

SIGNING & PAVEMENT MARKING NOTES

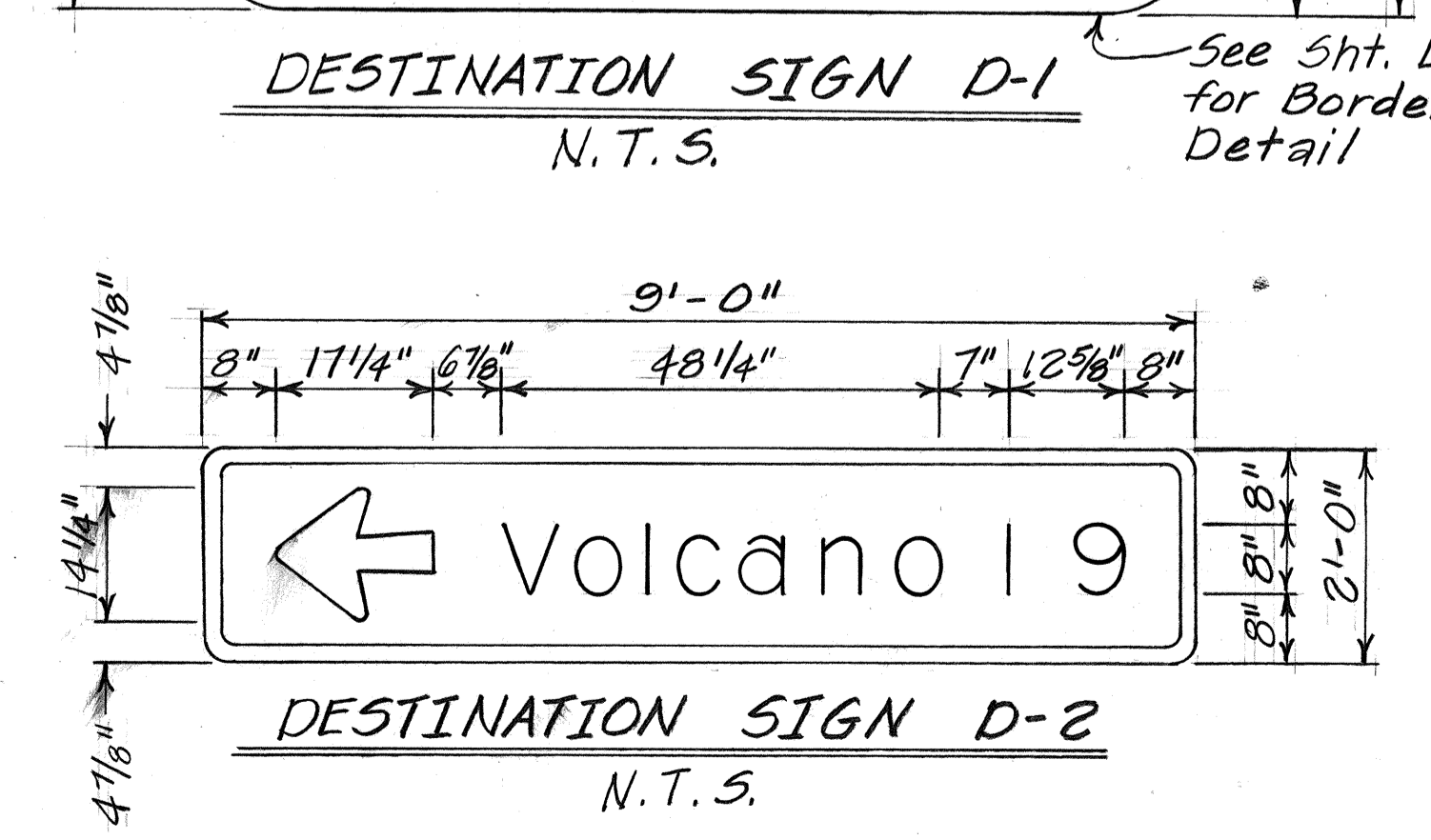
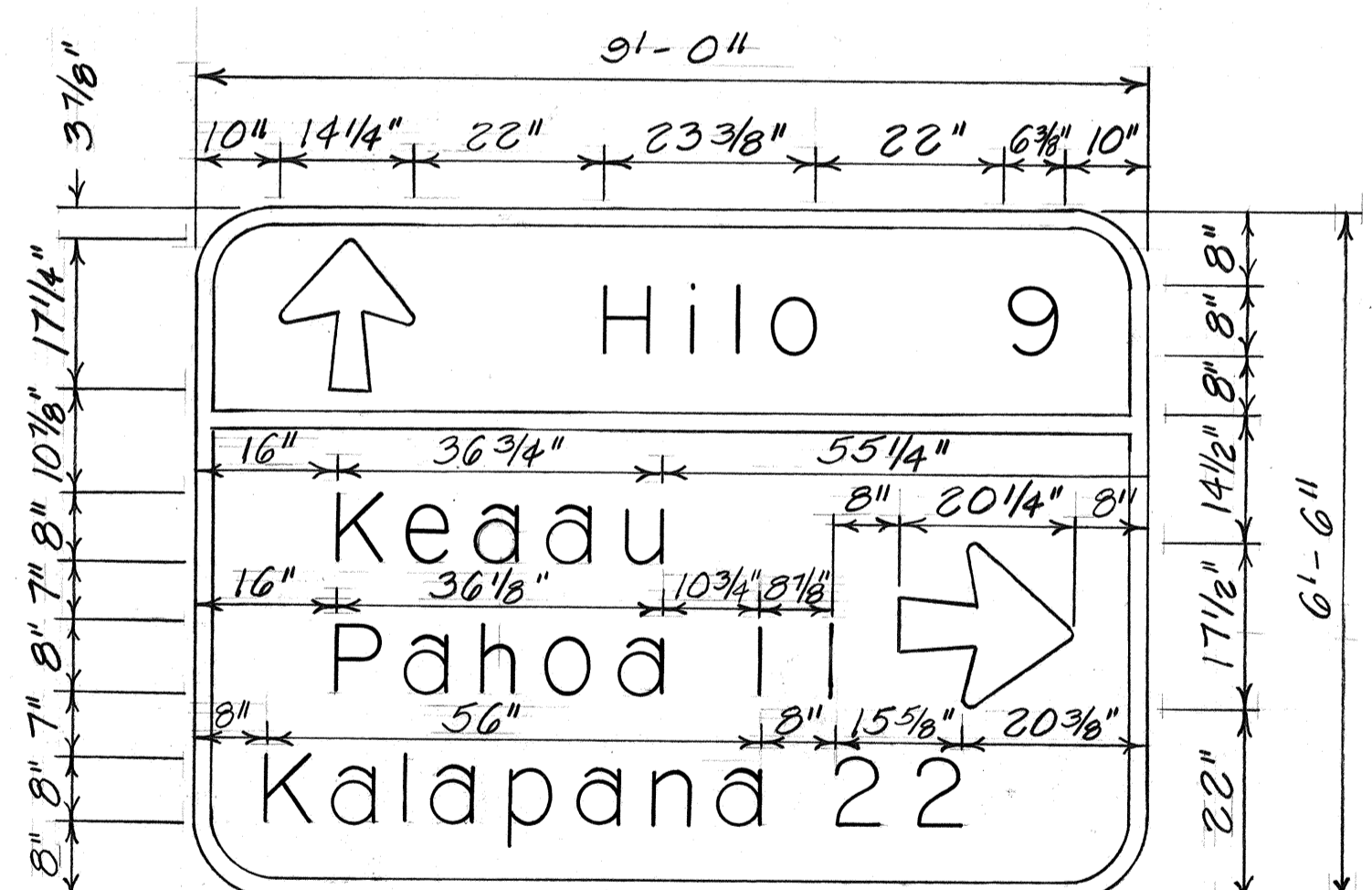
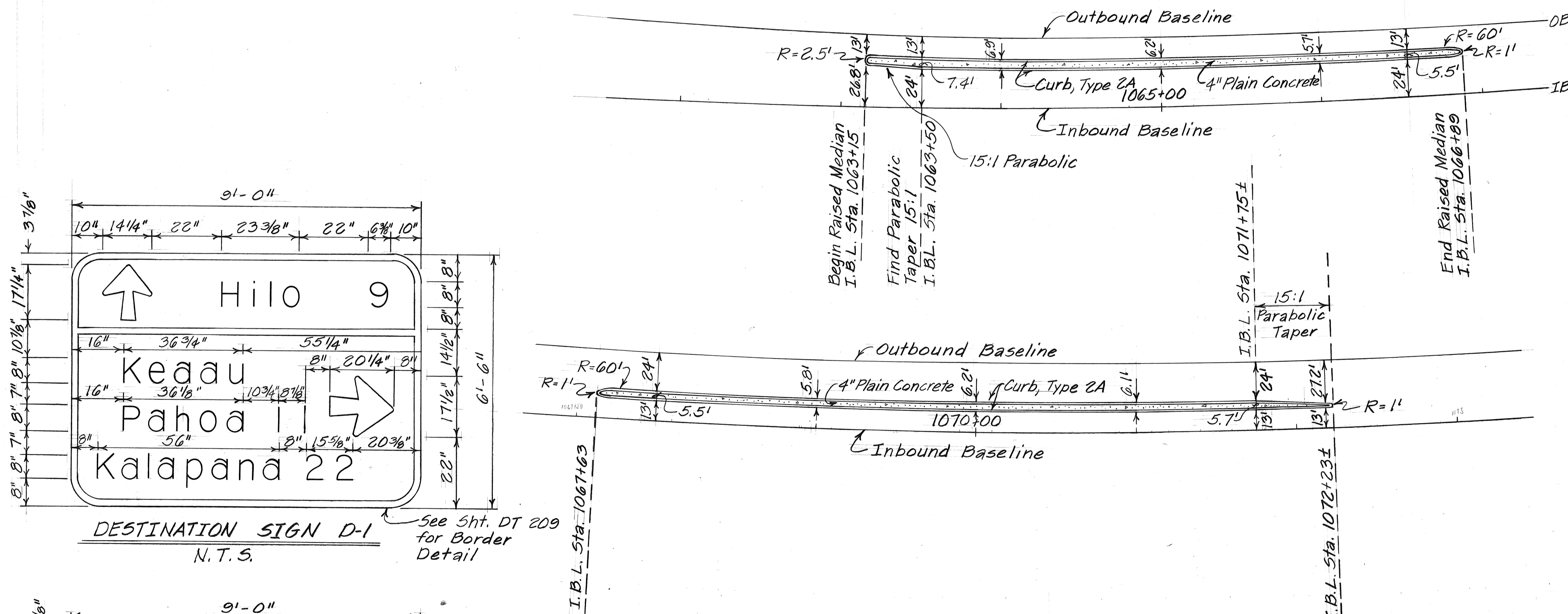
- The final locations of all signs shall be approved by the Engineer.
- Location of all new pavement markings shall be staked out by the Contractor for approval by the Engineer prior to installation.
- All existing Signs w/Post and Pavement Markings not incorporated in the final traffic pattern shall be removed unless otherwise specified or directed by the Engineer.
- All Striping shall be paint unless otherwise specified or directed by the Engineer.
- All existing signs to be relocated shall be relocated with new posts.
- All Signs to be removed shall not be paid for separately but shall be considered incidental to the various contract items.

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2(17) | 1986 | 63 | 142 |

| RELOCATE SIGNS | | | |
|----------------|----------------------------|-----------|----------|
| TYPE | DESCRIPTION | w/POST(s) | w/o POST |
| R2-1(45) | Speed Limit (45) | 2 | |
| R7-1 | No Parking Anytime | 2 | |
| M1-6(11) | State Route Marker (11) | 5 | |
| M1-6(130) | State Route Marker (130) | | 2 |
| M2-1 | JCT | 1 | |
| M6-2(R) | | | 1 |
| M6-3 | | | 1 |
| W11-2 | Advance Crossing | 1 | |
| Elev. 500' | Elevation 500 Ft. | 1 | |
| Mile Post | Mile Post | 3 | |
| Misc. | Maintenance Section Marker | 1 | |
| Misc. | FAP Marker | 1 | |
| Misc. | Hawaii Army National Guard | 1 | |

| TRAFFIC SIGN SUMMARY | | | |
|----------------------|------------------------|-----------|----------|
| INSTALL | NEW SIGNS | | |
| TYPE | DESCRIPTION | w/POST(s) | w/o POST |
| R1-1 | Stop | 4 | |
| R1-2 | Yield | 3 | |
| R2-1(55) | Speed Limit 55 | 1 | |
| R6-3A | Divided Highway | | 1 |
| W2-1 | + | 2 | |
| W2-2(R) | T | 1 | |
| W4-1(R) | ↑ | 2 | |
| W4-2 | ↓ | 1 | |
| W6-1 | ↓ | 1 | |
| W6-2 | ↓ | 1 | |
| W6-3 | ↓ | 1 | |
| W6-3A | Two Way Traffic | | 1 |
| RM-3 | Reflector Marker | 6 | 1 |
| D-1 | Destination Sign | 1 | |
| W2-2(L) | T | 1 | |
| W9-1(R)a | Right Lane Ends (1500) | 1 | |
| D-2 | Destination Sign | 1 | |
| R4-1 | Keep Right | 1 | |

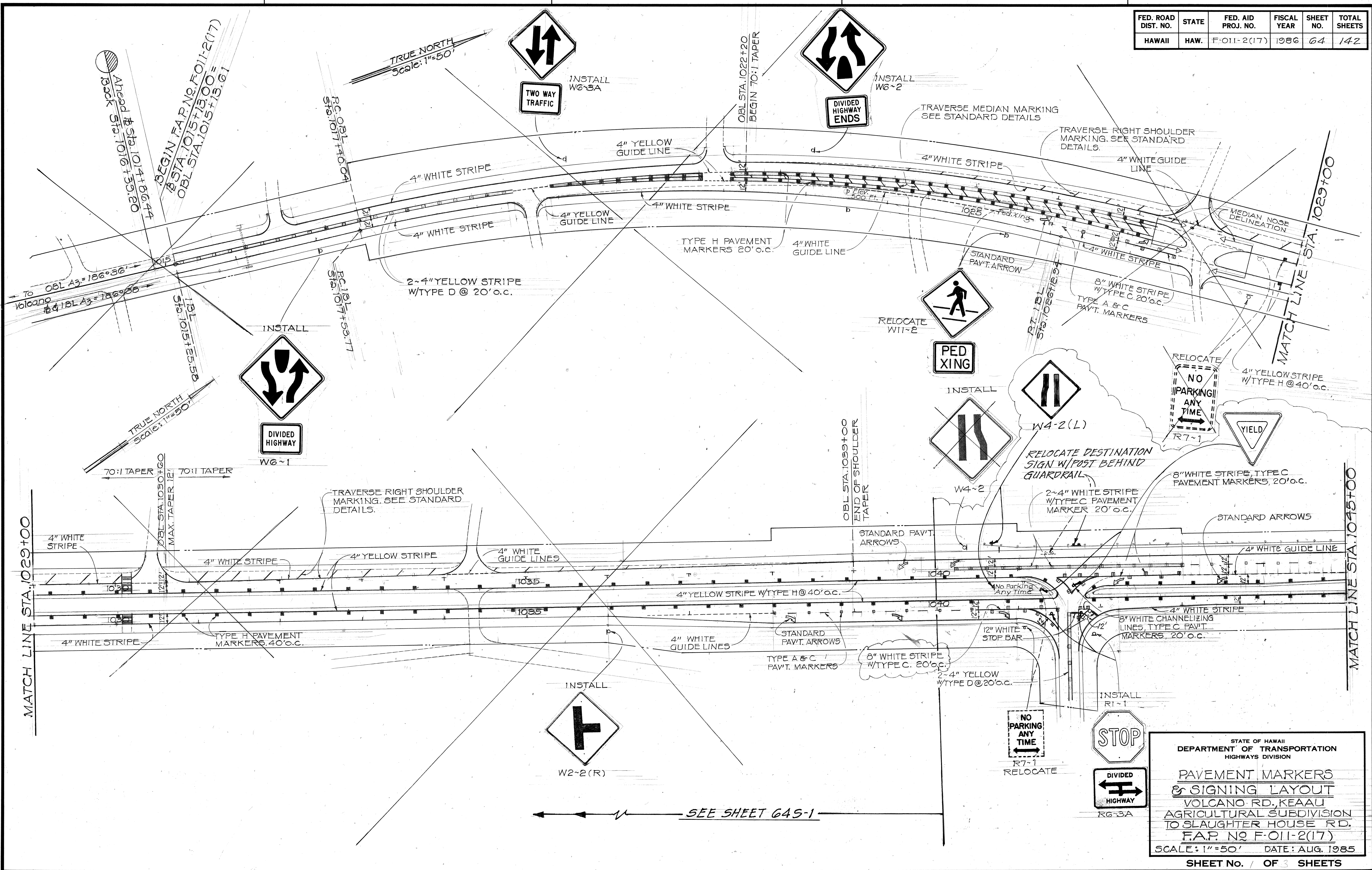
| REMOVE SIGNS | | | |
|--------------|--------------------------------|-----------|----------|
| TYPE | DESCRIPTION | w/POST(s) | w/o POST |
| Misc. | Left Turn Here | 1 | |
| R7-1 | No Parking Any Time | 1 | |
| W6-2 | ↓ | 1 | |
| Dest. Sign | Destination Sign | 2 | |
| W2-1 | + | | 1 |
| Misc. | Turn Right Any Time w/ Caution | 1 | |
| R1-1 | Stop | 8 | |
| R1-2 | Yield | 3 | |
| R2-1(45) | Speed Limit 45 | 2 | |
| R2-5b(30) | Reduced Speed 30 | 2 | |
| R4-1 | Do Not Pass | 3 | |
| R4-7 | Keep Right | 3 | |
| R5-1 | Do Not Enter | 4 | |
| R6-1(L) | One Way | 2 | |
| R6-1 | One Way | 3 | |
| R6-3 | Divided Highway | 1 | |
| R8-3 | No Parking | 5 | |
| RM-1 | Reflector Marker | 7 | |
| RM-2 | Reflector Marker | 2 | |
| RM-3 | Reflector Marker | 8 | |
| RM-4 | Reflector Marker | 1 | 2 |
| W4-1 | ↑ | 2 | |
| W4-2 | ↓ | 2 | |
| W6-1 | ↓ | 1 | |
| W2-2 | T | 1 | |



RAISED MEDIANS PLAN
 I.B.L. Sta. 1063+15± to 1066+89±
 I.B.L. Sta. 1067+63± to 1072+23±
 Scale: 1" = 40'

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION
PAVEMENT MARKING AND SIGNING
NOTES AND RAISED MEDIAN
 VOLCANO ROAD
 Keau Agricultural Subdivision to
 Slaughter House Road
 F.A.P. No. F-011-2(17)
 Scale: 1" = 40' Date: Aug., 1985

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2(17) | 1986 | 64 | 142 |

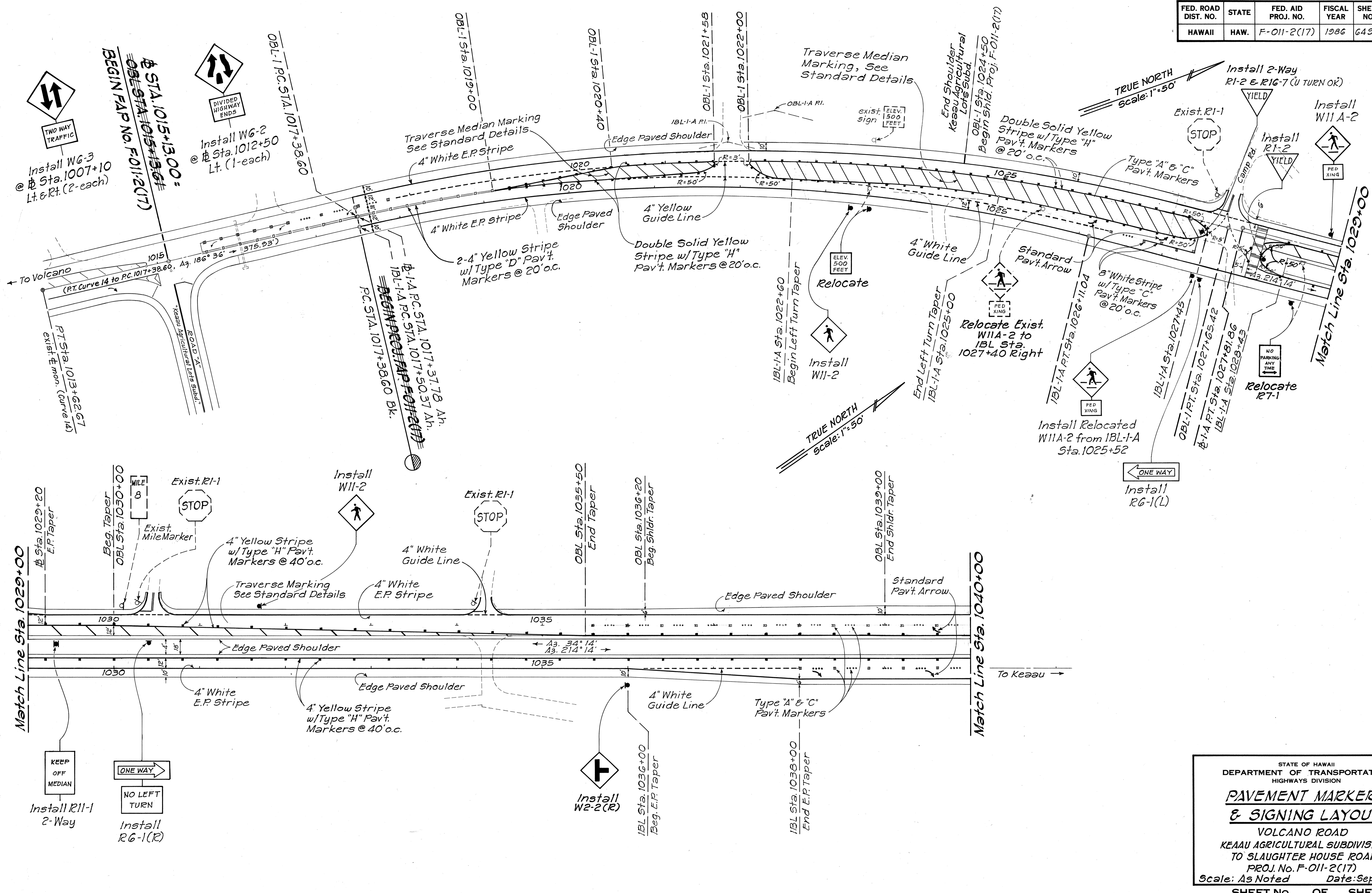


| | |
|-------------------|--|
| DATE | |
| SURVEY PLOTTED BY | |
| DRAWN BY | |
| DESIGNED BY | |
| CHECKED BY | |
| NO. | |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PAVEMENT MARKERS & SIGNING LAYOUT
VOLCANO RD. KEAAU
AGRICULTURAL SUBDIVISION
TO SLAUGHTER HOUSE RD.
F.A.P. NO F-011-2(17)
SCALE: 1"=50' DATE: AUG. 1985

