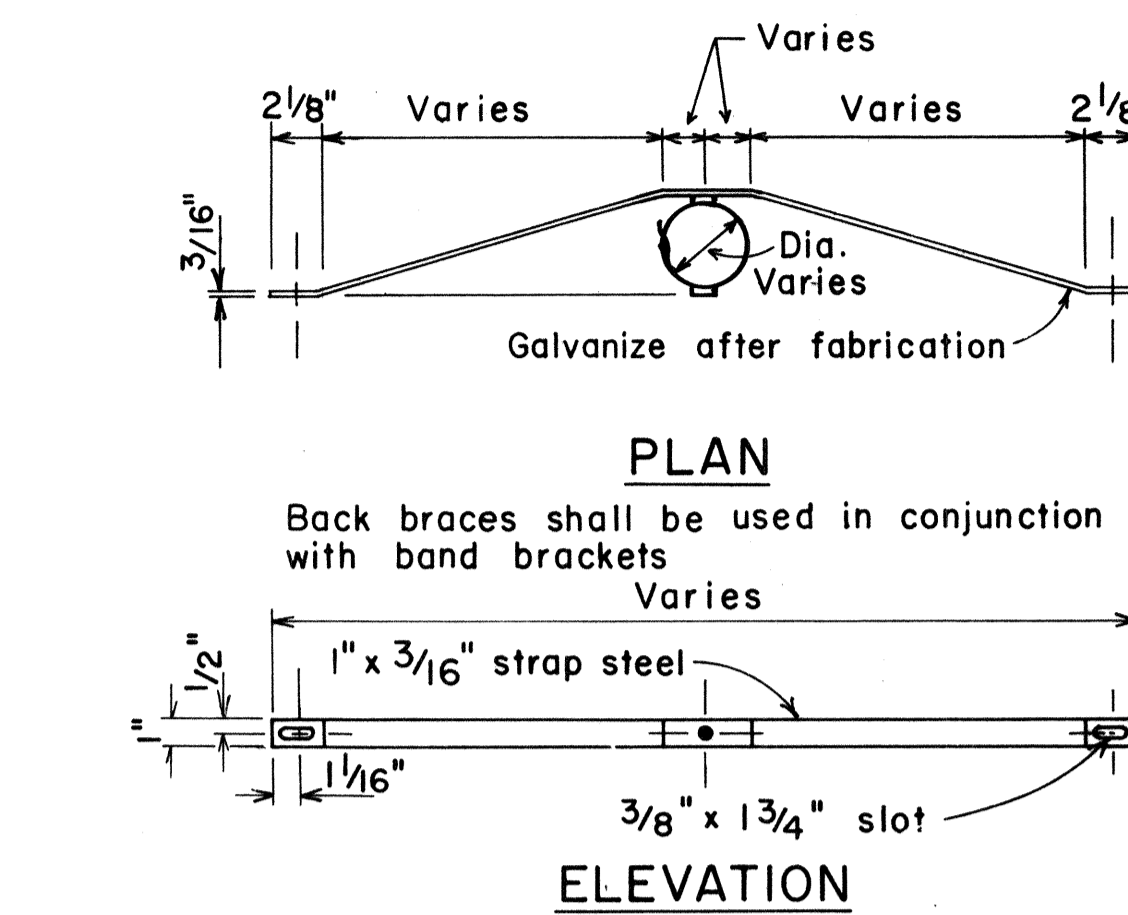


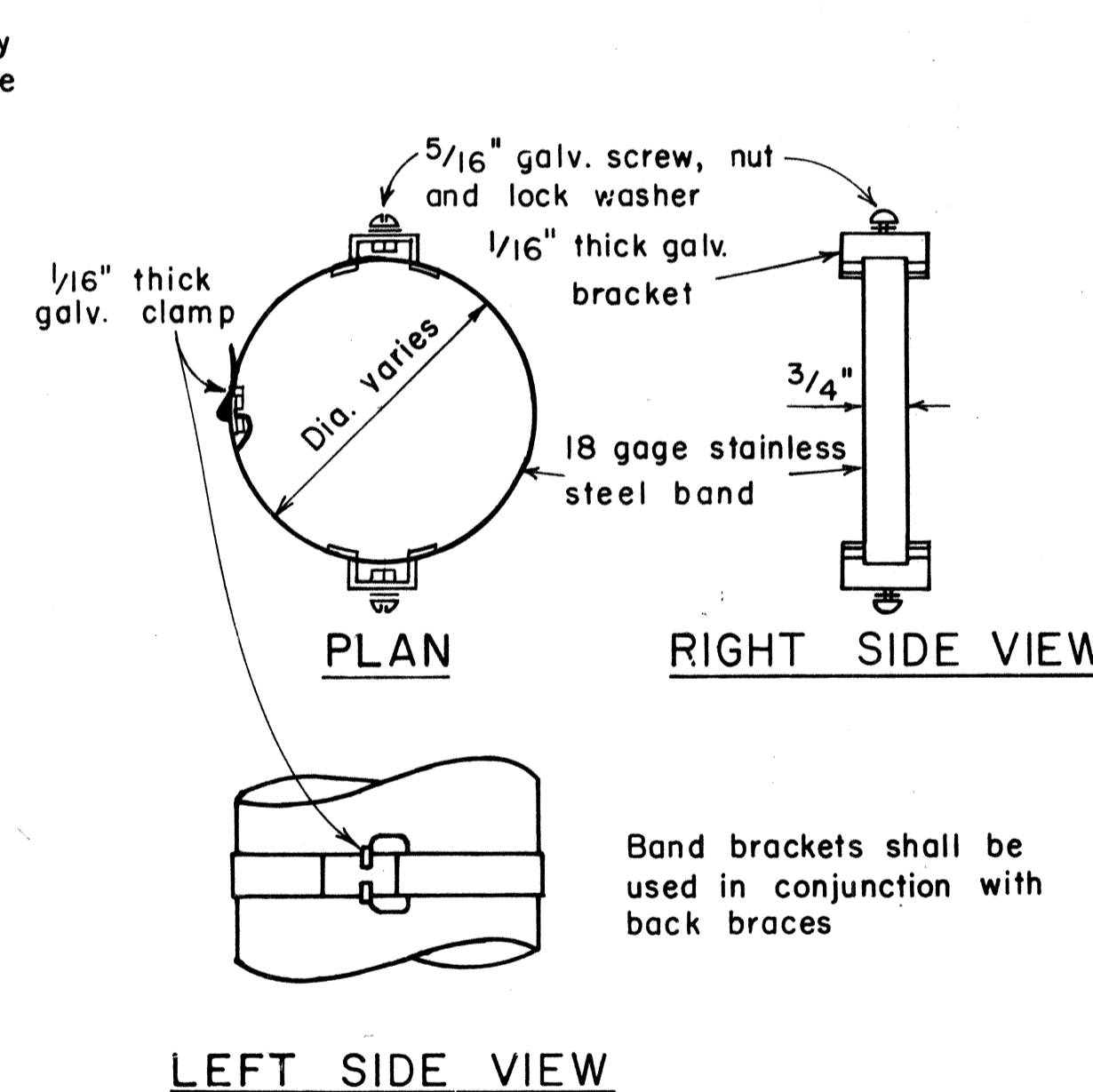
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-(129)	1980	79	131

GENERAL NOTES

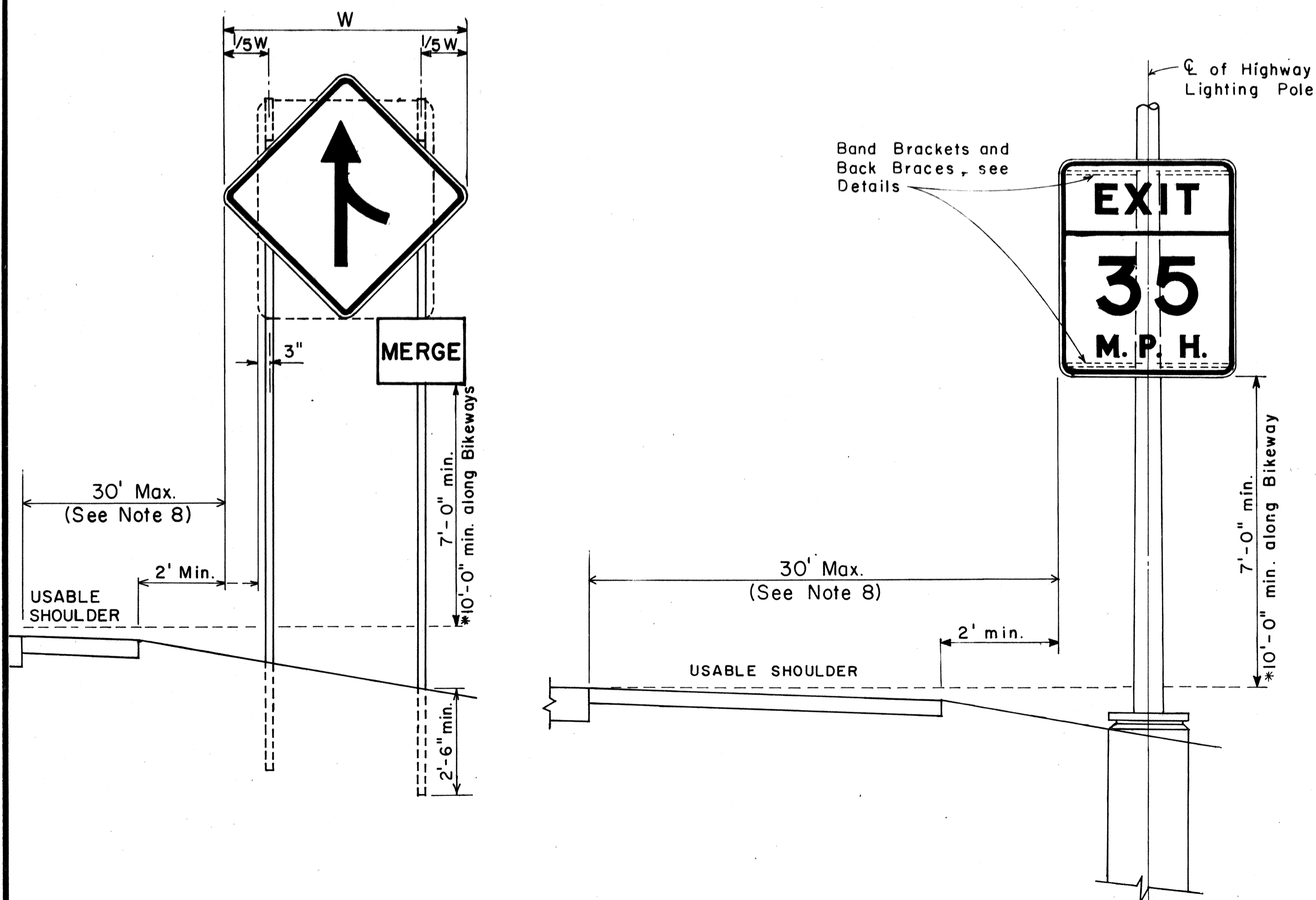
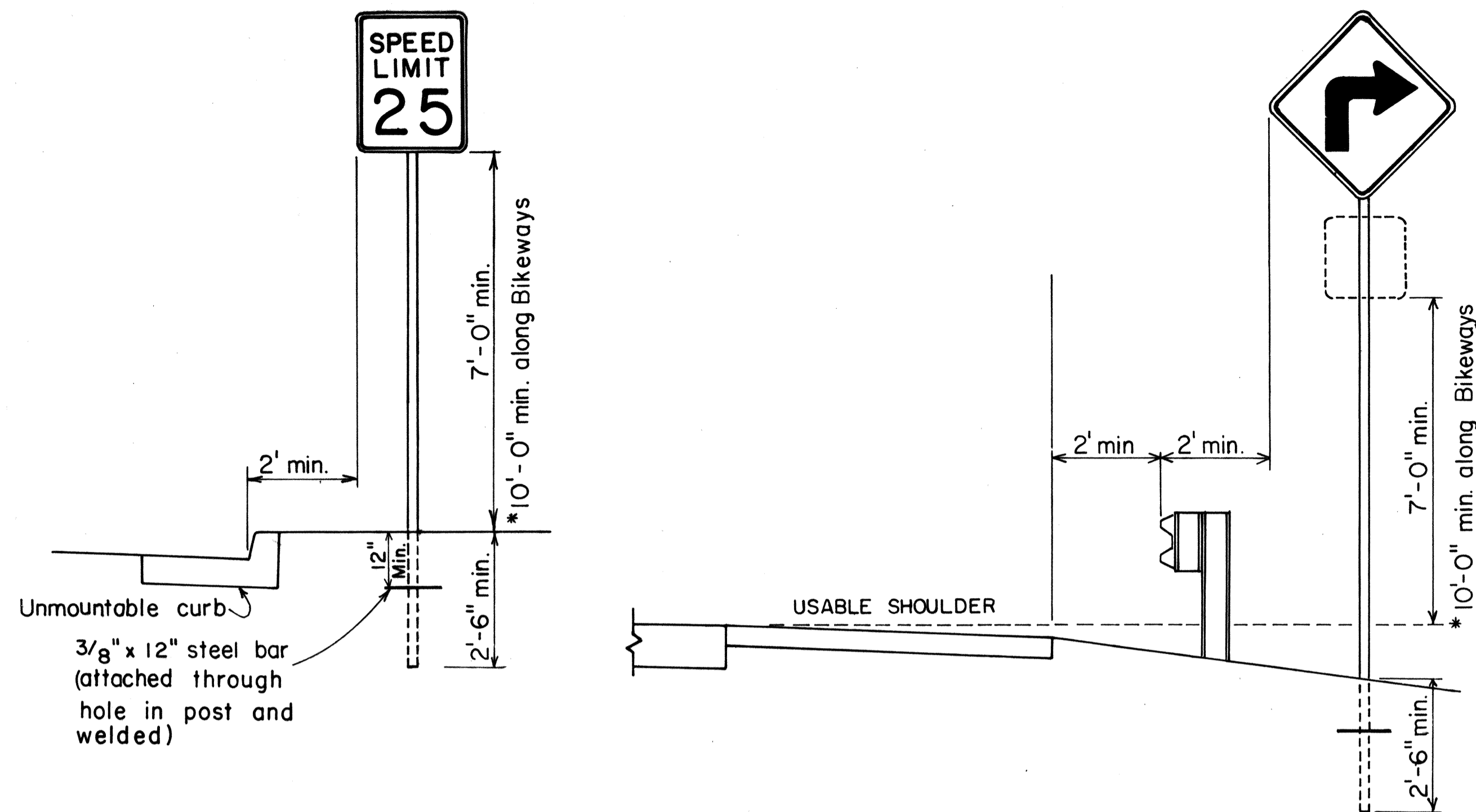
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts.
- All signs larger than 10 sq. ft. in area or 48" inches and wider, and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least two sets of band brackets and back braces.
- All signs 28 sq. ft. in area or larger and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least three sets of band brackets and back braces.
- 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.
- (R) or (L) indicates right or left and shall be as shown on the plans.
- See plans for special details.
- When clear roadside recovery areas are provided, Signs shall be placed as far from the edge of traveled way as possible up to a maximum of 30 feet. When possible they shall be placed in protected locations.
- Signs in medians shall be placed at midpoint of median up to a maximum distance of 30 feet from the edge of traveled way. When appropriate, signs for opposing directions shall be placed back to back.



BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



TYPICAL BAND BRACKET FOR MOUNTING TRAFFIC SIGNS



HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

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

APPROVED:
Harvey S. Pakeiaku 11/15/77
 ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGN DETAILS

Not to scale June, 1977

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HI-1(199)3	1969	80	131

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DO NOT PASS
R4-1 24" x 30"

PASS WITH CARE
R4-2 24" x 30"

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

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

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

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

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

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

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

COMMERCIAL VEHICLES EXCLUDED
R5-4 24" x 30"

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

WRONG WAY
R5-9 36" x 24"

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

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

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

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

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

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

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

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

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

NO PARKING
R8-3 24" x 30"

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

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

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

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

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

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

NO PEDESTRIAN CROSSING
R9-3 12" x 18"

NO HITCHHIKING
R9-4 18" x 24"

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

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

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

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

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

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

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

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

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

LEFT TURN SIGNAL
R10-10 24" x 30"

KEEP OFF MEDIAN
R11-1 24" x 30"

ROAD CLOSED
R11-2 48" x 30"

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

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

WEIGHT LIMIT 10 TONS
R12-1(10) 24" x 30"

GENERAL NOTES

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

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

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

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

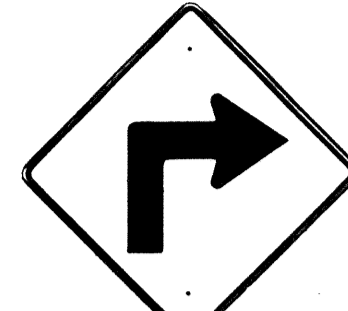

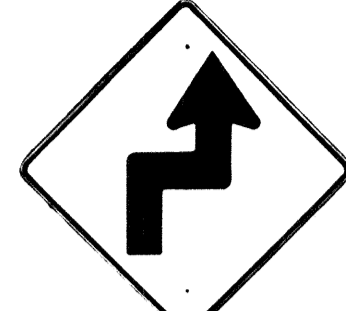


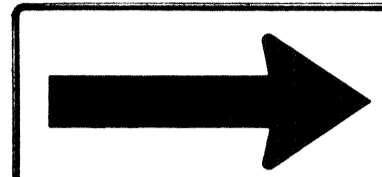
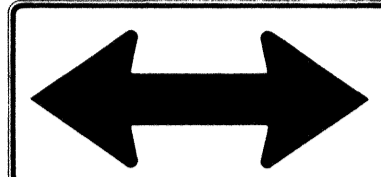
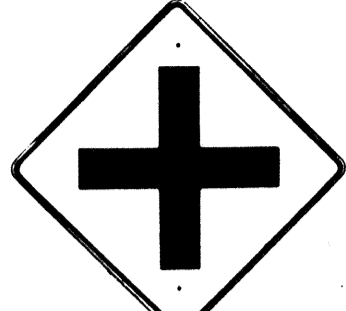
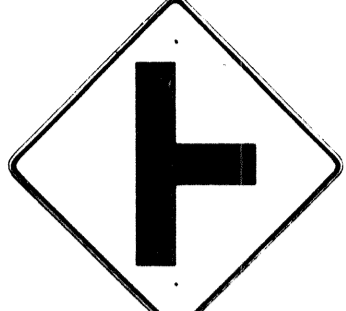
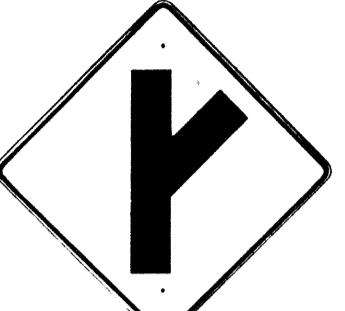
STANDARD DETAILS
REGULATORY SIGNS

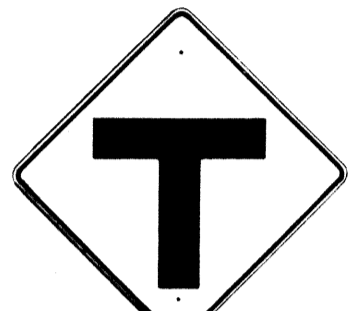



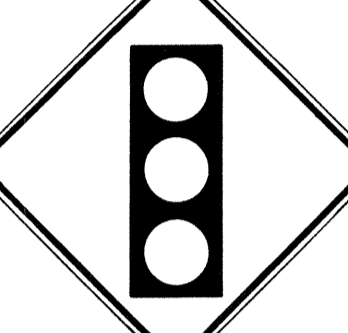

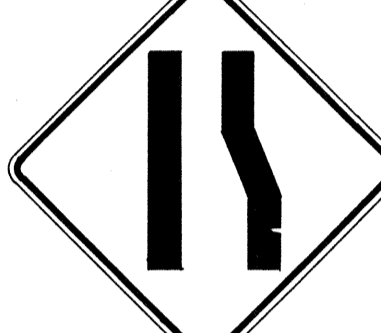



NOT TO SCALE











SHEET No. 2 OF 22 SHEETS DT 101








DATE
DESIGNED BY
CHECKED BY
QUANTITIES BY
NOTE BOOK
ORIGINAL PLAN

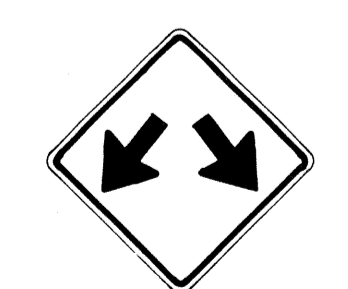


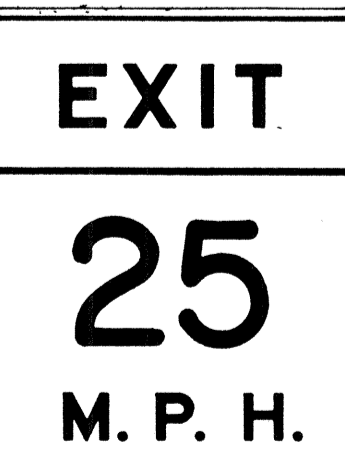
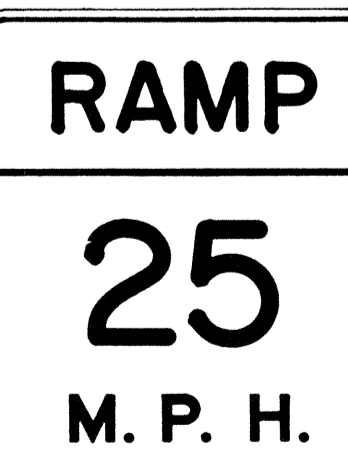


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII*	HAW.	I-HI-1(199)-1	1980	81	131

									
W1-1(R) 30"x30" W1-1(R)-A 48"x48"	W1-2(R) 30"x30" W1-2(R)-A 48"x48"	W1-3(R) 30"x30" W1-3(R)-A 48"x48"	W1-4(R) 30"x30" W1-4(R)-A 48"x48"	W1-5(R) 30"x30" W1-5(R)-A 48"x48"	W1-6 48"x24"	W1-7 48"x24"	W2-1 30"x30" W2-1-A 48"x48"	W2-2 30"x30" W2-2-A 48"x48"	W2-3(R) 30"x30" W2-3(R)-A 48"x48"

									
W2-4 30"x30" W2-4-A 48"x48"	W2-5 30"x30" W2-5-A 48"x48"	W3-1 30"x30" W3-1-A 36"x36"	W3-2 30"x30" W3-2-A 36"x36"	W3-3 36"x36" 24"x18"	W4-1(R) 30"x30" 24"x18" W4-1(R)-A 48"x48" 24"x18"	W4-2(R) 36"x36" W4-2(R)-A 48"x48"	W5-1 36"x36"	W5-2 30"x30" W5-2-A 36"x36"	W5-3 36"x36"

									
W6-1 36"x36" 24"x18"	W6-2 36"x36" 24"x18"	W6-3 30"x30" 24"x18" W6-3-A 36"x36" 24"x18" W6-3-B 48"x48" 24"x18"	W7-1 30"x30" 24"x18" W7-1-A 36"x36" 24"x18"	W7-2 24"x18"	W8-1 30"x30" W8-1-A 36"x36"	W8-2 30"x30" W8-2-A 36"x36"	W8-3 30"x30" W8-3-A 36"x36"	W8-4 30"x30" W8-4-A 36"x36"	W8-5 30"x30" 24"x18" W8-5-A 36"x36" 24"x18"

						
W9-1(R) 30"x30" W9-1(R)-A 36"x36" W9-1(R)-B 48"x48"	W9-2(L) 36"x36" W9-2(L)-A 48"x48"	W10-1 36" Diameter	W11-1 30"x30" 24"x18" W11-1-A 36"x36" 24"x18"	W11-2 30"x30" 24"x18" W11-2-A 36"x36" 24"x18"	W11-4 30"x30" 24"x18" W11-4-A 36"x36" 24"x18"	W11-5 30"x30" 24"x18" W11-5-A 36"x36" 24"x18"

						
W12-1 24"x24" W12-1-A 36"x36" W12-1-B 48"x48"	W12-2(12'-6") 36"x36" 24"x18"	W13-1(25) 18"x18" W13-1(25)-A 24"x24"	W13-2(25) 48"x60"	W13-3(25) 48"x60"	W14-1 30"x30"	W14-3 36"x48"x48"

GENERAL NOTES

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 warning signs shall be reflectorized unless otherwise specified.
3. All 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.
5. Signs prefixed with "CW" on the plans shall indicate orange and black construction signs, and shall be reflectorized.

APPROVAL RECOMMENDED:
Eddie Tanaka 3/17/12
TRAFFIC ENGINEER DATE

APPROVED:
Walter Ralskin 3-20-12
ASSISTANT CHIEF, ENGINEERING 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.	10/16/11
3	Revised General Note 5	M.T.	9-16-75
4	Revised General Note 5	H.T.	9-14-10

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(199)	1980	82	131

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 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.

Regulatory Signs:

- 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"
- NO PARKING 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 (Right) R9-3b(R) 18" x 12"
- USE CROSSWALK (Left) 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 4" Series D, 3" Series D, 2" Series D, 3" Series D 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"
- TURN AHEAD 8" Series F, 5" Series D R16-6 24" x 30"
- U TURN OK 8" Series F, 5" Series D R16-7 24" x 30"
- MOTOR-DRIVEN CYCLES PROHIBITED 4" Series B R5-8 30" x 24"

Warning Signs:

- 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"
- 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"
- STOP AHEAD 6" Series C W3-4 48" x 48"
- YIELD AHEAD W3-2a 36" x 36"; 24" x 18"; W3-2a-A 48" x 48"; 24" x 18"
- 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"
- ADVANCE GREEN 4" Series C W15-2 24" x 24"
- DELAYED GREEN 4" Series C W15-1 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"
- ADVANCE GREEN 4" Series C W15-2 24" x 24"
- DELAYED GREEN 4" Series C W15-1 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 4" Series C S4-3 24" x 8"
- WHEN CHILDREN ARE PRESENT 4" Series C S4-2 24" x 10"
- WHEN FLASHING 4" Series C S4-4 24" x 10"
- USE SIDEWALK 4" Series C R18-1 24" x 18"
- SCHOOL BUS STOP AHEAD 7" Series D CW23-4 48" x 48"

Informational Signs:

- 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"
- W17-1(L) 60" x 60"
- W14-4 36" x 36"; W14-4-A 48" x 48"
- W11-9 36" x 36"; W11-9-A 48" x 48"
- W17-1(L) 60" x 60"
- W14-4 36" x 36"; W14-4-A 48" x 48"
- W11-9 36" x 36"; W11-9-A 48" x 48"
- W11-8 36" x 36"; 24" x 18"; W11-8-A 48" x 48"; 24" x 18"
- W11-7 36" x 36"; 24" x 18"; W11-7-A 48" x 48"; 24" x 18"
- W14-4 36" x 36"; W14-4-A 48" x 48"
- W11-9 36" x 36"; W11-9-A 48" x 48"
- W11-8 36" x 36"; 24" x 18"; W11-8-A 48" x 48"; 24" x 18"
- W11-7 36" x 36"; 24" x 18"; W11-7-A 48" x 48"; 24" x 18"
- W14-4 36" x 36"; W14-4-A 48" x 48"
- W11-9 36" x 36"; W11-9-A 48" x 48"
- W11-8 36" x 36"; 24" x 18"; W11-8-A 48" x 48"; 24" x 18"
- W11-7 36" x 36"; 24" x 18"; W11-7-A 48" x 48"; 24" x 18"

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

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

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

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
 MISCELLANEOUS SIGNS
 NOT TO SCALE DATE: MAY, 1978
 SHEET No. 4 OF 22 SHEETS DT 103

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(100)	1980	83	131



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"



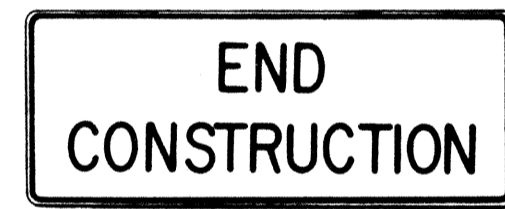
CW22-2 42"x 36"



CW22-3 42"x 36"



CG 20-1(5) 60"x 36"



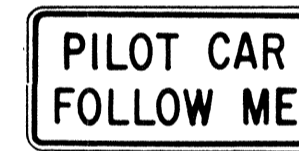
CG 20-2 60"x 24"



CM4-9(R) 30"x 24"



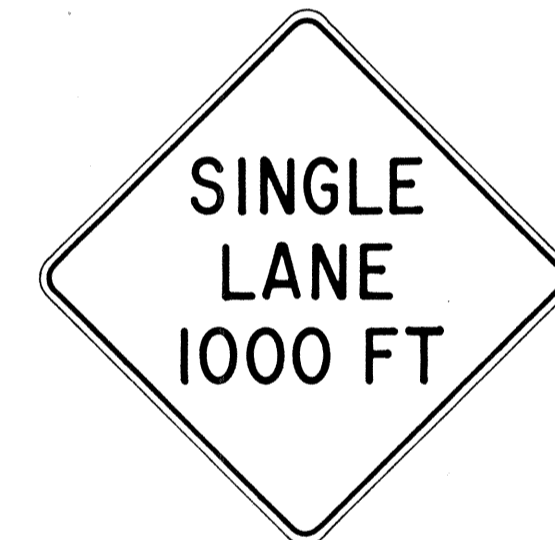
CM4-10(R) 48"x 18"



CG 20-4 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:
Eishi Tanaka 3/21/72
TRAFFIC ENGINEER DATE

APPROVED:
Arthur Sakish 2/23/72
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE
1	Supersedes Sht. DT 104 Approved 12-30-69	H.T.	2/23/72
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

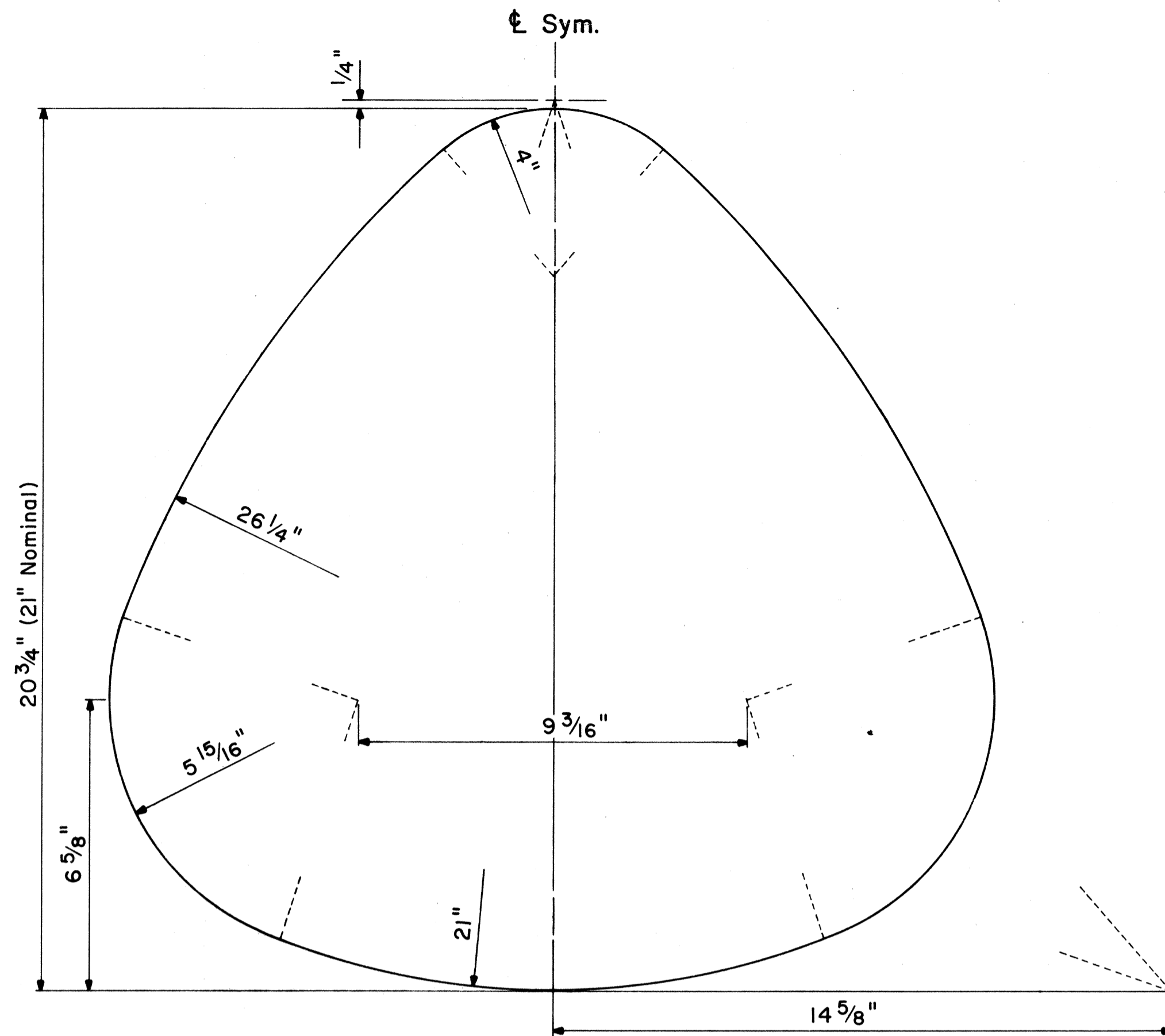
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
CONSTRUCTION SIGNS

NOT TO SCALE

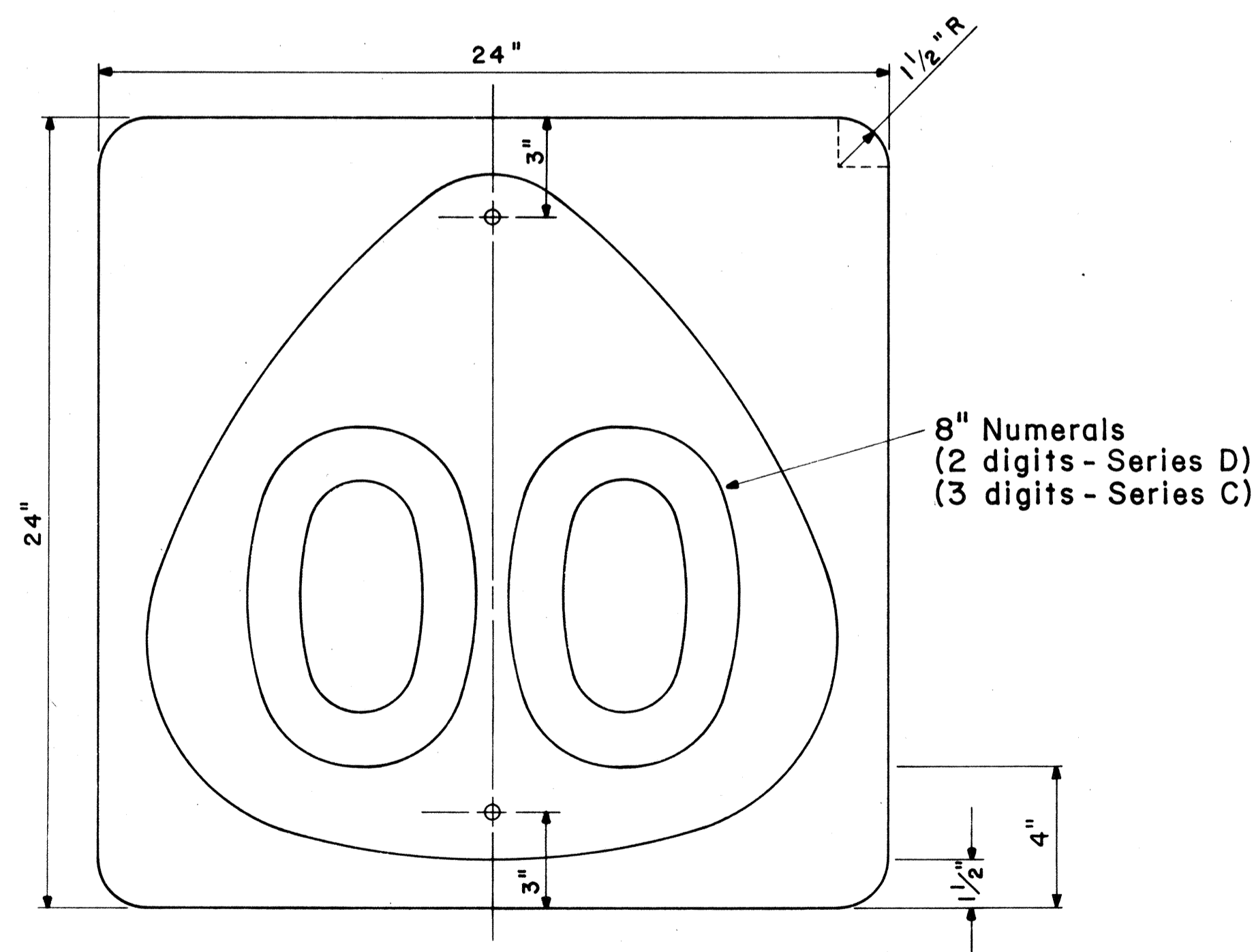
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTE BOOK	_____
CHECKED BY	_____
NO.	_____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-(129):1	1980	84	131



