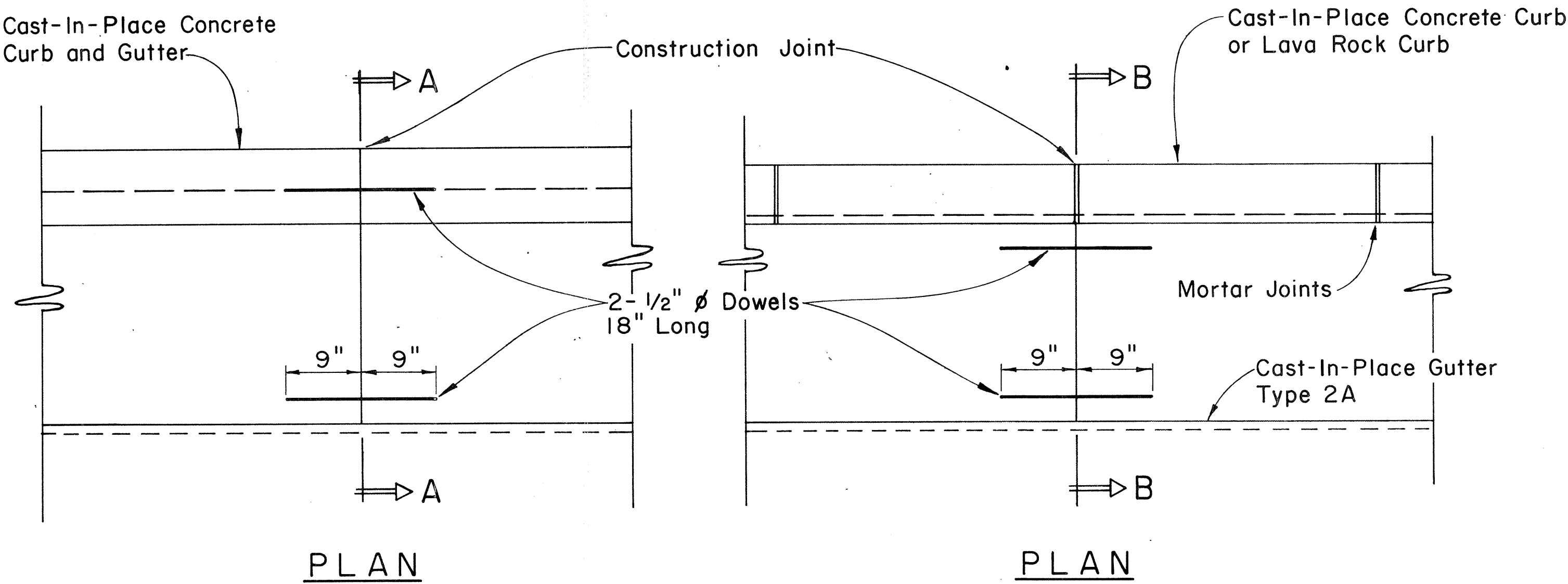
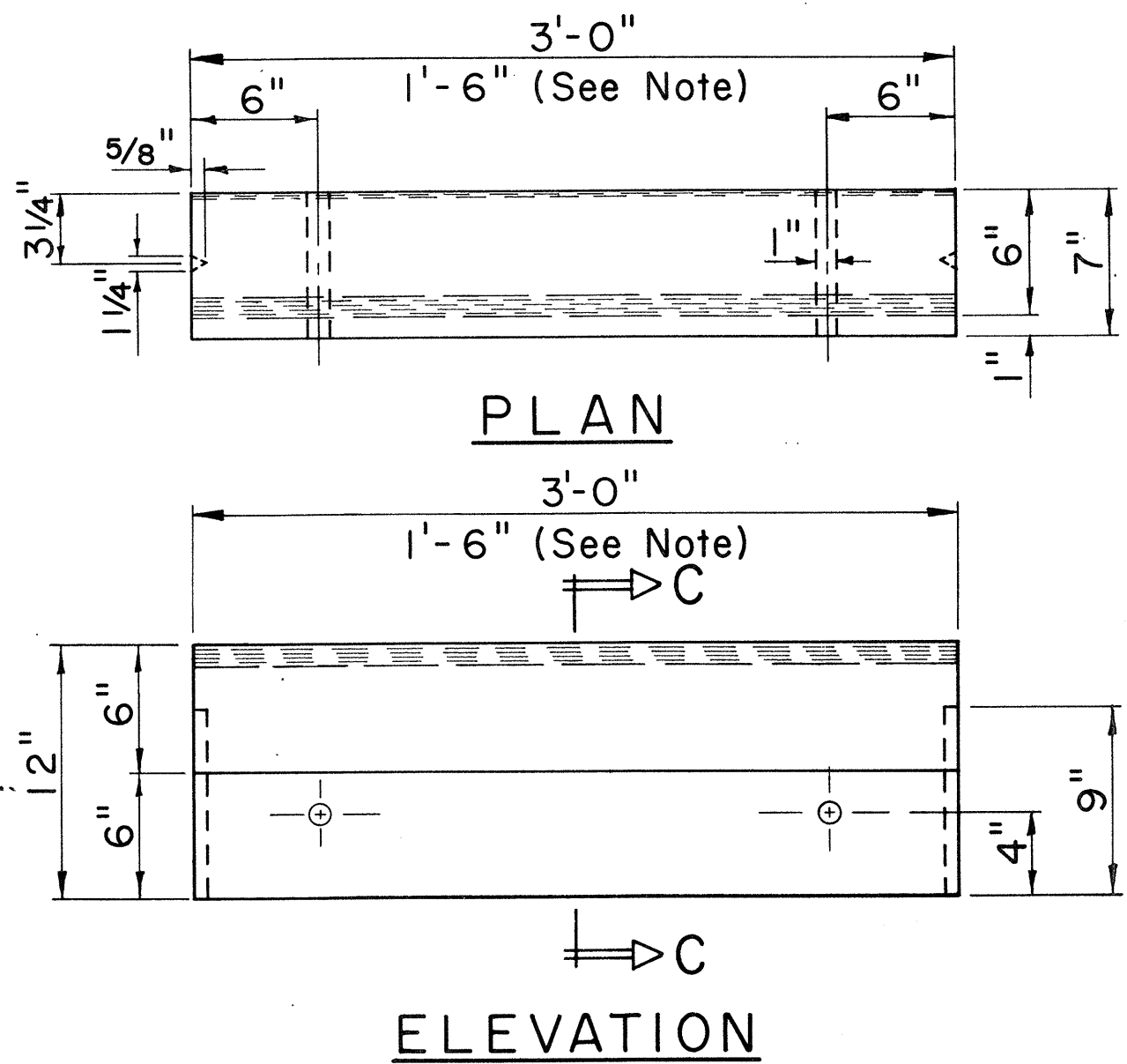


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	03A-01-80	1980	5	16

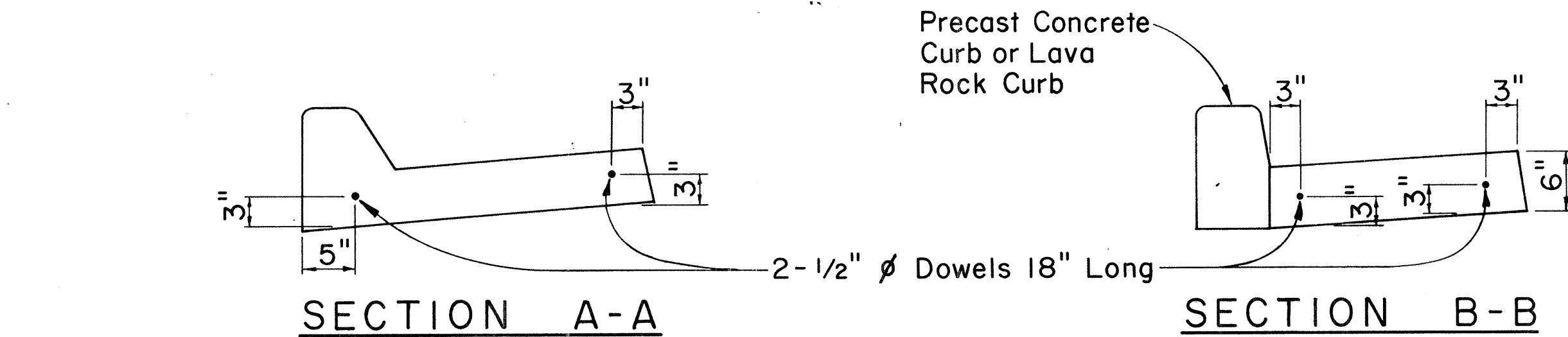


CURB, TYPE 6
BITUMINOUS CURB
 Scale: 1 1/2" = 1'-0"

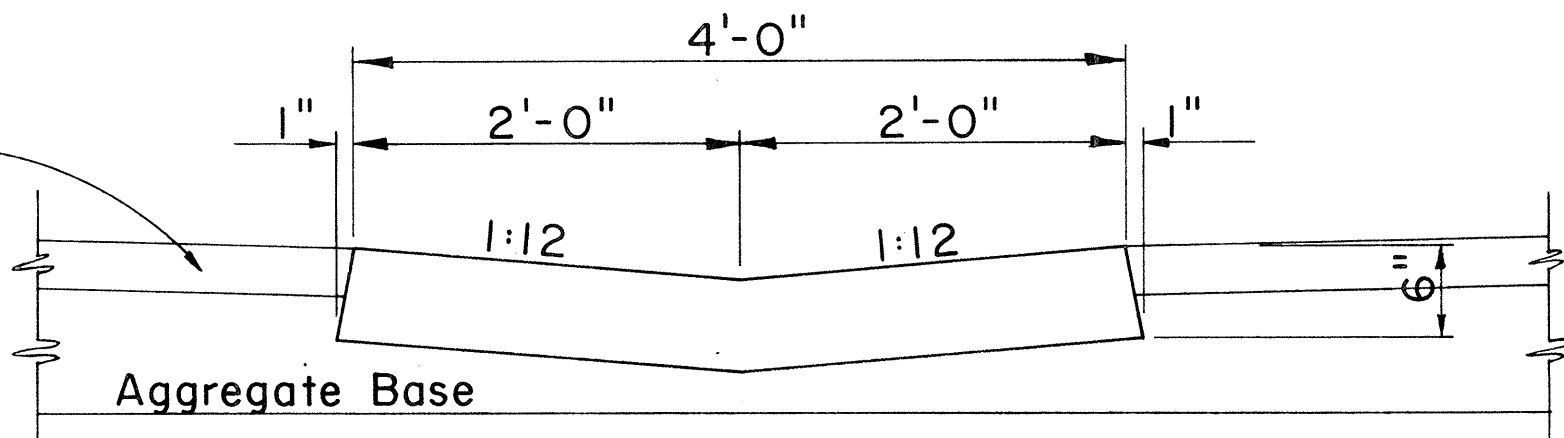
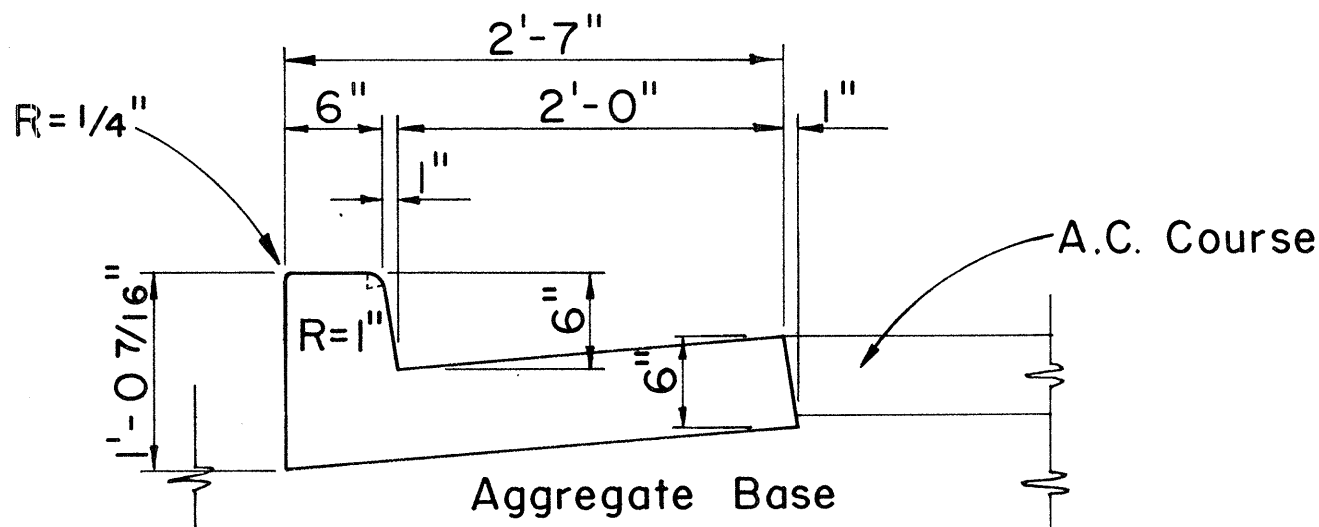
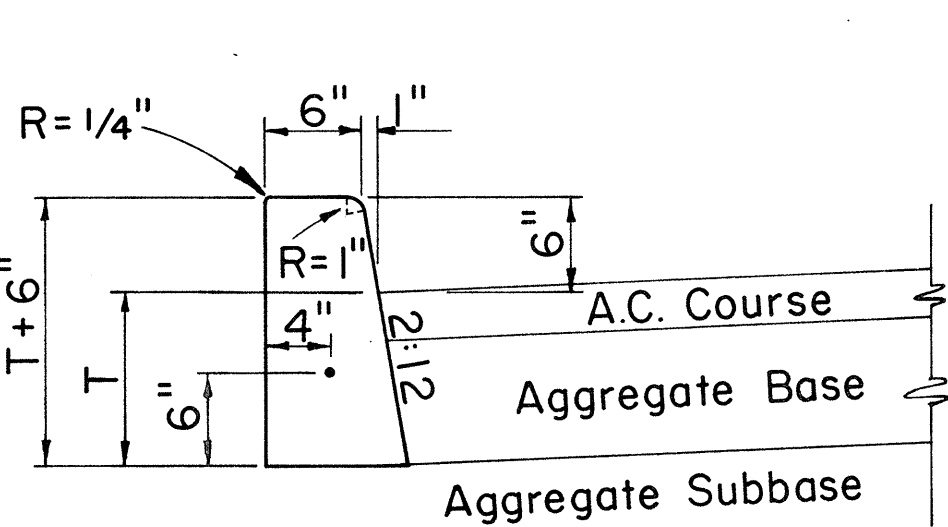
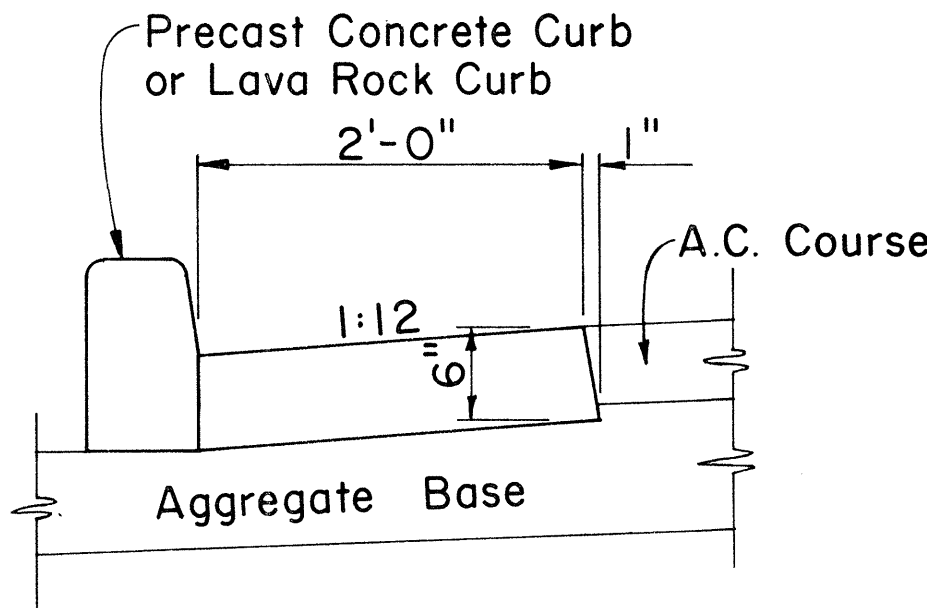
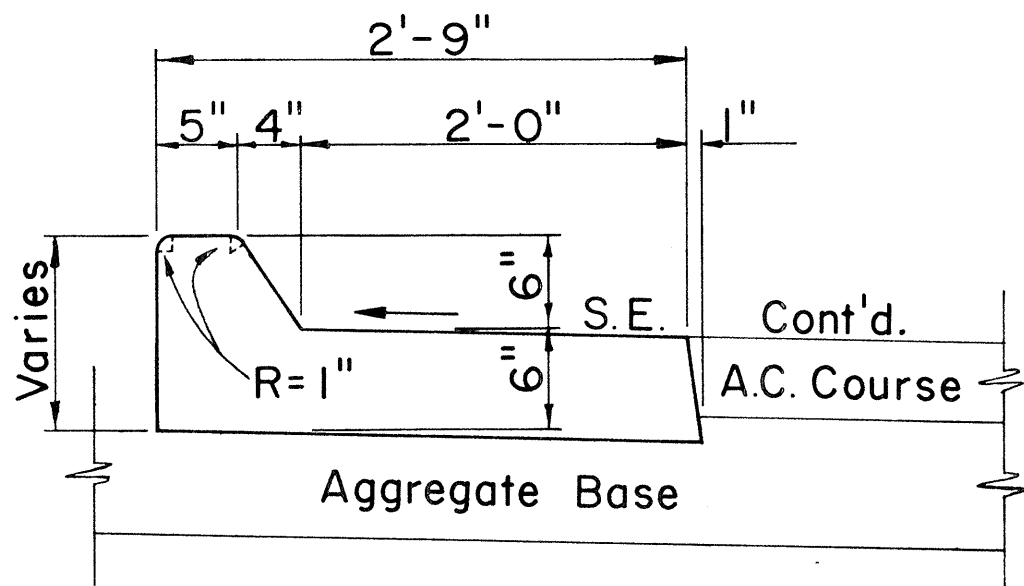
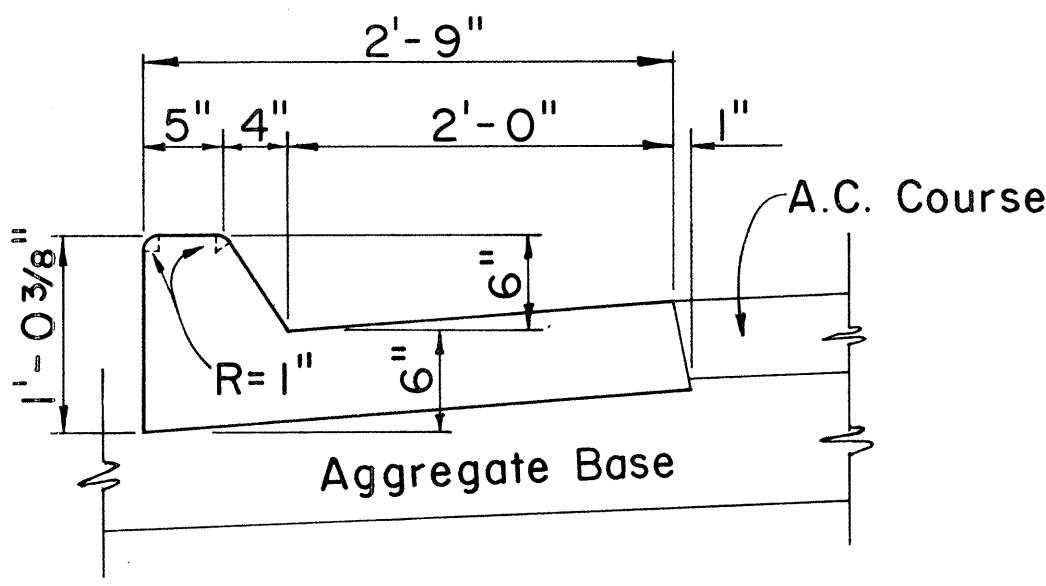
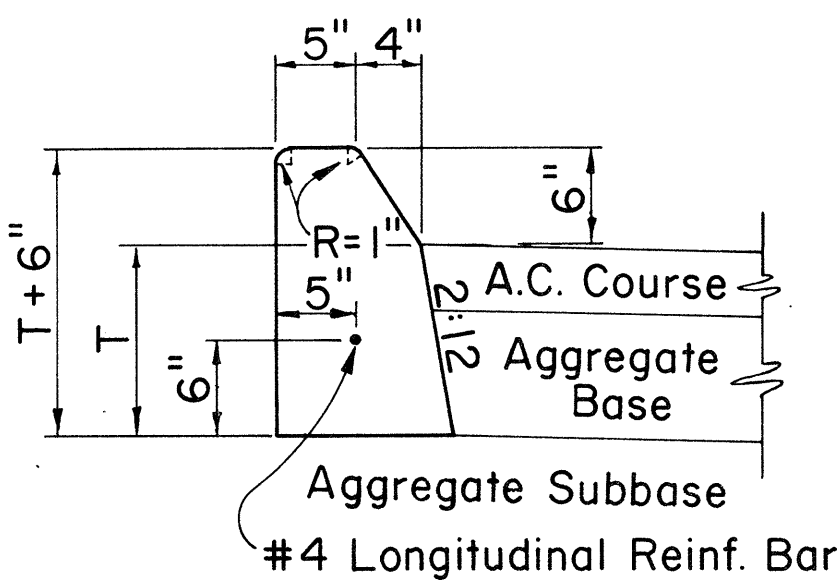


NOTE:
 For curb returns use 1'-6" pre-cast concrete curbs.