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2(17) | 1986 | 64S-1 | |



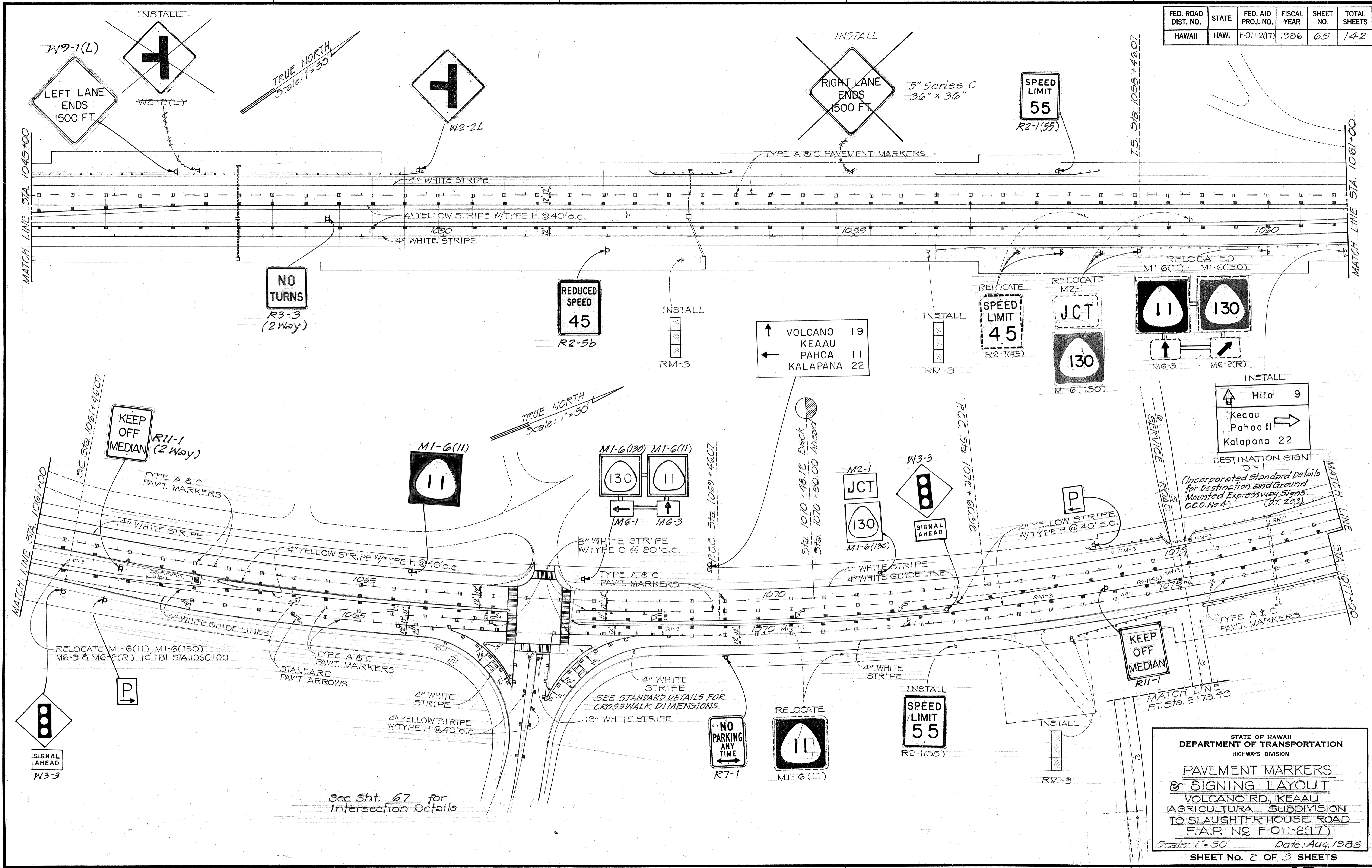
| | |
|-------------------|-------|
| DATE | _____ |
| SURVEY PLOTTED BY | _____ |
| DRAWN BY | _____ |
| TRACED BY | _____ |
| QUANTITIES BY | _____ |
| CHECKED BY | _____ |
| ORIGINAL PLAN NO. | _____ |
| NOTE BOOK NO. | _____ |
| NO. | _____ |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKERS
& SIGNING LAYOUT**

VOLCANO ROAD
KEAAU AGRICULTURAL SUBDIVISION
TO SLAUGHTER HOUSE ROAD
PROJ. No. F-011-2(17)
Scale: As Noted Date: Sept 1987

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F011-2(17) | 1986 | 65 | 142 |



| | |
|-------------------|-------|
| DATE | _____ |
| SURVEY PLOTTED BY | _____ |
| DRAWN BY | _____ |
| TRACED BY | _____ |
| DESIGNED BY | _____ |
| QUANTITIES BY | _____ |
| CHECKED BY | _____ |
| NO. | _____ |

See Sht. 67 for Intersection Details

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

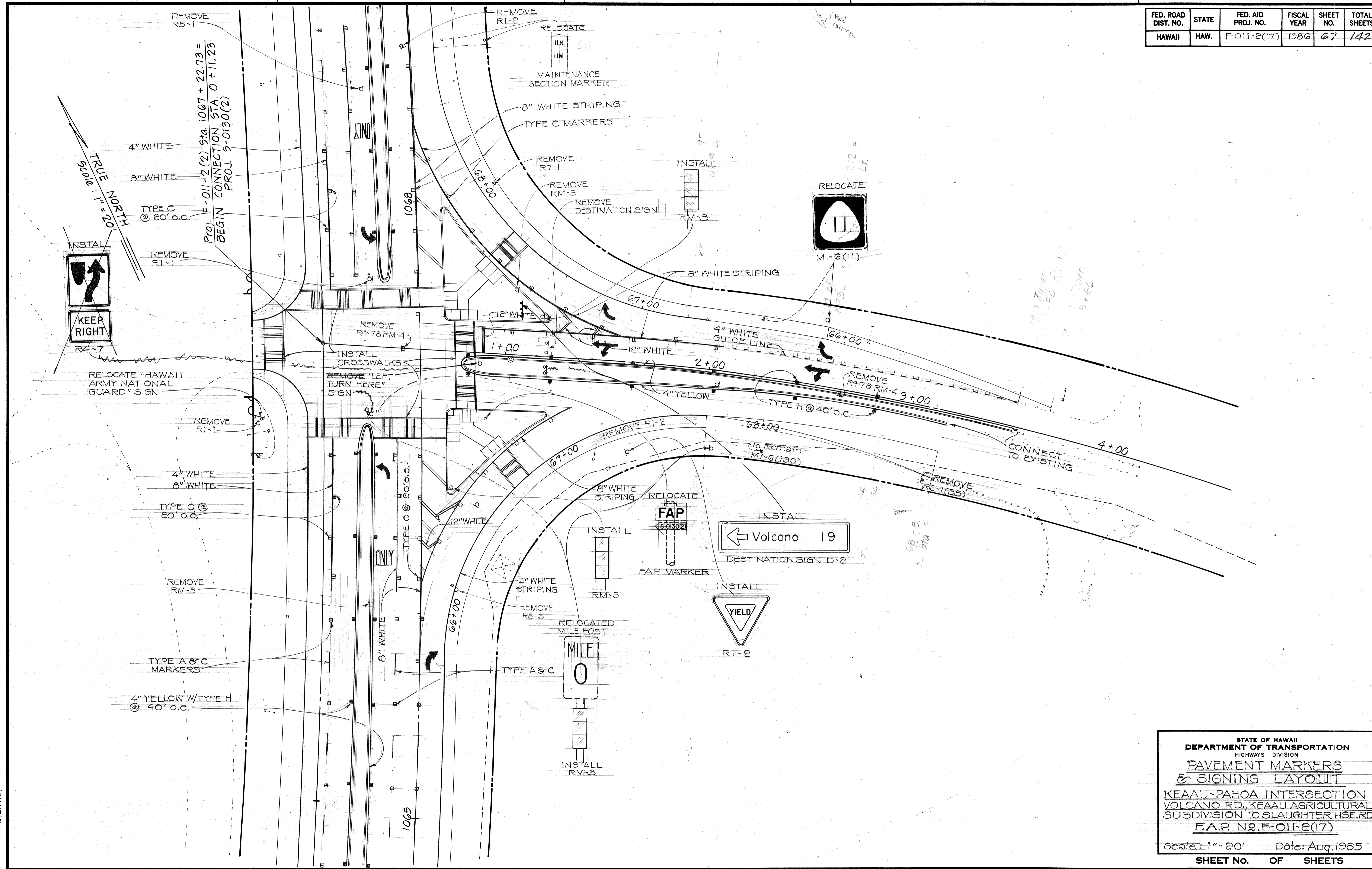
**PAVEMENT MARKERS
& SIGNING LAYOUT**

VOLCANO RD, KEAAU
AGRICULTURAL SUBDIVISION
TO SLAUGHTER HOUSE ROAD
F.A.P. NO F-011-2(17)

Scale: 1"=50' Date: Aug. 1985

SHEET NO. 2 OF 3 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2(17) | 1986 | 67 | 142 |



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PAVEMENT MARKERS
& SIGNING LAYOUT**

KEAAU-PAHOA INTERSECTION
VOLCANO RD., KEAAU AGRICULTURAL
SUBDIVISION TO SLAUGHTER HSE. RD.
F.A.P. NO. F-011-2(17)

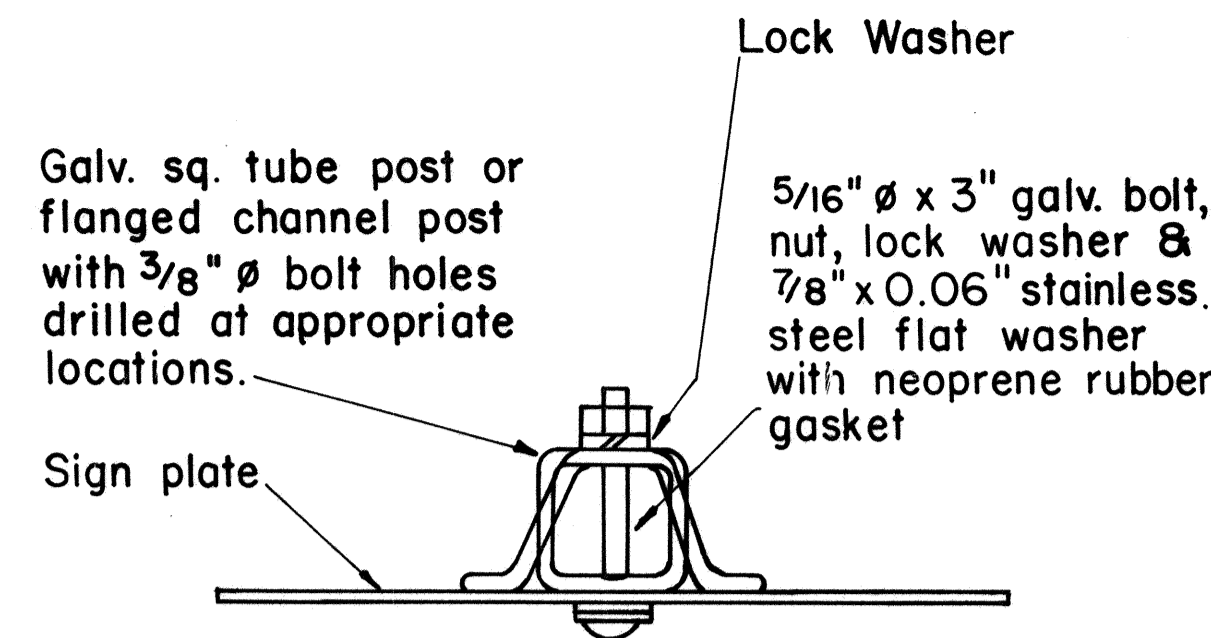
Scale: 1" = 20' Date: Aug. 1985

SHEET NO. OF SHEETS

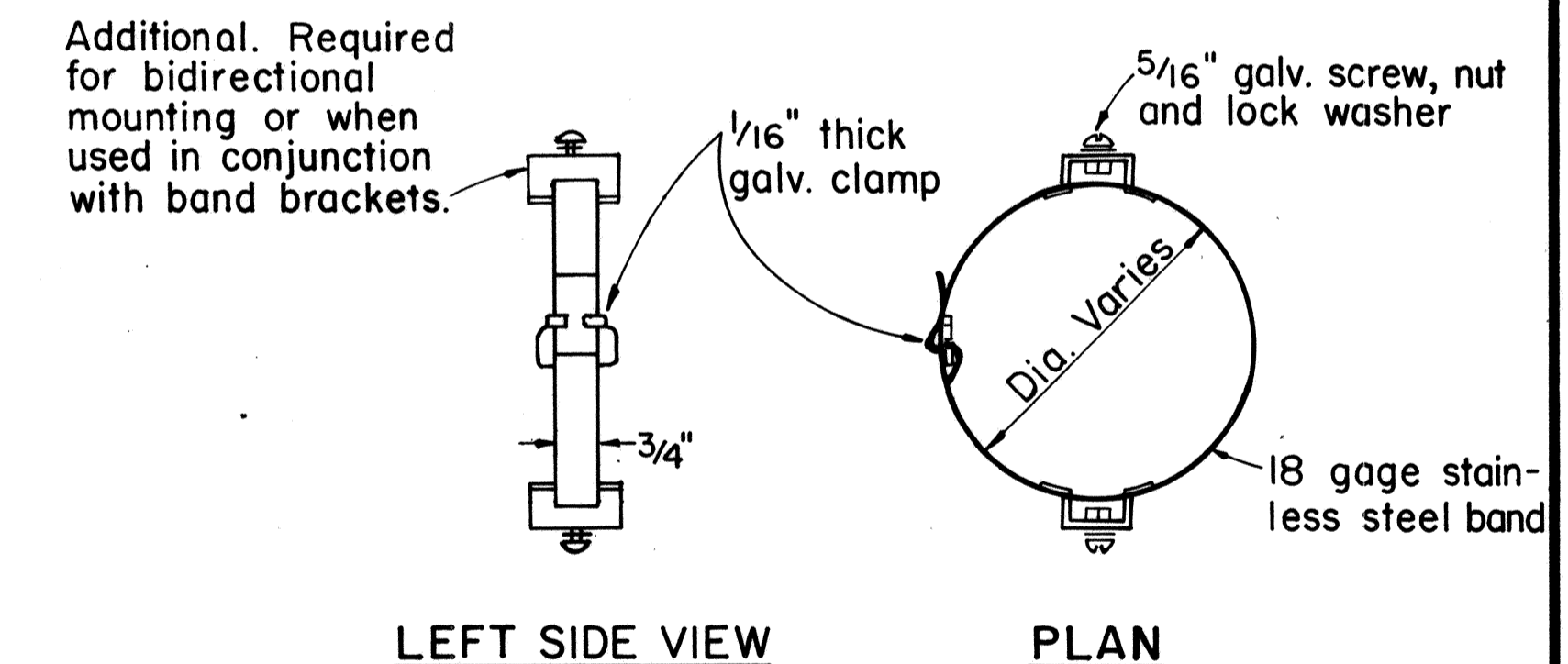
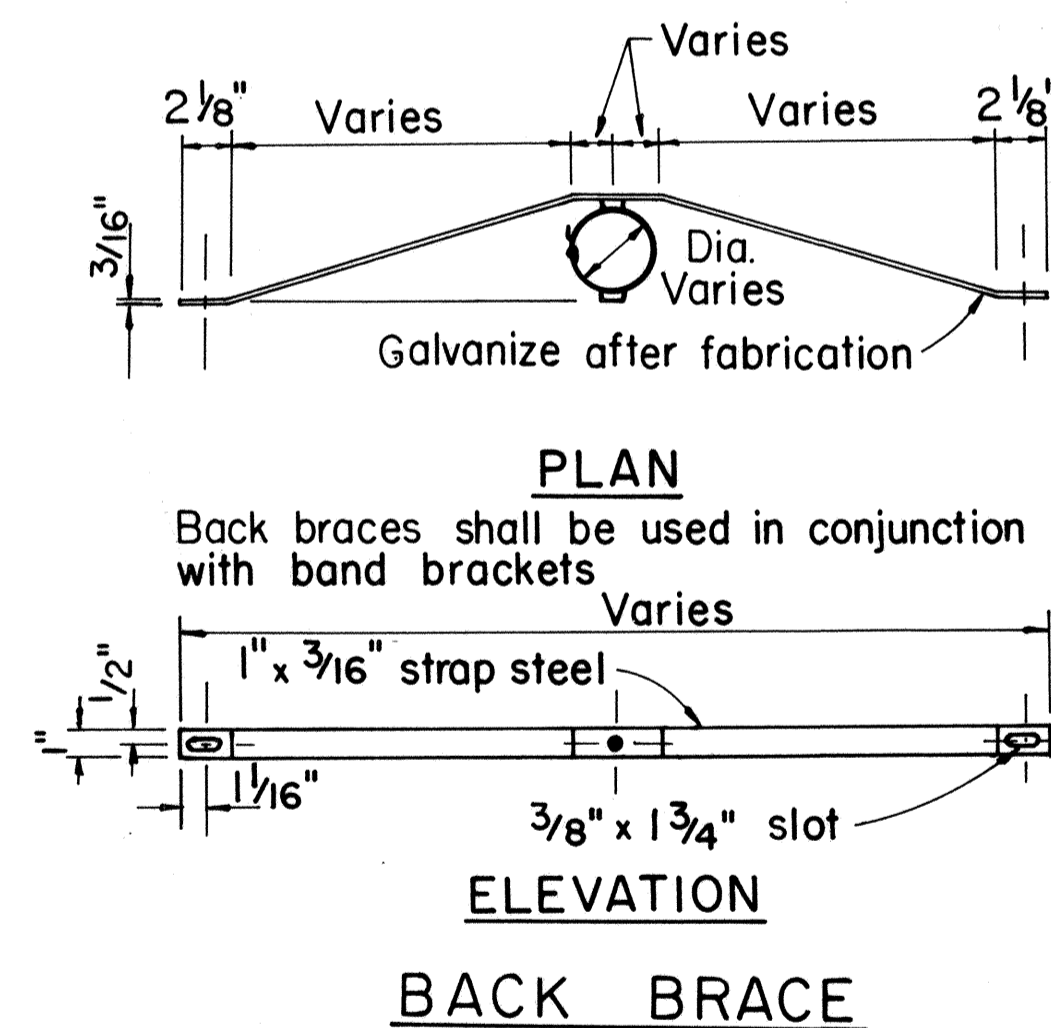
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|---------------------|-------|-----------------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2(17) RSG-0130(22) | 1986 | 68 | 142 |

GENERAL NOTES

- Signs shall be placed in conformance with positions shown and described in the "Manual on Uniform Traffic Control Devices for Streets and Highways", 1978, Part II, Section 2A-21, as amended, and as supplemented herein.
- Sign 48" and wider or larger than 10 sq. ft. in area shall be mounted on two or more sign posts except as noted below.
- Signs 48" and wider or larger than 10 sq. ft. in area may be mounted on objects other than sign posts (i.e. on highway lighting poles) as follows:
 - Signs 48" and wider but less than 10 sq. ft. in area shall be mounted with a minimum of two sets of band bracket and back braces.
 - Signs larger than 10 sq. ft. and less than 28 sq. ft. in area shall be mounted with a minimum of two sets of band brackets and back braces.
 - Signs larger than 28 sq. ft. in area shall be mounted with a minimum of three sets of band bracket and back braces.
- All parking restriction signs with arrows shall be mounted 45° to the line of traffic flow.
- Sign posts shall extend 3 1/2" above each sign, where required, for attachment of City and County street name signs.
- (R) or (L) indicates right or left and shown on the plans.
- See plans for special details of signs along bikeways.
- The minimum lateral distances shown are guidelines and shall be exceeded whenever possible. The Contractor shall place signs at the maximum practical lateral distance from the edge of the traveled way up to 30 feet and shall utilize protected locations whenever possible. Final locations of all signs shall be approved by the Engineer.
- Signs in medians shall be placed at midpoint of median up to a maximum distance of 30 feet from the edge of traveled way. When appropriate, signs for opposing directions shall be placed back to back.
- Anchor bases shall be installed for all signpost installations, unless otherwise shown or directed. See sheets DT 100A and DT 100B.



