

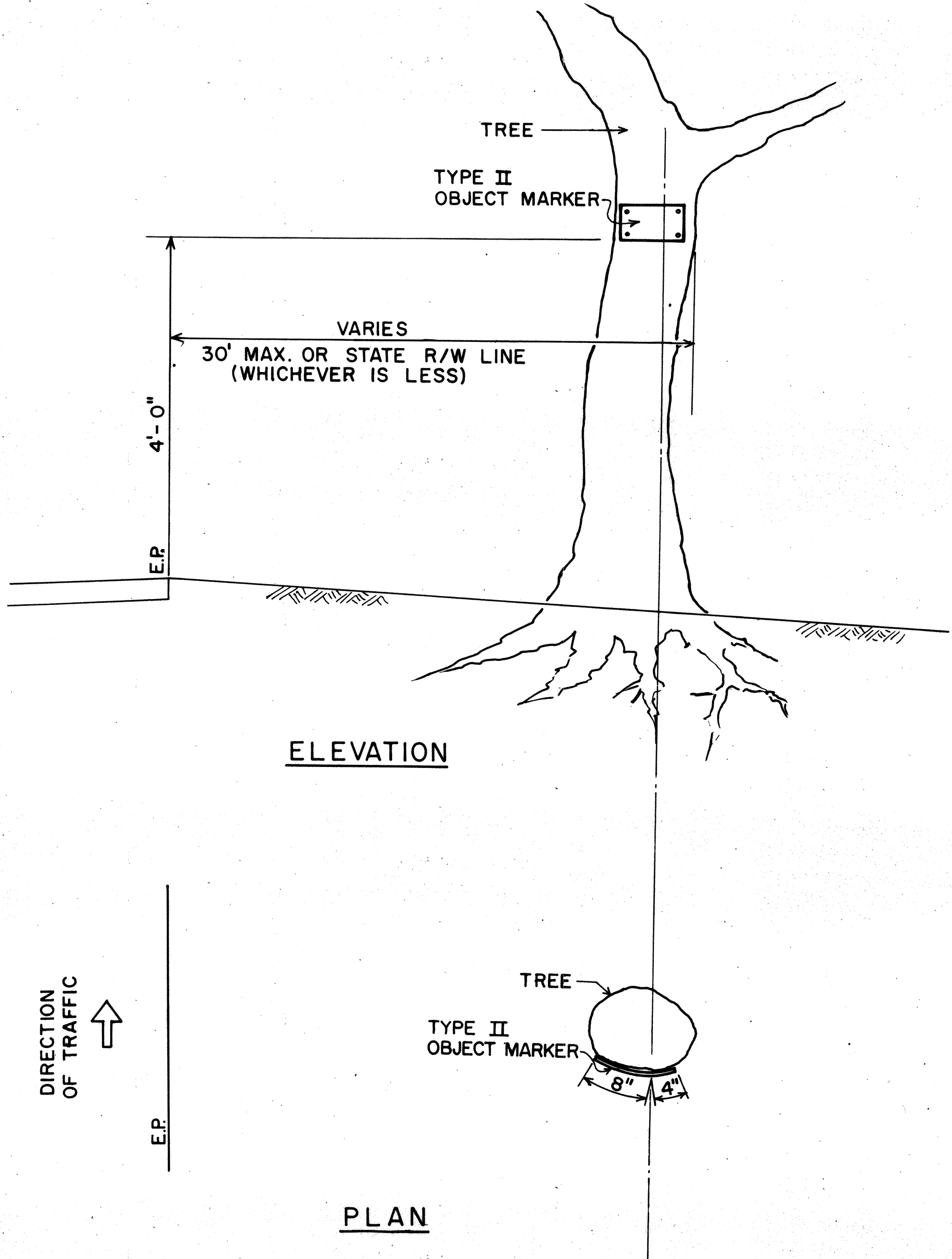
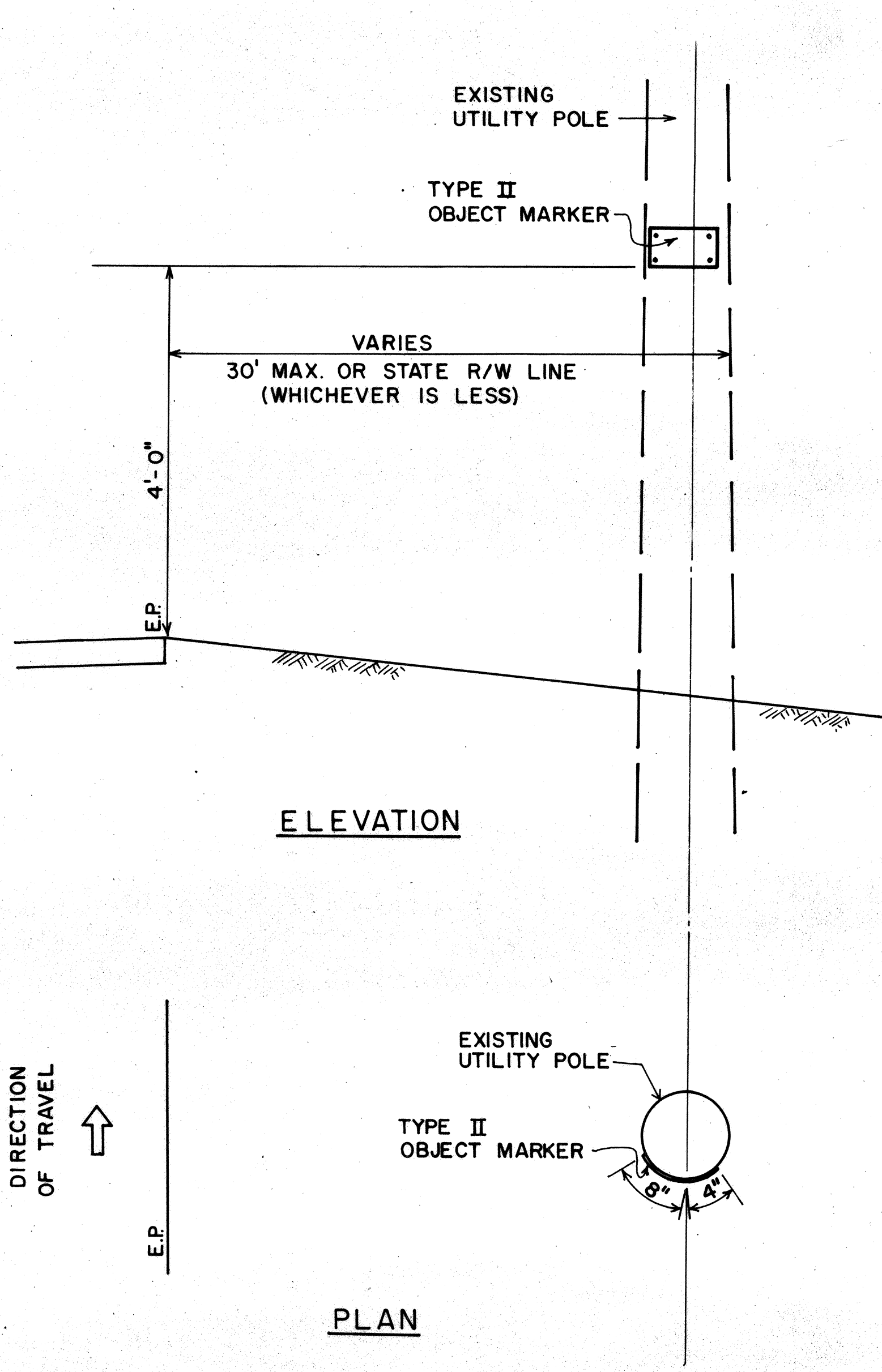
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 56A-01-80 | 1980        | 7         | 23           |

### GENERAL NOTES

- Type II Object Markers shall be of amber reflective sheeting material overlayed on 0.020" aluminum sheeting.
- Type II Object Markers shall be mounted on utility poles and trees, as shown on the plans, with 4d nails (4 ea.).
- The Contractor shall prepare the surface (of the utility pole or the tree etc.), on which the Type II Object Marker is to be placed to provide the most optimum reflecting surface to the motorist.
- Branches of trees which will obscure the object markers shall be trimmed. (Payment shall be incidental to Contract Item No. 621.4800 Type II Object Markers.)
- All objects (utility poles or trees) that are within the State highway right of way and within 30 feet of the roadway edge of pavement shall be marked.
- All objects to be marked will be determined in the field by the Engineer.
- Objects such as concrete posts, concrete or rock walls and boxes, metal posts (greater than 2 inches in diameter), or metal boxes shall be marked with post mounted object markers. Post mounted Type II Object Markers shall conform to the following requirements:
  - It shall consist of amber reflective sheeting material overlayed on 0.063 inch thick sheet aluminum backing of the dimensions shown on the plans.
  - It shall be mounted on 1/2"x 1/2", 12-gage square tube posts with 1/4"x 2" galv. bolts, nuts, and washers. Galvanized flanged 1/8" x 3/16" channel posts, 2 lbs. per ft., may be used as an option.

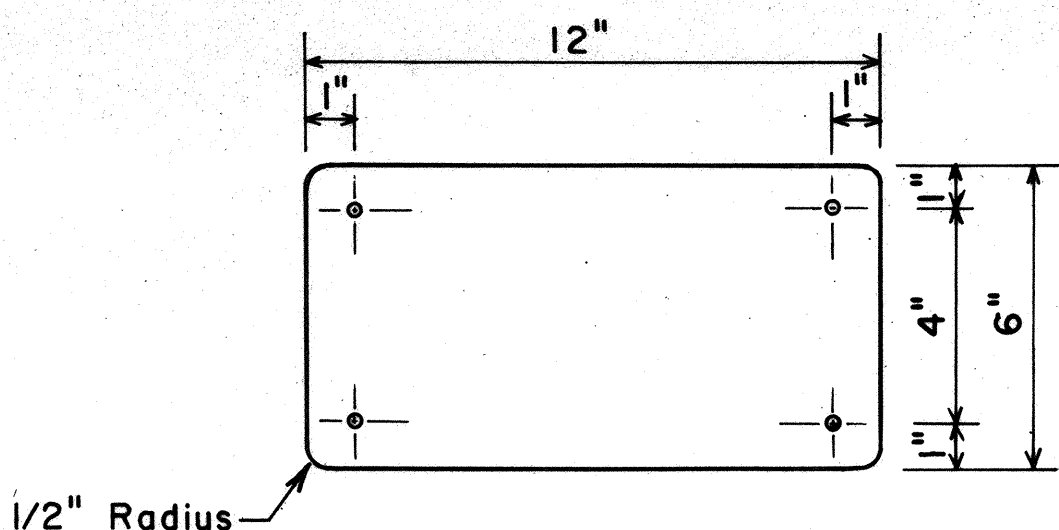
### TYPICAL TYPE II OBJECT MARKER MOUNTING DETAIL

Not To Scale



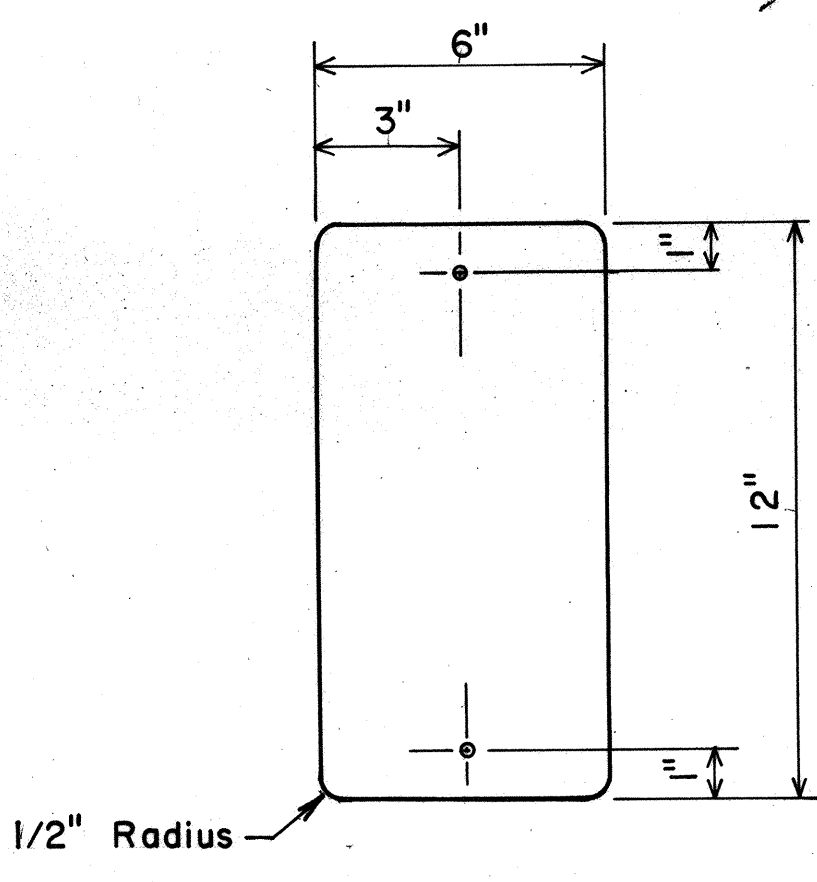
### TYPE II OBJECT MARKER

Not To Scale



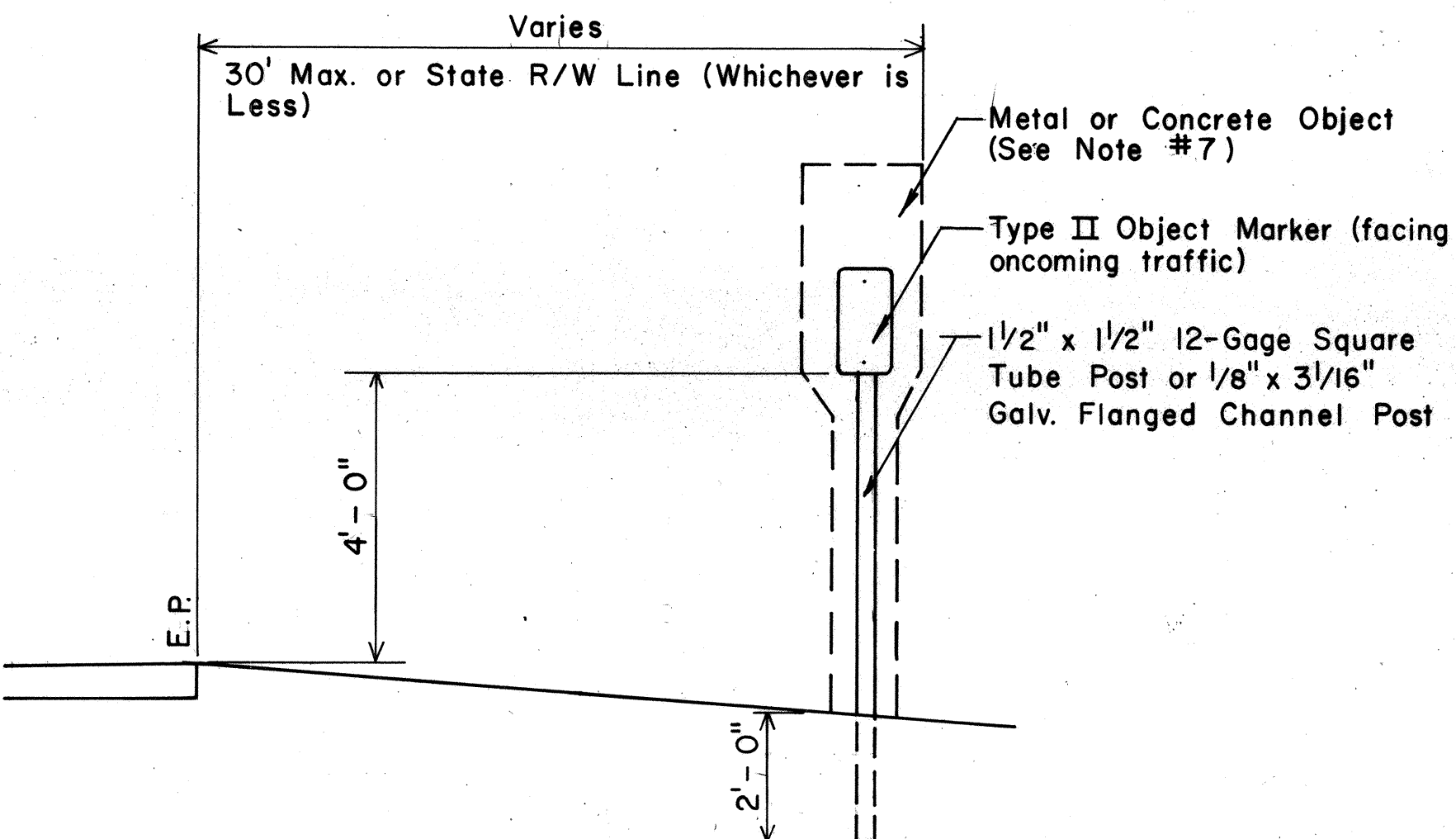
### TYPE II OBJECT MARKER POST MOUNTED

Not To Scale



### TYPE II POST MOUNTED OBJECT MARKER DETAIL

Not To Scale



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION

TYPICAL DETAILS  
TYPE II OBJECT MARKERS

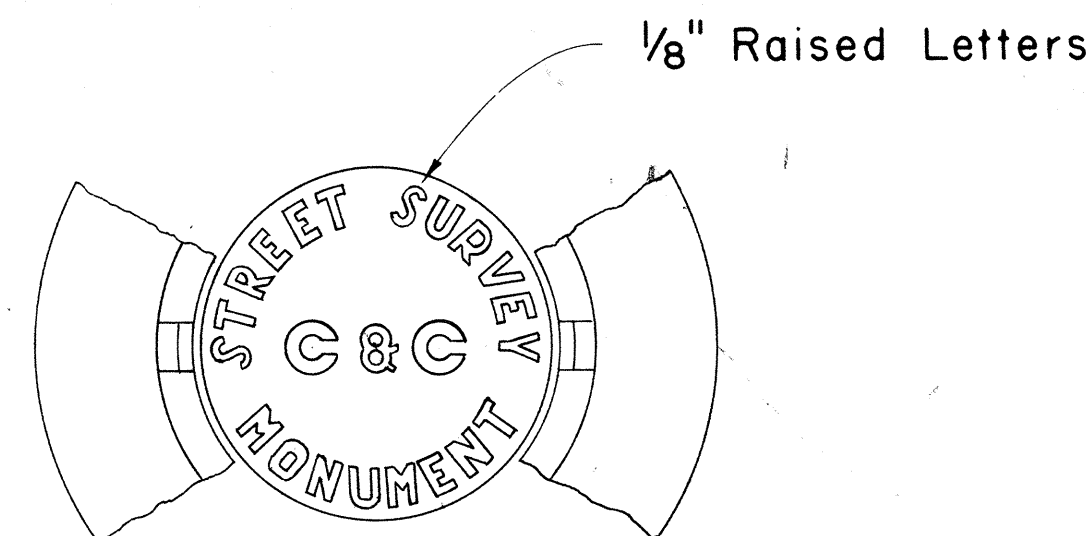
SCALE: AS SHOWN      DATE:

SHEET No. 1 OF 5 SHEETS

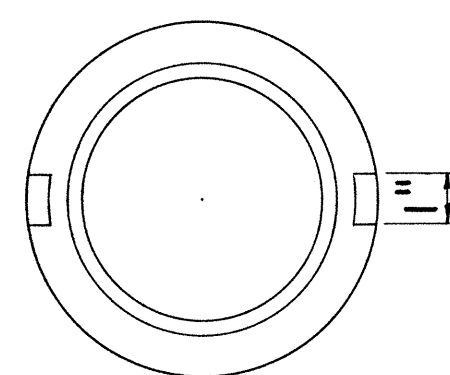
|                   |      |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY          |      |
| TRACED BY         |      |
| NOTED BY          |      |
| CHECKED BY        |      |
| ORIGINAL PLAN     |      |
| NOTE BOOK         |      |
| No.               |      |



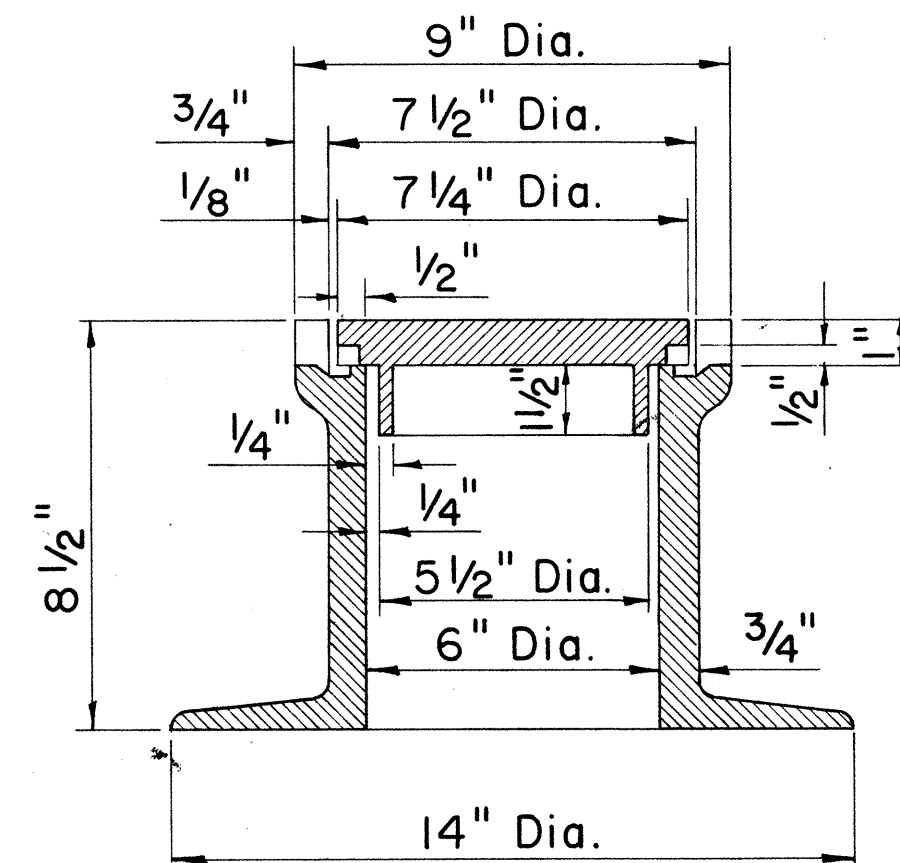
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 564-01-20 | 1980        | 8         | 23           |



