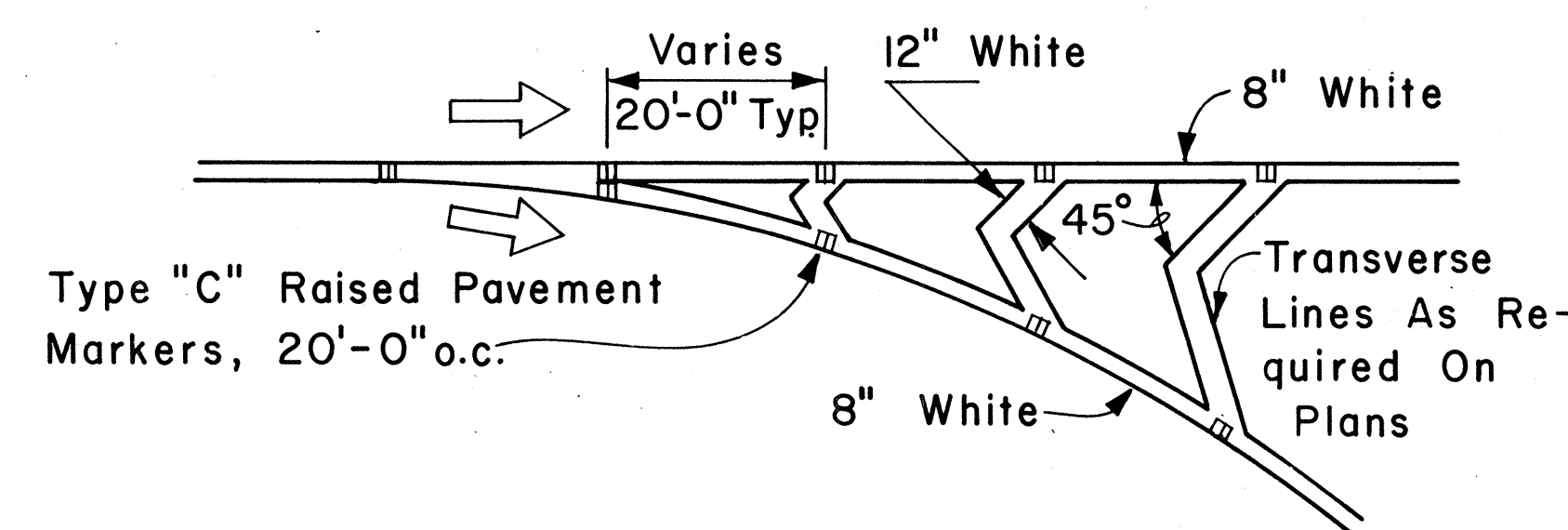
TRANSVERSE RIGHT SHOULDER MARKING



TRANSVERSE LEFT SHOULDER MARKING



TRANSVERSE MEDIAN MARKING



CHANNELIZING ISLAND

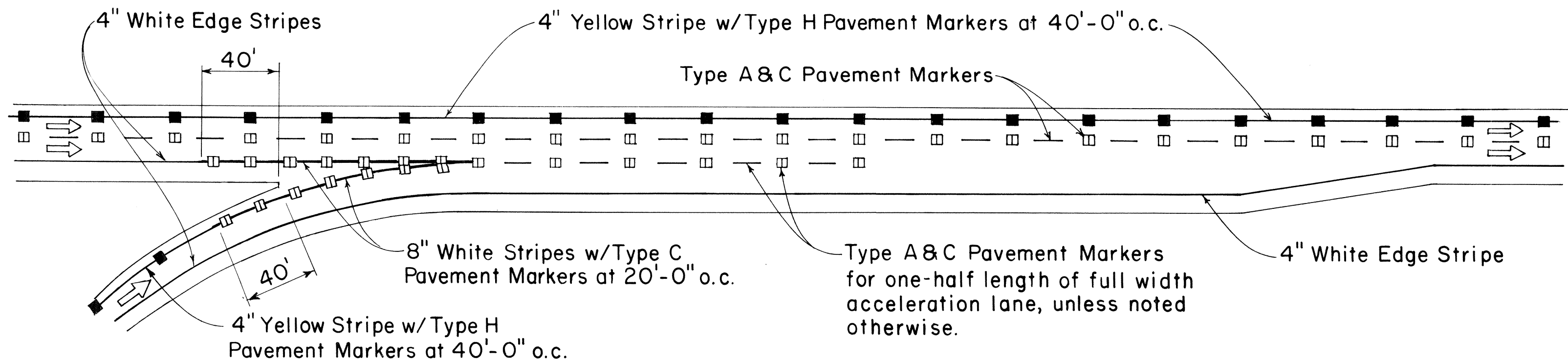
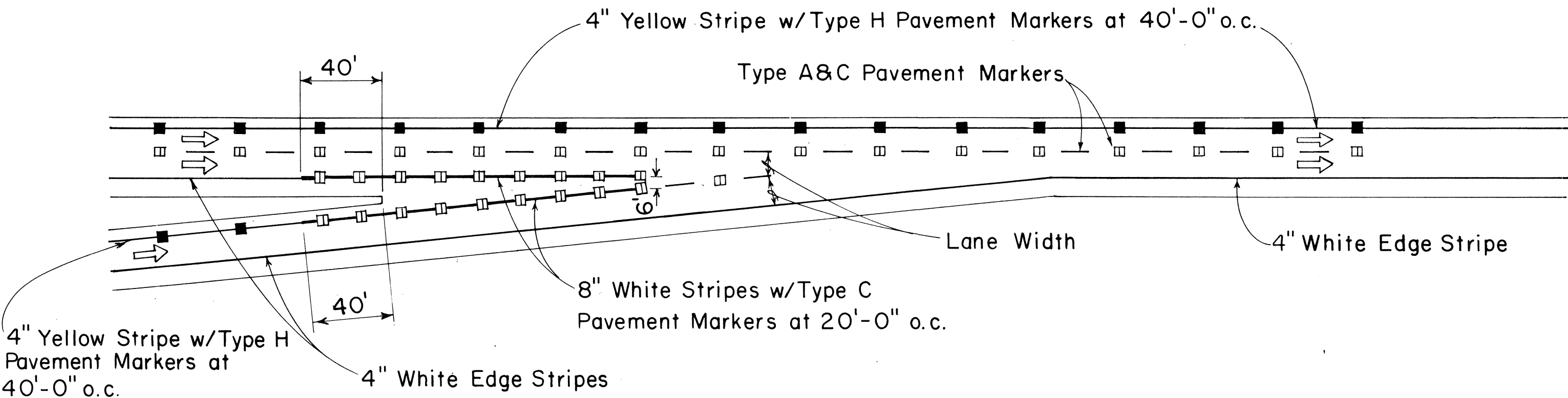
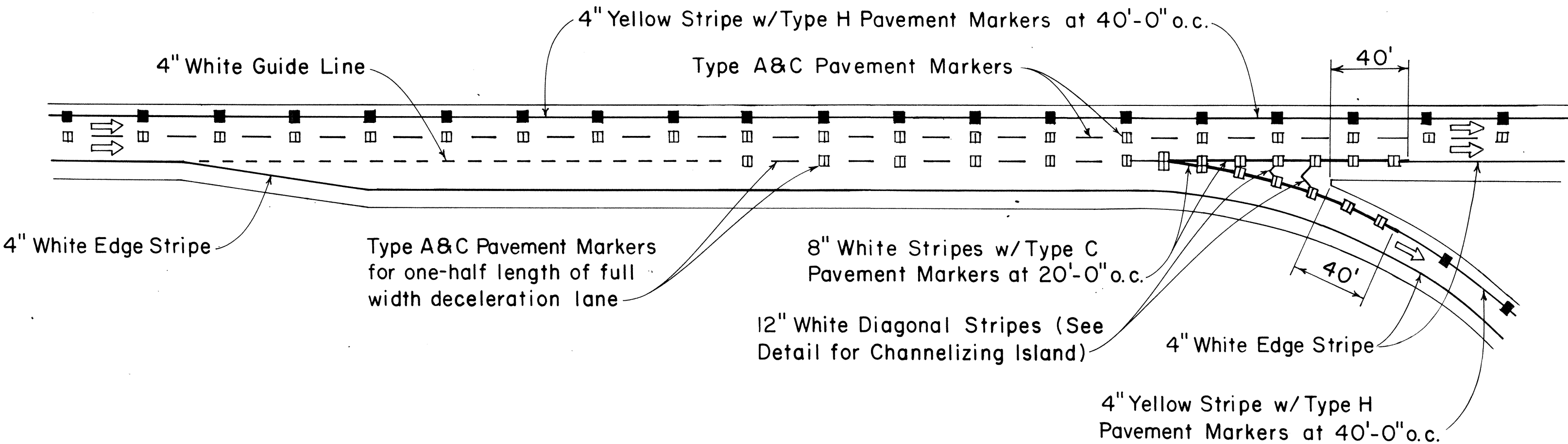
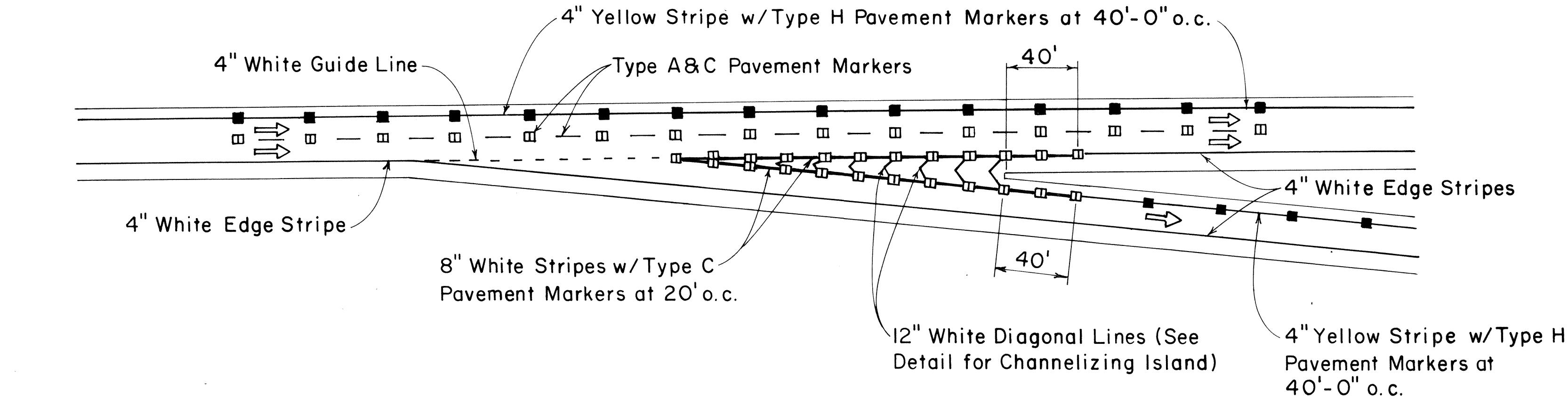
ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FR-092-1(17)	1981	12	14