GALVANIZED SQUARE TUBE OR FLANGED CHANNEL POST



BAND BRACKET

APPROVAL RECOMMENDED:
Eiichi Tanaka 10/14/83
 TRAFFIC ENGINEER DATE

APPROVED:
S. Fujiyama 10-18-83
 ASSISTANT CHIEF, ENGINEERING DATE

TYPICAL MOUNTING DETAILS

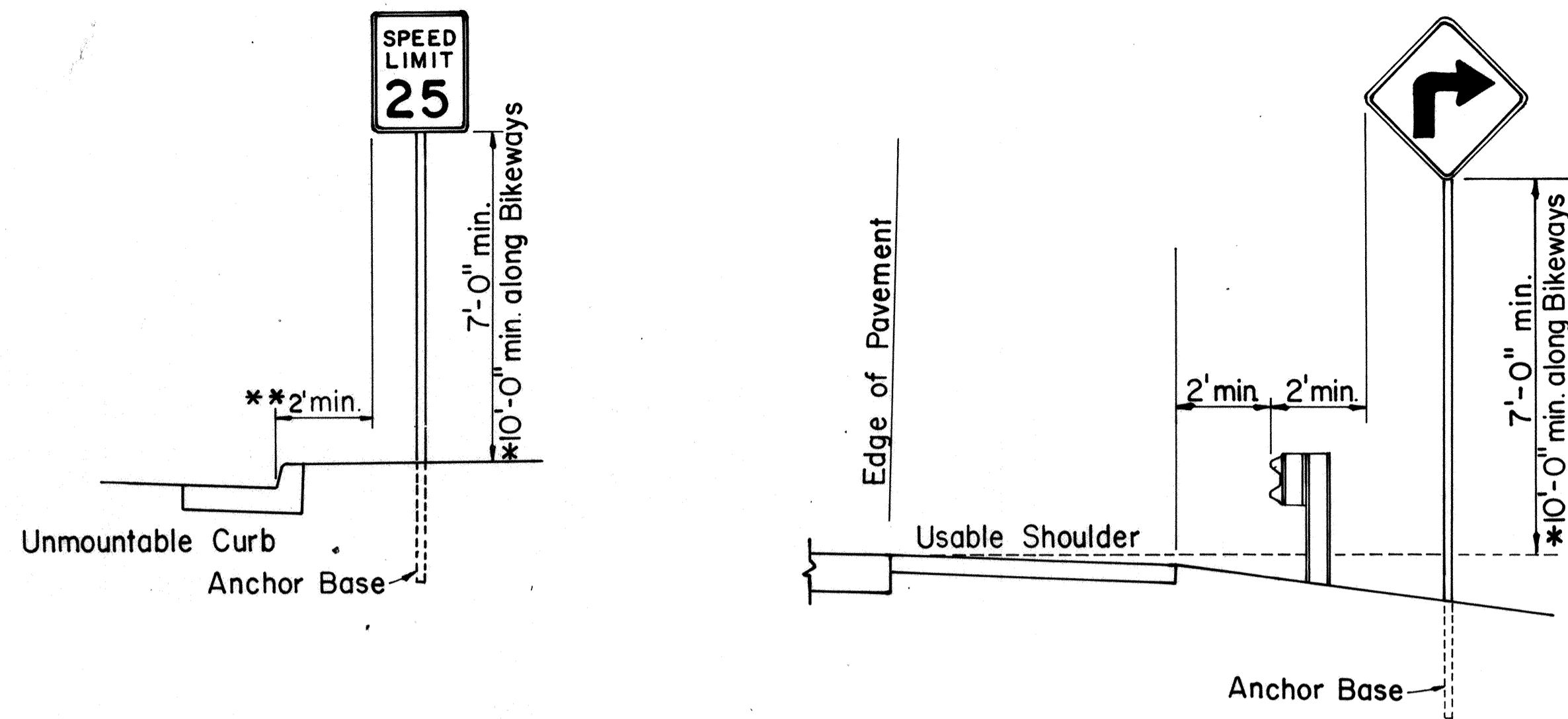
| NO. | REVISION | APPROVED BY | DATE |
|-----|--|--------------------|----------|
| 1 | Supersedes Sht. DT 100 approved 11/15/77 | <i>[Signature]</i> | 10-18-83 |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

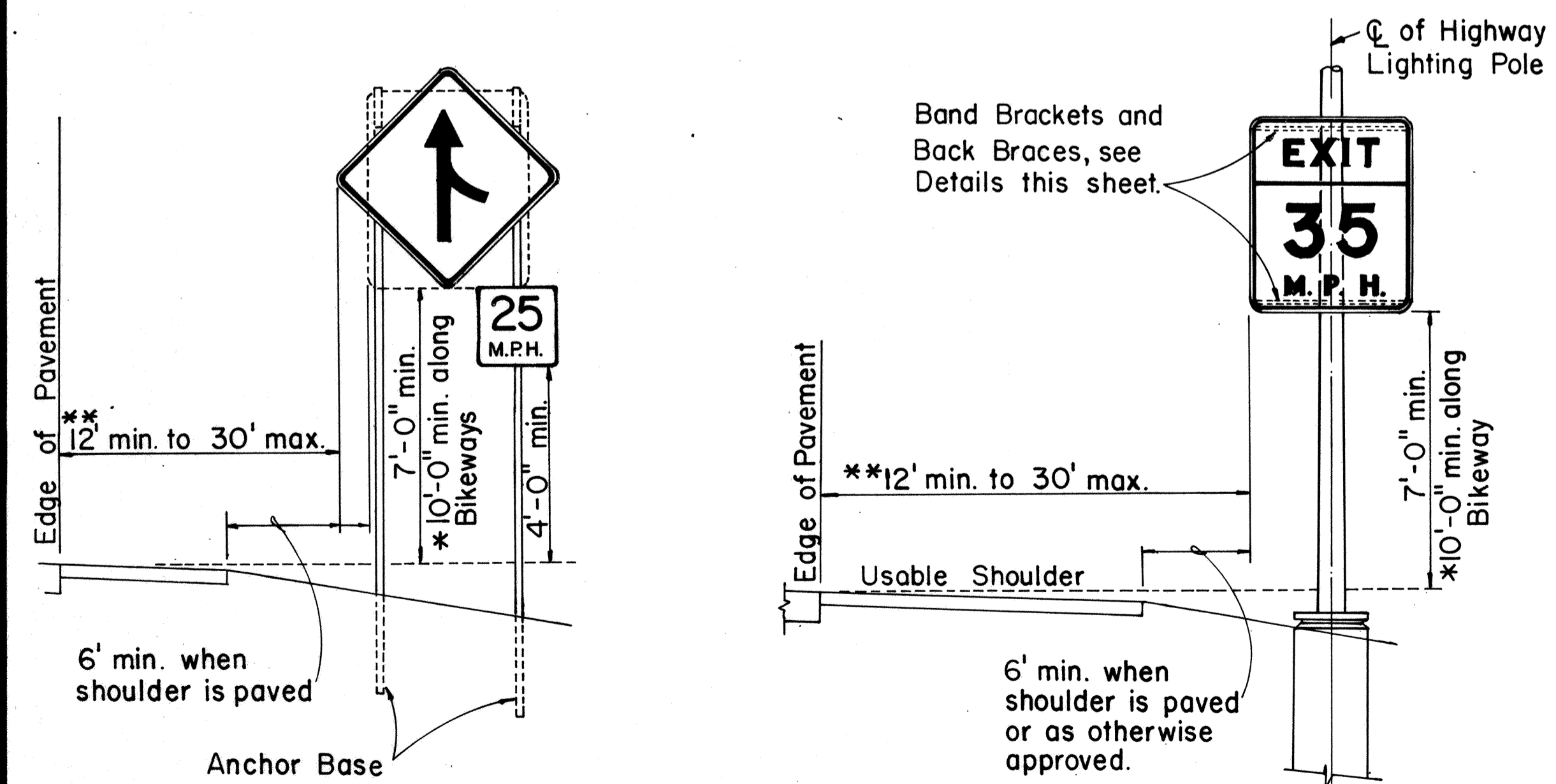
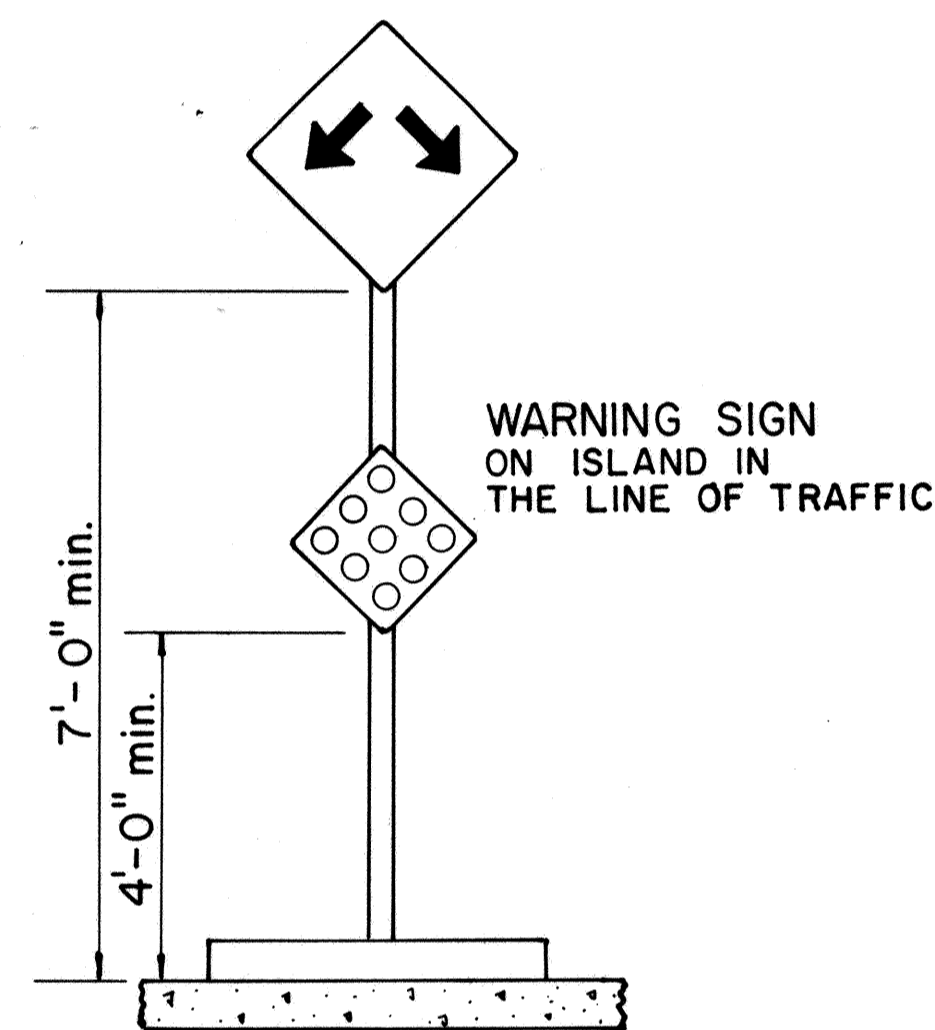
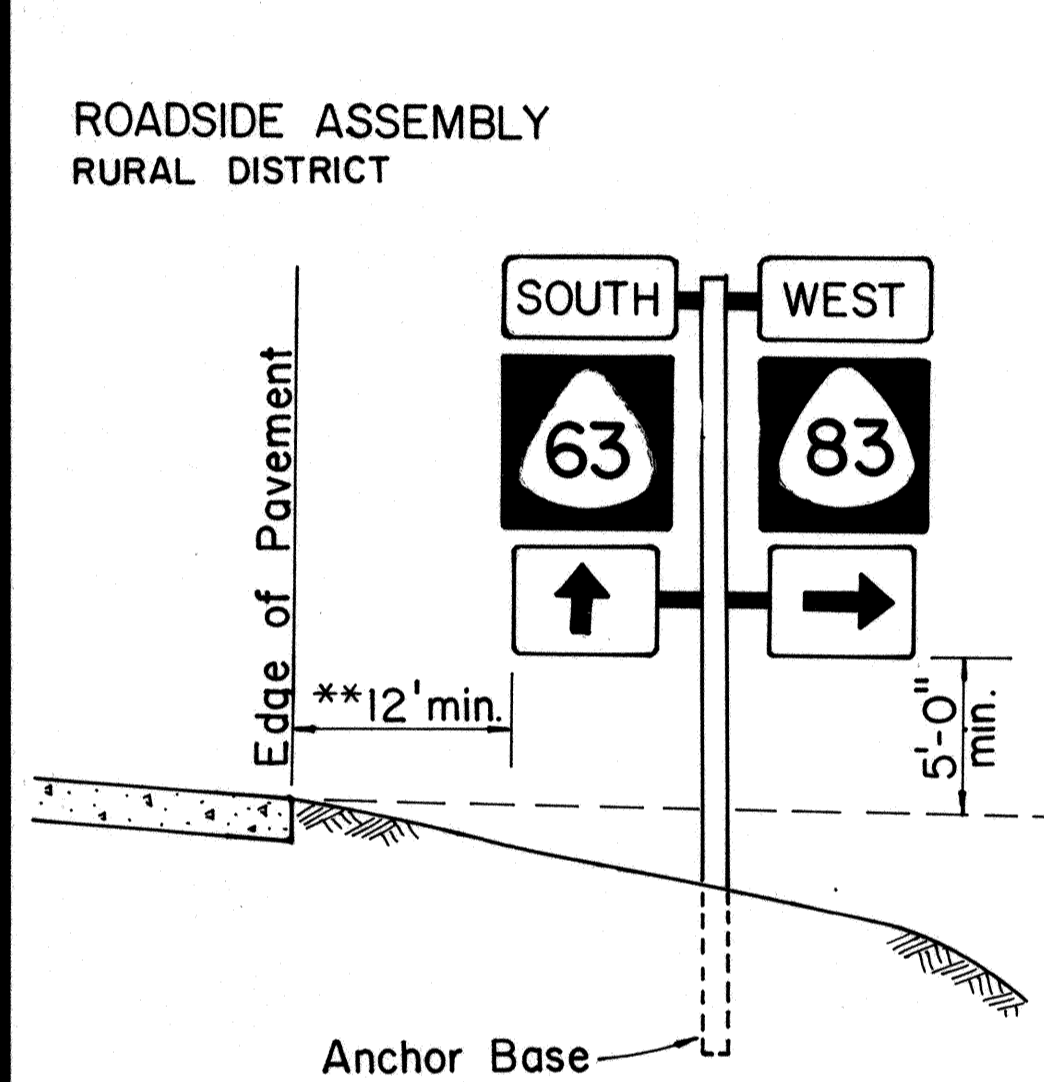
STANDARD DETAILS

MISCELLANEOUS SIGN DETAILS

Not to Scale: Oct. 1983
 SHEET NO. OF SHEETS DT 100



ROADSIDE ASSEMBLY RURAL DISTRICT

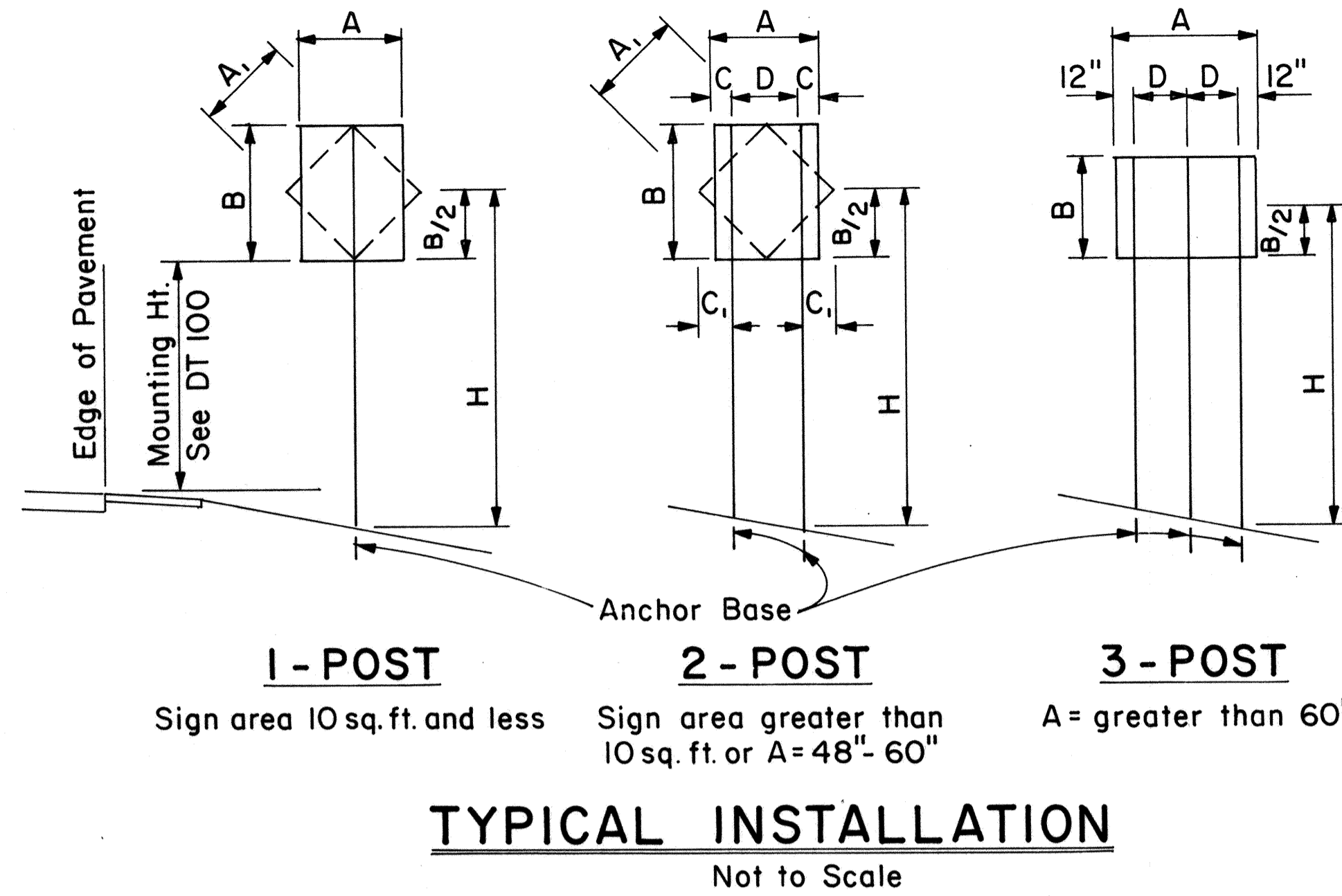
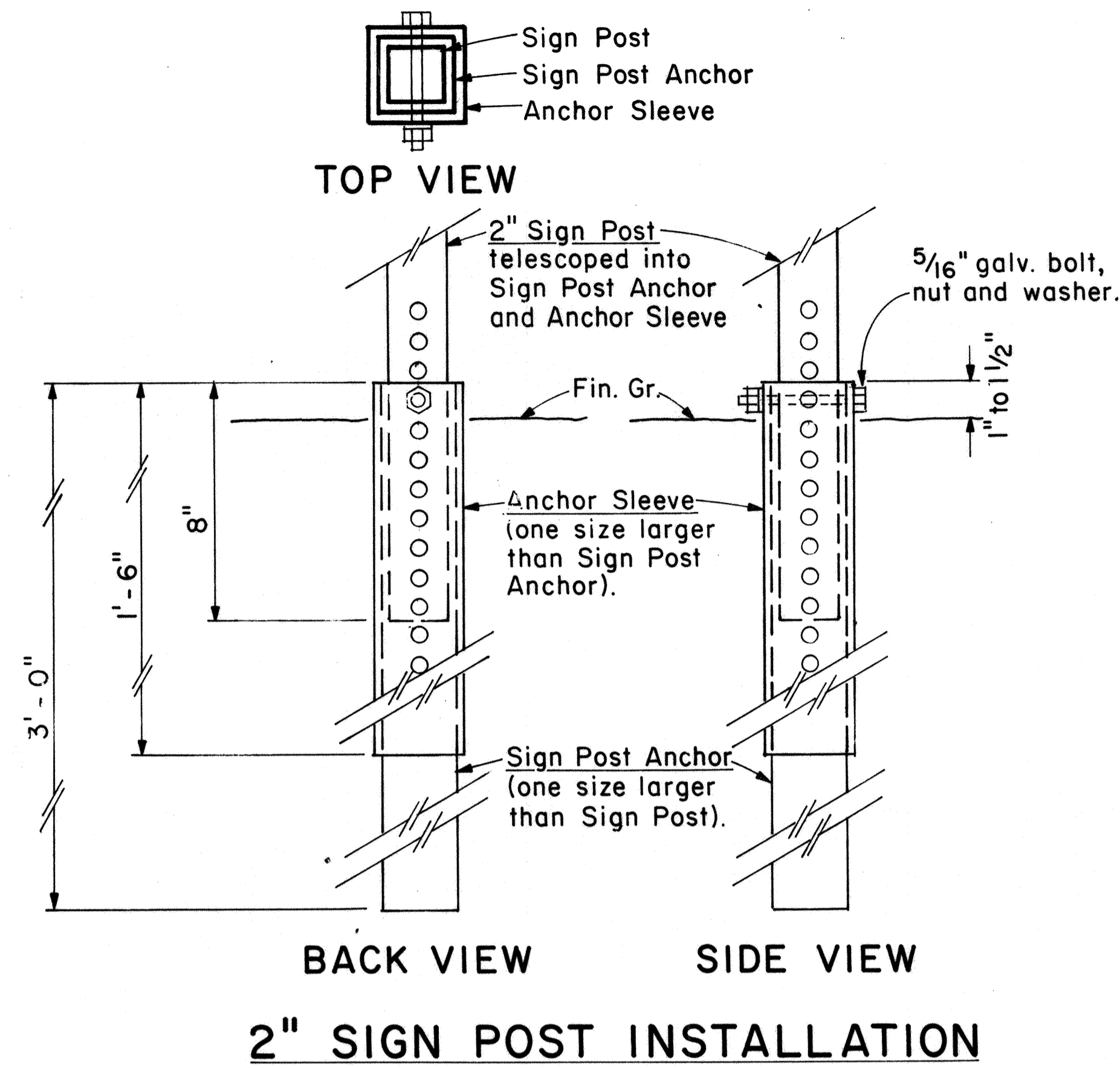


HEIGHT AND LATERAL LOCATION OF SIGNS TYPICAL INSTALLATION

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

GENERAL NOTES

- Square tube sign posts shall conform to Subsection 713.11(C) Square Tube Posts of the Specifications.
- All accessories, fittings and stiffener details (as required) shall be submitted to Engineer for approval 20 days prior to installation.
- Square tube posts shall be perforated with $\frac{7}{16}$ " ϕ holes, 1" o.c., 4 sides, along entire length of post.
- All posts shall be 12 gage unless otherwise specified or shown on the plans.
- For additional details see sht. DT 100.
- Basic formulas for use with the windload charts:
 $Factor = A \times B \times H$
Therefore, if sign area (A x B) is known,
Maximum H = $\frac{Factor}{sign\ area(A \times B)}$
and if H is known,
Maximum sign area (A x B) = $\frac{Factor}{H}$



| A or A ₁ | C | C ₁ |
|---------------------|-----|----------------|
| 36" | 6" | - |
| 48" | 9" | 19" |
| 60" | 12" | 24" |

NOTE: Frame stiffeners are required when D is greater than 24". See Gen. Note 2.