TOP VIEW OF COVER  
AND PORTION OF FRAME



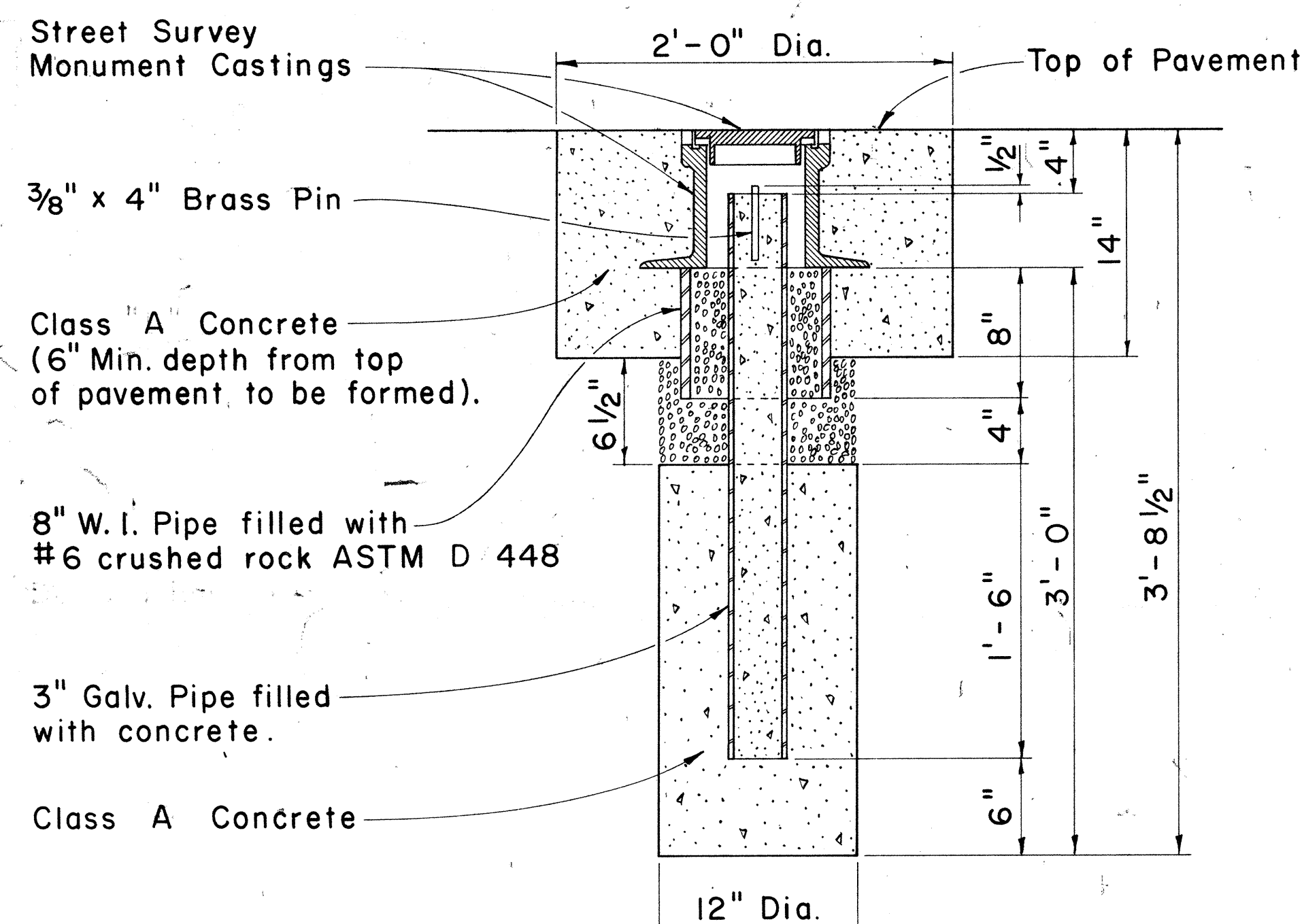
BOTTOM OF COVER



SECTIONAL VIEW OF  
FRAME AND COVER

## STREET SURVEY MONUMENT CASTINGS

Scale: 3" = 1'-0"

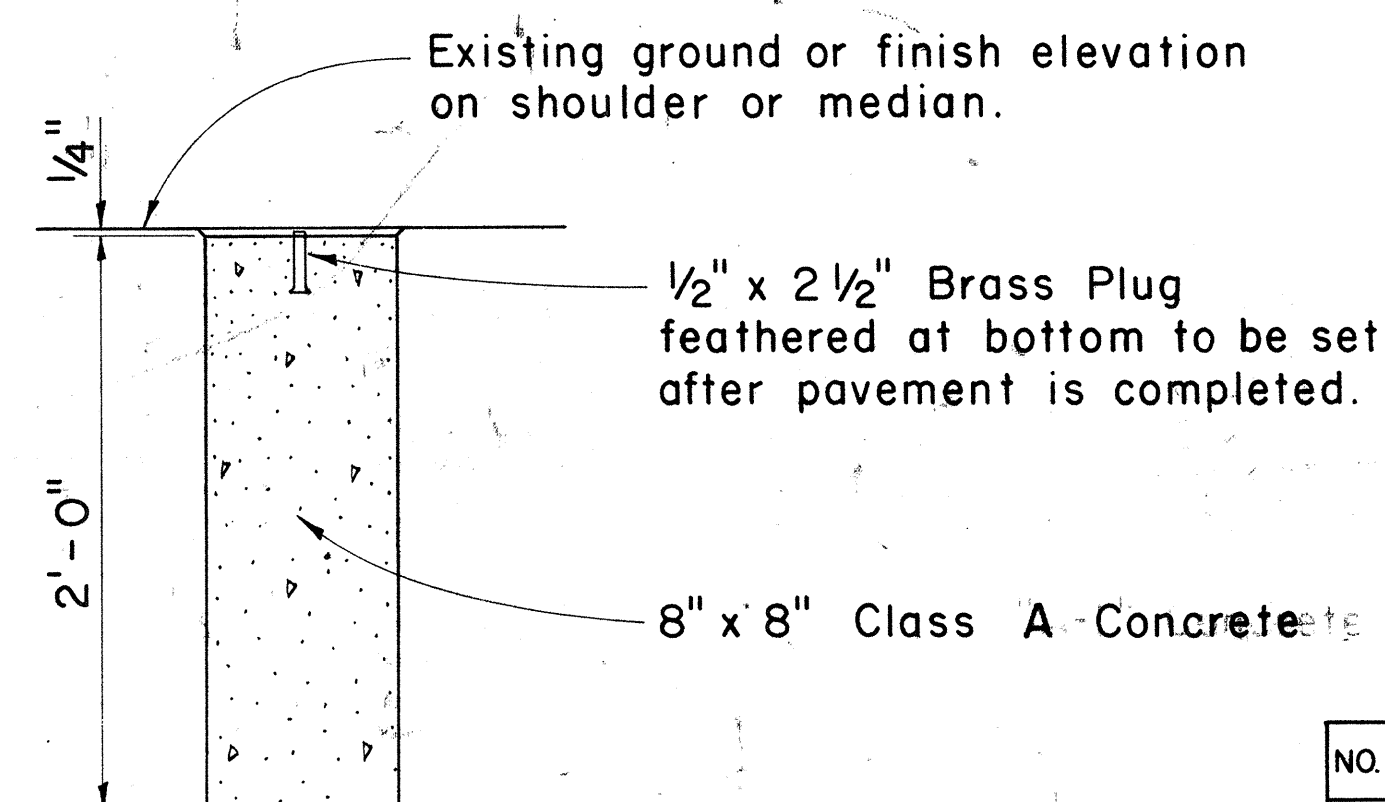


NOTE:

Where the excavation extends into solid rock the depth may be decreased if approved by the Engineer.

## STREET SURVEY MONUMENT

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



## DETAIL FOR CENTERLINE AND REFERENCE SURVEY MONUMENT

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

APPROVAL RECOMMENDED:

HIGHWAY DESIGN ENGINEER

12-1-69  
DATE

APPROVED:

ASSISTANT CHIEF, ENGINEERING

12-10-69  
DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

|                                                                      |  |
|----------------------------------------------------------------------|--|
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |  |
| STANDARD DETAILS                                                     |  |
| CENTERLINE, REFERENCE SURVEY<br>AND C & C STREET SURVEY<br>MONUMENTS |  |
| Scale: As Shown                                                      |  |

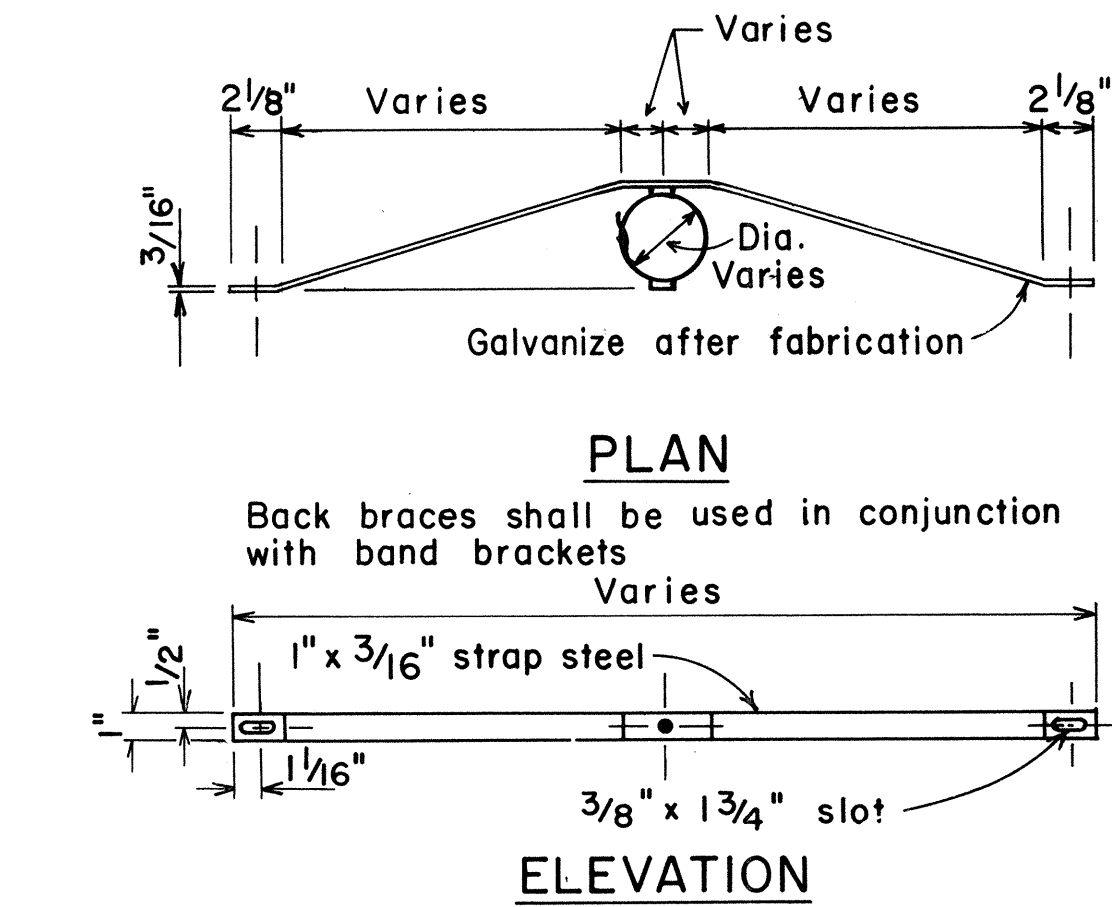
SHEET No. 2 OF 5 SHEETS DD 613.1



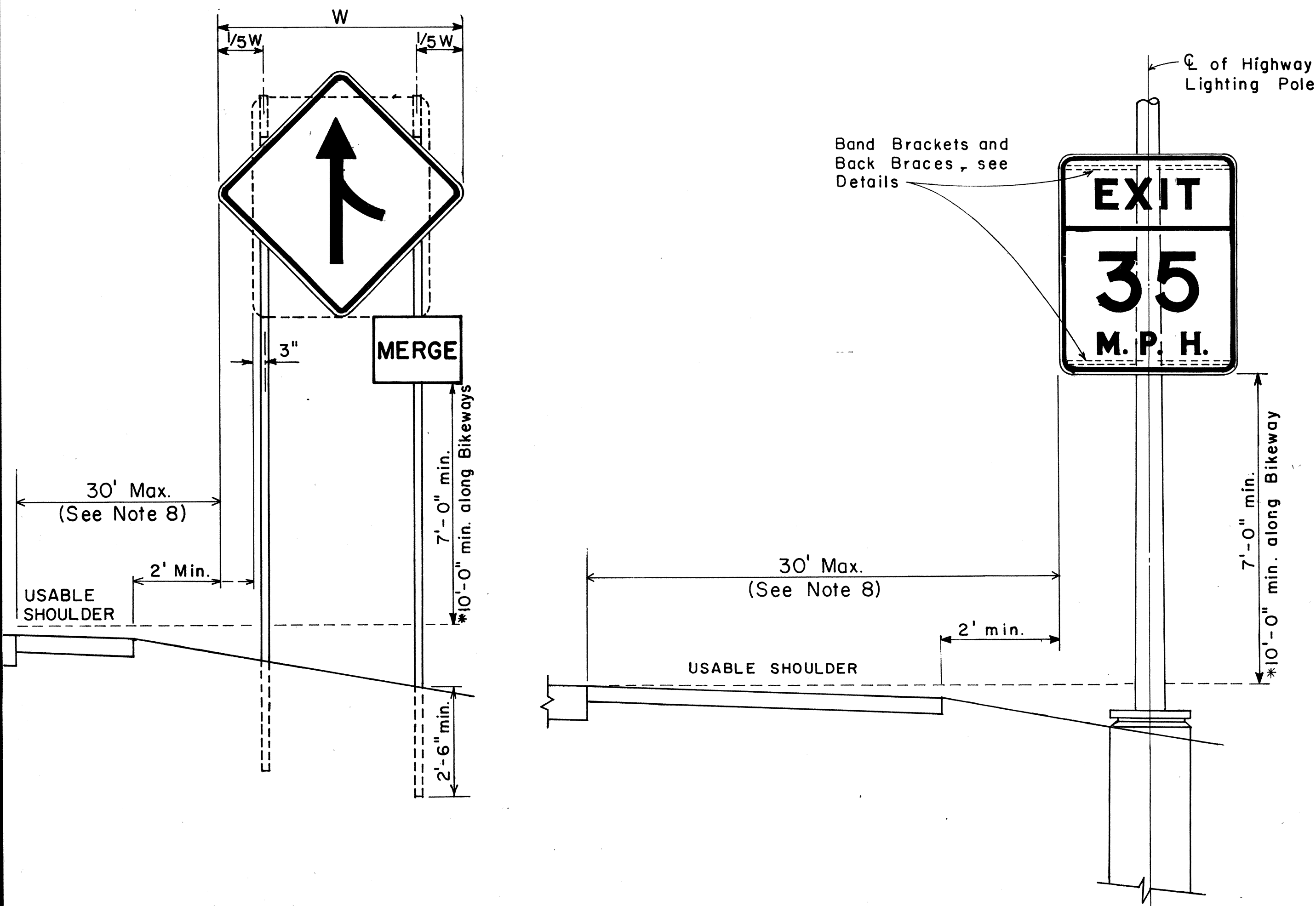
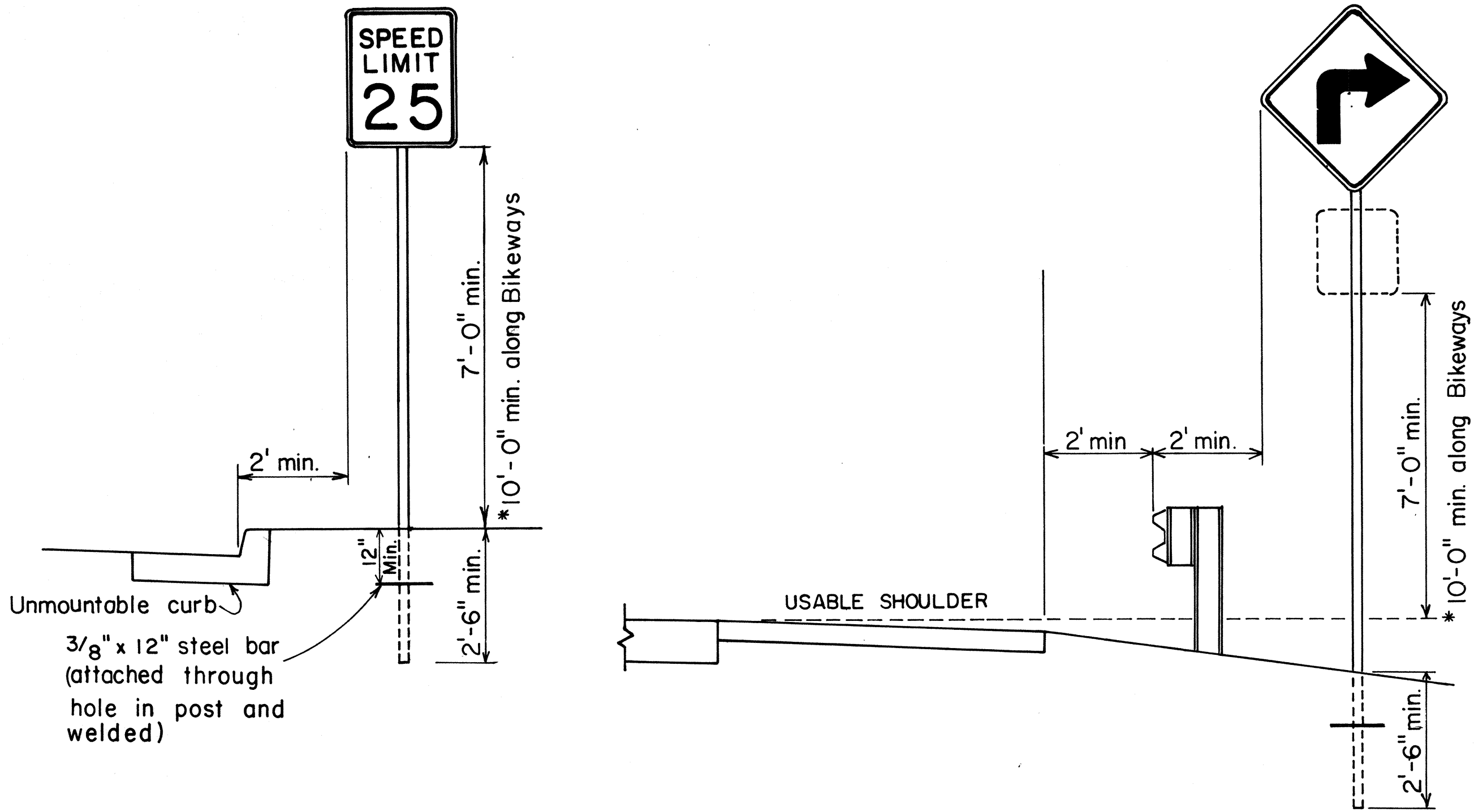
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 564-01-80 | 1980        | 9         | 23           |

### GENERAL NOTES

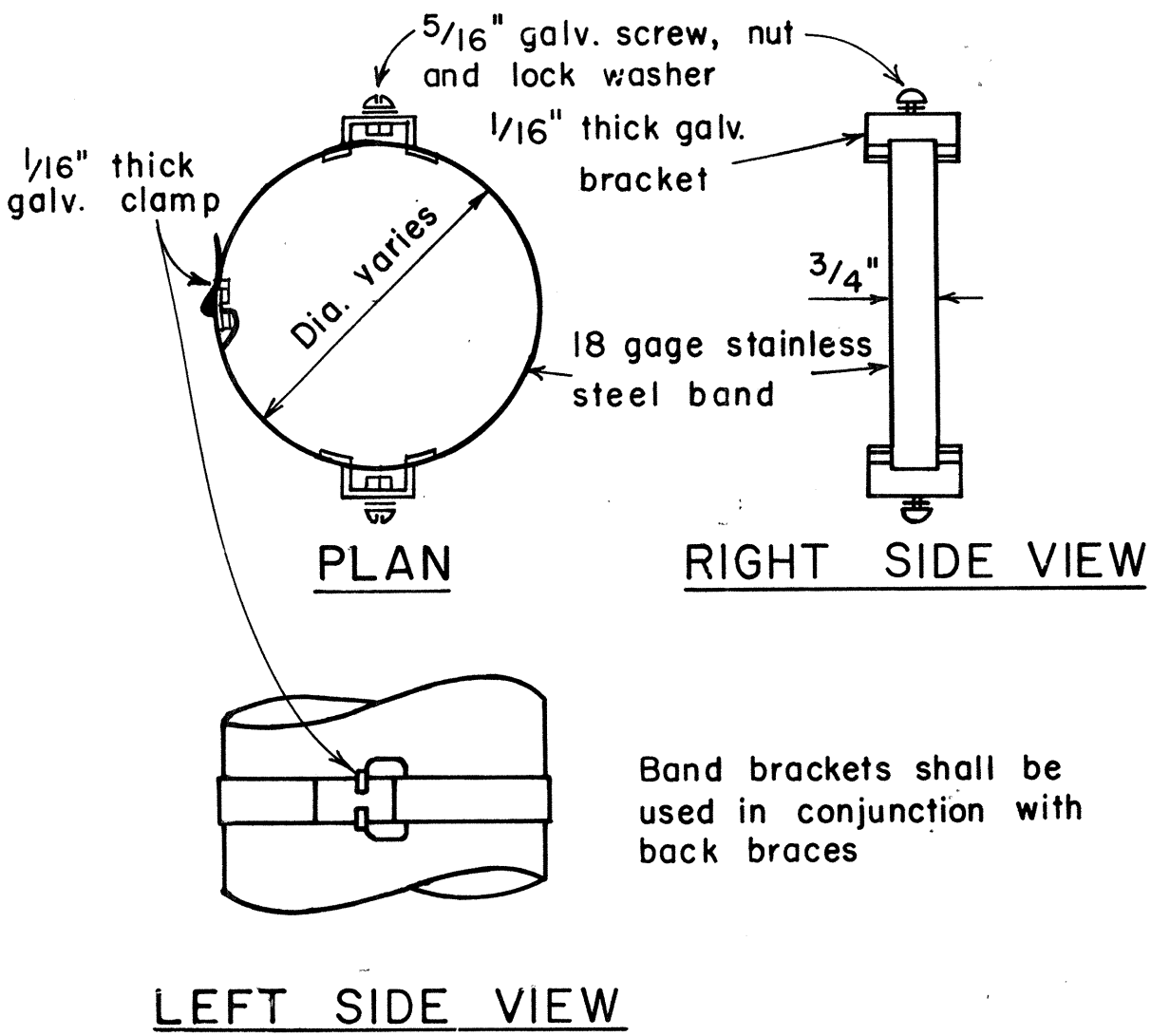
- Signs 48" and wider or larger than 10 sq. ft. in area shall be mounted on two sign posts.
- All signs larger than 10 sq. ft. in area or 48" inches and wider, and mounted on other than two posts supports (i.e., on highway lighting poles) shall have at least two sets of band brackets and back braces.
- 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.
- All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
- 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.