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.

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



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

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

APPROVED:
Robert D. Sakai
ASSISTANT CHIEF, ENGINEERING
7/24/78
DATE

NO.	REVISION	APPROVED BY	DATE

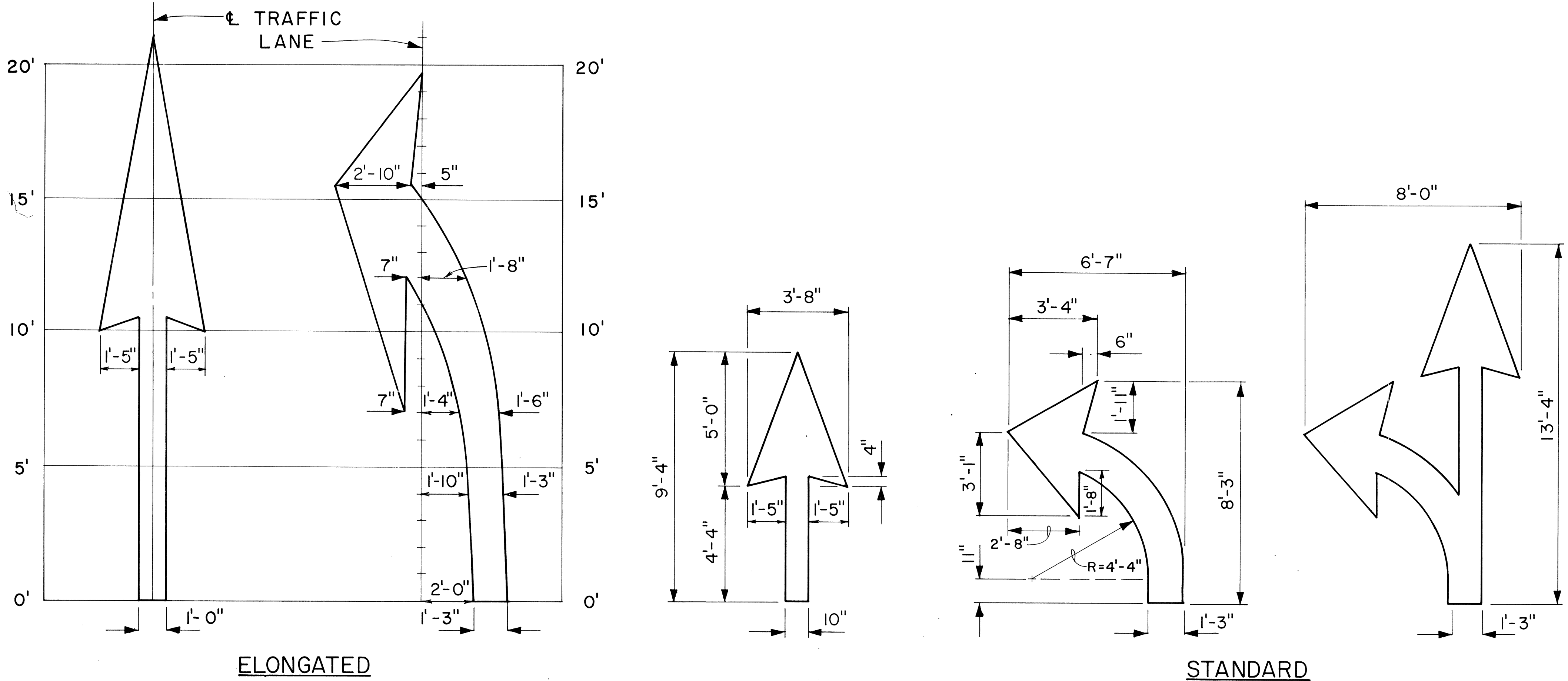
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND & HIGHWAYS DIVISION
STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Not to Scale
July 1978
SHEET NO. 6 OF 8 SHEETS