STATE ROUTE MARKER DETAIL

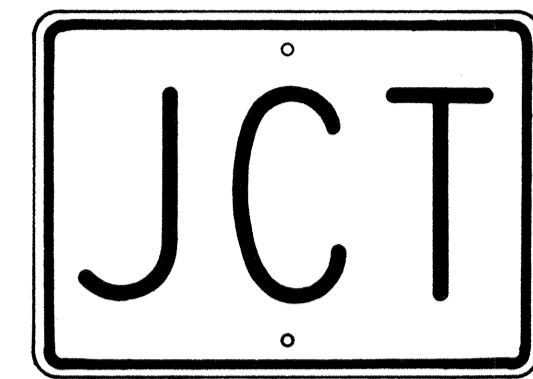
Not to Scale



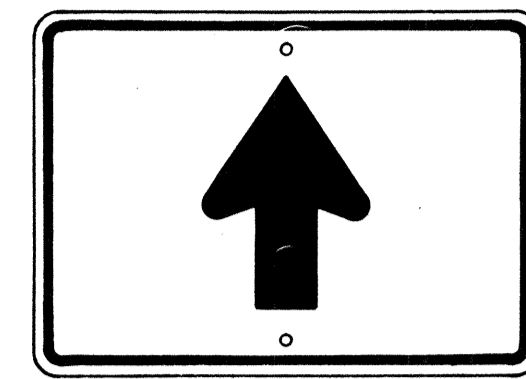
STATE ROUTE MARKER

MI-6(00) 24" x 24"

Scale: 1/4" = 1"



M2-1 21" x 15"



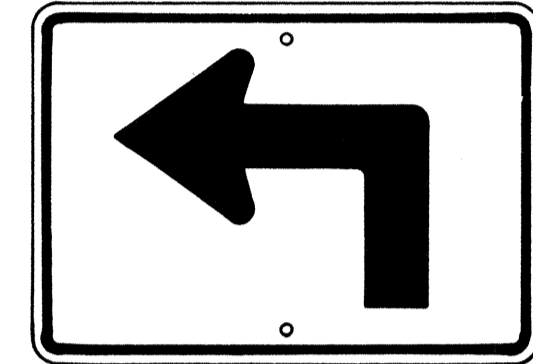
M6-3 21" x 15"



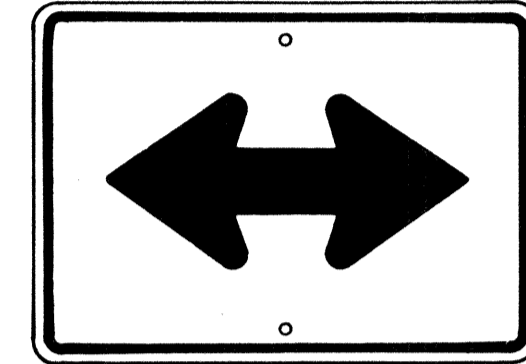
M3-1 24" x 12"
M3-1-A 36" x 18"



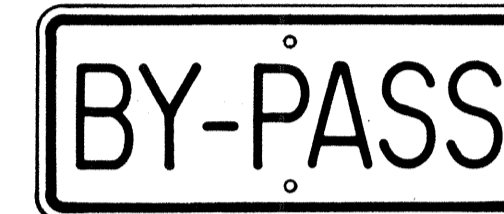
M4-1 24" x 12"



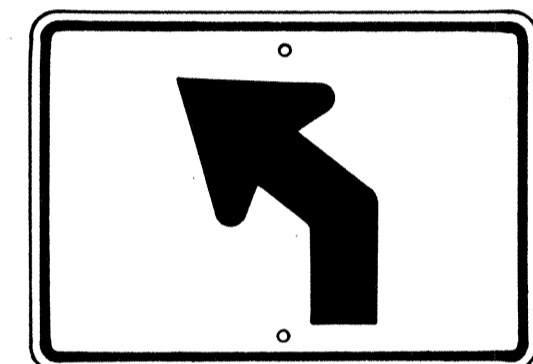
M5-1(L) 21" x 15"



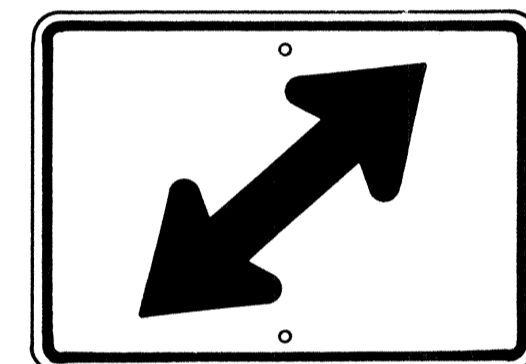
M6-4 21" x 15"



M4-2 24" x 12"



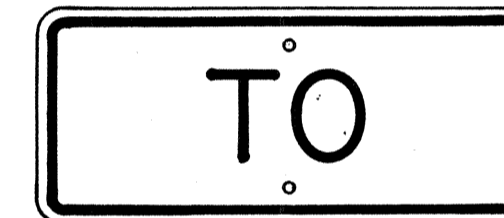
M5-2(L) 21" x 15"



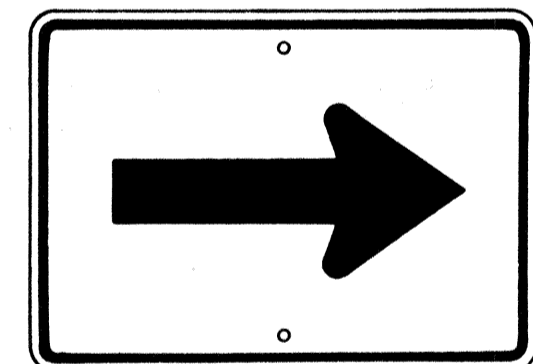
M6-5(R) 21" x 15"



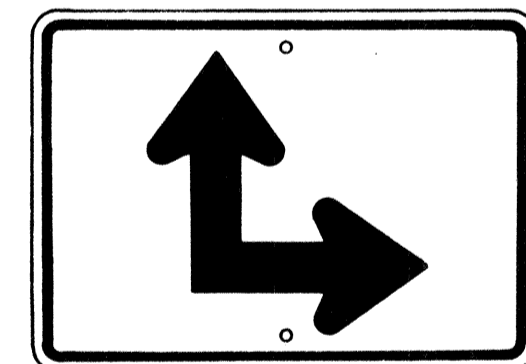
M4-3 24" x 12"



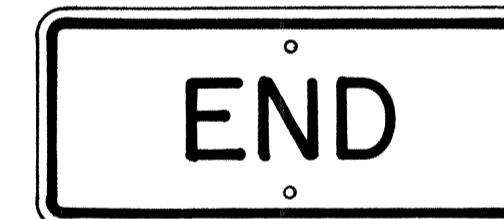
M4-5 24" x 12"



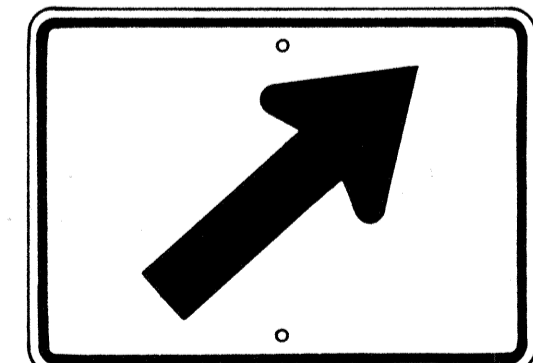
M6-1 21" x 15"



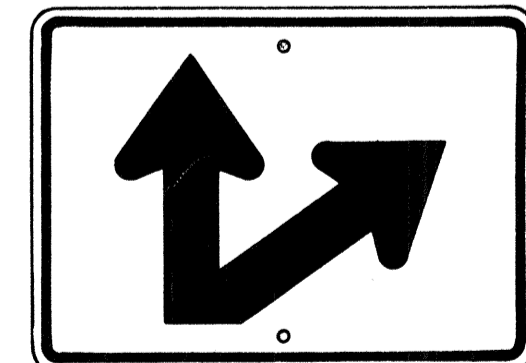
M6-6(R) 21" x 15"



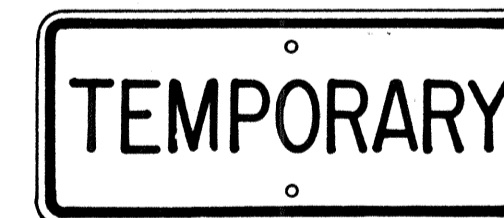
M4-6 24" x 12"



M6-2(R) 21" x 15"



M6-7(R) 21" x 15"



M4-7 24" x 12"



M4-8 24" x 12"

GENERAL NOTES

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

AUXILIARY MARKERS

Not to Scale

APPROVAL RECOMMENDED:

Eishi Tanaka 6/6/72
TRAFFIC ENGINEER DATE

APPROVED:

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

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

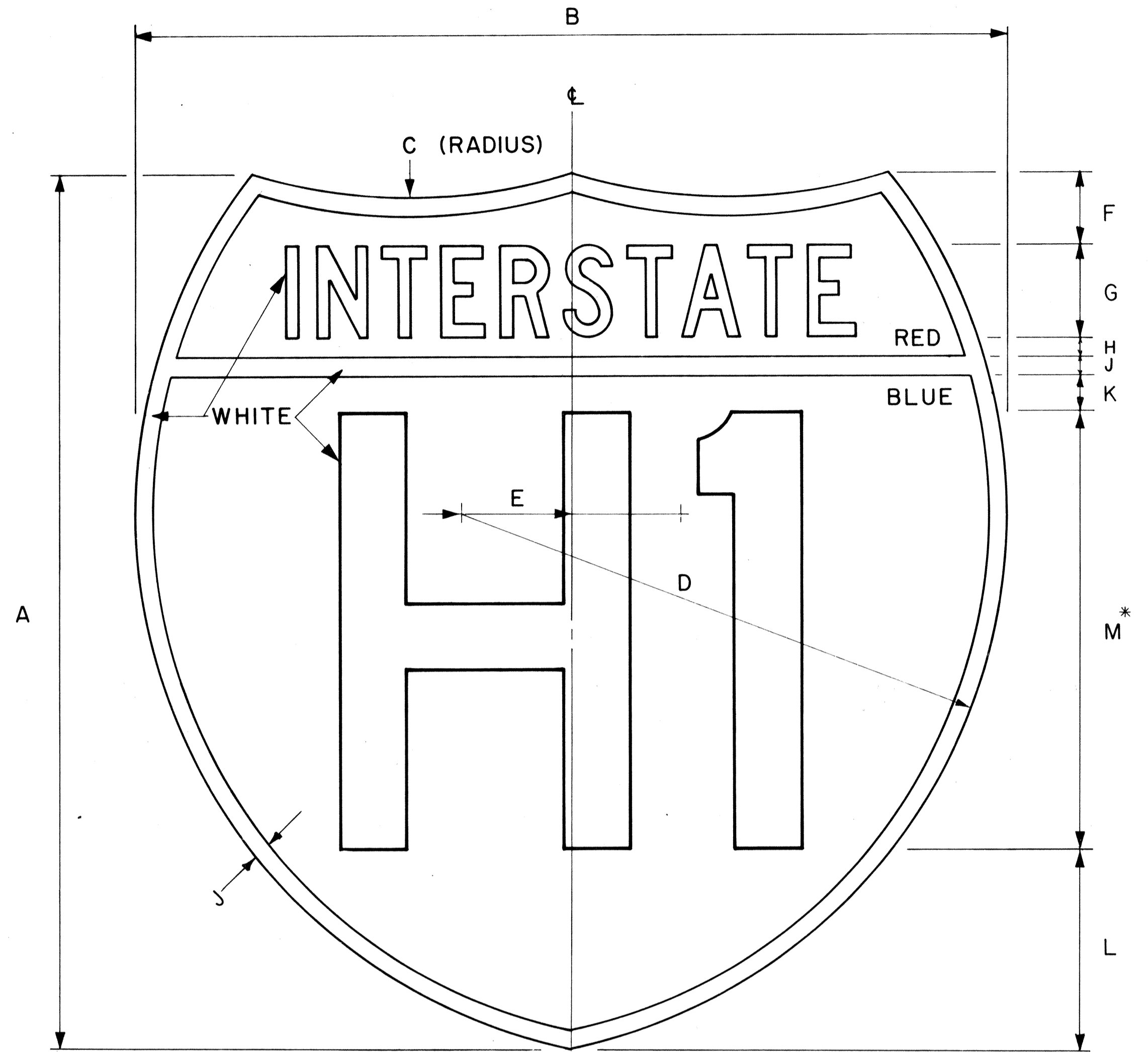
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
STATE ROUTE MARKER
AND AUXILIARY MARKERS

Scale: As Shown

SHEET NO. 6 OF 22 SHEETS DT 105

SURVEY PLOTTED BY: DATE: _____
 DRAWN BY: _____
 CHECKED 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.	I-H-1(106)	1980	85	131



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

GENERAL NOTES

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

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

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

APPROVAL RECOMMENDED:

Eiichi Tanaka 4/17/78
 TRAFFIC ENGINEER DATE

APPROVED:

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

NO.	REVISION	APPROVED BY	DATE
1	Replaces DT 106 Approved 12/30/69.	H.T.	4-18-78

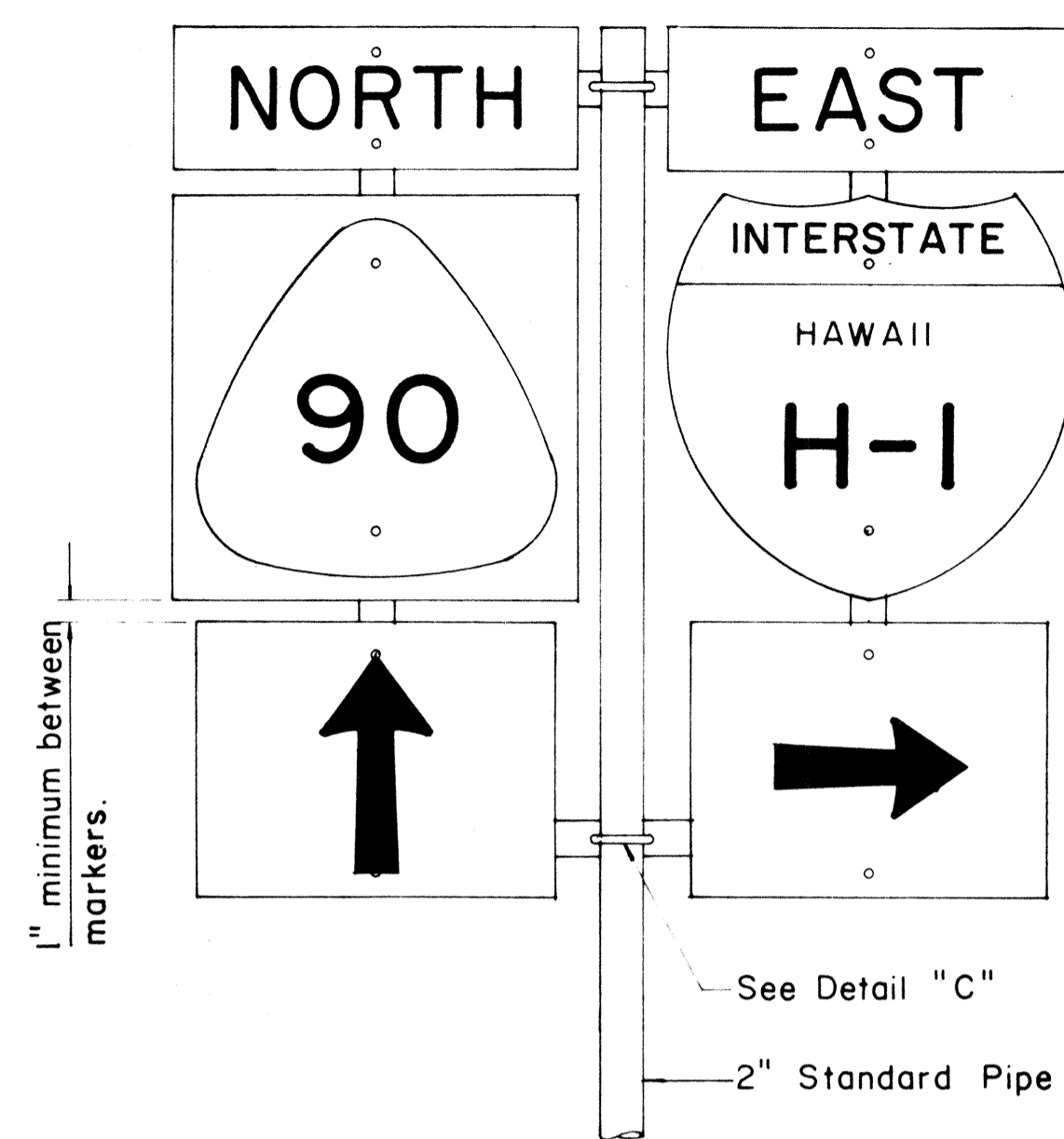
STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
INTERSTATE ROUTE MARKER

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

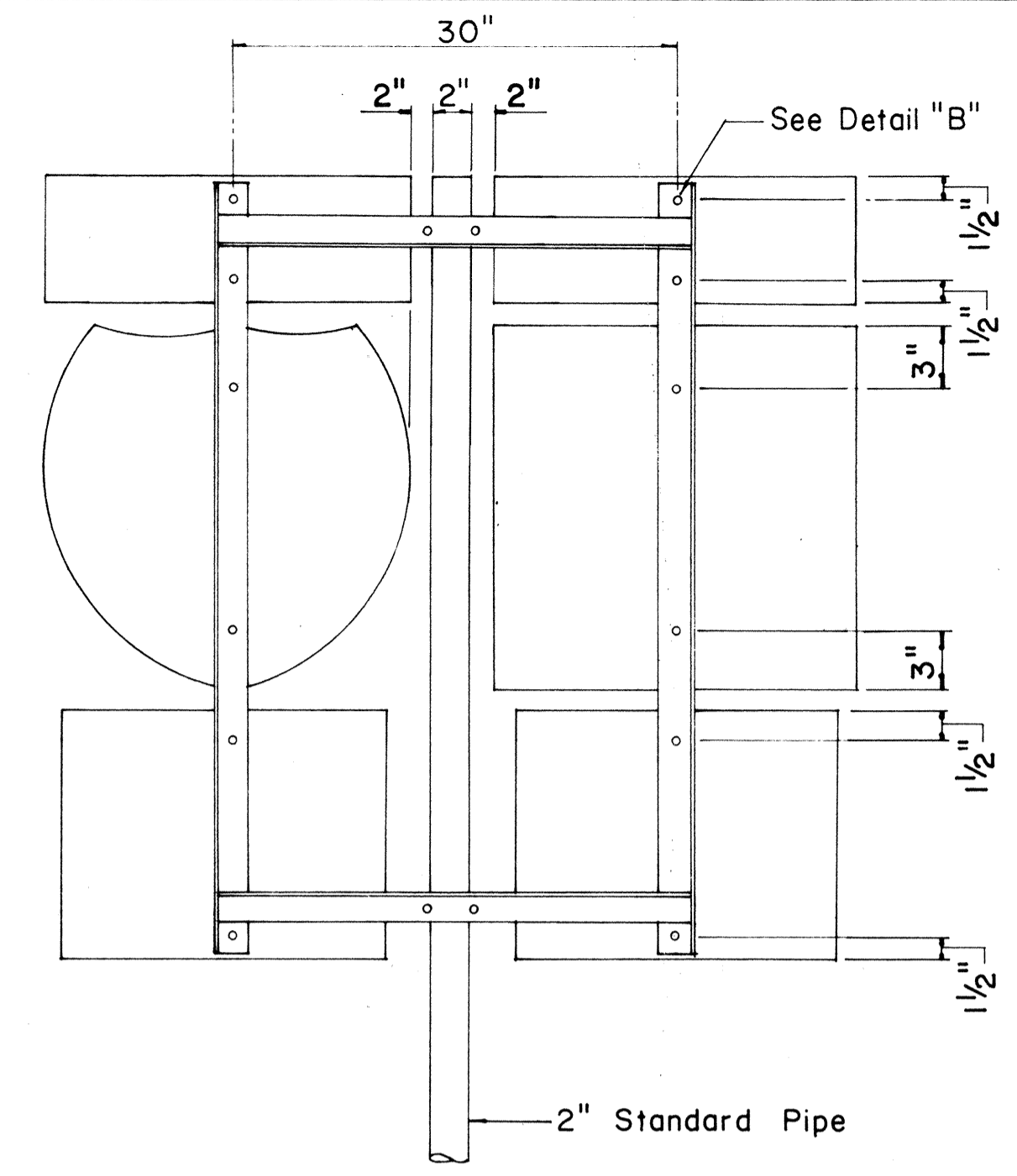
SURVEY PLOTTED BY: _____ DATE: _____
 DRAWN BY: _____
 TRACED BY: _____
 DESIGNED BY: _____
 QUANTITY BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN No. _____
 NOTE BOOK No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-10391	1960	86	131



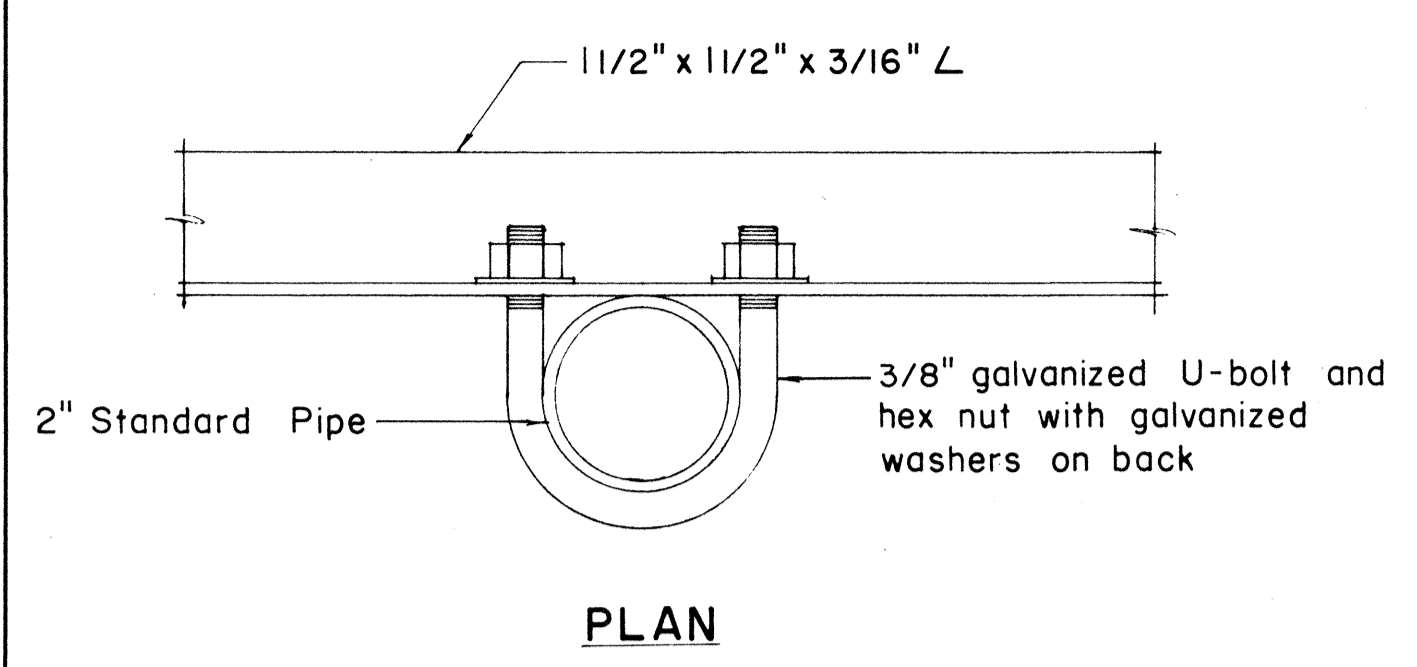
FRONT ELEVATION

TYPE "B" ASSEMBLY
Not to Scale

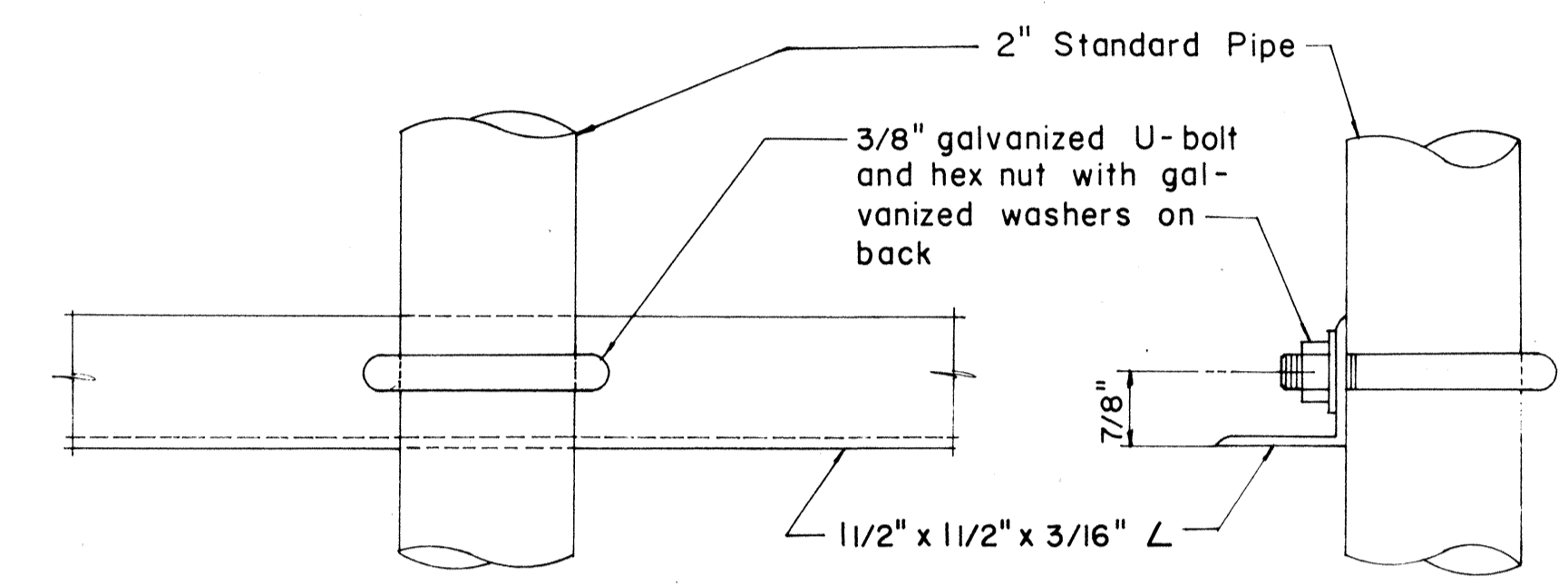


REAR ELEVATION

NOTE:
1. Minimum clearance between markers shall be one inch. (Larger clearances shall be in multiples of one inch.)
2. Pipe post for Type "A" & Type "B" Assembly shall be 2" Standard Pipe.



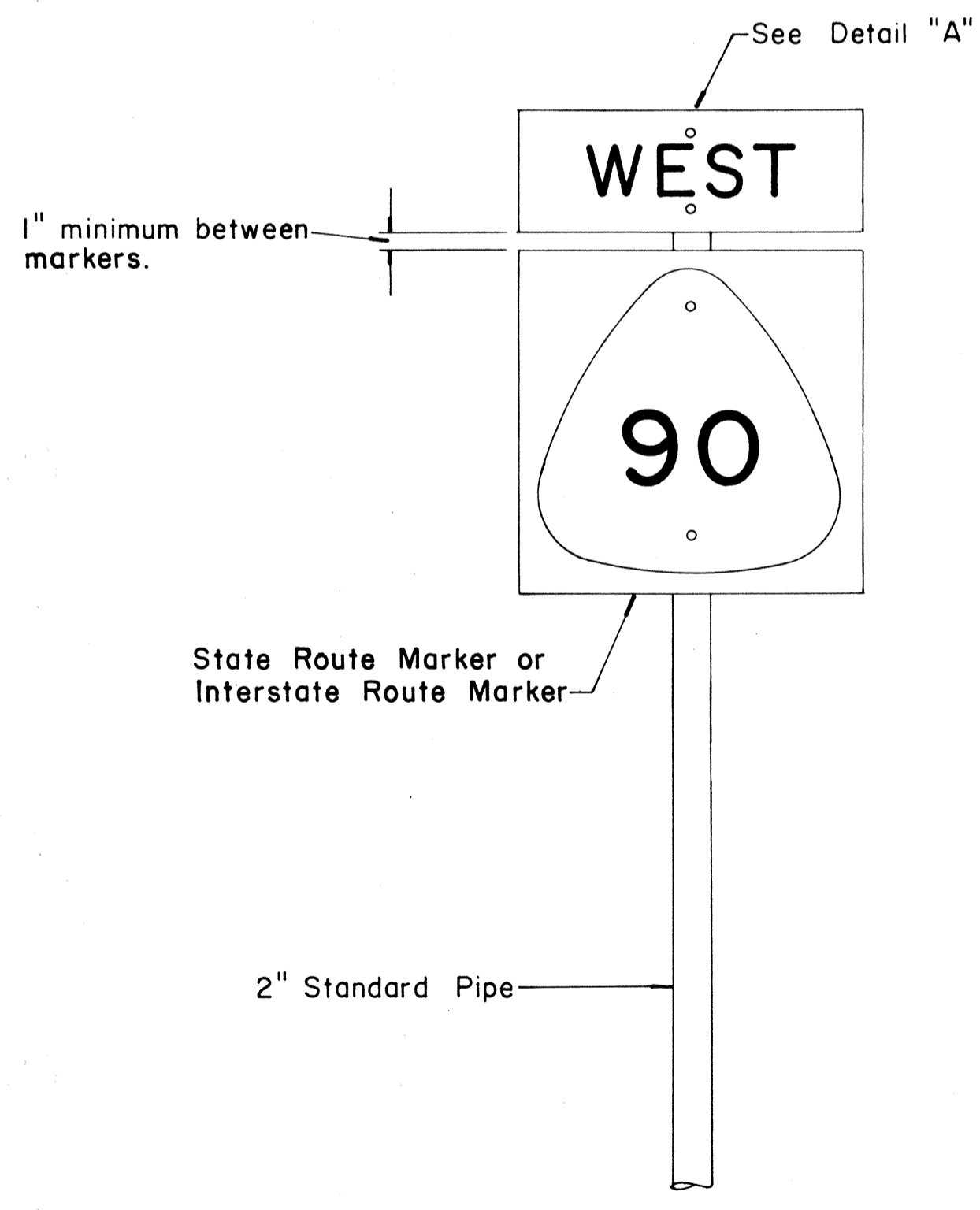
PLAN



FRONT ELEVATION

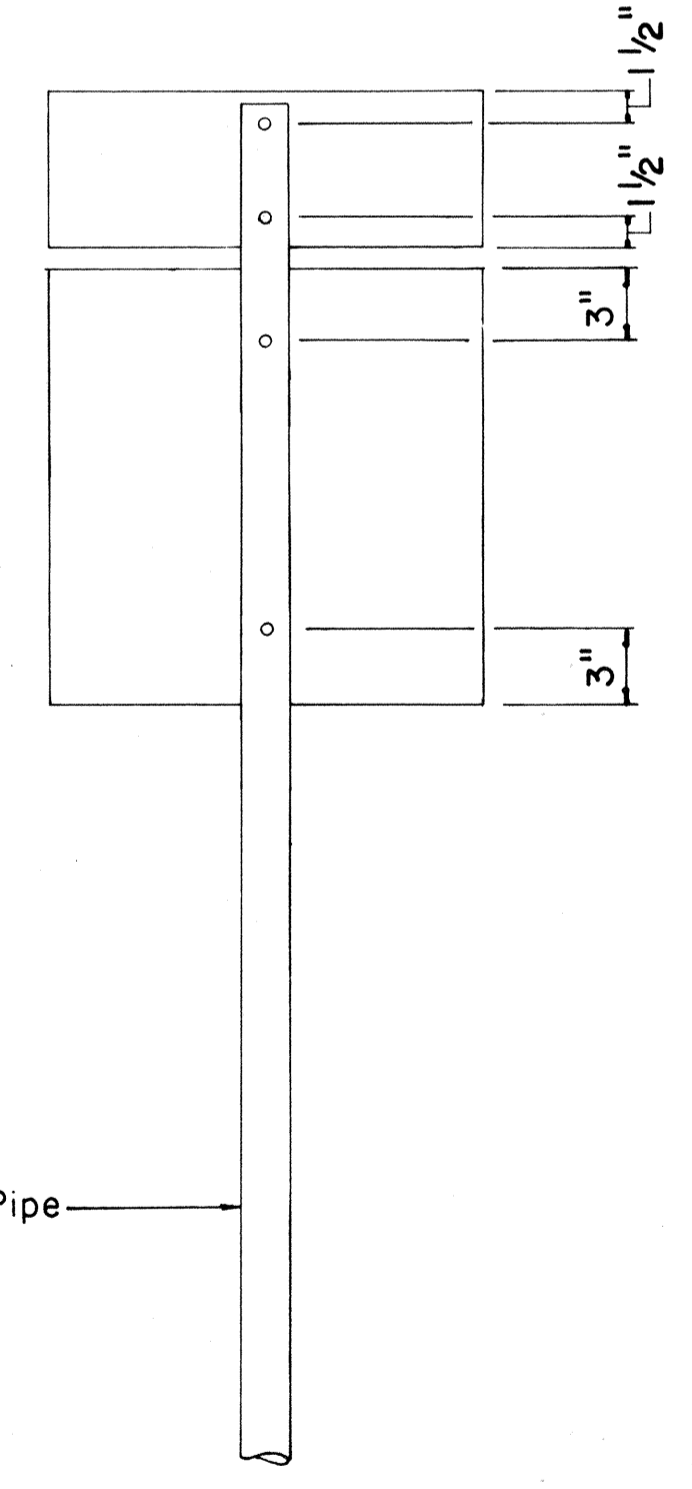
SIDE ELEVATION

DETAIL "C"



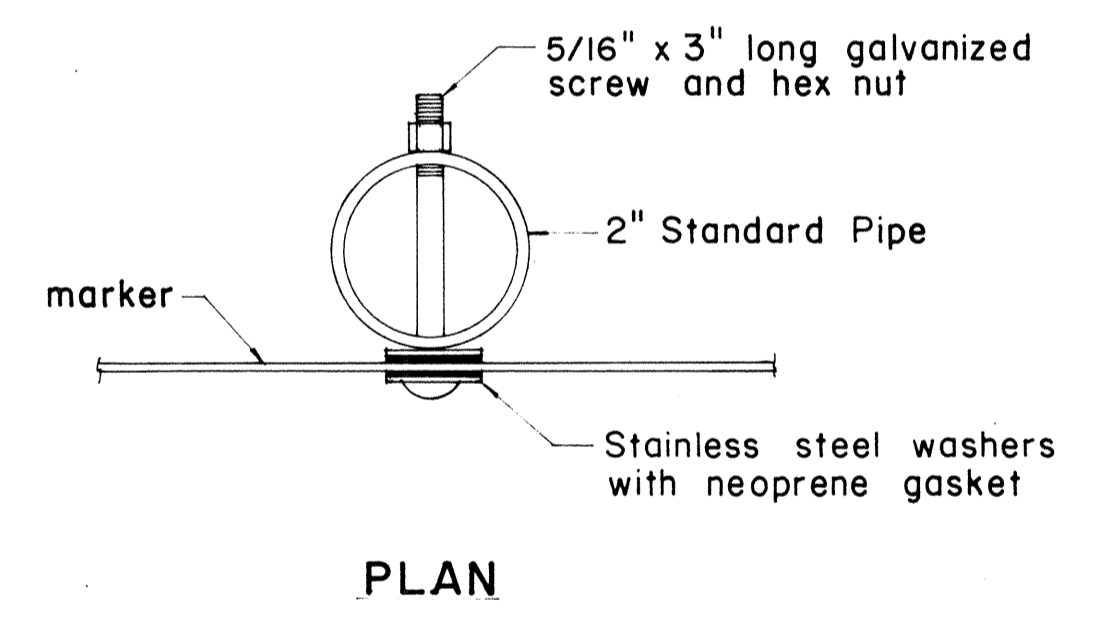
FRONT ELEVATION

TYPE "A" ASSEMBLY
Not to Scale

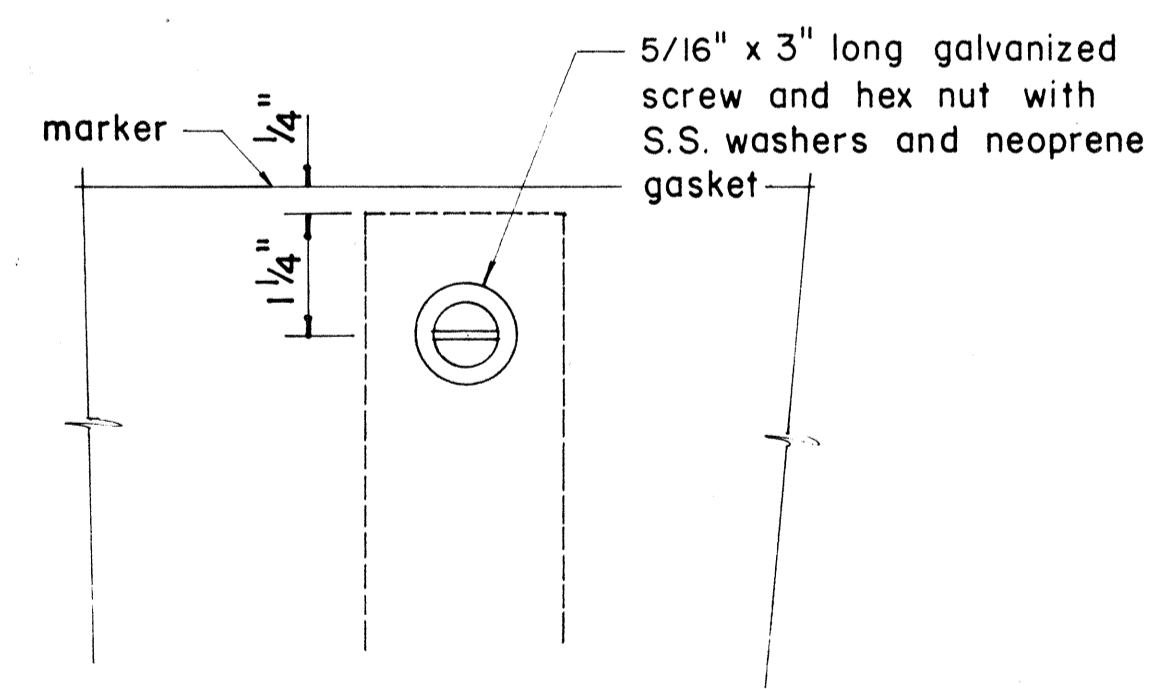


REAR ELEVATION

NOTE:
For height and lateral location of Route Marker Assembly, see plan sheet DT 100.