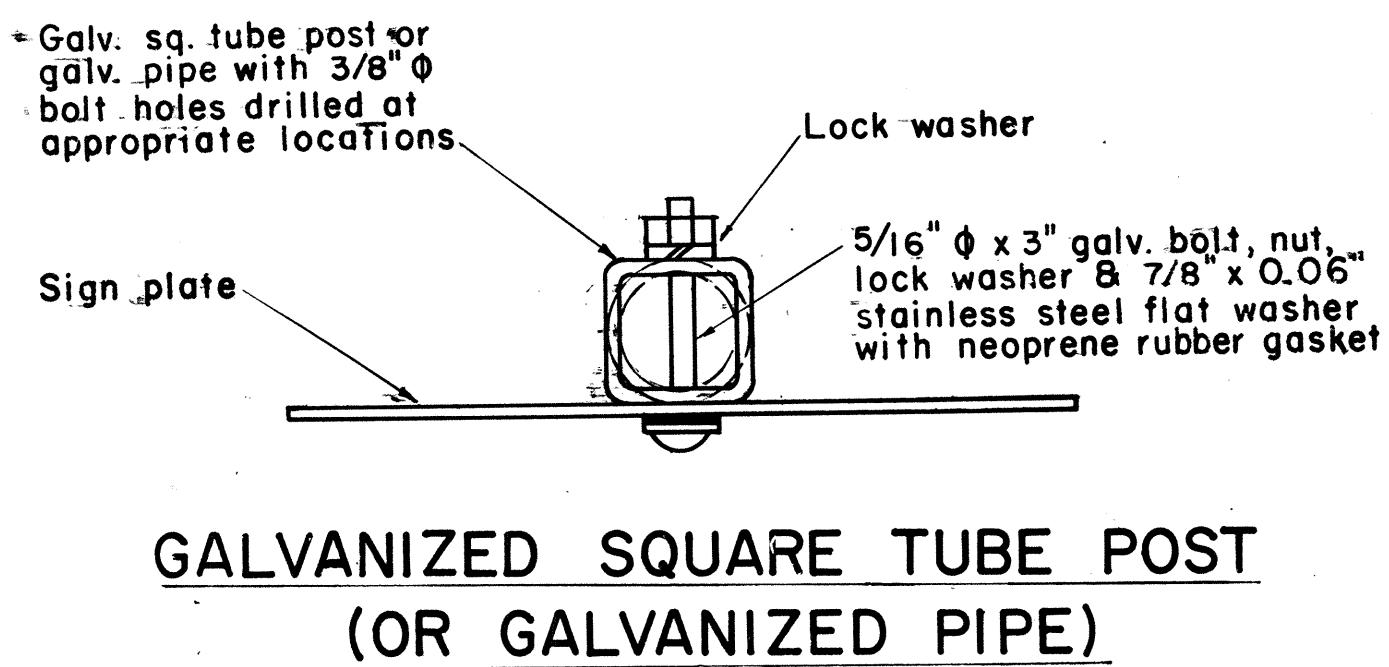
### BACK BRACE DETAILS FOR BALANCED SIGN INSTALLATION



### HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION



### BAND BRACKET



### GALVANIZED SQUARE TUBE POST (OR GALVANIZED PIPE)

### TYPICAL MOUNTING DETAILS NOT TO SCALE

| NO. | REVISION                                 | APPROVED BY | DATE     |
|-----|------------------------------------------|-------------|----------|
| 1   | Supercedes Sht. DT-100 approved 12/30/69 | H.T.        | 11/15/77 |
| 2   | Revised depth of signpost                | H.T.        | 5/31/79  |
| 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* 11/15/77  
TRAFFIC ENGINEER DATE

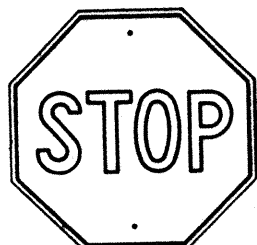
APPROVED:  
*Harbert S. Salaschis* 11/15/77  
ASSISTANT CHIEF, ENGINEERING DATE

|                                                                      |
|----------------------------------------------------------------------|
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |
| <b>STANDARD DETAILS</b>                                              |
| MISCELLANEOUS SIGN DETAILS                                           |
| Not to scale June, 1977                                              |
| SHEET NO. 3 OF 15 SHEETS DT 100                                      |

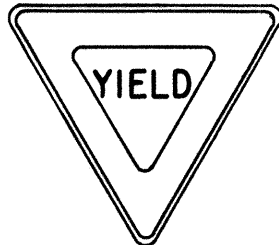
|                   |      |
|-------------------|------|
| ORIGINAL PLAN     | DATE |
| SURVEY PLOTTED BY |      |
| DRAWN BY          |      |
| DESIGNED BY       |      |
| CHECKED BY        |      |
| NOTE BOOK         |      |
| NO.               |      |



| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 56A-01-80 | 1980        | 10        | 23           |



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



R1-2 36"x36"x36"  
R1-2-A 48"x48"x48"



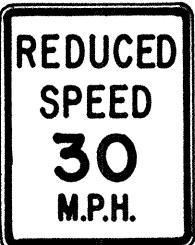
R2-1(50) 24"x 30"  
R2-1(50)-A 48"x 60"



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



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



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



R3-1 24"x24"  
24"x 18"  
R3-1-A 48"x48"  
48"x 36"



R3-2 24"x24"  
24"x 18"  
R3-2-A 48"x48"  
48"x 36"



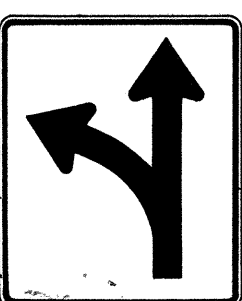
R3-3 24"x 24"  
R3-3-A 48"x 48"



R3-4 24"x 24"  
24"x 18"  
R3-4-A 48"x48"  
48"x 36"



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



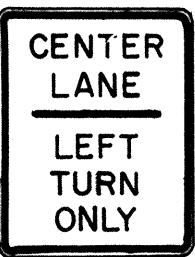
R3-6(L) 30"x 36"  
R3-6(L)-A 48"x 60"



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



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



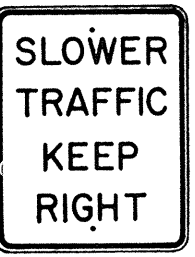
R3-9 24"x 30"



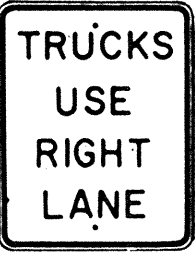
R4-1 24"x 30"



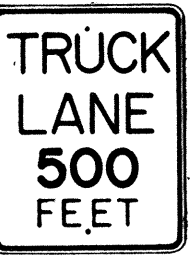
R4-2 24"x 30"



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



R4-5 24"x 30"



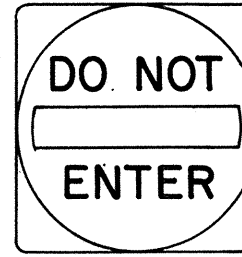
R4-6(500) 24"x 30"



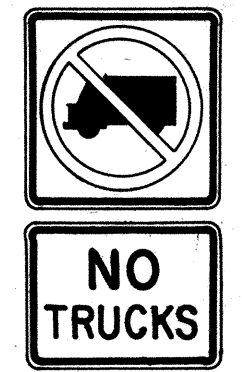
R4-7 24"x30"  
24"x 18"



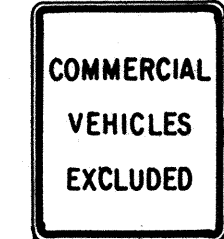
R4-8 24"x30"  
24"x 18"



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



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



R5-4 24"x 30"



R5-6 24"x24"  
24"x 18"



R5-9 36"x 24"



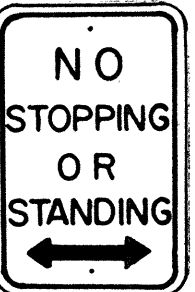
R6-1 (R) 36"x 12"



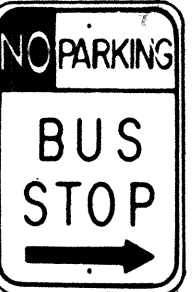
R6-2(R) 18"x 24"



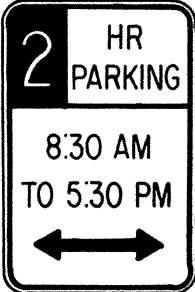
R7-1 12"x 18"  
R7-1-A 24"x 30"



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



R7-1,7(R) 12"x 18"



R7-108 12"x 18"



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



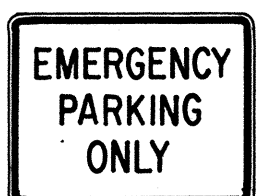
R8-1 24"x 30"



R8-2 24"x 30"



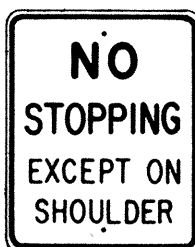
R8-3 24"x 30"



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



R8-5 24"x 30"



R8-6 24"x 30"



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



R9-1 18"x 24"



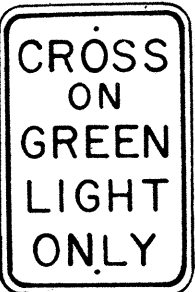
R9-2 12"x 18"



R9-3 12"x 18"



R9-4 18"x 24"



R10-1 12"x 18"



R10-2 12"x 18"



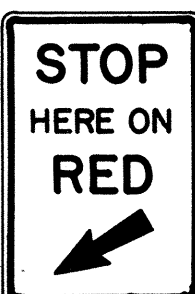
R10-3 9"x 12"



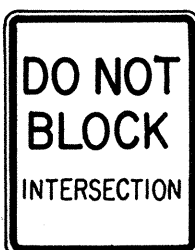
R10-4 9"x 12"



R10-5 24"x 30"



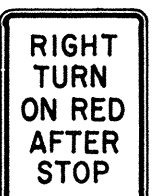
R10-6 24"x 36"



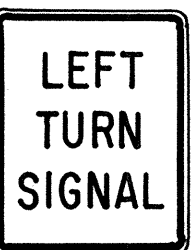
R10-7 24"x 30"



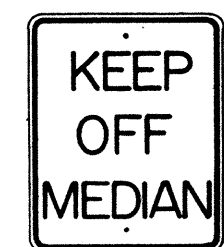
R10-8 24"x 30"



R10-9 24"x 30"



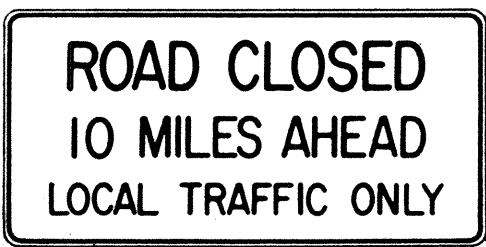
R10-10 24"x 30"



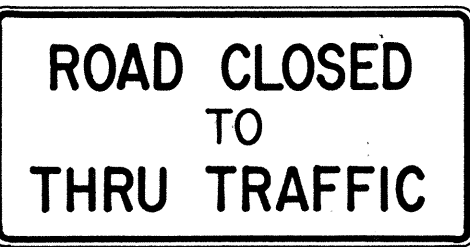
R11-1 24"x 30"



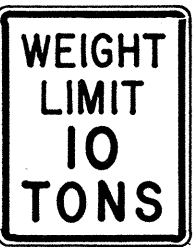
R11-2 48"x 30"



R11-3(10) 60"x 30"



R11-4 60"x 30"



R12-1(10) 24"x 30"

### GENERAL NOTES

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

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

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

| NO. | REVISION                                 | APPROVED BY | DATE     |
|-----|------------------------------------------|-------------|----------|
| 1   | Supersedes Sht. DT 101 Approved 12-30-69 | H.T.        | 3/20/72  |
| 2   | Revised General Note 1.                  | H.T.        | 10/10/74 |
| 3   | Added General Note 5                     | H.T.        | 6/9/79   |

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

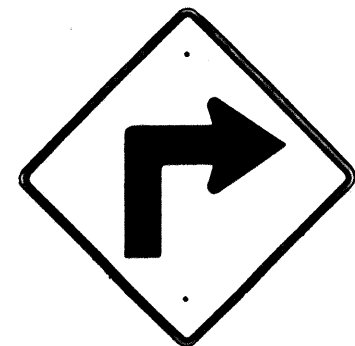
STANDARD DETAILS  
 REGULATORY SIGNS

NOT TO SCALE  
 SHEET No. 4 OF 15 SHEETS DT 101

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



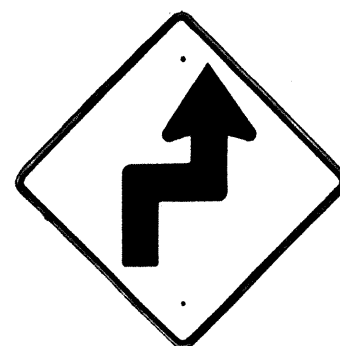
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII *            | HAW.  | 56A-01-80 | 1980        | 11        | 23           |



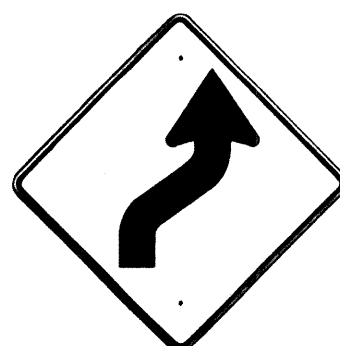
W1-1(R) 30"x30"  
W1-1(R)-A 48"x48"



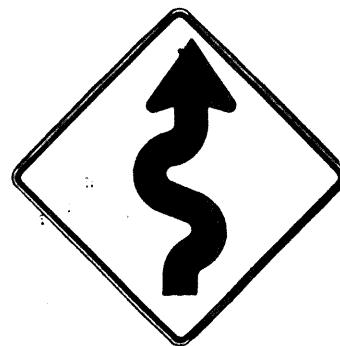
W1-2(R) 30"x30"  
W1-2(R)-A 48"x48"



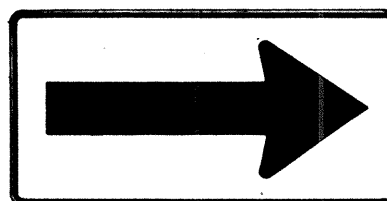
W1-3(R) 30"x30"  
W1-3(R)-A 48"x48"



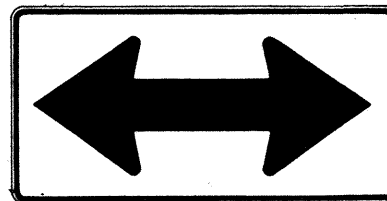
W1-4(R) 30"x30"  
W1-4(R)-A 48"x48"



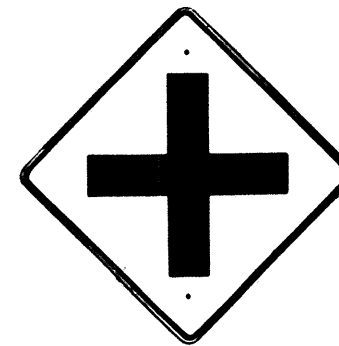
W1-5(R) 30"x30"  
W1-5(R)-A 48"x48"



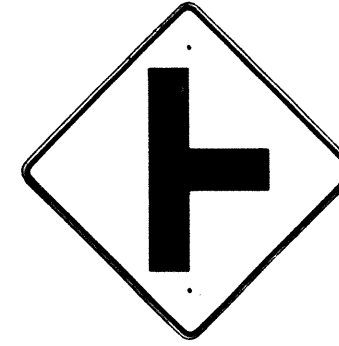
W1-6 48"x24"



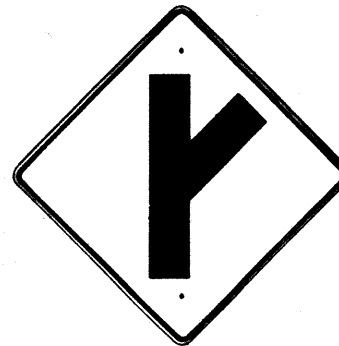
W1-7 48"x24"



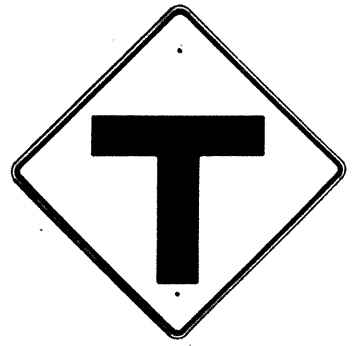
W2-1 30"x30"  
W2-1-A 48"x48"



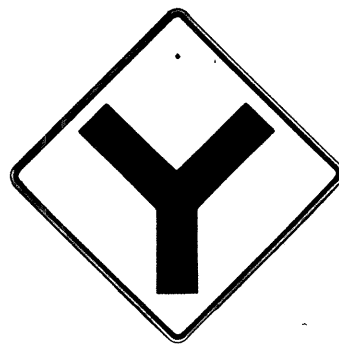
W2-2 30"x30"  
W2-2-A 48"x48"



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



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



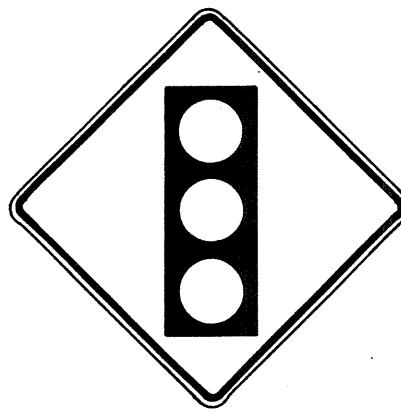
W2-5 30"x30"  
W2-5-A 48"x48"



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



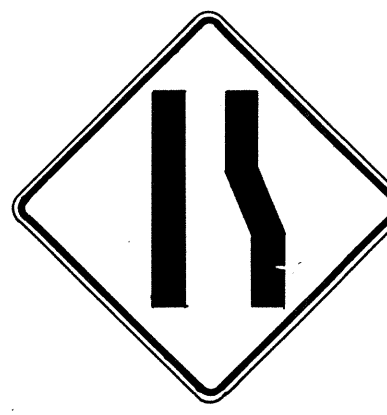
W3-2 30"x30"  
W3-2-A 36"x36"



SIGNAL AHEAD  
W3-3 36"x36"  
24"x18"



MERGE  
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"



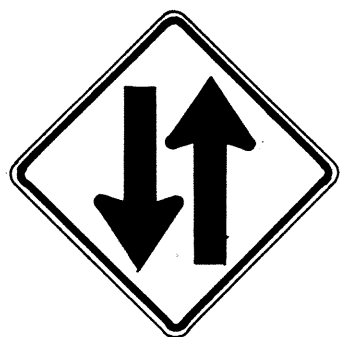
W5-3 36"x36"



DIVIDED HIGHWAY  
W6-1 36"x36"  
24"x18"



DIVIDED HIGHWAY ENDS  
W6-2 36"x36"  
24"x18"



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



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



USE LOW GEAR  
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"



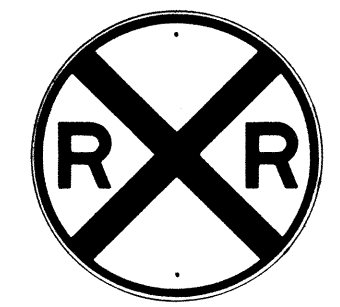
SLIPPERY WHEN WET  
W8-5 30"x30"  
24"x18"  
W8-5-A 36"x36"  
24"x18"



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"



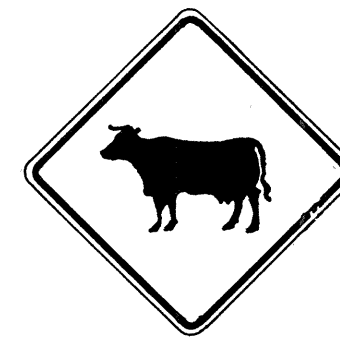
W10-1 36" Diameter



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



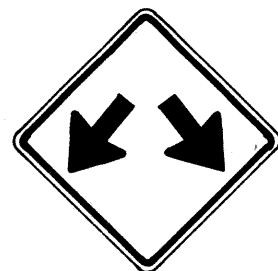
PED XING  
W11-2 30"x30"  
24"x18"  
W11-2-A 36"x36"  
24"x18"



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



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



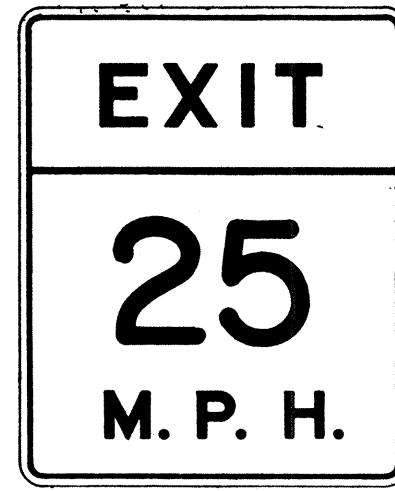
W12-1 24"x24"  
W12-1-A 36"x36"  
W12-1-B 48"x48"



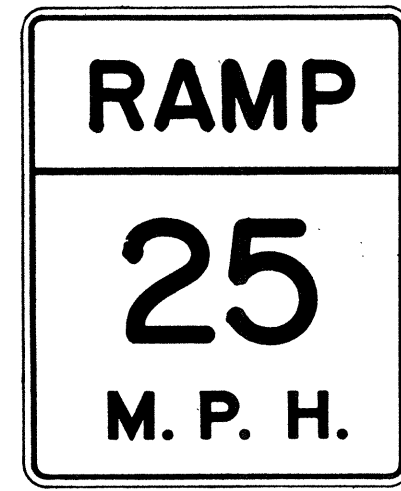
W12-2(12'-6") 36"x36"  
24"x18"



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



W13-2(25) 48"x60"



W13-3(25) 48"x60"



W14-1 30"x30"



W14-3 36"x48"x48"

### GENERAL NOTES

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

APPROVAL RECOMMENDED:  
TRAFFIC ENGINEER

3/17/12  
DATE

APPROVED:  
ASSISTANT CHIEF, ENGINEERING

3-20-12  
DATE

| NO. | REVISION                                 | APPROVED BY | DATE     |
|-----|------------------------------------------|-------------|----------|
| 1   | Supersedes Sht. DT 102 Approved 12-30-69 | H.T.        | 3/20/12  |
| 2   | Revised General Note 1                   | H.T.        | 10/16/12 |
| 3   | Revised General Note 5                   | MA          | 9-16-15  |
| 4   | Revised General Note 5                   | H.T.        | 9-14-16  |
| 5   | Added Note 1                             | H.T.        | 11-9-19  |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

### STANDARD DETAILS WARNING SIGNS

NOT TO SCALE

SHEET No. 5 OF 15 SHEETS DT 102

|                   |      |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN 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.  | 56A-01-80 | 1980        | 12        | 23           |

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.