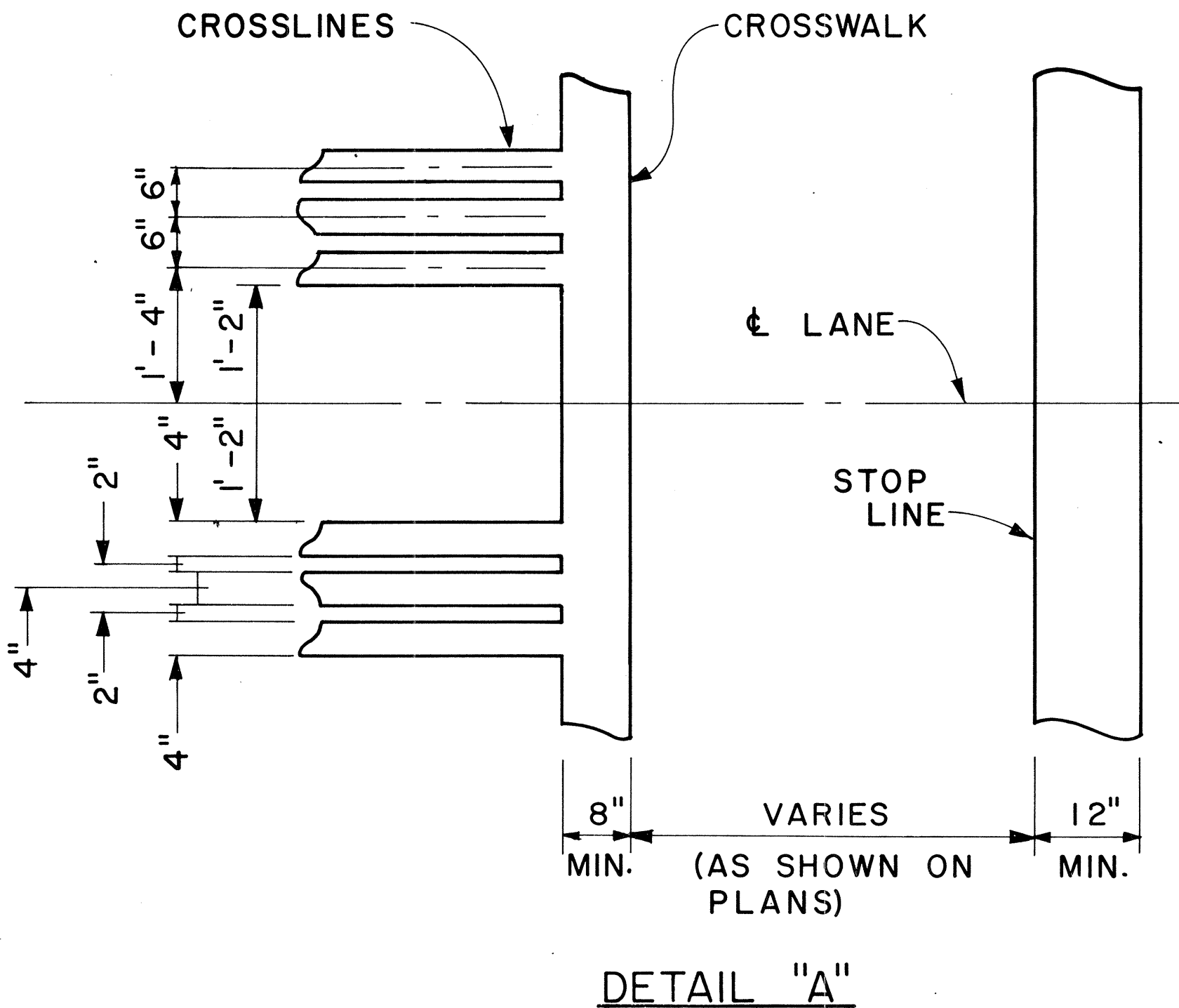
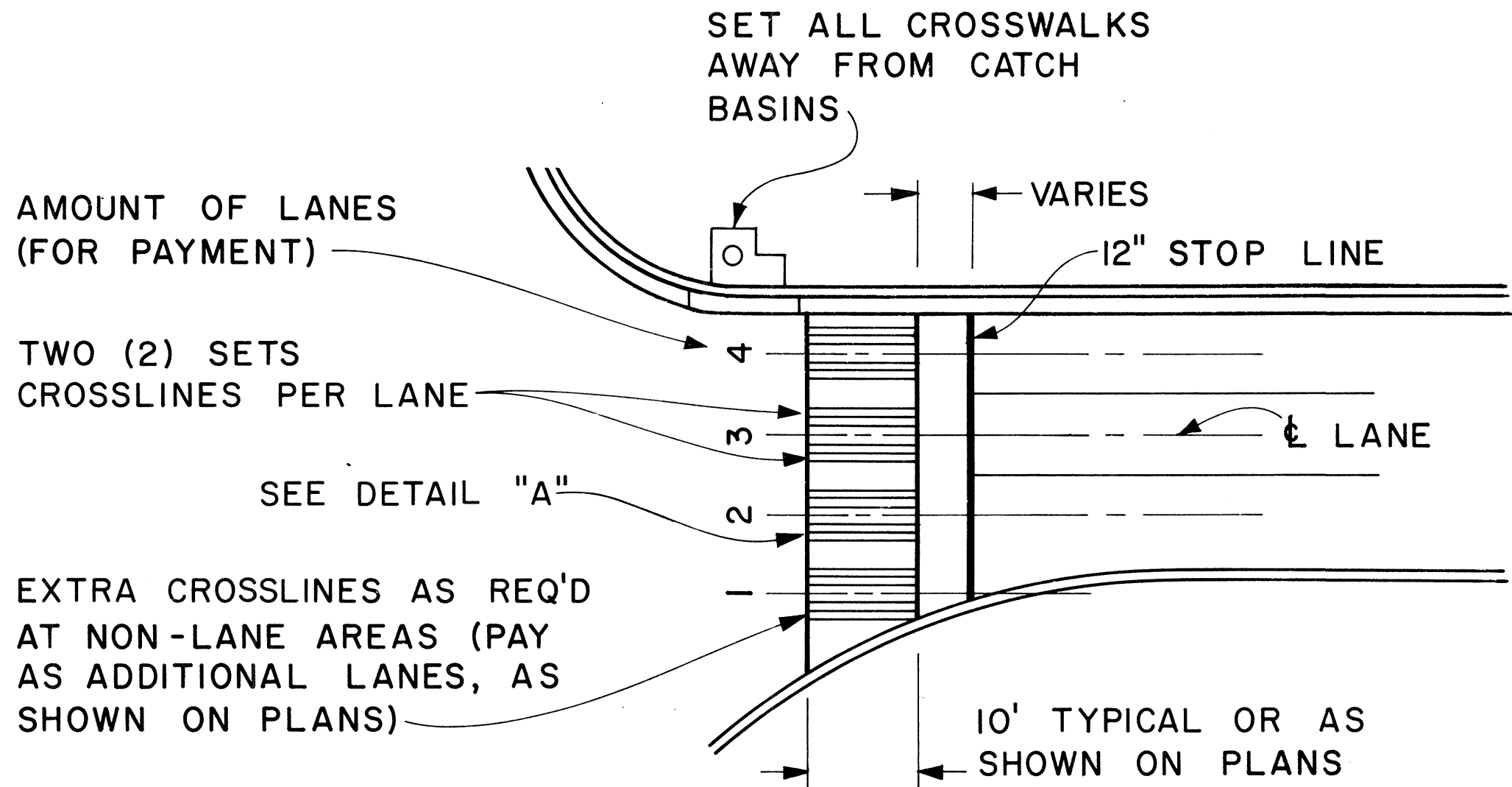
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FR-092-1(17)	1981	13	14

GENERAL NOTES:

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



PAVEMENT ARROWS
Scale: 3/8" = 1'