SECTION C-C
CURB, TYPE 3D
PRE-CAST CONC. CURB
 Scale: 1 1/2" = 1'-0"



CAST-IN-PLACE CURB & GUTTER
CAST-IN-PLACE GUTTER
CONSTRUCTION JOINT DETAIL
 Scale: 1" = 1'-0"



CAST-IN-PLACE CONCRETE CURBS AND/OR GUTTERS
 Scale: 1" = 1'-0"

APPROVAL RECOMMENDED:
 HIGHWAY DESIGN ENGINEER 12-4-69 DATE

APPROVED:
 ASSISTANT CHIEF, ENGINEERING 12-10-69 DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
STANDARD DETAILS
TYPICAL DETAILS OF CURB
AND/OR GUTTERS

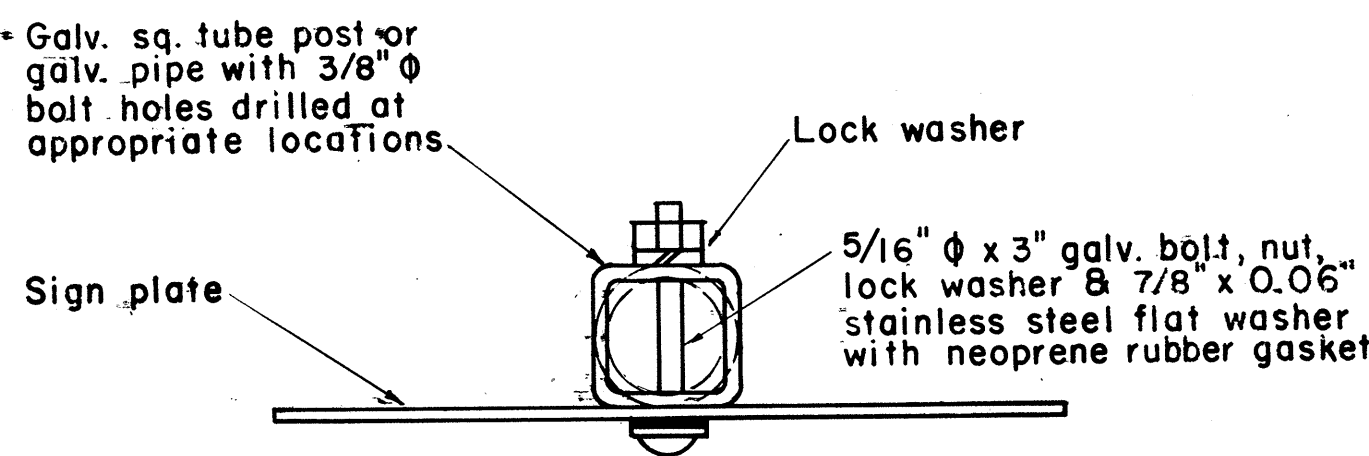
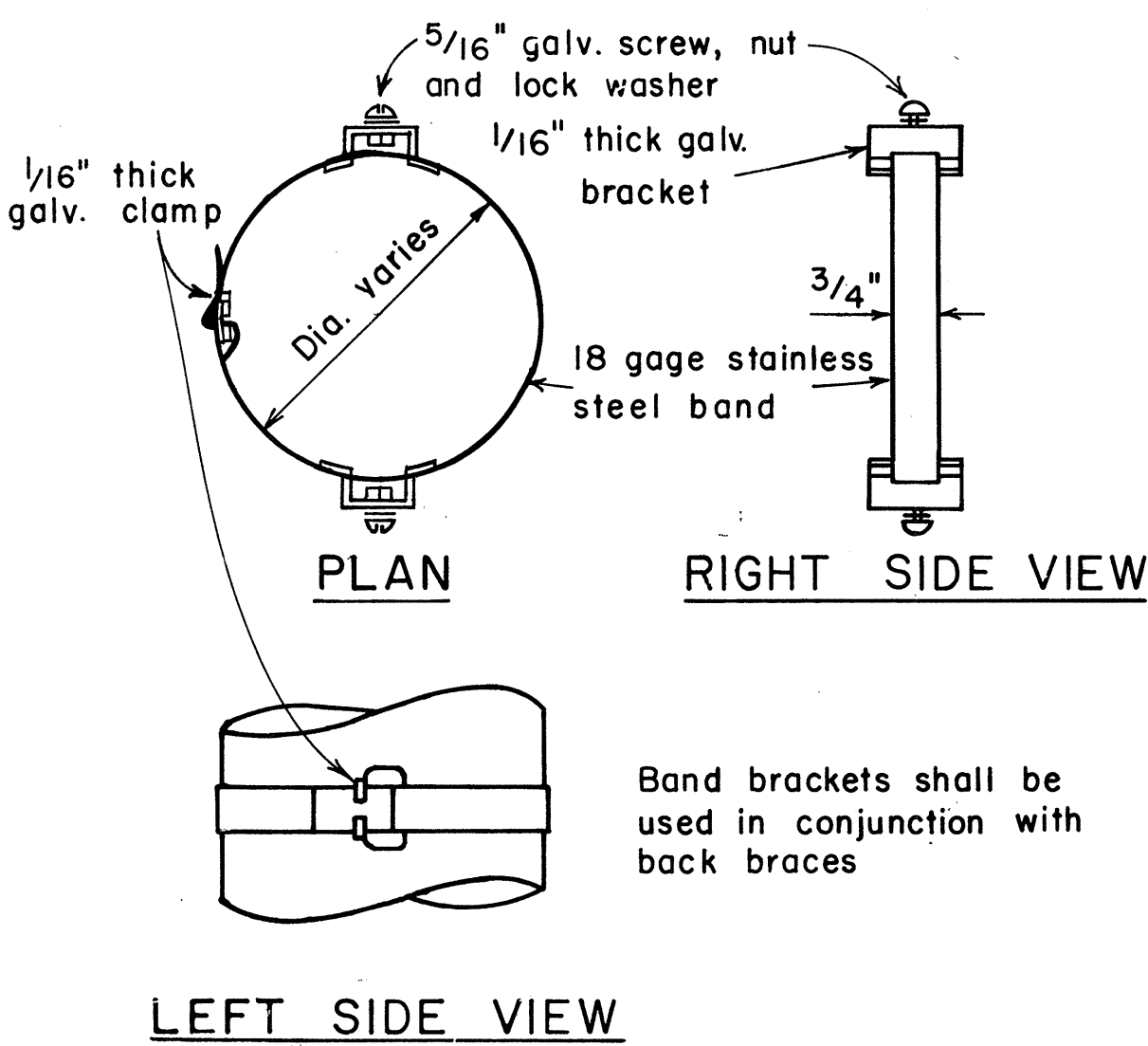
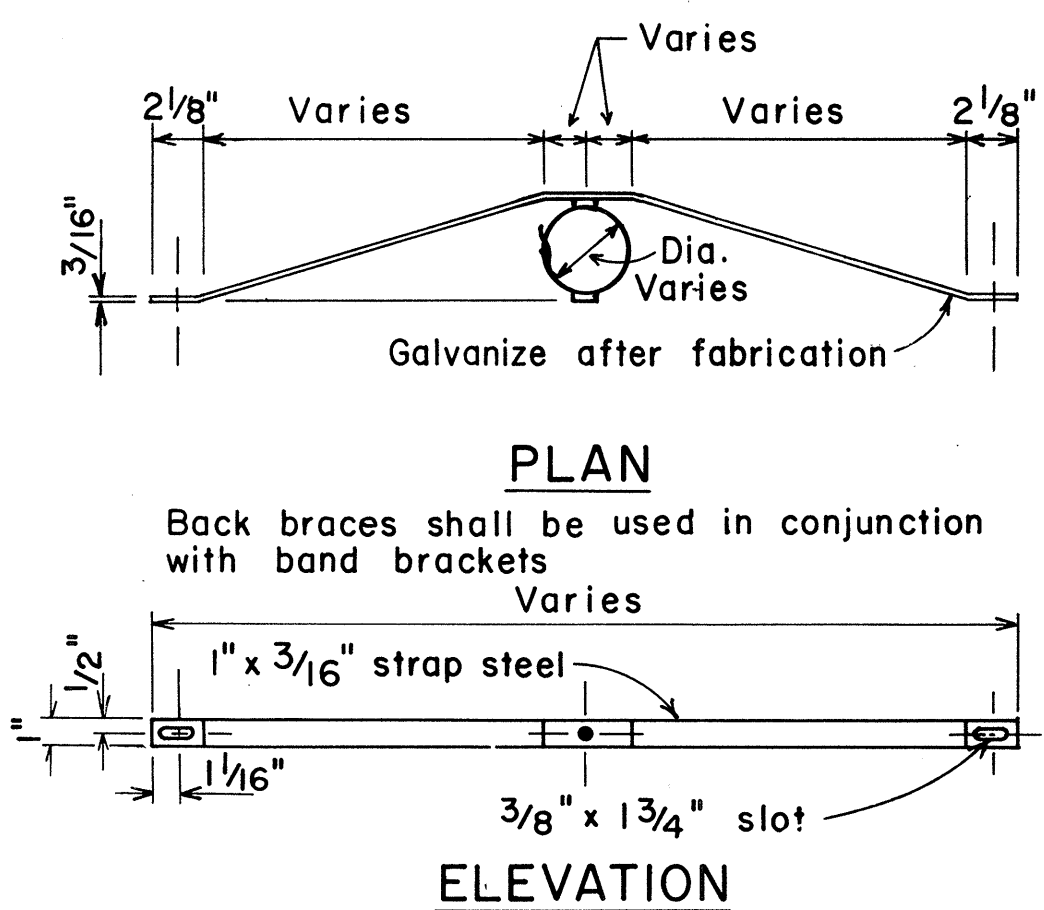
Scale: As Shown
 SHEET No. 1 OF 12 SHEETS DD 609.1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-80	1980	6	16

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. All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
5. Sign posts shall extend 3 1/2" above 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.
- *7. See plans for special details.
8. When clear roadside recovery areas are provided, Signs shall be placed as far from the edge of traveled way as possible up to a maximum of 30 feet. When possible they shall be placed in protected locations.
9. Signs in medians shall be placed at midpoint of median up to a maximum distance of 30 feet from the edge of traveled way. When appropriate, signs for opposing directions shall be placed back to back.

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.	11/15/77
2	Revised depth of signpost	H.T.	5/8/79
3	Added Notes No. 8 & No. 9	H.T.	5/18/79
4	Revised Gen. Note #4 & Mounting Details	H.T.	4/23/80

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

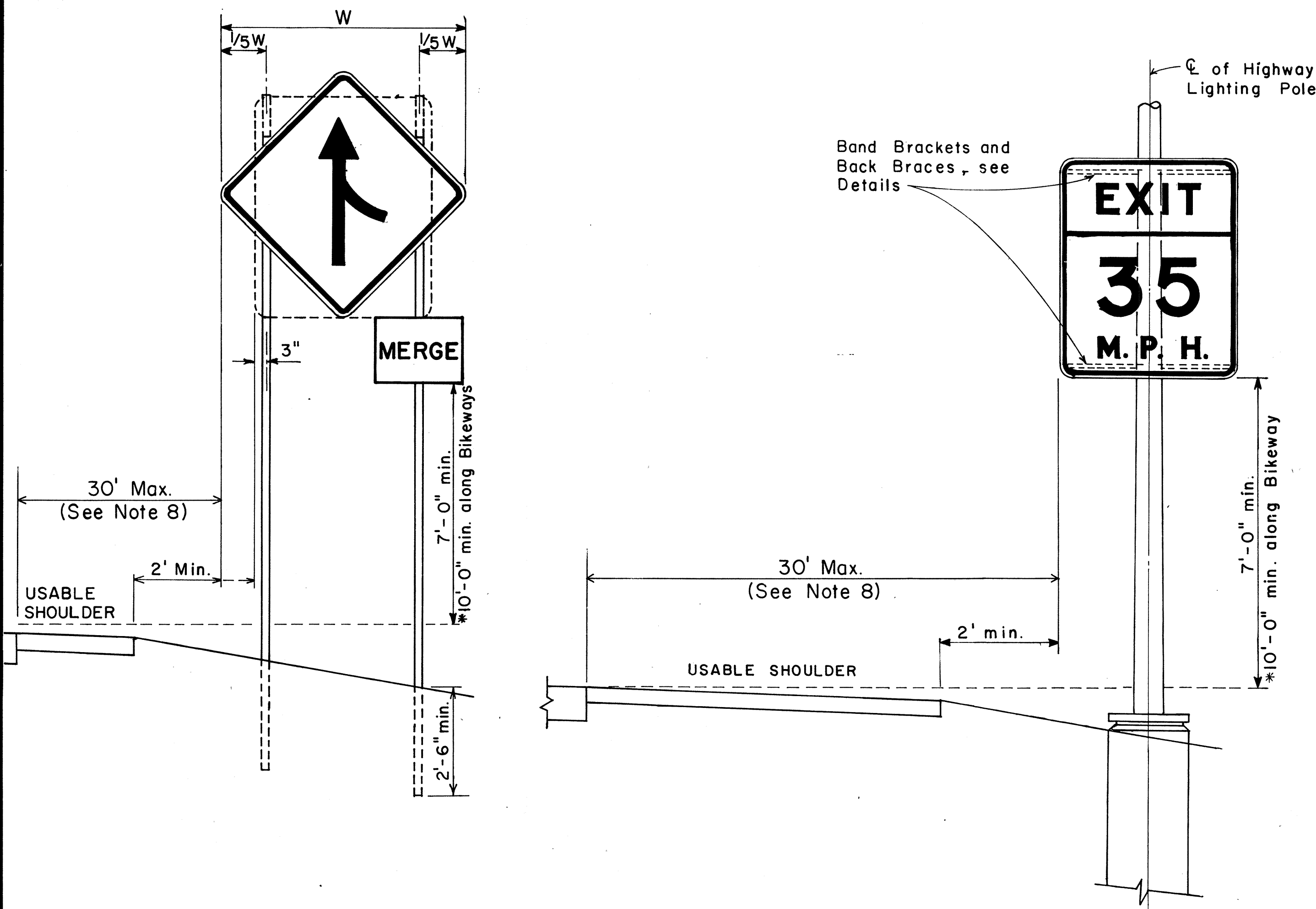
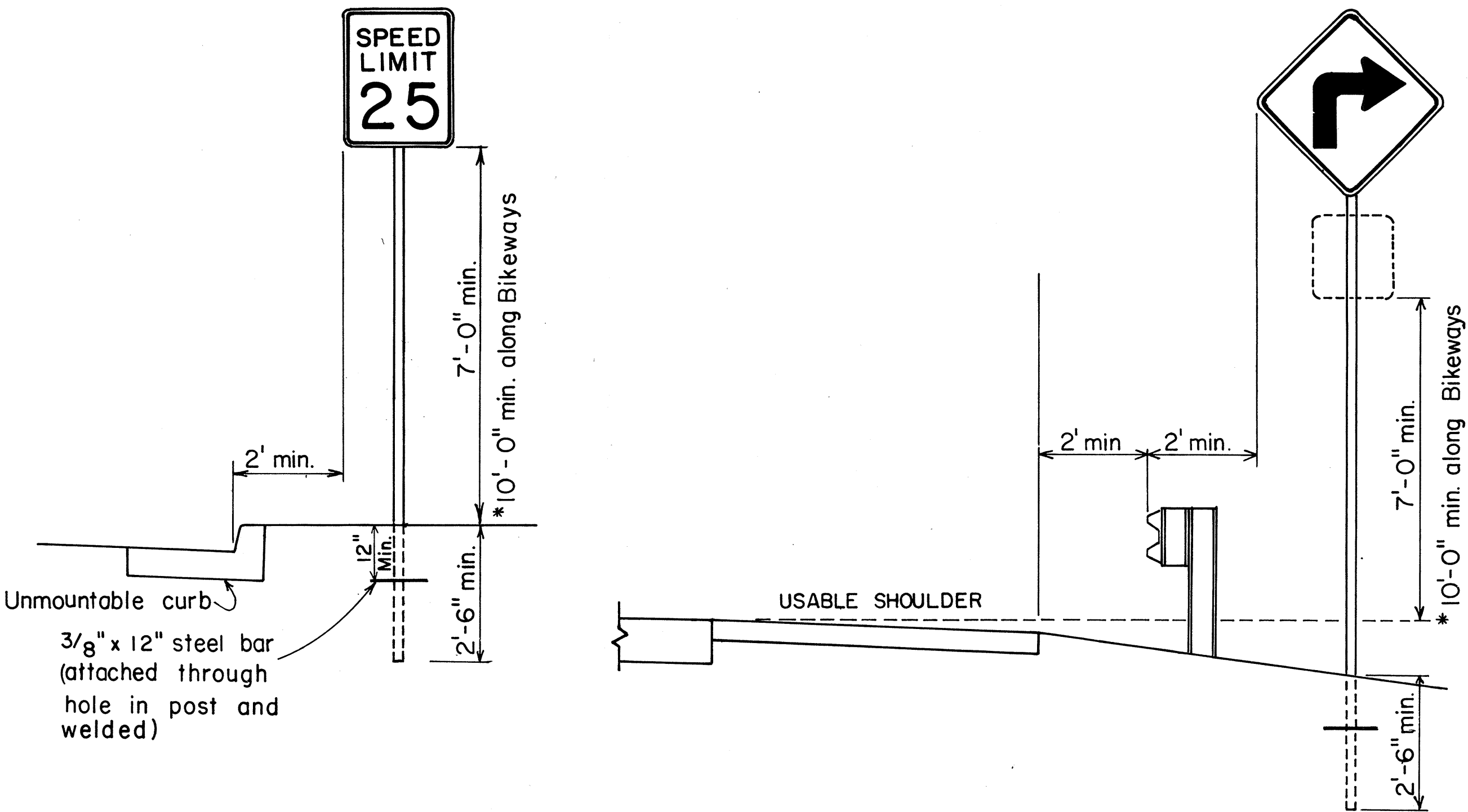
APPROVED:
Herbert S. Salas 11/15/77
 ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977

SHEET NO. 2 OF 12 SHEETS DT 100



HEIGHT AND LATERAL LOCATION OF SIGNS
TYPICAL INSTALLATION

DATE	11/10/77
DESIGNED BY	H.T.
TRACED BY	H.T.
NOTE BOOK	
DESIGNED BY	H.T.
QUANTITIES BY	
CHECKED BY	
NO.	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	23A-0180	1980	7	10

General Notes

- Sign details shall conform to the latest editions of the following FHWA publications:
 - "Standard Alphabets for Highway Signs," and as amended.
 - "Standard Highway Signs," and as amended.
 - "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- All signs shall be reflectorized with reflective sheeting, unless otherwise specified.
- All signs shall have $\frac{3}{8}$ " bolt holes drilled at appropriate locations.
- Numerals in () indicate numerals to be inserted for sign message. (R) or (L) indicates right or left.
- Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized with reflective sheeting.
- All signs shall be erected without educational plaques unless called for in the plans.