SQUARE TUBE: 1- POST INSTALLATION

| Post Size | A x B x H (Factor) | H = Ground Level to Midpoint (ft.) | | | | | | A x B (Area, sq. ft.) |
|-----------|--------------------|------------------------------------|-----|-----|-----|-----|-----|-----------------------|
| | | 7 | 8 | 9 | 10 | 11 | 12 | |
| 2" | 62 | 8.8 | 7.7 | 6.8 | 6.1 | 5.6 | 4.8 | A x B (Area, sq. ft.) |
| 2 1/2" | 107 | - | - | - | - | 9.6 | 8.8 | |

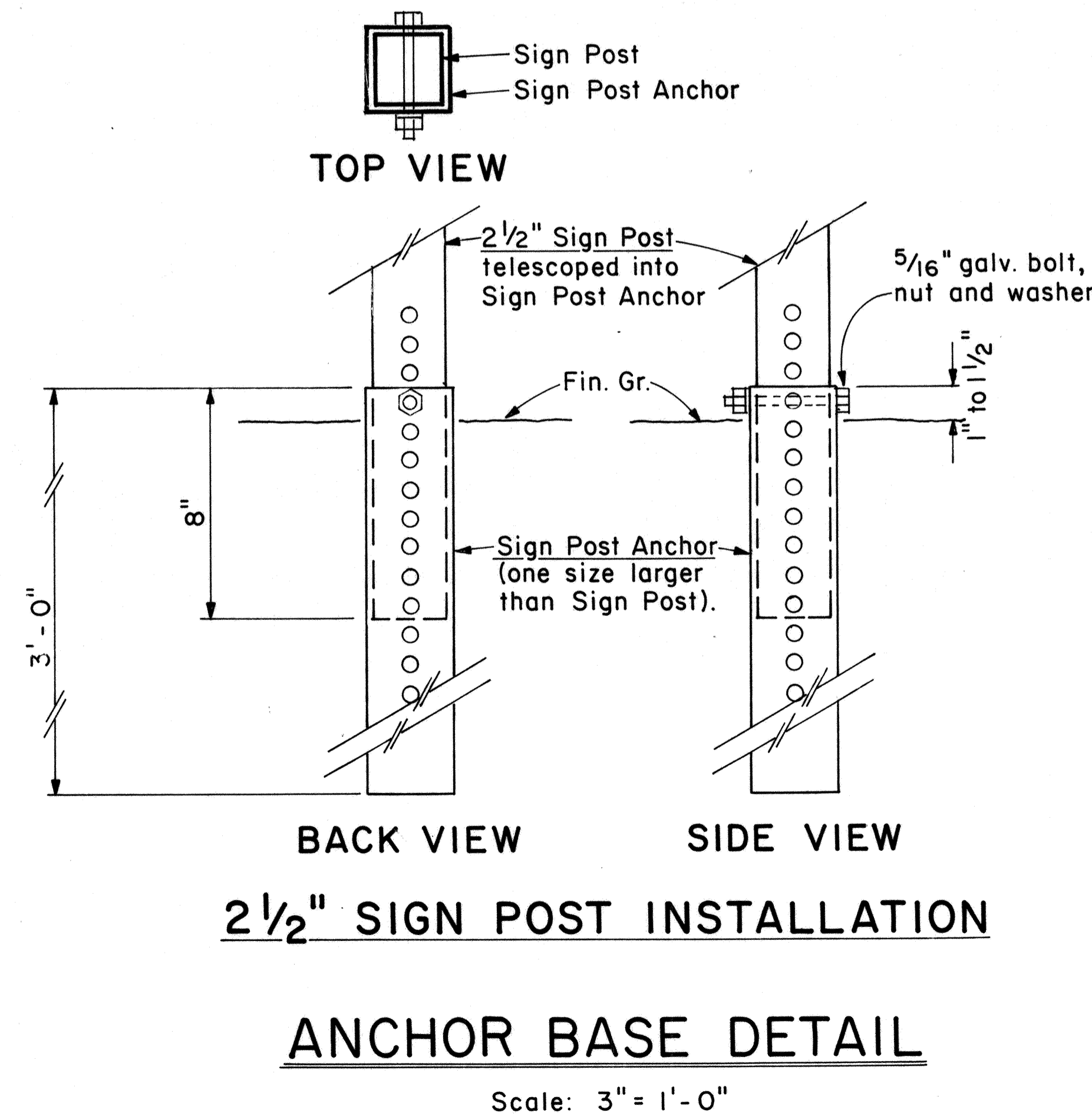
SQUARE TUBE: 2- POST INSTALLATION

| Post Size | A x B x H (Factor) | H = Ground Level to Midpoint (ft.) | | | | | | A x B (Area, sq. ft.) |
|----------------|--------------------|------------------------------------|------|------|------|------|------|-----------------------|
| | | 7 | 8 | 9 | 10 | 11 | 12 | |
| 2" | 122 | 17.4 | 15.2 | 13.5 | 12.2 | 11.0 | 10.1 | A x B (Area, sq. ft.) |
| 2 1/2" | 212 | 30.2 | 26.5 | 23.5 | 21.1 | 19.2 | 17.6 | |
| 2 1/2", 10 ga. | 260 | 37.0 | 32.0 | 28.6 | 26.0 | 23.5 | 21.5 | |

SQUARE TUBE: 3- POST INSTALLATION

| Post Size | A x B x H (Factor) | H = Ground Level to Midpoint (ft.) | | | | | | A x B (Area, sq. ft.) |
|----------------|--------------------|------------------------------------|------|------|------|------|------|-----------------------|
| | | 7 | 8 | 9 | 10 | 11 | 12 | |
| 2" | 183 | 26.0 | 22.8 | 20.3 | 18.2 | 16.6 | 15.2 | A x B (Area, sq. ft.) |
| 2 1/2" | 318 | 45.4 | 39.5 | 35.2 | 31.5 | 28.8 | 26.5 | |
| 2 1/2", 10 ga. | 388 | 55.0 | 48.5 | 43.0 | 38.5 | 35.0 | 32.0 | |

WINDLOAD CHARTS



APPROVAL RECOMMENDED:

Eishi Tanaka 9/21/82
TRAFFIC ENGINEER DATE

APPROVED:

Albert Balischi 9/22/82
ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

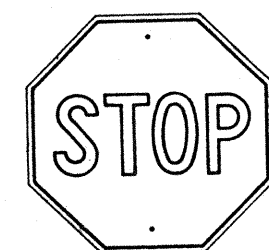
STANDARD DETAILS
GALVANIZED SQUARE TUBE
SIGN POST MOUNTING

Scale: As Shown Date: Sep 1982

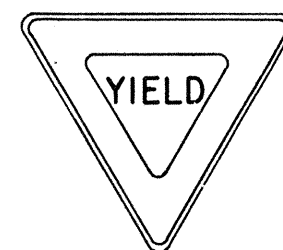
SHEET NO. OF SHEETS DT100B

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

| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | FO11-2(17) | 1986 | 71 | 142 |



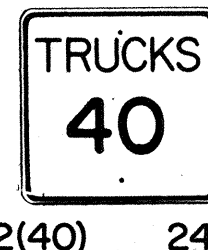
R1-1 30" x 30"
R1-1-A 36" x 36"



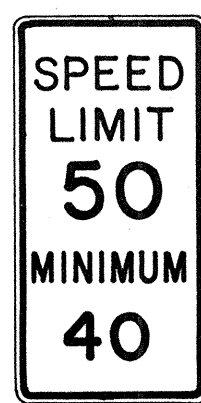
R1-2 36" x 36" x 36"
R1-2-A 48" x 48" x 48"



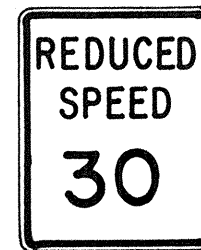
R2-1(50) 24" x 30"
R2-1(50)-A 48" x 60"



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



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



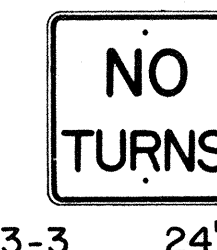
R2-5b(30) 24" x 30"
R2-5b(30)-A 48" x 60"



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



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



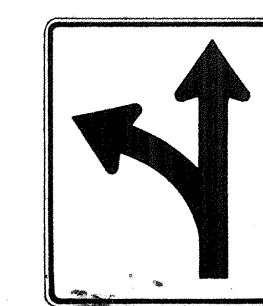
R3-3 24" x 24"
R3-3-A 48" x 48"



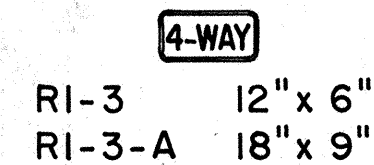
R3-4 24" x 24"
24" x 18"
R3-4-A 4" x 4"
48" x 36"



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



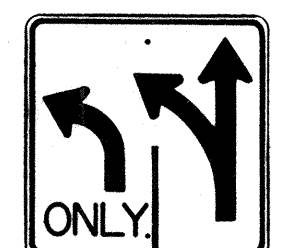
R3-6(L) 30" x 36"
R3-6(L)-A 48" x 60"



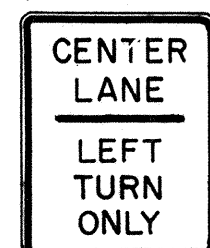
R1-3 12" x 6"
R1-3-A 18" x 9"



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"



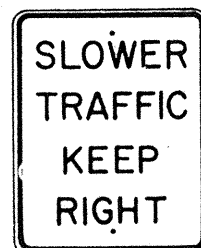
R3-9 24" x 30"



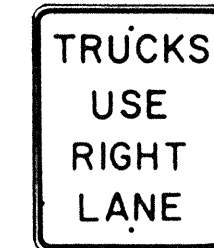
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R4-1-A 48" x 60"



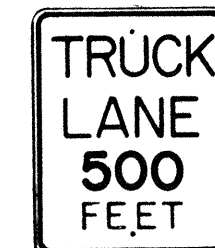
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R4-2-A 48" x 60"



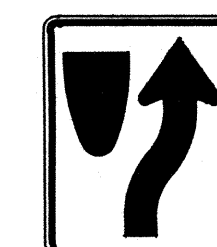
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R4-3-A 48" x 60"



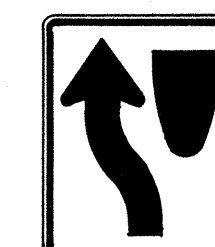
R4-5 24" x 30"
R4-5-A 48" x 60"



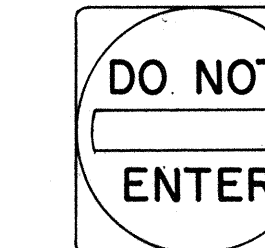
R4-6(500) 24" x 30"
R4-6(500)-A 48" x 60"



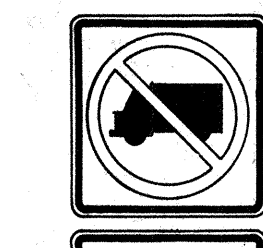
R4-7 24" x 30"
24" x 18"
R4-7-A 48" x 60"



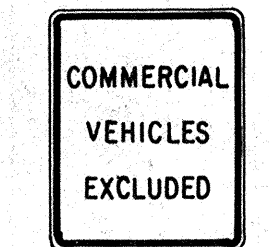
R4-8 24" x 30"
24" x 18"
R4-8-A 48" x 60"



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



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



R5-4 24" x 30"
R5-4-A 48" x 60"



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



R5-9 36" x 24"



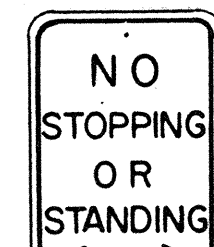
R6-1(R) 36" x 12"



R6-2(R) 18" x 24"



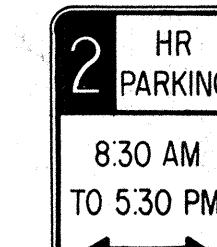
R7-1 12" x 18"
R7-1-A 24" x 30"



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



R7-107(R) 12" x 18"



R7-108 12" x 18"



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



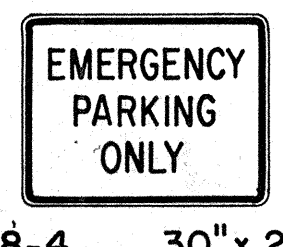
R8-1 24" x 30"
R8-1-A 48" x 60"



R8-2 24" x 30"
R8-2-A 48" x 60"



R8-3 24" x 30"
R8-3-A 48" x 48"



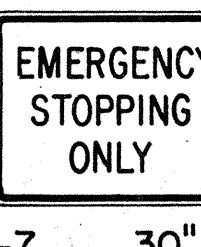
R8-4 30" x 24"
R8-4-A 48" x 36"



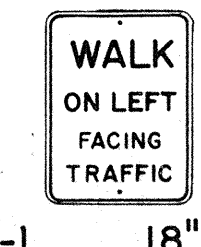
R8-5 24" x 30"
R8-5-A 48" x 60"



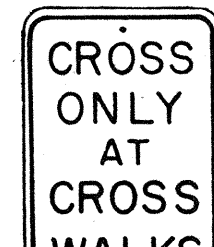
R8-6 24" x 30"
R8-6-A 48" x 60"



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



R9-1 18" x 24"



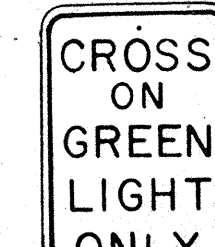
R9-2 12" x 18"



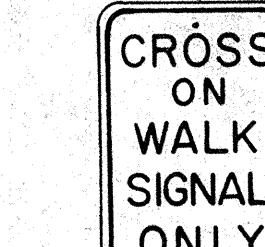
R9-3 12" x 18"



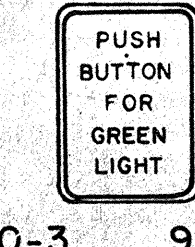
R9-4 18" x 24"



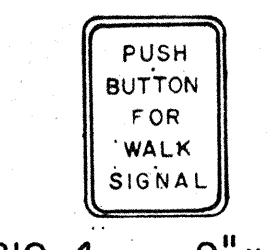
R10-1 12" x 18"



R10-2 12" x 18"



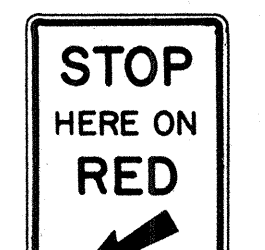
R10-3 9" x 12"



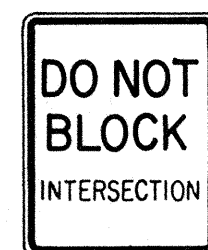
R10-4 9" x 12"



R10-5 24" x 30"



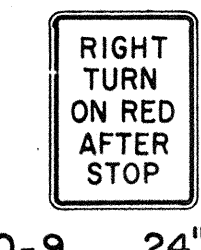
R10-6 24" x 36"



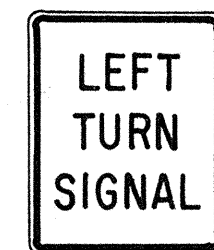
R10-7 24" x 30"



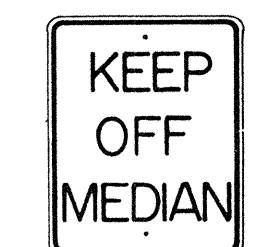
R10-8 24" x 30"



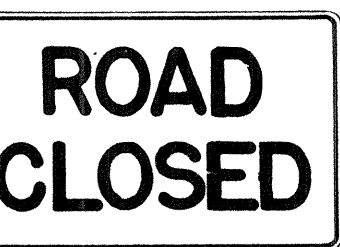
R10-9 24" x 30"



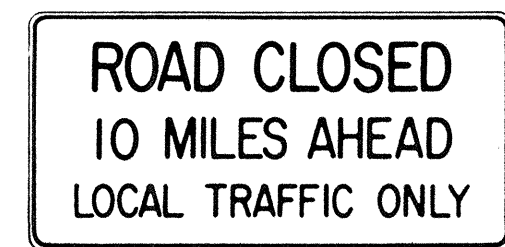
R10-10 24" x 30"



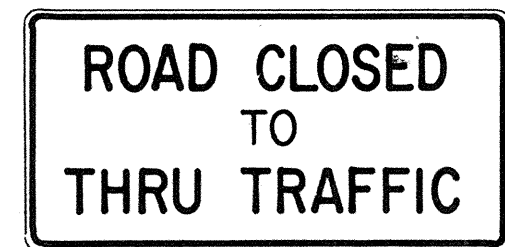
R11-1 24" x 30"



R11-2 48" x 30"



R11-3(10) 60" x 30"



R11-4 60" x 30"



R12-1(10) 24" x 30"

GENERAL NOTES

1. Sign details shall conform to the latest editions of FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," "Standard Alphabets for Highway Signs," and "Standard Highway Signs," and as amended.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs shall have 3/8" bolt holes drilled at appropriate locations.
4. Numerals in () indicates numerals to be inserted for sign message. (R) or (L) indicates right or left.
5. All signs shall be erected without educational plaques unless called for in the plans.

APPROVAL RECOMMENDED:
Eusiki Tanaka 3/17/78
TRAFFIC ENGINEER DATE

APPROVED:
Robert Robinson 3-20-78
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. | 11/2/75 |
| 4 | Revised Signs and General Note 1 | E.T. | 9/15/76 |




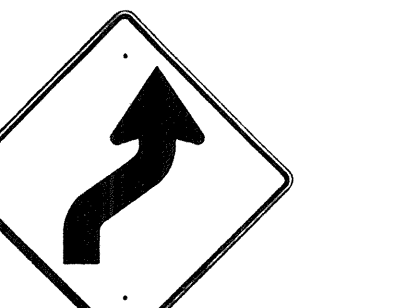
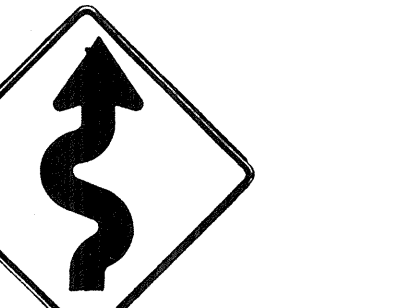
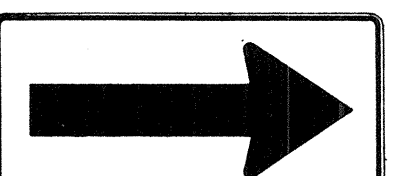
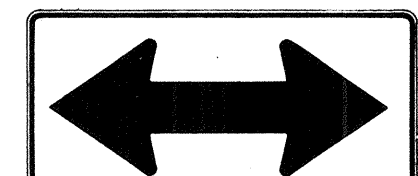
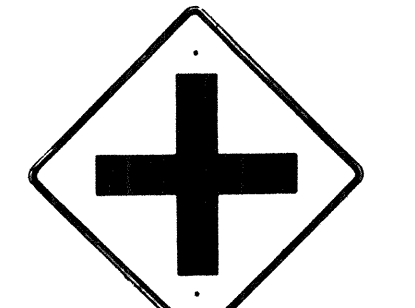
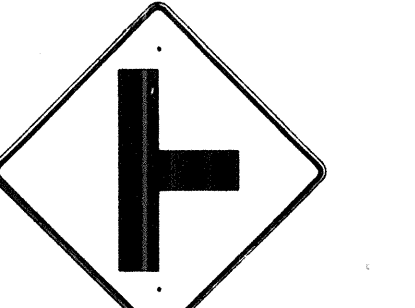
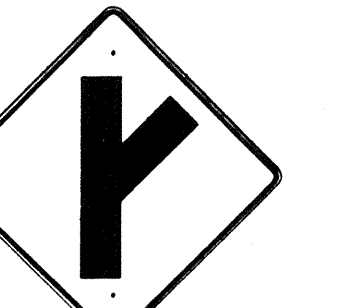
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

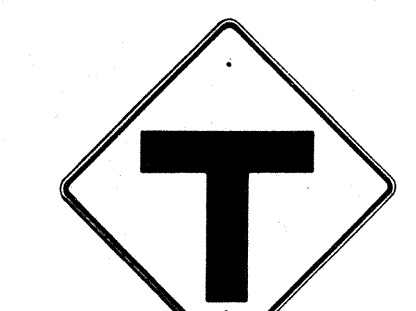
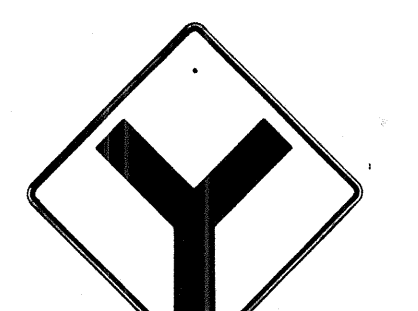