CROSSWALK & STOP LINE
Scale: Not to Scale

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

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

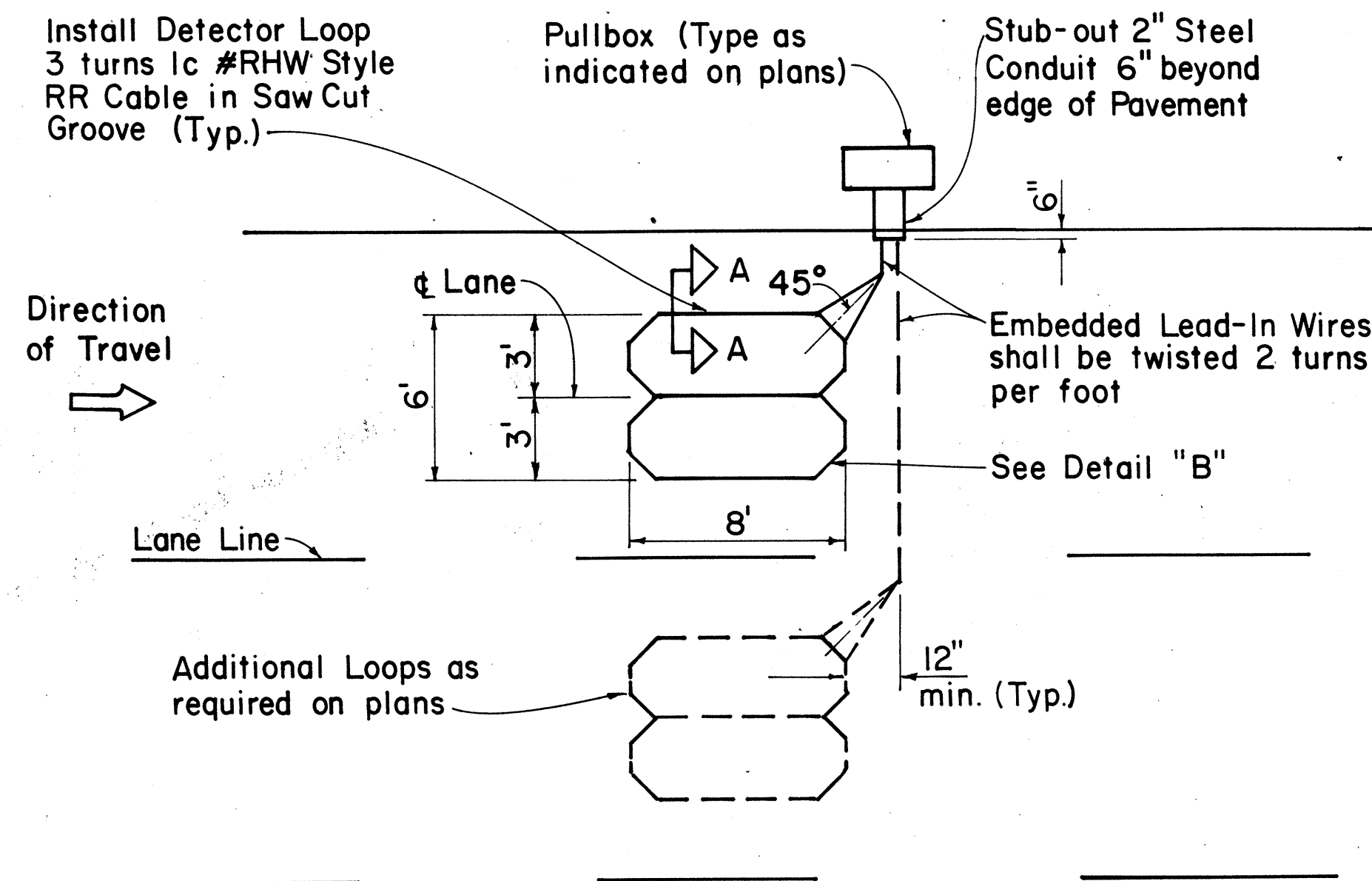
STANDARD DETAILS

MISCELLANEOUS
PAVEMENT MARKINGS

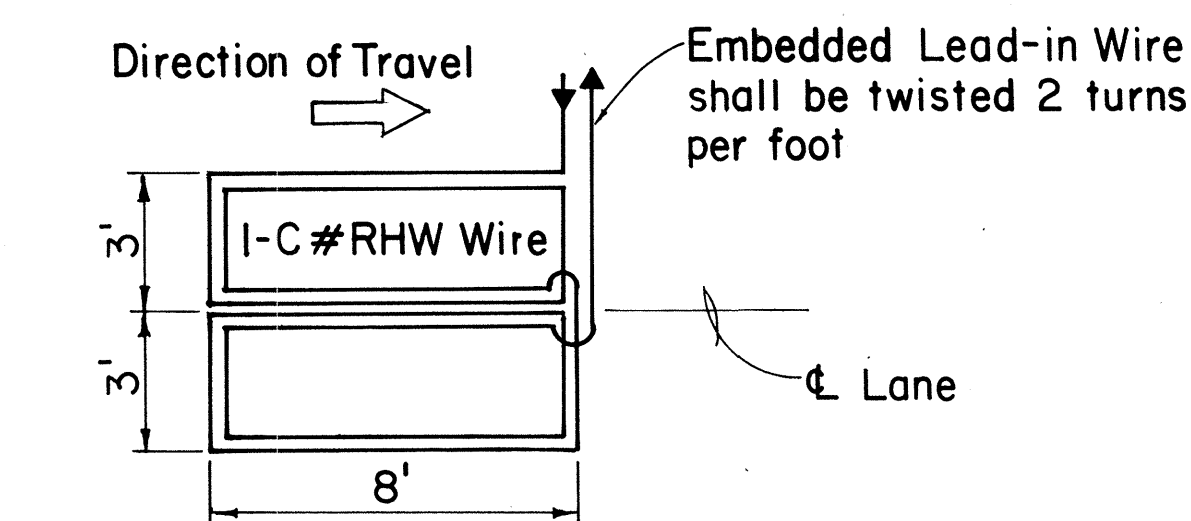
Scale: As Shown Date: March, 1978
SHEET NO. 7 OF 8 SHEETS DT 306

DATE	
SURVEY BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	

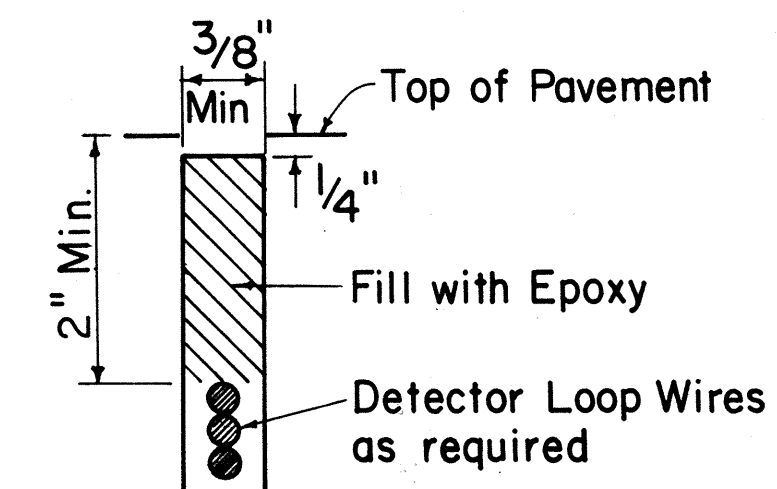
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FR-092-1(17)	1981	14	14