ALL WAY

R1-4 18"x 6"

REDUCED SPEED
35
AHEAD

R2-5d(35) 24"x 30"

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

SPEED LIMIT
ENFORCED
BY
VASCAR

4" Series D
- 4" Series C
- 3" Series D
- 5" Series C

R2-10 24"x 30"

CENTER LANE
ONLY

R3-9b 24"x 36"

BUS STOP

R7-107(R) 12"x 24"

RESERVED PARKING

R7-8 12"x 18"

R7-8-A 24"x 30"

ANY TIME

4" Series C
1 1/2"

R8-3a 24"x 24"

24"x 18"

R8-3a-A 48"x 48"

NO PED XING

R9-3a 18"x 18"

18"x 12"

R9-3a-A 24"x 24"

24"x 18"

USE CROSSWALK

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

USE CROSSWALK

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

NO TURN ON RED

R10-11a 24"x 30"

TURN RIGHT ANY TIME WITH CAUTION

4" Series C

R16-1 24"x 30"

NO LEFT TURN ON RED

4" Series D -
3" Series D -
2" Series D -
3" Series D -

R16-3 18"x 24"

NO RIGHT TURN ON RED

R16-4 18"x 24"

UNLICENSED VEHICLES
BICYCLES, CYCLES
UNDER 5 H.P.,
PEDESTRIANS
KEEP OUT FREEWAY

3" Series C
4" Series E

R16-5 36"x 42"

U TURN AHEAD

8" Series F
5" Series D

R16-6 24"x 30"

MOTOR-DRIVEN CYCLES PROHIBITED

4" Series B

R5-8 30"x 24"

U TURN OK

8" Series F
5" Series D

R16-7 24"x 30"

U TURN

W17-1(L) 60"x 60"

STOP AHEAD

W3-1a 36"x 36"

24"x 18"

W3-1a-A 48"x 48"

24"x 18"

YIELD AHEAD

W3-2a 36"x 36"

24"x 18"

W3-2a-A 48"x 48"

24"x 18"

STOP AHEAD WHEN FLASHING

6" Series C

W3-4 48"x 48"

TRUCK CROSSING

W8-6 30"x 30"

W8-6-A 36"x 36"

THRU TRAFFIC MERGE LEFT

6" Series E

W9-3(L) 48"x 48"

EQUESTRIAN XING

W11-7 36"x 36"

24"x 18"

W11-7-A 48"x 48"

24"x 18"

FIRE STATION

W11-8 36"x 36"

24"x 18"

W11-8-A 48"x 48"

24"x 18"

W11-9 36"x 36"

W11-9-A 48"x 48"

LIMITED SIGHT DISTANCE

W14-4 36"x 36"

W14-4-A 48"x 48"

DELAYED GREEN

4" Series C

W15-1 24"x 24"

ADVANCE GREEN

W15-2 24"x 24"

END FREEWAY 1/2 MI

8" Series E

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

RIGHT LANE EXIT ONLY

8" Series E

W18-1 48"x 60"

SCHOOL BUS STOP AHEAD

S3-1 30"x 30"

8:00 AM TO 3:30 PM

S4-1 24"x 10"

WHEN CHILDREN ARE PRESENT

S4-2 24"x 10"

SCHOOL

S4-3 24"x 8"

WHEN FLASHING

S4-4 24"x 10"

SIDEWALK CLOSED

7" Series D

CW23-4 48"x 48"

USE SIDEWALK

4" Series C

R18-1 24"x 18"

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

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

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT103 approved 3/20/72	H.T.	5/3/78
2	Added General Note 6	H.T.	11/7/78

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978

SHEET No. 3 OF 12 SHEETS DT 103

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	G3A-01-80	1980	8	16



CW20-1a 48" x 48"



CW20-2d 48" x 48"



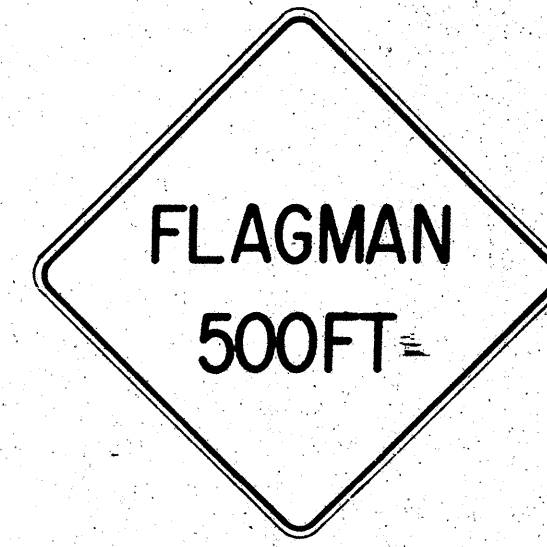
CW20-3b 48" x 48"



CW20-4d 48" x 48"



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



CW20-7c 48" x 48"



CW21-1 30" x 30"



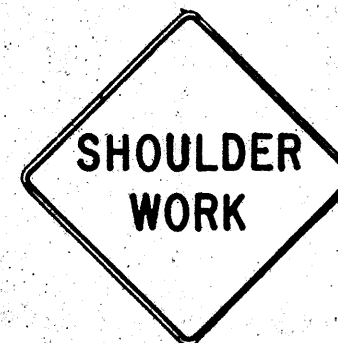
CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



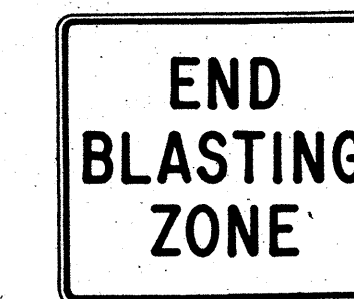
CW21-6 30" x 30"



CW22-1b 48" x 48"



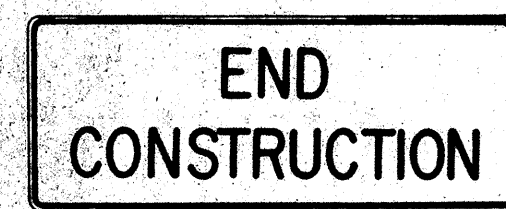
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-1(5) 60" x 36"



CG20-2 60" x 24"



CM4-9(R) 30" x 24"



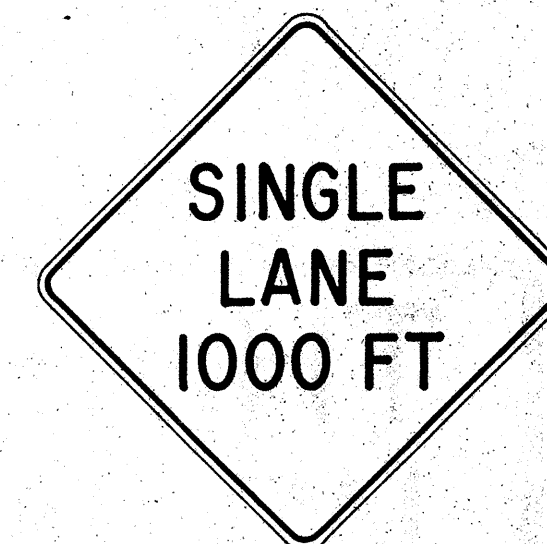
CM4-10(R) 48" x 18"



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.

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

APPROVED:
William S. Salsich 2/23/72
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	H.T.	9-16-75
4	Revised General Note 2 and sign CG20-1(5)	H.T.	9-14-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS CONSTRUCTION SIGNS

NOT TO SCALE

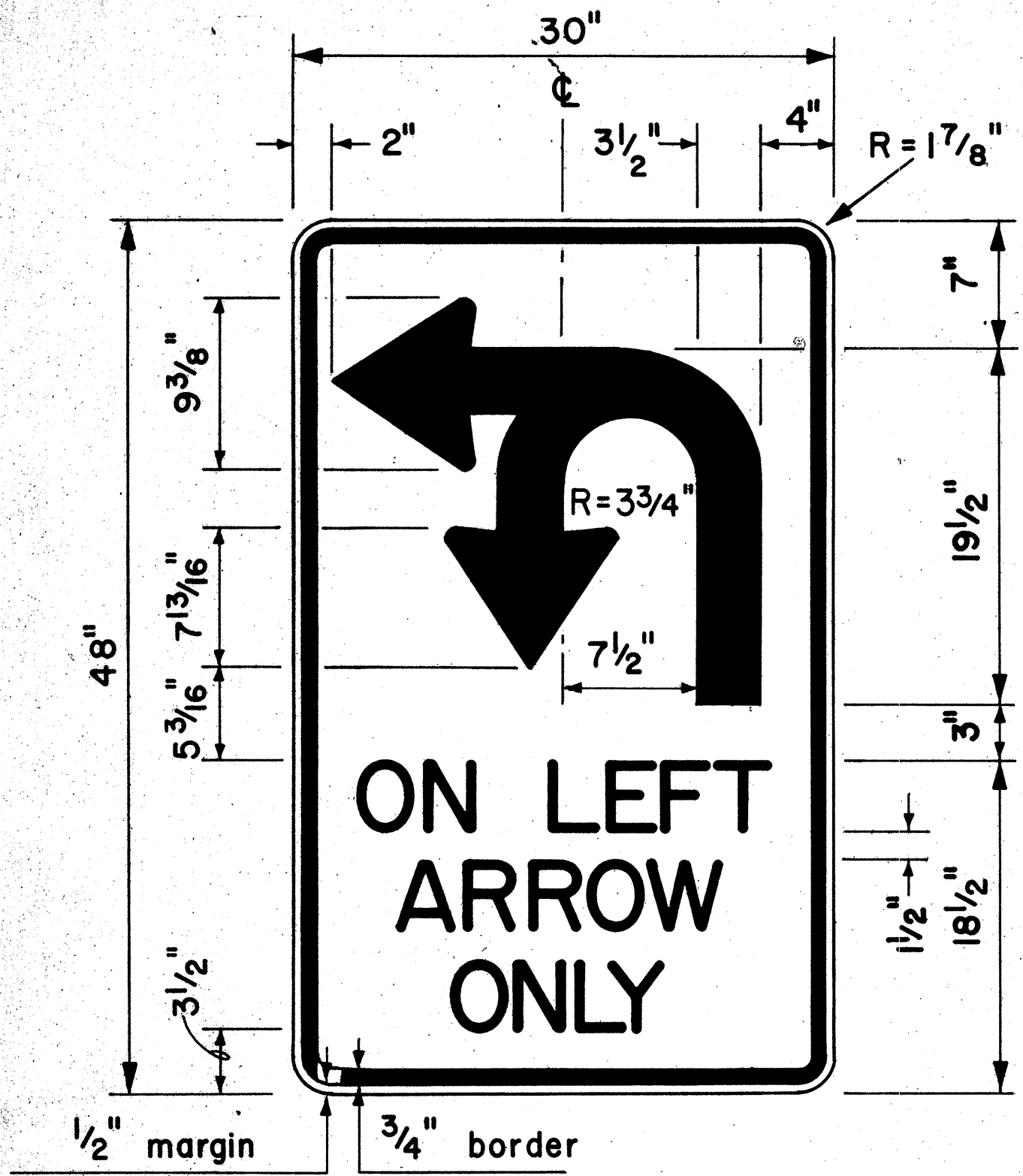
SHEET No. 4 OF 12 SHEETS DT 104

DESIGNED BY	NOTED BY
DRAWN BY	CHECKED BY
TRACED BY	
DATE	

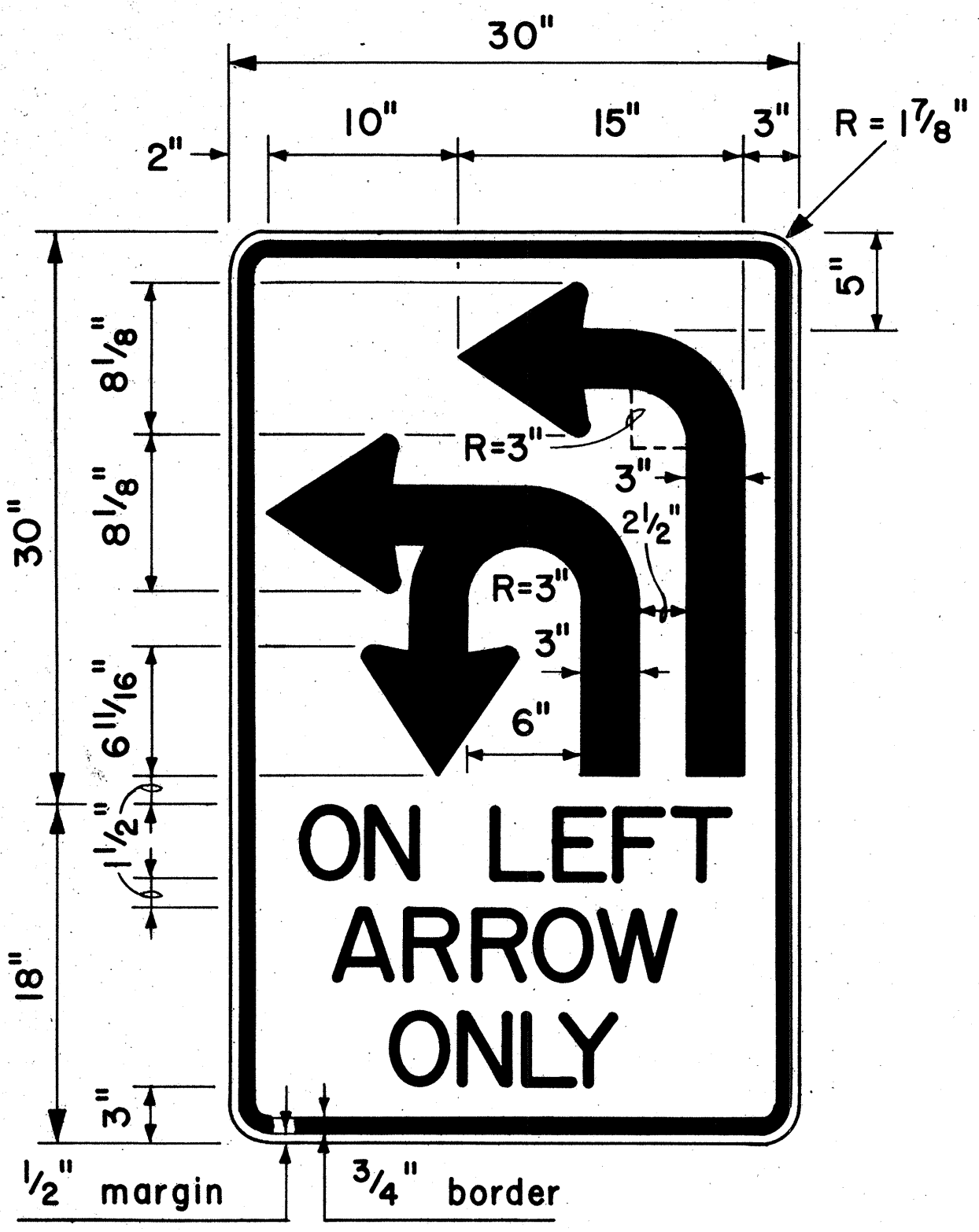
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-80	1980	9	16

GENERAL NOTES

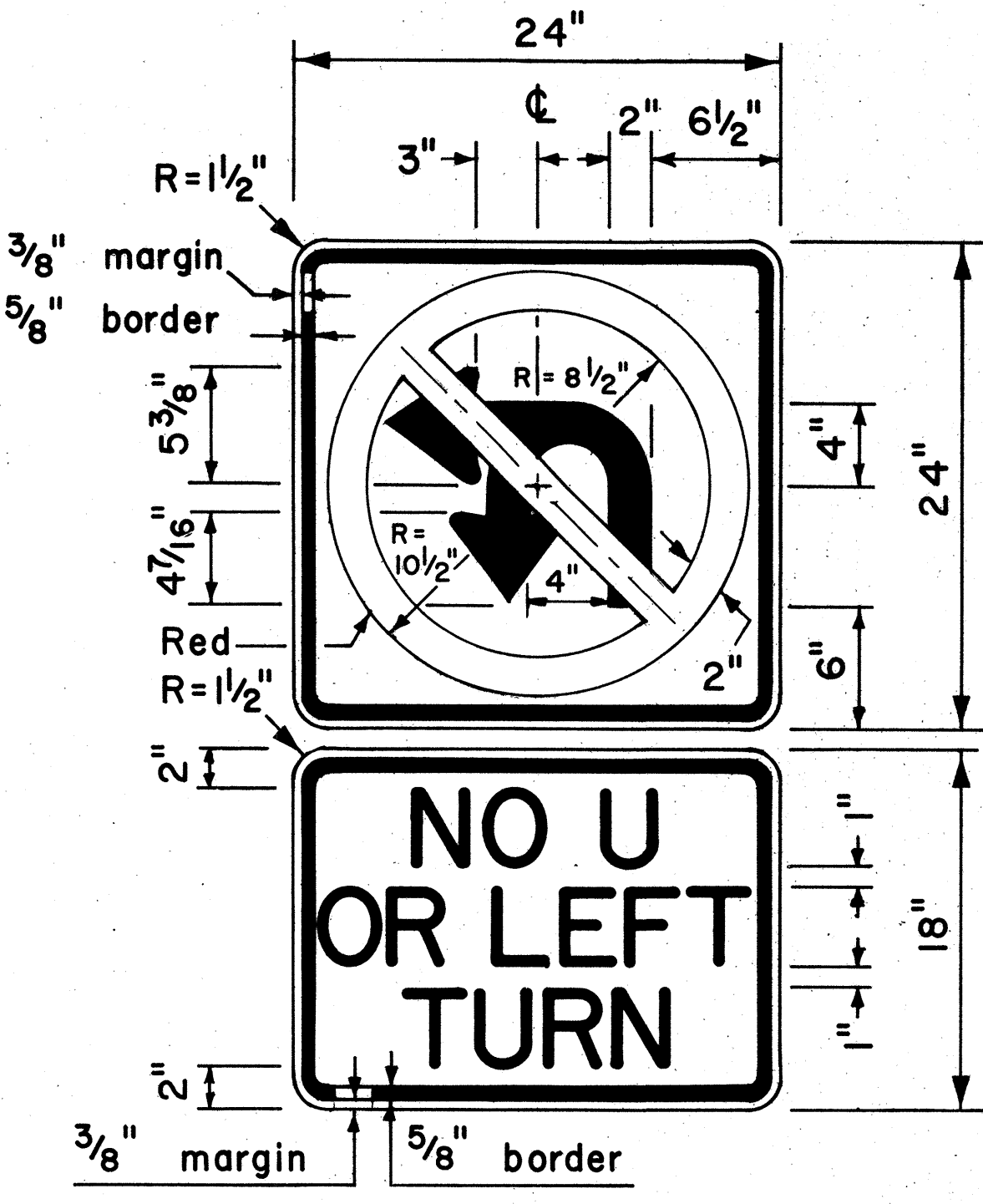
1. Sign details shall conform to the latest editions of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and "Standard Highway Signs," and as amended.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs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