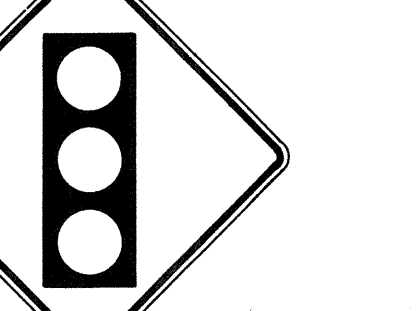

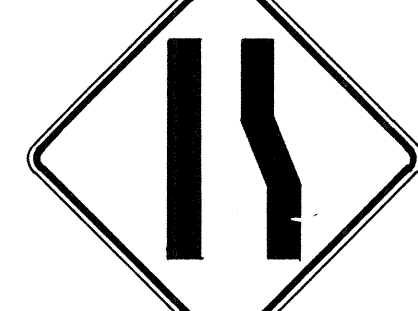



STANDARD DETAILS
REGULATORY SIGNS


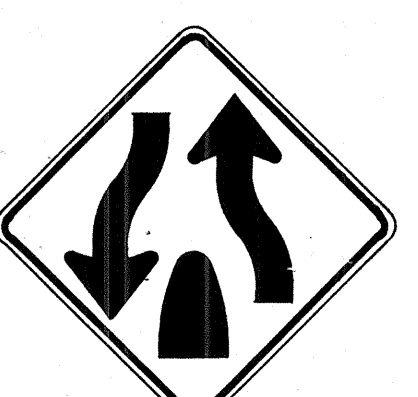
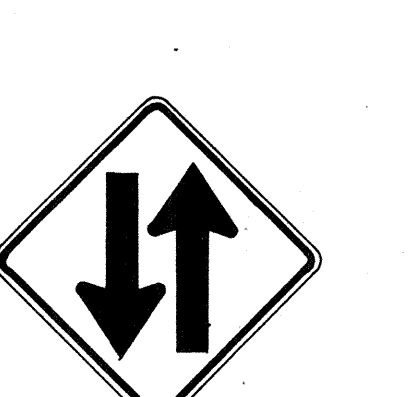
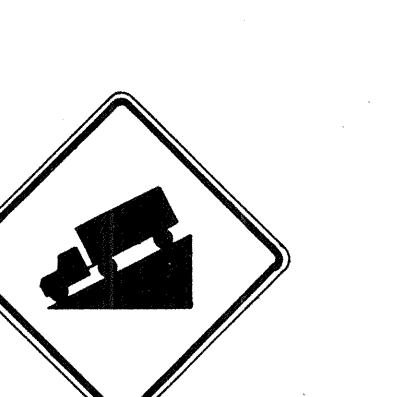






NOT TO SCALE

SHEET No. OF SHEETS DT 101

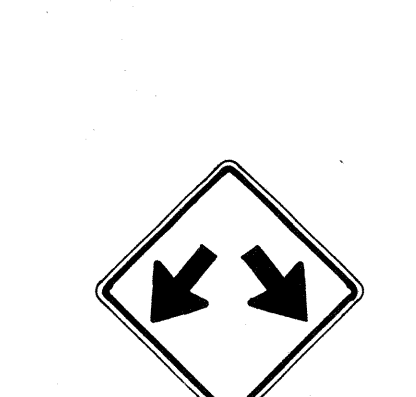


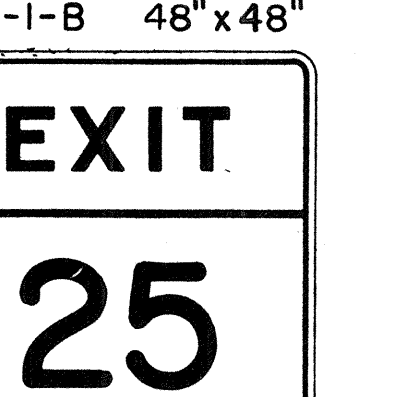
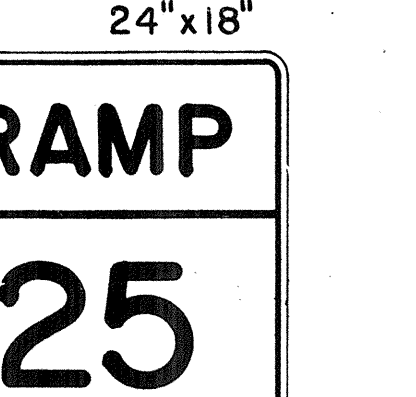
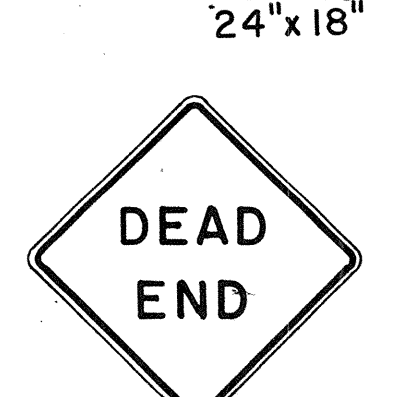
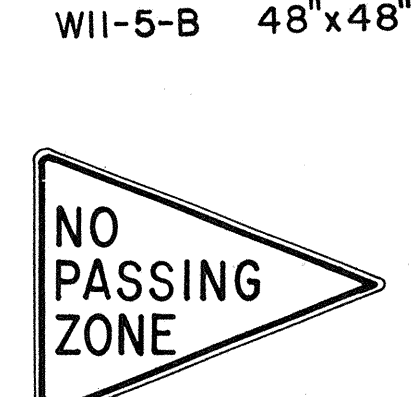
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII* | HAW. | F0112(17) | 1986 | 72 | 142 |

| | | | | | | | | | |
|---|---|--|---|---|---|---|---|---|---|
|  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" SIGNAL AHEAD |  W4-1(R) 30"x30" 24"x18" W4-1(R)-A 48"x48" 24"x18" MERGE |  W4-2(R) 36"x36" W4-2(R)-A 48"x48" |  W5-1 36"x36" W5-1-A 48"x48" |  W5-2 30"x30" W5-2-A 36"x36" |  W5-3 36"x36" W5-3-A 48"x48" |
|---|---|--|---|--|--|---|---|---|---|

| | | | | | | | | | |
|---|--|---|--|--|--|---|---|---|---|
|  W6-1 36"x36" 24"x18" W6-1-A 48"x48" 24"x18" DIVIDED HIGHWAY |  W6-2 36"x36" 24"x18" W6-2-A 48"x48" 24"x18" DIVIDED HIGHWAY ENDS |  W6-3 30"x30" 24"x18" W6-3-A 36"x36" 24"x18" W6-3-B 48"x48" 24"x18" TWO WAY TRAFFIC |  W7-1 30"x30" 24"x18" W7-1-A 48"x48" 24"x18" HILL |  W7-2 24"x18" USE LOW GEAR |  W8-1 30"x30" W8-1-A 36"x36" W8-1-B 48"x48" BUMP |  W8-2 30"x30" W8-2-A 36"x36" W8-2-B 48"x48" DIP |  W8-3 30"x30" W8-3-A 36"x36" PAVEMENT ENDS |  W8-4 30"x30" W8-4-A 36"x36" SOFT SHOULDER |  W8-5 30"x30" 24"x18" W8-5-A 36"x36" 24"x18" SLIPPERY WHEN WET |
|---|--|---|--|--|--|---|---|---|---|

| | | | | | | |
|---|---|---|--|--|--|---|
|  W9-1(R) 30"x30" W9-1(R)-A 36"x36" W9-1(R)-B 48"x48" RIGHT LANE ENDS |  W9-2(L) 36"x36" W9-2(L)-A 48"x48" LANE ENDS MERGE LEFT |  W10-1 36" Diameter R X R |  W11-1 30"x30" 24"x18" W11-1-A 36"x36" 24"x18" W11-1-B 48"x48" 24"x18" BIKE XING |  W11A-2 30"x30" 24"x18" W11A-2-A 36"x36" 24"x18" W11A-2-B 48"x48" 24"x18" PED XING |  W11-4 30"x30" 24"x18" W11-4-A 36"x36" 24"x18" W11-4-B 48"x48" 24"x18" CATTLE XING |  W11-5 30"x30" 24"x18" W11-5-A 36"x36" 24"x18" W11-5-B 48"x48" 24"x18" FARM MACHINERY |
|---|---|---|--|--|--|---|

| | | | | | | |
|---|---|---|--|--|---|--|
|  W12-1 24"x24" W12-1-A 36"x36" W12-1-B 48"x48" LOW CLEARANCE |  W12-2(12'-6") 36"x36" 24"x18" W12-2(12'-6")-A 48"x48" 12'-6" LOW CLEARANCE |  W13-1(25) 18"x18" W13-1(25)-A 24"x24" 25 M.P.H. |  W13-2(25) 48"x60" EXIT 25 M.P.H. |  W13-3(25) 48"x60" RAMP 25 M.P.H. |  W14-1 30"x30" W14-1-A 36"x36" DEAD END |  W14-3 36"x48"x48" W14-3-A 48"x64"x64" NO PASSING ZONE |
|---|---|---|--|--|---|--|

GENERAL NOTES

- Sign details shall conform to the latest editions of FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways", "Standard Alphabet for Highway Signs", and "Standard Highway Signs", 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:
Eishi Tanaka 3/17/72
TRAFFIC ENGINEER DATE

APPROVED:
Walter R. Sisk 3-20-72
ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|--|-------------|----------|
| 1 | Supersedes Sht. DT 102 Approved 12-30-69 | H.T. | 3/20/72 |
| 2 | Revised General Note 1 | H.T. | 10/16/74 |
| 3 | Revised General Note 5 | M.H. | 9-16-75 |
| 4 | Revised General Note 5 | H.T. | 9-14-76 |
| 5 | Added Note 1 | H.T. | 11-9-79 |
| 6 | Revised Signs & General Note 1 | E.T. | 9/18/85 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
WARNING SIGNS

NOT TO SCALE

DATE _____
SURVEY PLATTED BY _____
DRAWN BY _____
TRACED BY _____
CHECKED BY _____
NO. _____

| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | F-011-2(17) | 1986 | 73 | 142 |

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

ALL WAY R1-4 18" x 6"

REDUCED SPEED AHEAD R2-5a 24" x 30"
R2-5a-A 48" x 60"

SPEED LIMIT ENFORCED BY RADAR R2-10 24" x 30"
4" Series D
- 4" Series C
- 3" Series D
- 5" Series C

CENTER LANE ONLY R3-9b 24" x 36"

BUS STOP R7-107 12" x 24"

RESERVED PARKING R7-8 12" x 18"
R7-8-A 24" x 30"

NO PARKING ANY TIME R8-3a 24" x 24"
24" x 18"
R8-3a-A 48" x 48"
- 4" Series C
- 1 1/2"

NO PED XING R9-3a 18" x 18"
18" x 12"
R9-3a-A 24" x 24"
24" x 18"

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

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

NO TURN ON RED R10-11a 24" x 30"

TURN RIGHT ANY TIME WITH CAUTION R16-1 24" x 30"
4" Series C

NO LEFT TURN ON RED R16-3 18" x 24"
- 4" Series D -
- 3" Series D -
- 2" Series D -
- 3" Series D -

NO RIGHT TURN ON RED R16-4 18" x 24"

UNLICENSED VEHICLES BICYCLES, CYCLES UNDER 5 H P, PEDESTRIANS KEEP OUT FREEWAY R16-5 36" x 42"
3" Series C
4" Series E

TURN AHEAD R16-6 24" x 30"
- 8" Series F
- 5" Series D

U TURN OK R16-7 24" x 30"
- 8" Series F
- 5" Series D

MOTOR-DRIVEN CYCLES PROHIBITED R5-8 30" x 24"
4" Series B

U TURN AHEAD W17-1(L) 60" x 60"
20" b
8 3/4"

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 W3-4 48" x 48"
6" Series C

TRUCK CROSSING W8-6 30" x 30"
W8-6-A 36" x 36"
W8-6-B 48" x 48"

THRU TRAFFIC MERGE LEFT W9-3(L) 48" x 48"
6" Series E

U TURN AHEAD W4-3 36" x 36"
W4-3-A 48" x 48"
8" Series F
- 5" Series D

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"

WHEELCHAIR ACCESSIBLE 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 W15-1 24" x 24"
- 4" Series C -

ADVANCE GREEN W15-2 24" x 24"

END FREEWAY 1/2 MI CW16-1(1/2) 60" x 60"
8" Series E

RIGHT LANE EXIT ONLY W18-1 48" x 60"
8" Series E

SCHOOL BUS STOP AHEAD S1-1 36" x 36"
S1-1-A 48" x 48"

SCHOOL S2-1 36" x 36"
S2-1-A 48" x 48"

9:00 AM TO 3:30 PM S4-1 24" x 10"

SCHOOL S4-3 24" x 8"

WHEN CHILDREN ARE PRESENT S4-2 24" x 10"

WHEN FLASHING S4-4 24" x 10"

SIDEWALK CLOSED CW23-4 48" x 48"
7" Series D

USE SIDEWALK R18-1 24" x 18"
4" Series C

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

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

| NO. | REVISION | APPROVED BY | DATE |
|-----|--|-------------|---------|
| 1 | Supersedes Sht. DT103 approved 3/20/72 | H.T. | 5/3/78 |
| 2 | Added General Note 6 | H.T. | 11/9/78 |
| 3 | Revised Signs and added Sign W4-3 | E.T. | 9/18/80 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

MISCELLANEOUS SIGNS

NOT TO SCALE DATE: MAY, 1978
SHEET NO. OF SHEETS DT 103

DATE: _____

ORIGINAL PLAN NO. _____

DESIGNED BY: _____

TRACED BY: _____

QUANTITIES BY: _____

CHECKED BY: _____

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2(17) | 1986 | 74 | 142 |



CW20-1a 48" x 48"



CW20-2d 48" x 48"



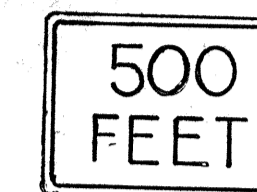
CW20-3b 48" x 48"



CW20-4d 48" x 48"



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



CW20-7c 36" x 36"
24" x 18"
CW20-7c-A 48" x 48"
24" x 18"



CW21-1 30" x 30"



CW21-2 30" x 30"



CW21-3 36" x 36"



CW21-4 36" x 36"



CW21-5 30" x 30"



CW21-6 30" x 30"



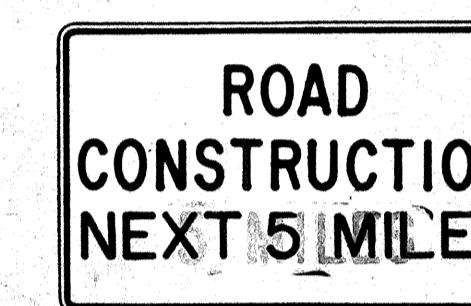
CW22-1b 48" x 48"



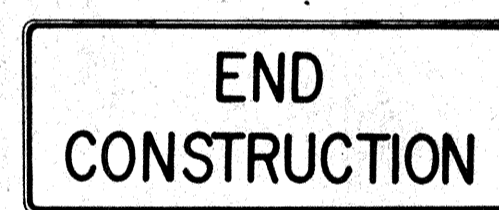
CW22-2 42" x 36"



CW22-3 42" x 36"



CG20-(15) 60" x 36"



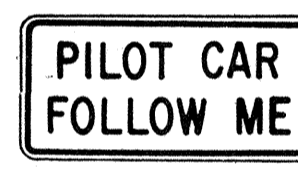
CG20-2 60" x 24"



CM4-9(R) 30" x 24"



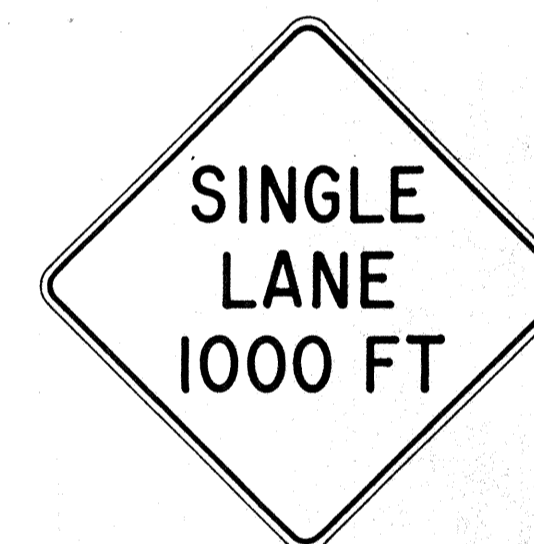
CM4-10(R) 48" x 18"



CG20-4 36" x 18"



CW23-1 36" x 36"



CW23-2b 48" x 48"



CW23-3(R) 48" x 48"

GENERAL NOTES

1. Sign details shall conform to the latest editions of FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," "Standard Alphabets for Highway Signs," and "Standard Highway Signs," and as amended.
2. All construction signs shall be reflectorized.
3. All construction 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. For "CW" series signs, suffixes a,b,c and d are as follows:
a-1500 FT, b-1000 FT,
c-500 FT and d-AHEAD.

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

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

| NO. | REVISION | APPROVED BY | DATE |
|-----|---|-------------|----------|
| 1 | Supersedes Sht. DT 104 Approved 12-30-69 | H.T. | 3/23/72 |
| 2 | Revised General Note 1 | H.T. | 10/12/74 |
| 3 | Revised General Note 2 | M | 9-16-75 |
| 4 | Revised General Note 2 and sign CG20-1(5) | H.T. | 9-14-76 |
| 5 | Revised General Note 1 and sign CW20-7c | E.T. | 9/18/85 |

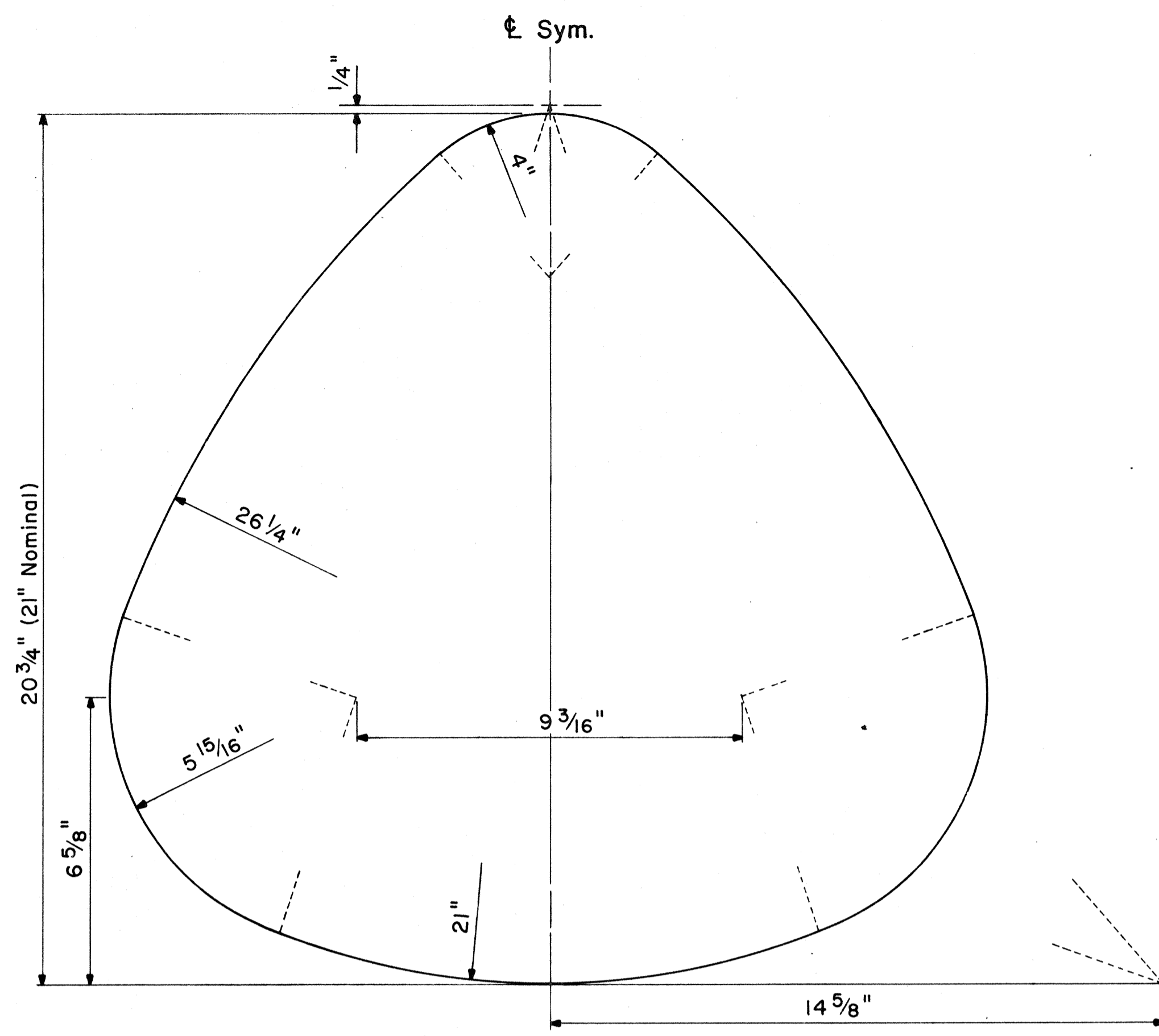
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CONSTRUCTION SIGNS