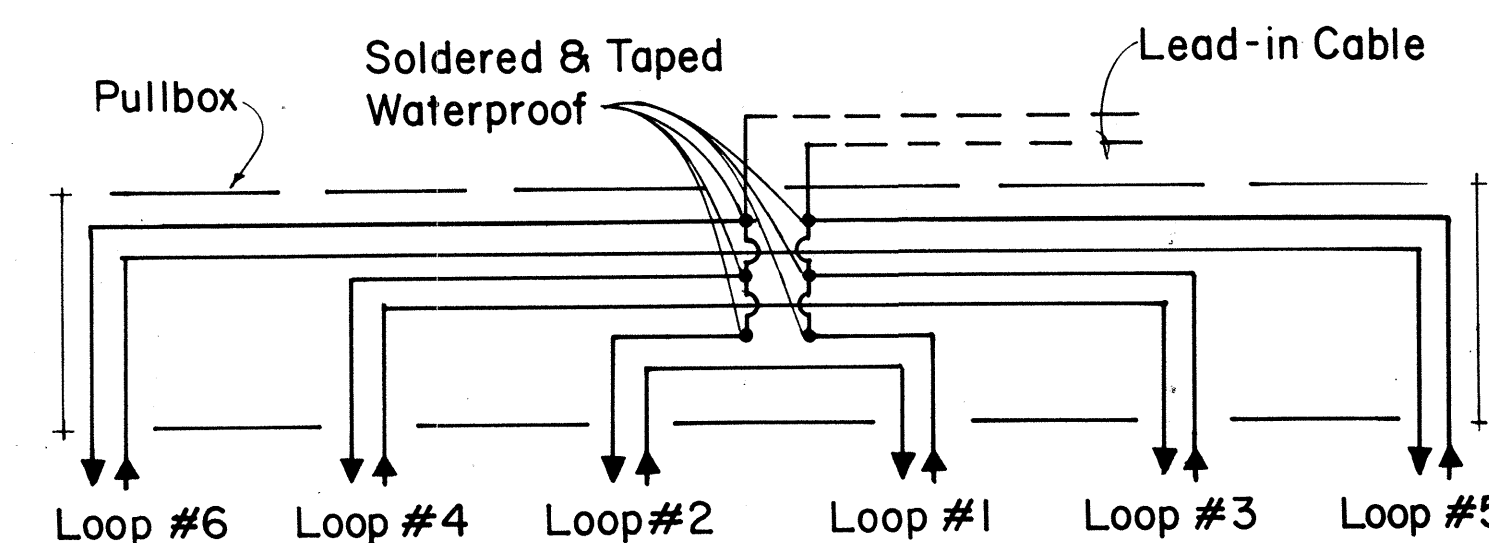
SINGLE LOOP LAYOUT



WIRING DIAGRAM



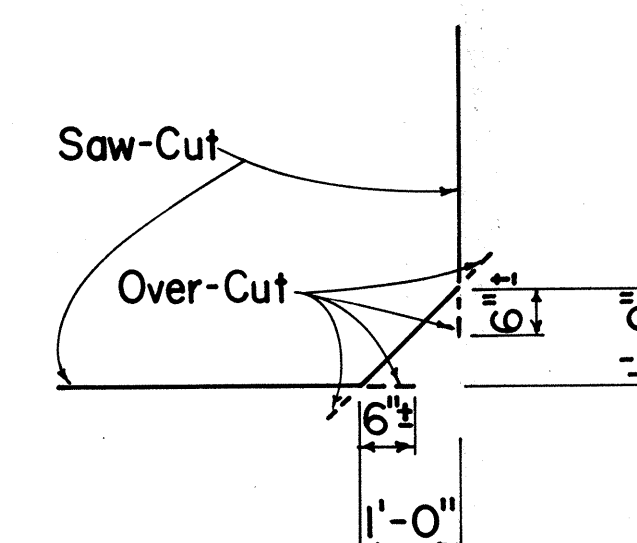
DETECTOR LOOP SAW-CUT SECTION A-A (TYPICAL)



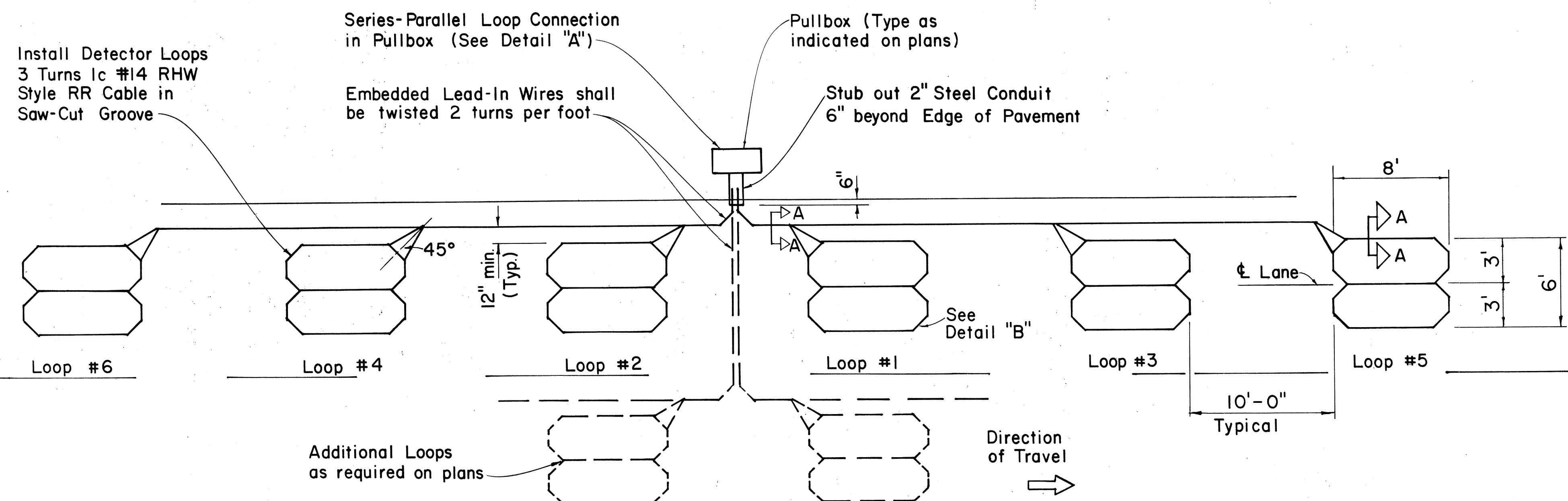
DETAIL "A"

TYPICAL SERIES-PARALLEL LOOP CONNECTION

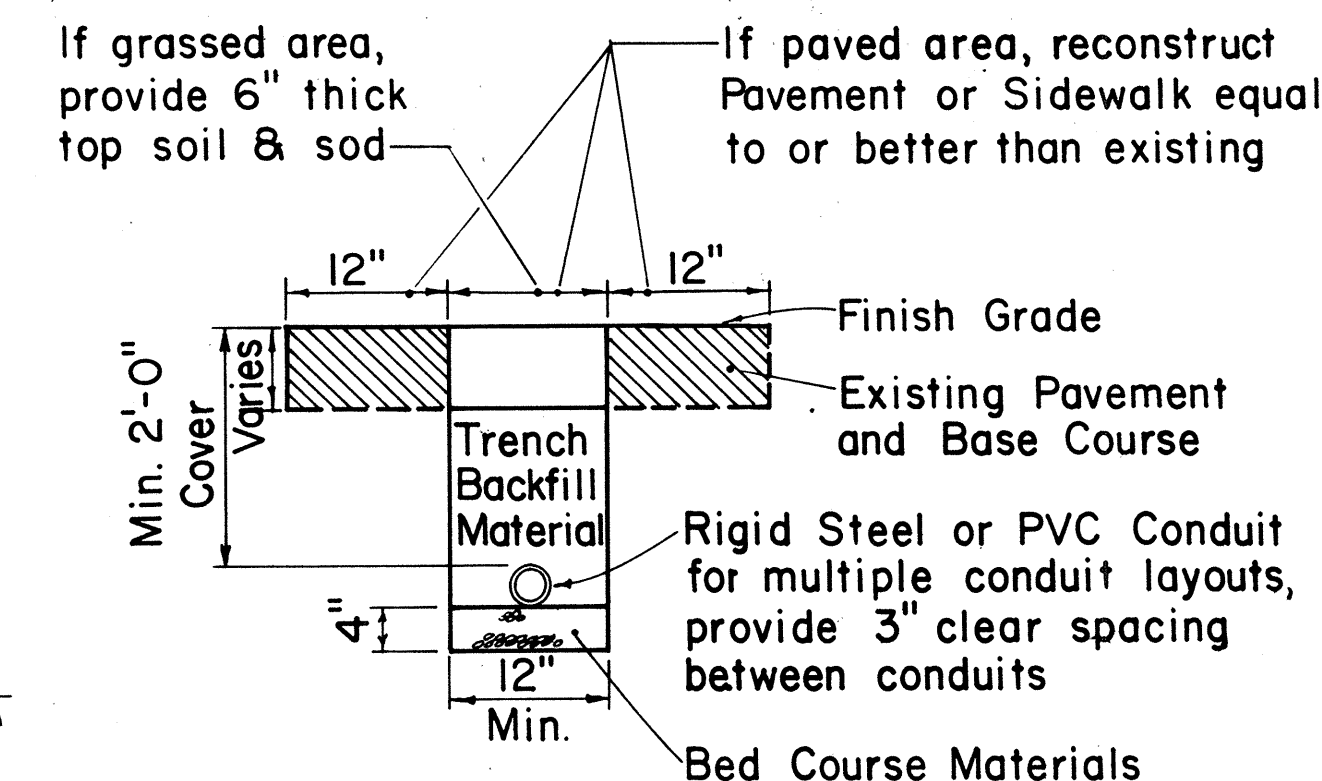
Note: Back-Fill Over-Cuts with Epoxy



DETAIL "B" SAW-CUT AT CORNERS



MULTIPLE LOOP LAYOUT



TYPICAL TRENCH SECTION FOR CONDUIT

NOTE:

- All conduits under roadways shall be steel or PVC schedule 80. All other conduits shall be steel or PVC schedule 40.