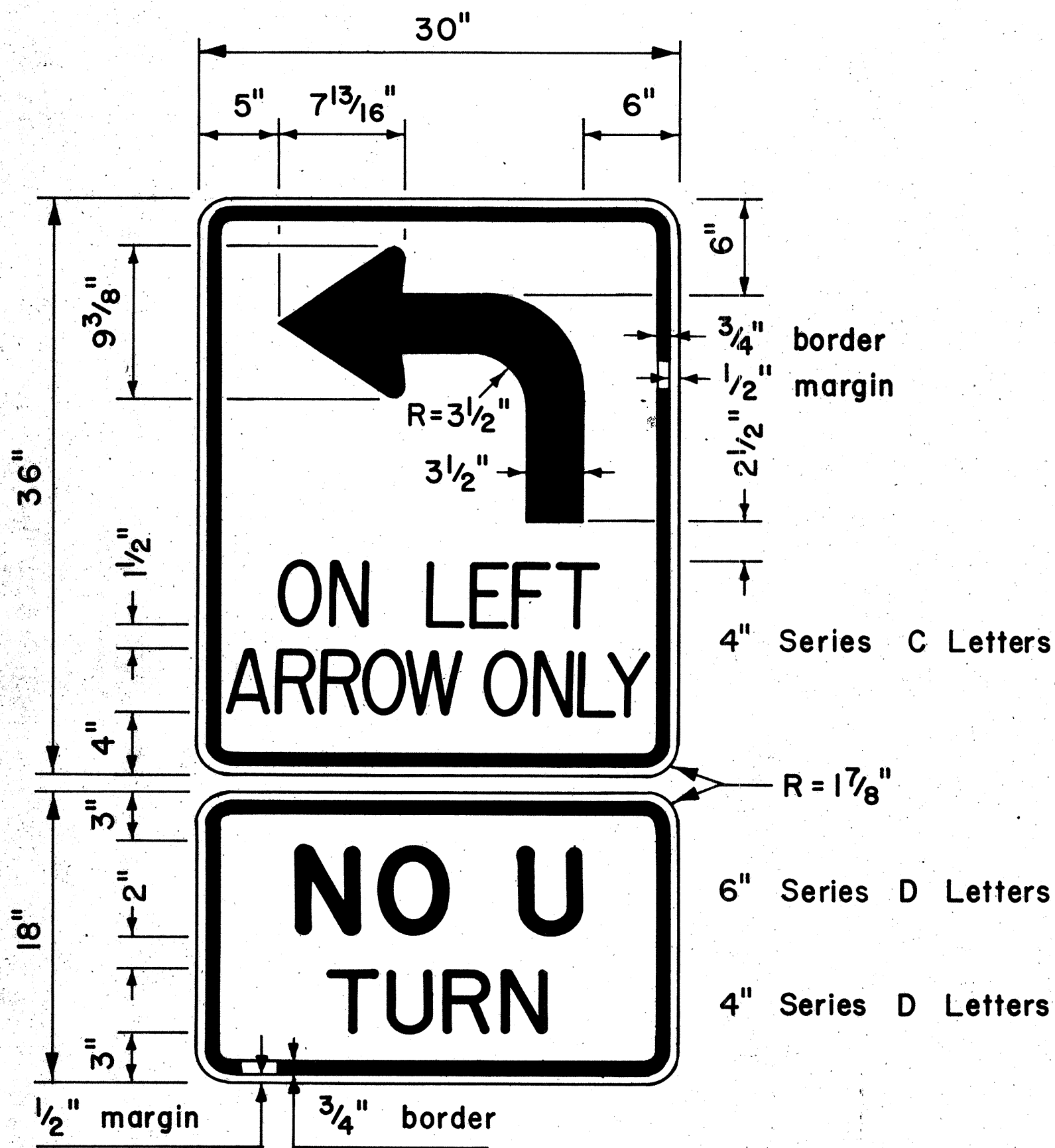
4" Series D Letters
R17-1



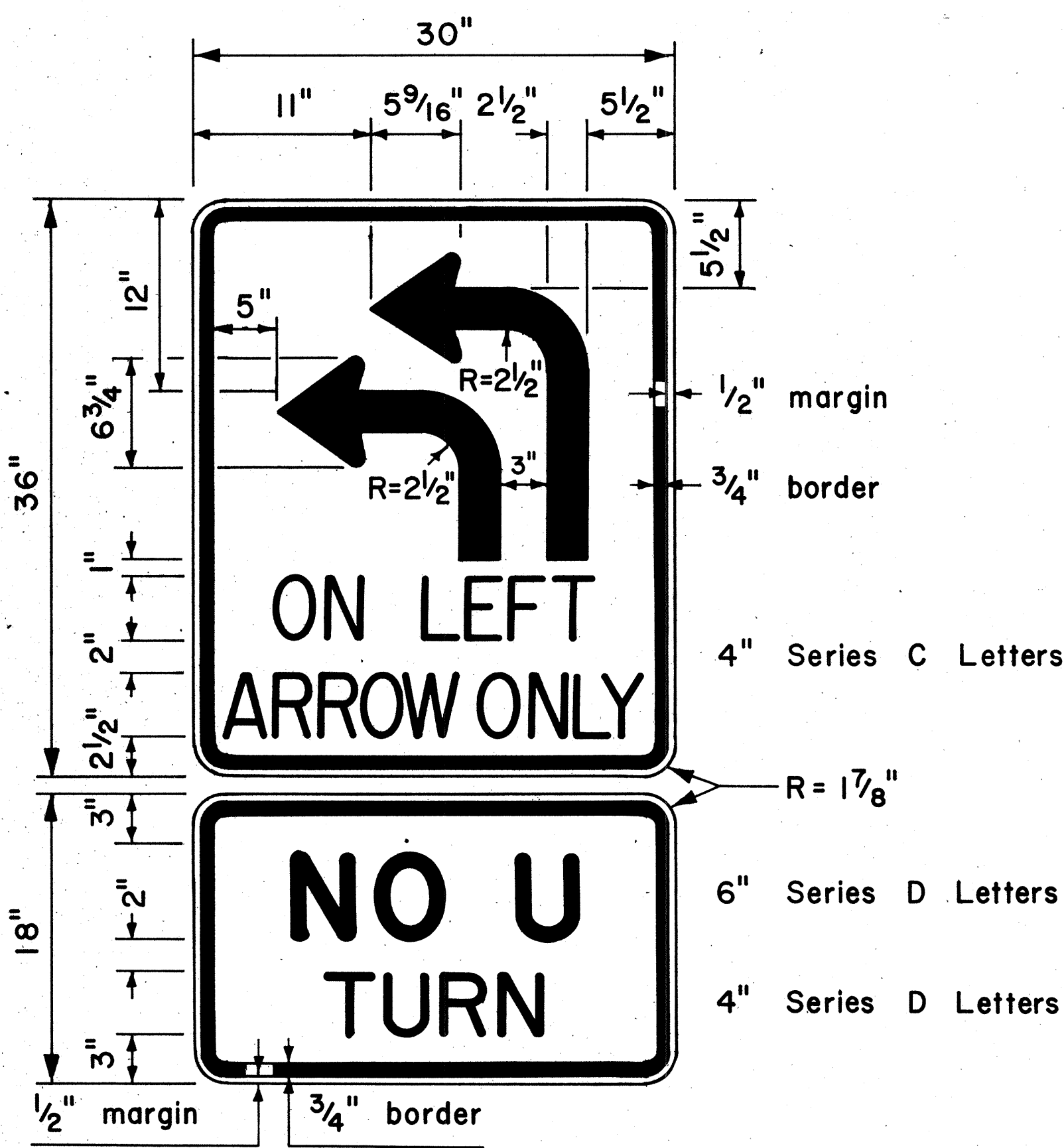
4" Series D Letters
R17-2



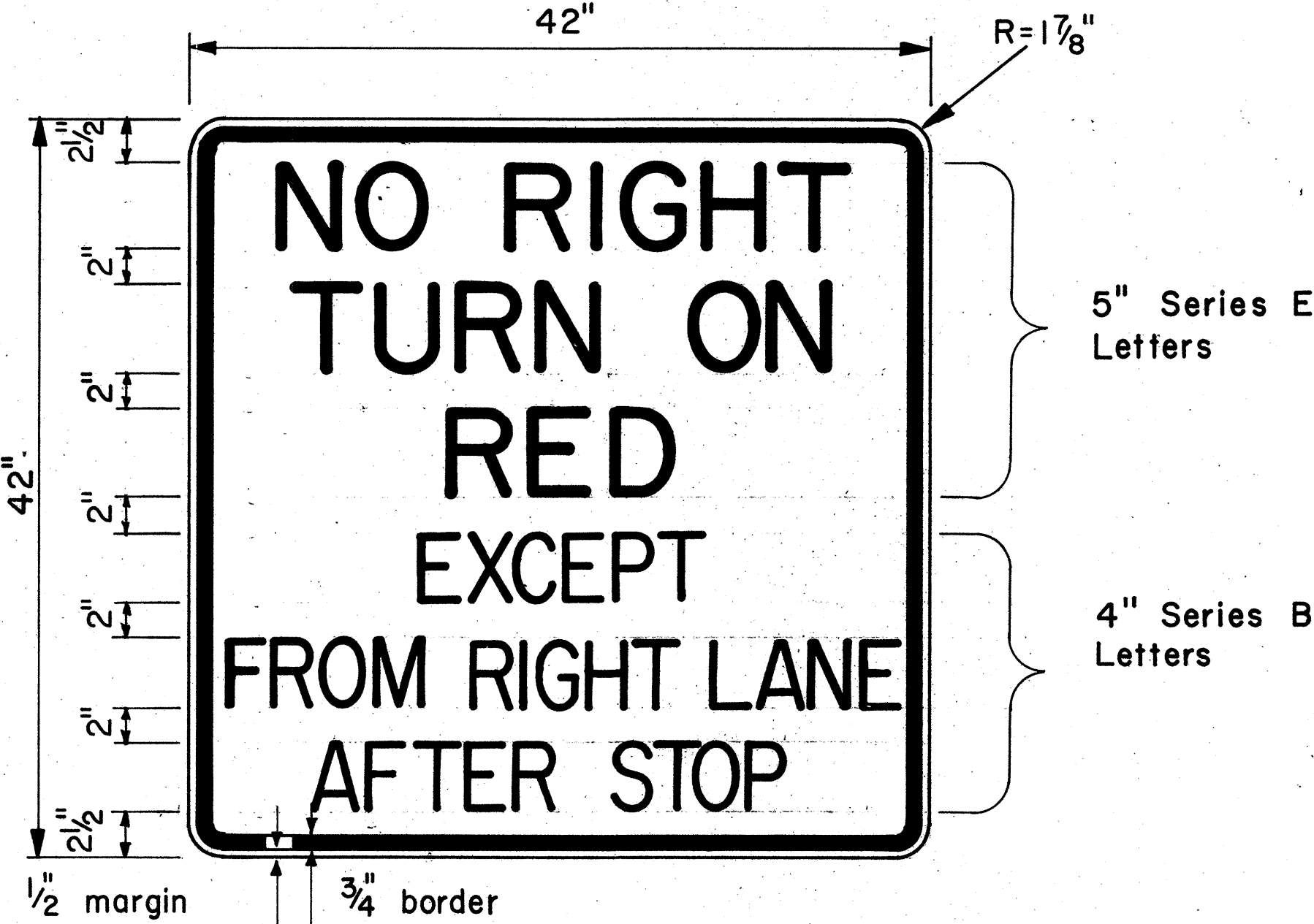
4" Series D Letters
R3-4b



R17-3



R17-4



R10-11d

NO.	REVISION	APPROVED BY	DATE

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

APPROVED:
Harbert Zaleski 8/16/77
 ASSISTANT CHIEF, ENGINEERING DATE

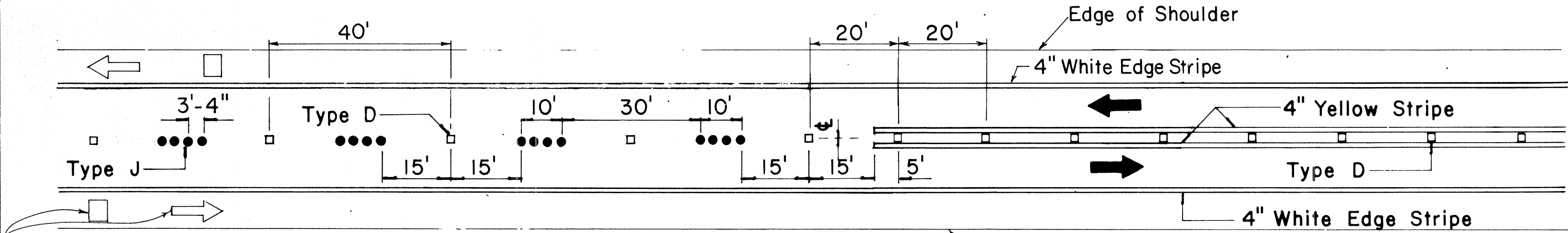
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
MISCELLANEOUS
INTERSECTION SIGNS

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

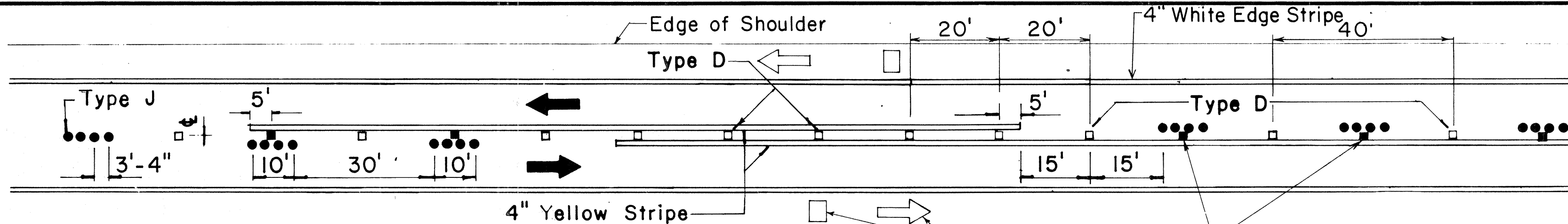
SHEET No. 5 OF 12 SHEETS DT 112

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	62A-01-80	1980	10	10



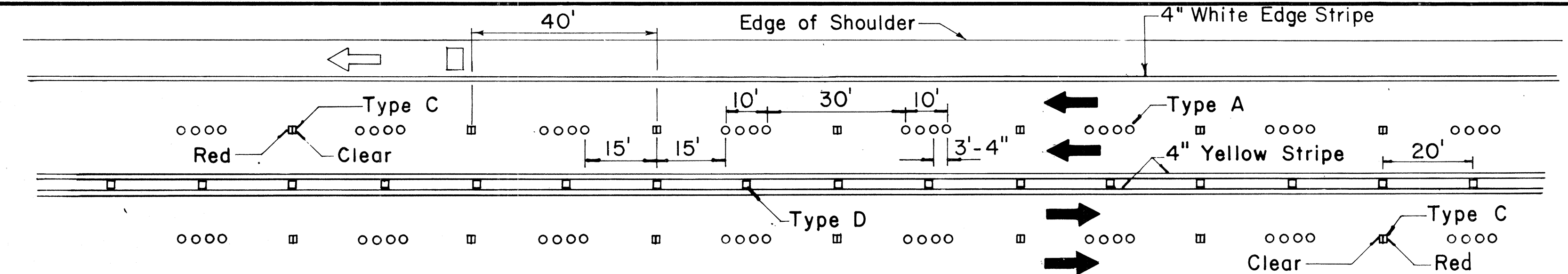
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

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.

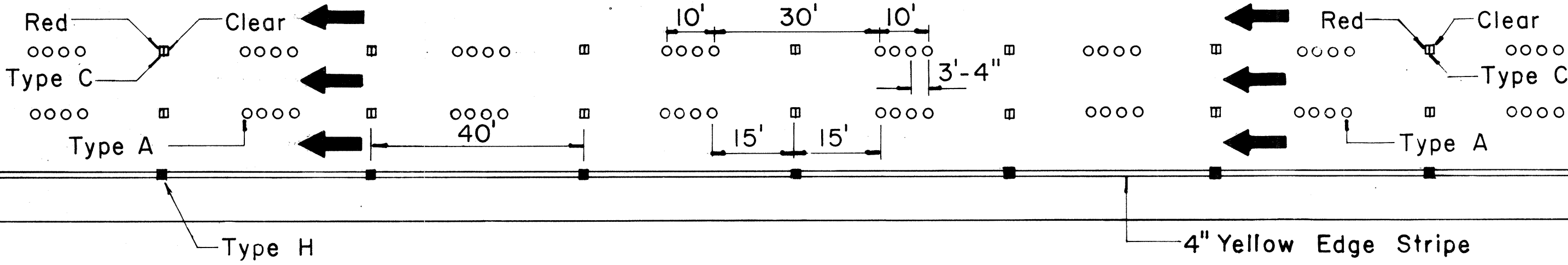
Edge of Shoulder

4" White Edge Stripe

NOTE: Type H (Reflective Surface facing oncoming traffic)

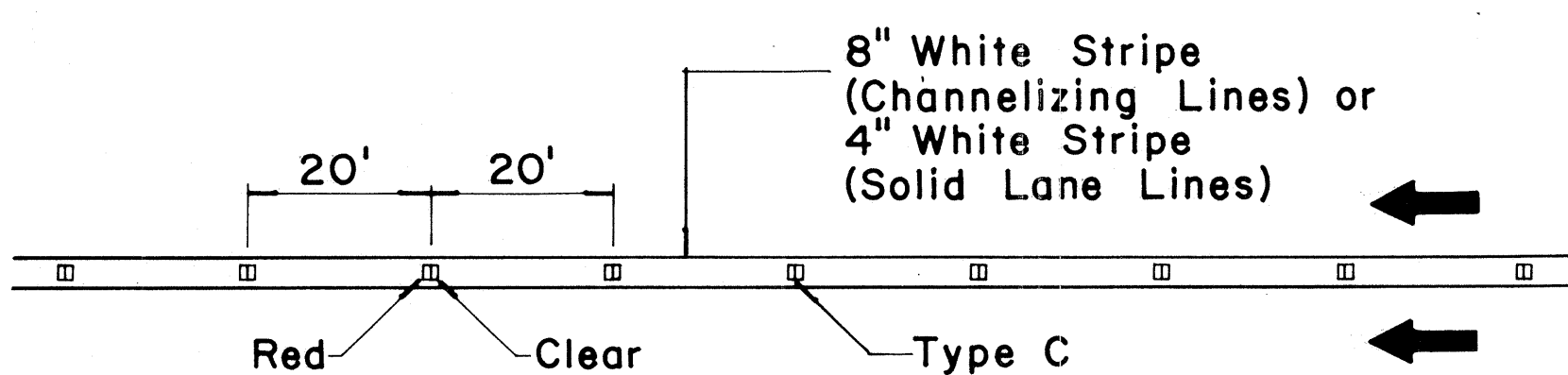
Pavement Symbols, Words, Arrows, and Legends for Bike Route as Required on Plans.

4" White Edge Stripe



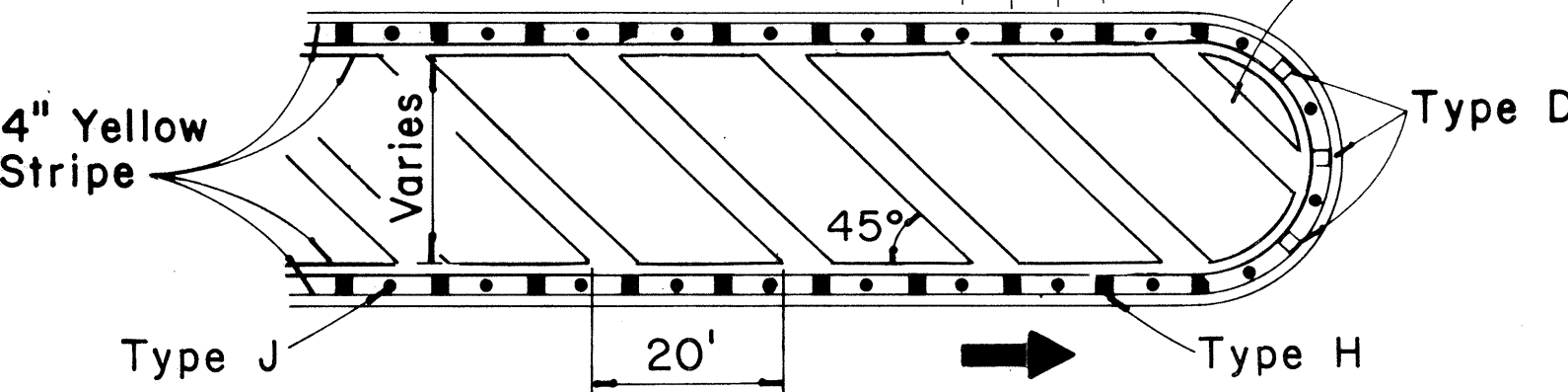
Type H

4" Yellow Edge Stripe



CHANNELIZING LINES OR SOLID LANE LINES

NOTE: Type H (Reflective surface facing oncoming traffic)



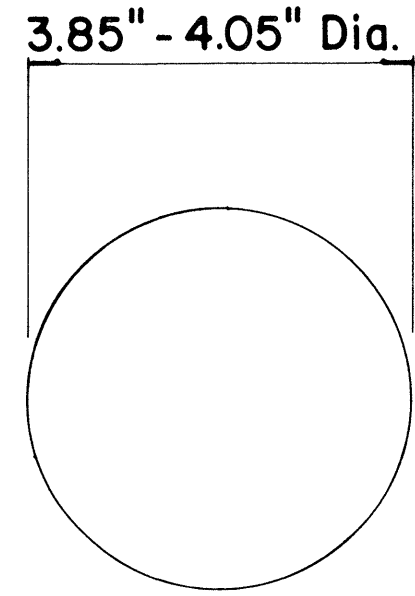
MEDIAN NOSE DELINEATION

TWO - LANE

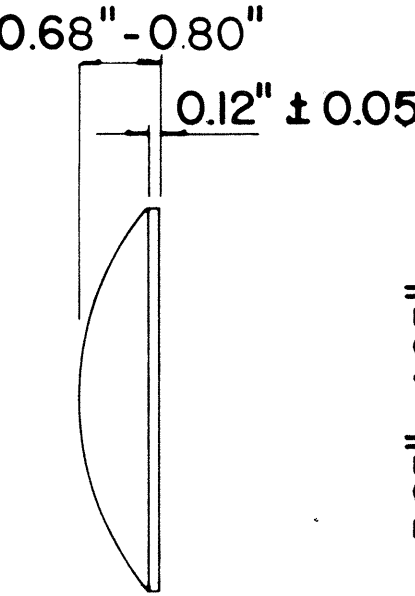
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

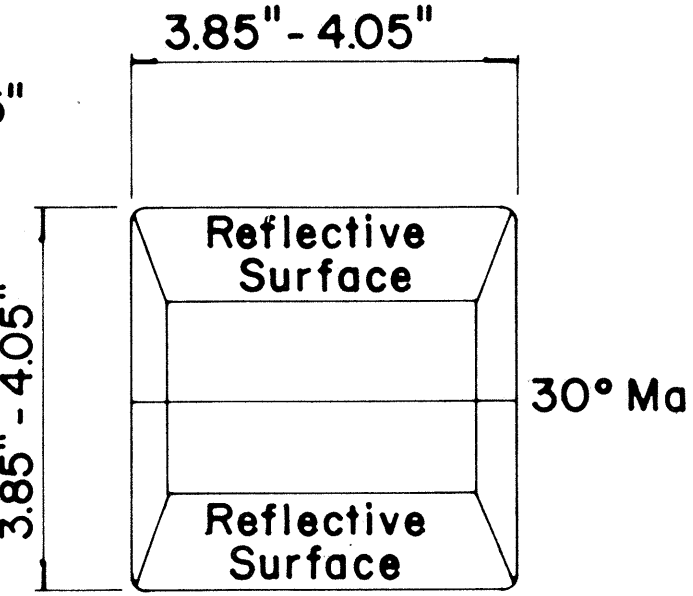
MISCELLANEOUS



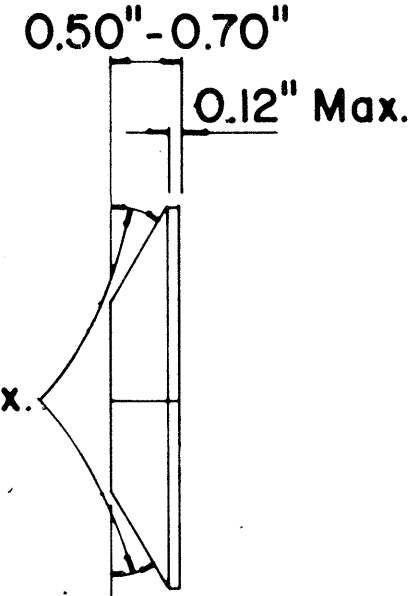
TYPE A
NON-REFLECTIVE WHITE MARKER



TYPE J
NON-REFLECTIVE YELLOW MARKER



TYPE C
RED-CLEAR REFLECTIVE MARKER



TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER

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:

Erich Tanaka
TRAFFIC ENGINEER

7/21/78
DATE

APPROVED:

Herbert B. Zekas
ASSISTANT CHIEF, ENGINEERING

7/24/78
DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.T.	7/24/78
2	Delete Type A Markers from Bike Route Delineation.	H.T.	7/15/78

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

Not to Scale
SHEET No. 6 OF 12 SHEETS DT 300

July 1978

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	G3A-01-80	1980	11	16

GENERAL NOTES:

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

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

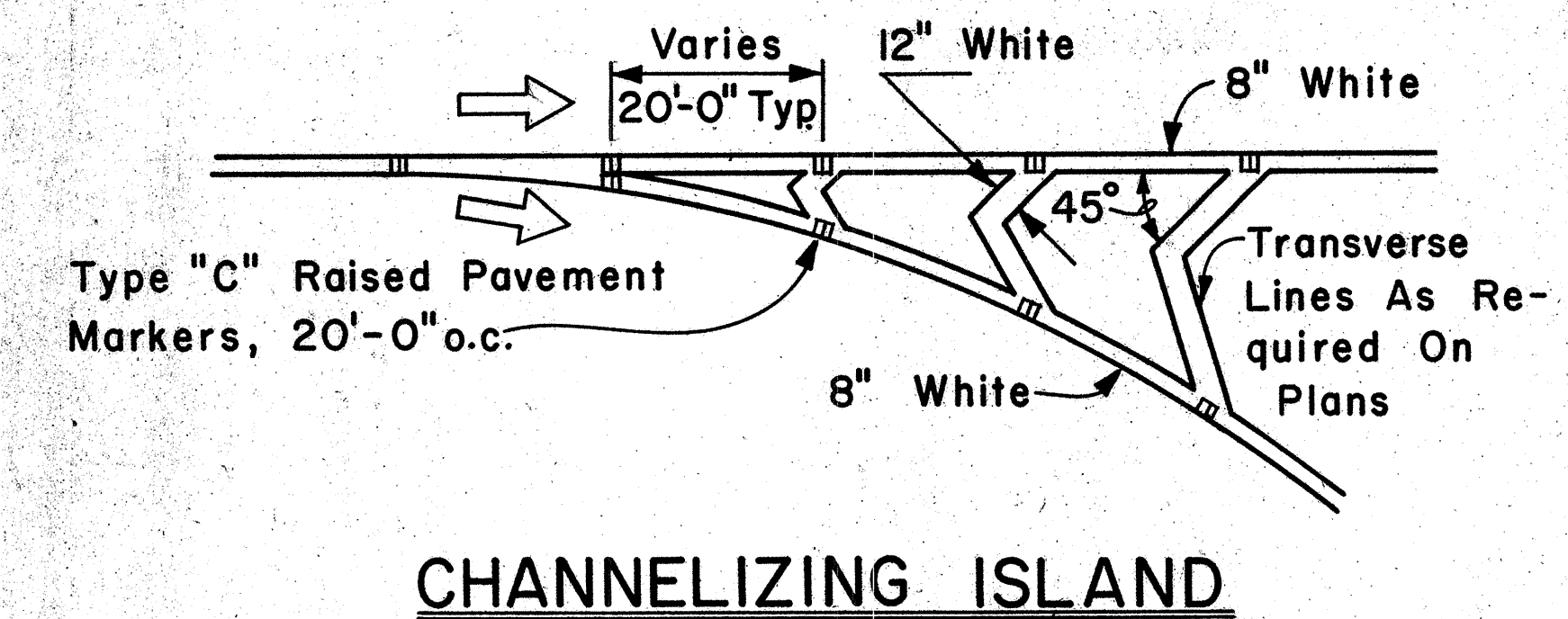
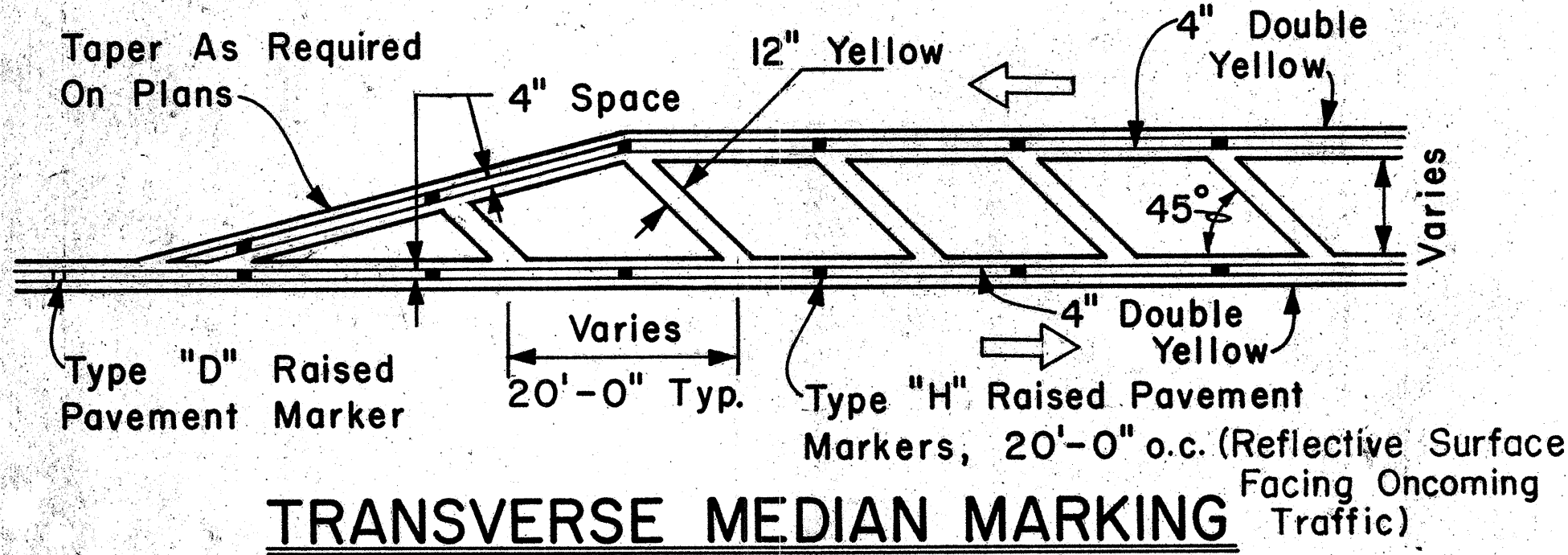
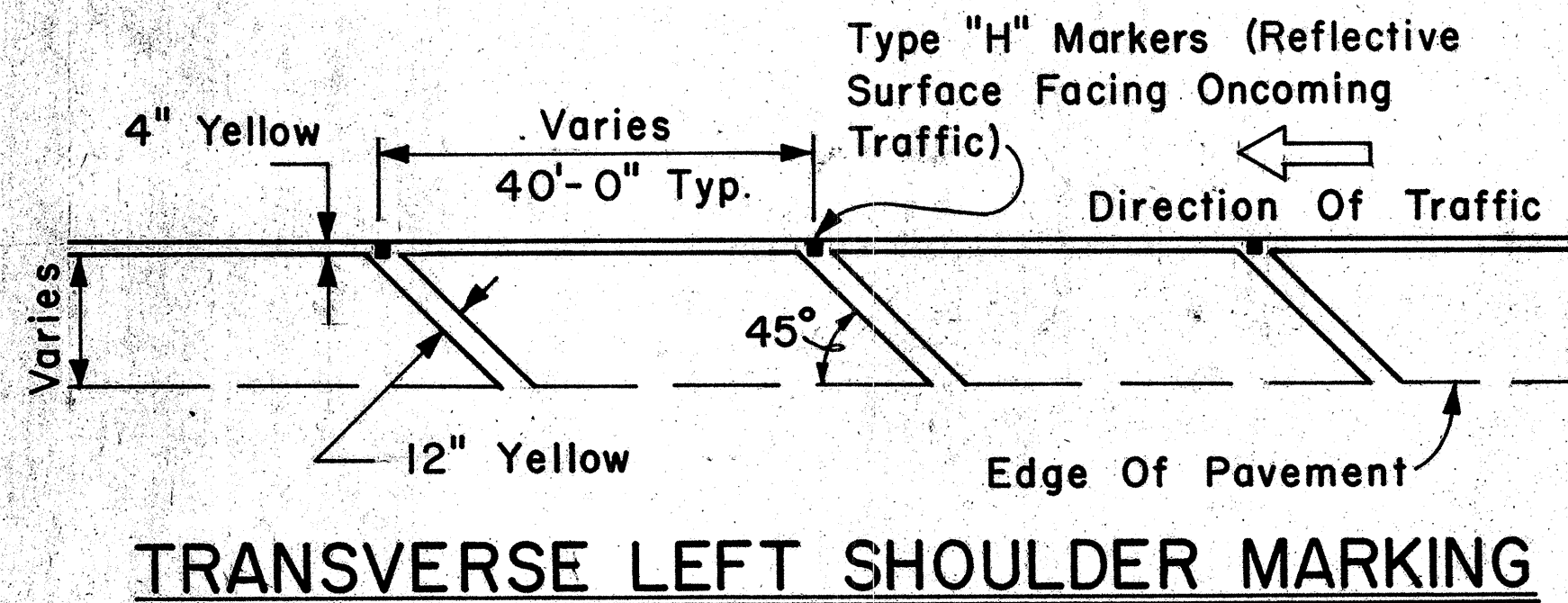
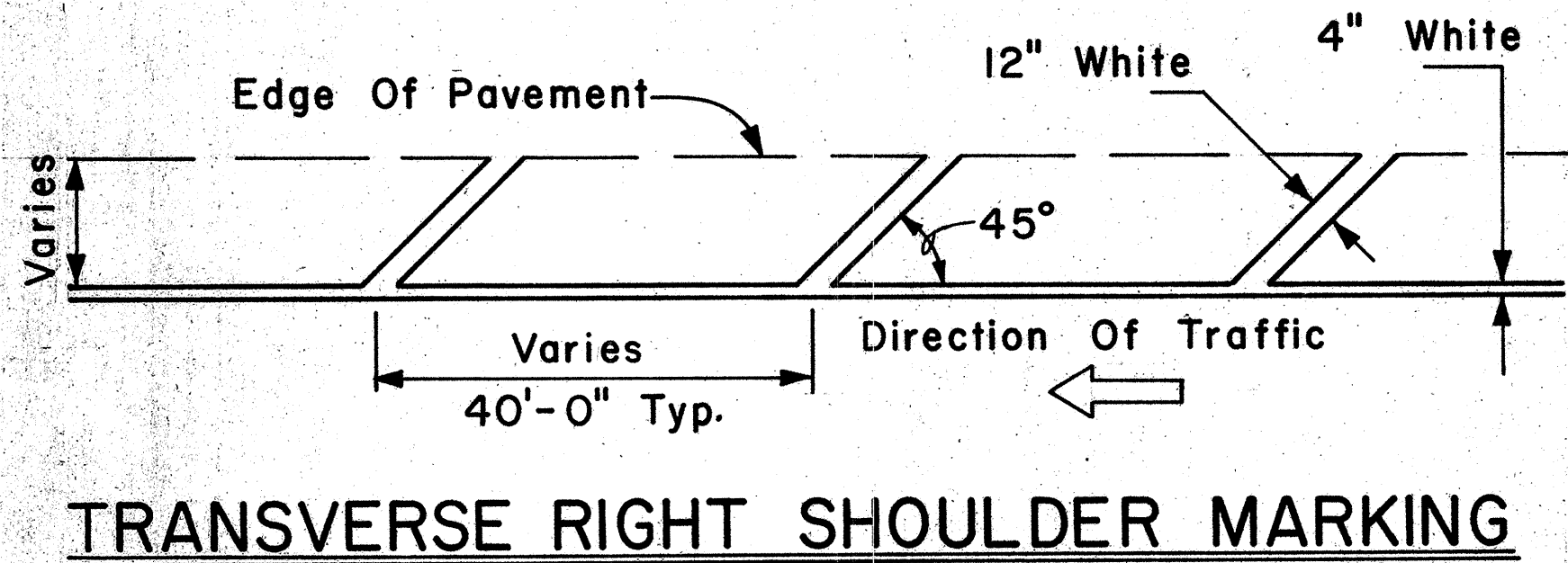
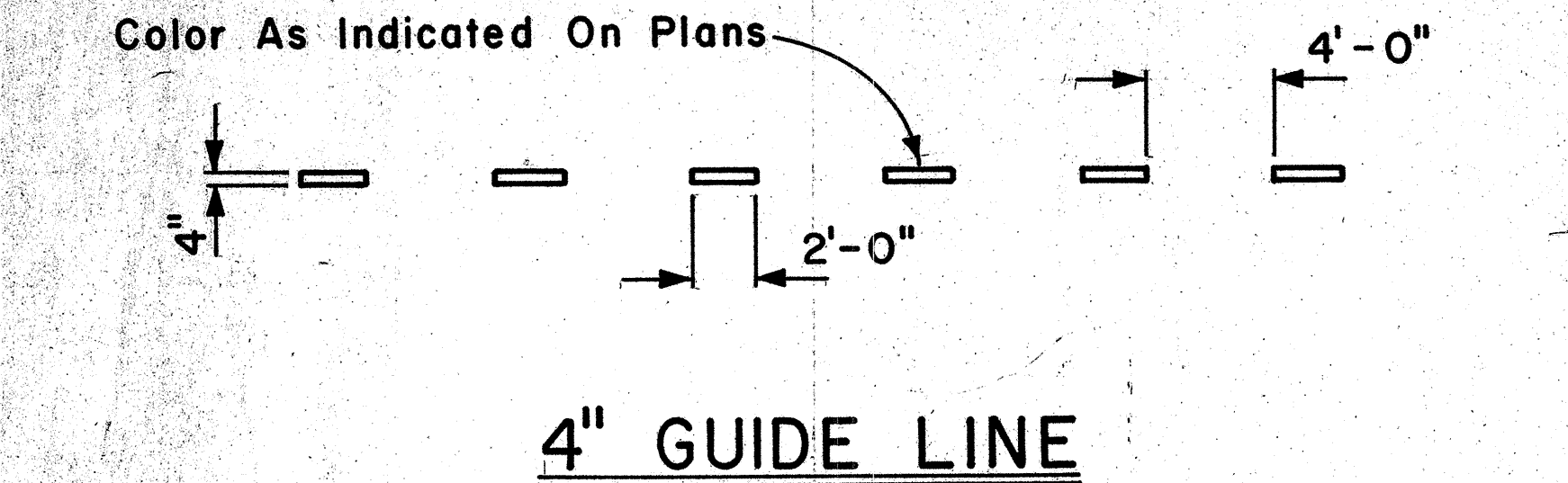
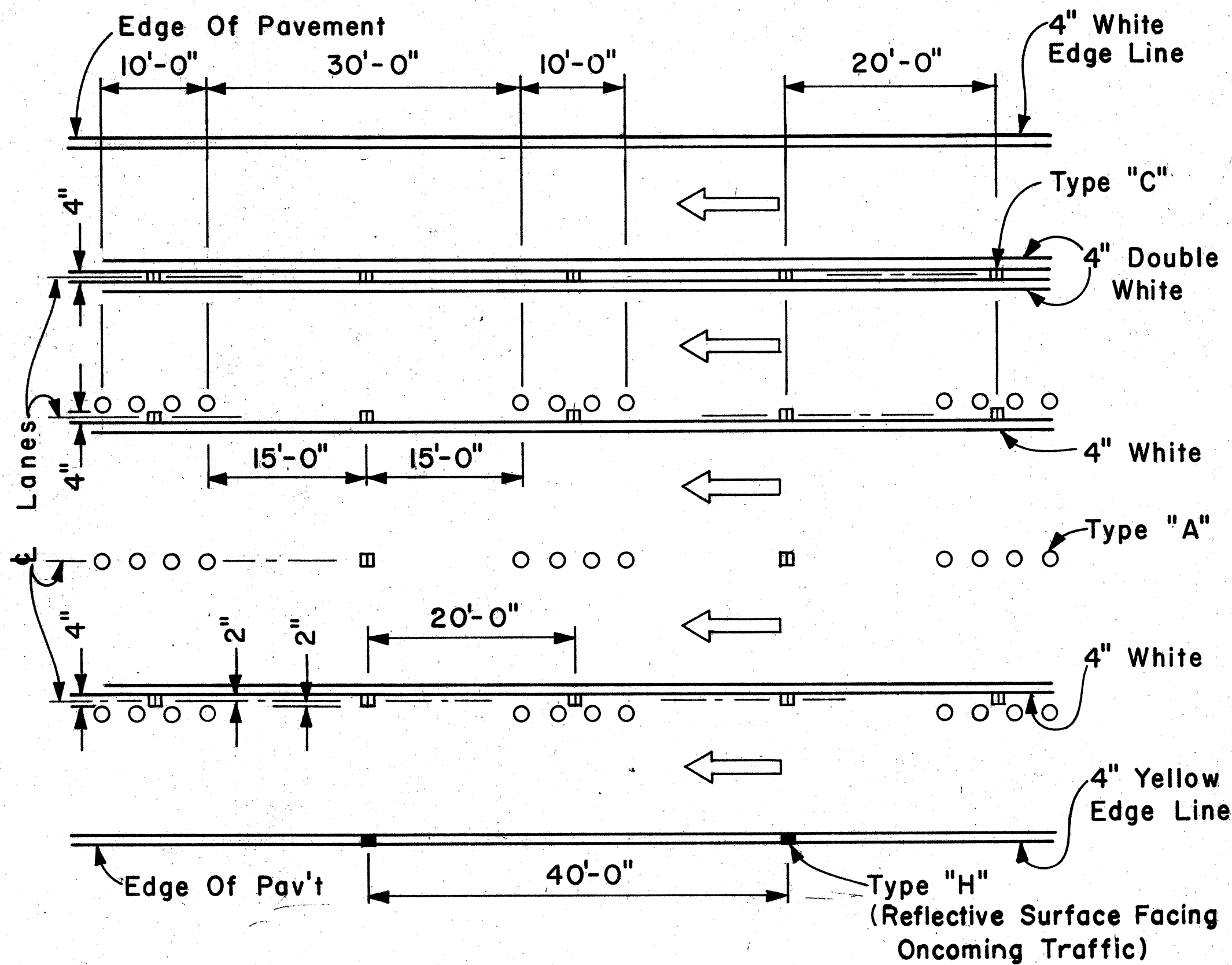
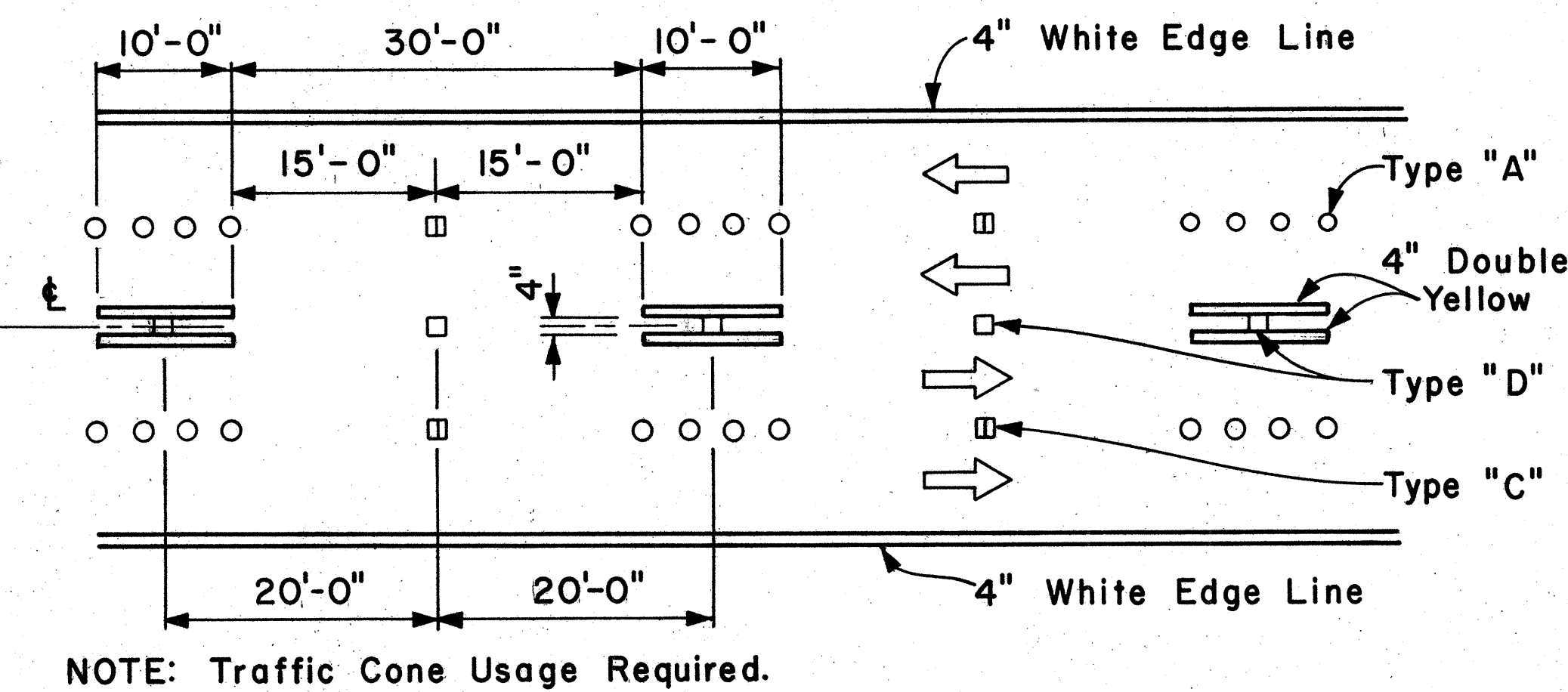
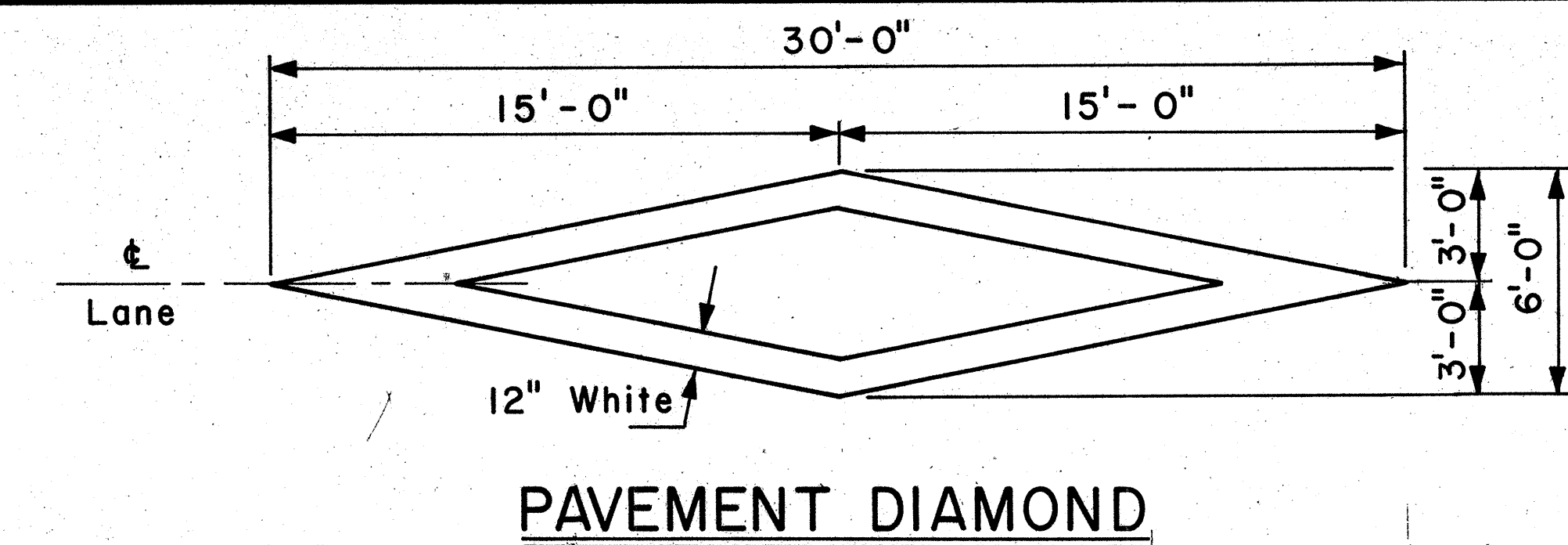
APPROVED:
Herbert S. Zaksch 5/3/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