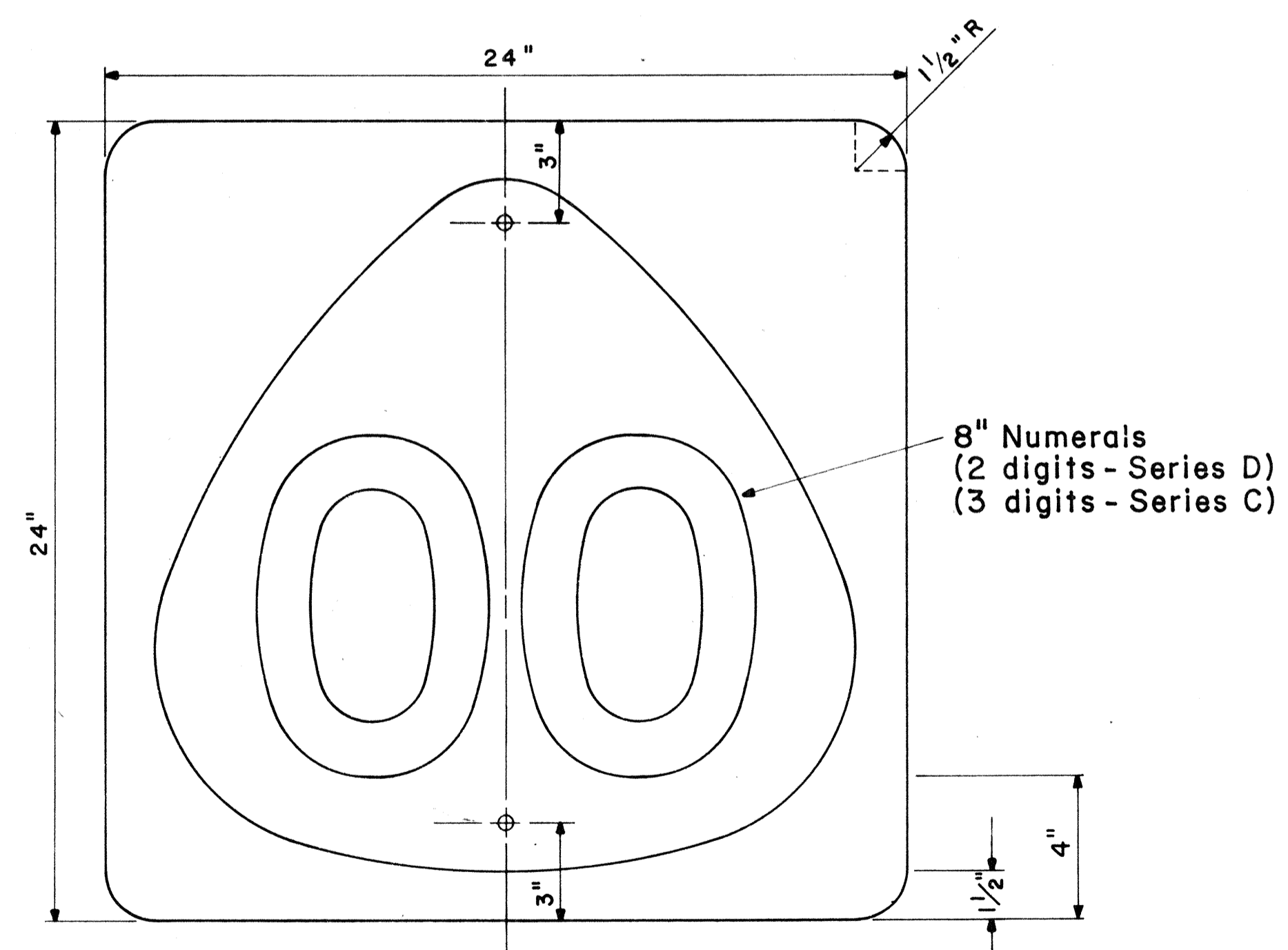
NOT TO SCALE

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

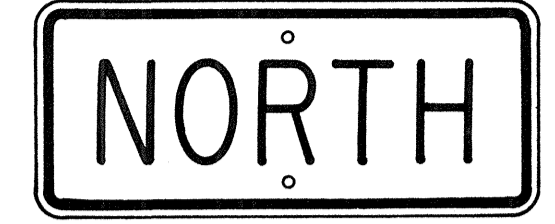
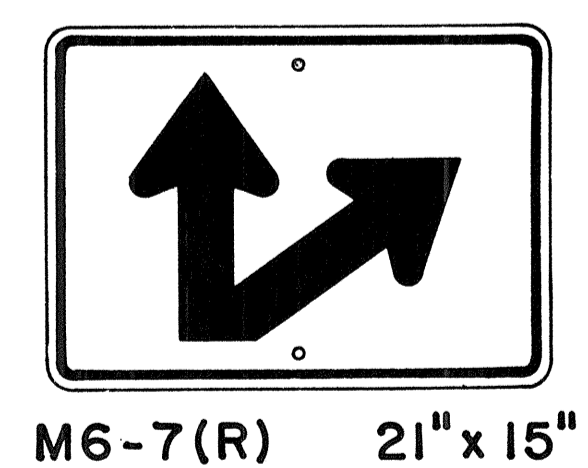
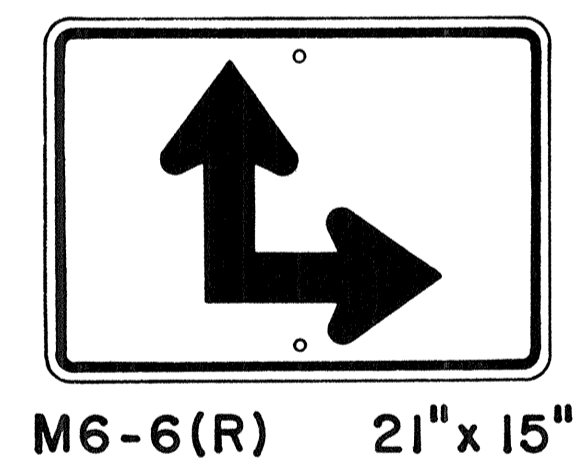
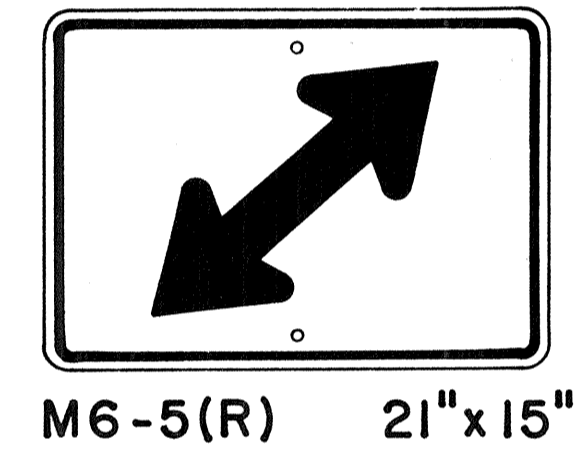
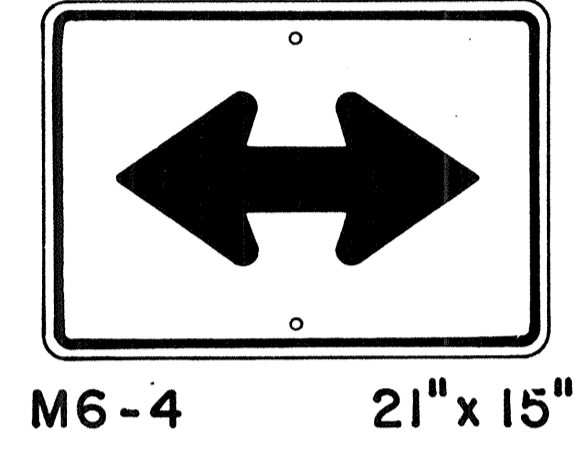
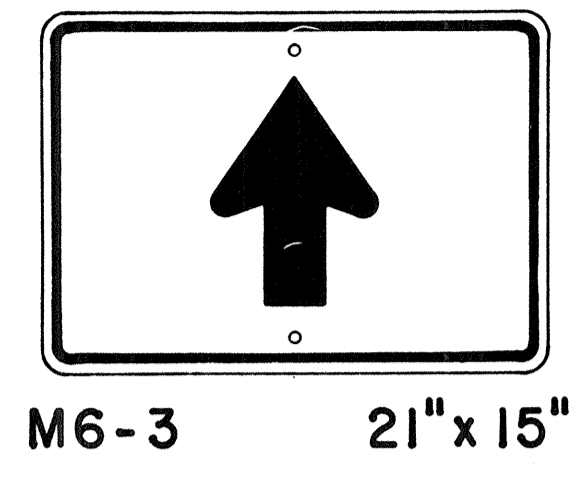
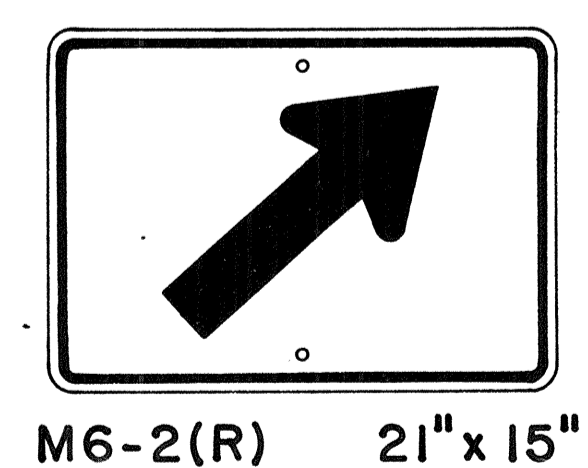
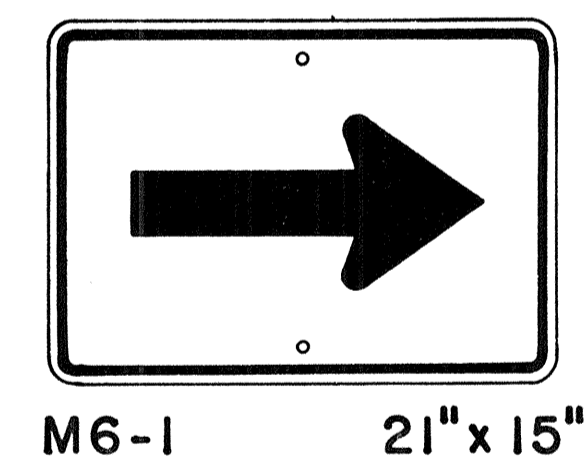
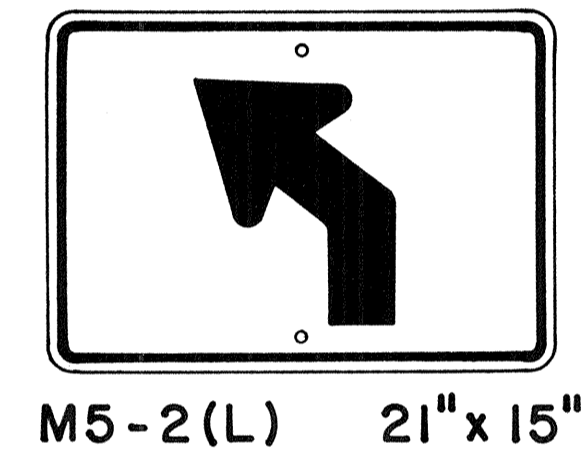
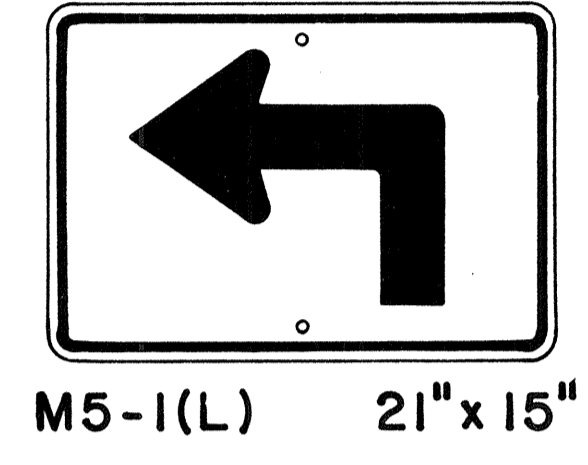
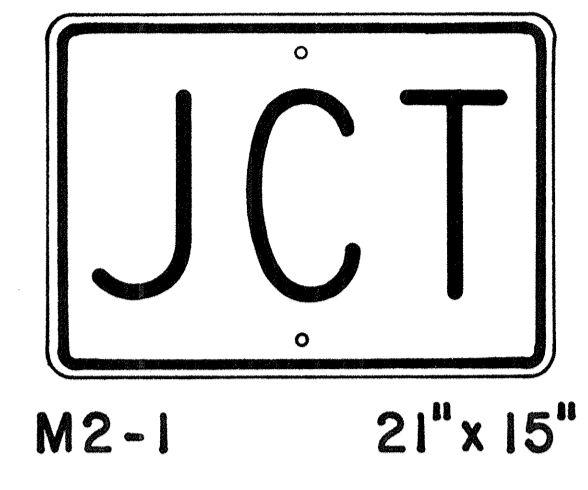
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F011-2(17) | 1986 | 75 | 142 |



STATE ROUTE MARKER DETAIL
Not to Scale



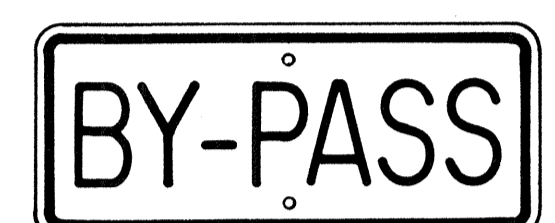
STATE ROUTE MARKER
M1-6(00) 24" x 24"
Scale: 1/4" = 1"



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



M4-1 24" x 12"



M4-2 24" x 12"



M4-3 24" x 12"



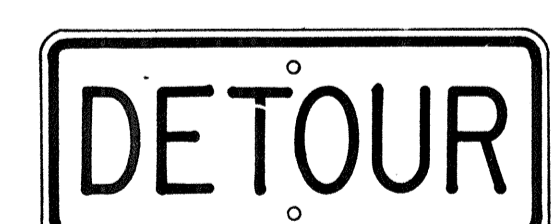
M4-5 24" x 12"



M4-6 24" x 12"



M4-7 24" x 12"



M4-8 24" x 12"

GENERAL NOTES

1. Marker details shall conform to the latest editions of FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," "Standard Alphabets for Highway Signs," and "Standard Highway Signs," 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

| NO. | REVISION | APPROVED BY | DATE |
|-----|--|-------------|----------|
| 1 | Supersedes Sht. DT 105 Approved 12-30-69 | H.T. | 6/1/72 |
| 2 | Revised General Note 1 | H.T. | 10/16/74 |
| 3 | Revised General Note 1 | E.T. | 9/18/85 |

APPROVAL RECOMMENDED:
Eiichi Tanaka 6/6/72
TRAFFIC ENGINEER DATE

APPROVED:
Abdur 2. Sakidin 6-1-72
ASSISTANT CHIEF, ENGINEERING DATE

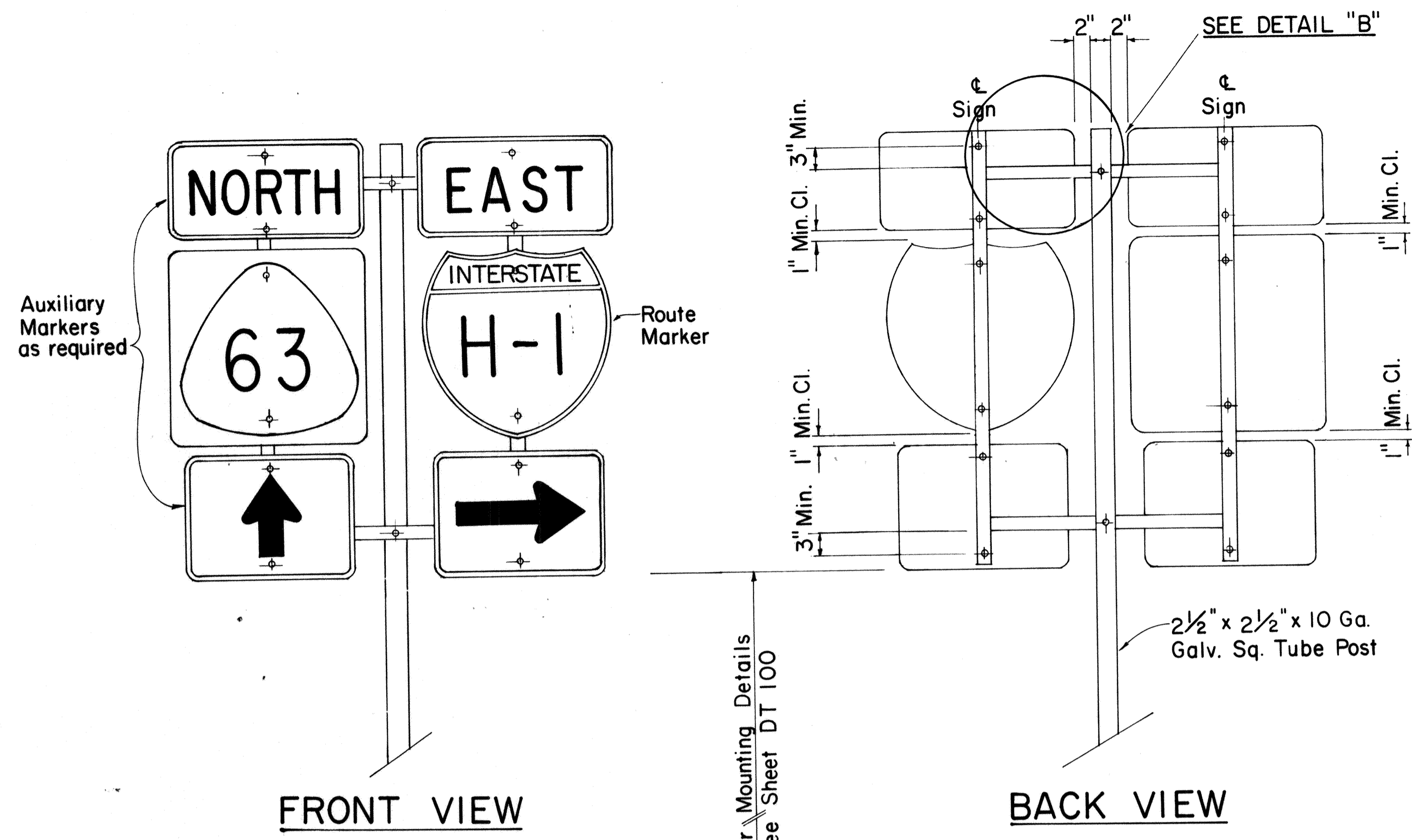
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
STATE ROUTE MARKER
AND AUXILIARY MARKERS

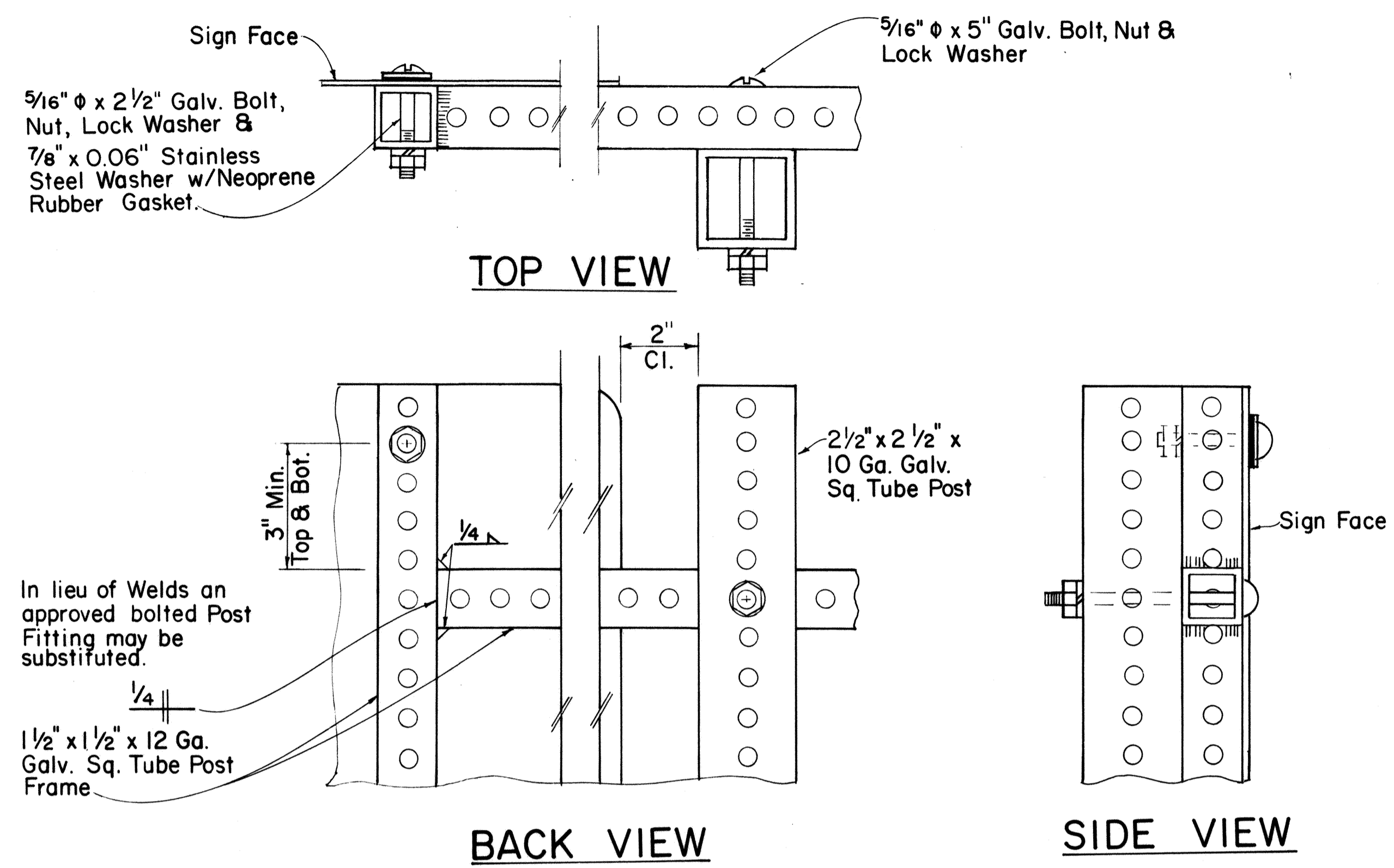
Scale: As Shown
SHEET NO. OF SHEETS DT105