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

APPROVED:  
*Robert J. Dakeishi* 5/2/78  
 ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION                               | APPROVED BY | DATE    |
|-----|----------------------------------------|-------------|---------|
| 1   | Supersedes Sht. DT103 approved 3/20/72 | H.T.        | 5/2/78  |
| 2   | Added General Note 6                   | H.T.        | 11/9/79 |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978

SHEET NO. 6 OF 15 SHEETS.DT 103

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

CENTER LANE  
ONLY

R3-9b 24"x36"

BUS STOP

R7-107(R) 12"x 24"

RESERVED PARKING

R7-8 12"x18"

R7-8-A 24"x30"

ANY TIME

1 1/2"

- 4" Series C

R8-3a 24"x 24"

24"x 18"

R8-3a-A 48"x 48"

NO PED XING

R9-3a 18"x18"

18"x12"

R9-3a-A 24"x24"

24"x18"

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"x30"

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"

TURN AHEAD

- 8" Series F

- 5" Series D

R16-6 24"x30"

U TURN OK

- 8" Series F

- 5" Series D

R16-7 24"x30"

MOTOR-DRIVEN CYCLES PROHIBITED

4" Series B

R5-8 30"x24"

U TURN

1 1/2"

20"

8 3/4"

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"

8:00 AM TO 3:30 PM

S4-1 24"x10"

WHEN CHILDREN ARE PRESENT

S4-2 24"x10"

SCHOOL

S4-3 24"x8"

WHEN FLASHING

S4-4 24"x10"

SIDEWALK CLOSED

7" Series D

CW23-4 48"x 48"

USE SIDEWALK

4" Series C

R18-1 24"x18"

SI-1 36"x36"

S2-1 36"x 36"

SCHOOL BUS STOP AHEAD

S3-1 30"x30"

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

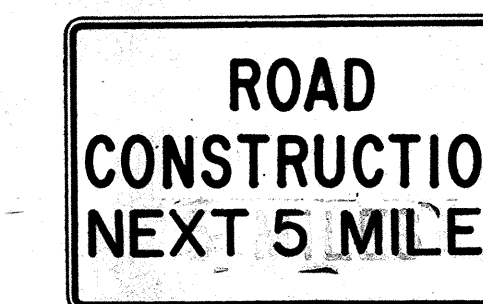
12



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



CW21-2      30" x 30'



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



CW 23-3(R) 48" x 48"

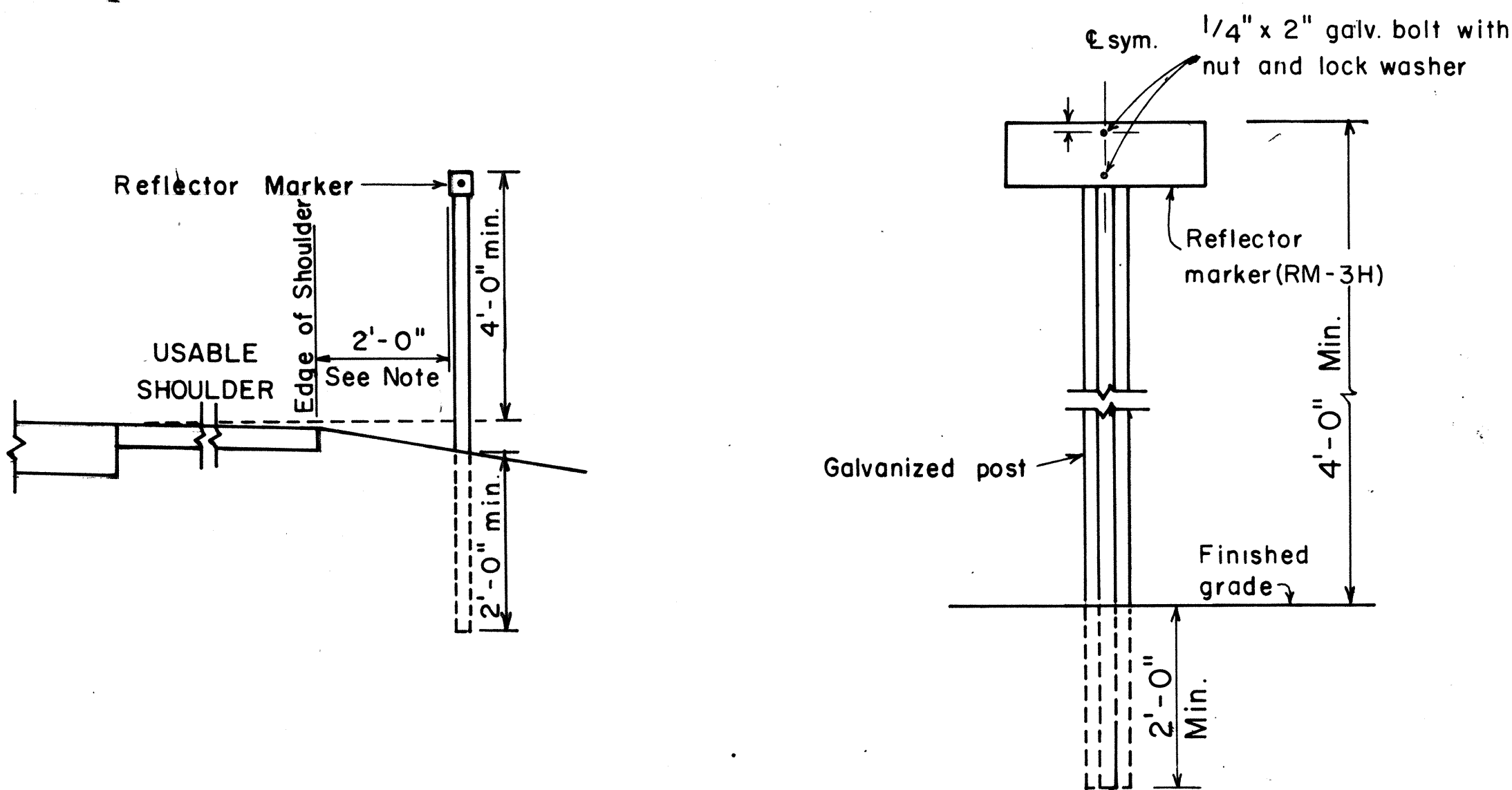
**SHEET No. 7 OF 15 SHEETS DT 104**



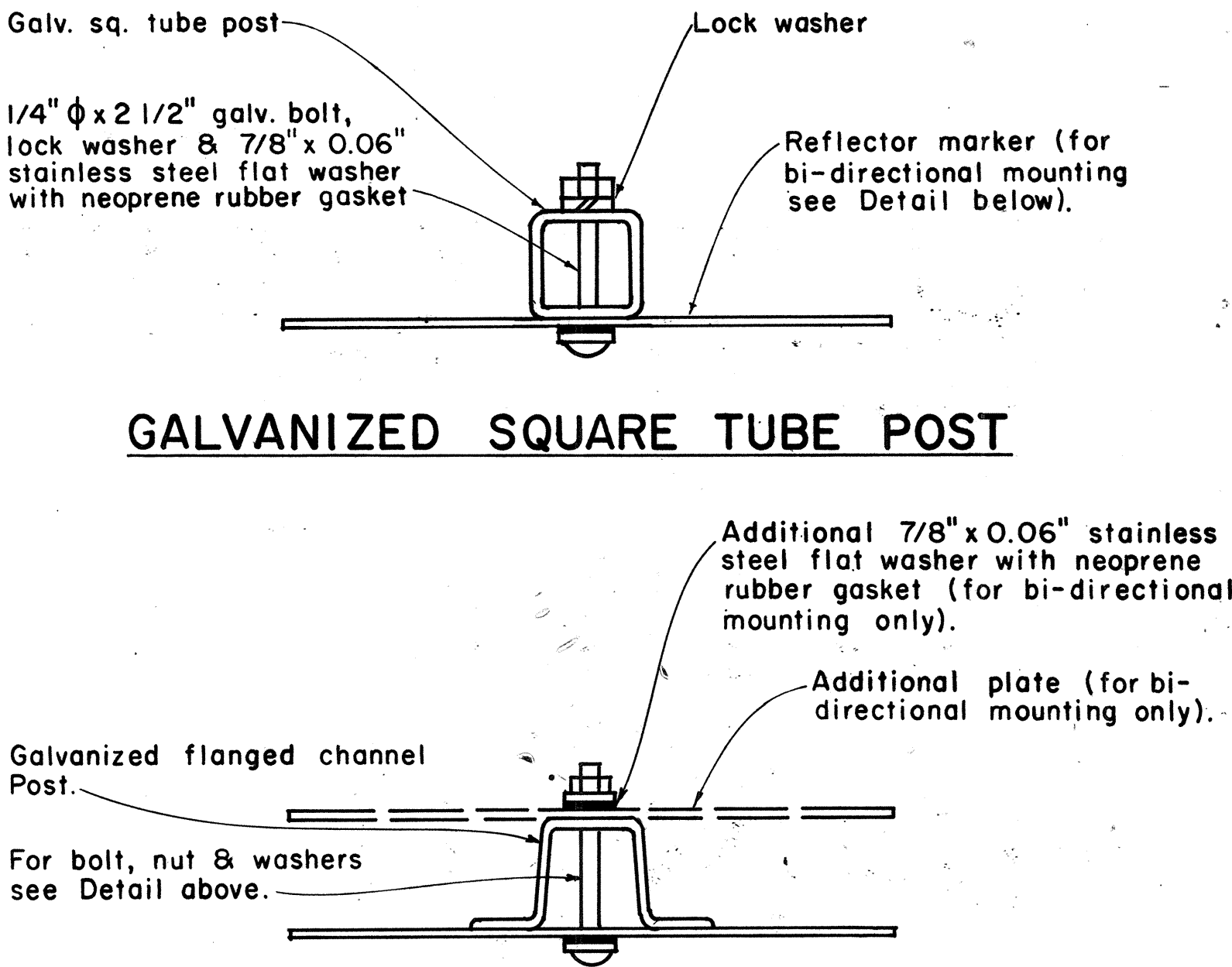
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 56A-01-80 | 1980        | 14        | 23           |

GENERAL NOTES:

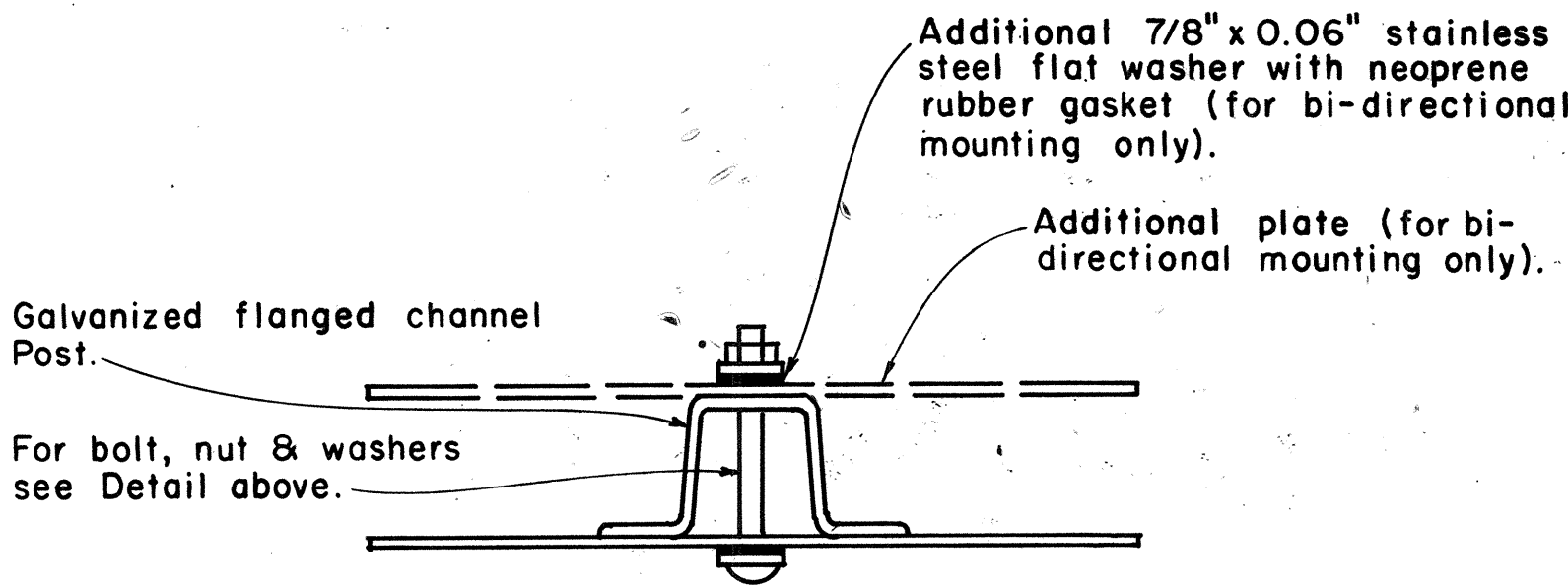
1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
2. (R) or (L) indicates right or left and shall be as shown on the plans.
3. Reflector markers RM-1 and RM-2 shall be:
  - a) Yellow if placed along the left edge of divided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



REFLECTOR MARKER MOUNTING DETAIL

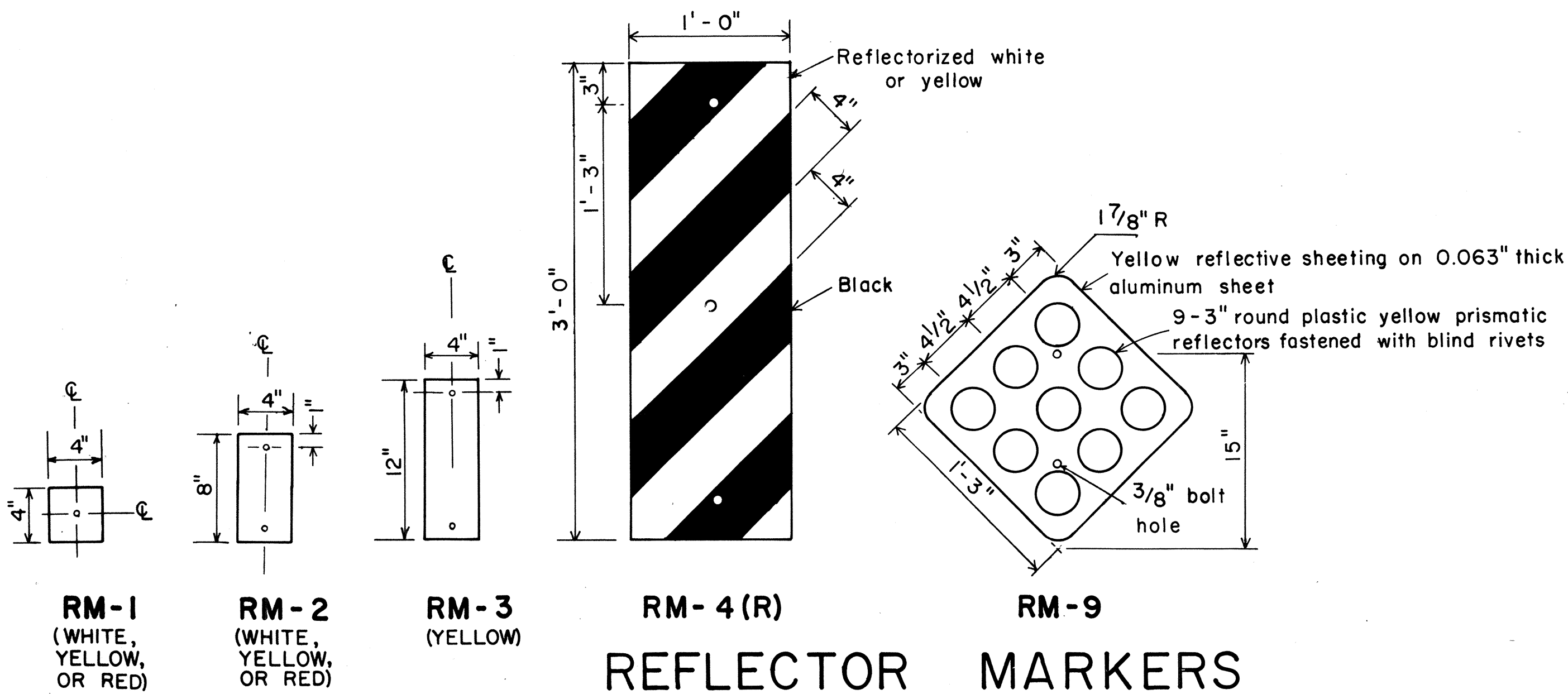


GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS



REFLECTOR MARKERS

APPROVAL RECOMMENDED:  
*Euski Tanaka*  
 TRAFFIC ENGINEER  
 DATE 11/7/77

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

| NO. | REVISION                 | APPROVED BY | DATE    |
|-----|--------------------------|-------------|---------|
| 1   | Revised Mounting Details | H-1         | 4/23/80 |

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS**  
 MISCELLANEOUS REFLECTOR MARKERS

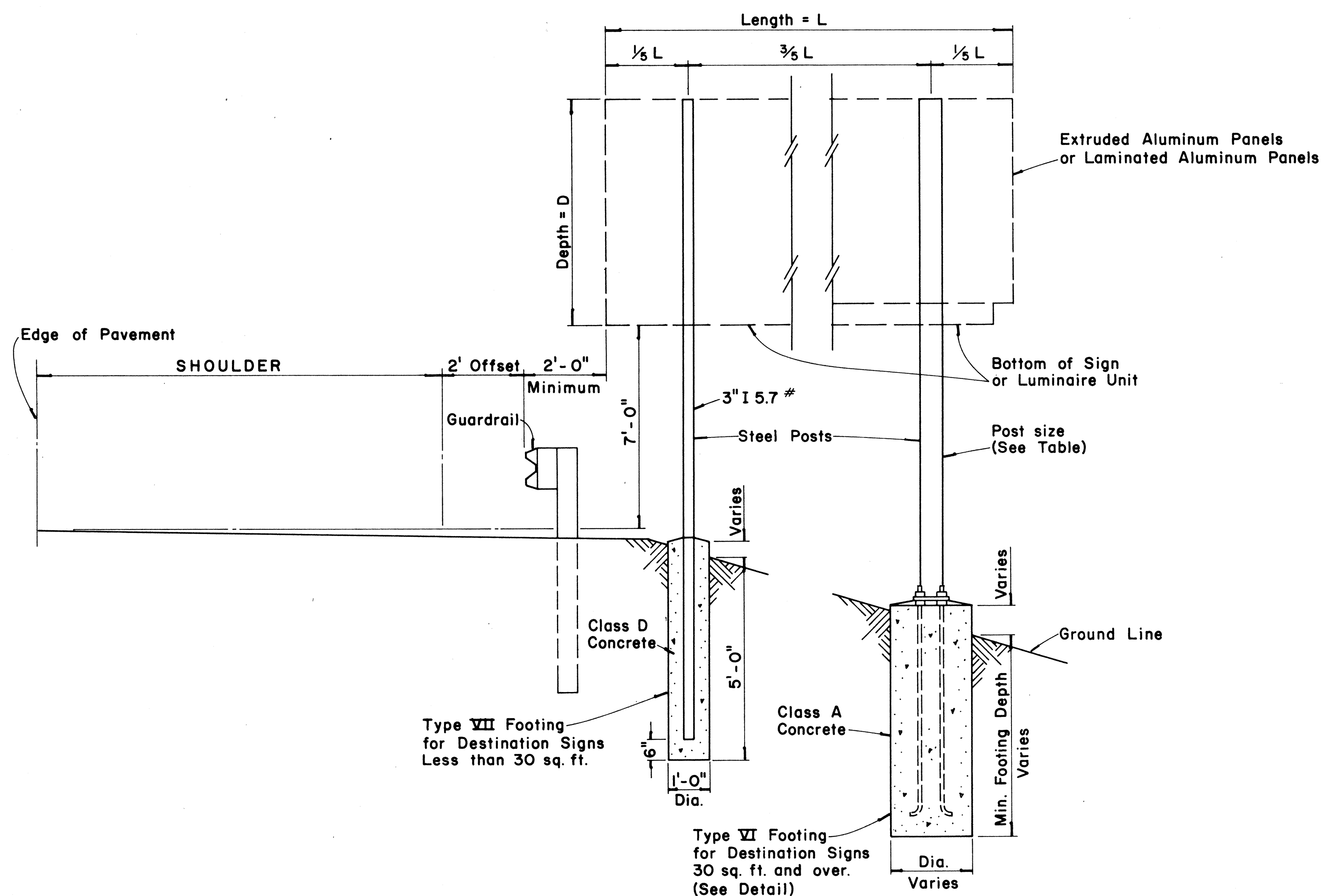
Not to scale  
 June, 1977

SHEET NO. 8 OF 15 SHEETS DT 110

|               |                   |      |
|---------------|-------------------|------|
| ORIGINAL PLAN | SURVEY PLOTTED BY | DATE |
| NOTE BOOK     | DRAWN BY          |      |
|               | DESIGNED BY       |      |
|               | QUANTITIES BY     |      |
|               | CHECKED BY        |      |