APPROVAL RECOMMENDED:

Erich Tanaka 9/26/80
TRAFFIC ENGINEER DATE

APPROVED:

Shelton S. Leishe 9/30/80
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Replaces Sht. DT 405 dated 3/5/76	H.T.	9/30/80
2	Revised Section A-A	H.T.	5/15/81

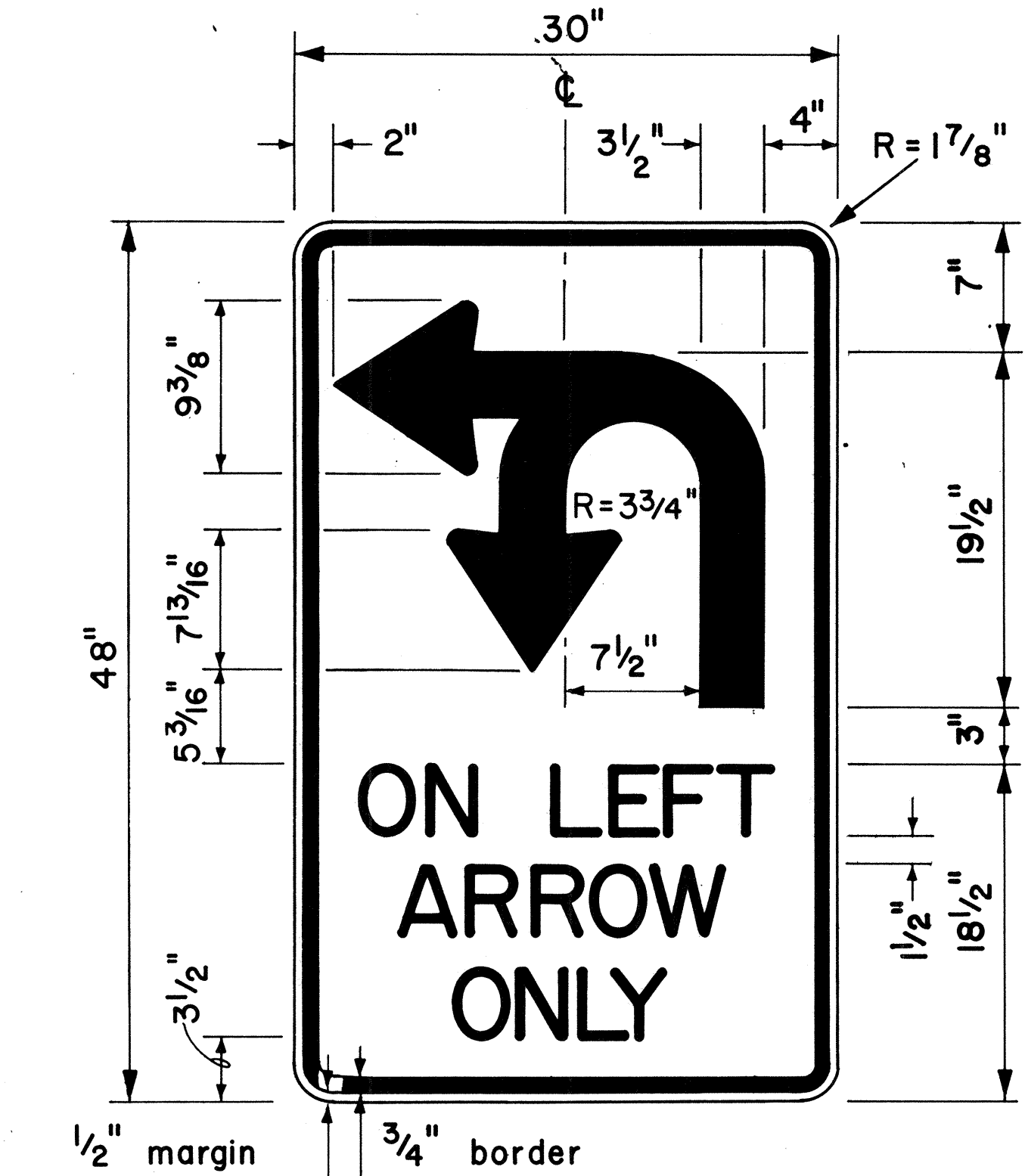
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
STANDARD DETAILS
LOOP DETECTORS
Not to Scale

SHEET NO. 8 OF 8 SHEETS DT 405

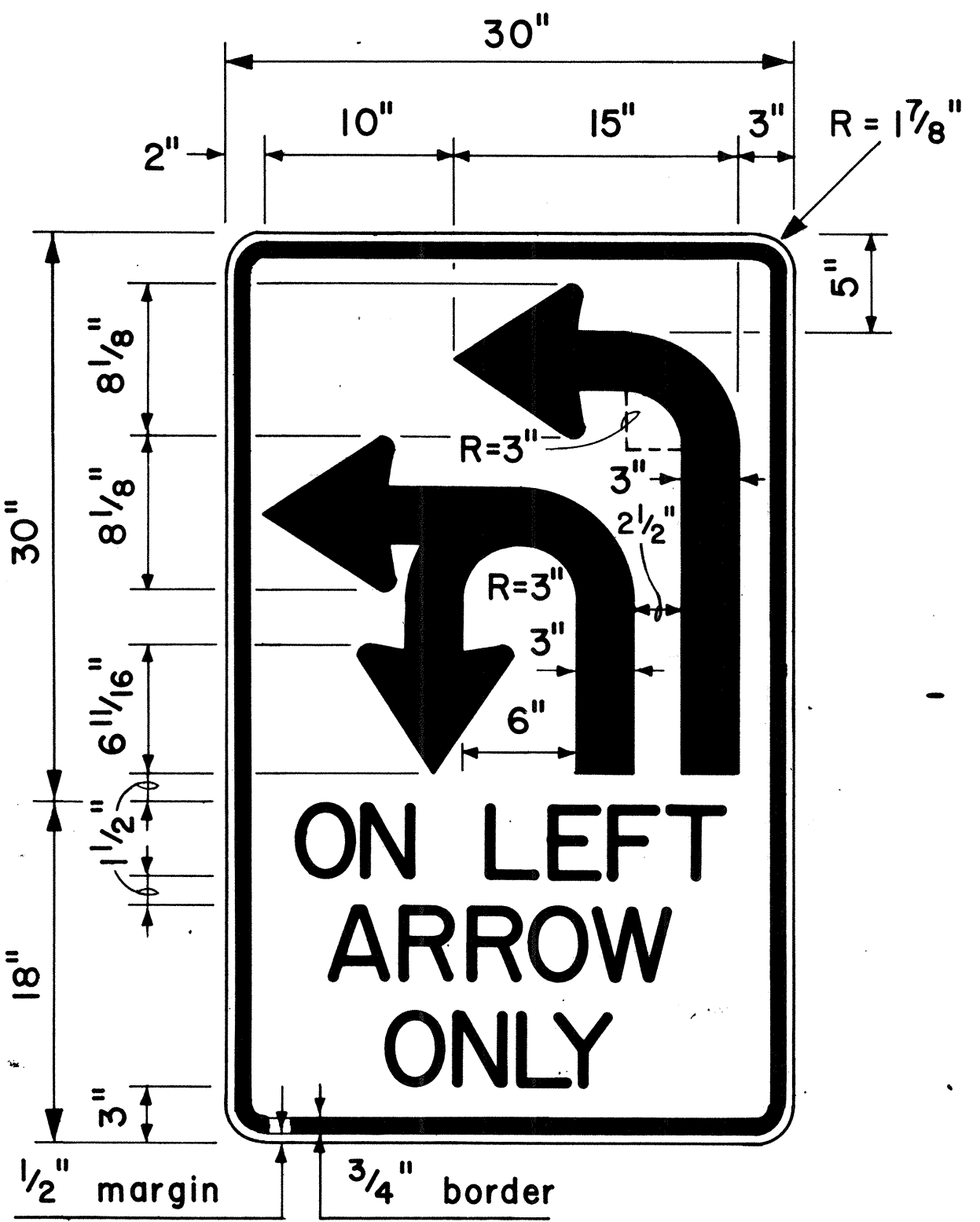
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FR-022-1(17)	1981	C.O.145-1	14