| | |
|---------------|------|
| ORIGINAL PLAN | DATE |
| DRAWN BY | |
| CHECKED BY | |
| QUANTITIES BY | |
| NO. | |

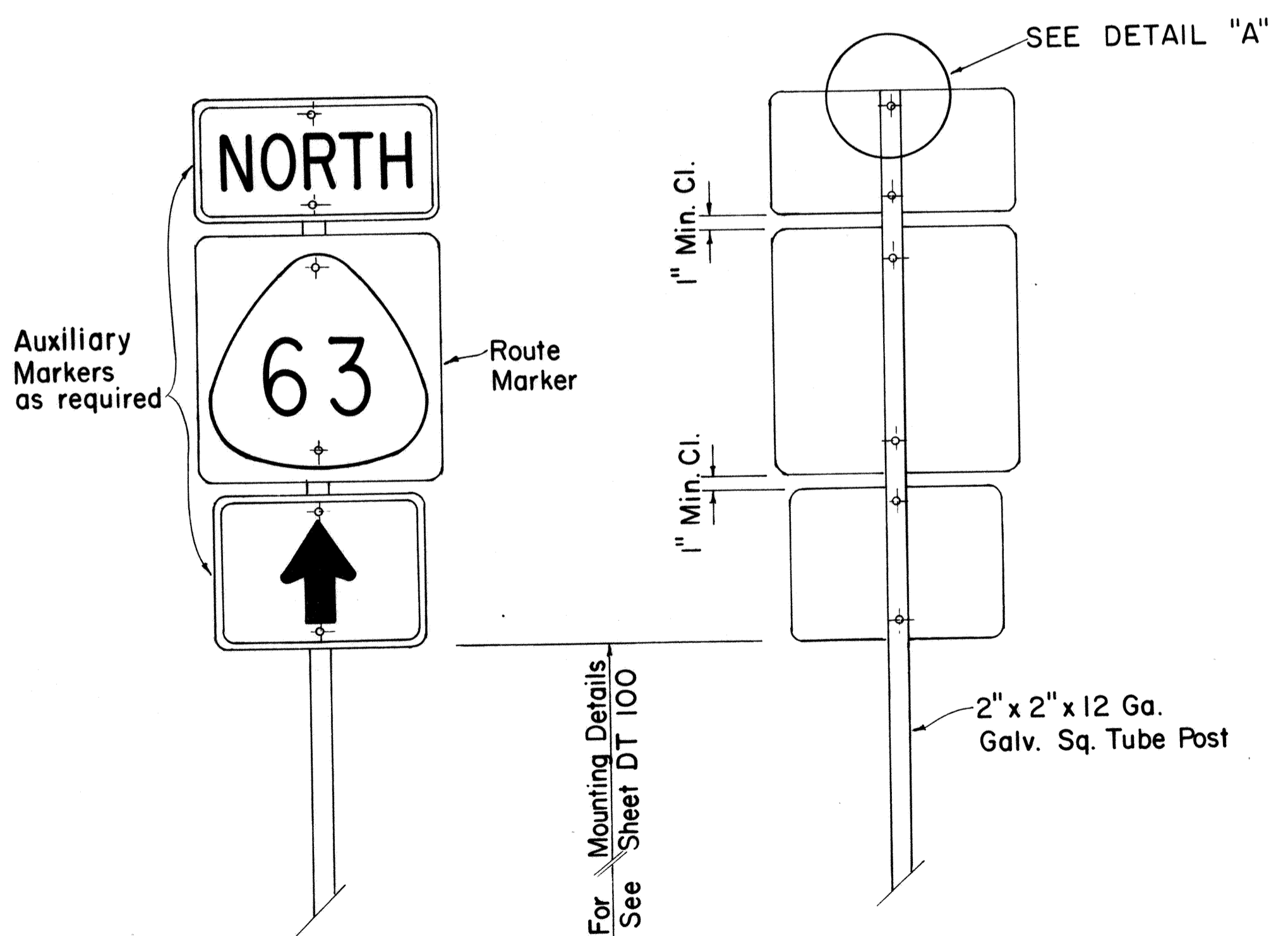
| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | F-011-2(17) | 1980 | 70 | 142 |



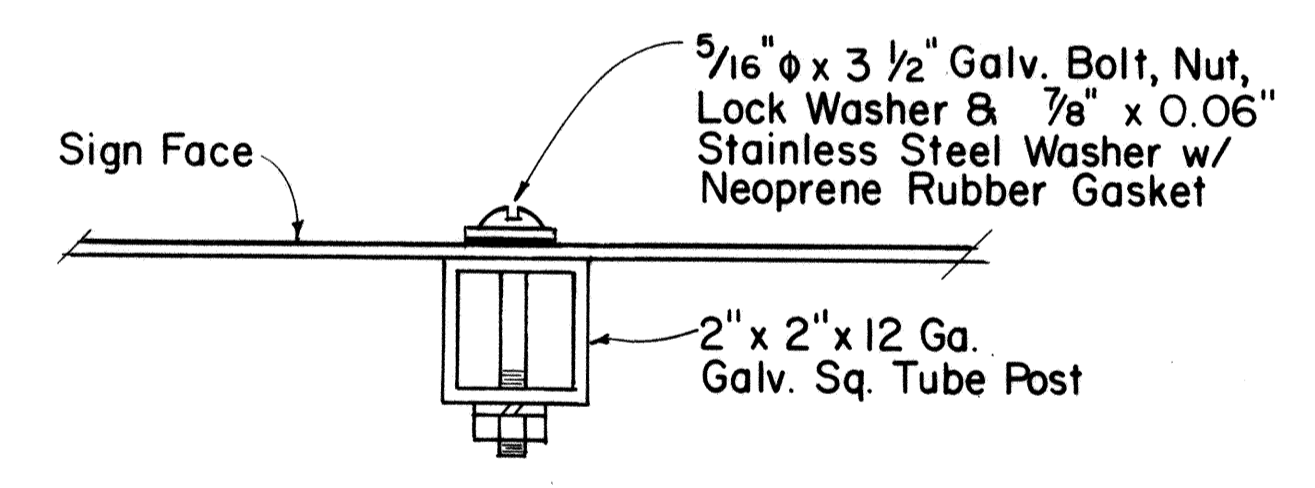
TYPE "B" ASSEMBLY
SCALE: 1" = 1'-0"



DETAIL "B"
SCALE: 3/8" = 1"



TYPE "A" ASSEMBLY
SCALE: 1" = 1'-0"



DETAIL "A"
SCALE: 3/8" = 1"

APPROVAL RECOMMENDED:
Eiichi Tanaka 7/31/80
TRAFFIC ENGINEER DATE

APPROVED:
Herbert Zaleski 7/31/80
ASSISTANT CHIEF, ENGINEERING DATE

| NO | REVISION | APPROVED BY | DATE |
|----|--|-------------|---------|
| 1 | Supersedes Sht. DT 107 dated 12/30/69. | H.R. | 7/31/80 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
ROUTE MARKER
ASSEMBLIES

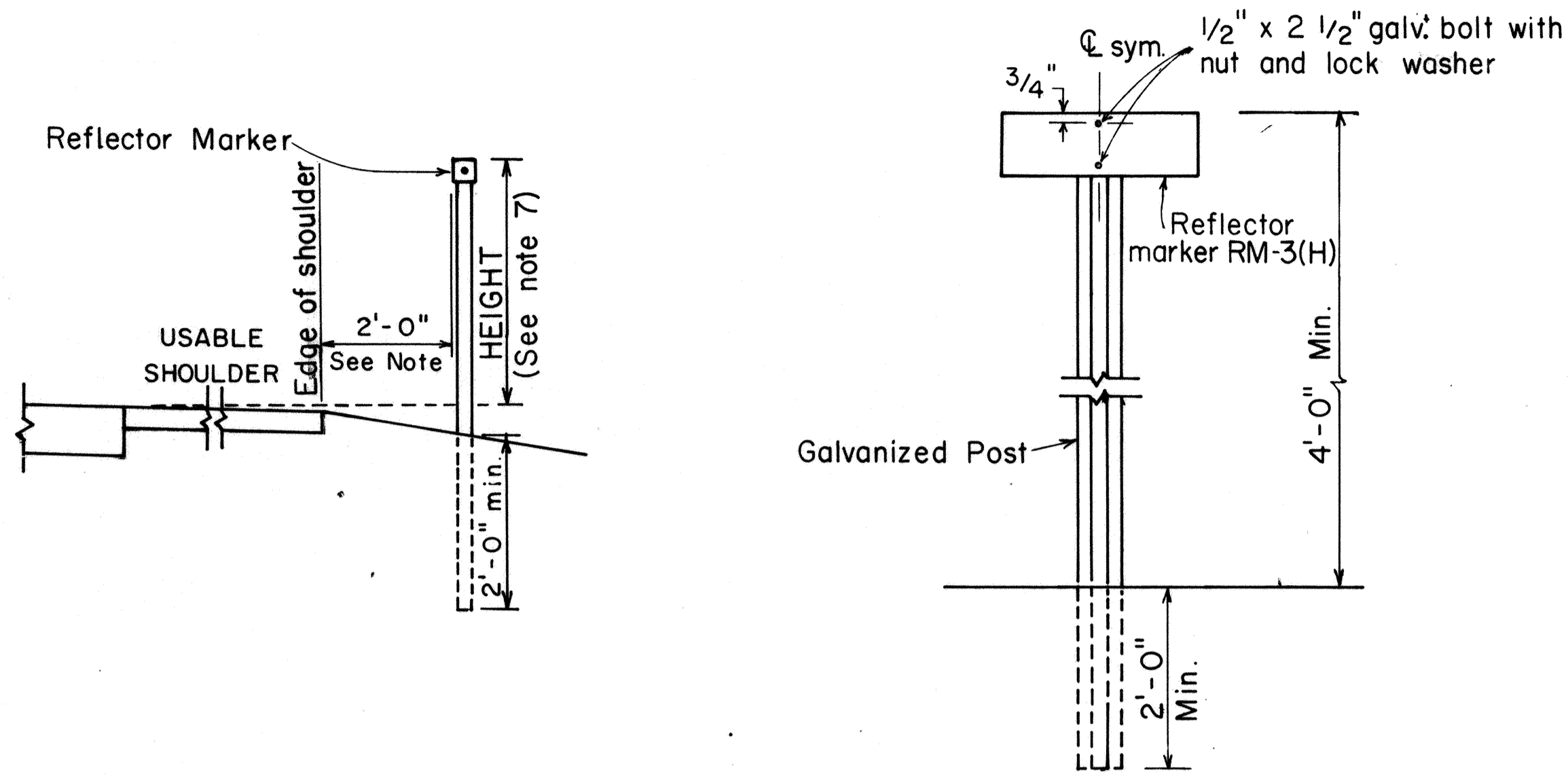
SCALE: AS SHOWN
SHEET No. OF SHEETS DT 107

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

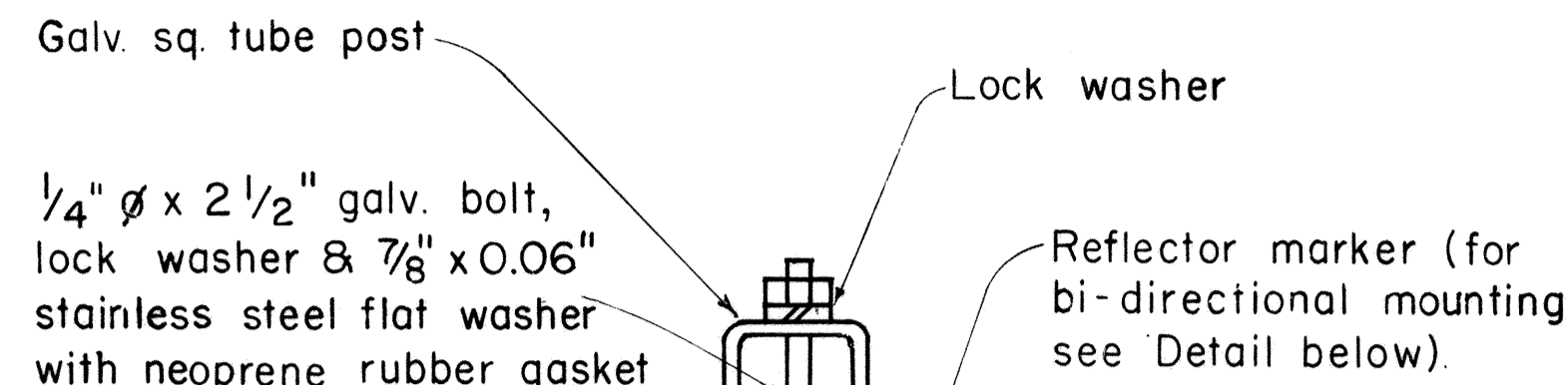
| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | F-011-207 | 1986 | 77 | 142 |

GENERAL NOTES:

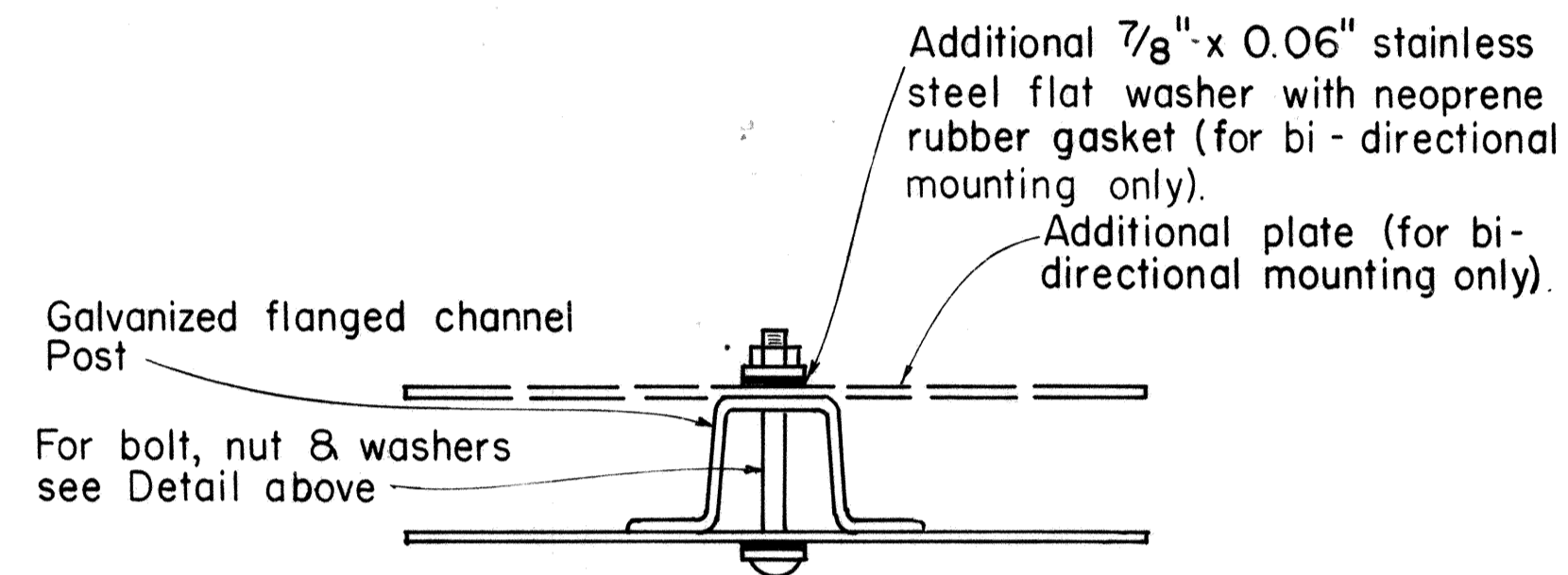
1. Clearance markers (RM-3, RM-4) shall be installed with the edge of the marker in line with the inner edge of the obstruction.
2. (R) or (L) indicates right or left and shall be as shown on the plans.
3. Reflector markers RM-1 and RM-2 shall be:
 - a) Yellow if placed along the left edge of divided 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 RM-4, the stripes shall slope downward at an angle of 45° toward the side of the obstruction that traffic is to pass.
5. For reflector marker RM-9, reflective sheeting material may be used as an alternate.
6. (H) indicates horizontal mounting of reflector marker.
7. Height = 4'-0" min. for RM-1, RM-2 and RM-3.
Height = 5'-6" min. for RM-4 and RM-9.
8. Final locations of reflector markers shall be approved by the Engineer.



REFLECTOR MARKER MOUNTING DETAIL

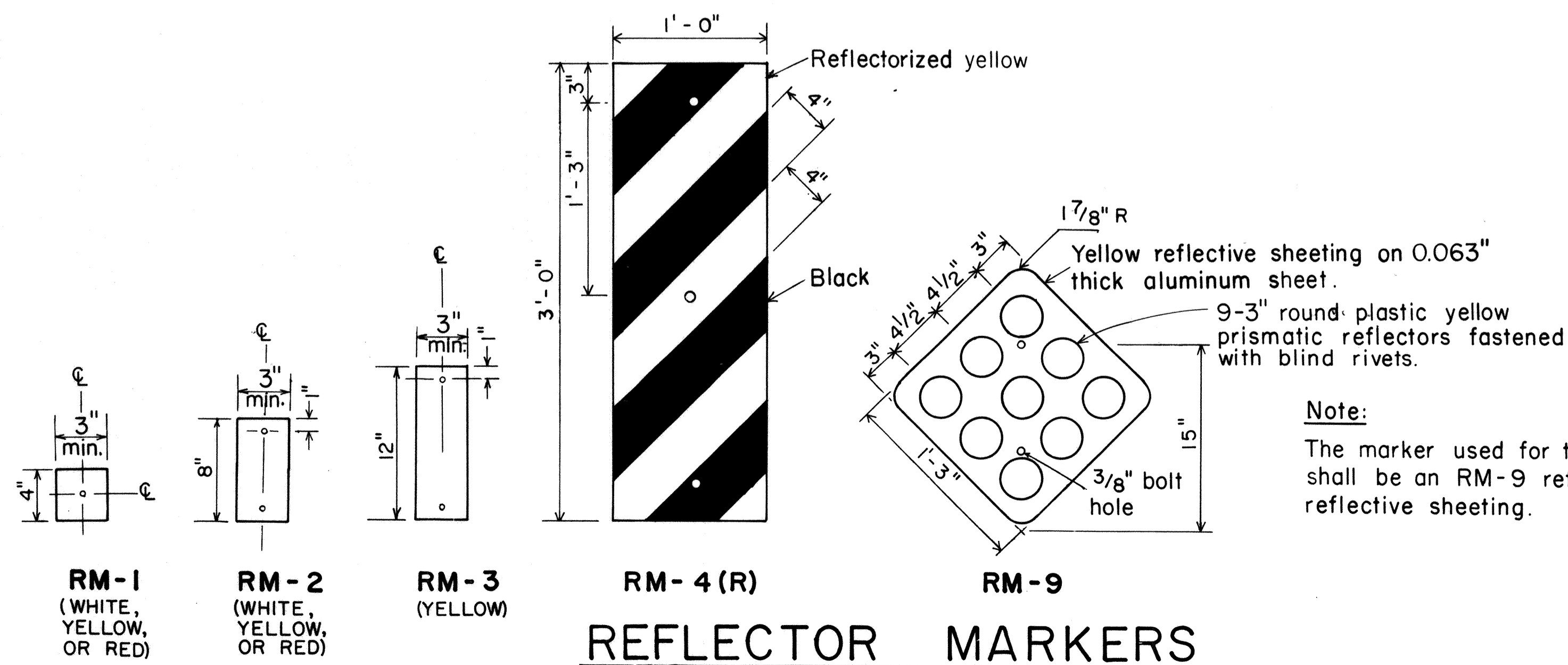


GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

TYPICAL MOUNTING DETAILS



REFLECTOR MARKERS

APPROVAL RECOMMENDED:
Eishi Tanaka 11/21/77
 TRAFFIC ENGINEER DATE

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

| NO. | REVISION | APPROVED BY | DATE |
|-----|--|-------------|---------|
| 1 | Revised Mounting Details | H.S. | 4/23/80 |
| 2 | Revised General Notes, Mounting Details and Reflector Markers. | H.S. | 7-28-83 |
| 3 | Eliminated White for RM-4 | H.S. | 1-30-88 |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