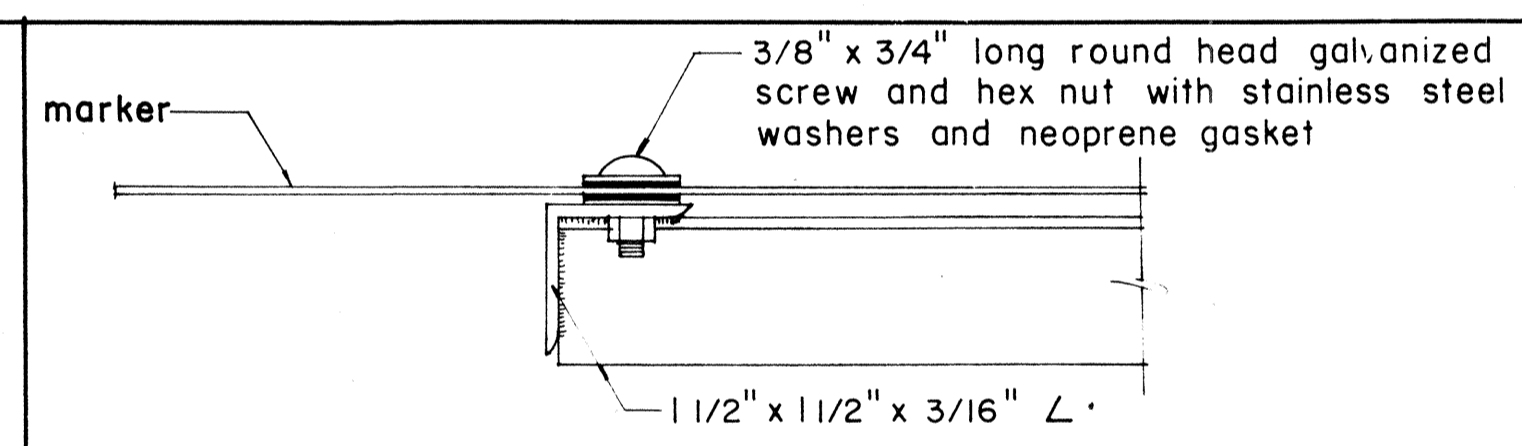


PLAN

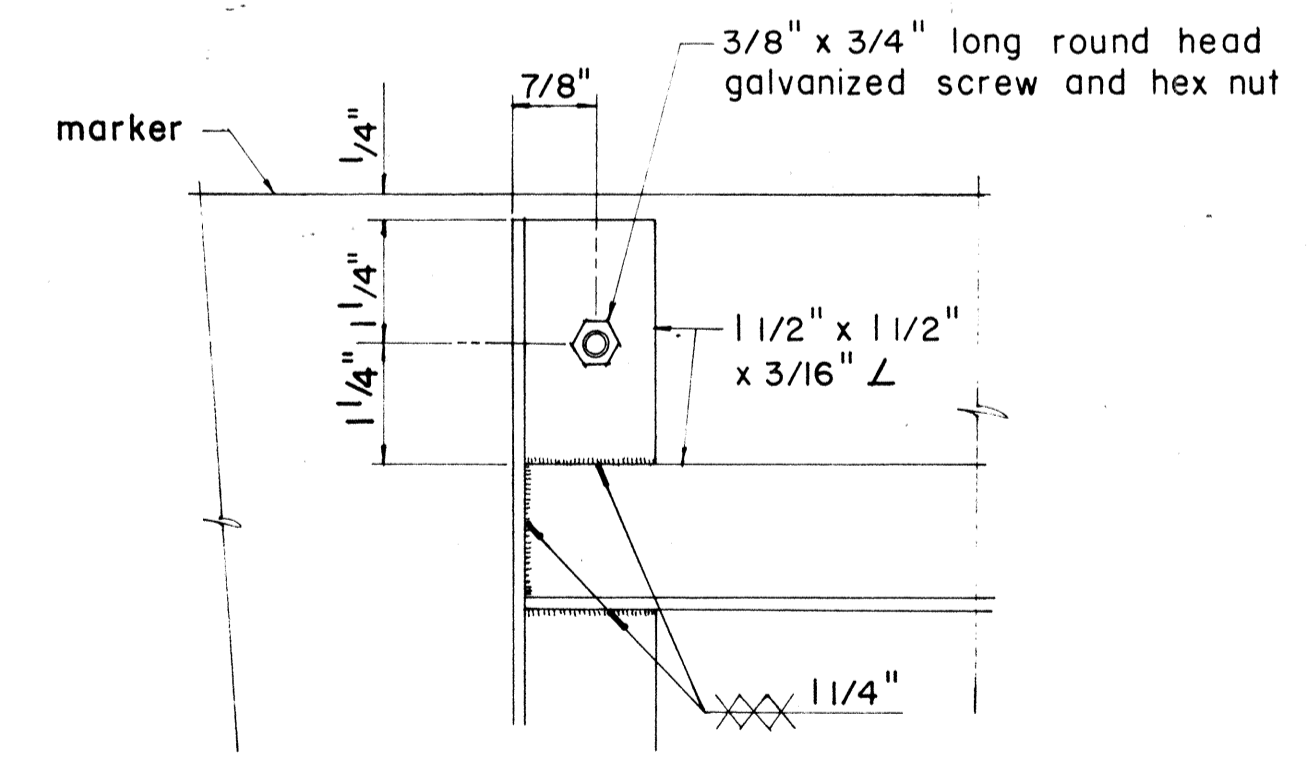


FRONT ELEVATION

DETAIL "A"

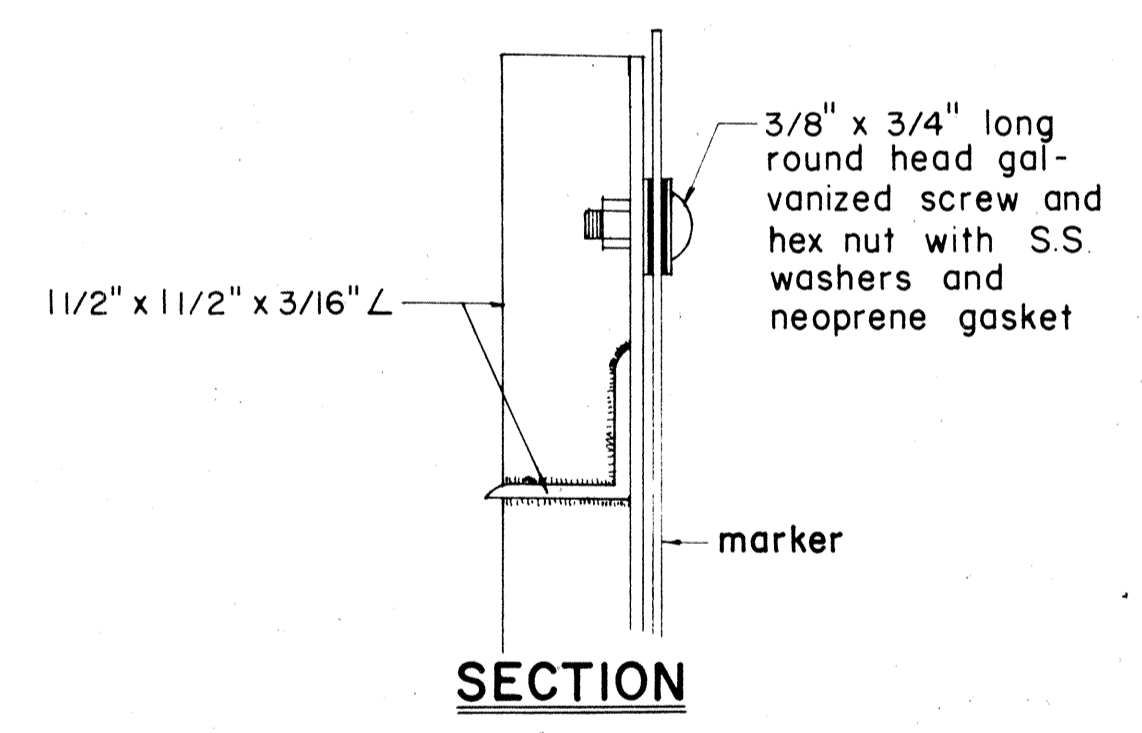


PLAN



ELEVATION

DETAIL "B"



SECTION

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

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

NO.	REVISION	APPROVED BY	DATE
1	Revisions to Route Marker Assemblies.	<i>HT</i>	6/1/72

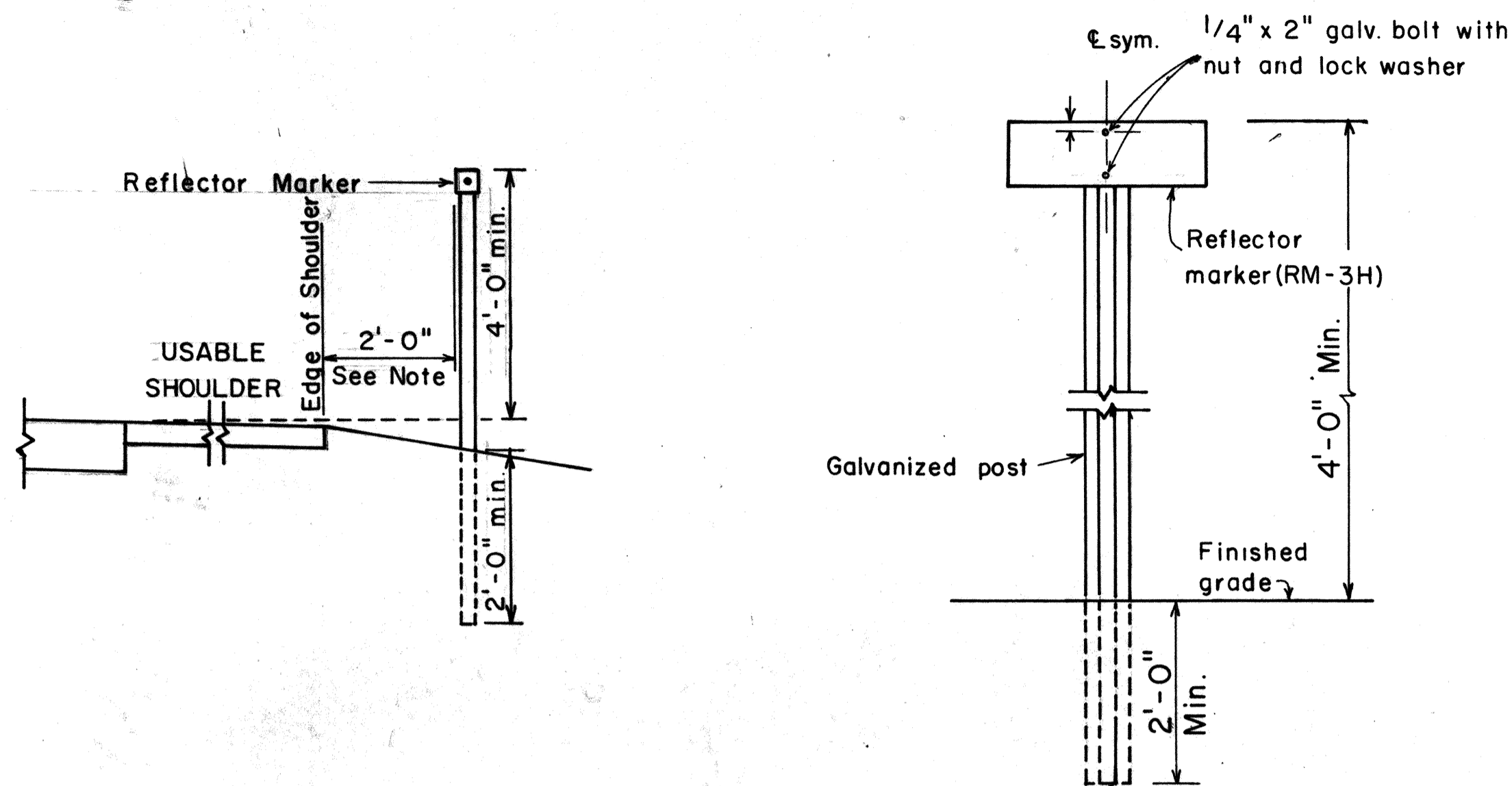
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
ROUTE MARKER ASSEMBLIES

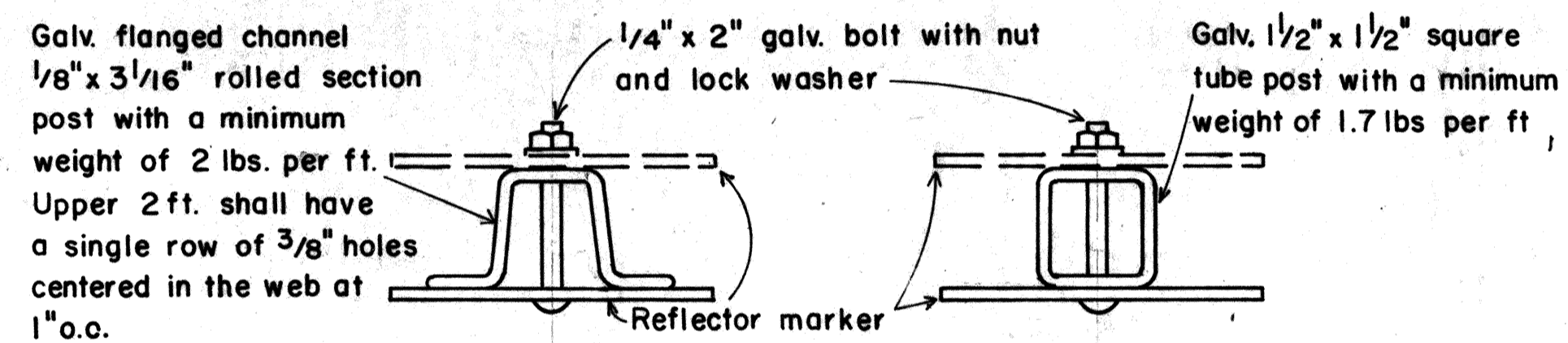
Scale: As Shown
SHEET No. 8 OF 22 SHEETS DT 107

ORIGINAL PLAN
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

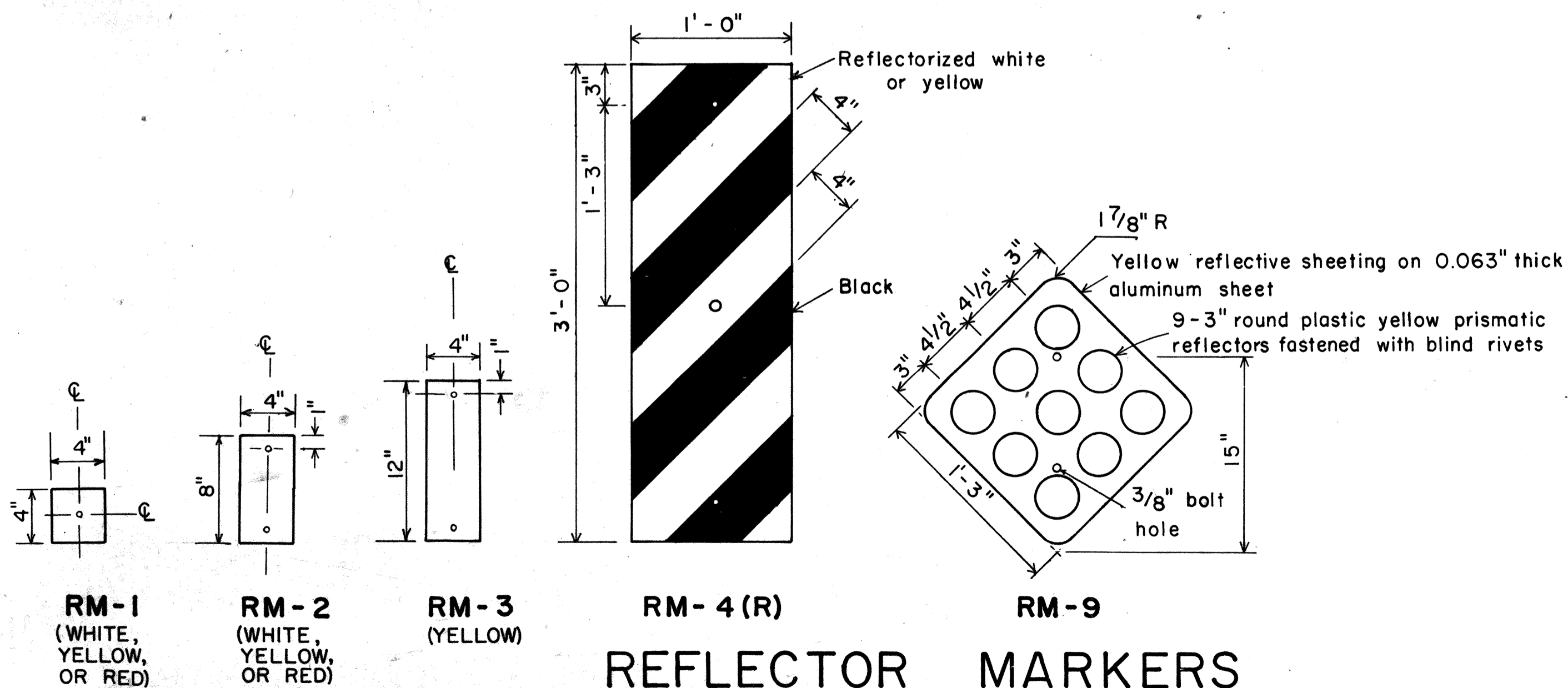
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-41-1(129)	1980	87	131



REFLECTOR MARKER MOUNTING DETAIL



TYPICAL SECTION OF ROAD DELINEATOR



REFLECTOR MARKERS

GENERAL NOTES:

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

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

APPROVAL RECOMMENDED:
Eishi Tanaka 11/2/77
 TRAFFIC ENGINEER DATE

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

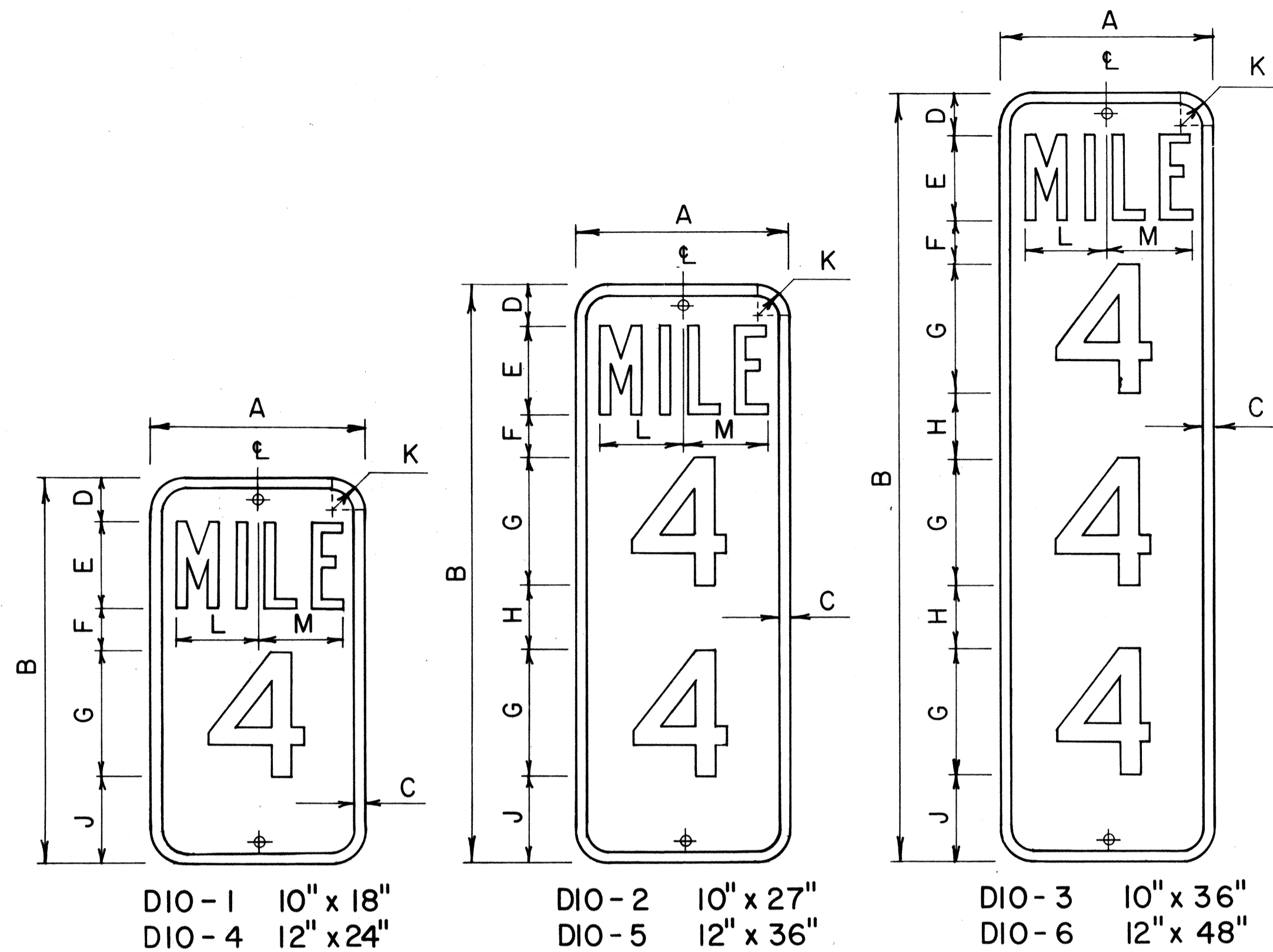
STANDARD DETAILS
 MISCELLANEOUS REFLECTOR MARKERS

Not to scale June, 1977

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-(1977)	1980	88	131

GENERAL NOTES:

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

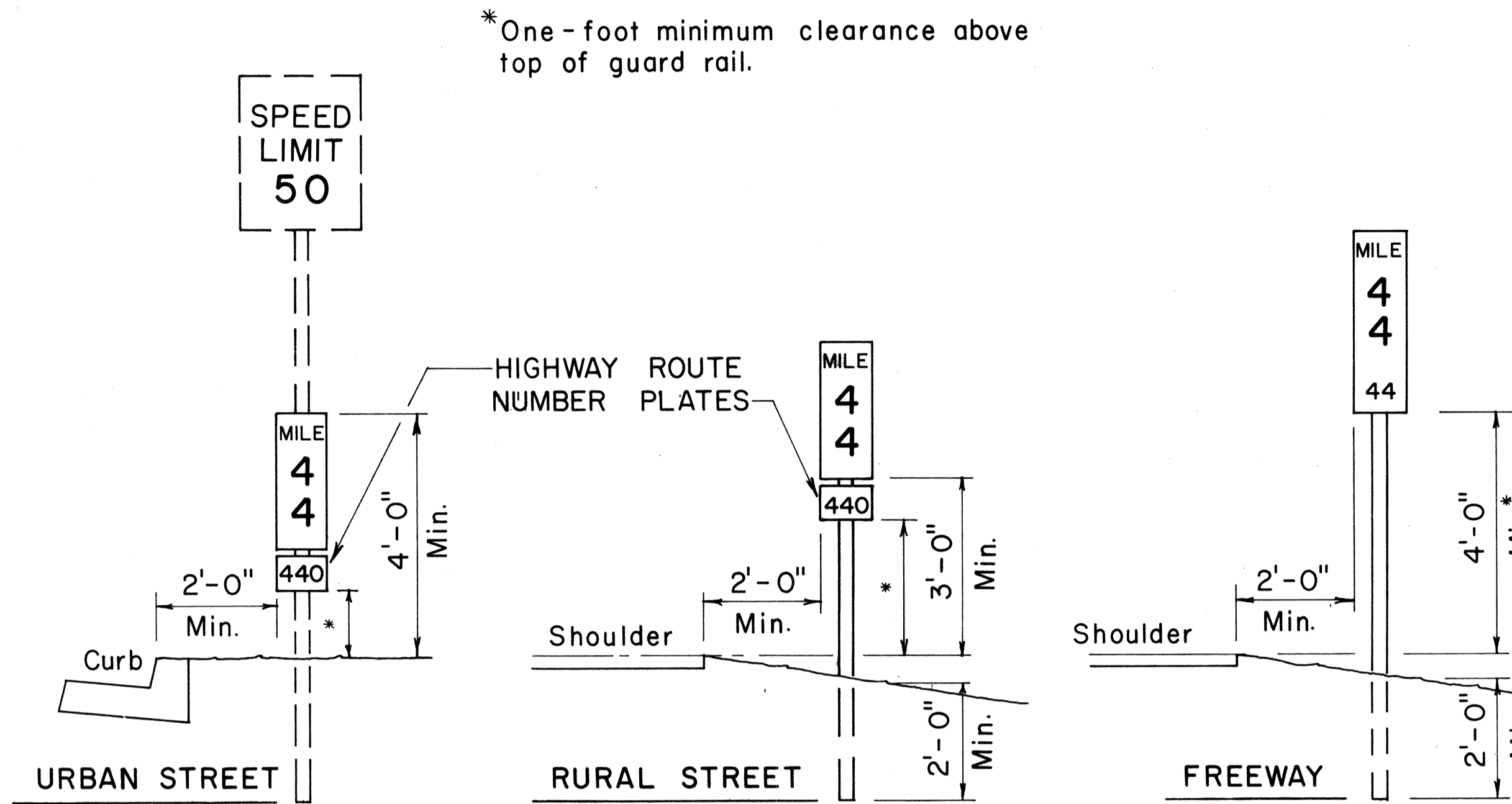


DIO-1 10" x 18" DIO-2 10" x 27" DIO-3 10" x 36"
 DIO-4 12" x 24" DIO-5 12" x 36" DIO-6 12" x 48"

MILEPOST MARKER PLATE DETAILS

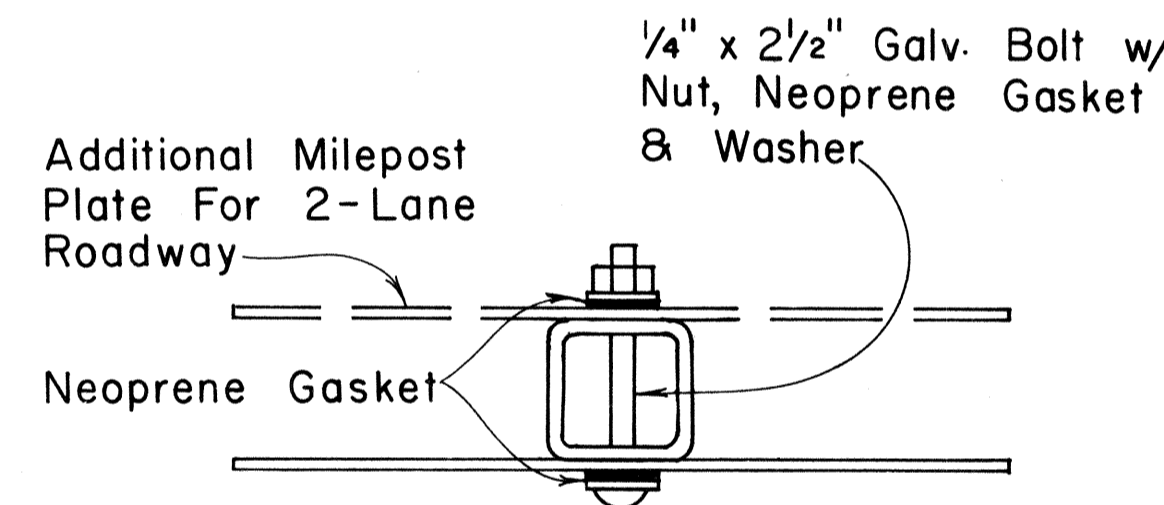
Scale: 3/16" = 1"

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

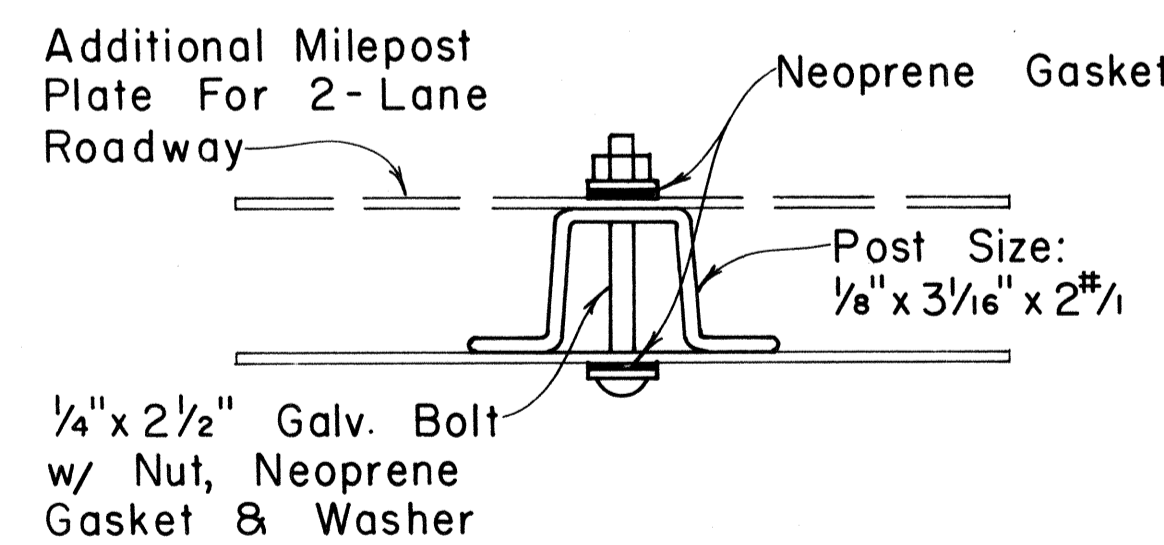


TYPICAL ROADSIDE INSTALLATION

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



GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS

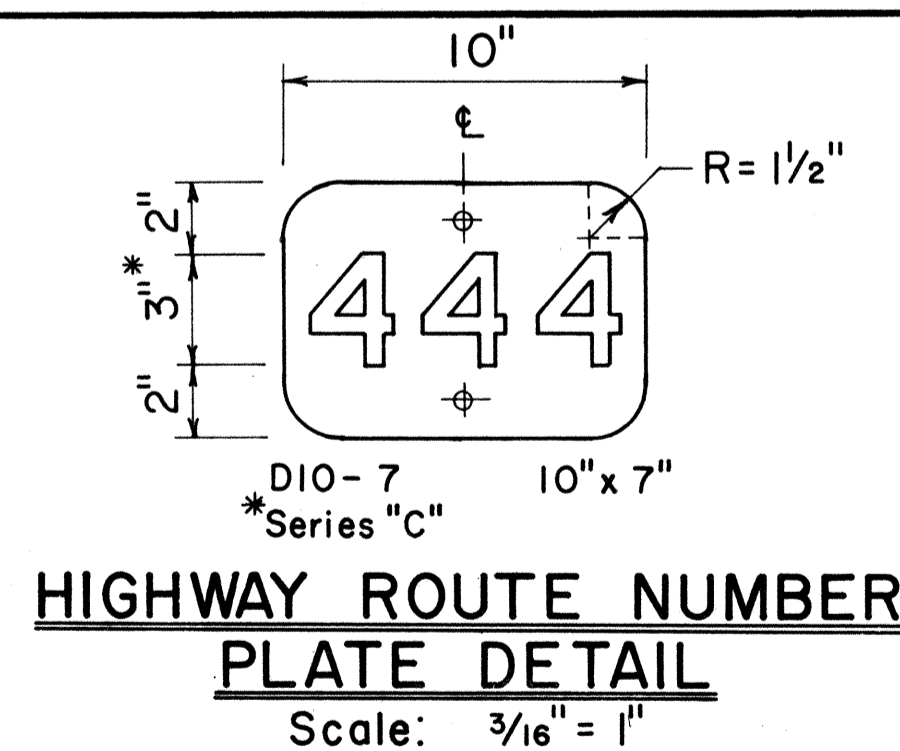
Scale: 1/2" = 1"

NO.	REVISION	APPROVED BY	DATE

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

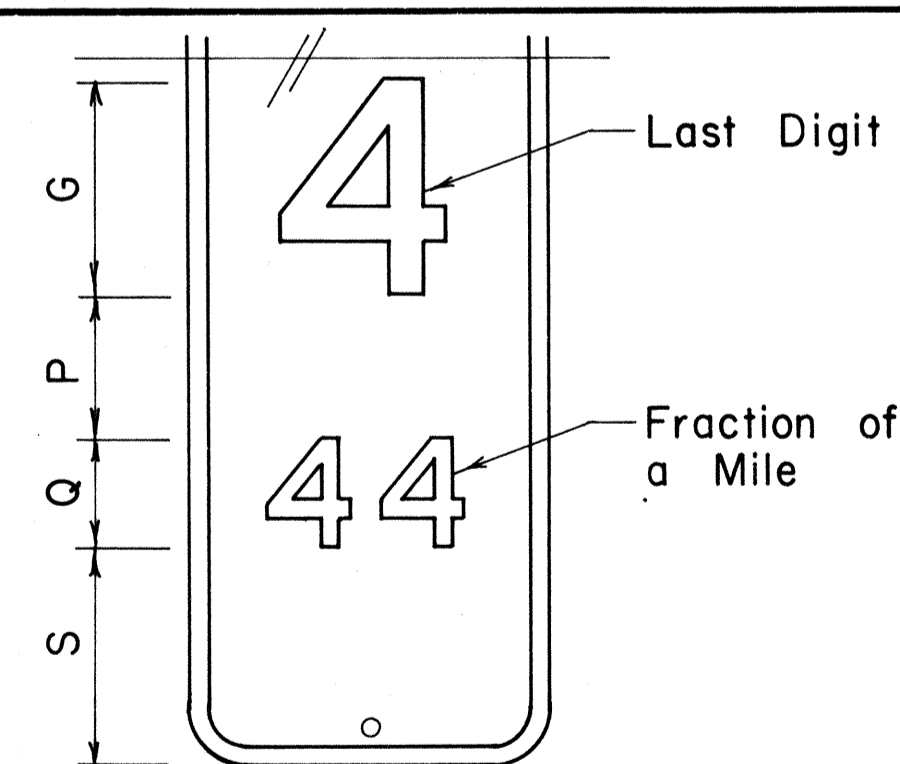
APPROVED:
Harbert B. Zaleski 1/18/78
 ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
MILEPOSTS
 SCALE: As Shown DATE: December, 1977
 SHEET No. 10 OF 22 SHEETS DT 116



HIGHWAY ROUTE NUMBER PLATE DETAIL

Scale: 3/16" = 1"