GENERAL NOTES

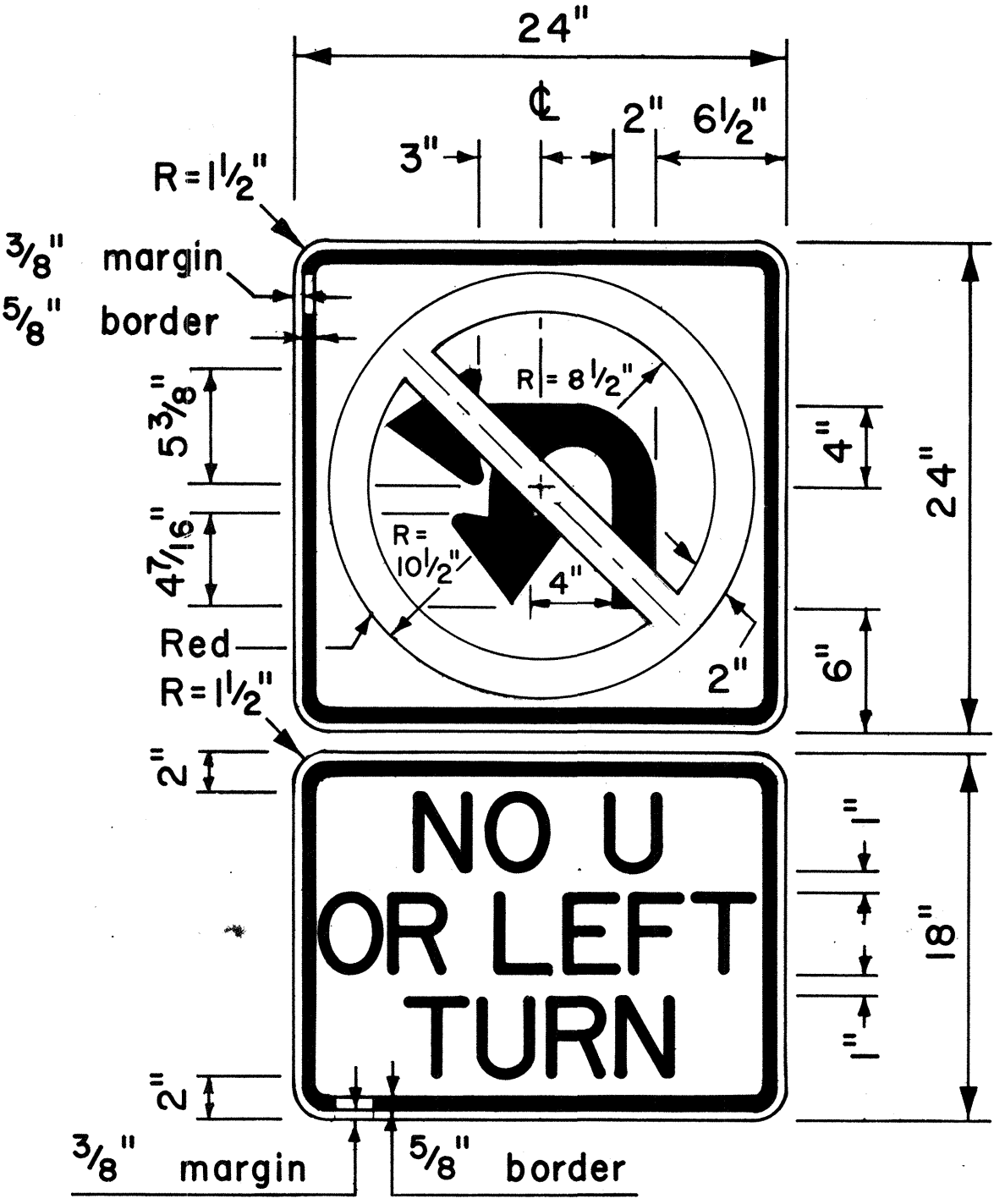
- Sign details shall conform to the latest editions of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and "Standard Highway Signs," and as amended.
- All regulatory signs shall be reflectorized unless otherwise specified.
- All regulatory signs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