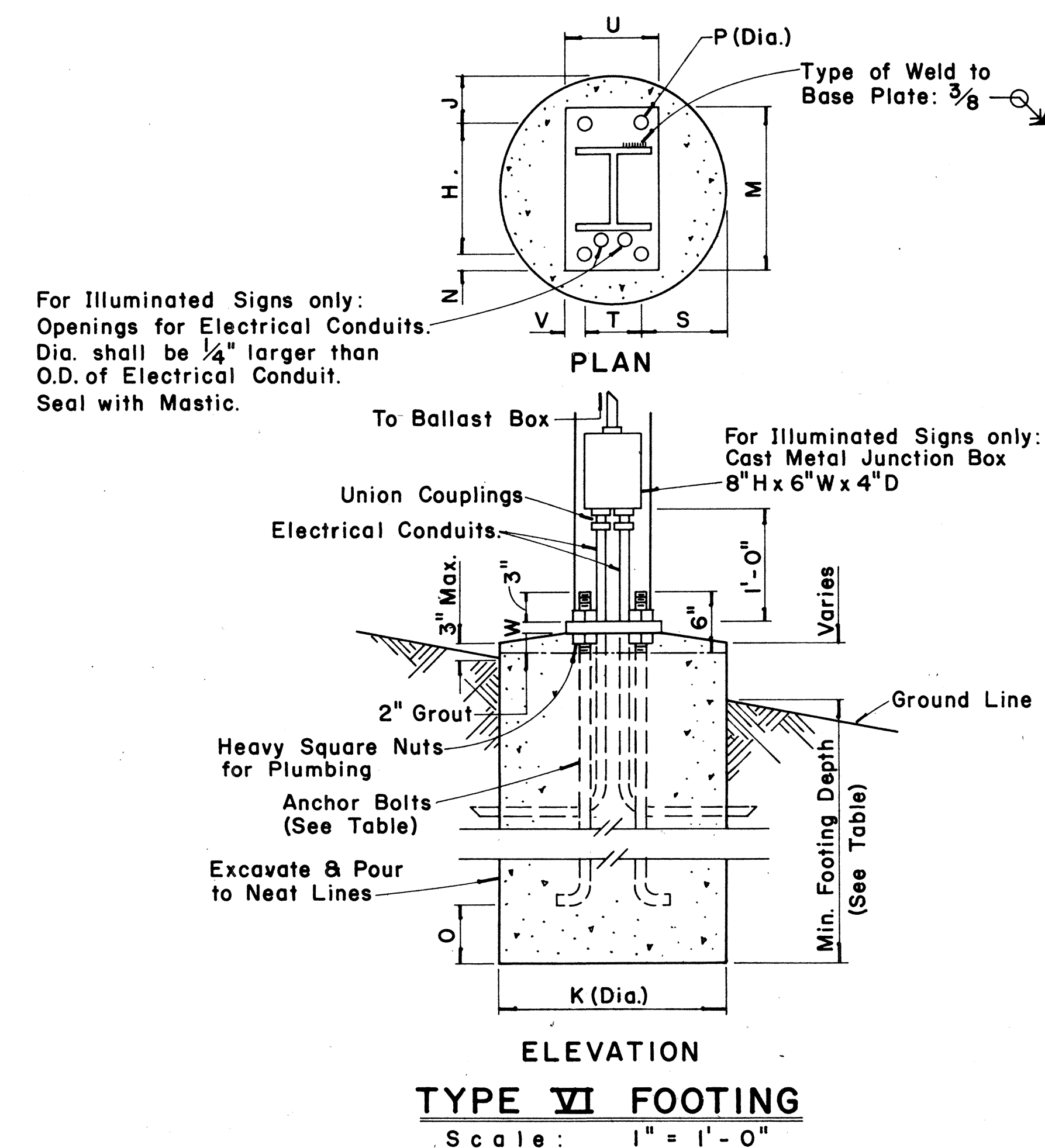
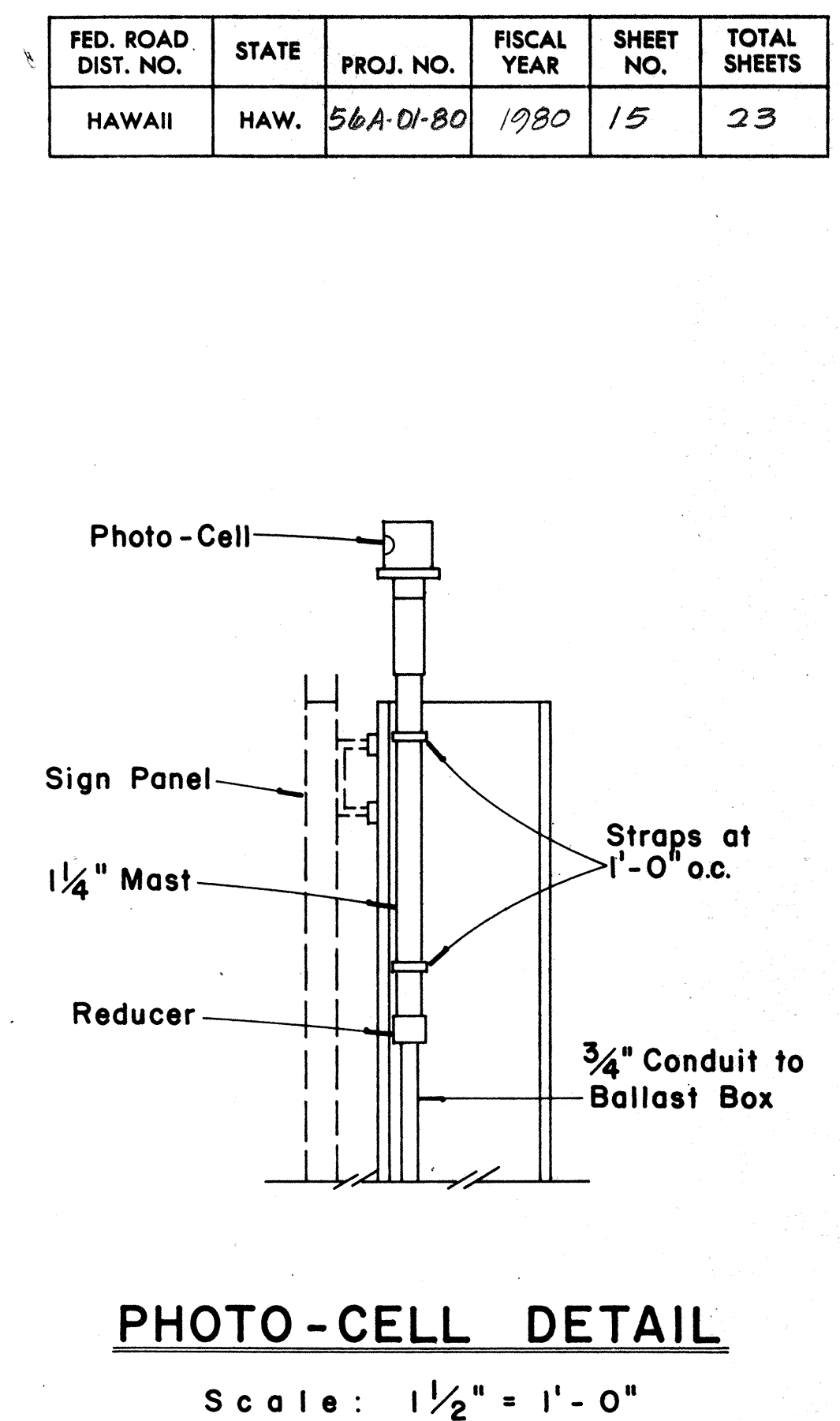
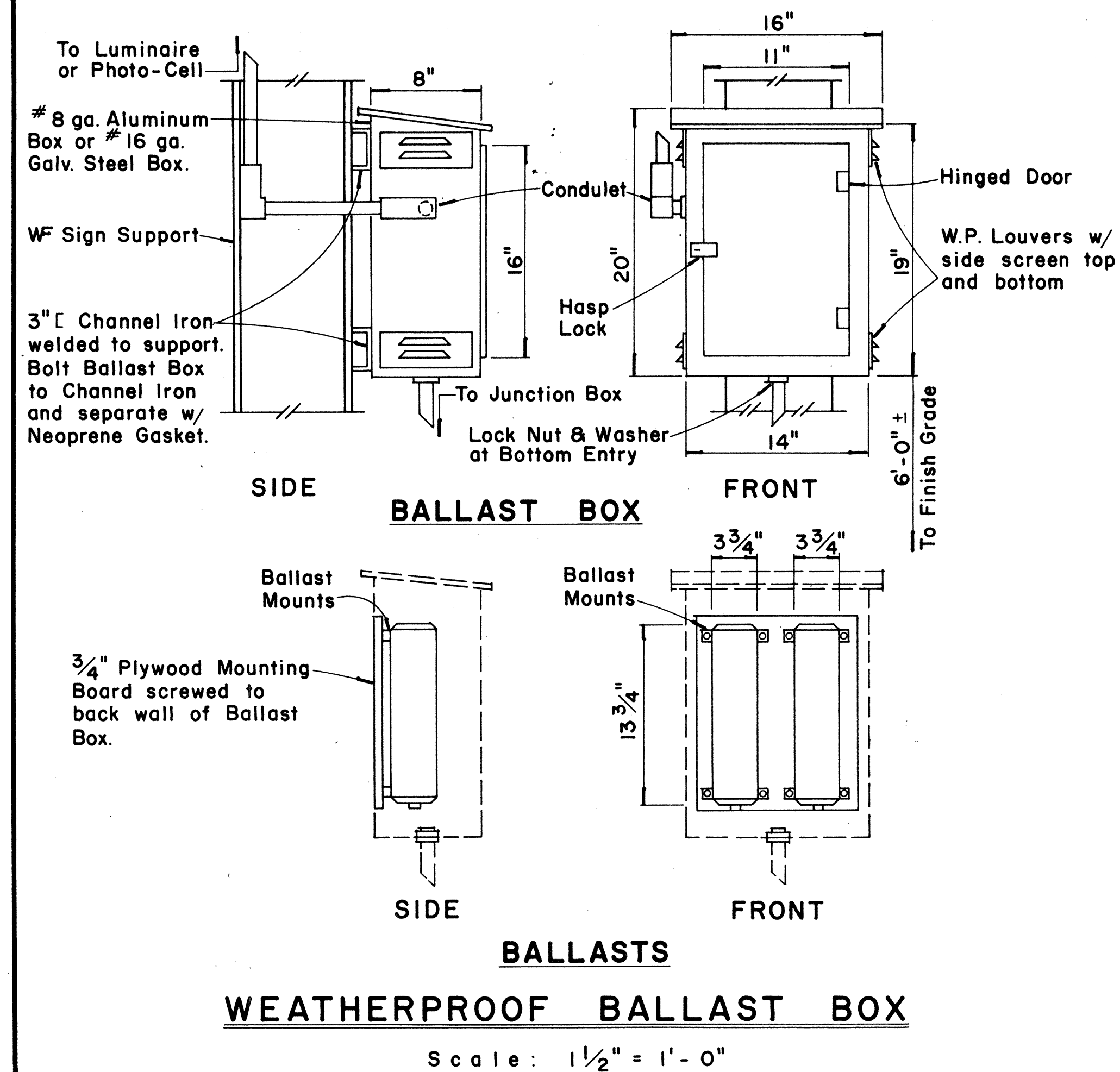


\* For moment calculations only. Post shall be from top of foundation to top of sign.  
 \*\* For fills with side slopes flatter than 4:1, Minimum Footing Depth shall be 4½ feet.

[illegible]

### TYPICAL DESTINATION & GROUND MOUNTED EXPRESSWAY SIGN

Not to Scale



APPROVAL RECOMMENDED:

Eishi Tanaka 12/29/69  
TRAFFIC ENGINEER DATE

APPROVED:

Arthur J. Salvi 12-30-69  
ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION | APPROVED<br>BY | DATE |
|-----|----------|----------------|------|
|     |          |                |      |

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

Scale: As Shown

**SHEET No. 9 OF 15 SHEETS DT 203**



H.S. bolts (Bearing Type) with hex. hd. nut and one flat washer under each bolt head and bevel or flat washer (where required) under nut.

Fuse Plate (Install with notches toward base)

Flange holes for hinge shall be drilled or sub-punched and reamed.

Beveled washers for all I-shaped posts. Flat washers for others.

Cut flange and web

Fillet depth  $\pm \frac{1}{16}$ "  
No Cut

Post shall be saw cut after galvanizing and the cut surface treated with an approved zinc solder meeting the Federal Spec. O-G-93 (Stick only). Cut surface will not be treated until plate is installed and all bolts fully tightened.

See Hinge Detail

Post cut @  
bottom of sign  $\pm 1"$

Sign Face

Sign Post

Ground Line

Stub Post

5'-0"

Class A Concrete

8 Bars V  
(See Table for size).

#2 plain spiral  
6" pitch

See Details "A" & "B"

Diag. Varies  
(See Table)

Technical drawing of a pile cap showing three views: side elevation, top view, and front elevation.

- Side Elevation (Top):** Shows the pile cap resting on a "Ground Line". The height of the cap is dimensioned as 3".
- Top View:** Shows a circular cross-section of the pile cap. It contains 8 reinforcement bars, labeled "8  $\infty$  Bars V (See Table for size)".
- Front Elevation (Bottom):** Shows the pile cap with a height of 4" and a width of 2". It details the reinforcement as "#2 plain spiral  $\infty$  6" pitch. The reinforcement pattern is described as "Three flat turns top & one flat turn bottom".

Other labels include "Stub post length (See Table)" pointing to the vertical dimension on the left, and "Ground Line" pointing to the base of the side elevation.

Technical drawing of a sign post base showing Section A-A and Section B-B.

**SECTION "A-A"** (Cross-section):

- Overall width: 7 1/2"
- Opening width: 6"
- Base thickness: 3/4"
- Stub Post diameter: 3"
- Base height: 3"
- Bevel: 12" (Typ.)
- Stub Post thickness: 3/16"
- Sign Post diameter: 3"
- Sign Post height: 3"
- Base thickness: 3/4"
- Base width: 3"
- Base height: 3"
- Sign Post diameter: 3"
- Sign Post height: 3"

**SECTION "B-B"** (Longitudinal section):

- Overall width: 7 1/2"
- Opening width: 6"
- Base thickness: 3/4"
- Stub Post diameter: 3"
- Base height: 3"
- Bevel: 12" (Typ.)
- Stub Post thickness: 3/16"
- Sign Post diameter: 3"
- Sign Post height: 3"
- Base thickness: 3/4"
- Base width: 3"
- Base height: 3"
- Sign Post diameter: 3"
- Sign Post height: 3"

Diagram illustrating the Stiffener Plate Detail. The plate thickness is 12. The dimensions shown are:

- Vertical dimension:  $A$
- Horizontal dimension:  $B$
- Top corner chamfer:  $\frac{1}{2}"$
- Bottom corner chamfer:  $\frac{1}{2}"$
- Plate Thickness = 12

STIFFENER PLATE DETAIL

- APPROVAL RECOMMENDED: Erich Tanaka 12/23/69  
TRAFFIC ENGINEER DATE
- d. APPROVED: [Signature] 12-30-69  
ASSISTANT CHIEF, ENGINEERING DATE

$\frac{5}{8}$ "  $\varnothing$  x 2  $\frac{3}{4}$ " H.S. bolt with hex. hd. nut & 3 washers with each bolt. Torque = 450#  
See bolting procedure.

Remove all galvanizing runs or beads in washer area.

**ASSEMBLY SECTION :**

to stub with bolts and washer on each bolt

to plumb post.  
as the max. possible with  
to bed washers & shims

The diagram illustrates the assembly of a sign post and stub post. It shows a cross-section of the post and stub post, with bolts and washers securing them. Key components labeled include: Stiffener Plate (See Detail), Post Length, Stub Projection (See Table), Top of Footing, and Typ. The diagram also shows the removal of galvanizing runs or beads in the washer area.

DETAIL "B"

SIGN POST & STUB POST

(For W & B Shapes)