MILEPOST MARKER FRACTION DETAIL

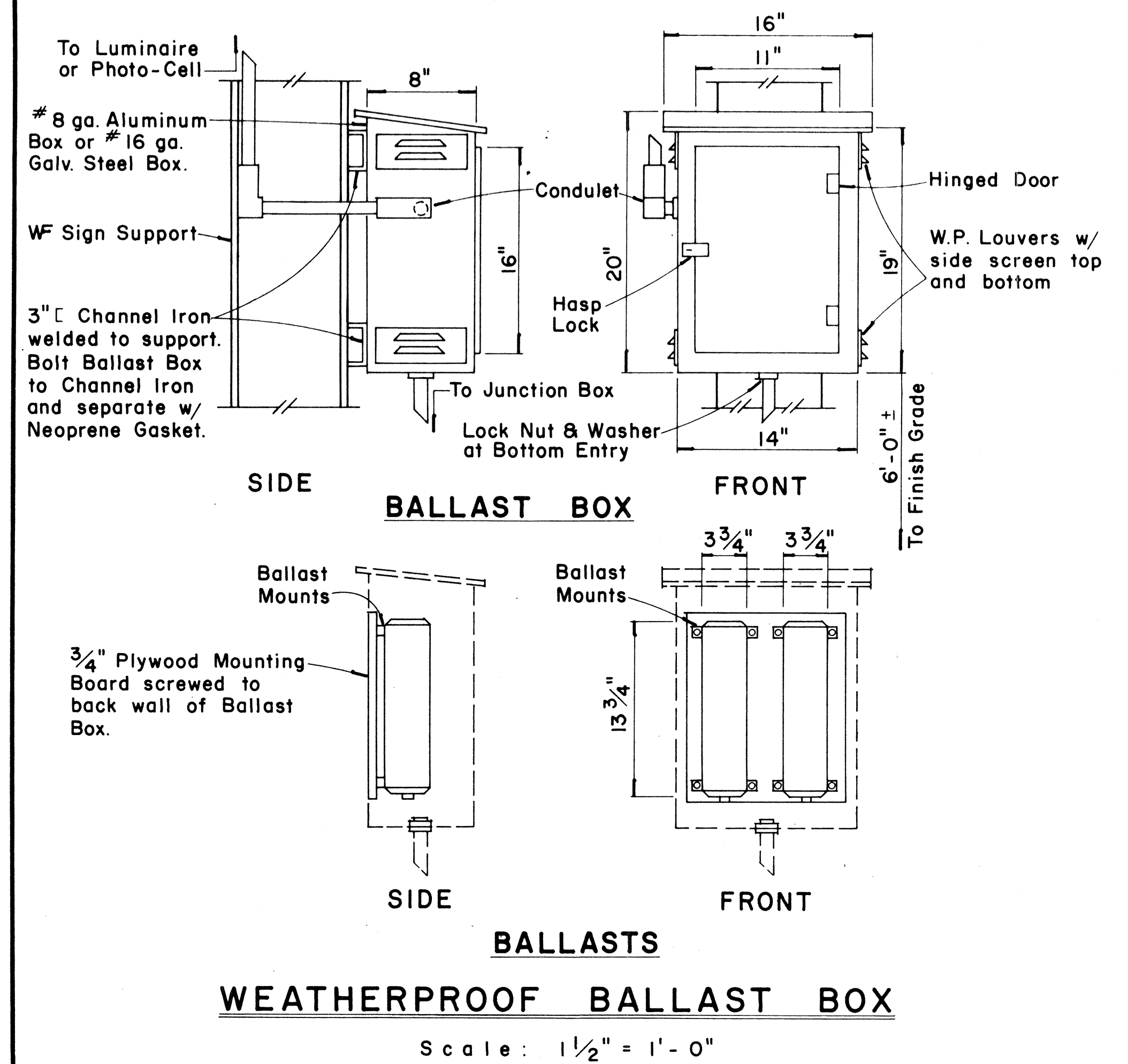
Scale: 3/16" = 1"

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

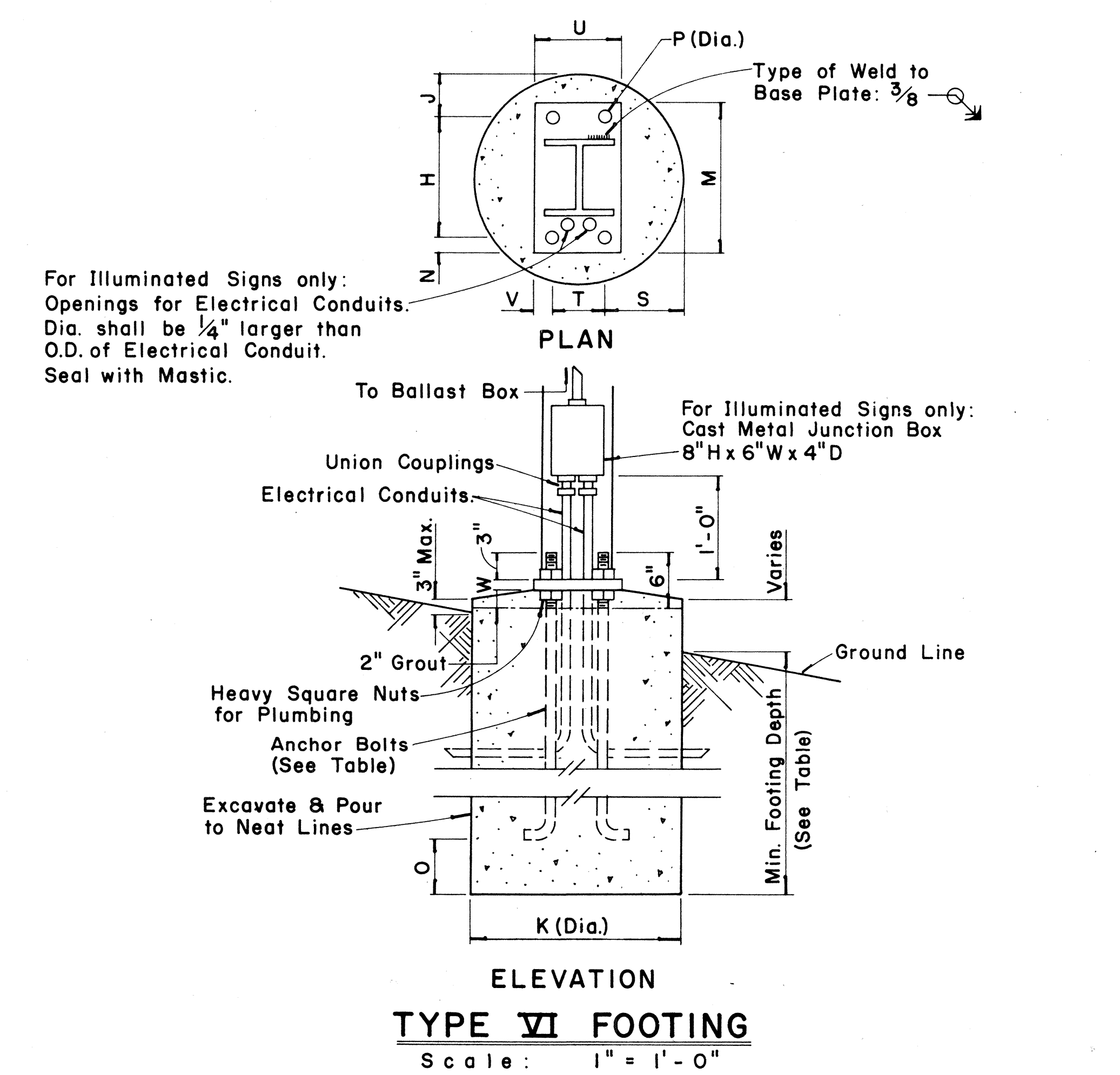
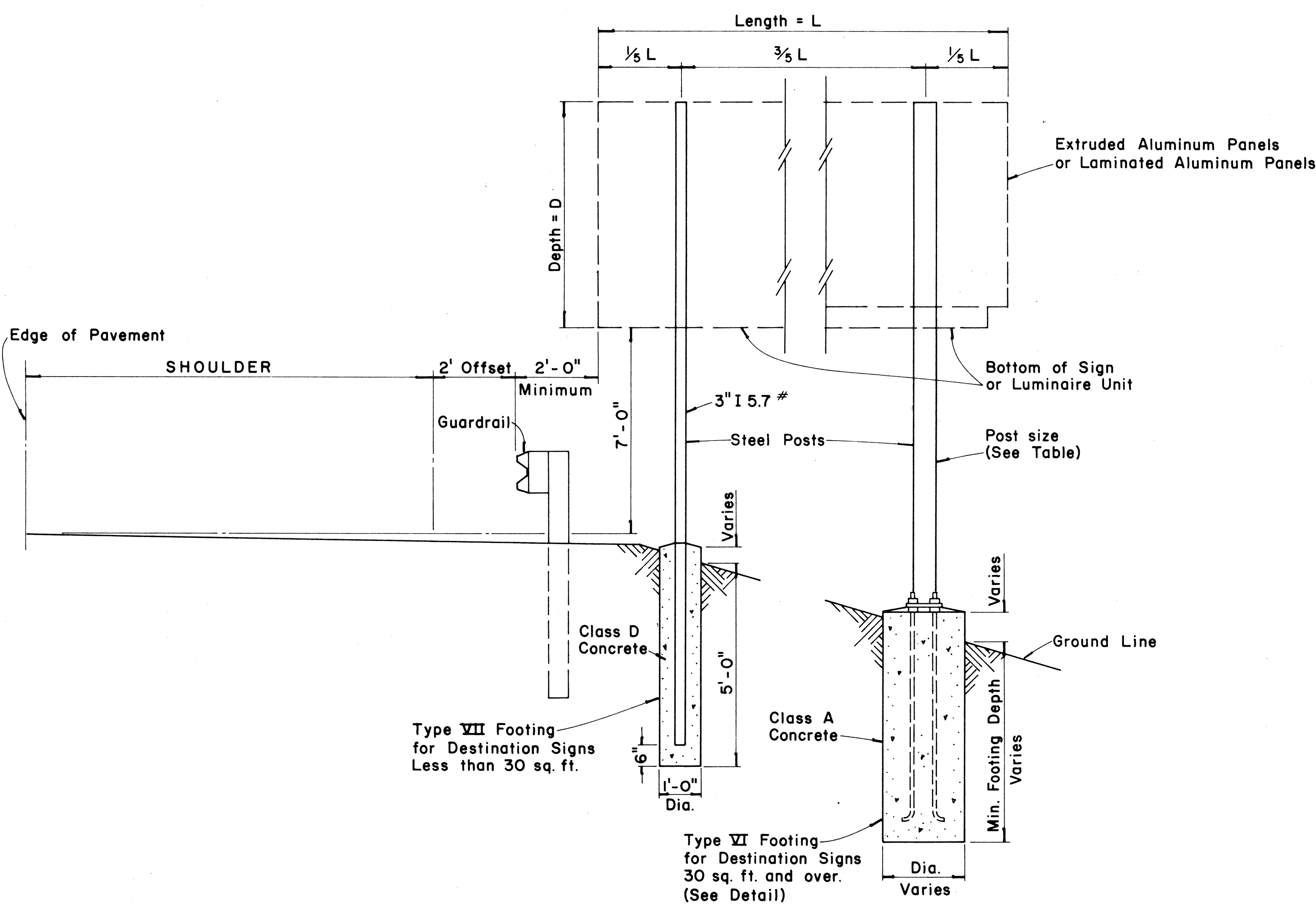
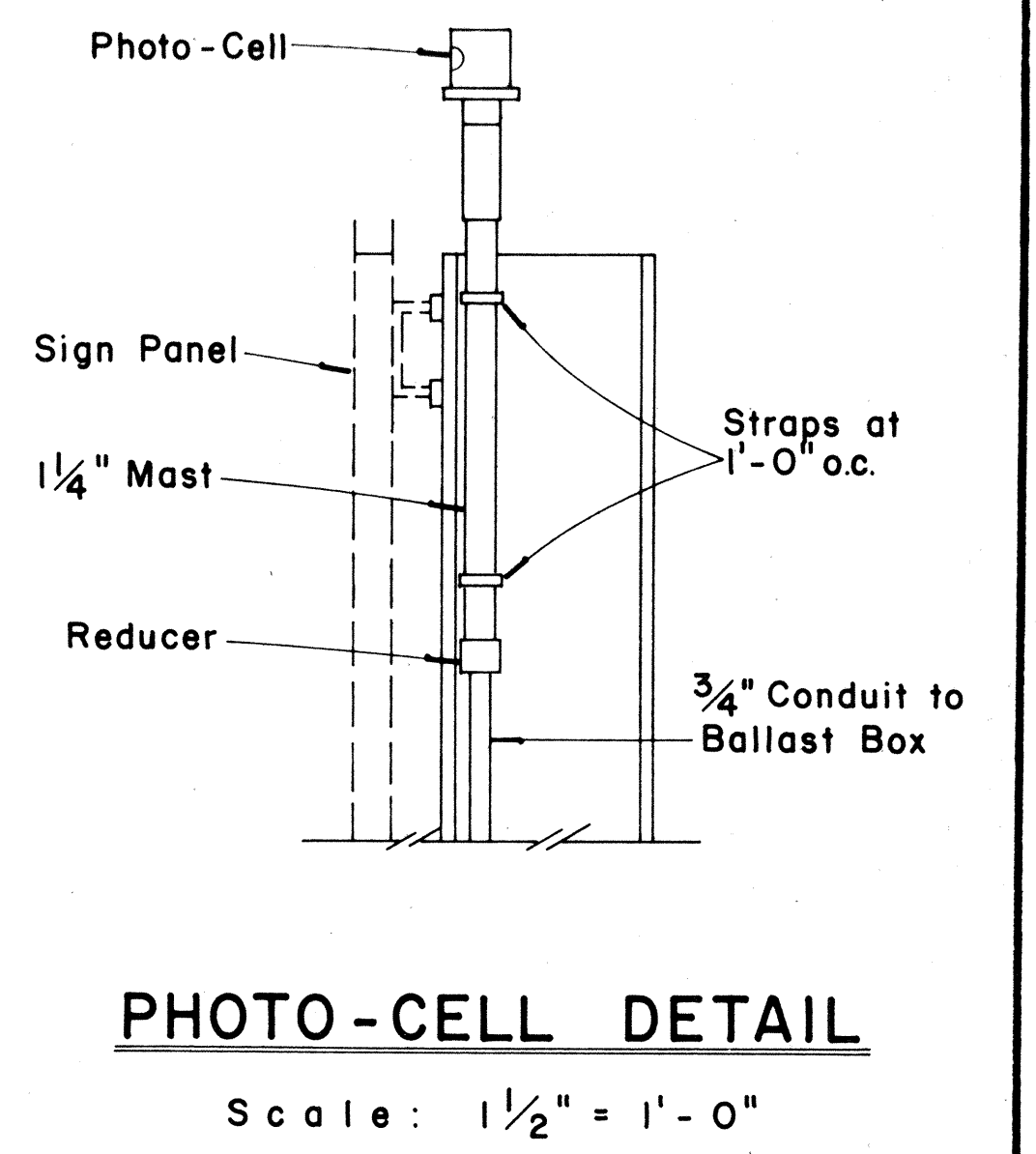
ORIGINAL SURVEY ELABORATED BY: _____
 PLAN DRAWN BY: _____
 TRACED BY: _____
 NOTE BOOK DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 No. _____

* 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.

DATA TABLE FOR TYPE VI FOOTING																	
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"	15⅝"	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'															



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	[H-11(139)]	1980	89	131



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

APPROVED:
John S. Palms 12-29-69
 ASSISTANT CHIEF, ENGINEERING DATE

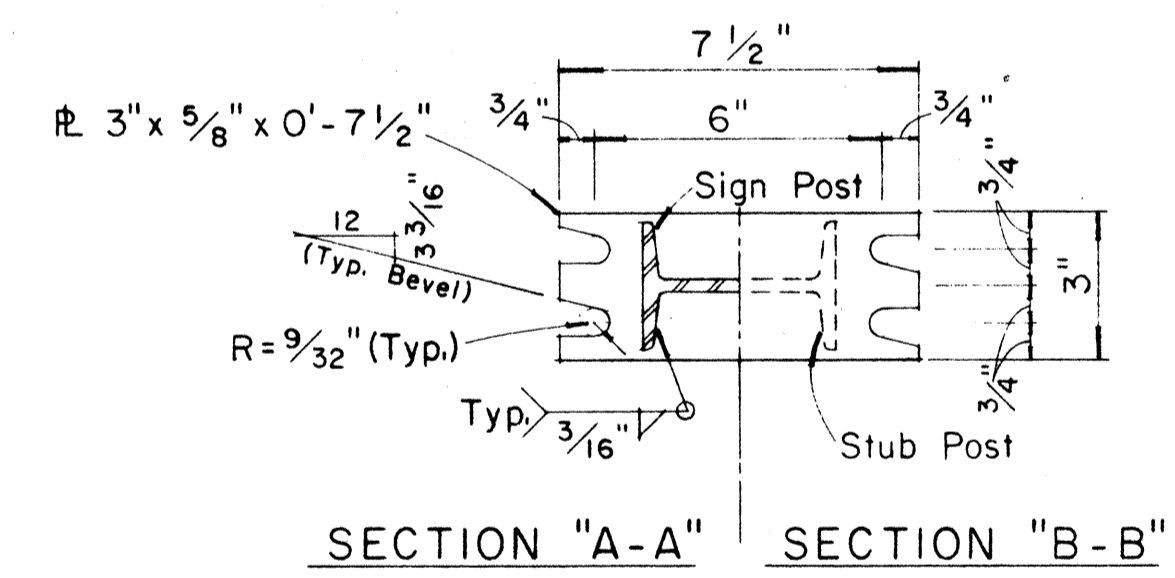
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
DESTINATION & GROUND MOUNTED EXPRESSWAY SIGNS
 Scale: As Shown
SHEET No. 11 OF 22 SHEETS DT 203

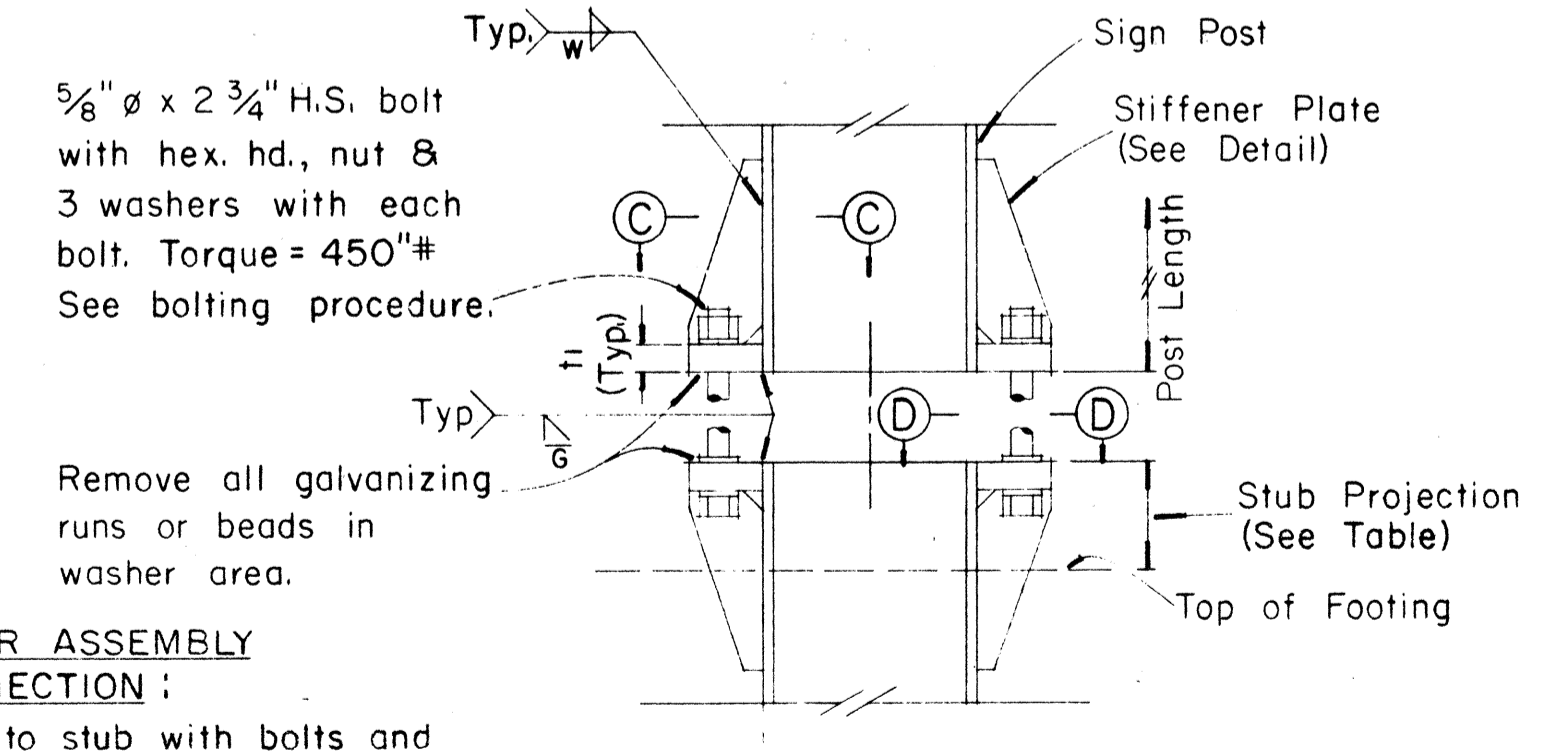
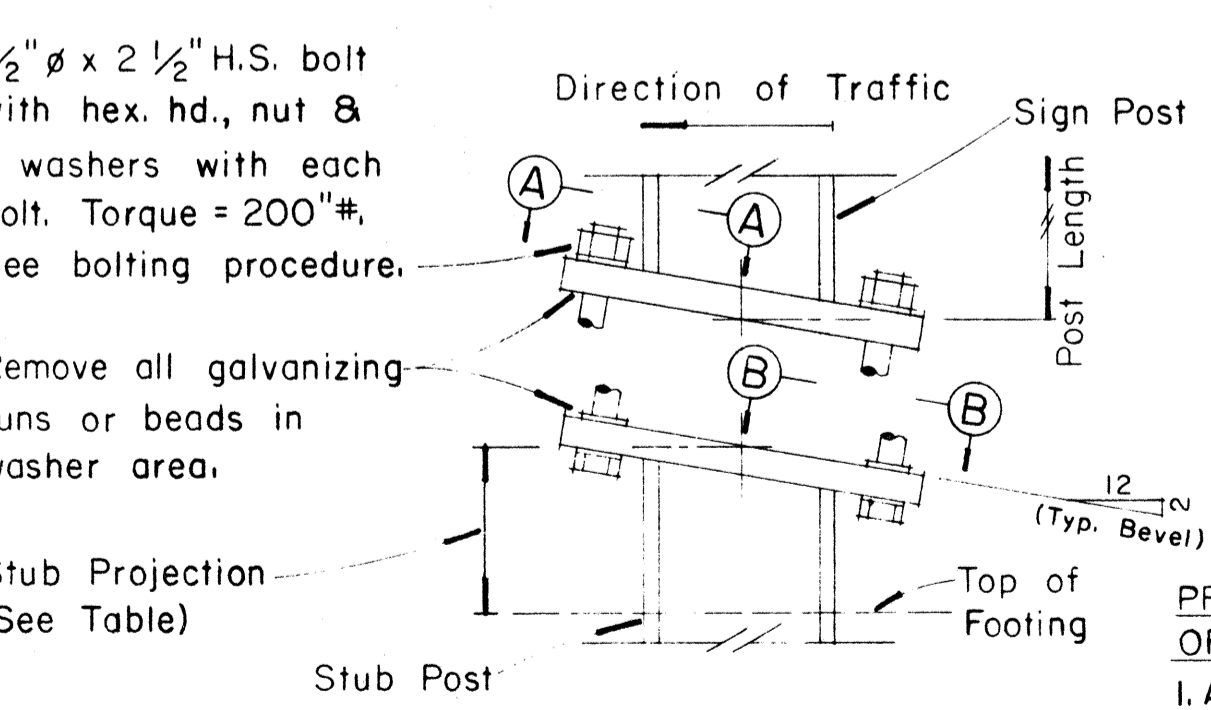
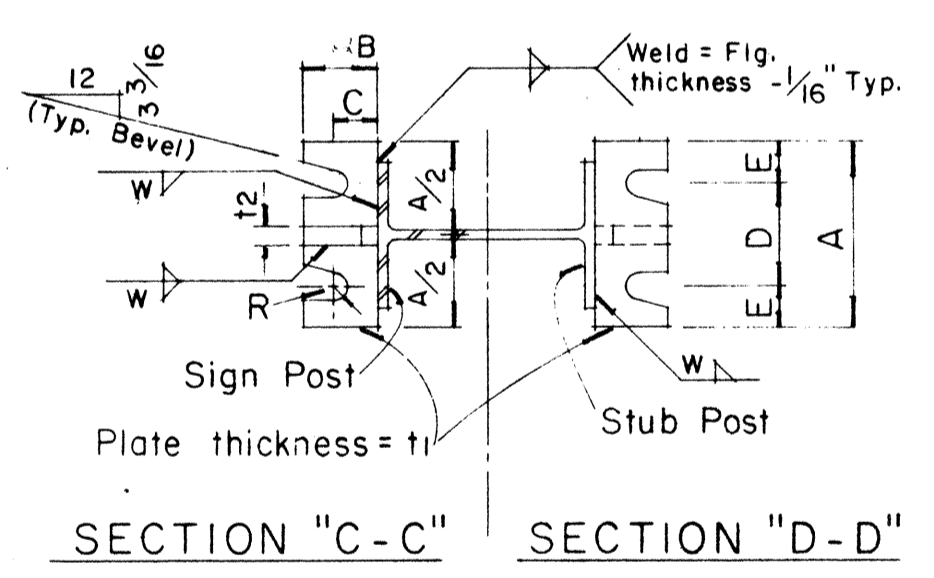
SURVEY PLOTTED BY: _____
 DRAWN BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN: _____
 NOTE BOOK: _____
 No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(129)-1	1980	20	31

Post Size	BASE CONNECTION DATA TABLE										FUSE PLATE DATA TABLE										FOUNDATION DATA				
	Bolt Size & Torque	A	B	C	D	E	t ₁	t ₂	W	R	F	G	H	J	K	L	N	d ₁	t ₃	Bolt Dia.	Wt. of each Fuse Pl.	Stub Length	Stub Projection	Footing Diameter	Bars V Size
6 B 8.5	5/8" ϕ x 2 3/4" Torque = 450**	5"	2"	1 1/4"	2 3/4"	1 1/8"	3/4"	1/2"	1/4"	1 1/32"	3 5/8"	2"	1 1/8"	4"	2 1/4"	7/8"	1/2"	9/16"	1/4"	1/2" ϕ	1.09*	2'-0"	3"	2'-0"	#5
6 B 12											3 3/4"	2"	1 1/8"	4"	2 1/4"	7/8"	5/8"	1/16"	3/8"	5/8" ϕ	1.60*	2'-0"	3"	2'-0"	#5
6 B 15.5											4 1/2"	2 1/2"	1 1/4"	6"	3 1/2"	1 1/4"	3/4"	1 3/16"	1/2"	3/4" ϕ	3.75*	2'-6"	3"	2'-0"	#6
8 W 17											4 1/2"	2 1/2"	1 1/4"	5 1/4"	2 3/4"	1 1/4"	3/4"	1 3/16"	1/2"	3/4" ϕ	3.27*	2'-6"	3"	2'-0"	#7
8 W 20	3/4" ϕ x 3 1/2" Torque = 750**	6"	2 1/4"	1 3/8"	3 1/2"	1 1/4"	1"	3/4"	5/16"	1 3/32"	4 7/8"	2 1/2"	1 1/2"	5 1/4"	2 3/4"	1 1/4"	7/8"	1 5/16"	9/16"	7/8" ϕ	3.93*	3'-0"	2 1/2"	2'-0"	#8
10 W 21											5 3/8"	3"	1 1/2"	5 3/4"	2 3/4"	1 1/2"	7/8"	1 5/16"	9/16"	7/8" ϕ	4.75*	3'-0"	2 1/2"	2'-0"	#9
10 W 25											5 3/8"	3"	1 1/2"	5 3/4"	2 3/4"	1 1/2"	7/8"	1 5/16"	9/16"	7/8" ϕ	4.79*	3'-0"	2 1/2"	2'-0"	#10
12 W 27	1/2" ϕ x 2 1/2" Torque = 200**	SEE DETAIL "A"									5 3/8"	3"	1 1/2"	6 1/2"	3 1/2"	1 1/2"	7/8"	1 5/16"	9/16"	7/8" ϕ	5.42*	3'-0"	2 1/2"	2'-0"	#11
3 I 5.7											3 1/8"	1 1/2"	1 1/8"	2 5/8"	1 1/2"	9/16"	1/2"	9/16"	1/4"	1/2" ϕ	0.64*	1'-6"	3 1/2"	1'-6"	#5
4 I 7.7	3 1/8"	1 1/2"	1 1/8"	2 5/8"	1 1/2"	9/16"	1/2"	9/16"	1/4"	1/2" ϕ	0.64*	1'-6"	3 1/2"	1'-6"	#5										

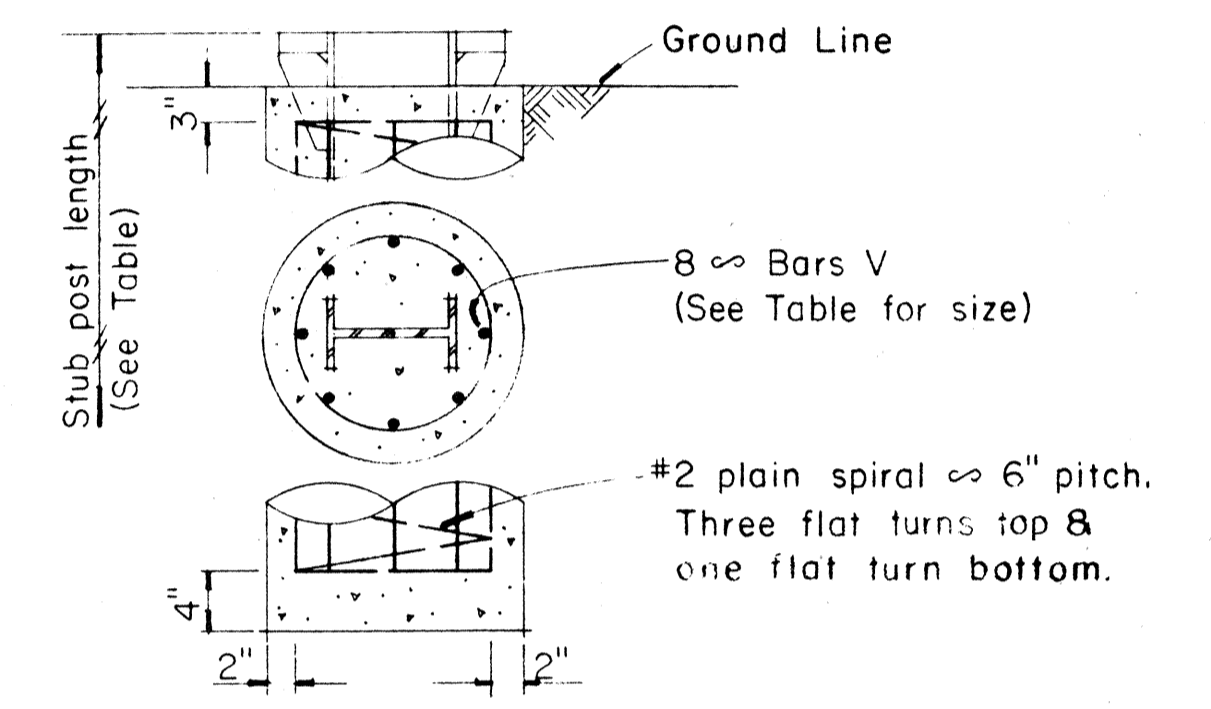
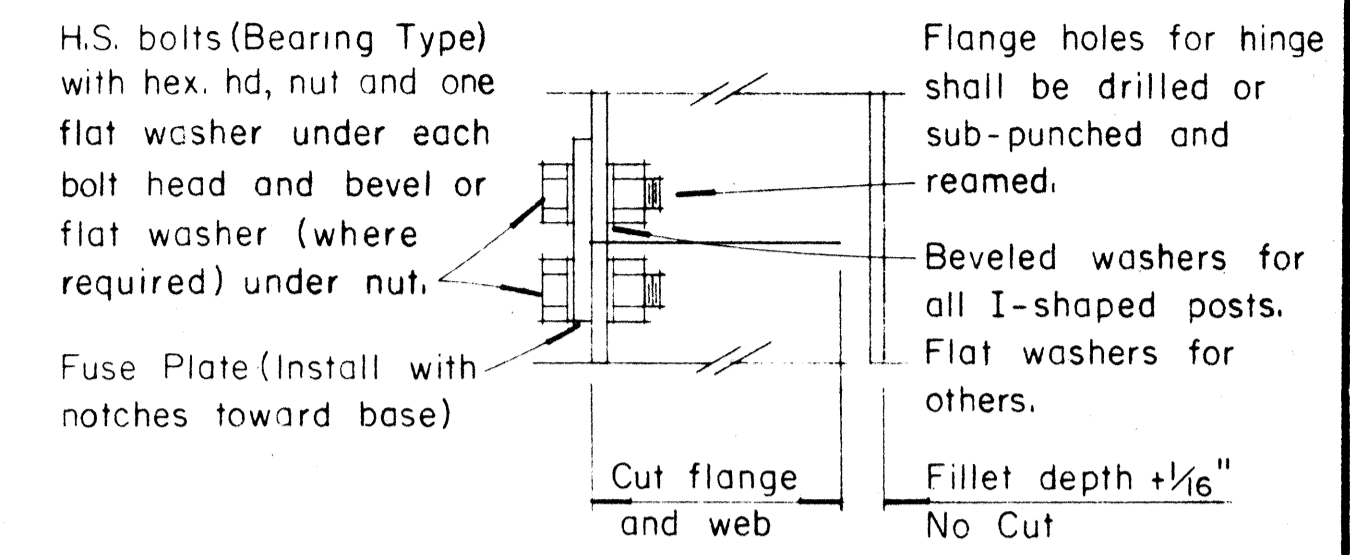
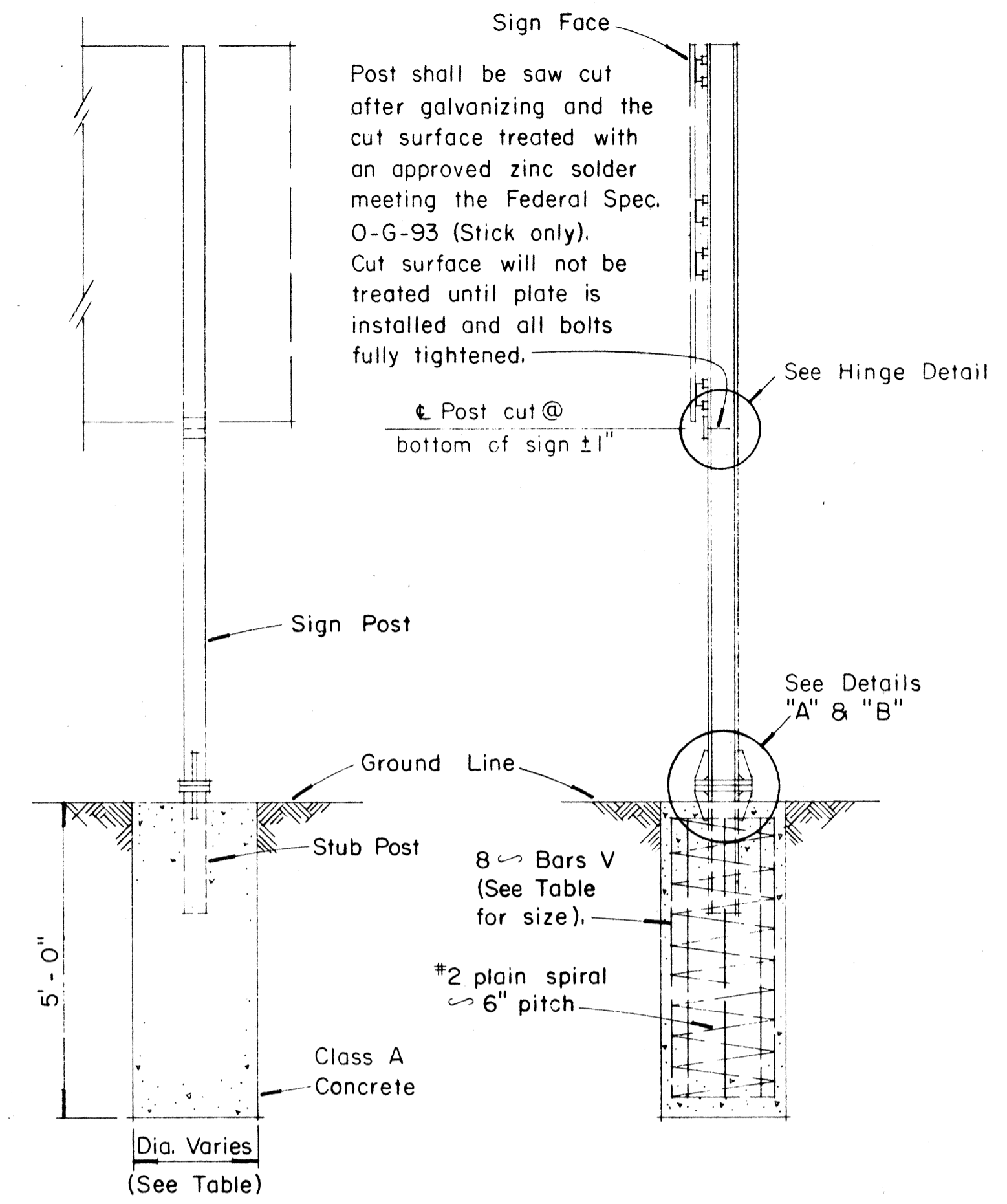


NOTE:
Sections shown are for installations on right shoulder and in gore. Reverse plate slot bevels for installations on left shoulder.