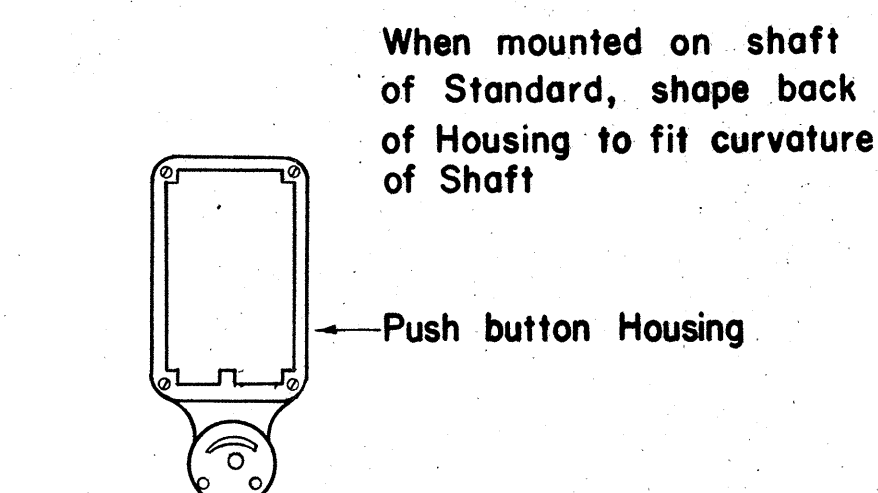
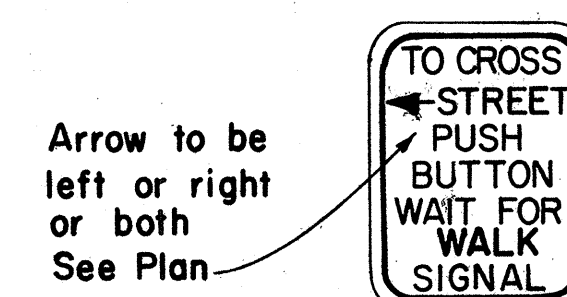
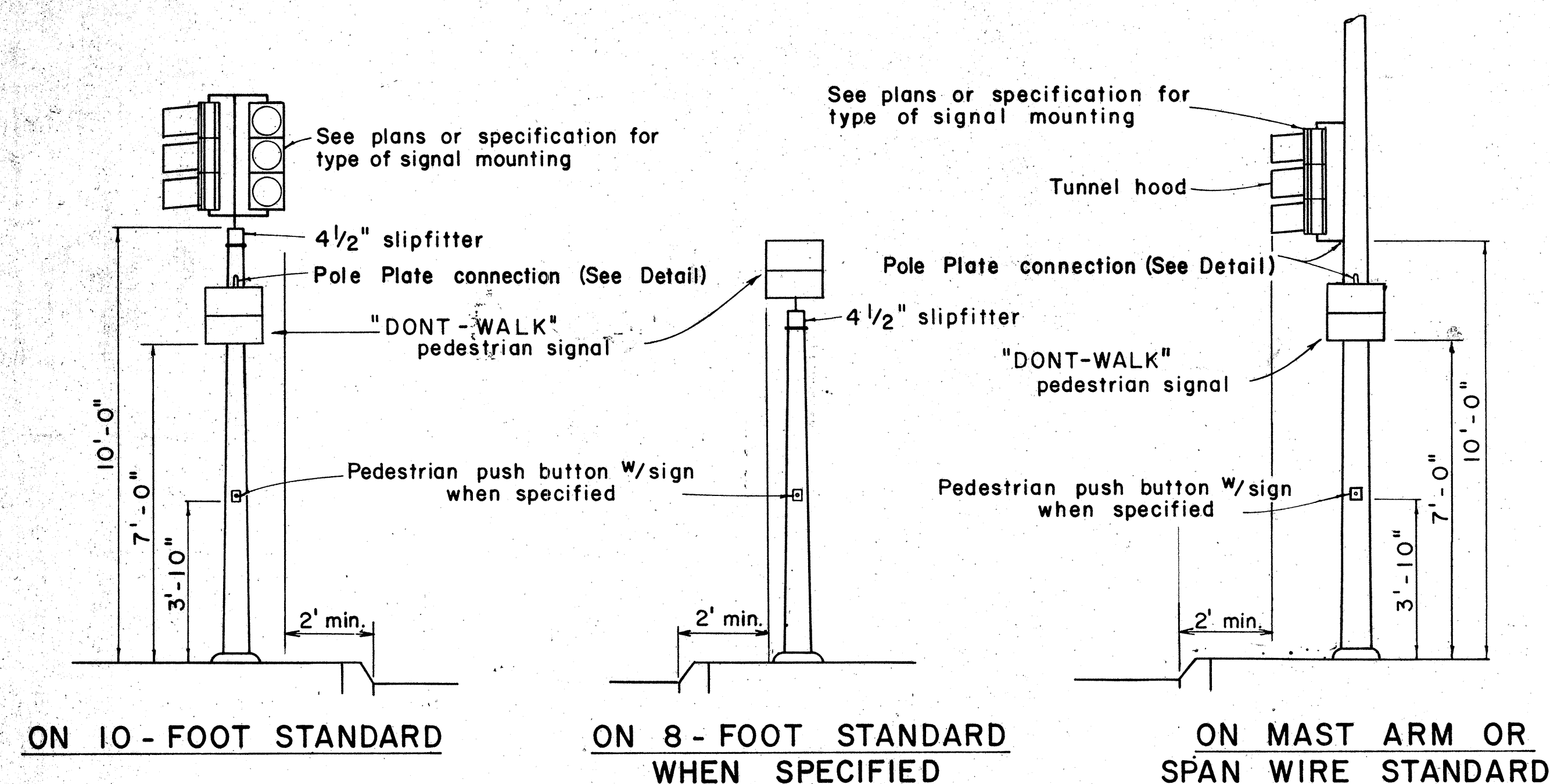
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Scale: Not to Scale Date: April, 1978
SHEET No. 7 OF 12 SHEETS DT 302



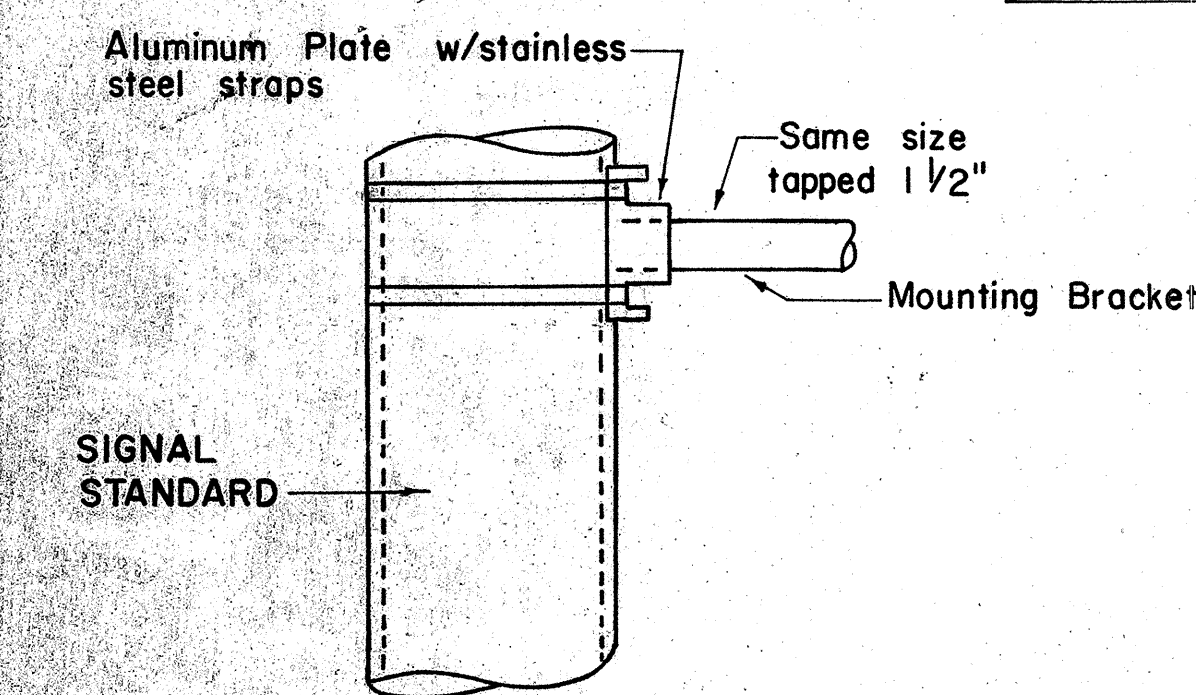
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	G3A-01-80	1980	13	16



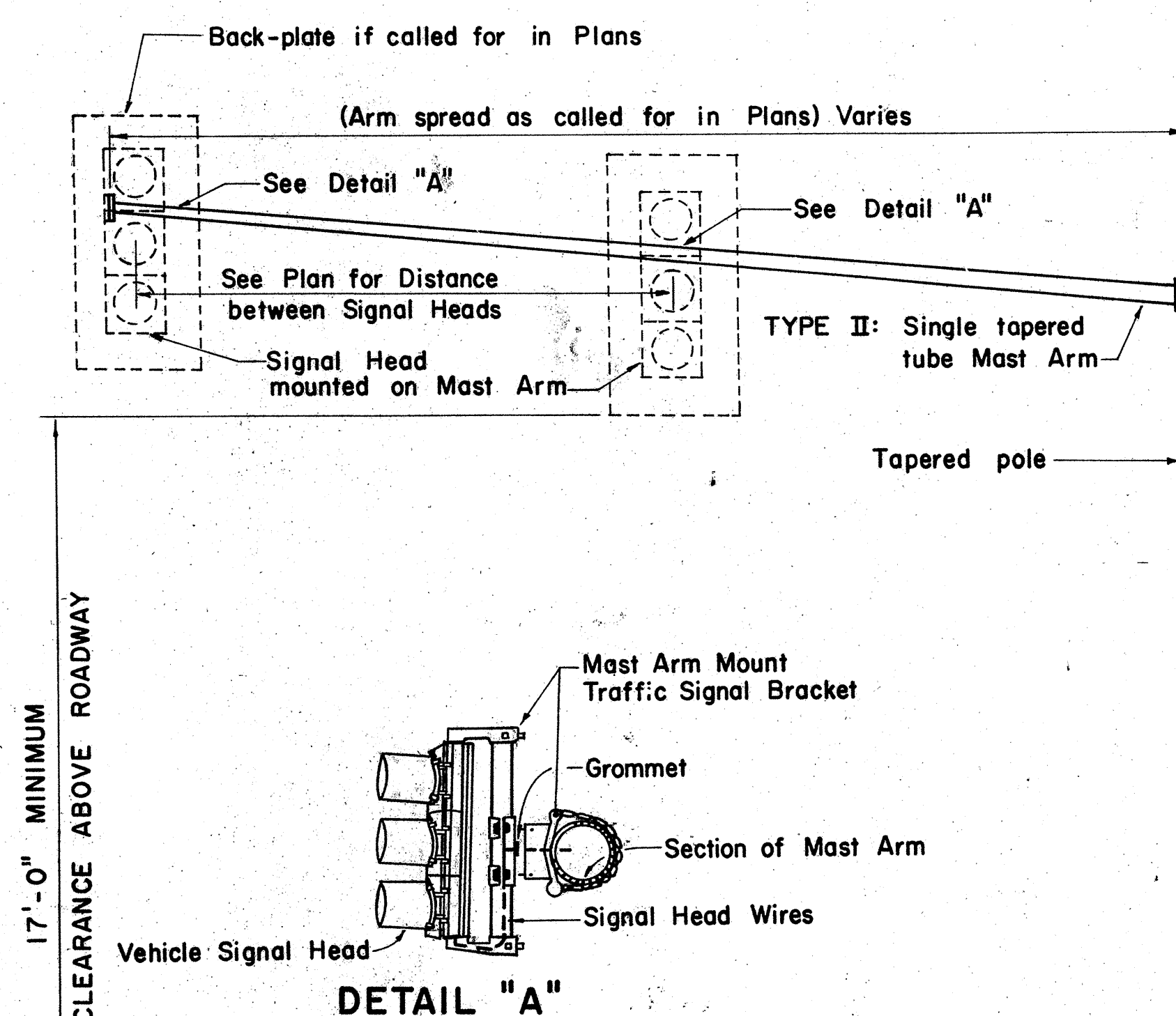
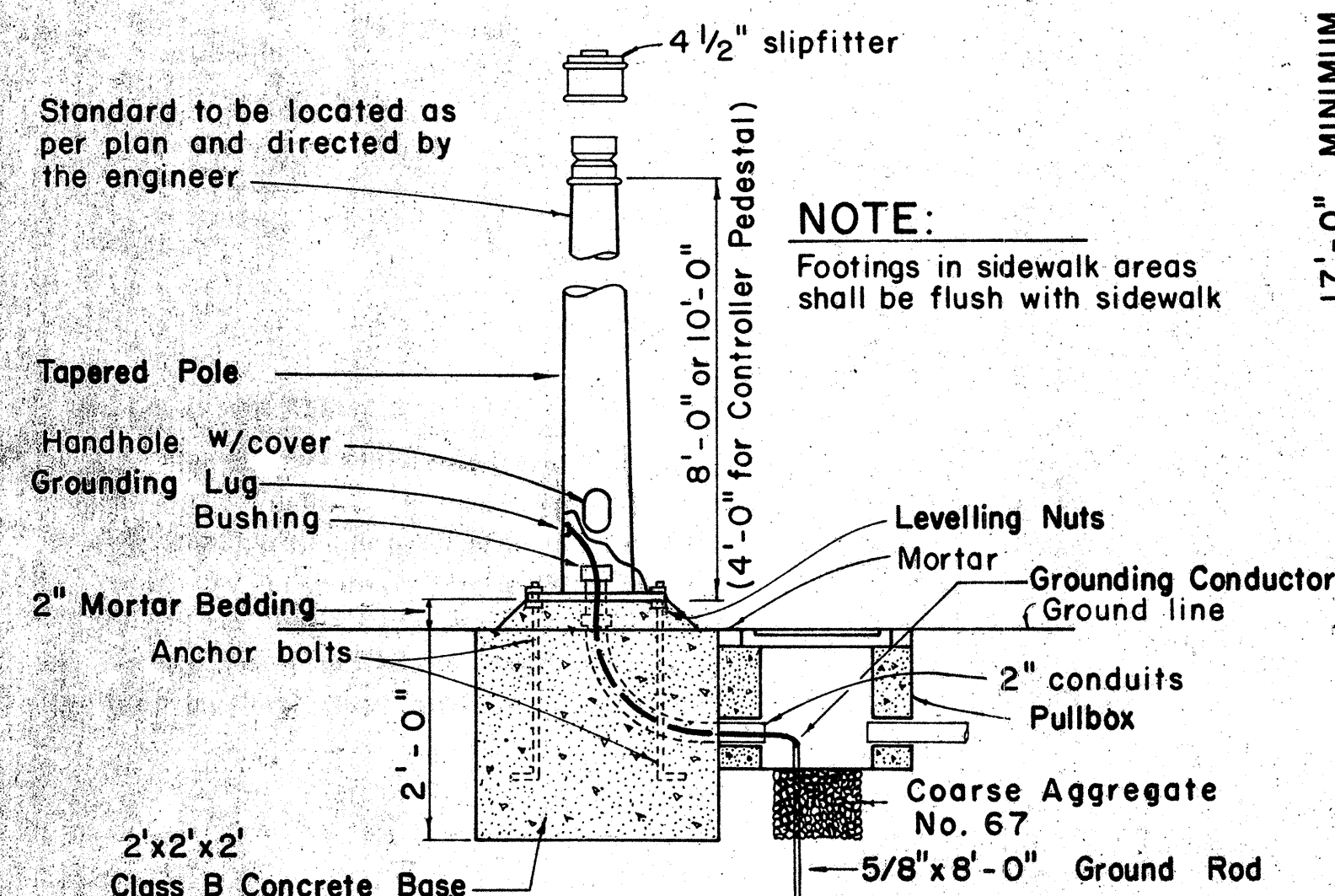
NOTE:

1. Conduits shall protrude 2" max. above finished surface of foundation.
2. Conduits shall slope away from pole foundation.

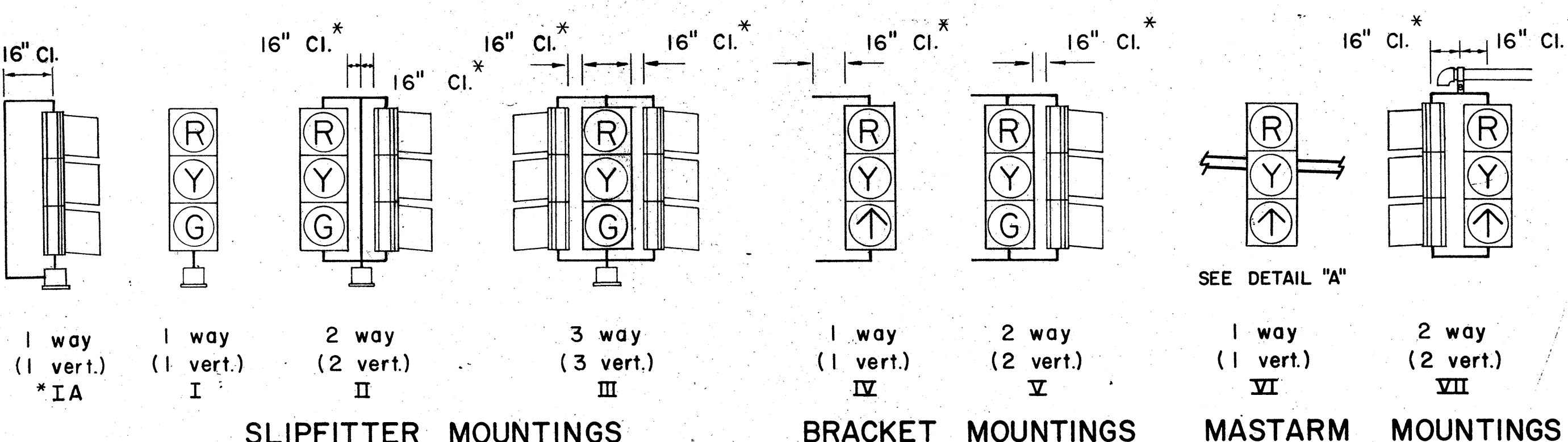
TYPICAL EQUIPMENT MOUNTINGS



DETAIL OF POLE PLATE CONNECTIONS



PEDESTRIAN PUSH BUTTON POST AND FOOTING



TYPICAL SIGNAL ARRANGEMENTS

NO.	REVISION	APPROVED BY	DATE
1	Revise code nos. for Pedestrian Push Button signs.	H.T.	3/1/23
2	Revise Details of Traffic and Pedestrian Signals, Standards and Pedestrian Push Button and Signs.	H.T.	3/5/23
3	Revise signal indications.	H.T.	9/22
4	Remove Note No. 3 & Revise clearance and dimension.	H.T.	9/19/23

APPROVAL RECOMMENDED:

Eichi Tanaka 12/29/6
TRAFFIC ENGINEER DATE

12/30/06
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

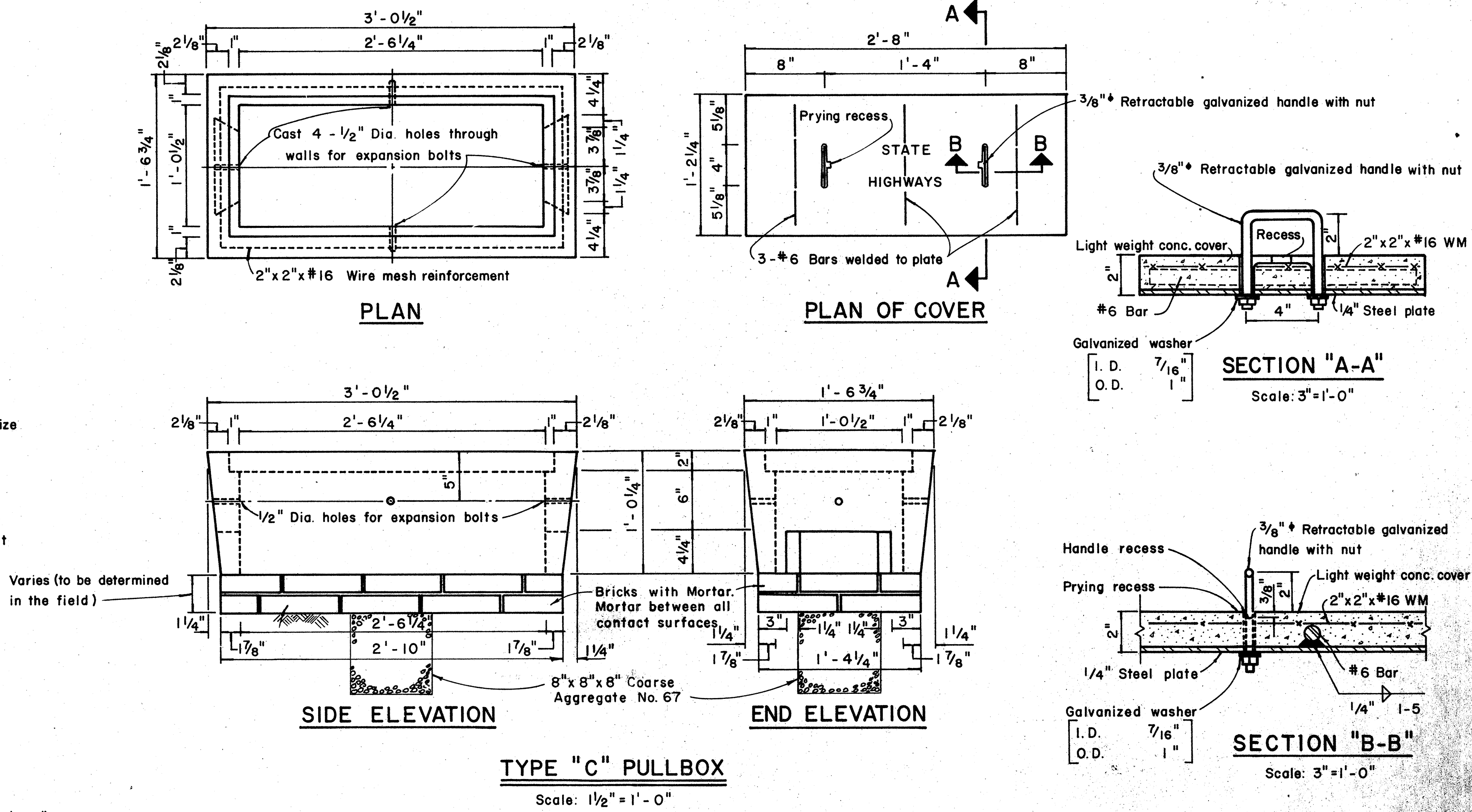
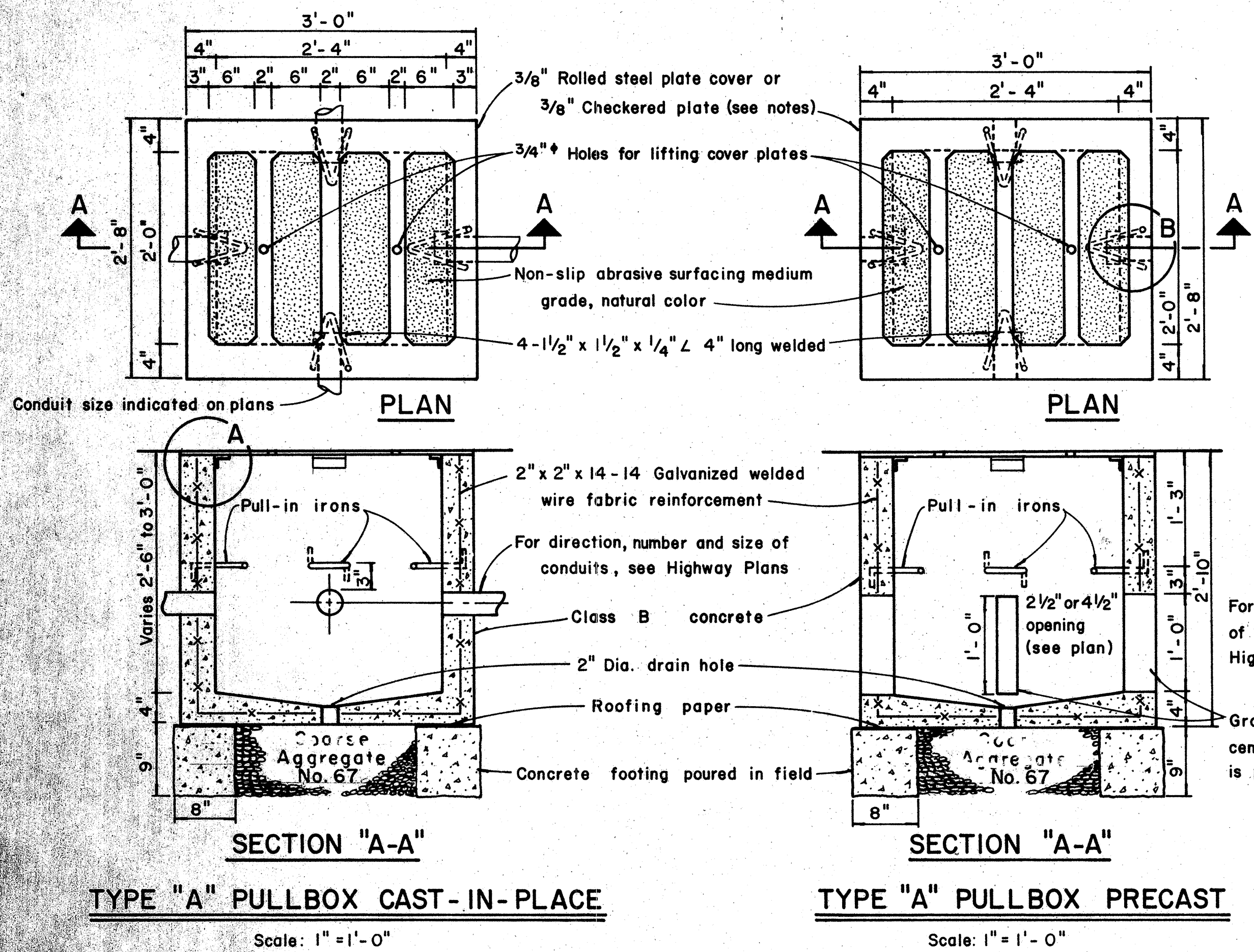
TRAFFIC SIGNAL SYSTEM

MISCELLANEOUS DETAILS

Not to Scale

SHEET No. 9 OF 12 SHEETS DT 400

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-80	1980	14	16



APPROVAL RECOMMENDED:
Eishi Tanaka
TRAFFIC ENGINEER
12/1-1989
DATE

APPROVED:
[Signature]
ASSISTANT CHIEF, ENGINEERING
12-30-89
DATE

NO.	REVISION	APPROVED BY	DATE
1	Revised Type B & C Pullbox details	H.T.	3-5-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND & HIGHWAYS DIVISION

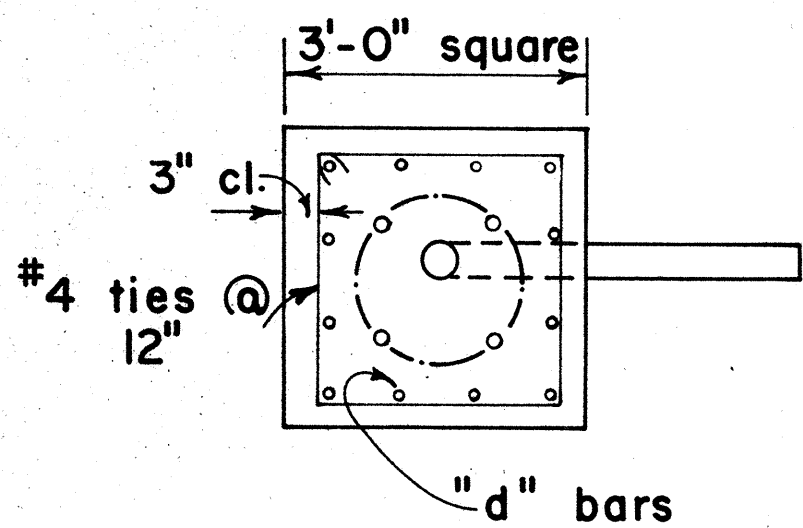
STANDARD DETAILS
PULLBOXES

Scale as noted Date:

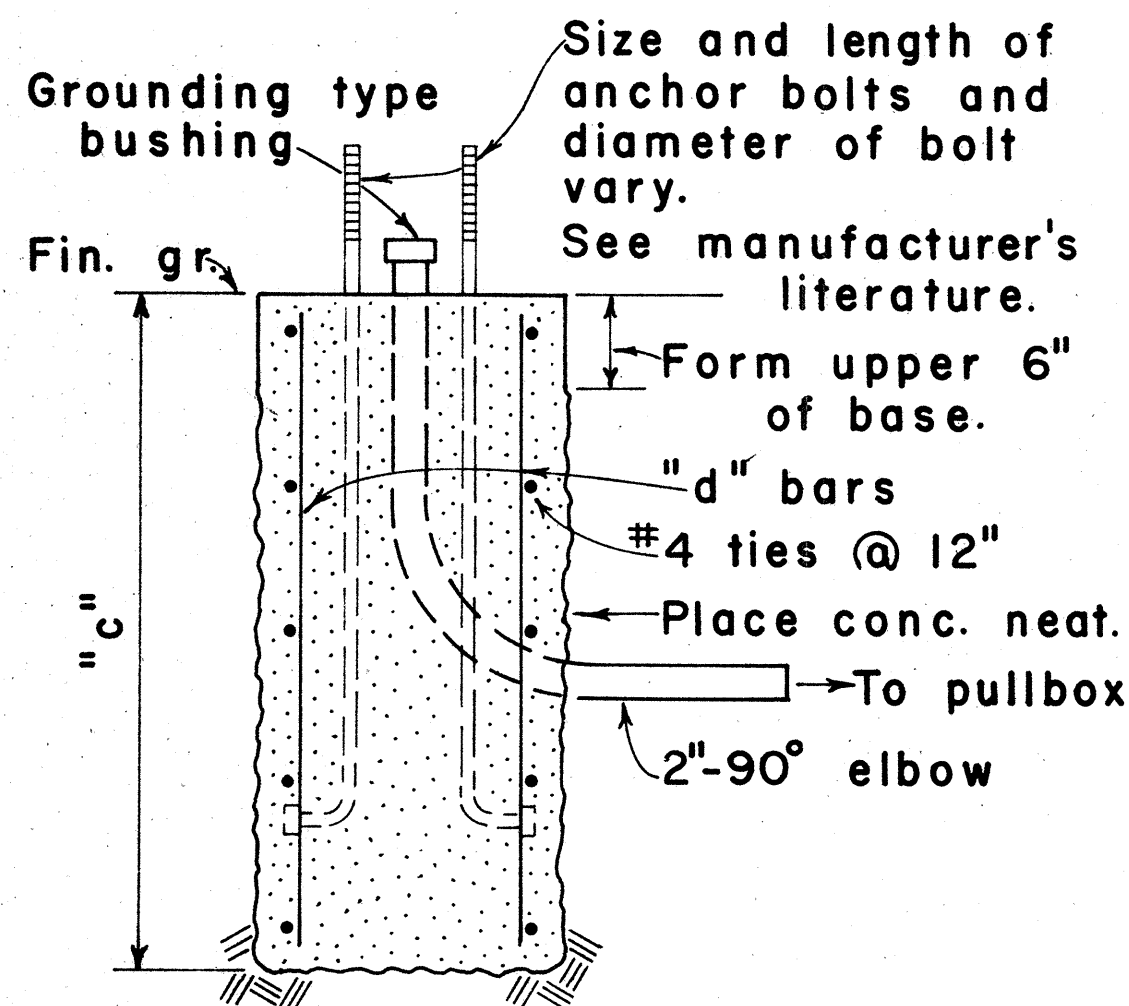
SHEET No. 10 OF 12 SHEETS DT 401

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

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-80	1980	15	16



PLAN - SECTION

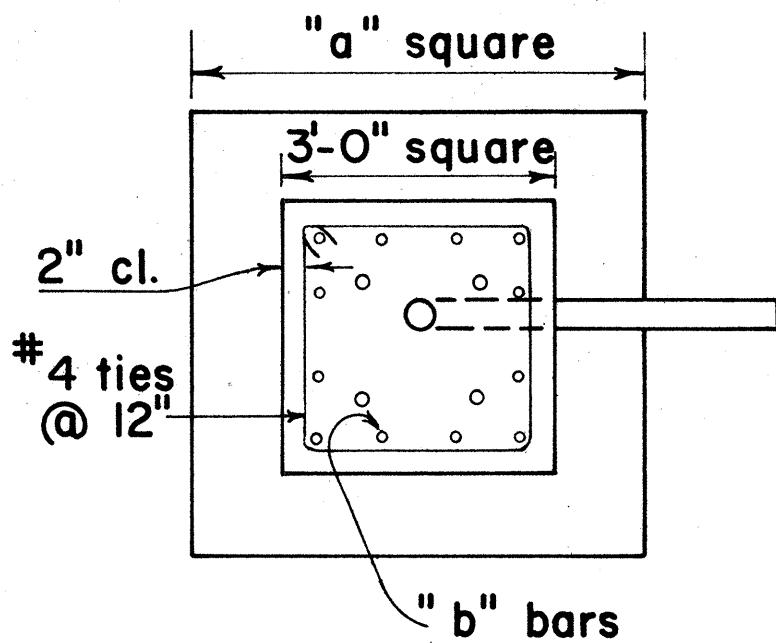


NOTE:
Concrete shall be Class B.

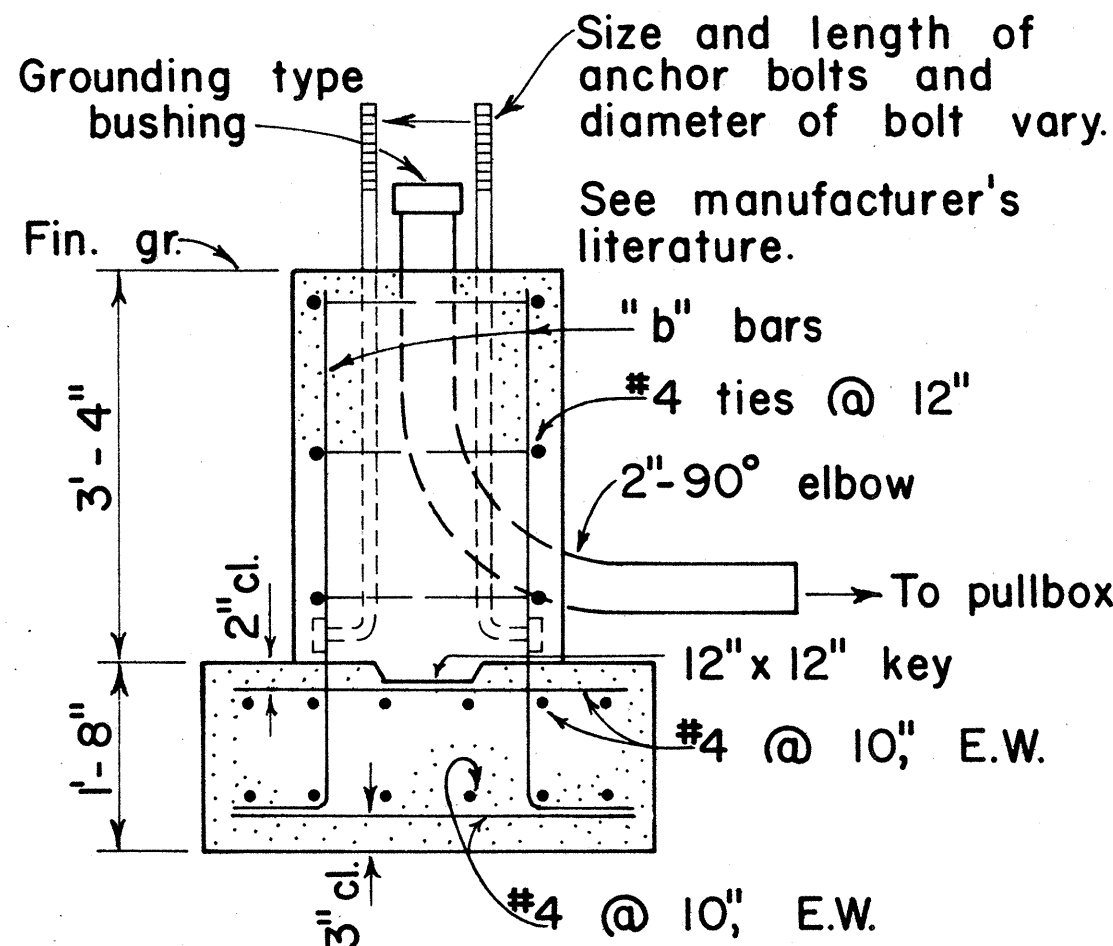
SECTION

MAST ARM LENGTH	"c"	"d" BARS
16' - 18'	5' - 0"	12 - #6
20'	5' - 6"	12 - #6
25'	6' - 0"	12 - #6
30'	6' - 6"	12 - #6
35'	7' - 0"	12 - #8
40'	8' - 0"	12 - #8

TYPE II



PLAN - SECTION

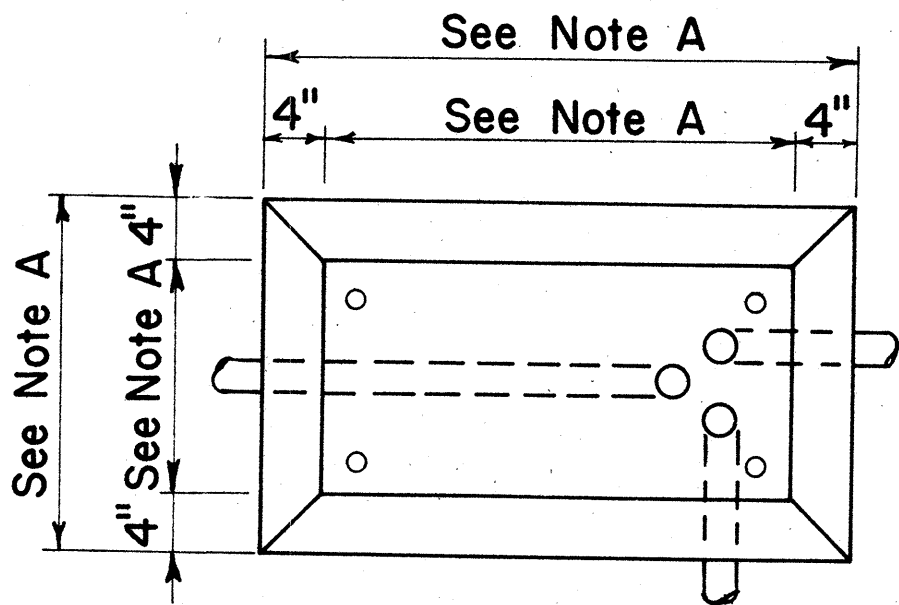


NOTE:
Concrete shall be Class B.

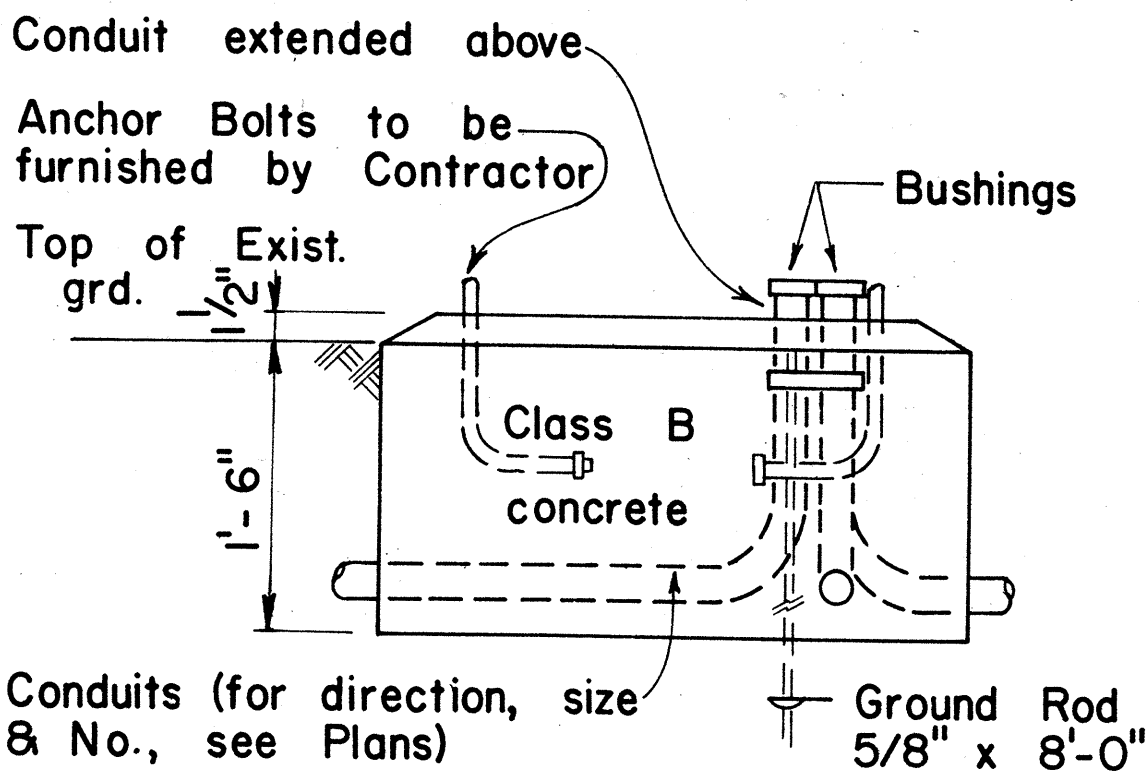
SECTION

MAST ARM LENGTH	"a"	"b" BARS
16' - 18'	5' - 0"	12 - #6
20'	5' - 6"	12 - #6
25'	6' - 0"	12 - #6
30'	6' - 6"	12 - #8
35'	6' - 6"	12 - #8
40'	7' - 0"	12 - #8

TYPE IIA



PLAN



ELEVATION

CONCRETE BASE FOR CONTROLLER CABINET

- NOTES:
- Dimensions to be determined by the size of the Controller Cabinet to be furnished under this Contract.
 - Details of Conduits, Anchor Bolts, etc., are approximate only. Exact details shall be secured by the Contractor from Manufacturer.