SHIM DETAIL

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
LAND TRANSPORTATION FACILITIES DIVISION

**STANDARD DETAILS**

**BREAK-AWAY SIGN SUPPORTS**

**FOR**

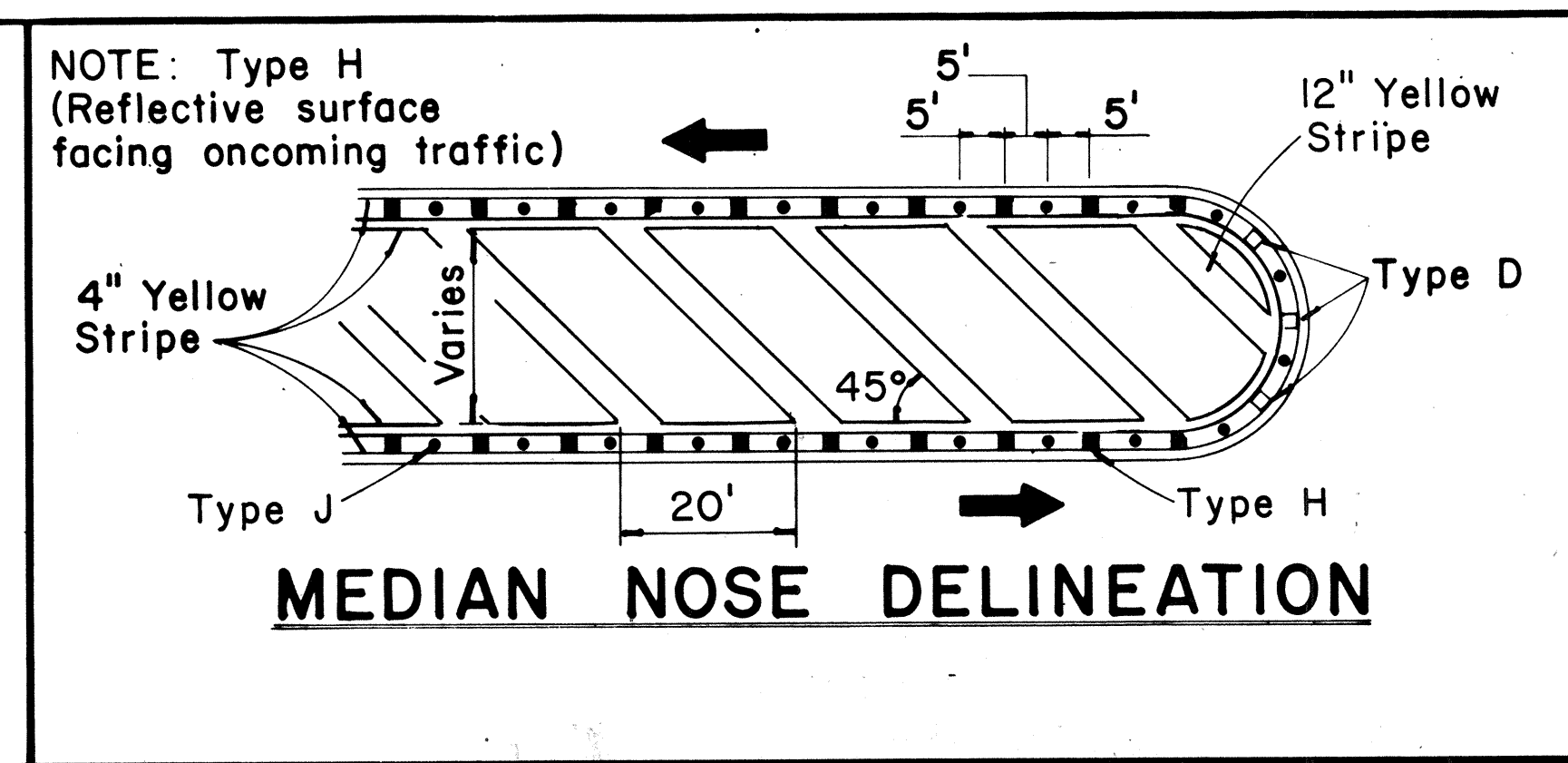
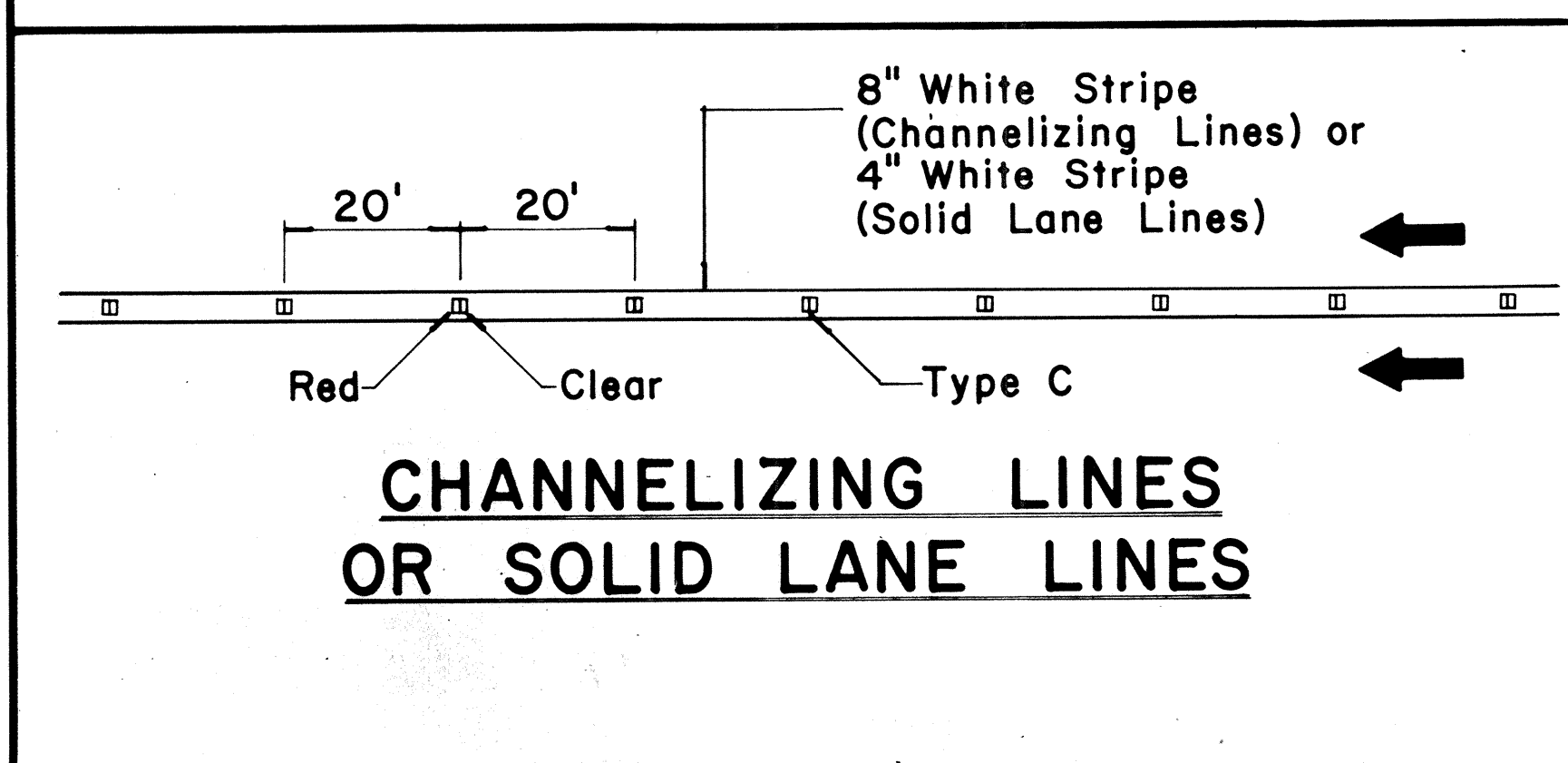
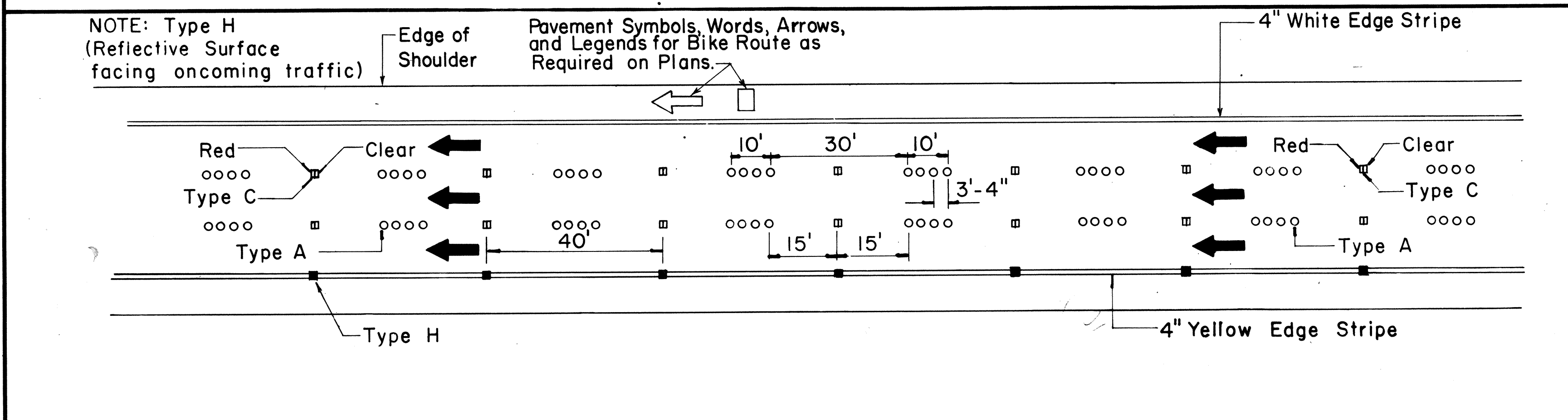
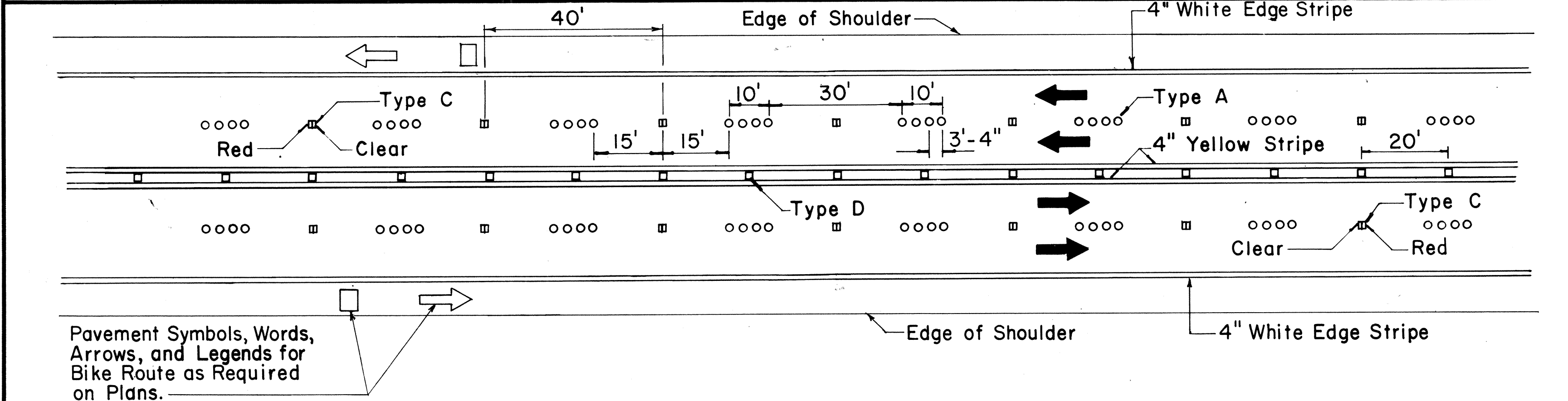
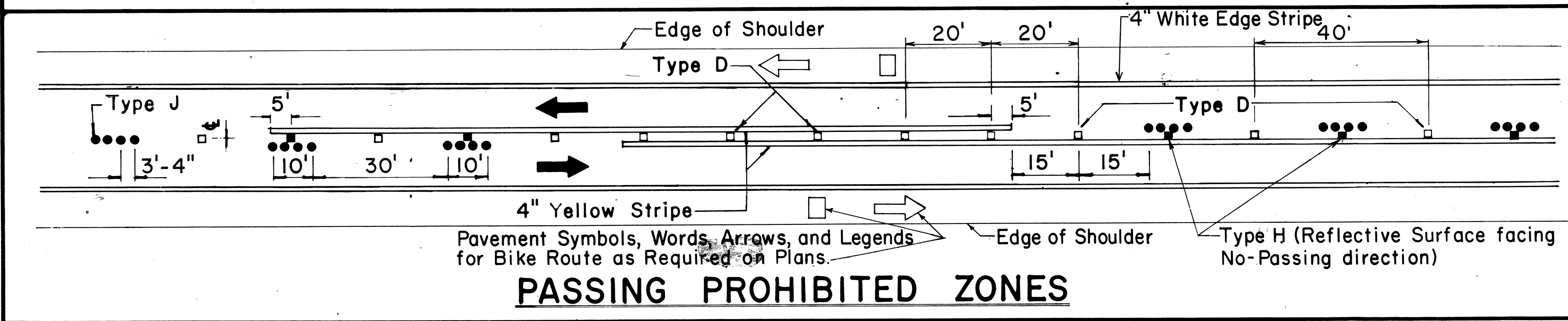
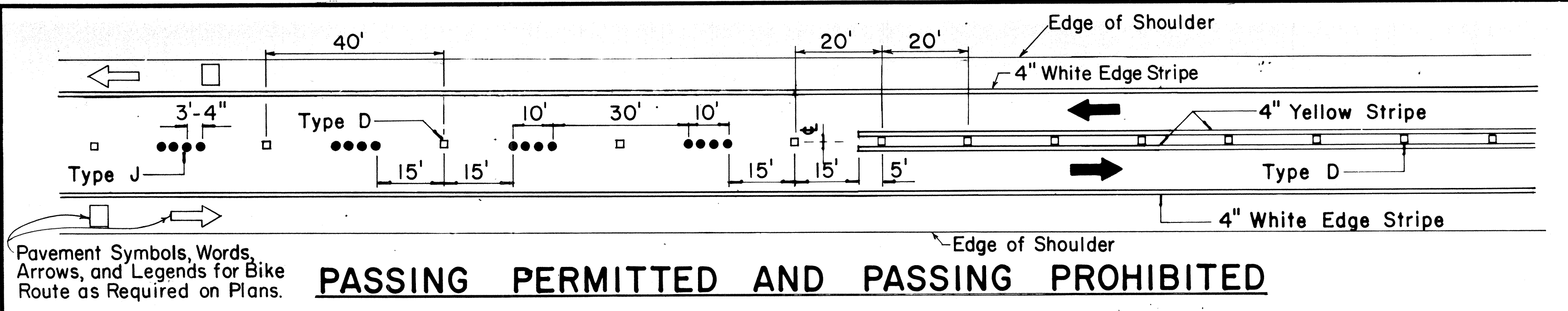
**GROUND MOUNTED GUIDE SIGNS**

Not to Scale

**SHEET No. 10 OF 15 SHEETS DT204**



| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 56A01-80  | 1980        | 17        | 23           |

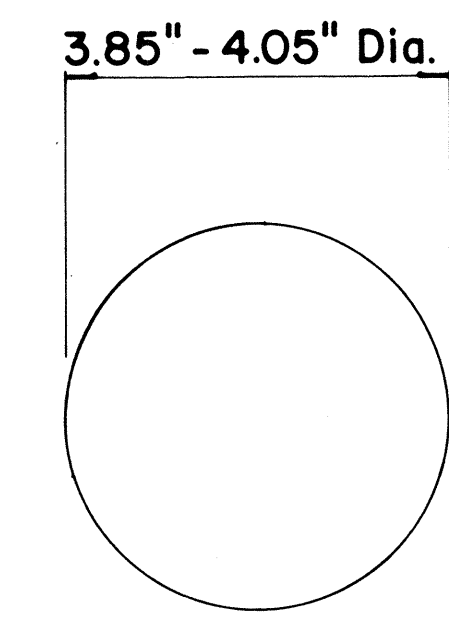


TWO - LANE

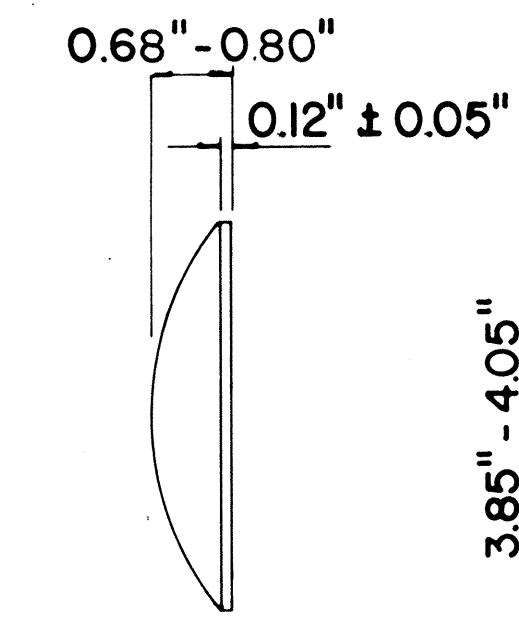
MULTI - LANE

DIVIDED HIGHWAY AND FREEWAY

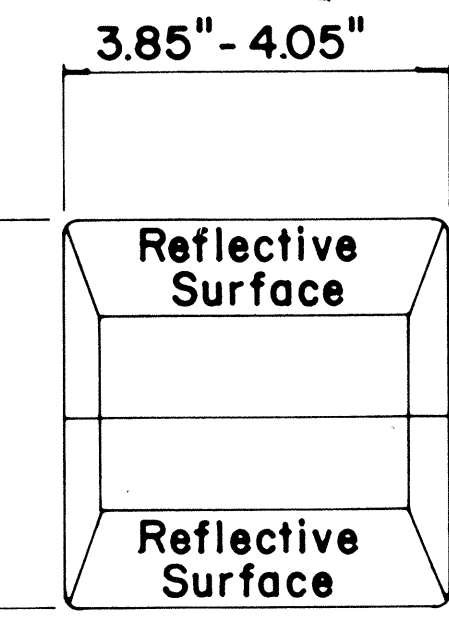
MISCELLANEOUS



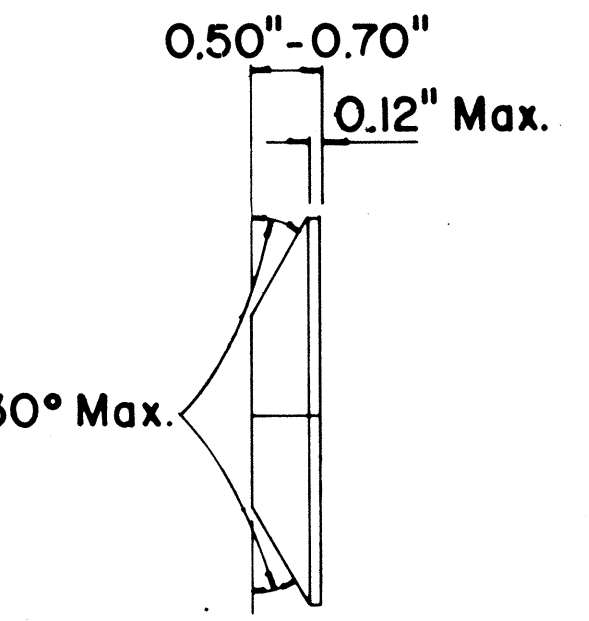
**TYPE A**  
NON-REFLECTIVE WHITE MARKER



**TYPE J**  
NON-REFLECTIVE YELLOW MARKER



**TYPE C**  
RED-CLEAR REFLECTIVE MARKER



**TYPE H**  
ONE-WAY YELLOW REFLECTIVE MARKER

**GENERAL NOTES**

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:  
*Erich Tanaka* 7/21/78  
TRAFFIC ENGINEER DATE

APPROVED:  
*Harbert J. Zakeish* 7/21/78  
ASSISTANT CHIEF, ENGINEERING 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.        | 10/15/79 |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**  
**RAISED PAVEMENT MARKERS AND STRIPING**

Not to Scale July 1978  
SHEET No. 11 OF 15 SHEETS DT 300

DATE  
DRAWN BY  
CHECKED BY  
DESIGNED BY  
NOTED BY  
ORIGINAL PLAN  
NOTE BOOK  
NO.



| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 56A-01-80 | 1980        | 18        | 23           |

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: E. A. Tanaka 5/2/78  
 TRAFFIC ENGINEER DATE

APPROVED: Harold S. Zaks 5/3/78  
 ASSISTANT CHIEF, ENGINEERING DATE

NO.