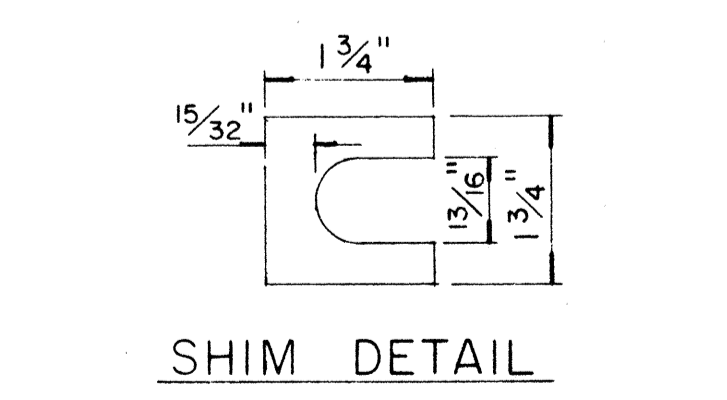
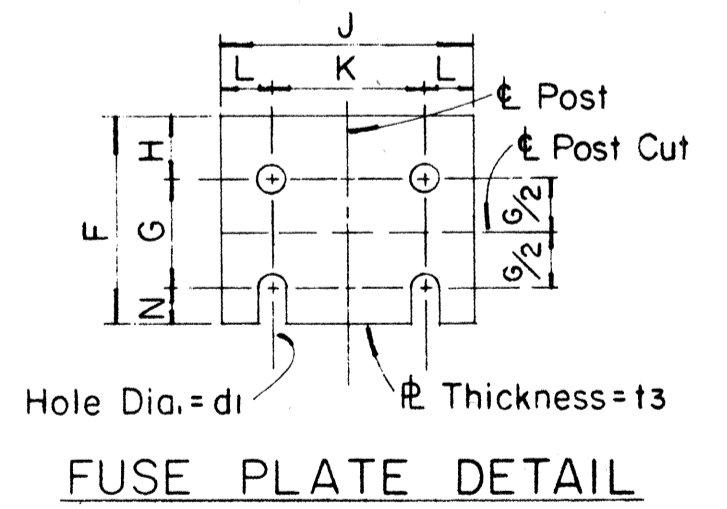
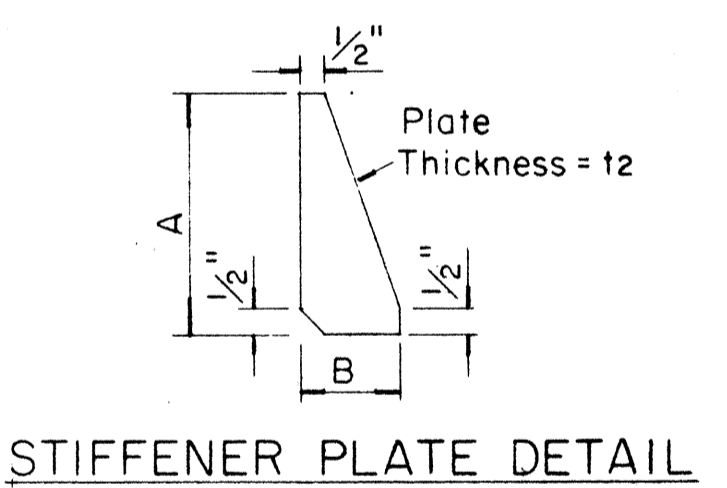


PROCEDURE FOR ASSEMBLY OF BASE CONNECTION:

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



GENERAL NOTES



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

1. Design conforms with AASHTO Specifications for the design and Construction of Structural Supports for Highway Signs.
2. Materials and Fabrication shall conform to the requirements of the Standard Specifications and Special Provisions.
3. All holes shall be drilled. All plate cuts shall preferably be saw cuts, however; flame cutting will be permitted provided all edges are ground. Metal projecting beyond the plane of the plate face will not be tolerated.
4. Tighten the high strength bolts in the base connection only to the torque shown, do not overtighten. All bolts other than high strength bolts shall conform to ASTM A 307, Class A.
5. All structural steel, bolts, nuts and washers shall be galvanized as per the Standard Specifications and Special Provisions. Structural steel to be galvanized after fabrication except as noted.
6. Structural steel shall conform with with the requirements of ASTM A 441
7. Galvanizing of all posts shall be projection above concrete plus 6" minimum.
8. All friction fuse bolts shall be tightened in the shop following a method approved by the Engineer. Tightening shall be to such a degree as to obtain the following minimum residual tension in each bolt:

Bolt Size	Min. Tension	Bolt Size	Min. Tension
1/2" ϕ	12050 Lbs.	3/4" ϕ	28400 Lbs.
5/8" ϕ	19200 Lbs.	7/8" ϕ	36050 Lbs.

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

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

NO.	REVISION	APPROVED BY	DATE

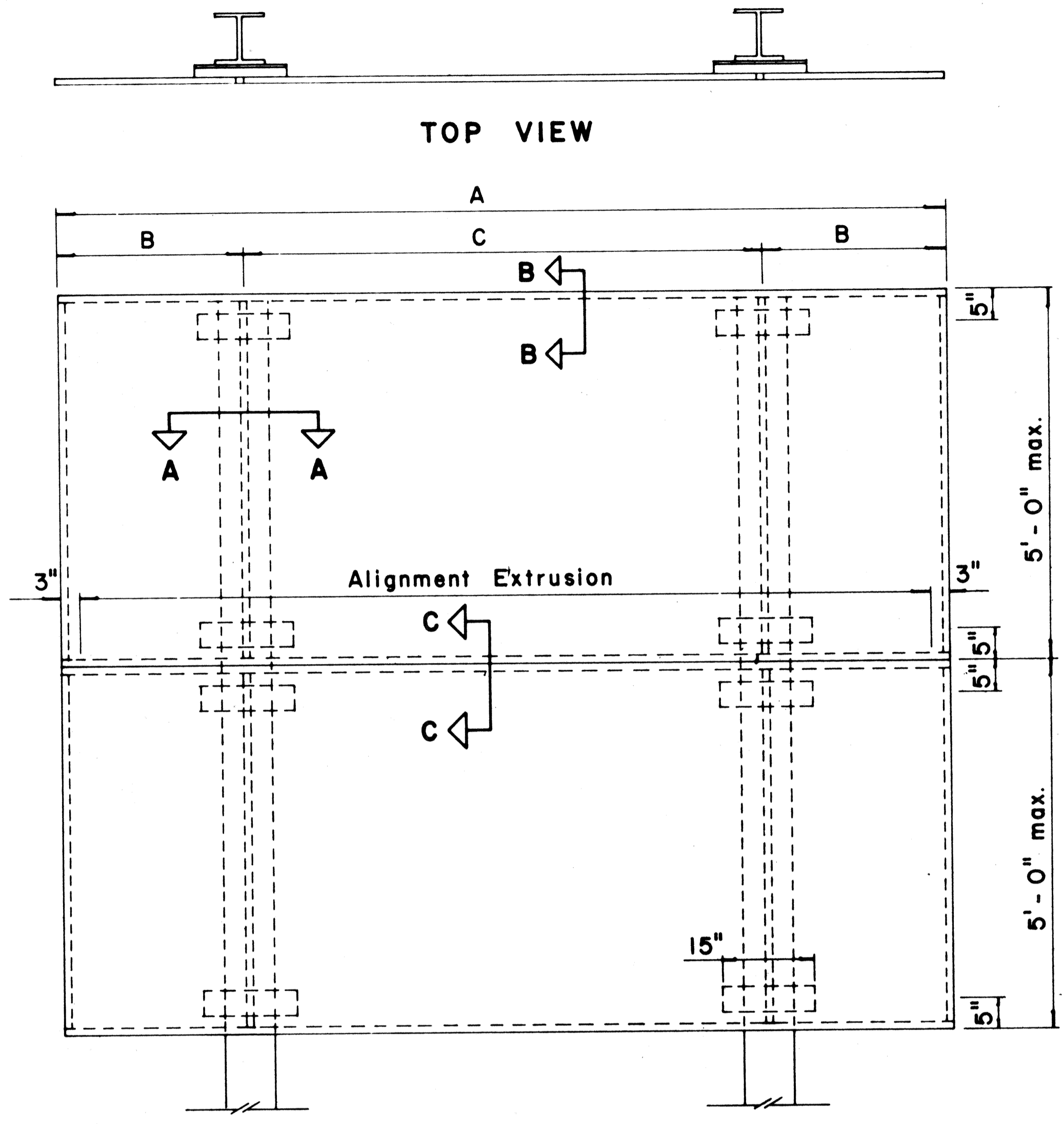
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
BREAK-AWAY SIGN SUPPORTS
FOR
GROUND MOUNTED GUIDE SIGNS
Not to Scale

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

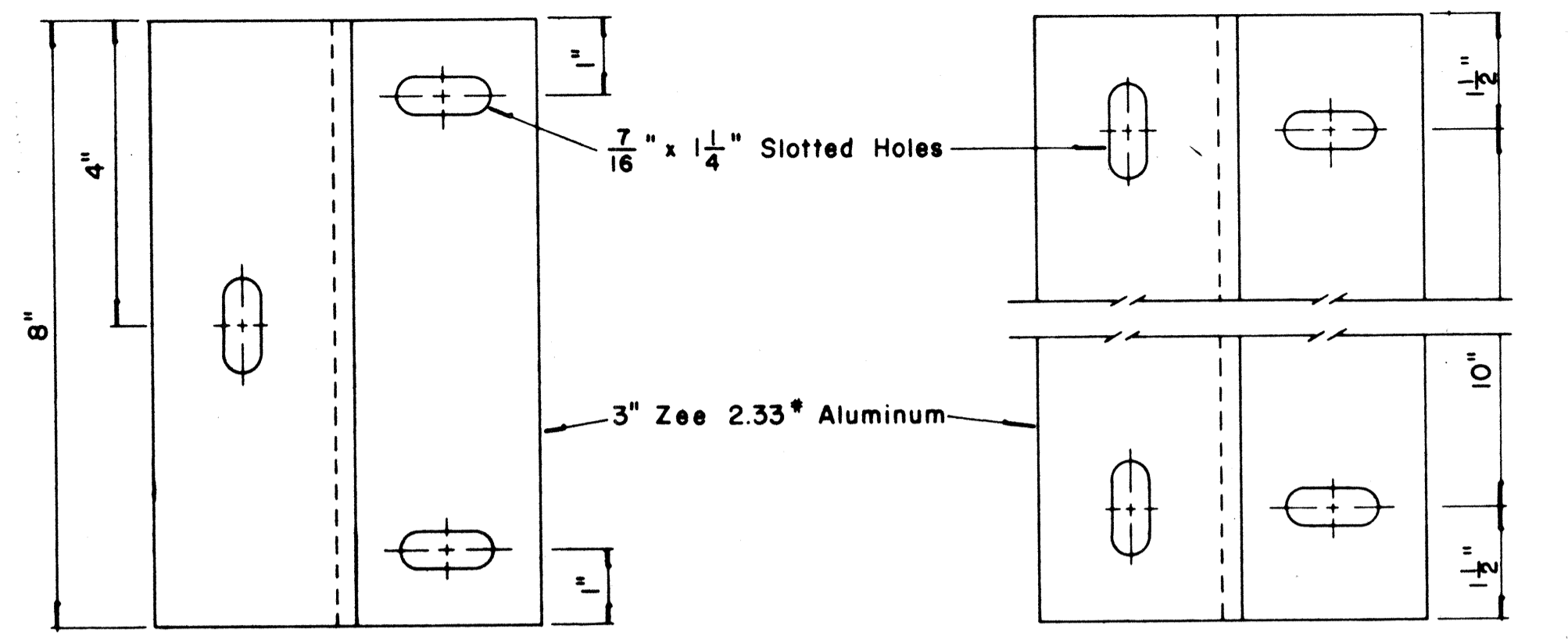
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-1(20)	1980	21	131

(GROUND MOUNTED SIGNS)
SUPPORT SPACING TABLE

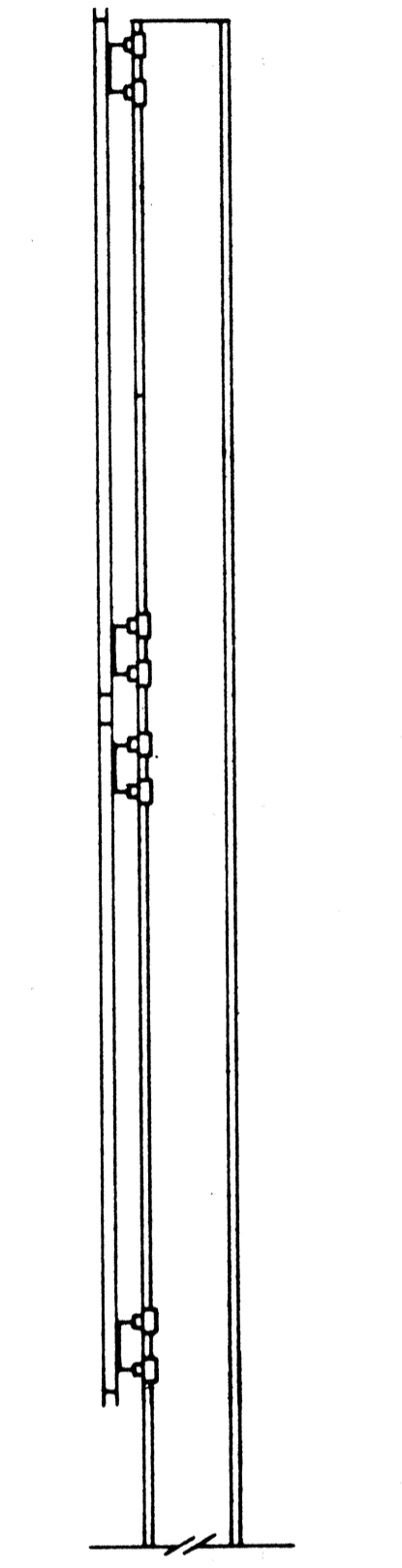
PANEL THICK.	LENGTH OF SIGN	NO. OF SUPPORTS	OVERHANG		SUPPORT SPACING
			A	B	
1"	6'-0"	2	12"	48"	
1"	6'-6"	2	15"	48"	
1"	7'-0"	2	15"	54"	
1"	7'-6"	2	18"	54"	
1"	8'-0"	2	18"	60"	
1"	8'-6"	2	20"	62"	
1"	9'-0"	2	22"	64"	
1"	9'-6"	2	23"	68"	
1"	10'-0"	2	24"	72"	
1"	10'-6"	2	24"	78"	
1"	11'-0"	2	24"	84"	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



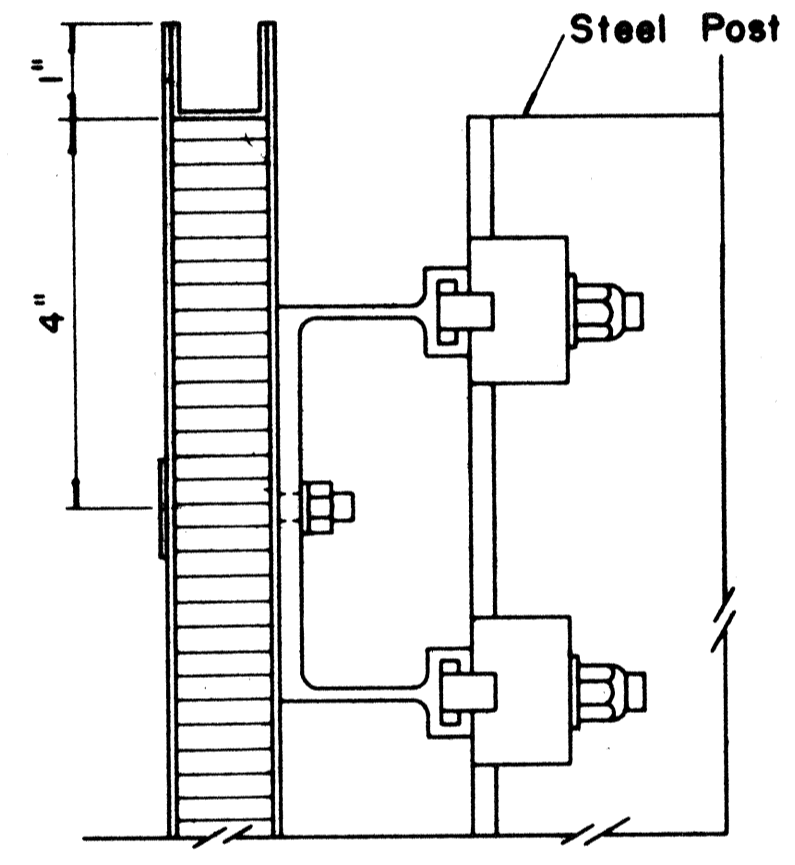
TYPICAL SIGN ASSEMBLY
Scale: 3/4" = 1'-0"



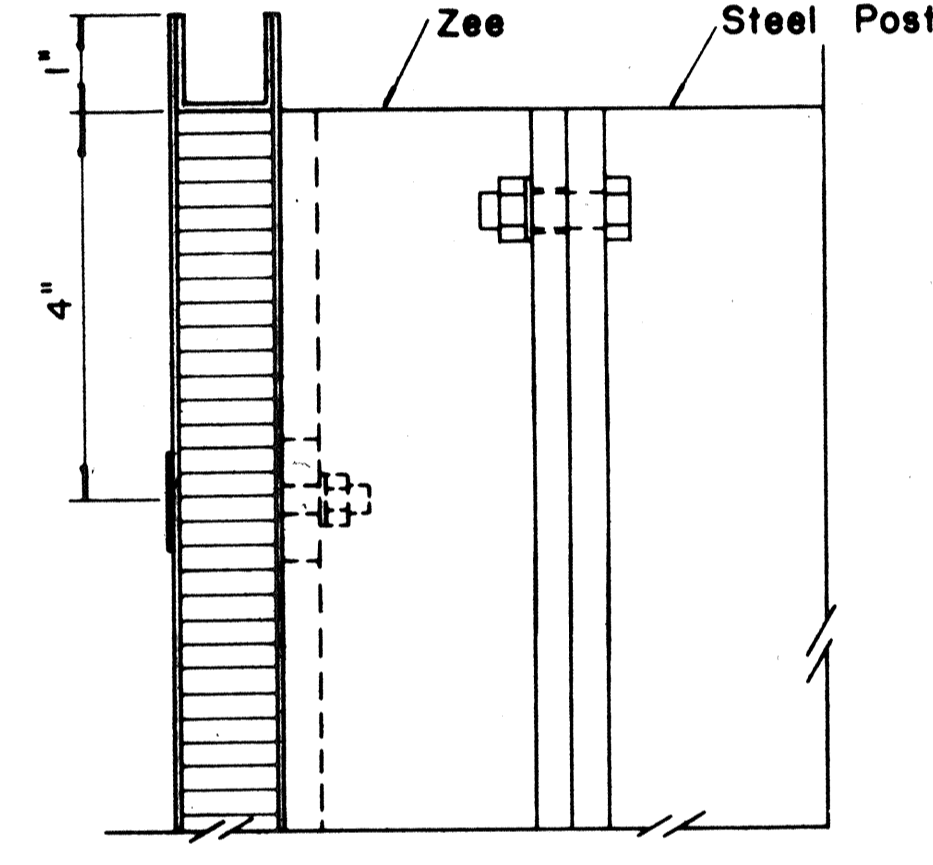
ZEE MOUNTING DETAILS
Scale: 1/2" = 1"



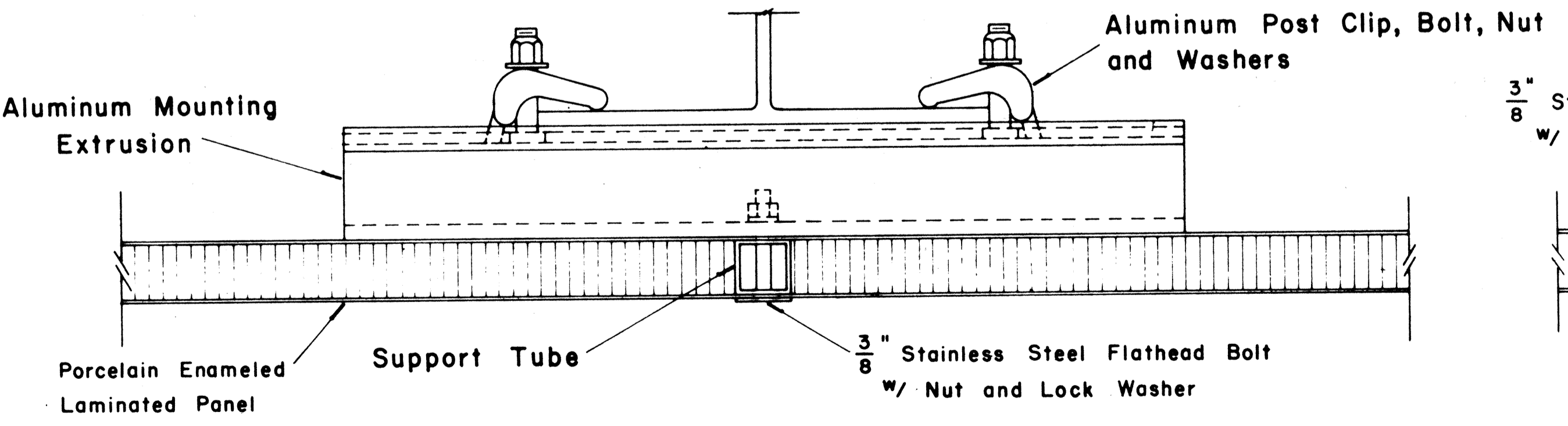
SIDE VIEW



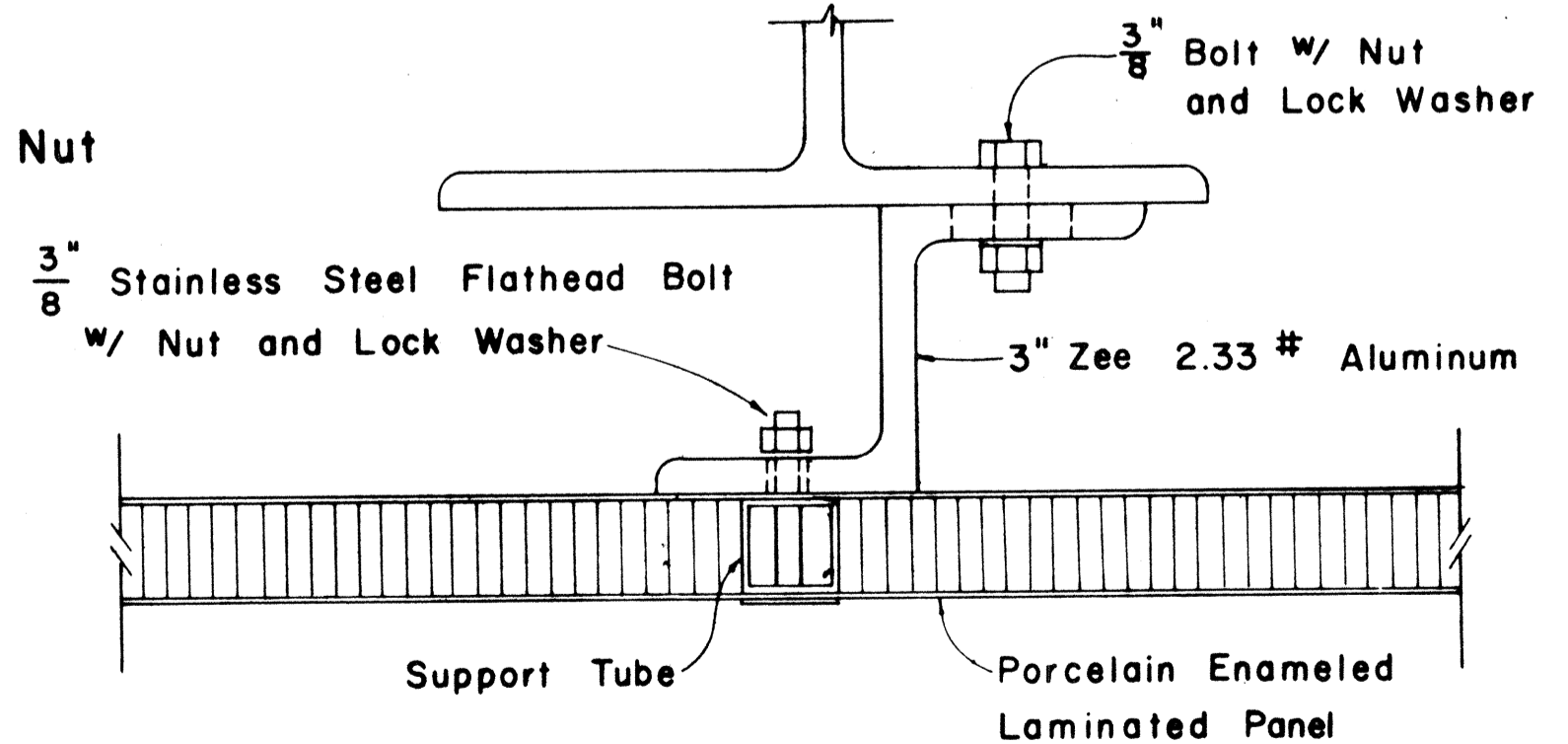
SECTION "B-B"
Scale: 1/2" = 1"



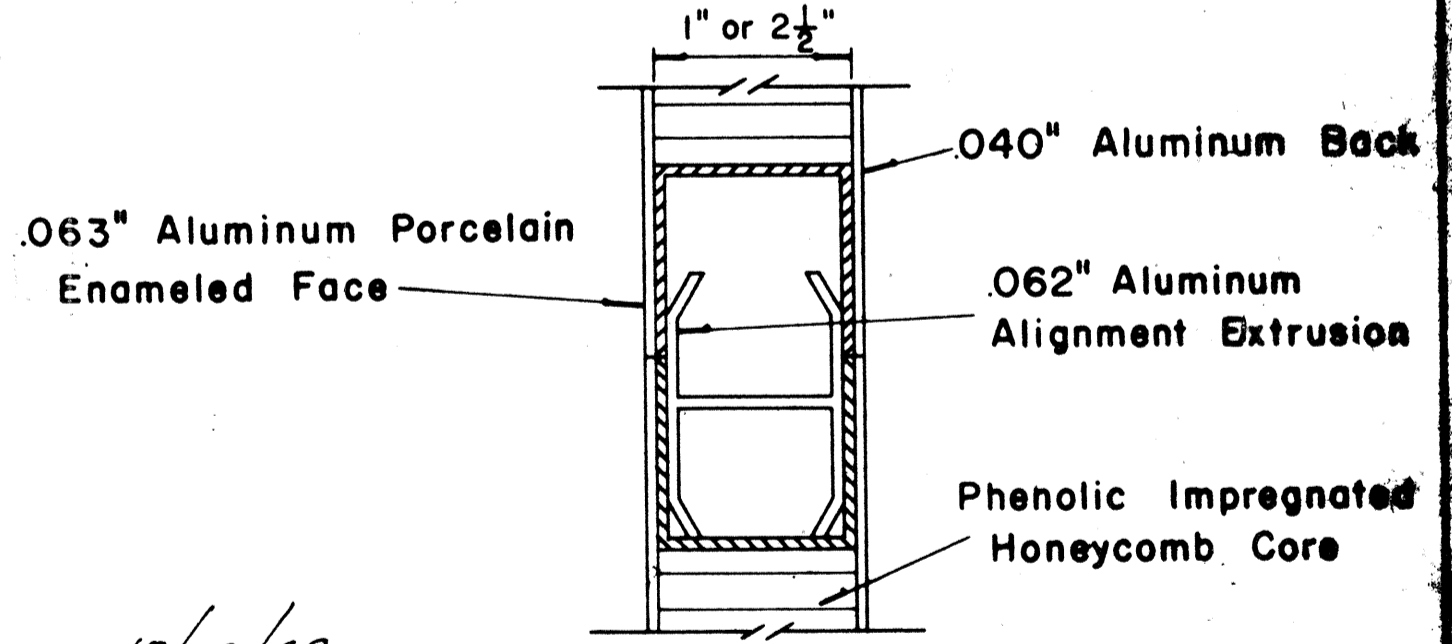
SECTION "B-B" (Alternate)
Scale: 1/2" = 1"



SECTION "A-A"
Scale: 1/2" = 1"



SECTION "A-A" (Alternate)
Scale: 1/2" = 1"



CLOSURE DETAIL SECTION "C-C"
FULL SCALE

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

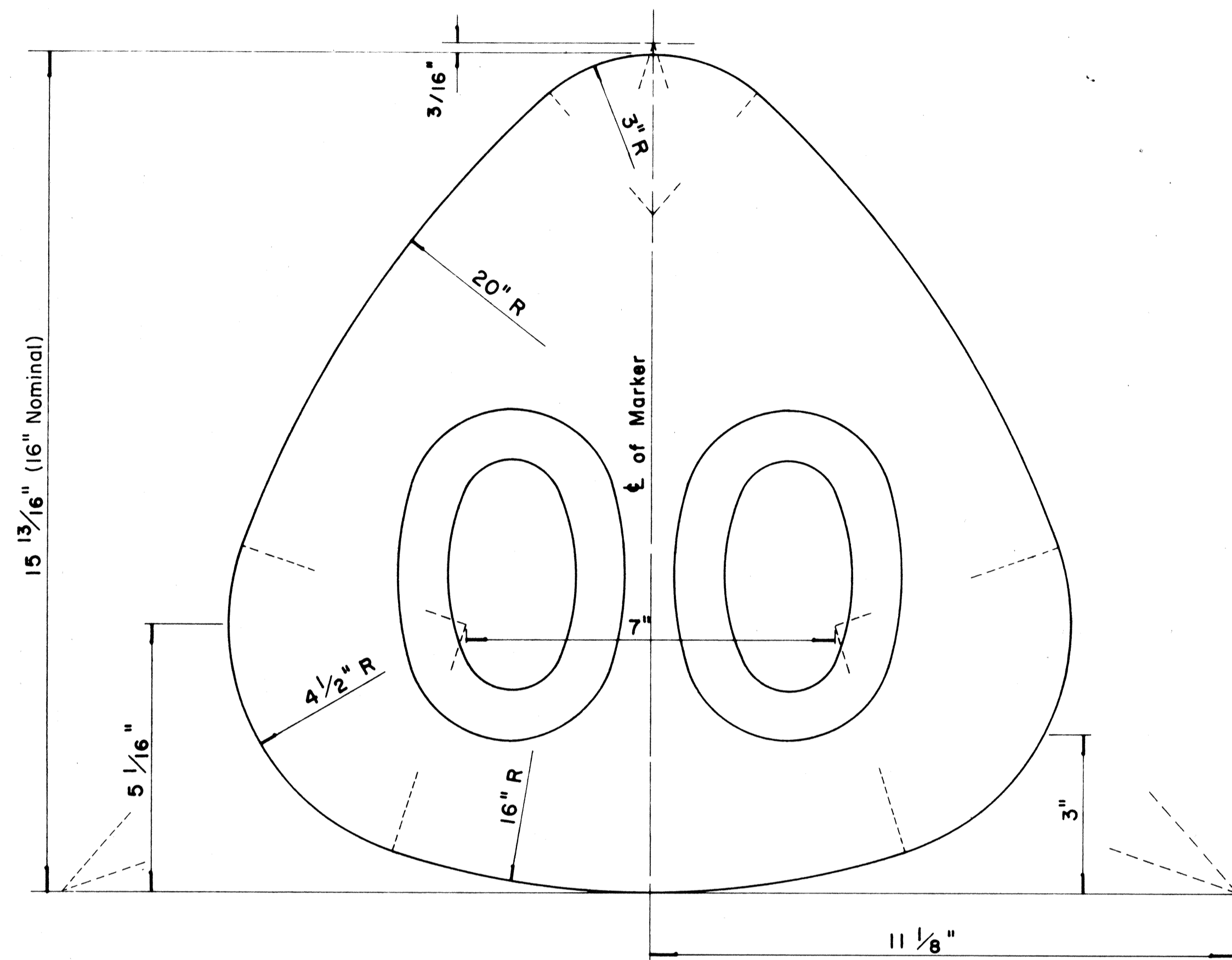
APPROVED:
Andy S. S. S.
ASSISTANT CHIEF, ENGINEERING
12-30-69
DATE

NO.	REVISION	APPROVED BY	DATE

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

SURVEY PLOTTED BY _____ DATE _____
 DRAWN BY _____
 CHECKED BY _____
 QUANTITIES 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**

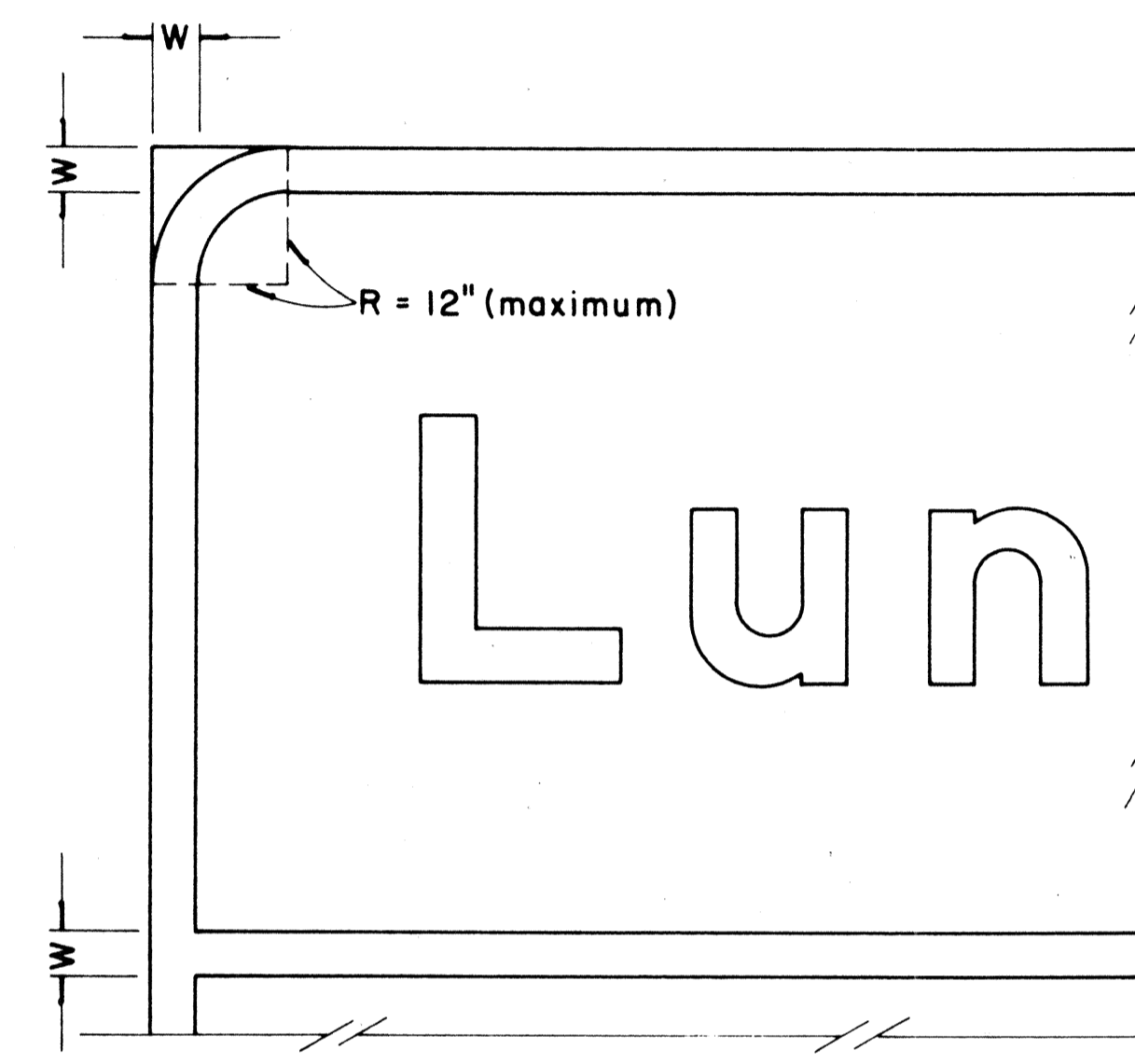
Scale: Half Size

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.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI(103)H	1980	93	131

RADI 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:

Etsuki 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	HT	4/12/72
2	Revised Notes and Schedules	HT	9-14-70