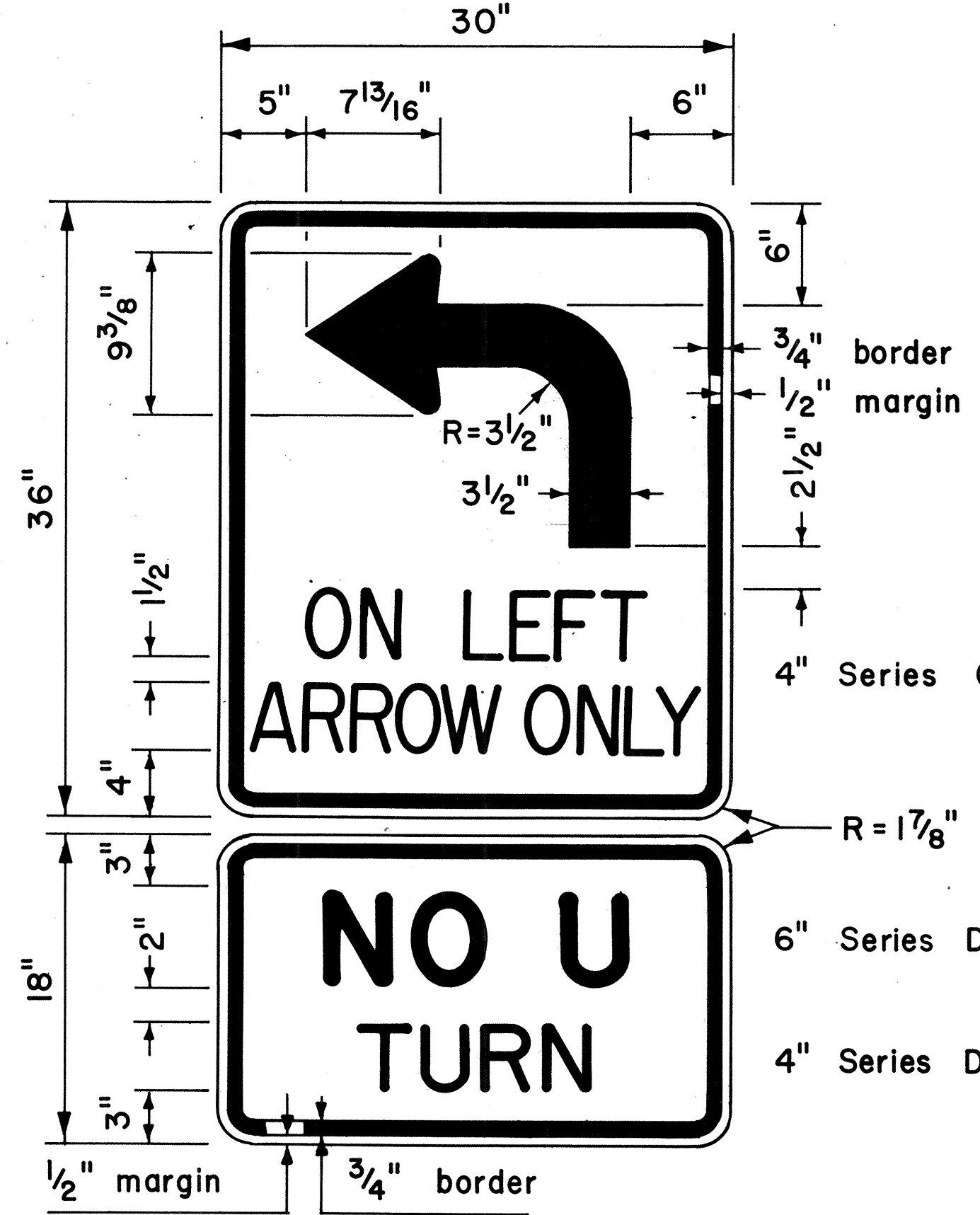
4" Series D Letters
R17-1



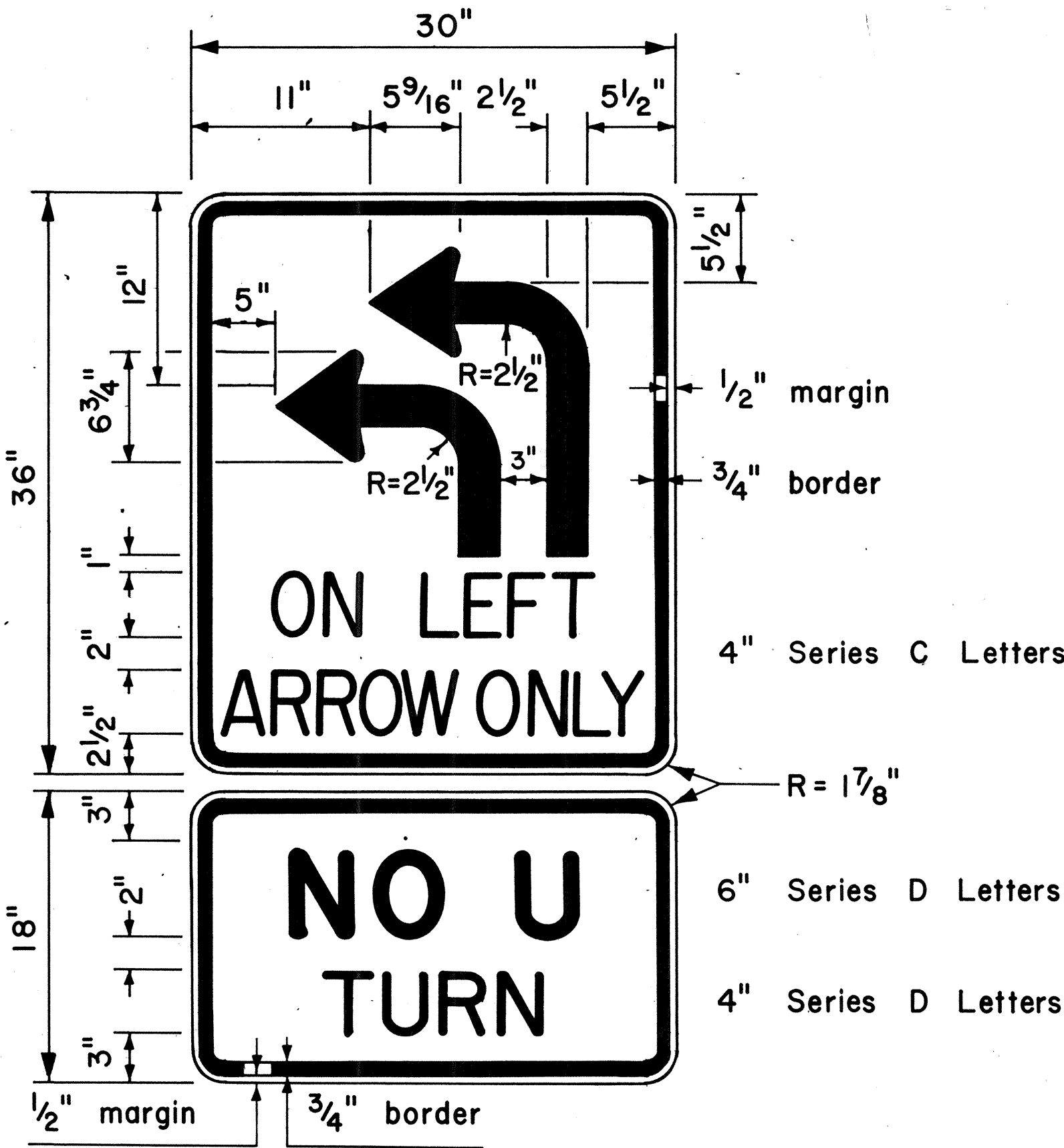
4" Series D Letters
R17-2



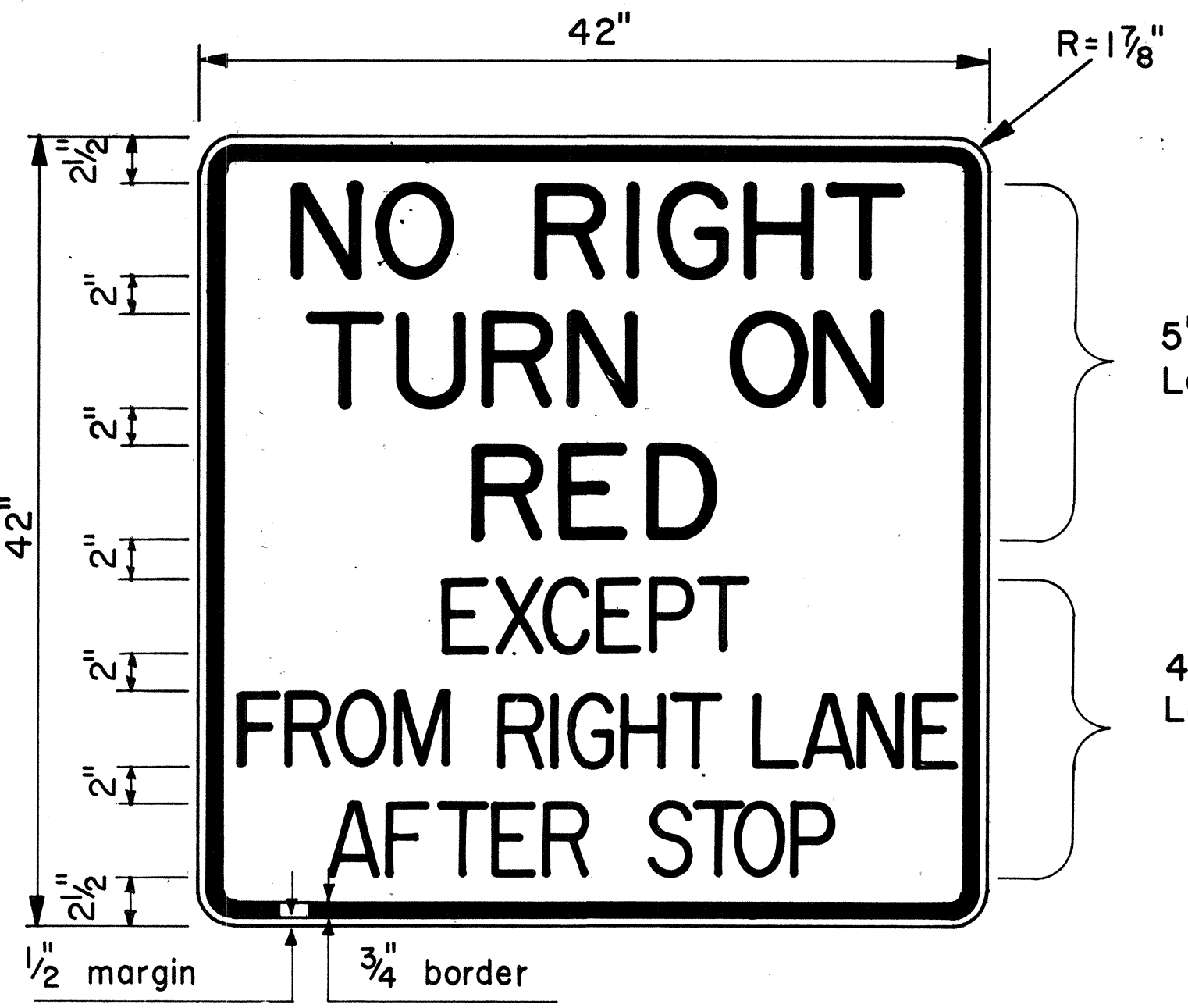
4" Series D Letters
R3-4b



R17-3



R17-4



R10-11d

NO.	REVISION	APPROVED BY	DATE

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS
INTERSECTION SIGNS

Scale: 1 1/2" = 1'-0" Date: Aug., 1977