REVISION

APPROVED BY

DATE

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

LAND TRANSPORTATION FACILITIES DIVISION

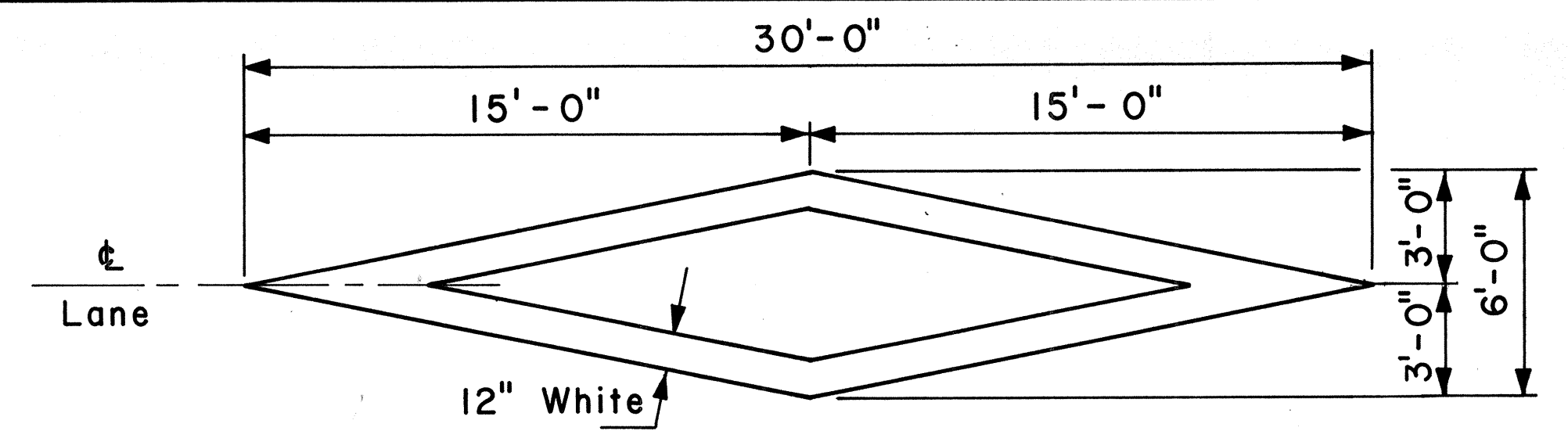
STANDARD DETAILS

MISCELLANEOUS

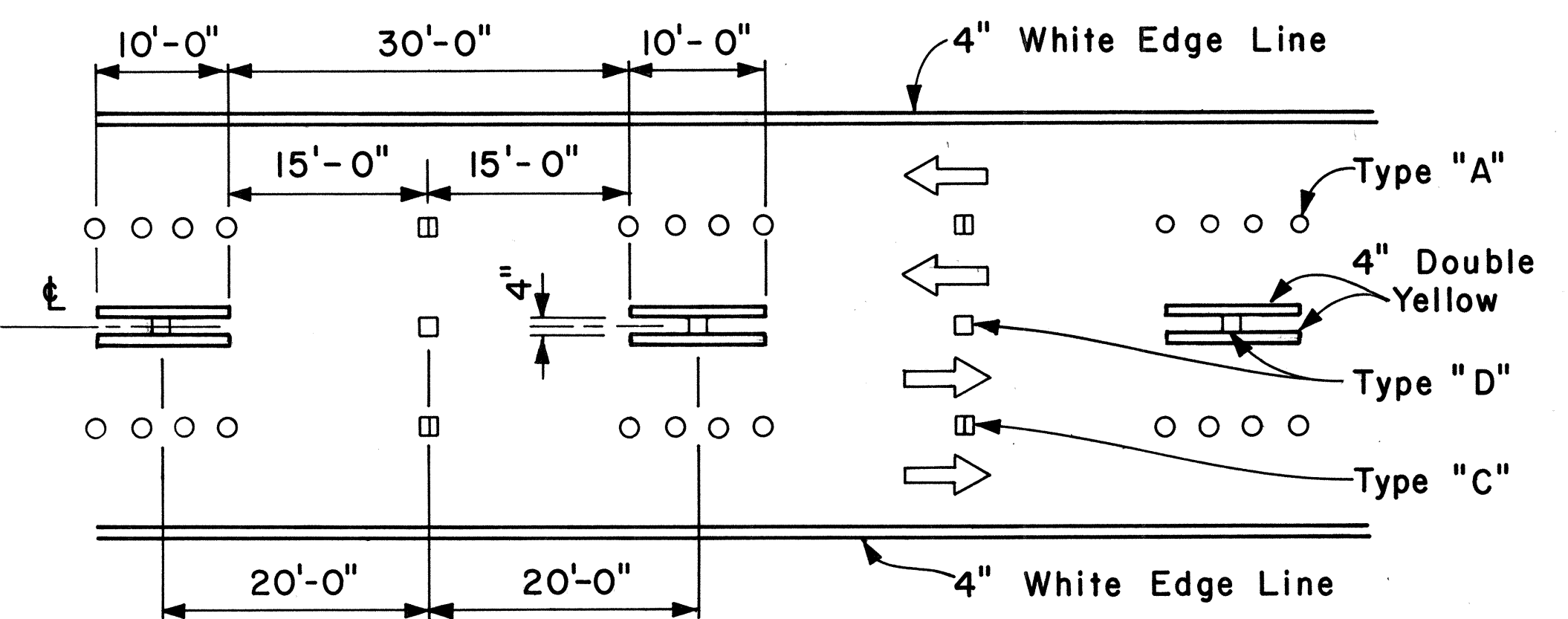
PAVEMENT MARKINGS

Scale: Not to Scale Date: April, 1978

SHEET No. 12 OF 15 SHEETS DT 302

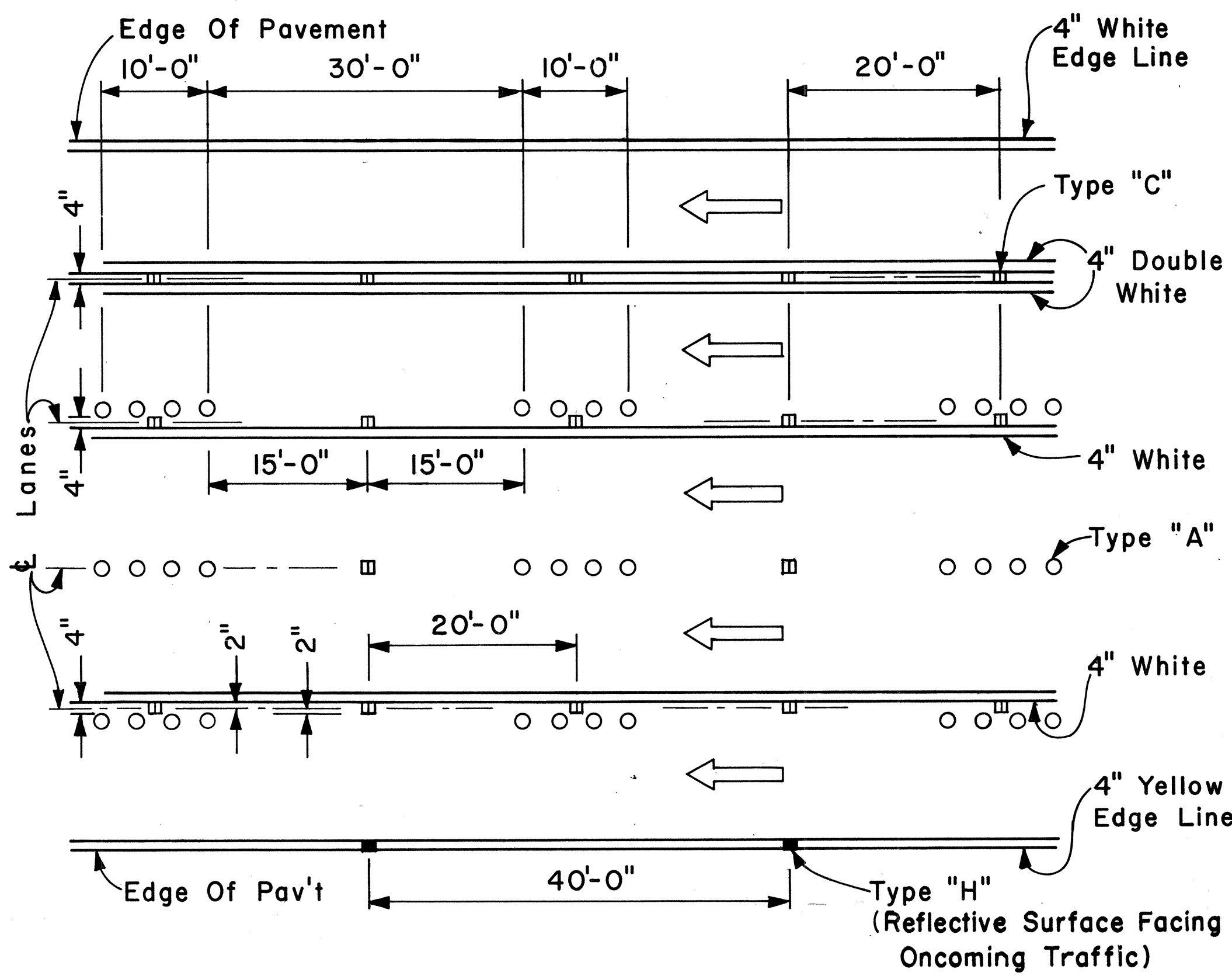


PAVEMENT DIAMOND

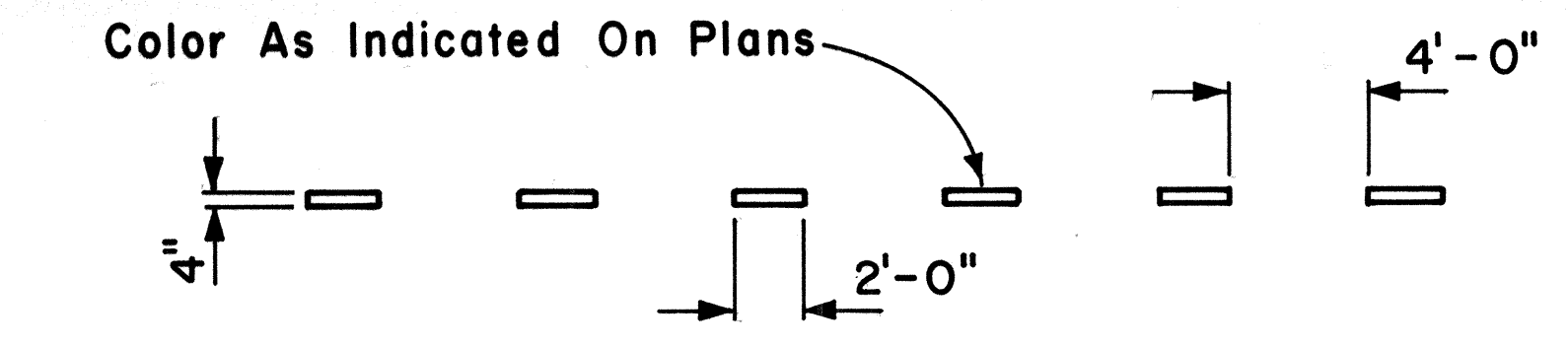


NOTE: Traffic Cone Usage Required.

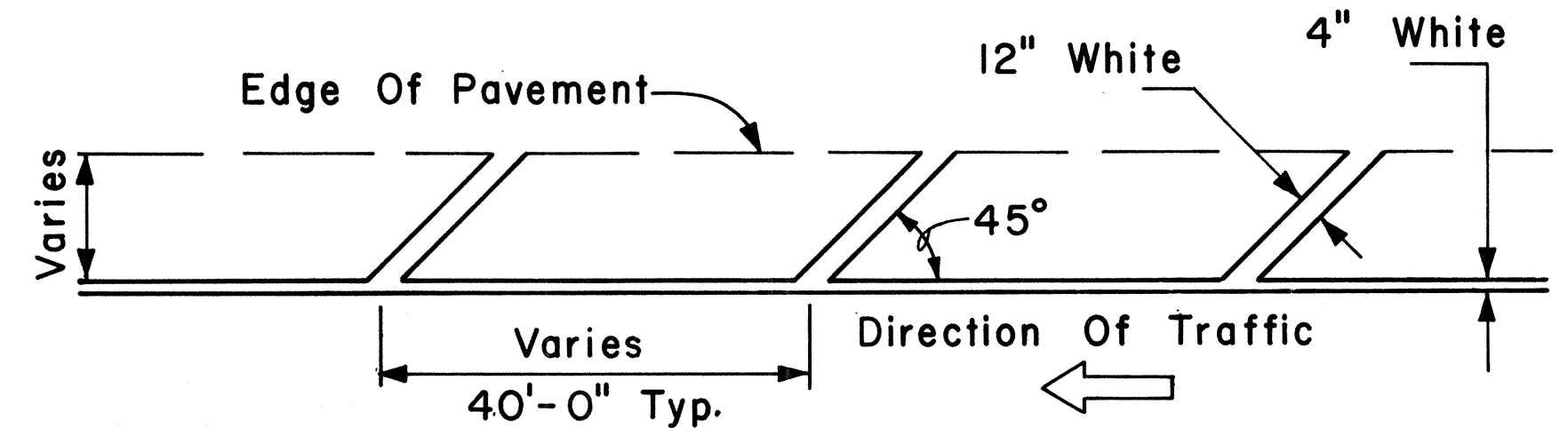
MULTI-LANE REVERSIBLE LANES



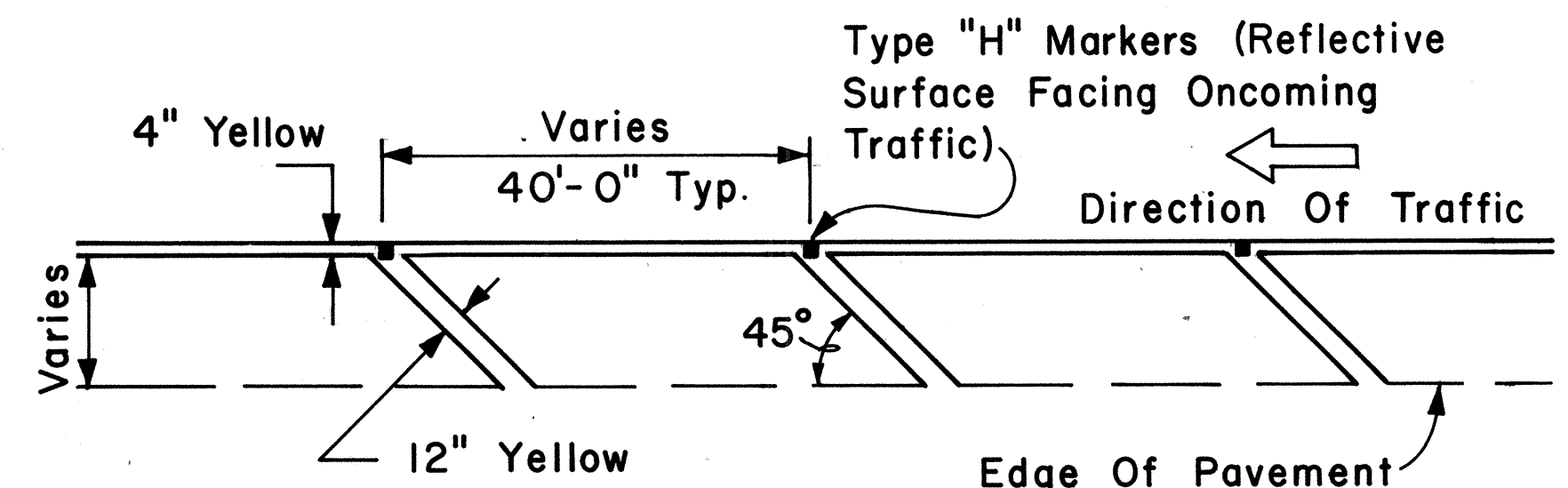
MULTI-LANE LANE CHANGE RESTRICTION ZONES



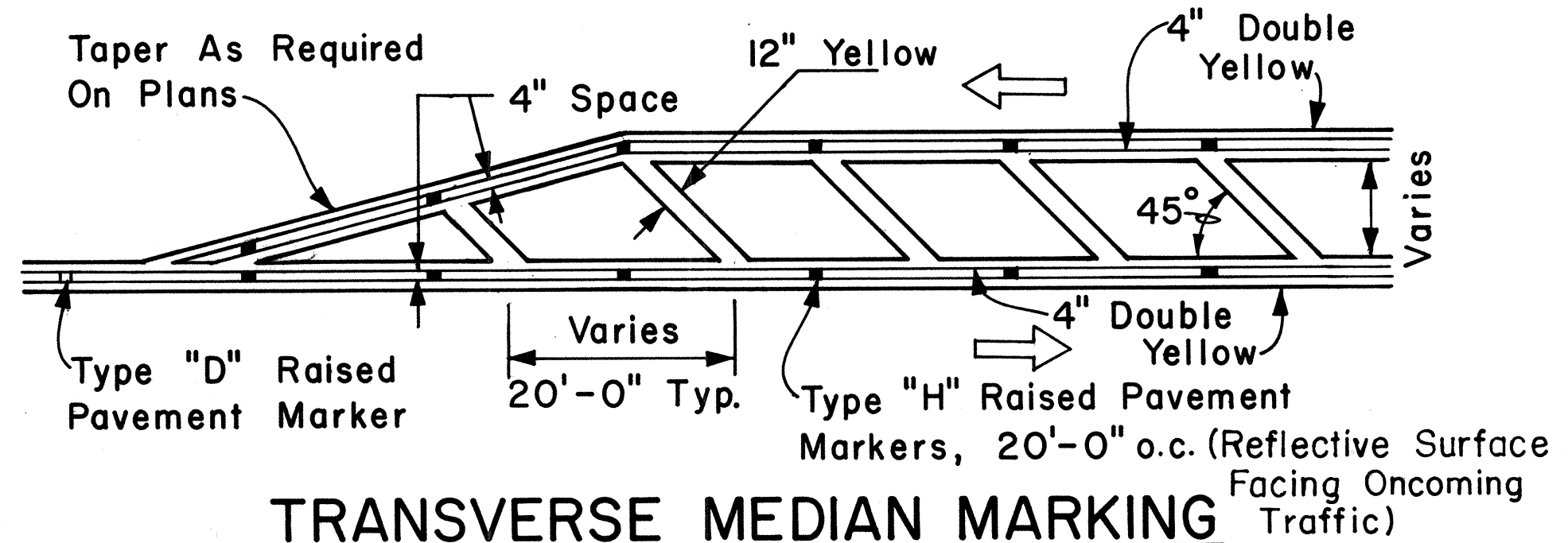
4" GUIDE LINE



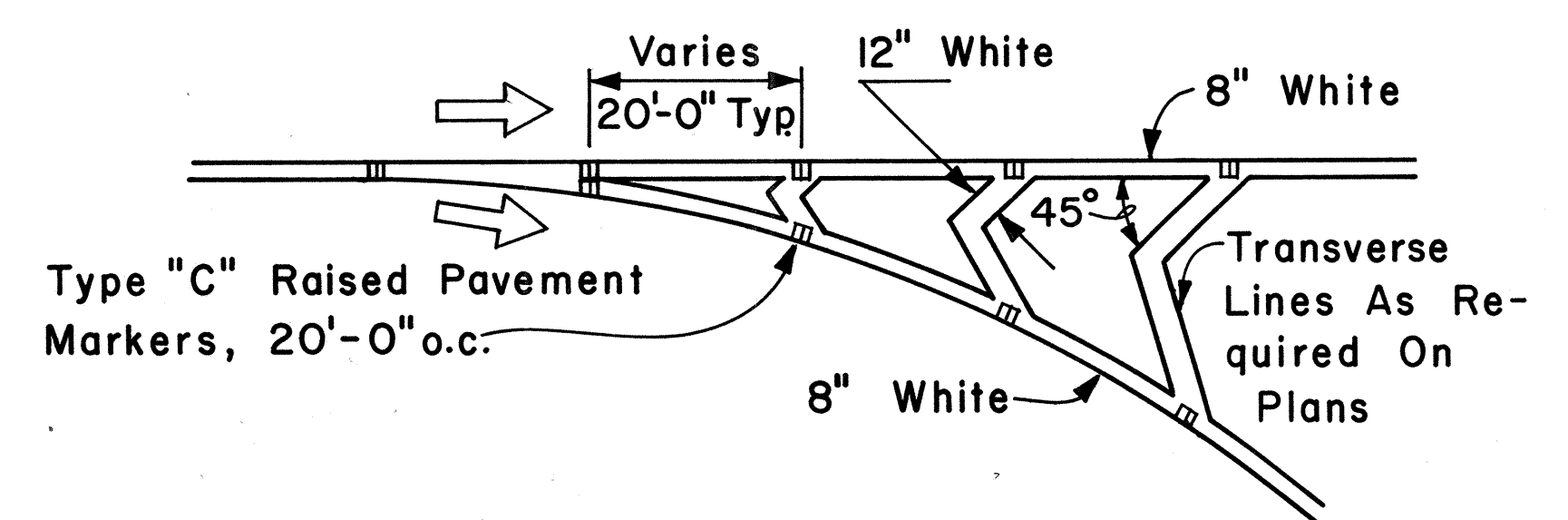
TRANSVERSE RIGHT SHOULDER MARKING



TRANSVERSE LEFT SHOULDER MARKING



TRANSVERSE MEDIAN MARKING



CHANNELIZING ISLAND

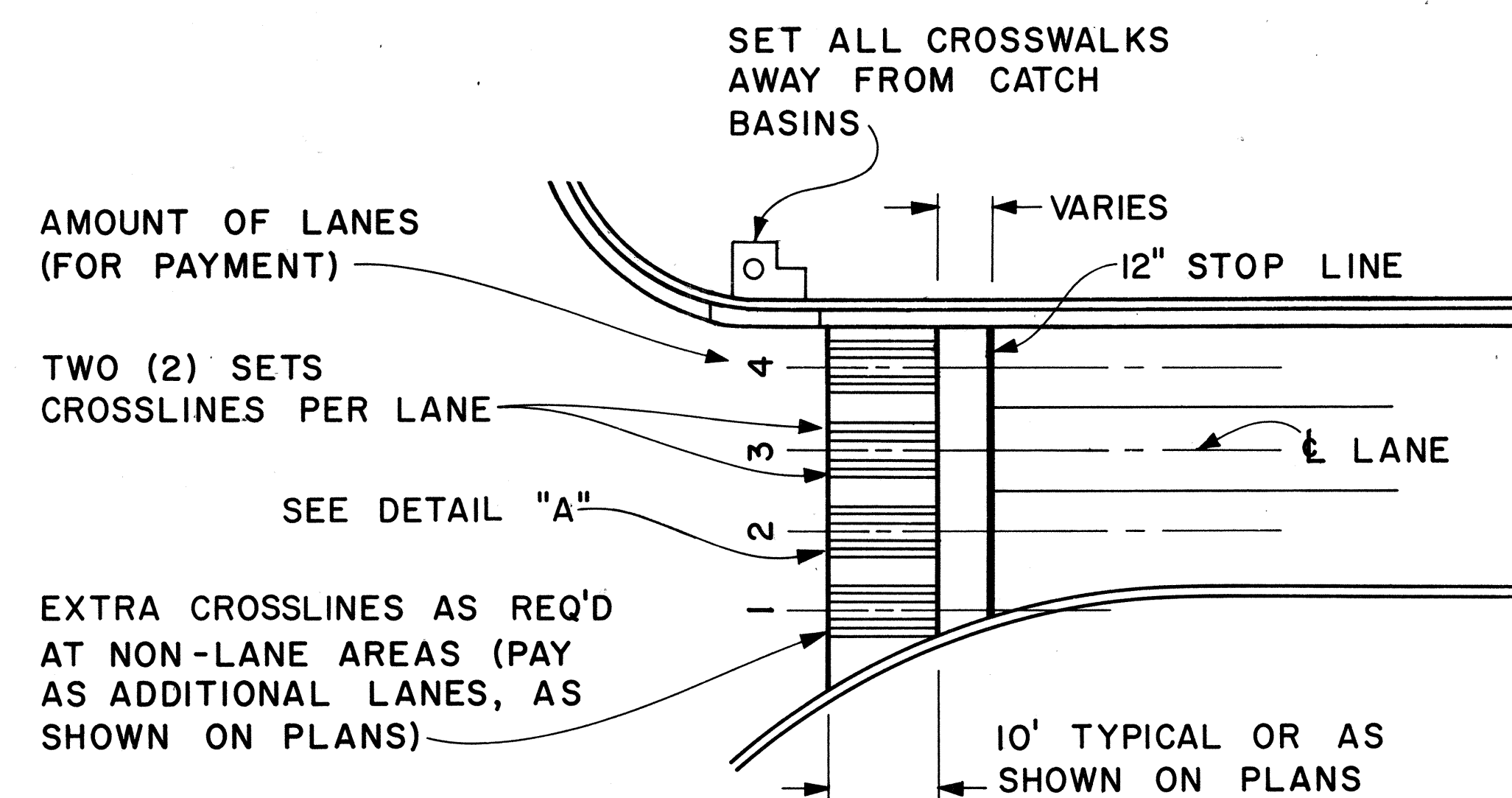
|               |       |
|---------------|-------|
| DATE          | _____ |
| DESIGNED BY   | _____ |
| NOTED BY      | _____ |
| CHECKED BY    | _____ |
| ORIGINAL PLAN | _____ |
| NOTE BOOK     | _____ |
| QUANTITIES BY | _____ |
| NO.           | _____ |



GENERAL NOTES:

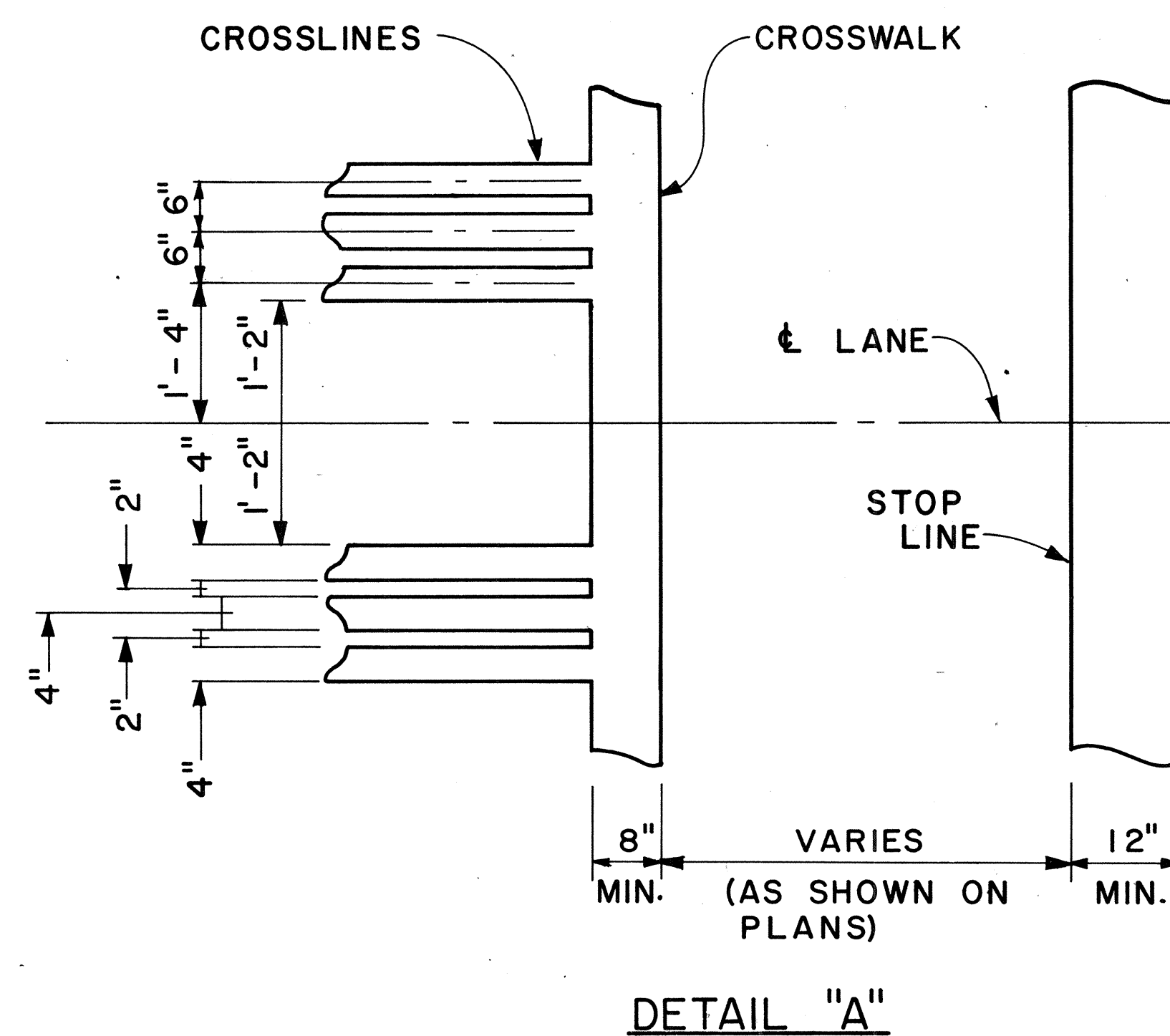
- [illegible]

**Scale:**  $3/8" = 1'$



CROSSWALK & STOP LINE

Scale: Not to Scale

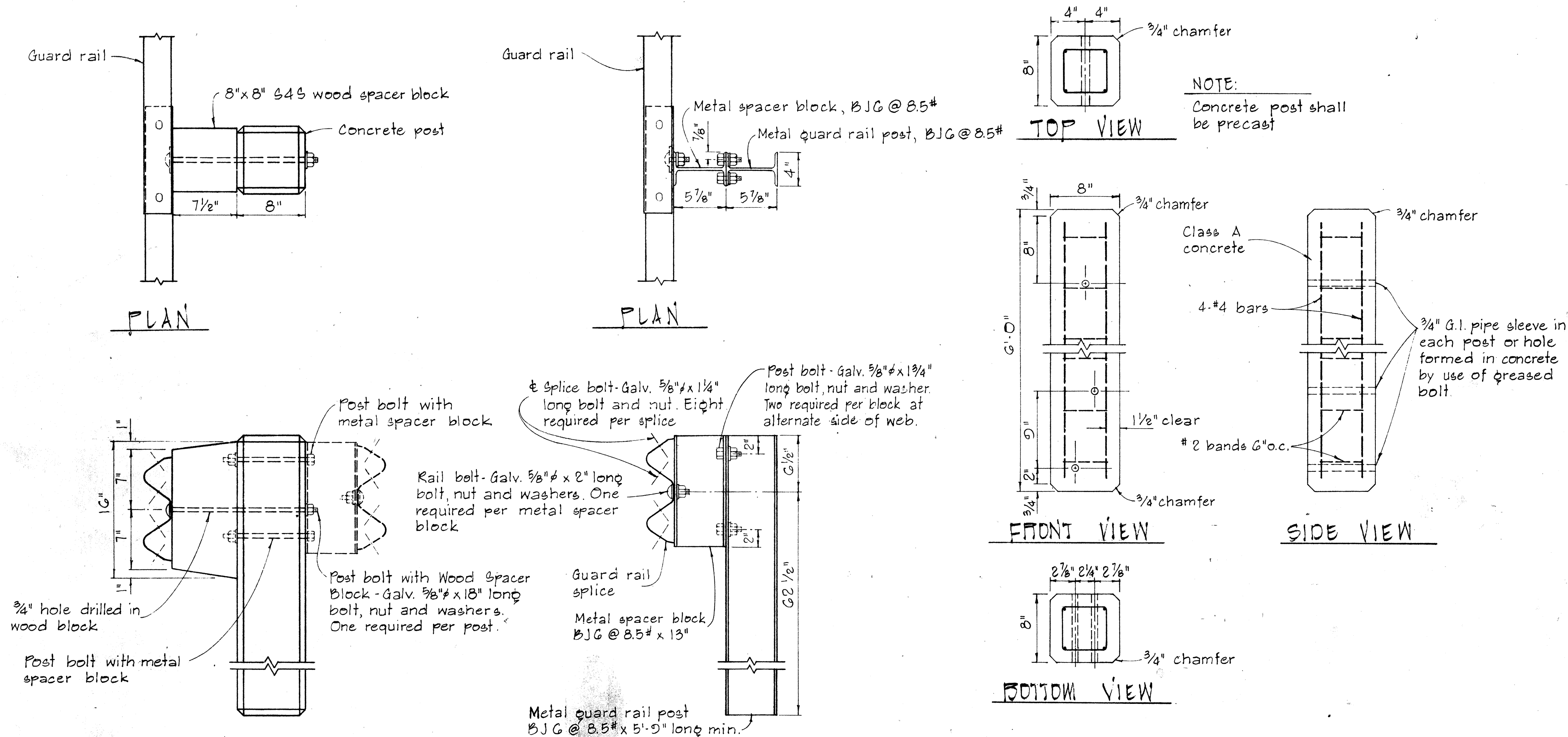


| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |

Scale: As Shown Date: March, 1978  
SHEET NO. 13 OF 15 SHEETS DT 306

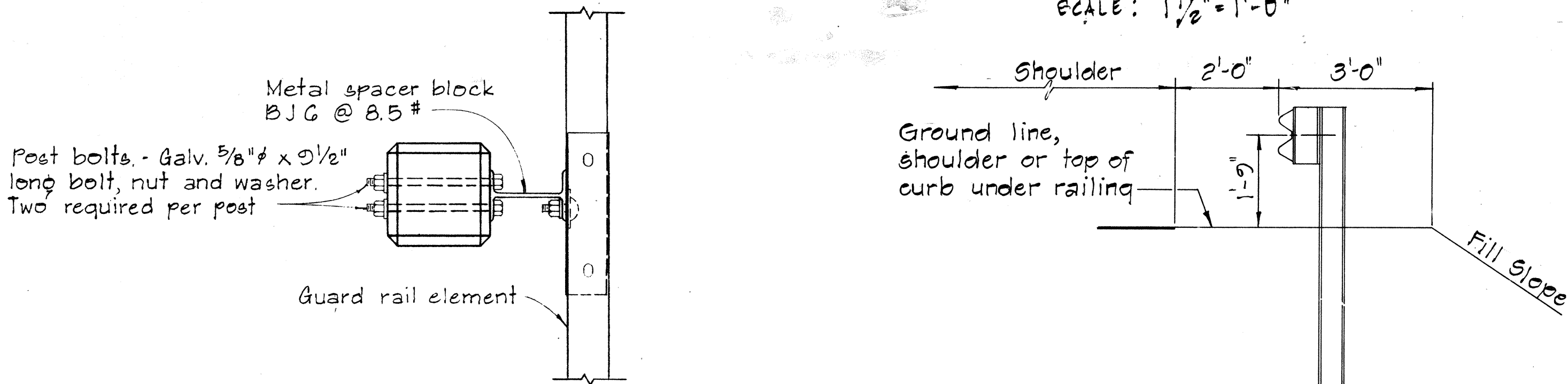


| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-----------|-------------|-----------|--------------|
| HAWAII              | HAW.  | 56A-01-80 | 1980        | 20        | 23           |



**SINGLE METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK**

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

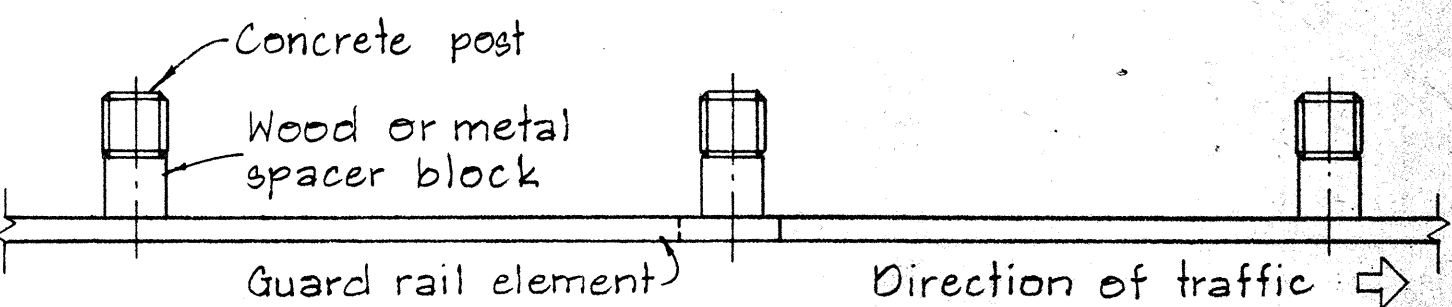
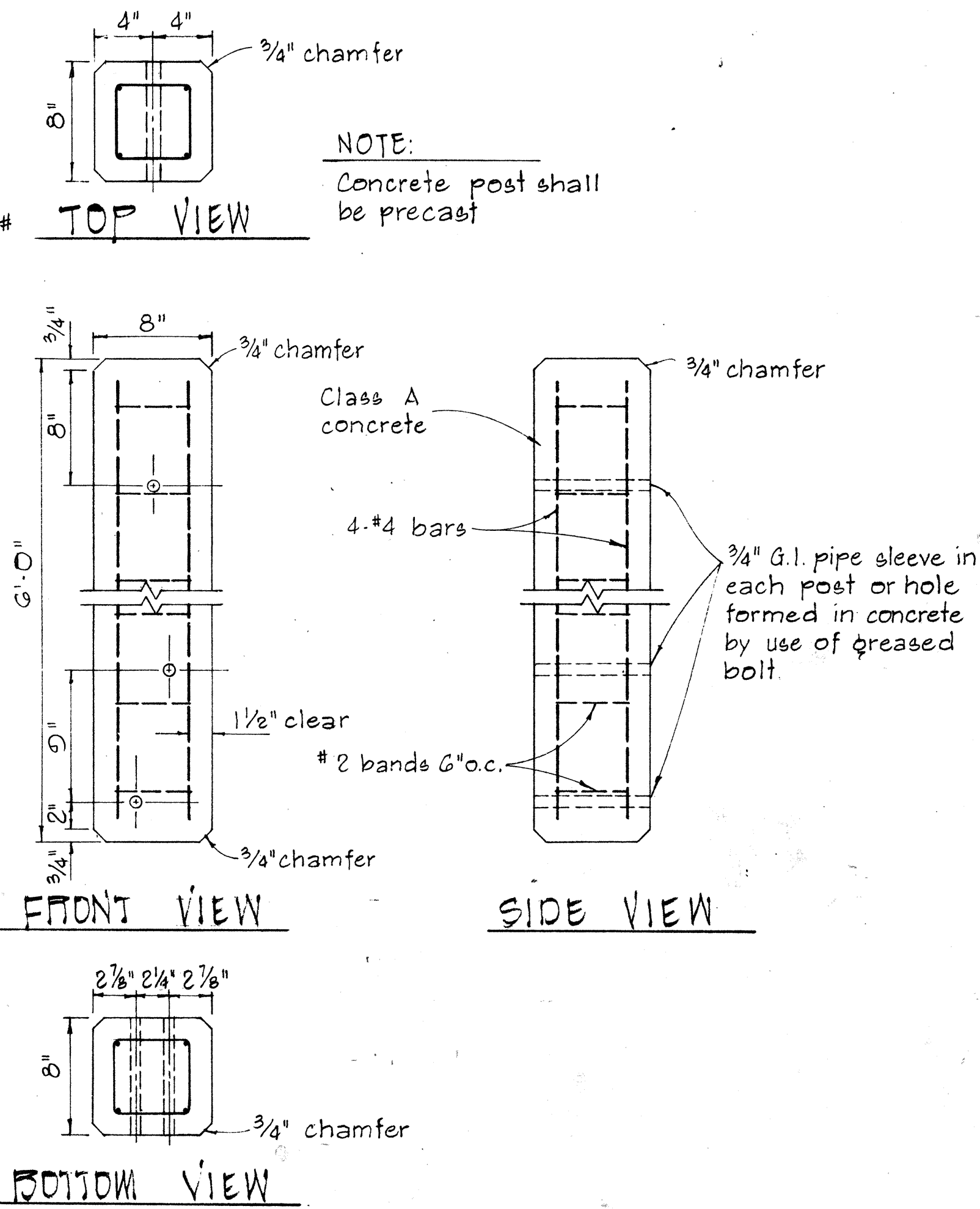


**SINGLE METAL GUARD RAIL ON PRECAST CONCRETE POST WITH WOOD OR METAL SPACER BLOCK**

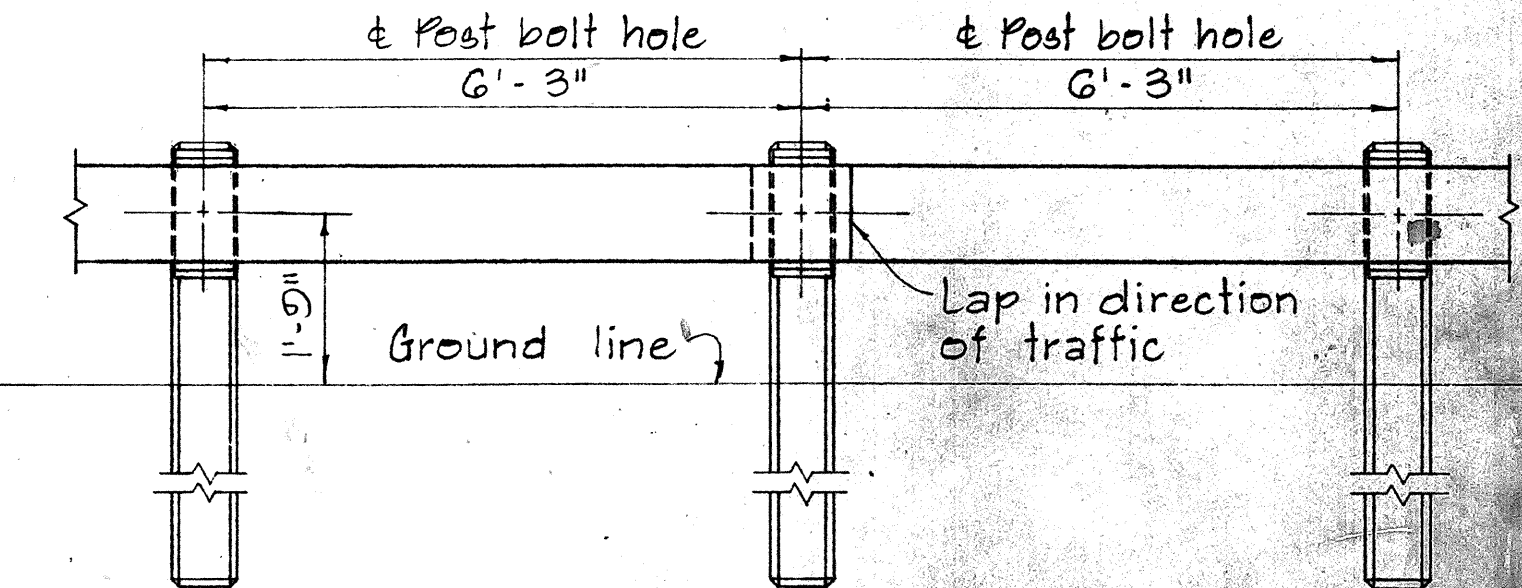
SCALE: 1 1/2" = 1'-0"

**DETAIL OF CONCRETE POST**

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



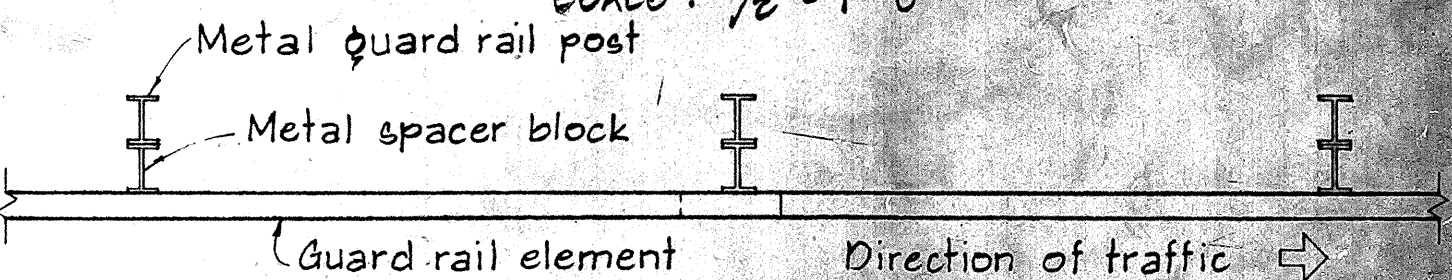
**PLAN**



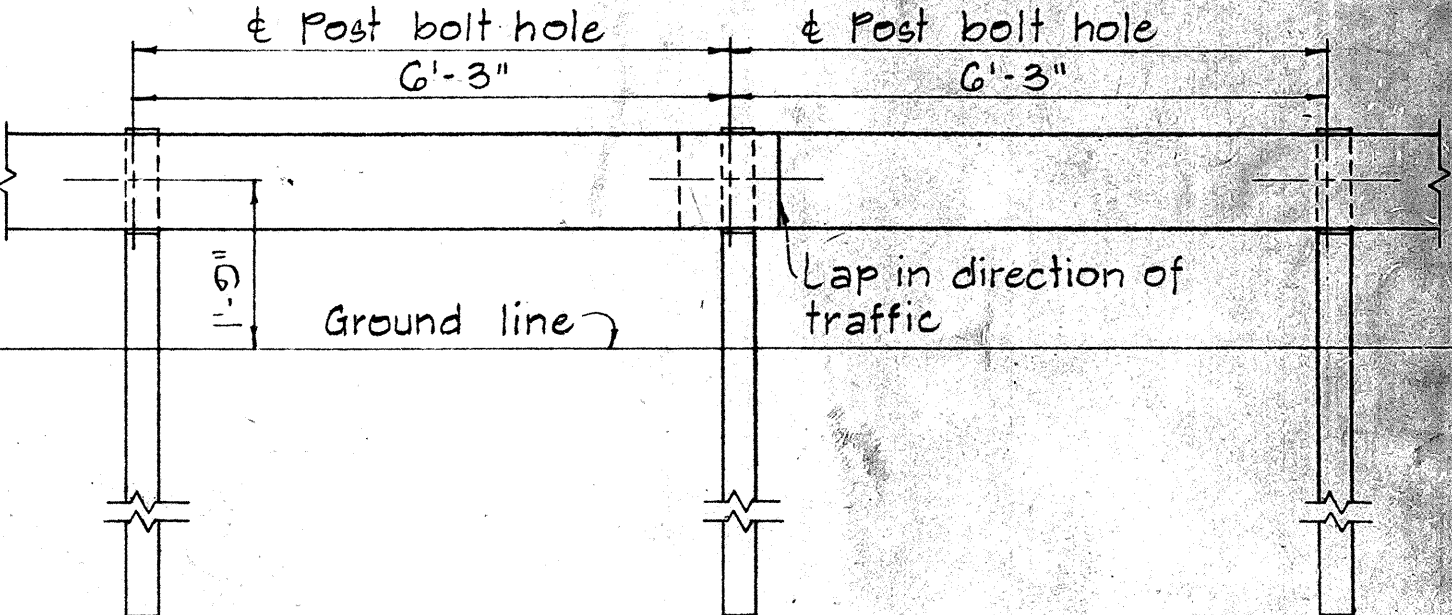
**ELEVATION**

**METAL GUARD RAIL ON CONCRETE POST WITH WOOD OR METAL SPACER BLOCK**

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



**PLAN**



**ELEVATION**

**METAL GUARD RAIL ON METAL POST WITH METAL SPACER BLOCK**

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

**AT SHOULDER SECTION**

**TYPICAL METAL GUARD RAIL DETAIL**

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

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

APPROVED:  
*Richard J. Zelen*  
ASSISTANT CHIEF, ENGINEERING  
12-30-69  
DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|----------|-------------|------|
|     |          |             |      |
|     |          |             |      |
|     |          |             |      |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

STANDARD DETAILS  
METAL GUARD RAIL

SCALE: AS SHOWN  
NOV. 1968  
SHEET No. 14 OF 15 SHEETS DT 500

|               |  |
|---------------|--|
| DATE          |  |
| DESIGNED BY   |  |
| TRACED BY     |  |
| NOTED BY      |  |
| CHECKED BY    |  |
| ORIGINAL PLAN |  |
| NOTE BOOK     |  |
| NO.           |  |