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

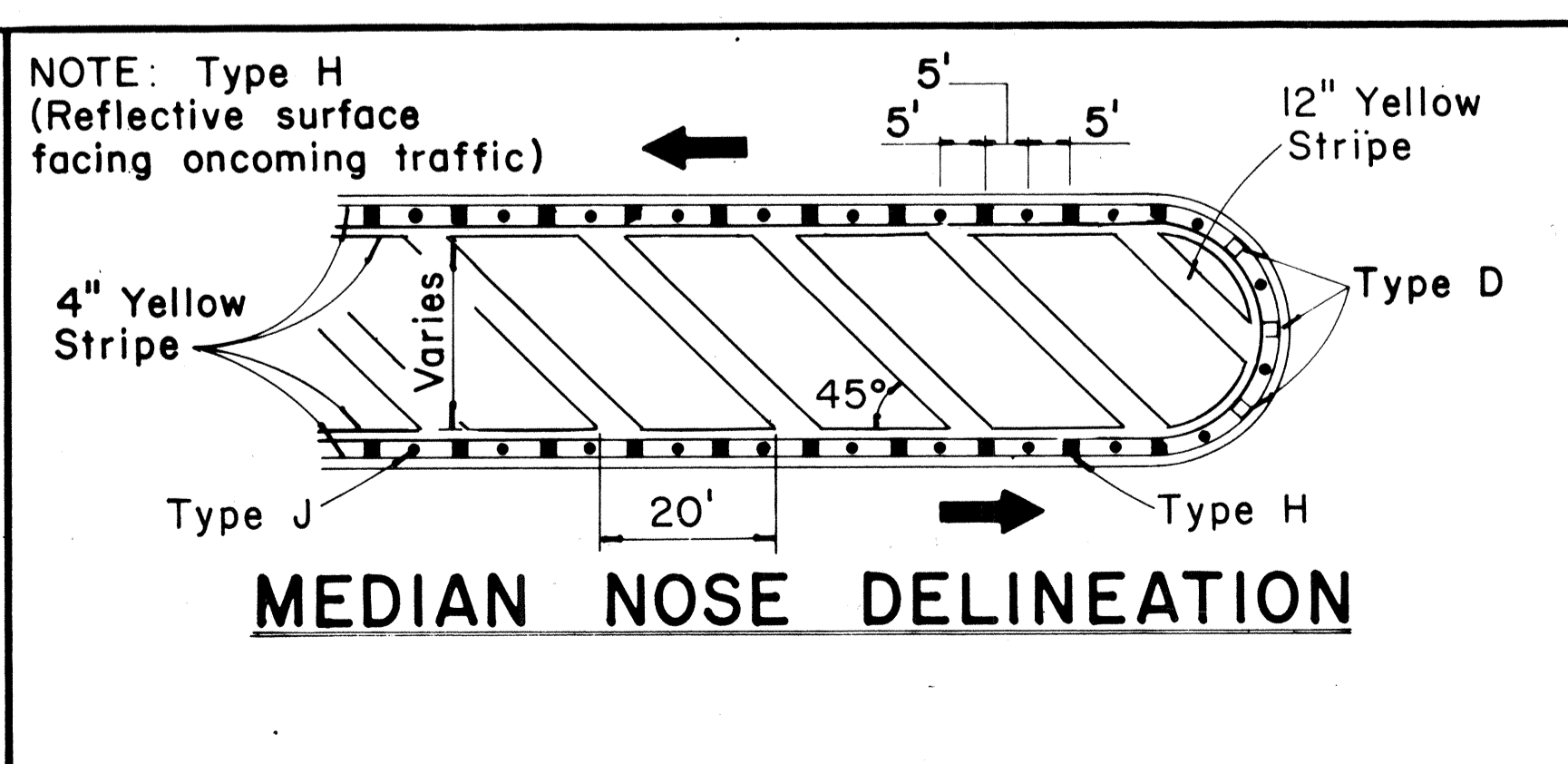
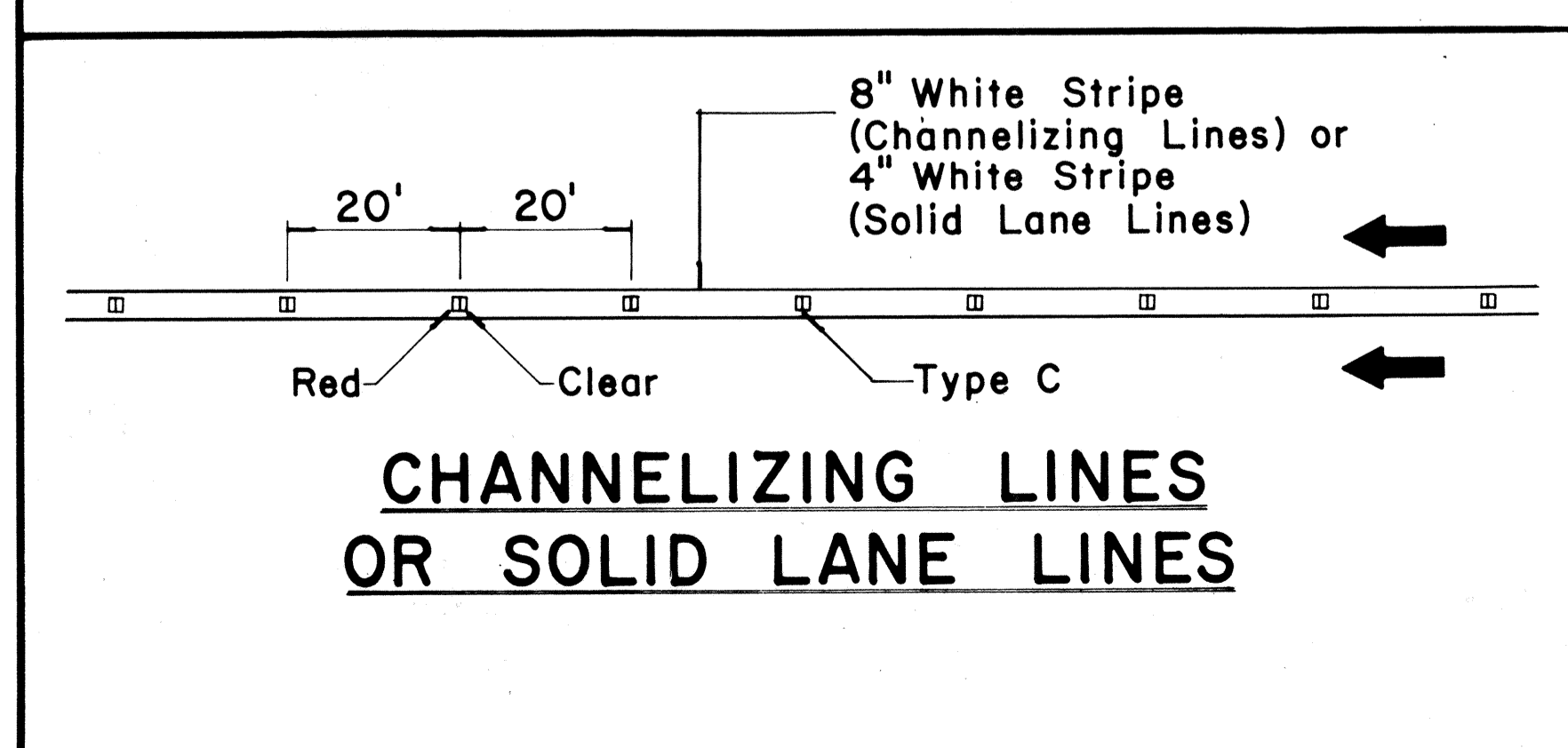
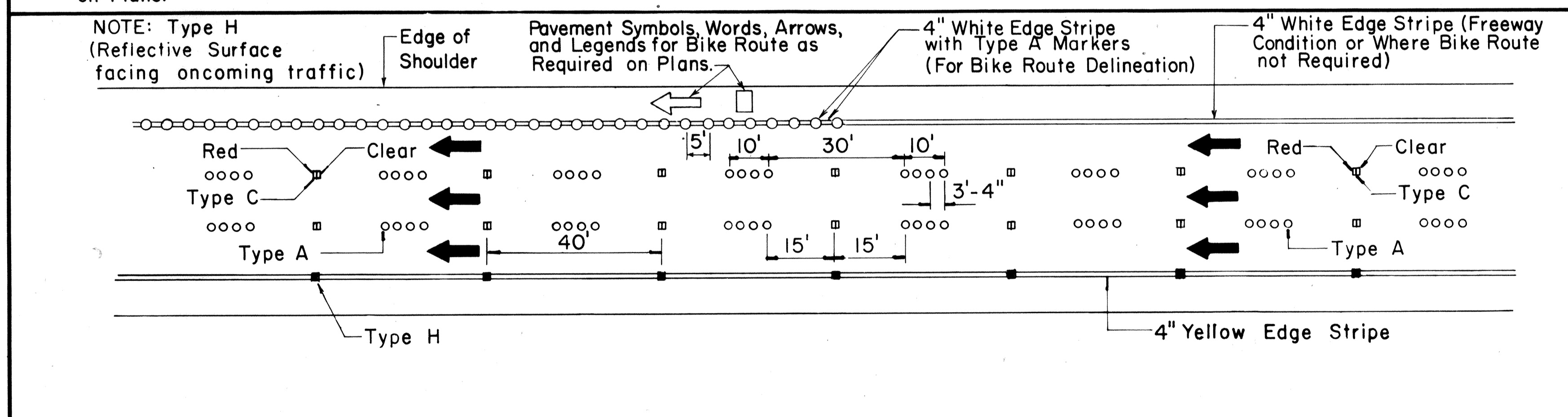
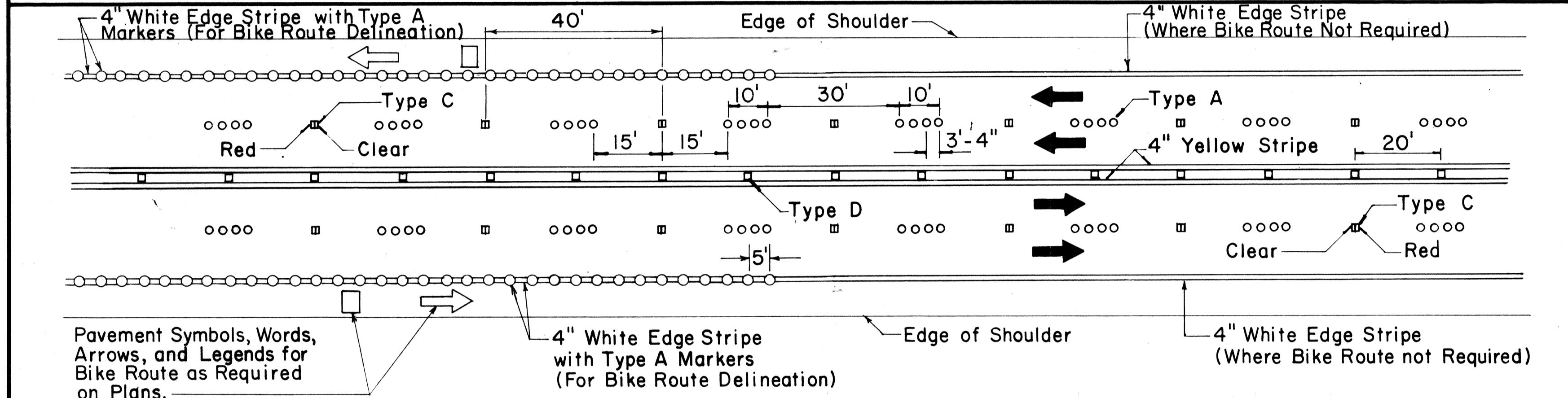
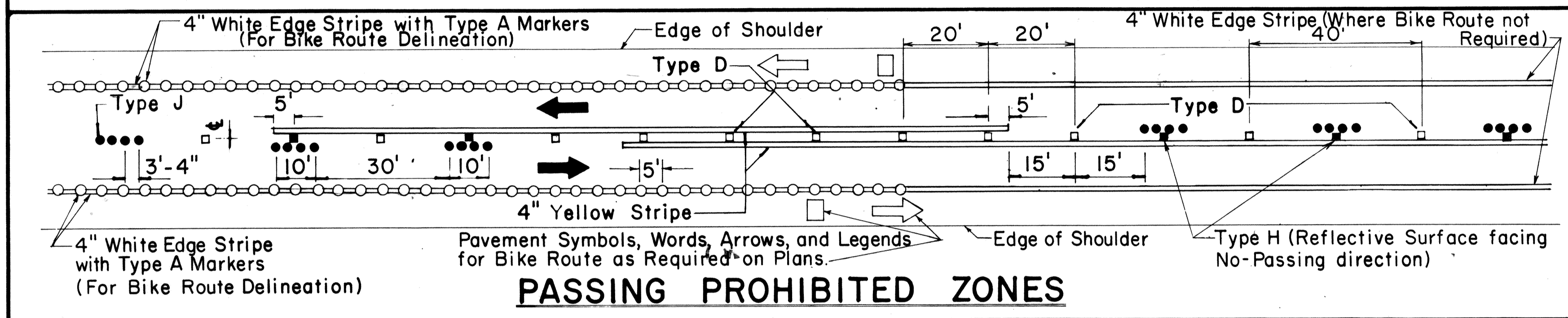
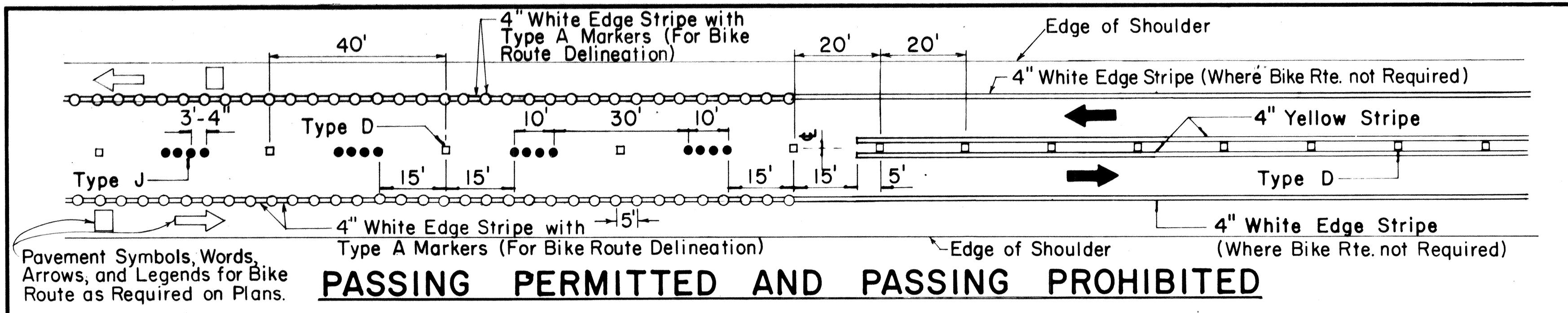
**STATE ROUTE MARKER
AND BORDER DETAIL
FOR GUIDE SIGNS**

Scale: As Shown

SHEET No. 15 OF 22 SHEETS DT 209

DATE	
DESIGNED BY	
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	[H-11(199)]	1980	94	131

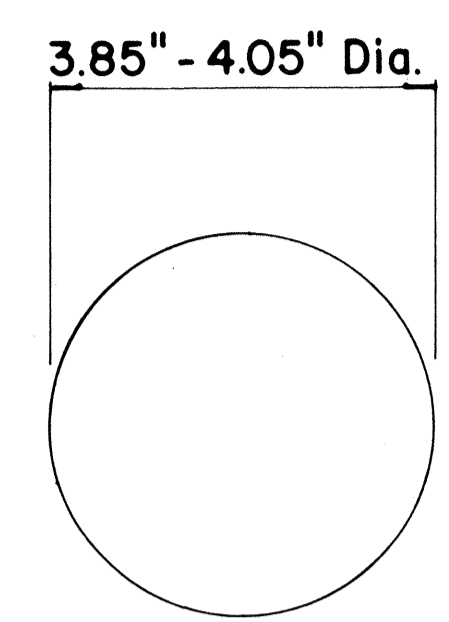


TWO - LANE

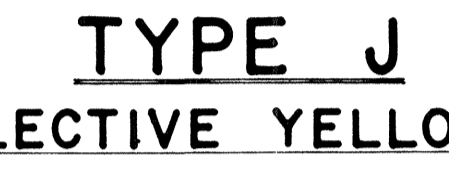
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

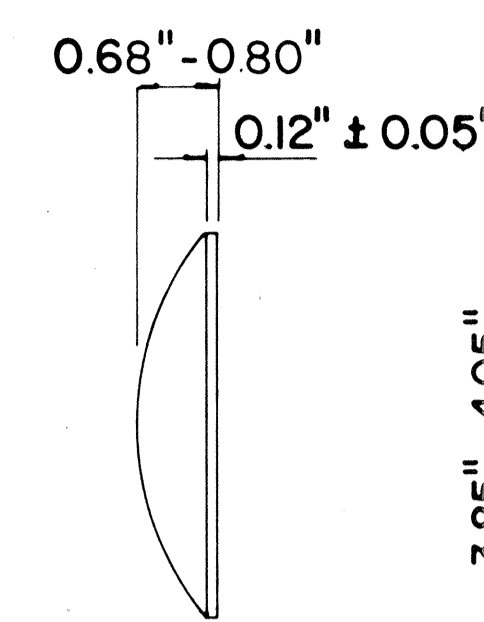
MISCELLANEOUS



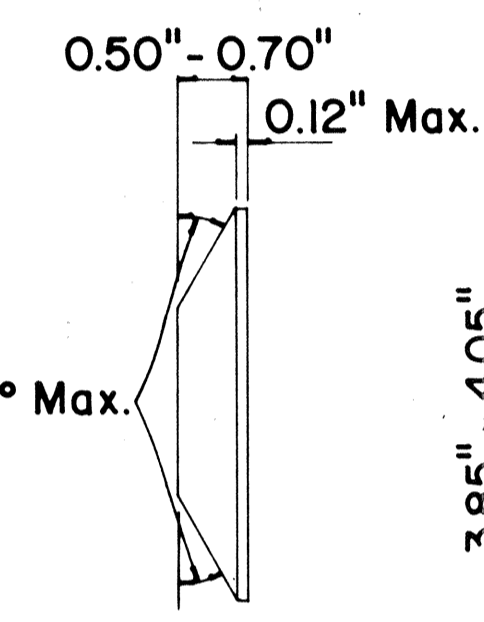
TYPE A
NON-REFLECTIVE WHITE MARKER



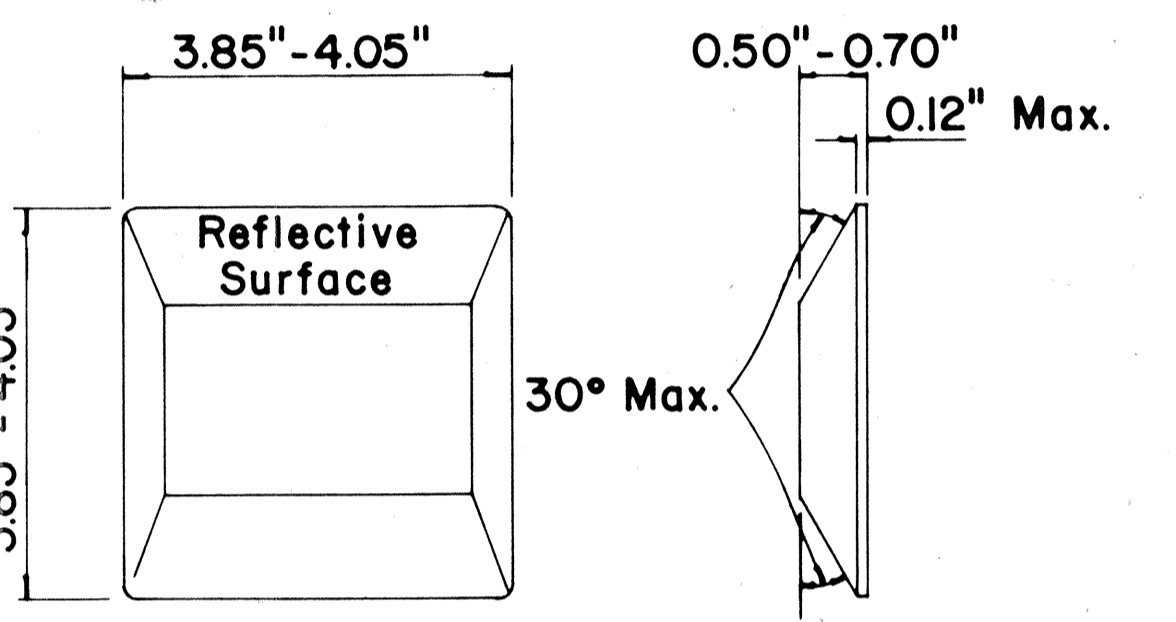
TYPE J
NON-REFLECTIVE YELLOW MARKER



TYPE C
RED-CLEAR REFLECTIVE MARKER



TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER



TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER

GENERAL NOTES

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

LEGEND

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

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

APPROVED:
Robert J. Zaki 7/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

No.	REVISION	APPROVED BY	DATE
1	Supersedes DT 300 approved 11/18/71.	H.f.	7/24/78

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

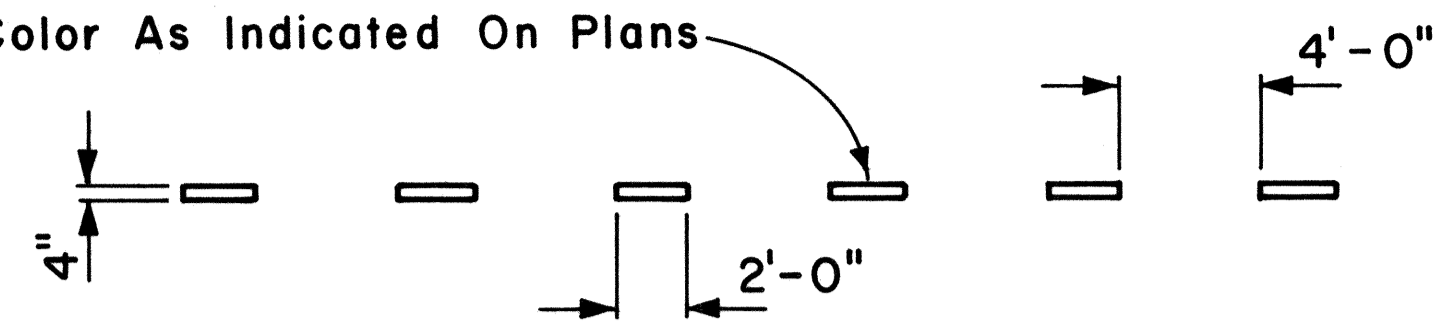
STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

Not to Scale July 1978
 SHEET No. 16 OF 22 SHEETS DT 300

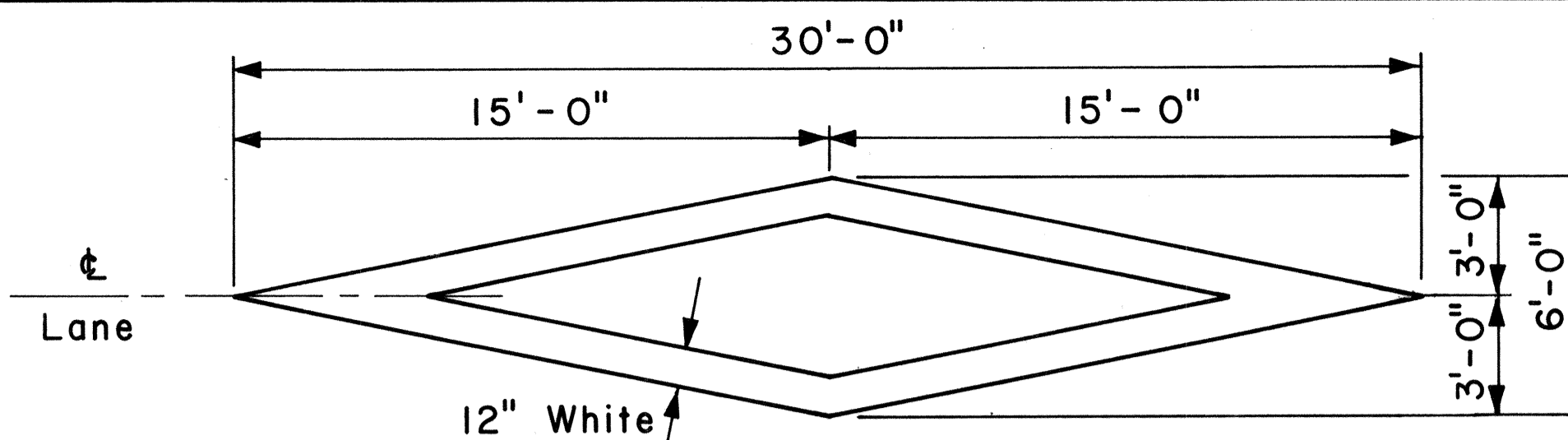
SURVEY PLOTTED BY: _____ DATE: _____
 ORIGINAL PLAN: _____
 DESIGNED BY: _____
 NOTE BOOK: _____
 QUANTITIES BY: _____
 CHECKED BY: _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-11-1020-1	1980	25	131

Color As Indicated On Plans



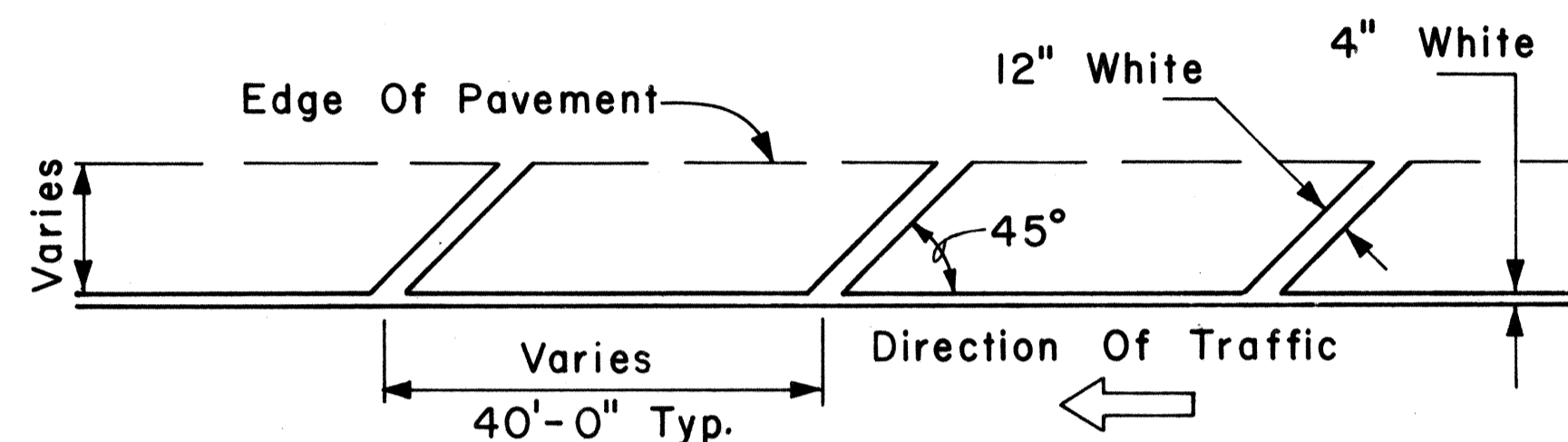
4" GUIDE LINE



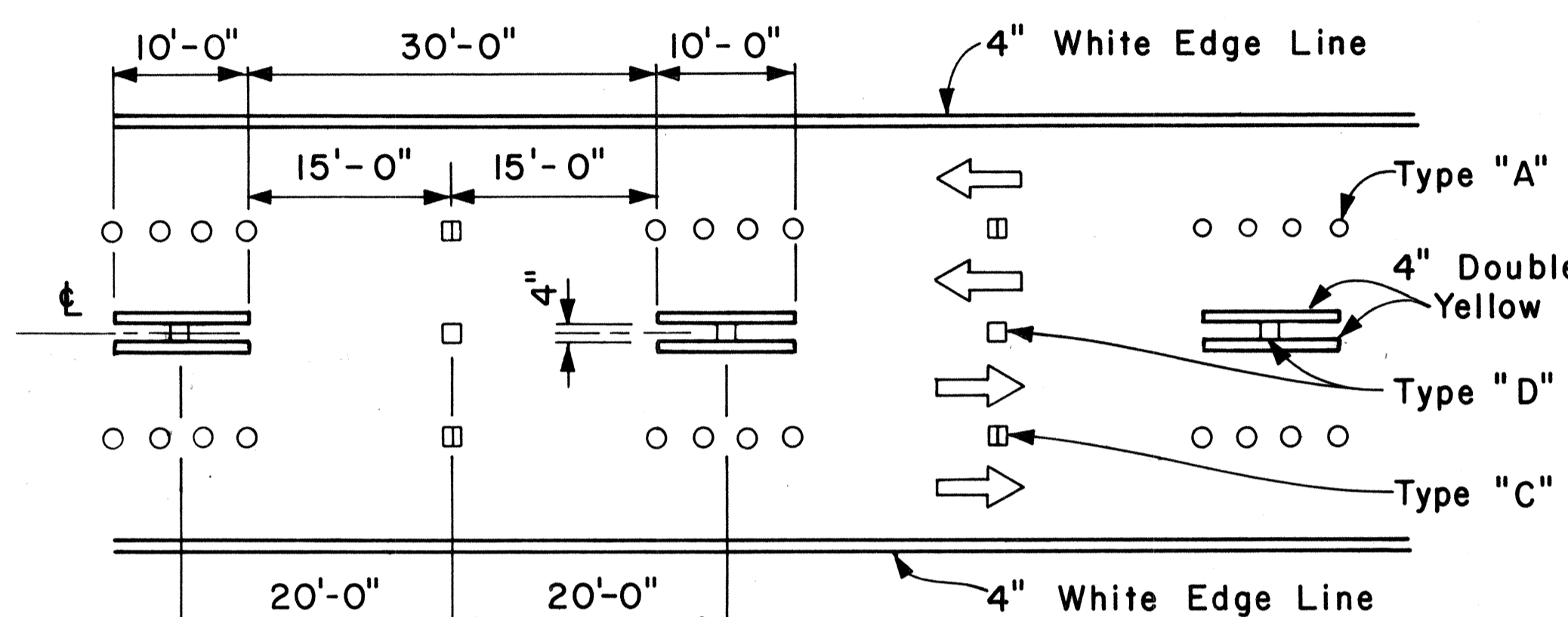
PAVEMENT DIAMOND

GENERAL NOTES:

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

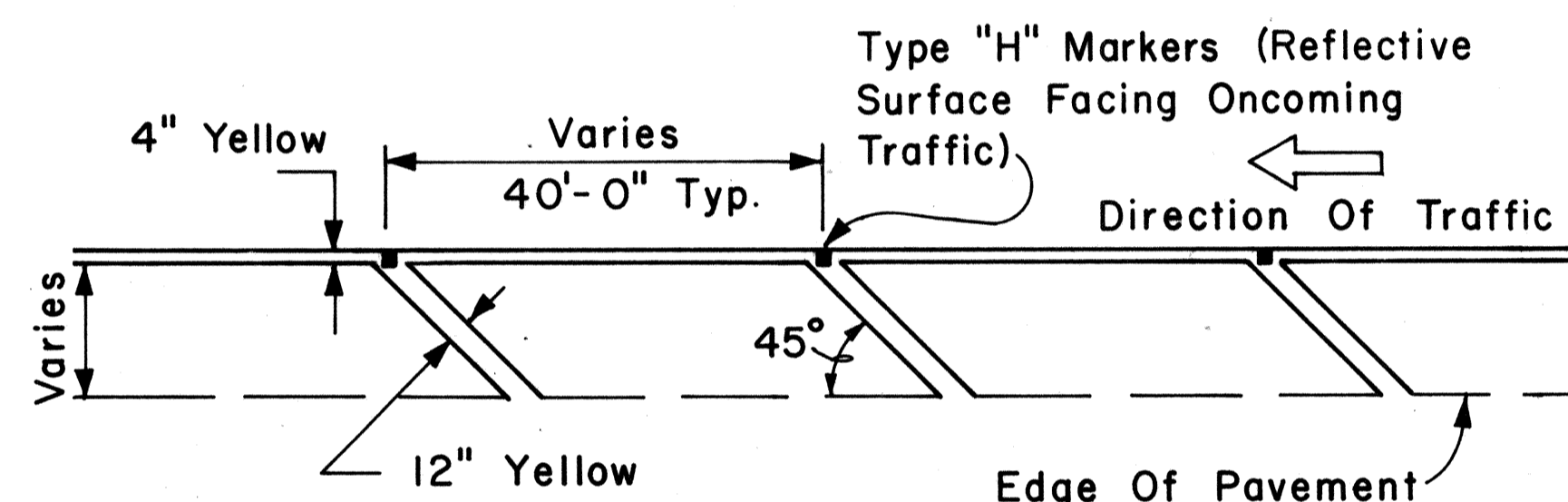


TRANSVERSE RIGHT SHOULDER MARKING

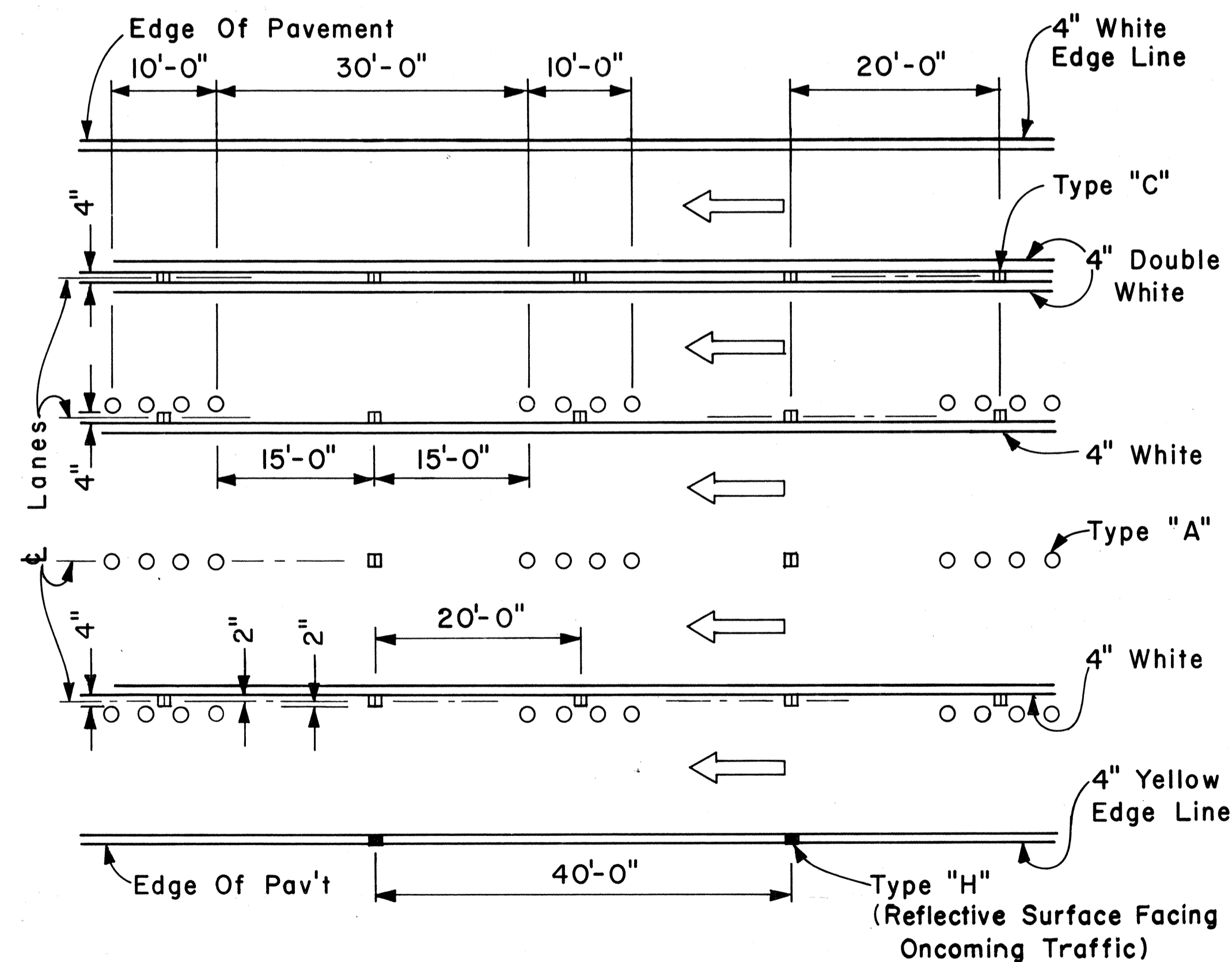


NOTE: Traffic Cone Usage Required.