FOOTING FOR MAST ARM STANDARD

APPROVAL RECOMMENDED:
E. A. Tanaka 3/4/76
TRAFFIC ENGINEER DATE

APPROVED:
Robert B. Sakai 2-5-76
ASSISTANT CHIEF, ENGINEERING DATE

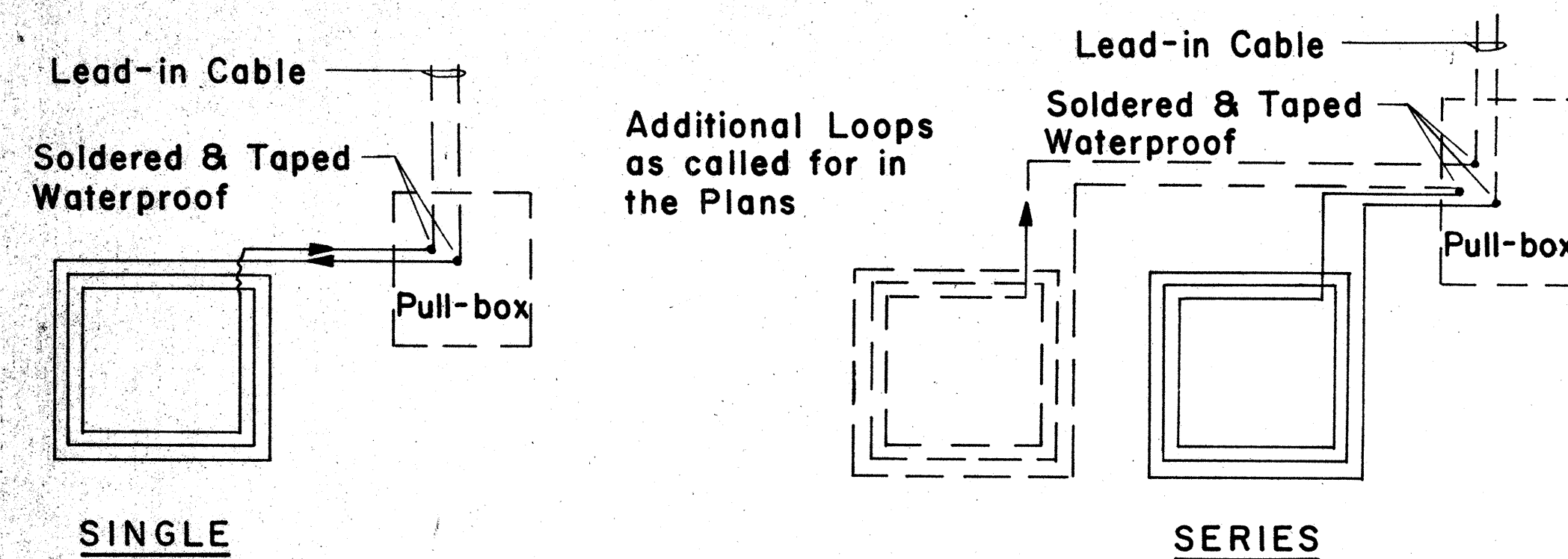
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

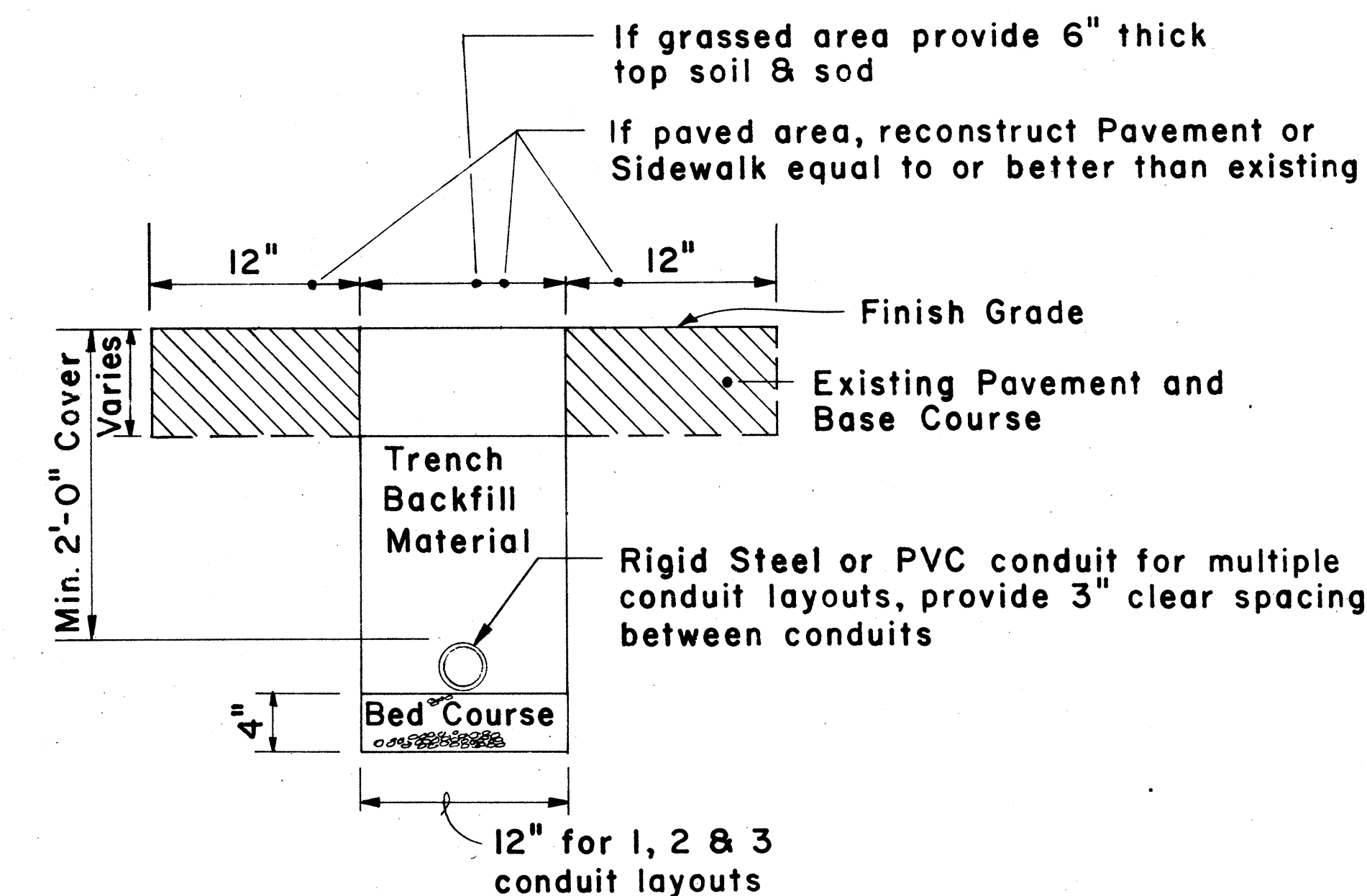
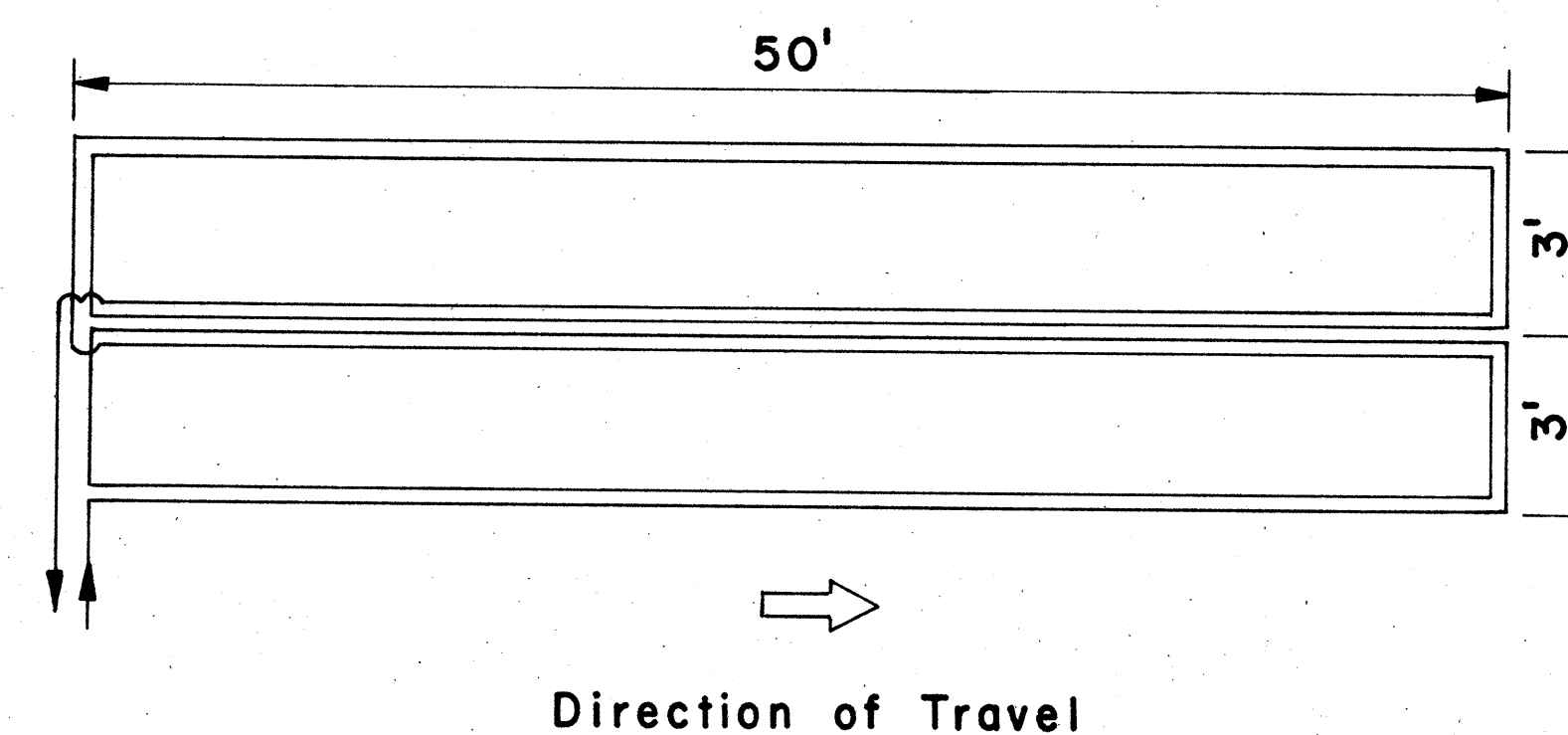
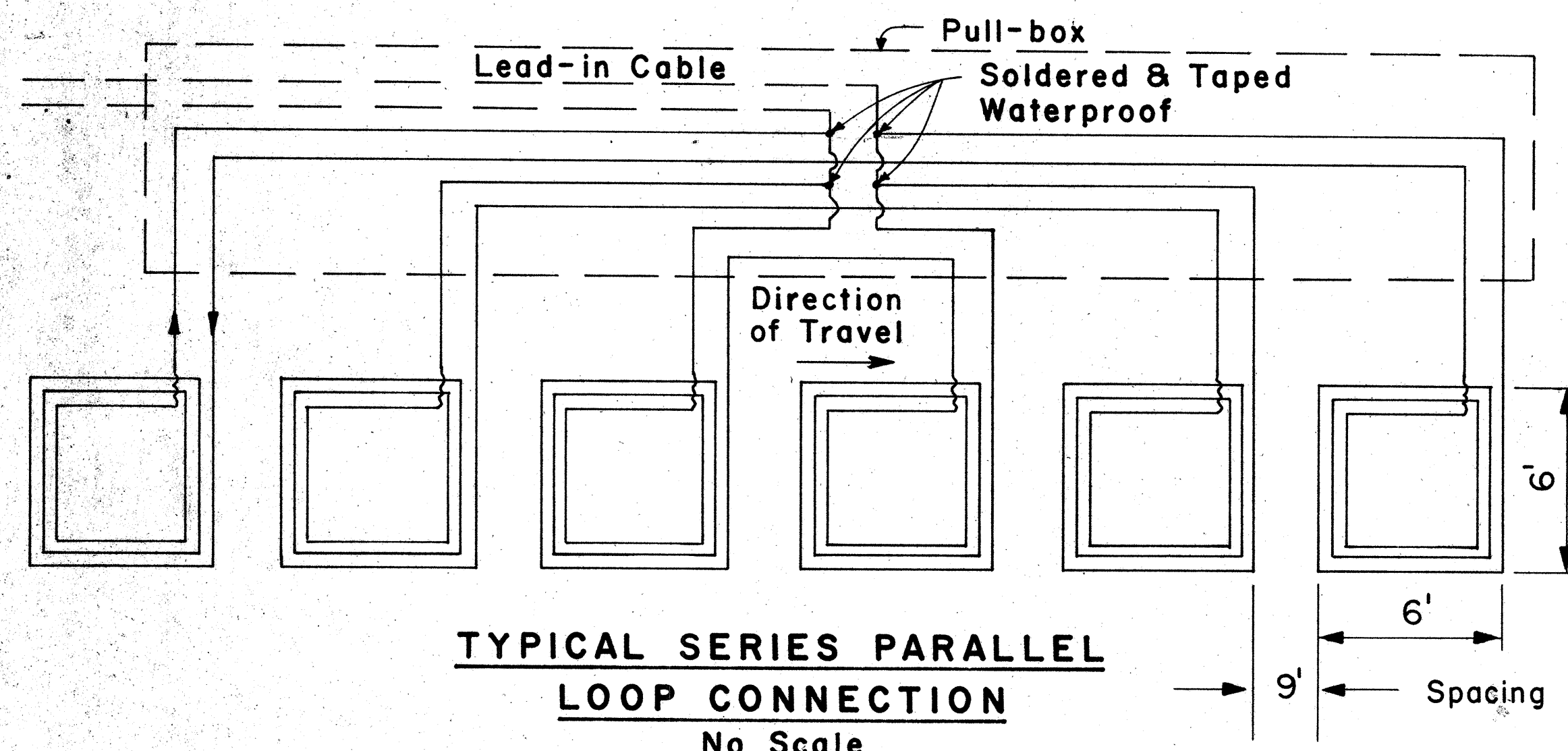
TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS

Not to Scale

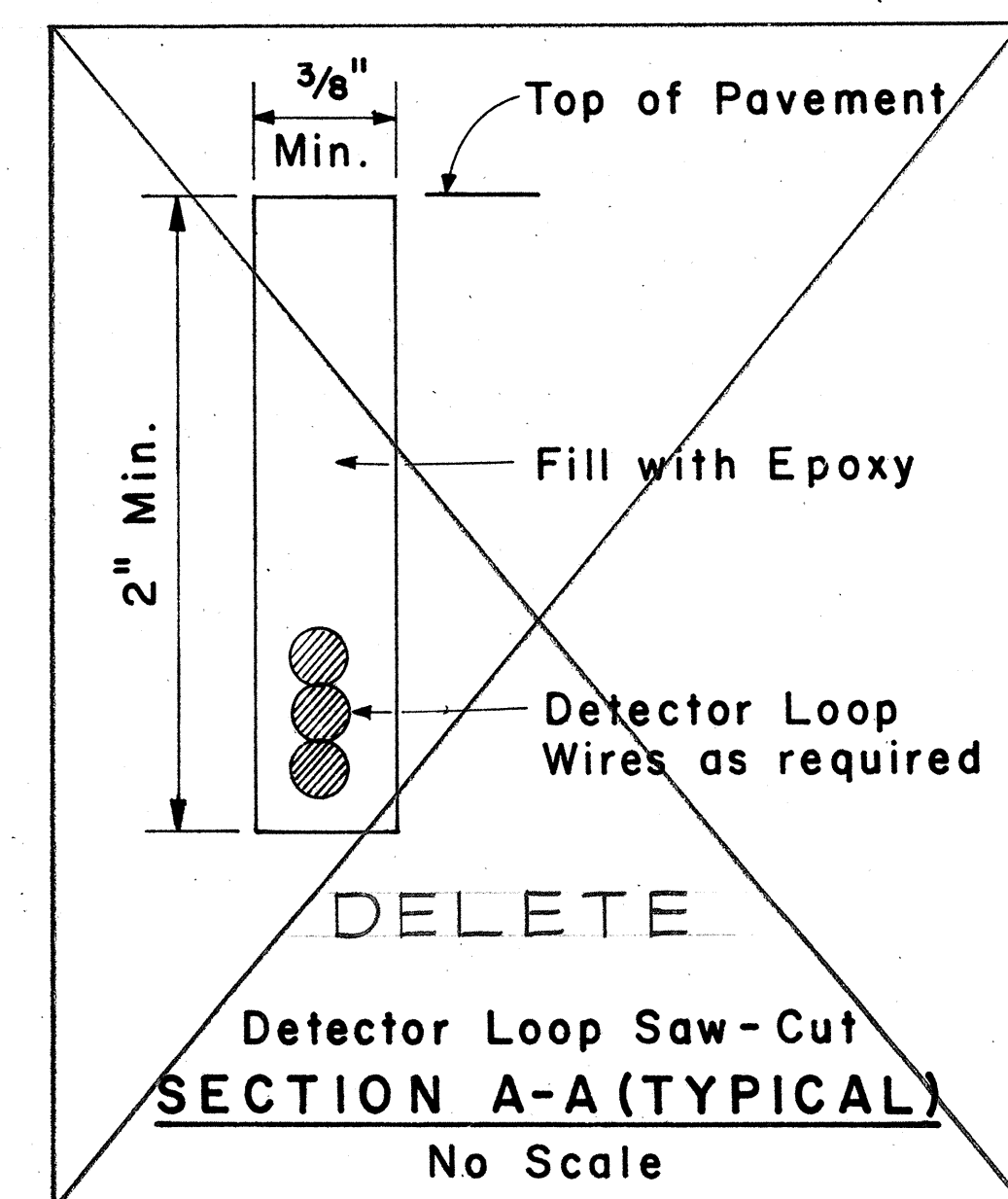
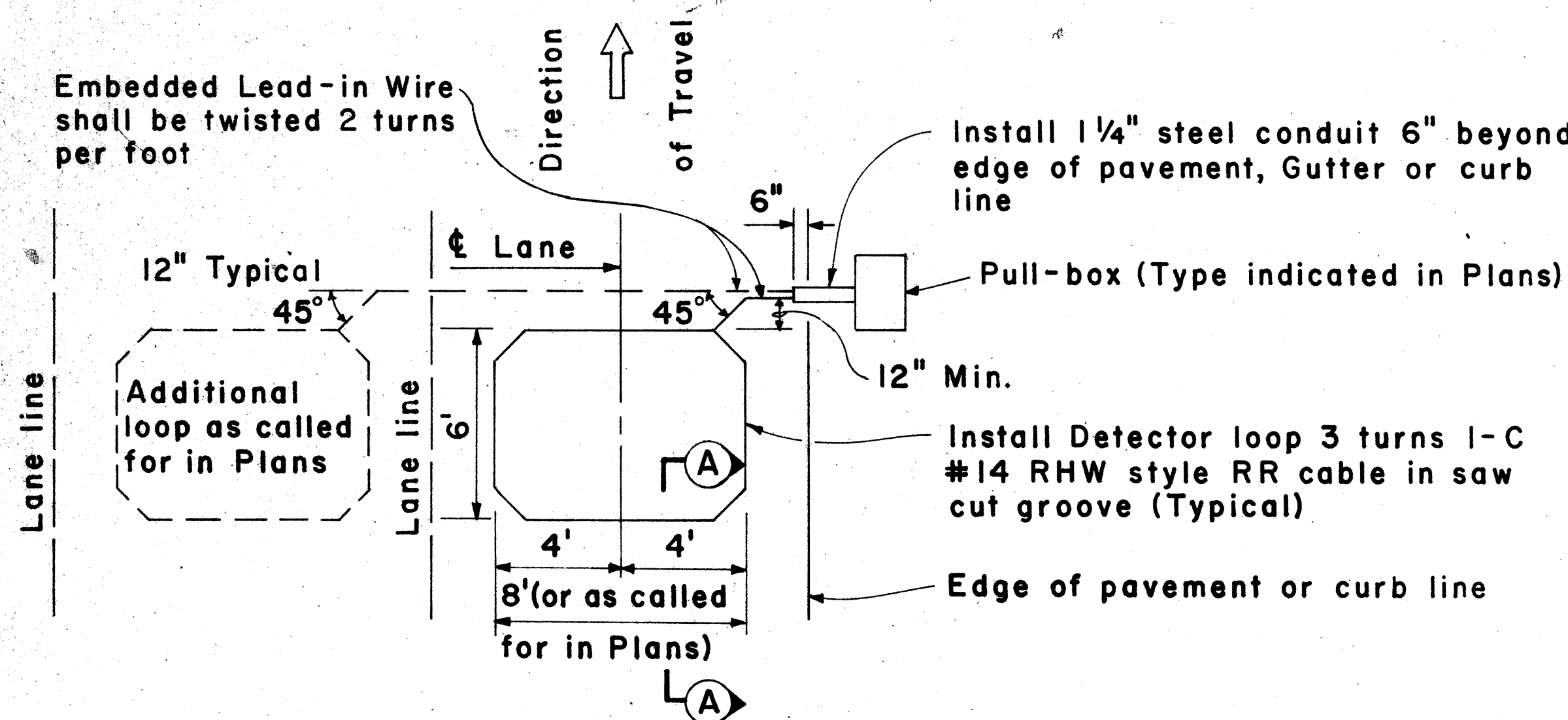
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	63A-01-80	1980	16	16



TYPICAL LOOP CONFIGURATIONS
No Scale



NOTE:
1. All conduits under roadways shall be steel or PVC schedule 80. All other conduits shall be steel or PVC schedule 40.



DETECTION LOOP
Scale : As Shown

APPROVAL RECOMMENDED:
Eichi Tanaka 3/4/76
TRAFFIC ENGINEER DATE

APPROVED:
Hubert B. Balentine 3-2-76
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Add dimensions to Loop Configurations	H.T.	9-22-76

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**TRAFFIC SIGNAL SYSTEM
MISCELLANEOUS DETAILS**

Scale: As Noted

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