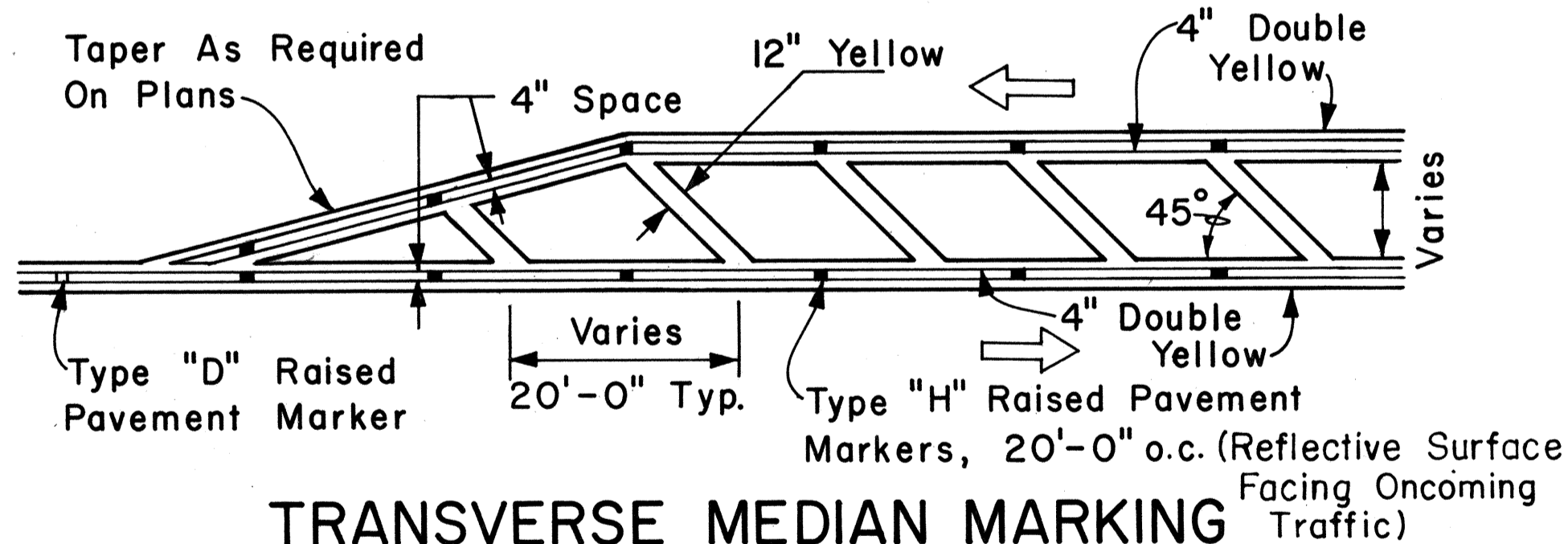
MULTI-LANE REVERSIBLE LANES



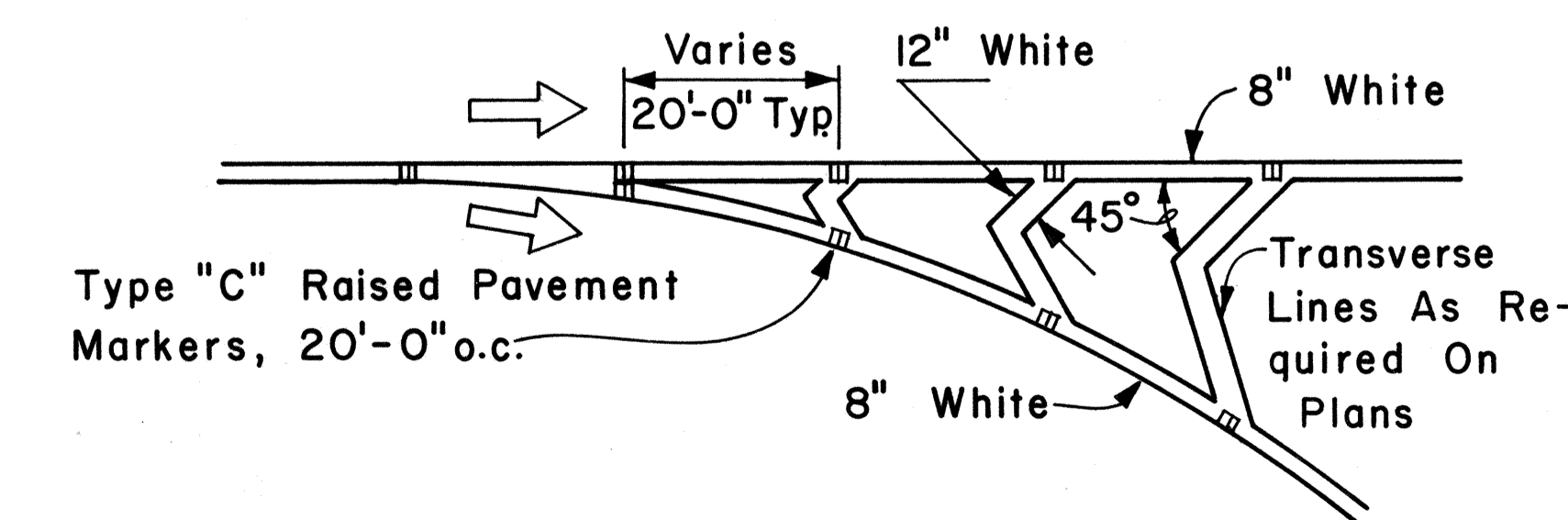
TRANSVERSE LEFT SHOULDER MARKING



MULTI-LANE LANE CHANGE RESTRICTION ZONES



TRANSVERSE MEDIAN MARKING



CHANNELIZING ISLAND

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

APPROVED:
Harbor 2. Zafraich 5/3/78
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
 MISCELLANEOUS
 PAVEMENT MARKINGS
 Scale: Not to Scale Date: April, 1978
 SHEET No. 17 OF 22 SHEETS DT 302

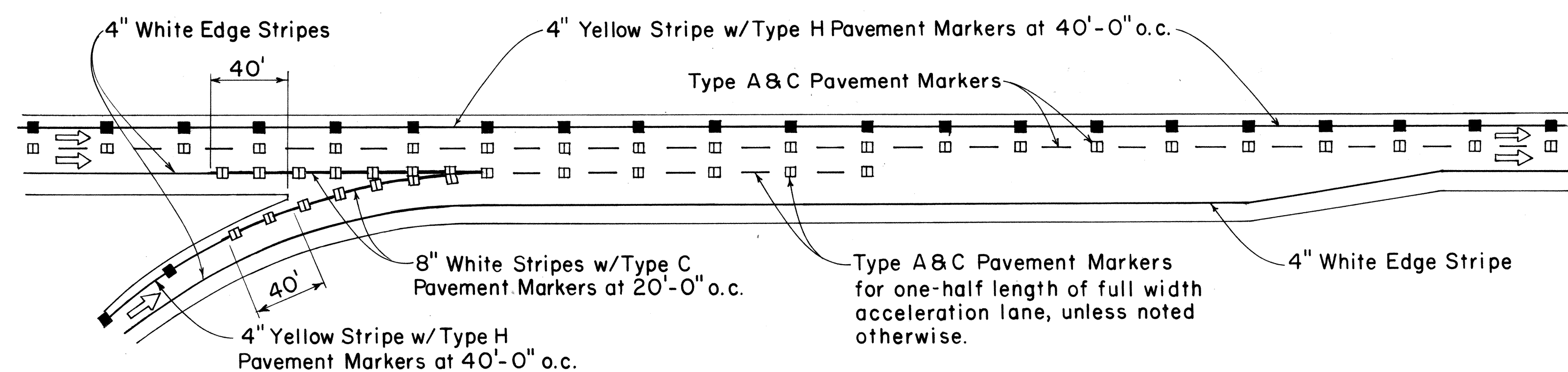
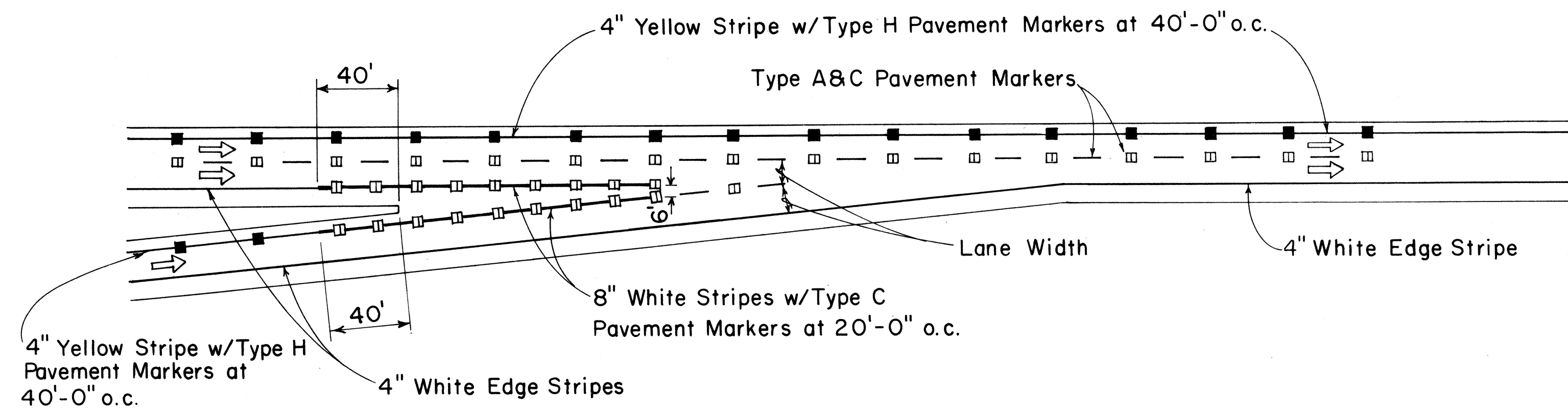
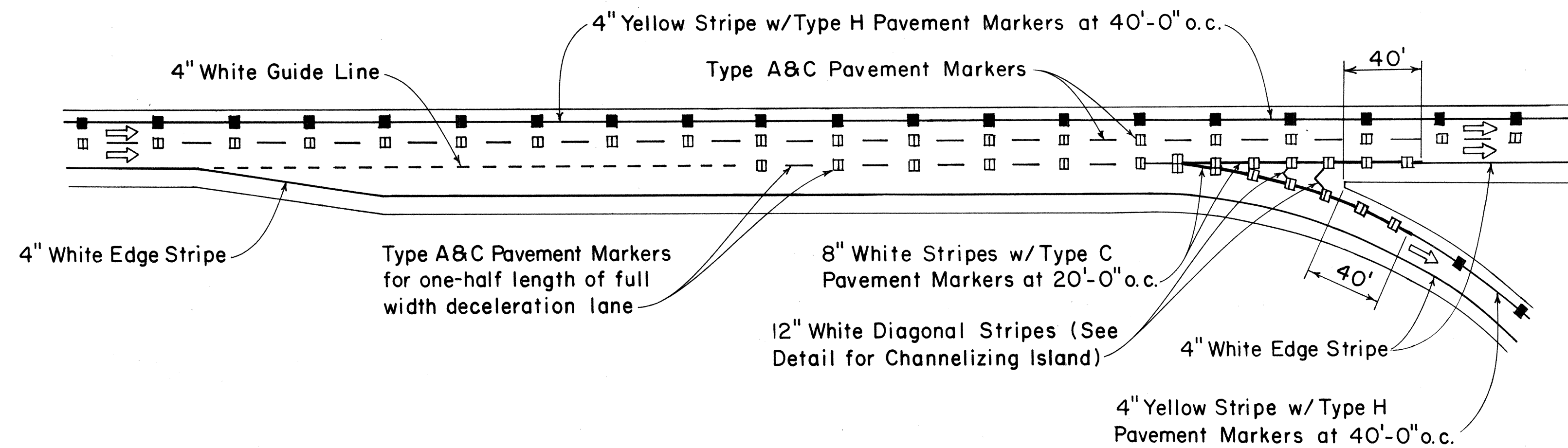
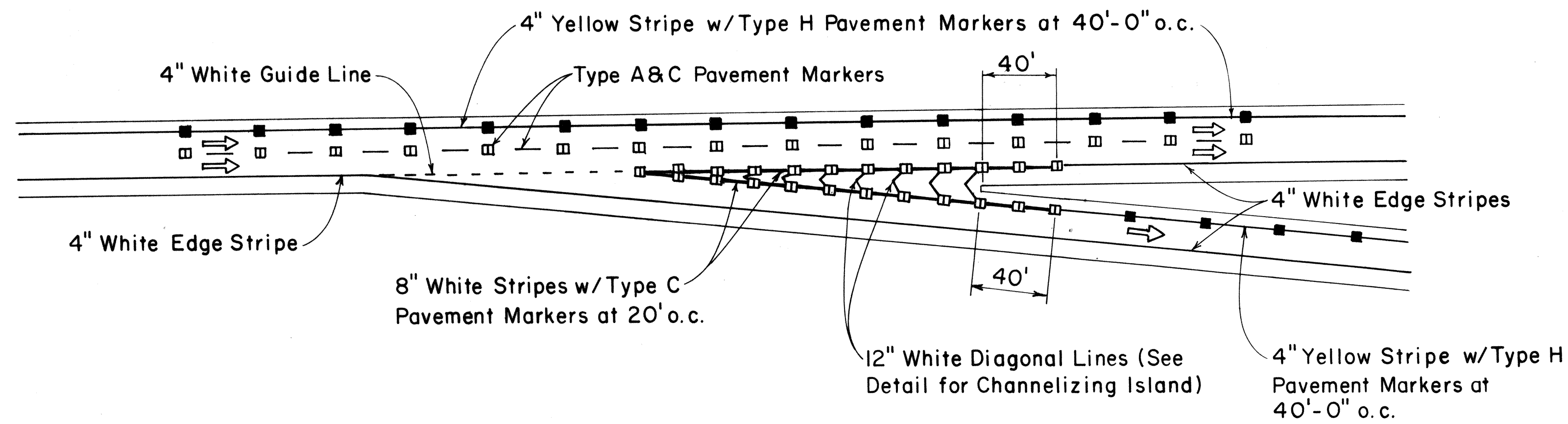
ORIGINAL PLAN
 SURVEY PLOTTED BY
 DATE
 TRACED BY
 DESIGNED BY
 NOTE BOOK
 QUANTITIES BY
 CHECKED BY
 No.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	[H-117]	1980	96	131

GENERAL NOTES:

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

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



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

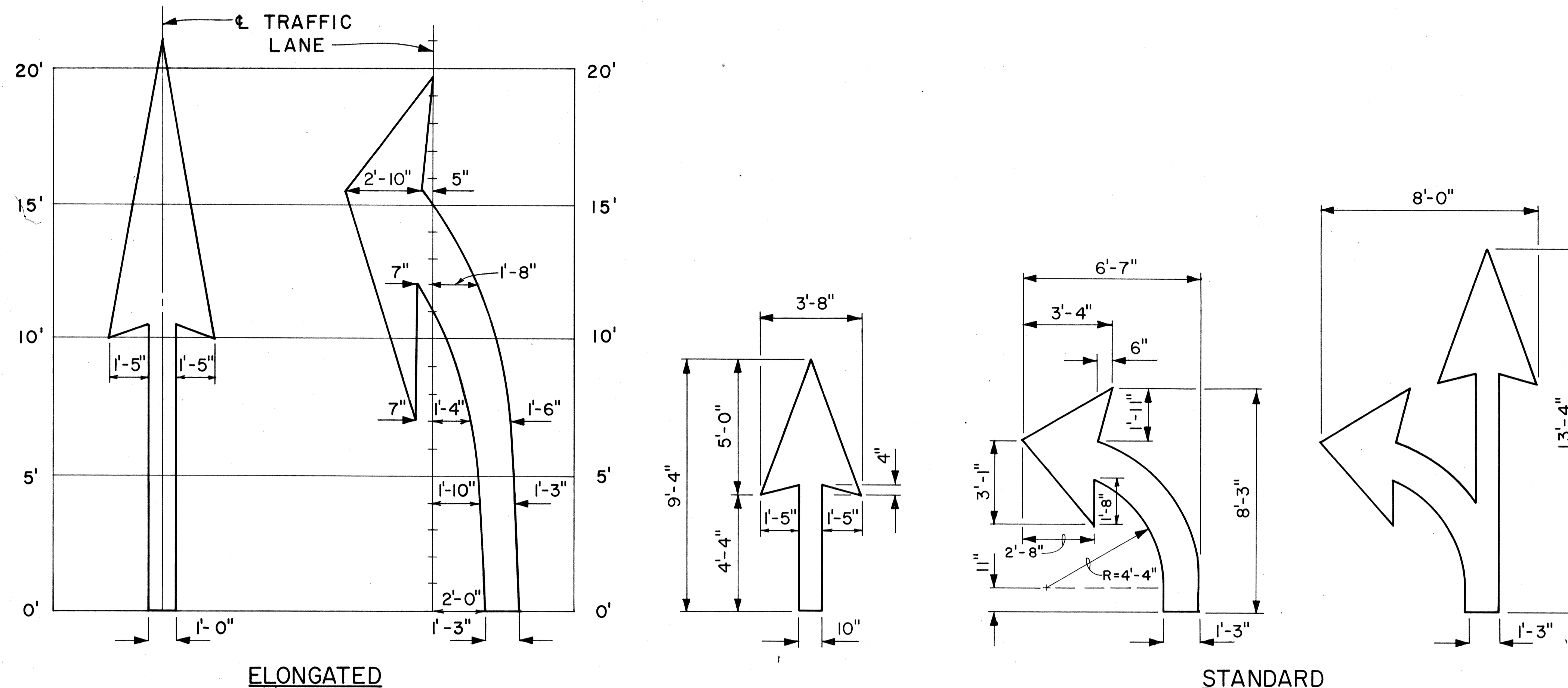
APPROVAL RECOMMENDED:
Euske Tanaka 7/21/78
 TRAFFIC ENGINEER DATE

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

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS
 Not to Scale July 1978
 SHEET No. 18 OF 22 SHEETS DT 304

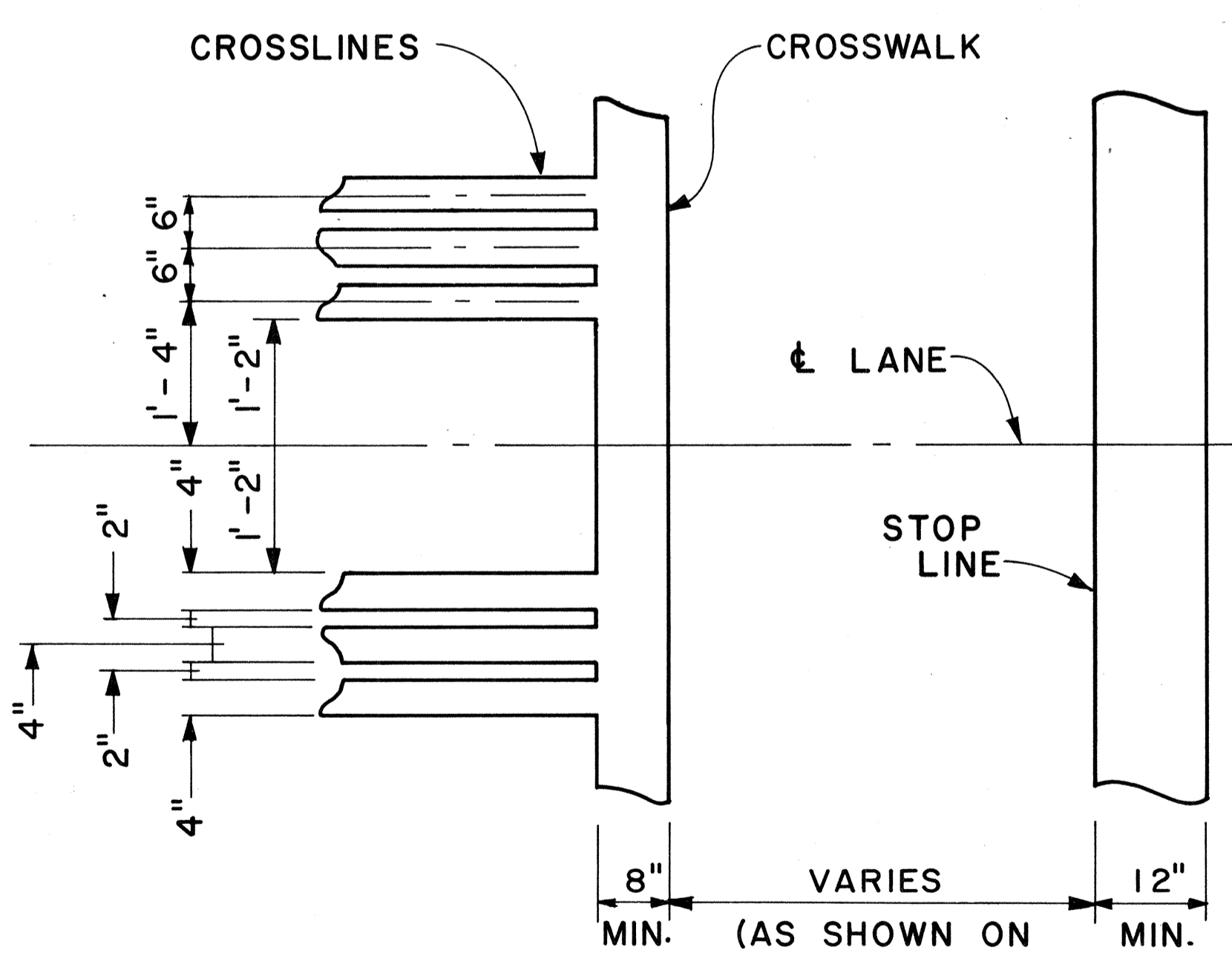
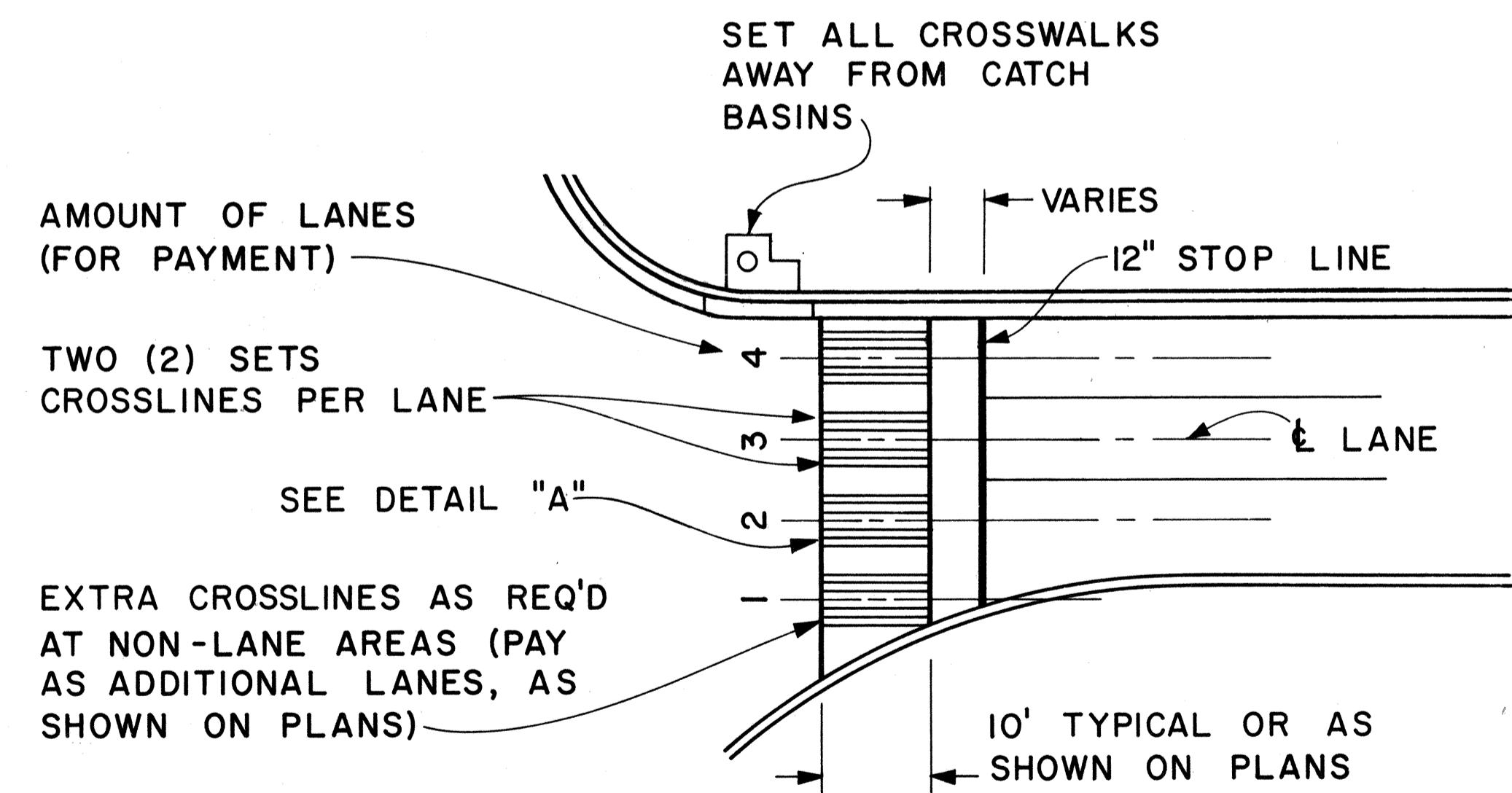
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-(100)-1	1980	97	131



PAVEMENT ARROWS
Scale: 3/8" = 1'

GENERAL NOTES:

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



CROSSWALK & STOP LINE
Scale: Not to Scale

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

APPROVED:
Herbert S. Sakai 5/2/78
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

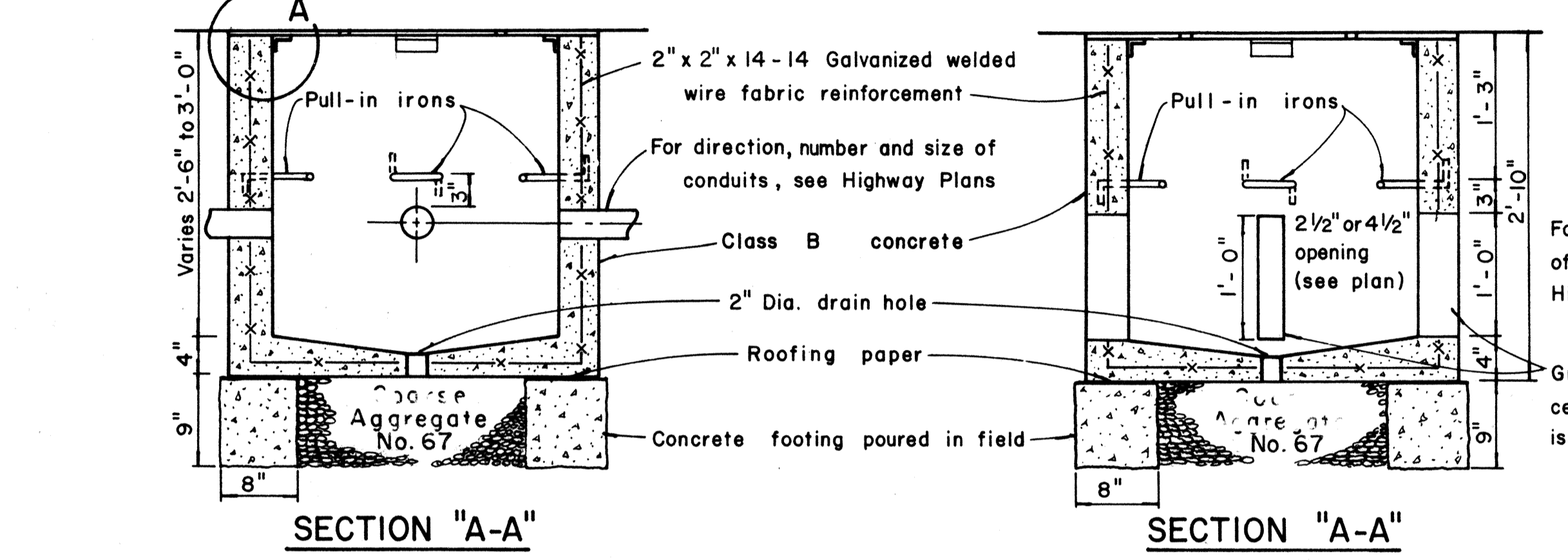
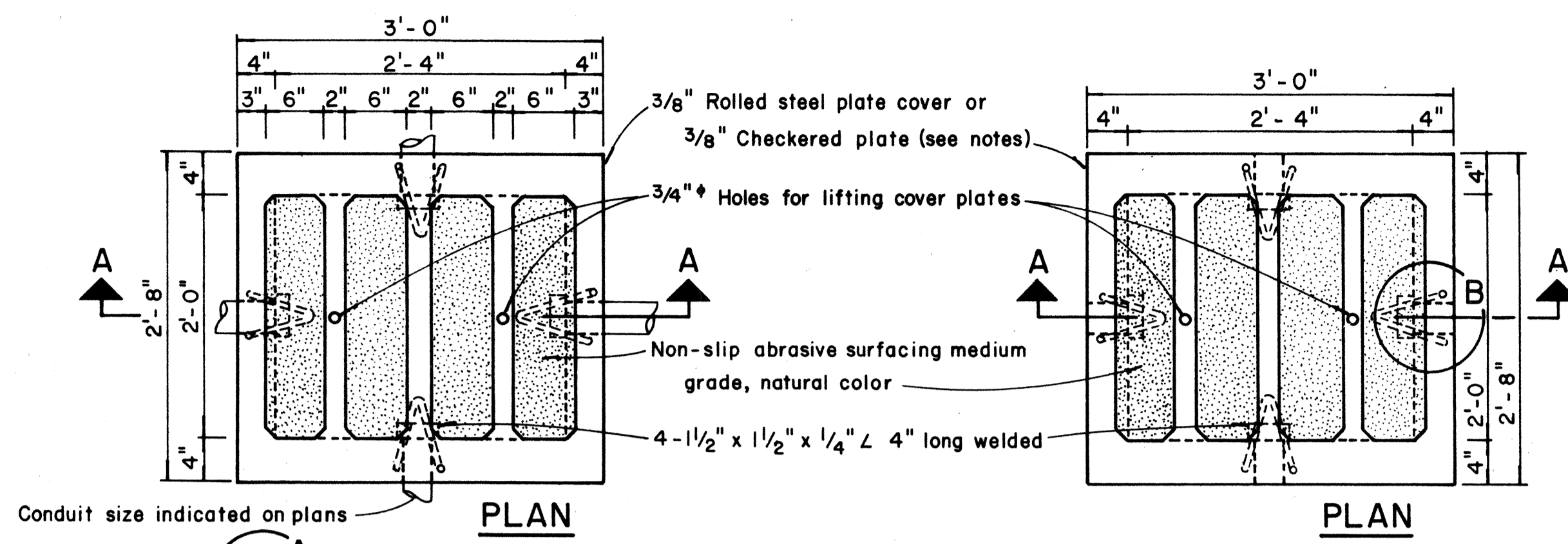
STANDARD DETAILS

MISCELLANEOUS
PAVEMENT MARKINGS

Scale: As Shown Date: March, 1978
SHEET No. 19 OF 22 SHEETS DT 306

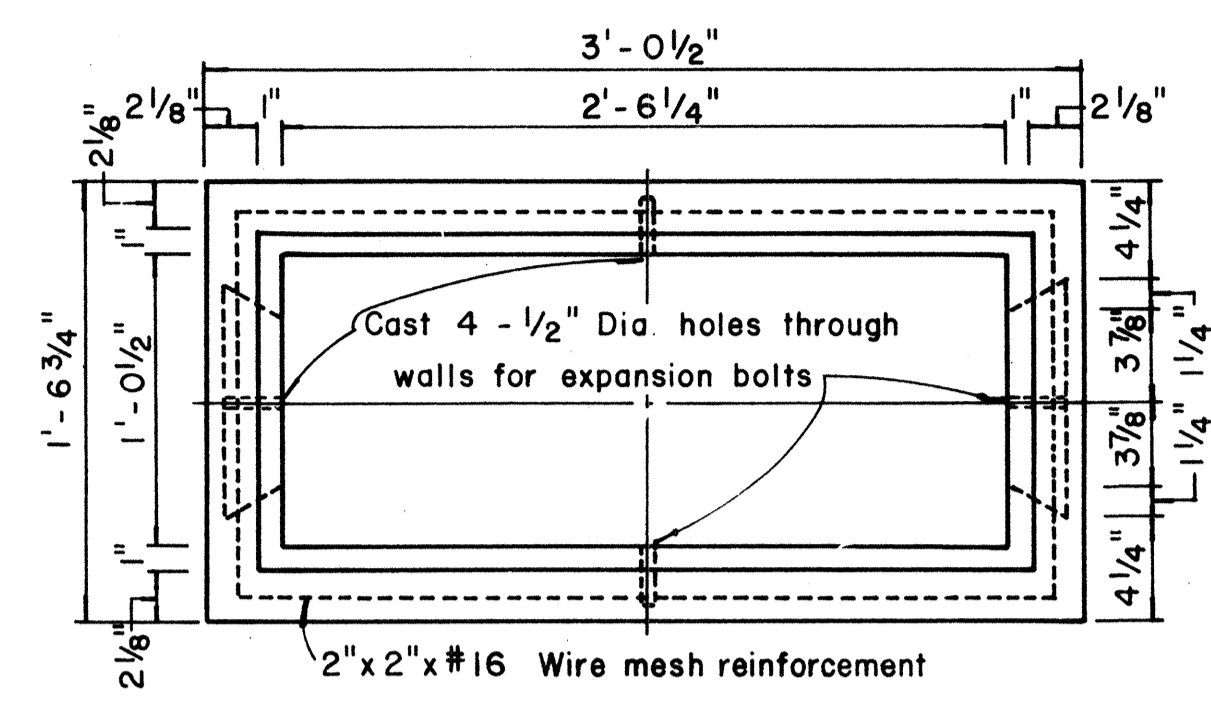
SURVEY PLOTTED BY: _____ DATE: _____
 DRAWN BY: _____
 DESIGNED BY: _____
 QUANTITIES BY: _____
 CHECKED BY: _____
 ORIGINAL PLAN No. _____

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(199)-1	1980	99	131

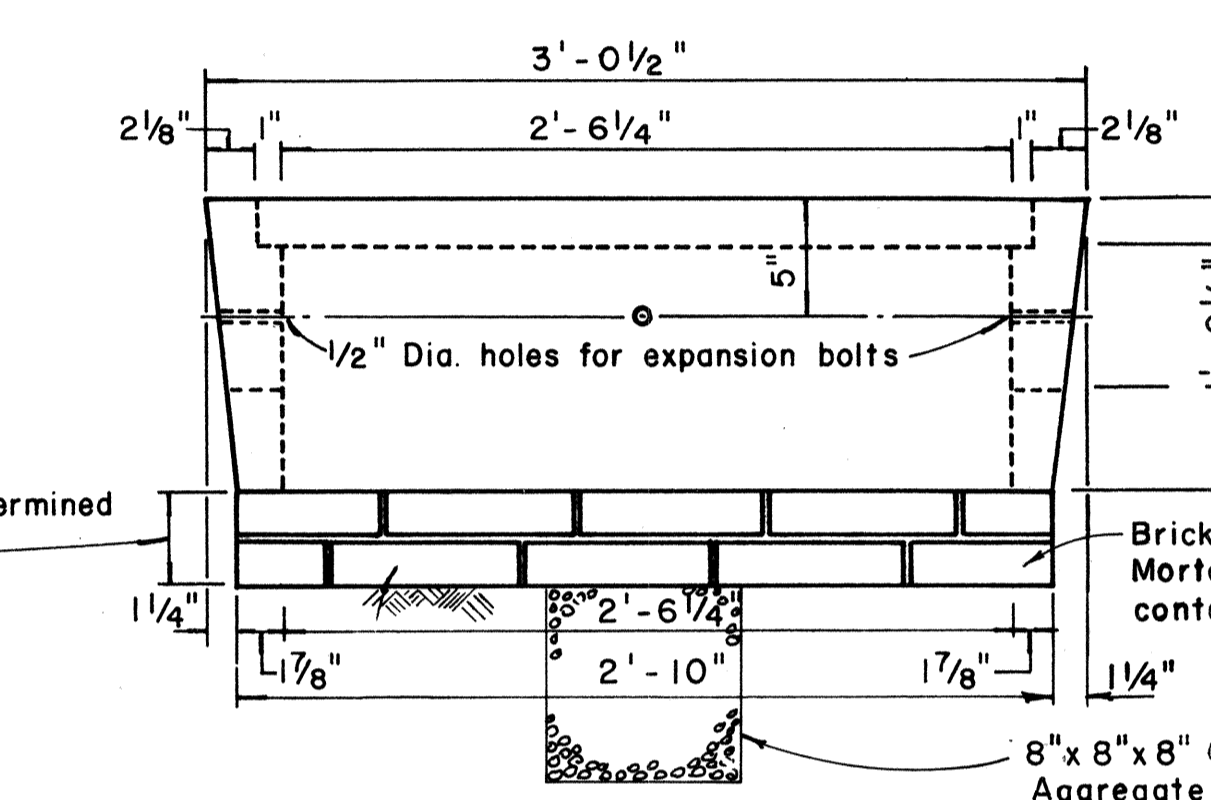


TYPE "A" PULLBOX CAST-IN-PLACE
Scale: 1" = 1'-0"

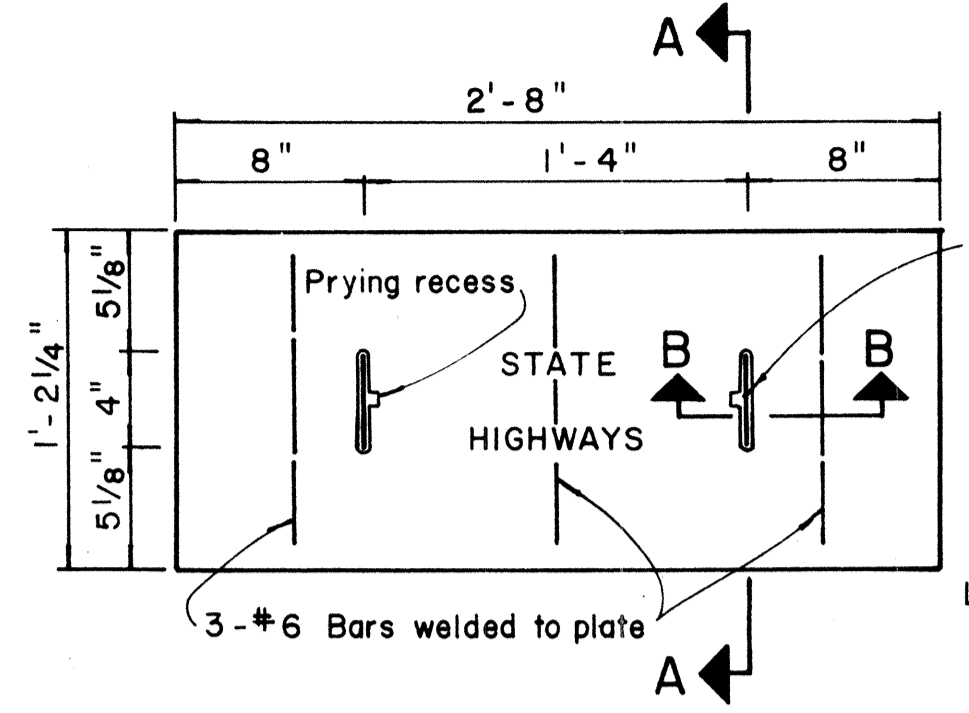
TYPE "A" PULLBOX PRECAST
Scale: 1" = 1'-0"



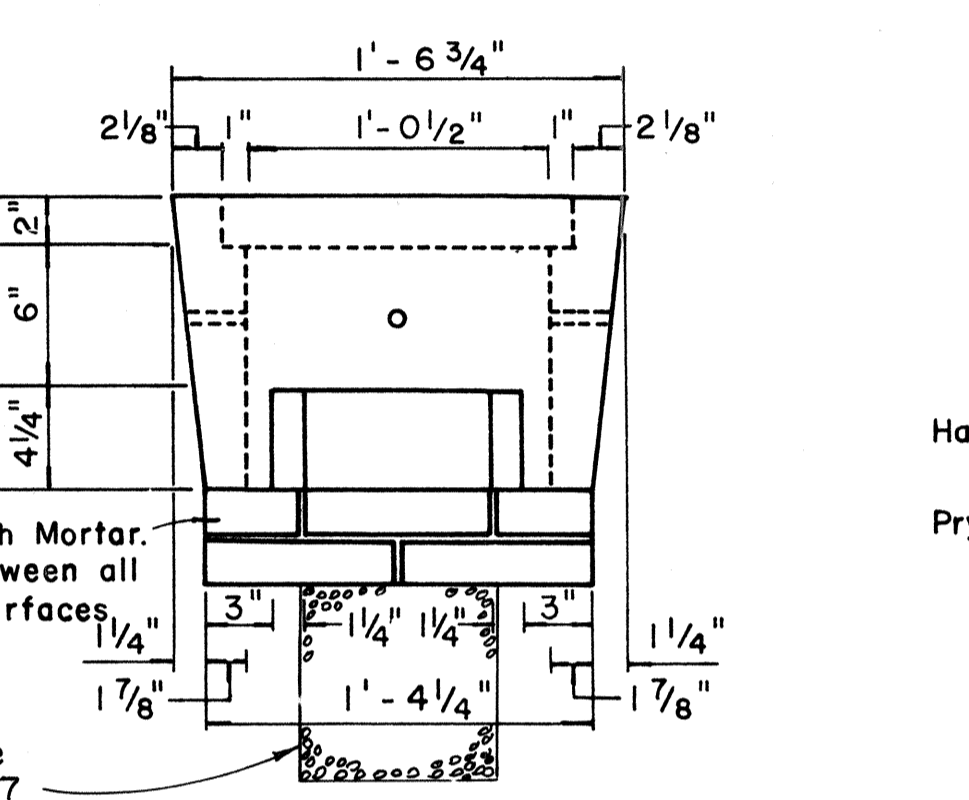
PLAN



SIDE ELEVATION

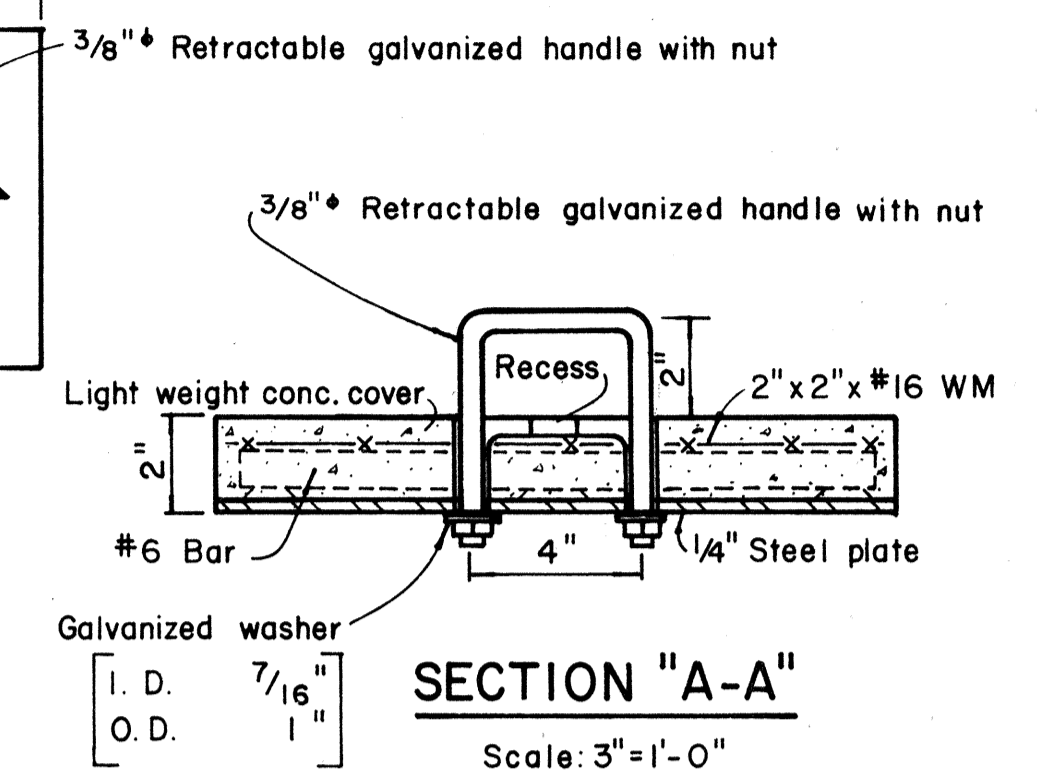


PLAN OF COVER

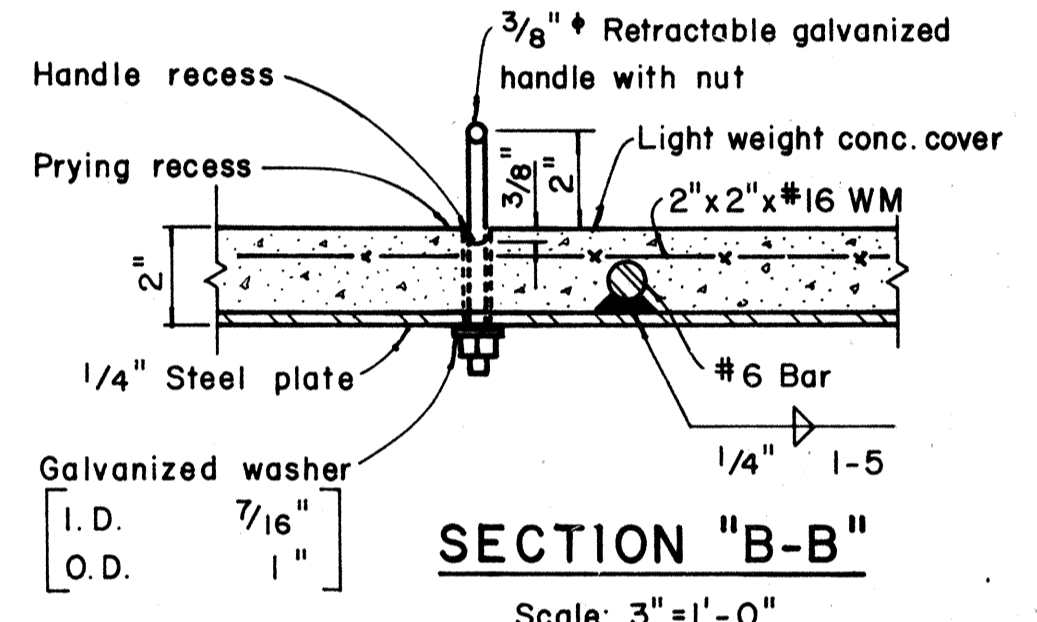


END ELEVATION

TYPE "C" PULLBOX
Scale: 1/2" = 1'-0"

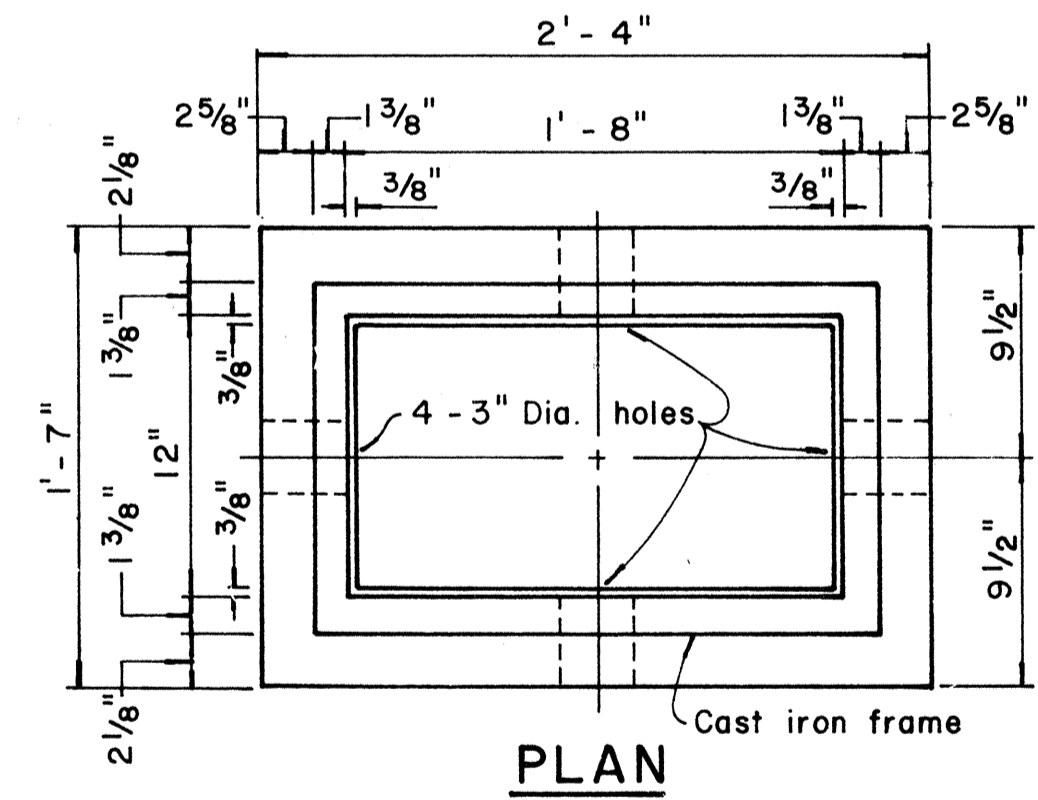


SECTION "A-A"
Scale: 3" = 1'-0"

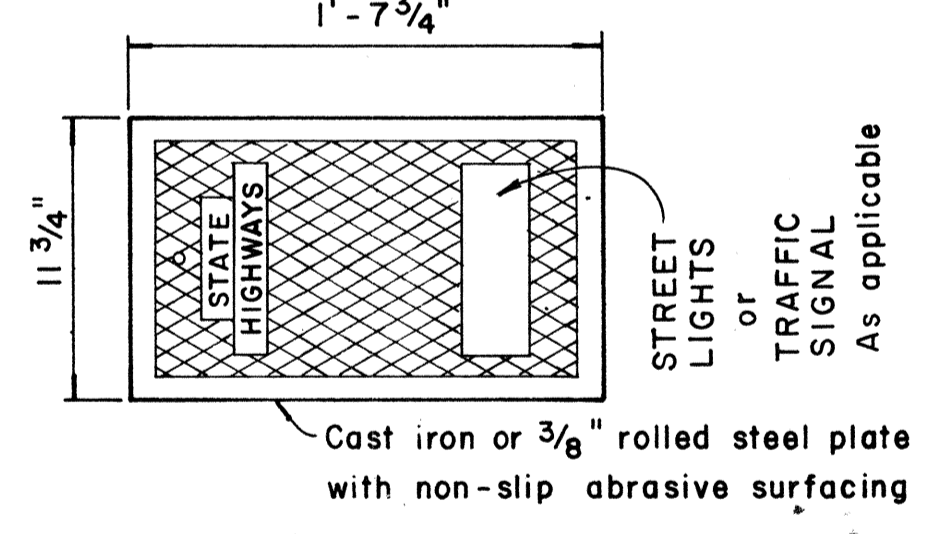


SECTION "B-B"
Scale: 3" = 1'-0"

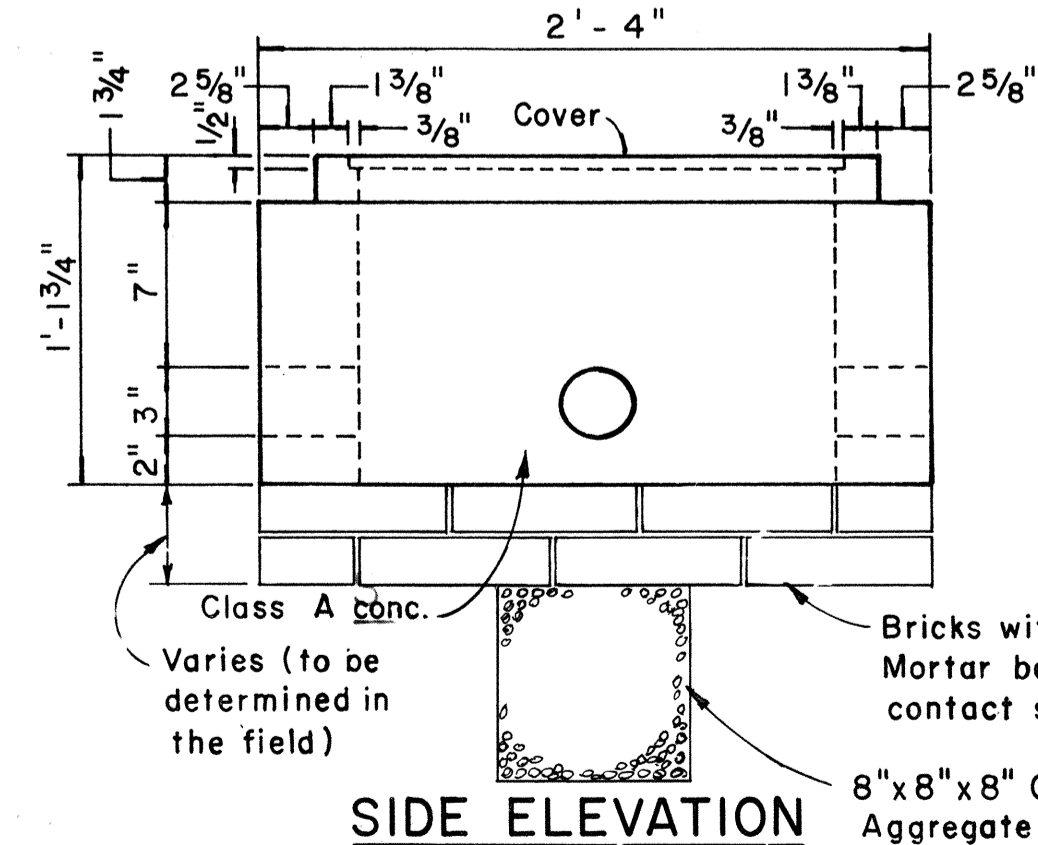
NOTE:
Steel rim shall be welded to bottom of steel cover if necessary so that top of cover and frame are flush.



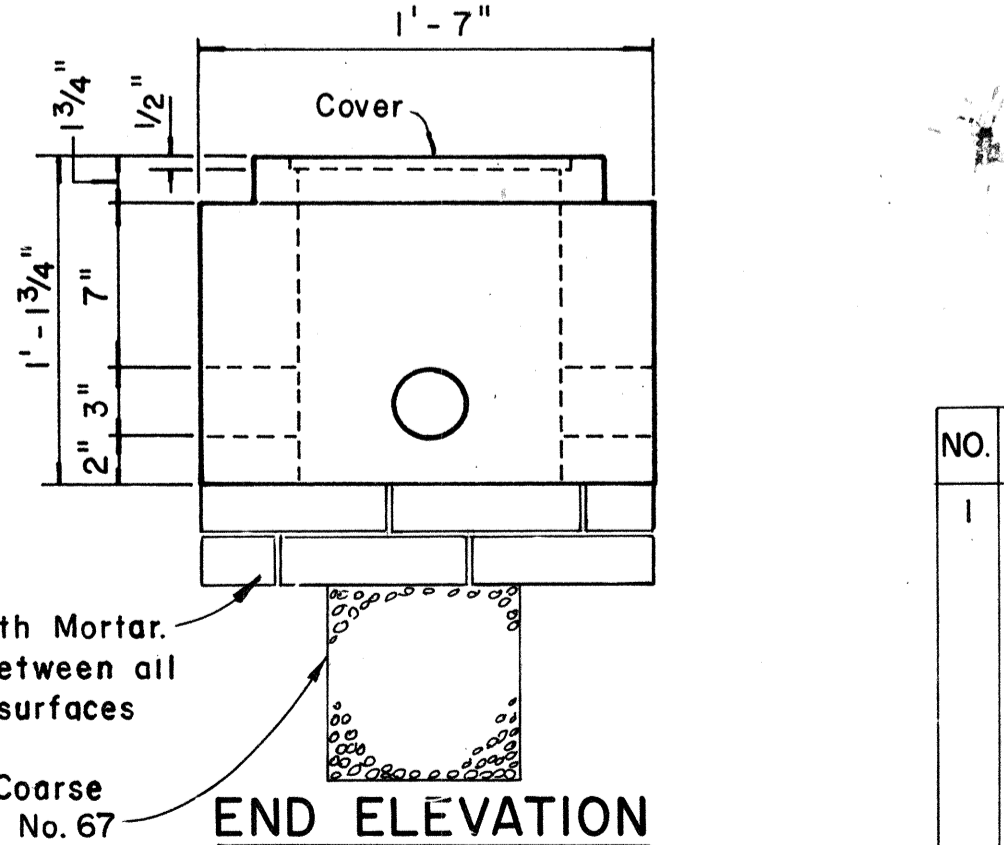
PLAN



PLAN OF COVER

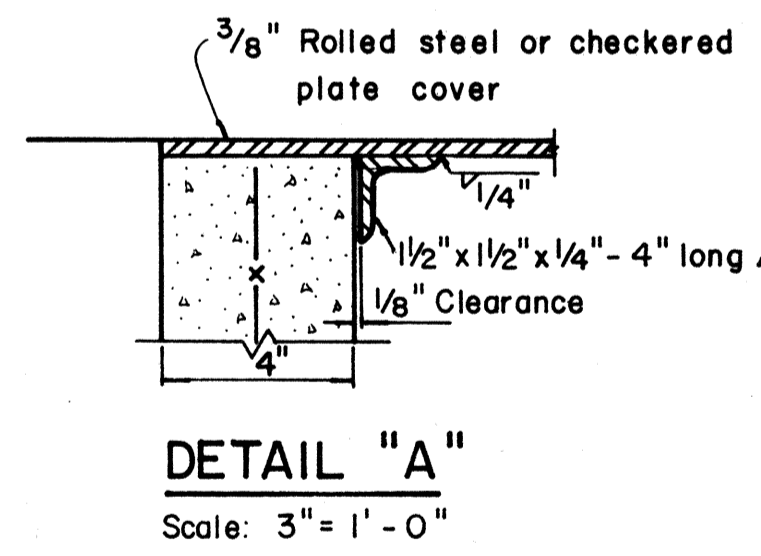


SIDE ELEVATION

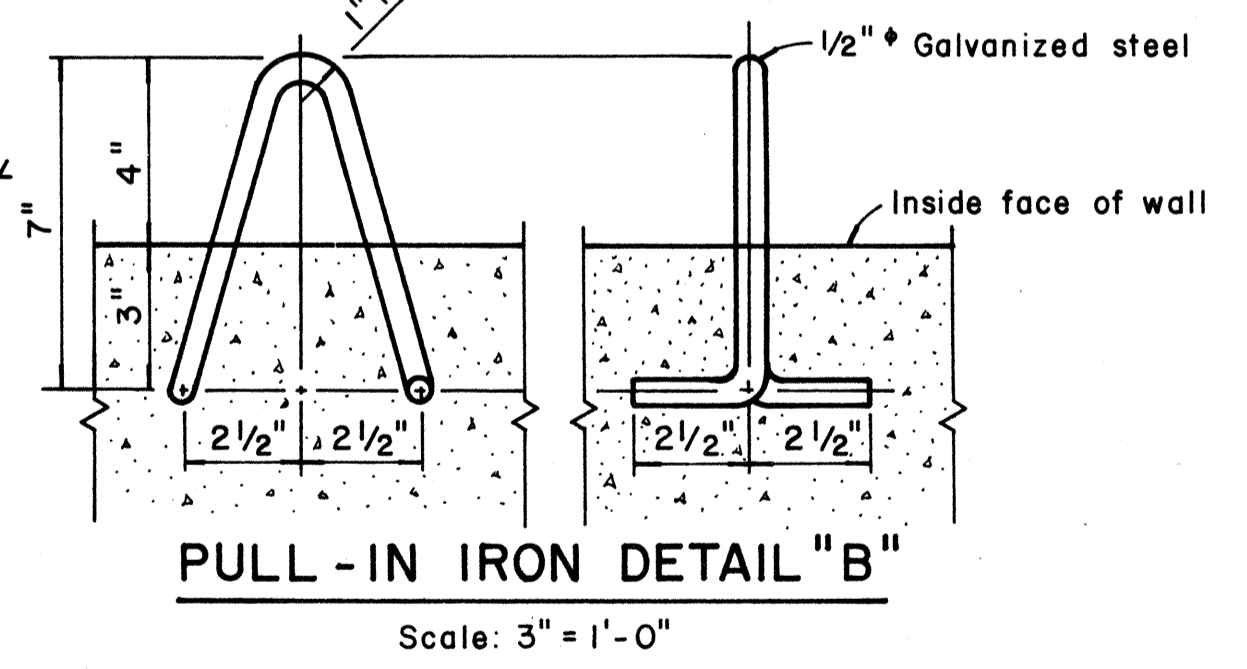


END ELEVATION

TYPE "B" PULLBOX
Scale: 1/2" = 1'-0"



DETAIL "A"
Scale: 3" = 1'-0"



PULL-IN IRON DETAIL "B"
Scale: 3" = 1'-0"

- NOTES: (FOR TYPE "A" PULLBOX)**
- 3/8" Rolled steel plate cover with non-slip abrasive surfacing medium grade, natural color shall be used on all pullboxes located on sidewalk areas where pedestrians are walking.
 - 3/8" Checkered plate cover shall be used on all pullboxes located in median areas and other locations where there are no pedestrians walking.
 - Pull irons shall be placed opposite each conduit slot.
 - Covers on all pullboxes located in sidewalk areas shall be set flush with the concrete sidewalk.
 - Each pullbox shall have a pair of pull irons opposite each other for lifting purposes.

APPROVAL RECOMMENDED:
Erica L. L... 12/1/62
TRAFFIC ENGINEER DATE

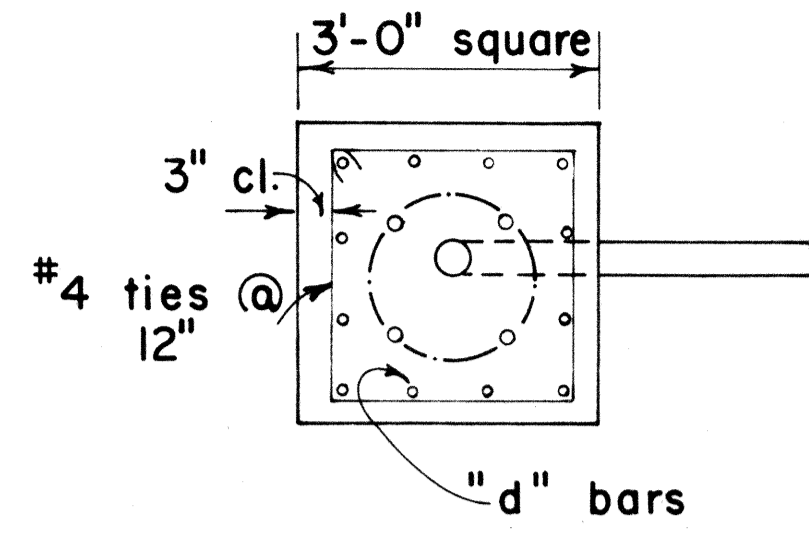
APPROVED:
... 12-20-69
ASSISTANT CHIEF, ENGINEERING DATE

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

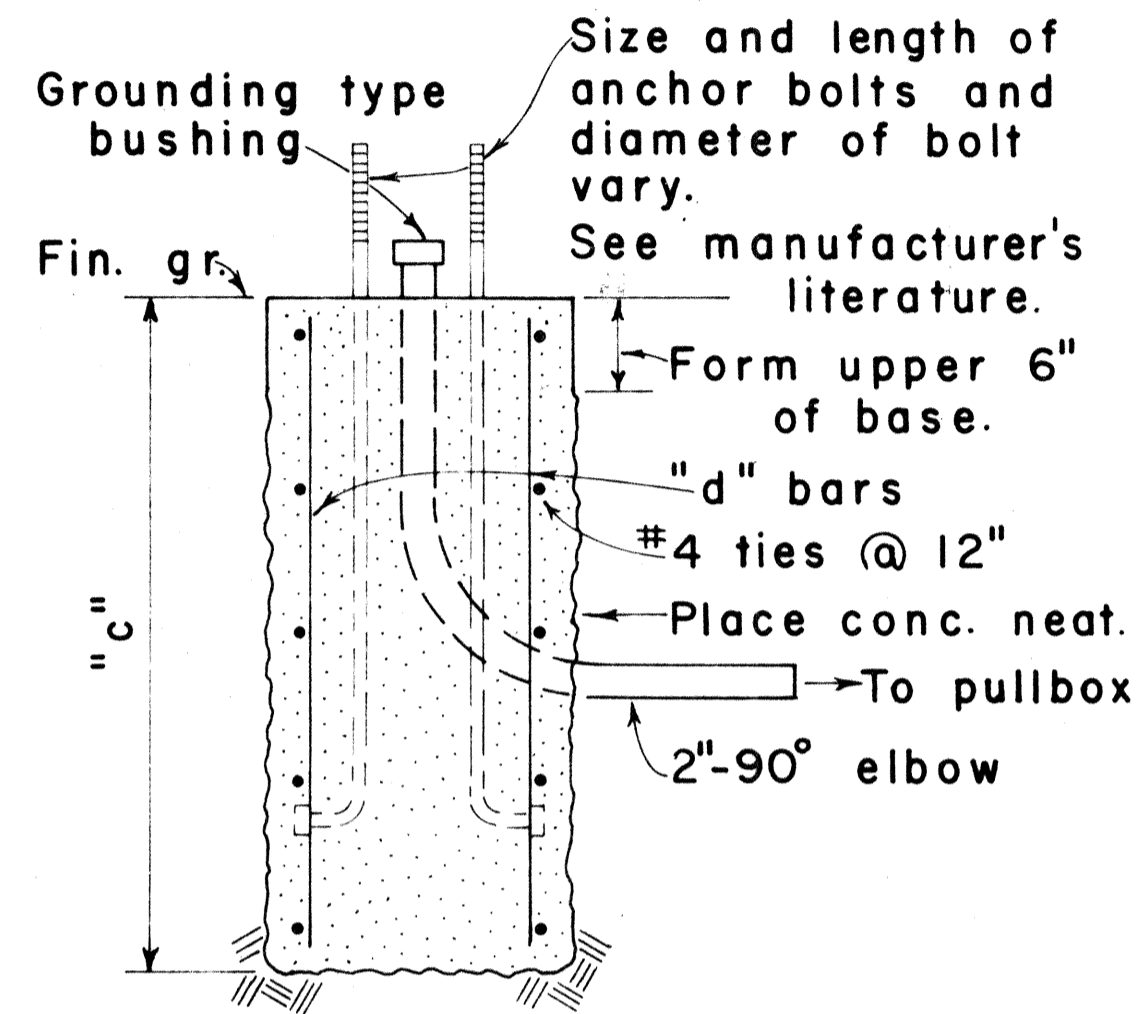
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
PULLBOXES
Scale as noted Date
SHEET No. 21 OF 22 SHEETS DT 401

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

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	[H-1(12)]	1980	100	131



PLAN - SECTION



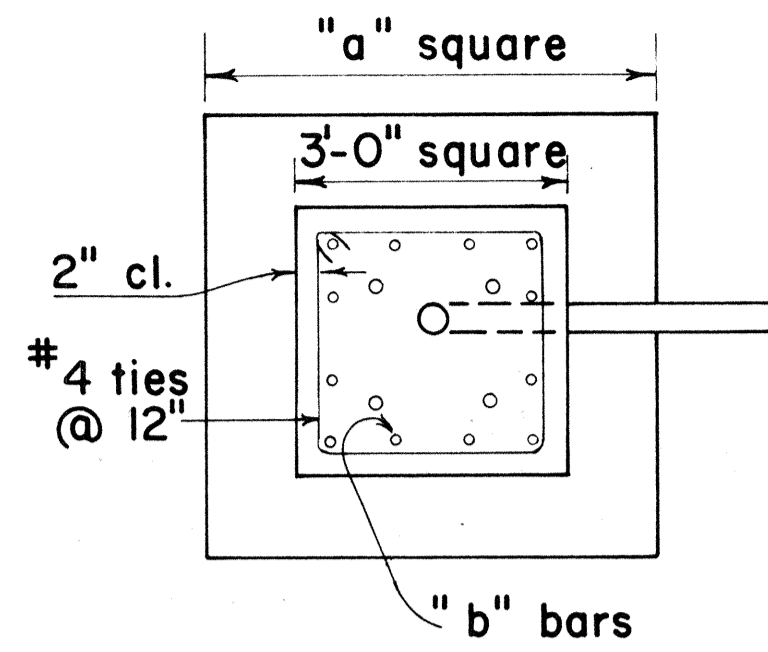
NOTE:

Concrete shall be Class B.

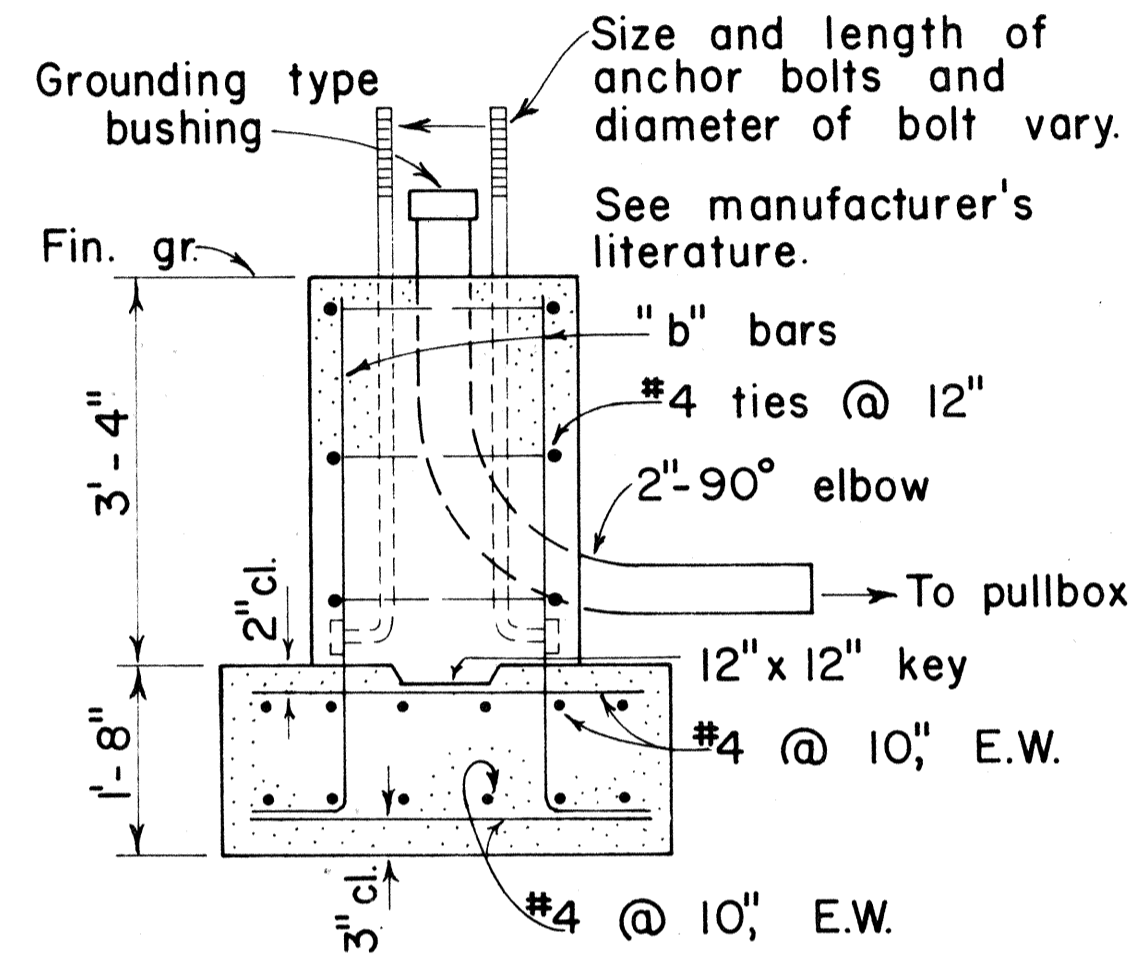
SECTION

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:

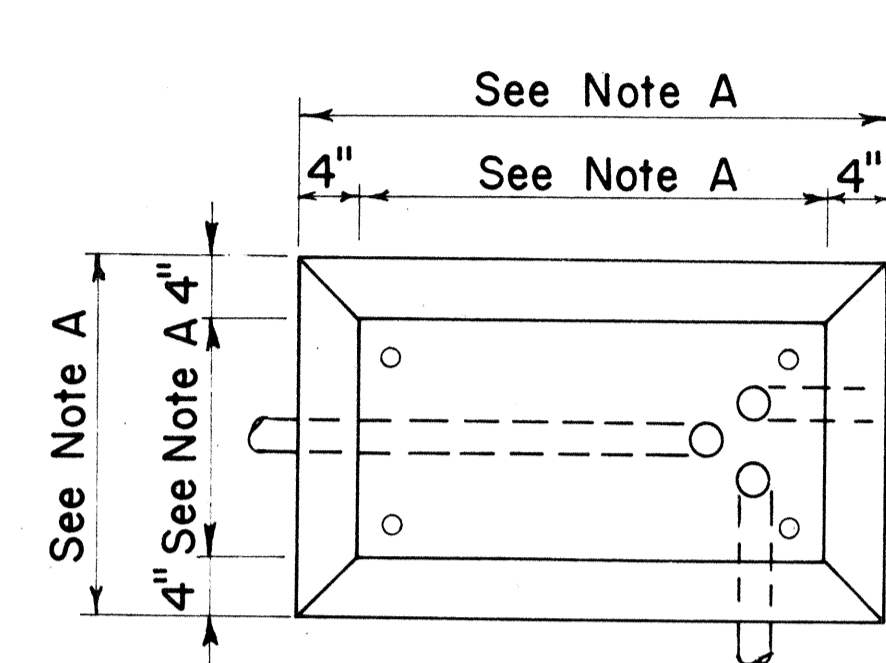
Concrete shall be Class B.

SECTION

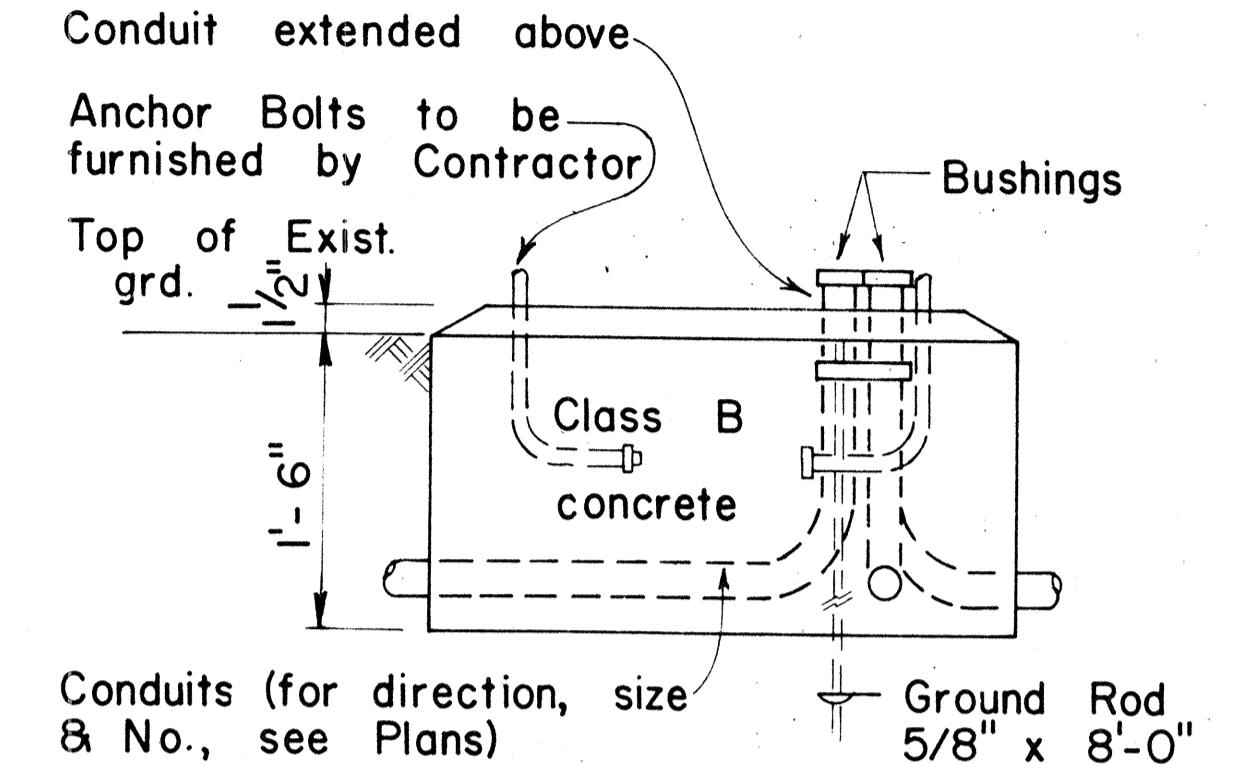
MAST ARM LENGTH	"a"	"b" BARS
16' - 18'	5' - 0"	12 - #6
20'	5' - 6"	12 - #6
25'	6' - 0"	12 - #6
30'	6' - 6"	12 - #8
35'	6' - 6"	12 - #8
40'	7' - 0"	12 - #8

TYPE IA

FOOTING FOR MAST ARM STANDARD



PLAN



ELEVATION

CONCRETE BASE FOR CONTROLLER CABINET

NOTES:

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

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

APPROVED:
Harbert B. Sakischi 2-5-76
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

**TRAFFIC SIGNAL SYSTEM
 MISCELLANEOUS DETAILS**

Not to Scale

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