STANDARD DETAILS
 MISCELLANEOUS REFLECTOR MARKERS

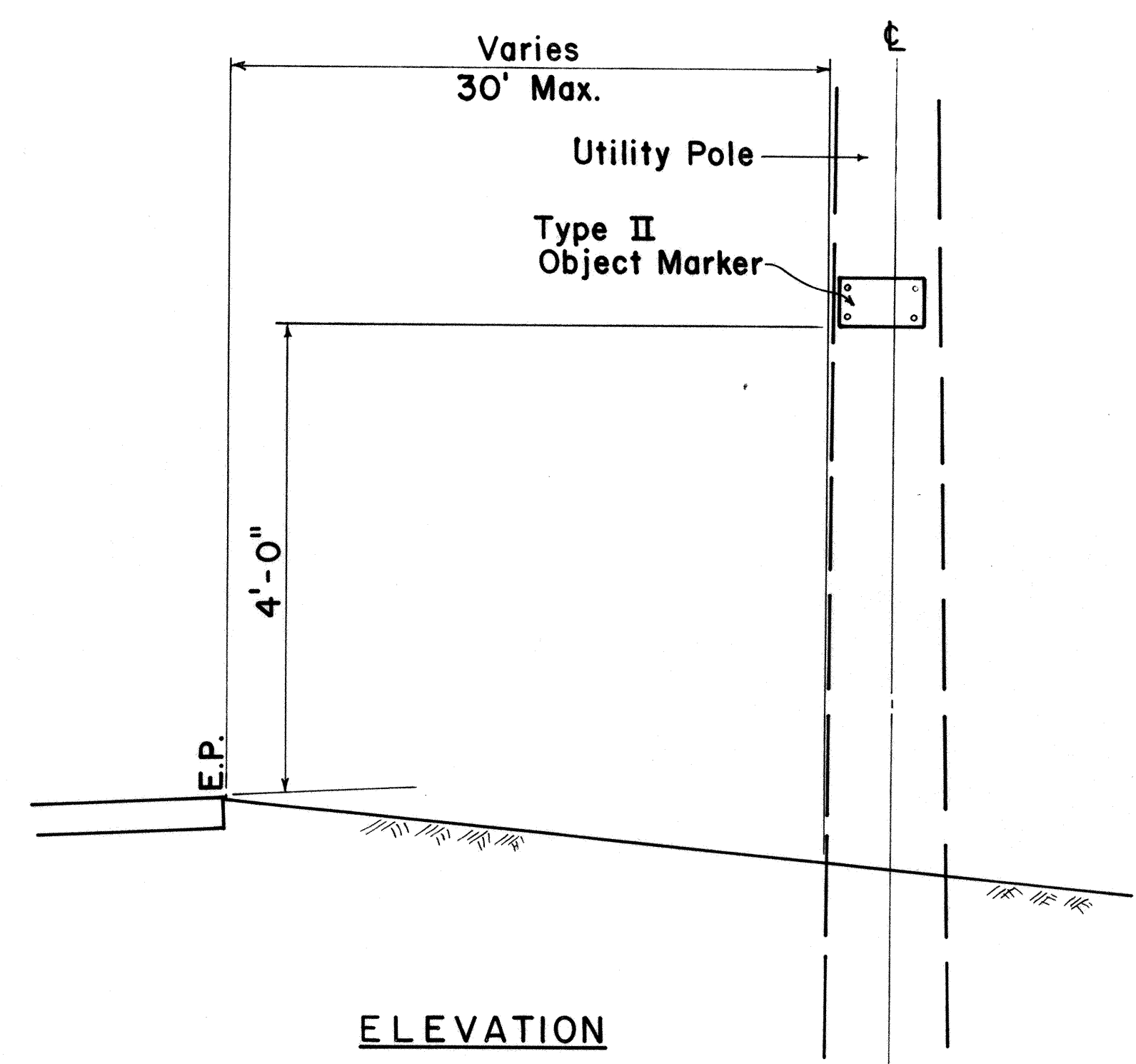
Not to scale June, 1977

SHEET NO. OF SHEETS DT 110

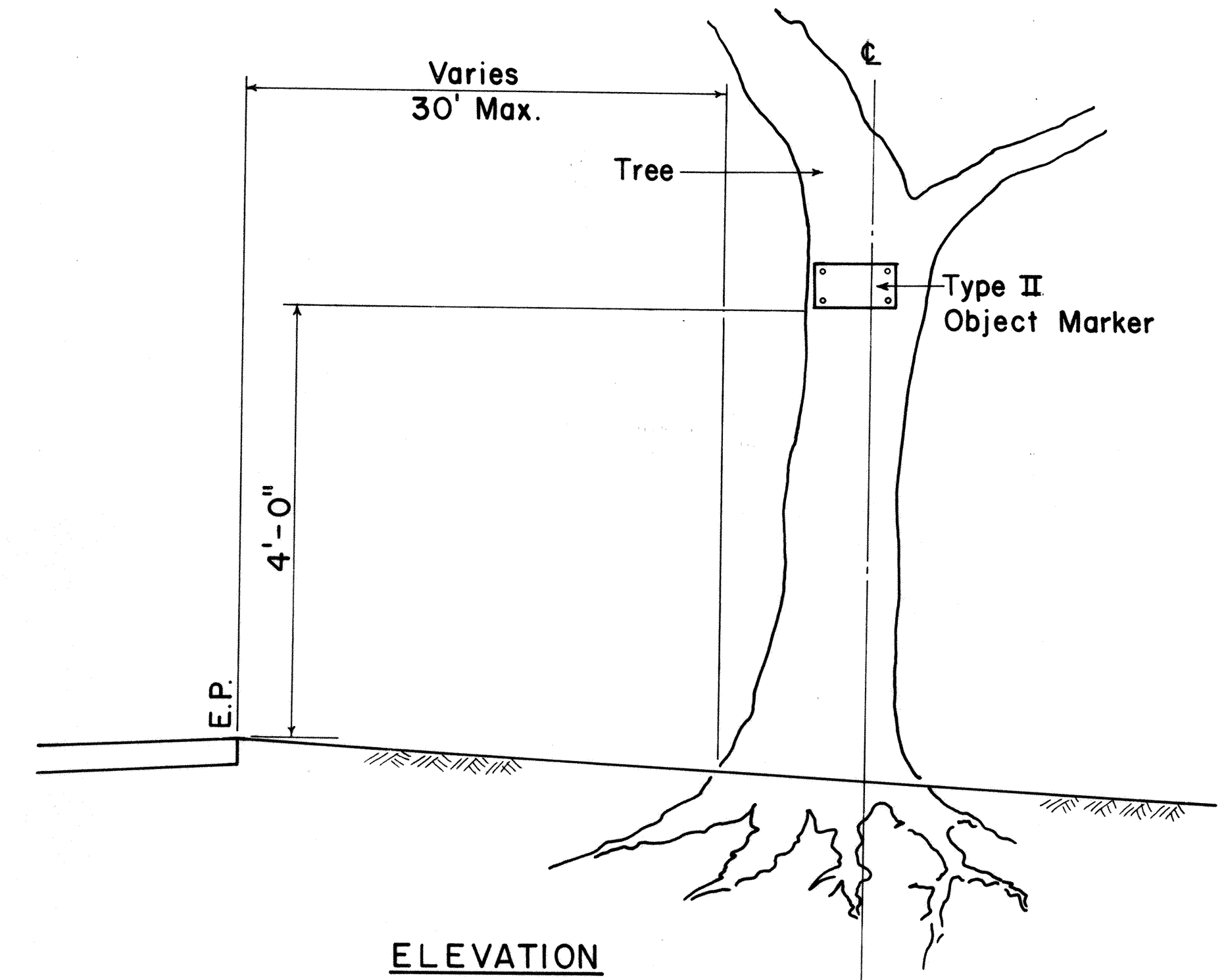
| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | E-011-2 (17) | 1986 | 78 | 142 |

GENERAL NOTES

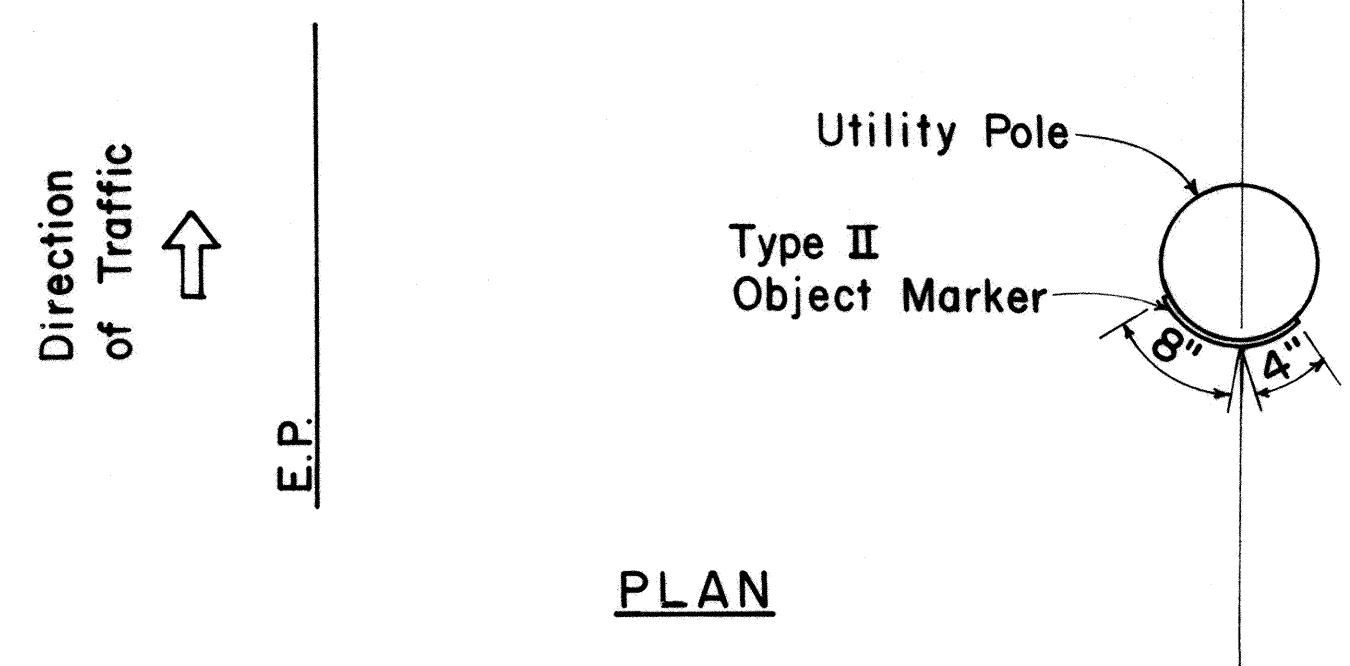
- All objects (utility poles or trees) that are within the State highway right of way and within 30 feet of the roadway edge of pavement shall be marked as directed by the Engineer.
- The Contractor shall prepare the mounting surface of each object as directed by the Engineer and place the Type II Object Marker as shown on this plan.
- Type II Object Markers shall be mounted on utility poles and trees with 1 3/4" galv. roofing nails (4 ea.).
- Branches of trees which obscure the object markers shall be trimmed. (Payment shall be incidental to Type II Object Markers as shown in the proposal).
- Type II Object Markers for utility poles and trees, etc., shall be made of amber reflective sheeting material overlaid on 0.020" aluminum sheeting.
- Objects such as concrete posts, concrete or rock walls and boxes, metal posts (greater than 2" 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 overlaid on 0.063" thick sheet aluminum backing of the dimensions shown on the plans.
 - It shall be mounted on either metal posts or flexible delineator posts with 1/4"x2" galv. bolts, nuts and washers. Metal posts shall be galvanized and shall be either 1 1/2"x 1 1/2", 12 gage square tube posts or 1.12 lbs. per ft. flanged channel posts.



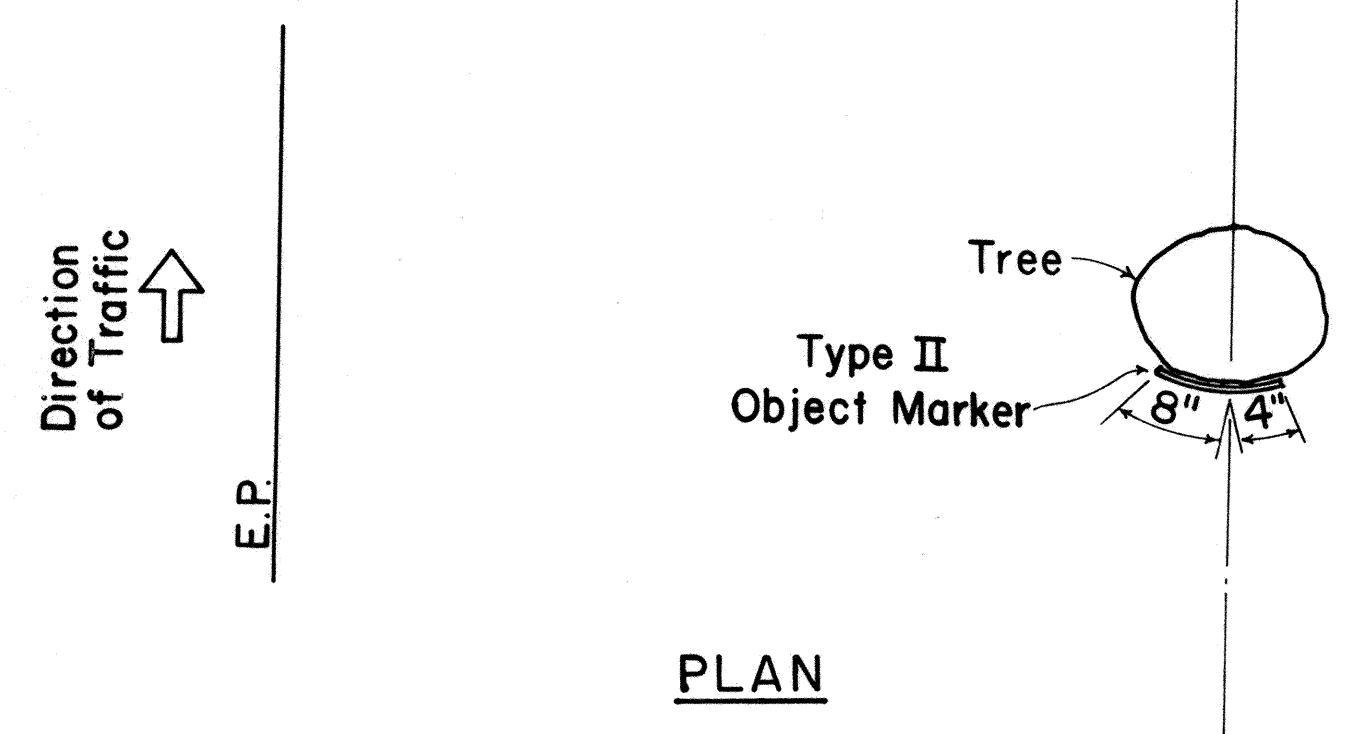
ELEVATION



ELEVATION

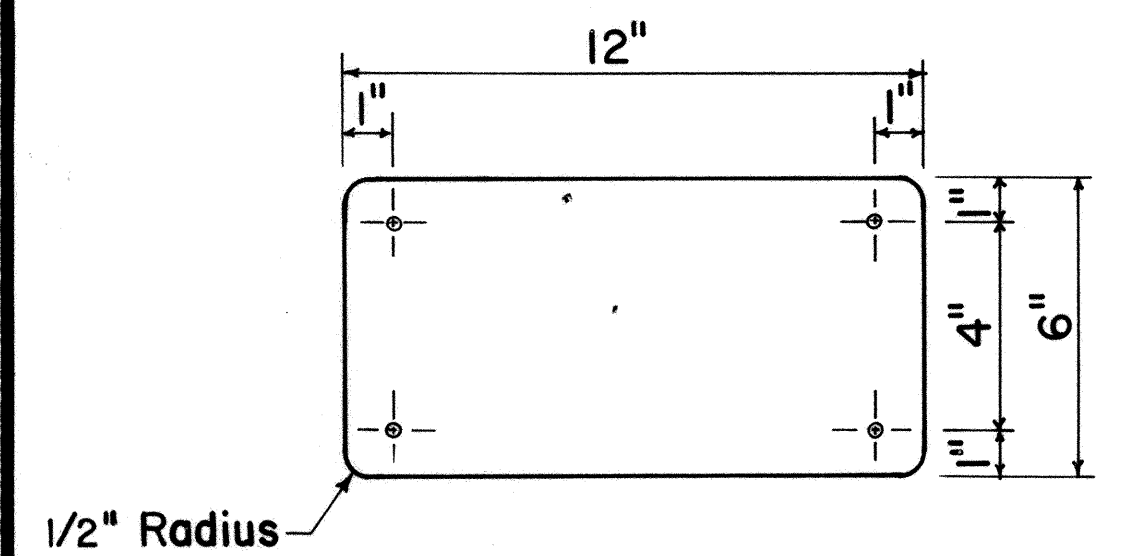


PLAN

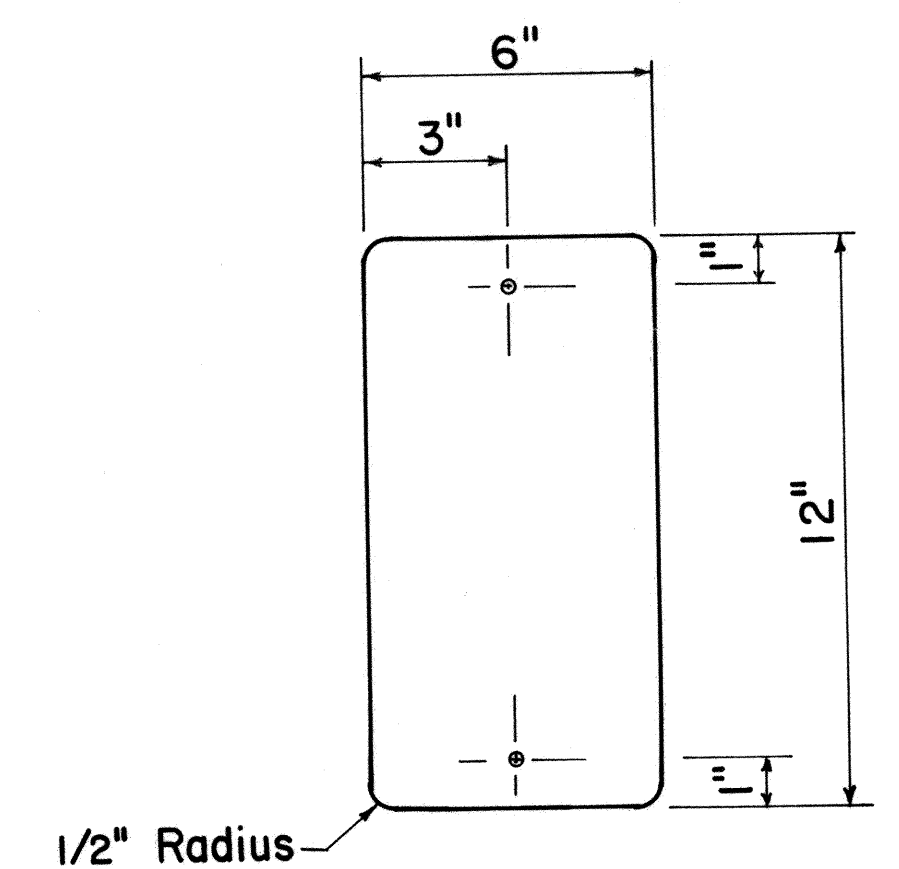


PLAN

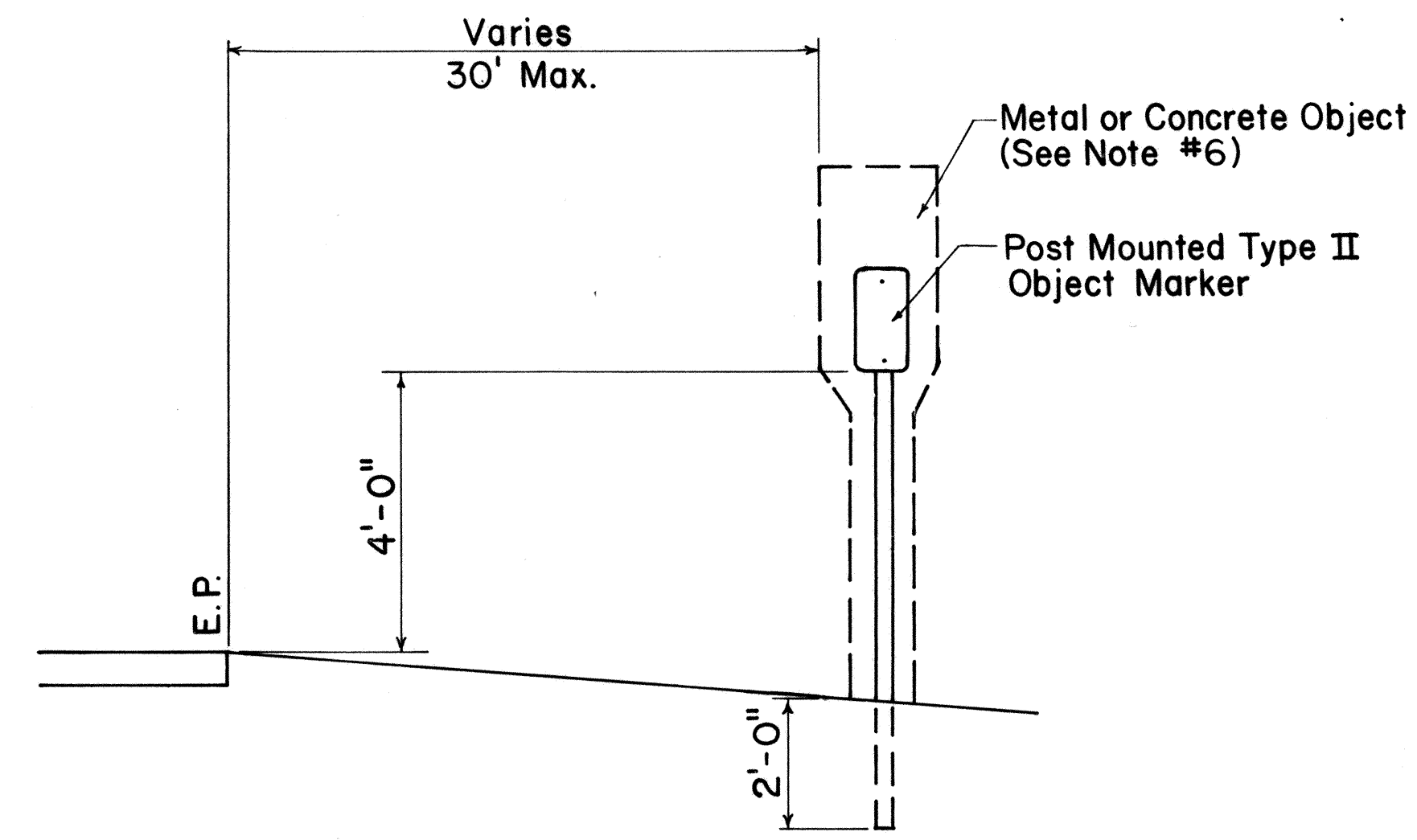
TYPICAL TYPE II OBJECT MARKER MOUNTING DETAIL



TYPE II OBJECT MARKER



TYPE II OBJECT MARKER POST MOUNTED



POST MOUNTED TYPE II OBJECT MARKER DETAIL

APPROVAL RECOMMENDED:

Eiichi Tanaka 3/30/83
TRAFFIC ENGINEER DATE

APPROVED:

S. Fujiyama 3-31-83
ASSISTANT CHIEF, ENGINEERING DATE

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

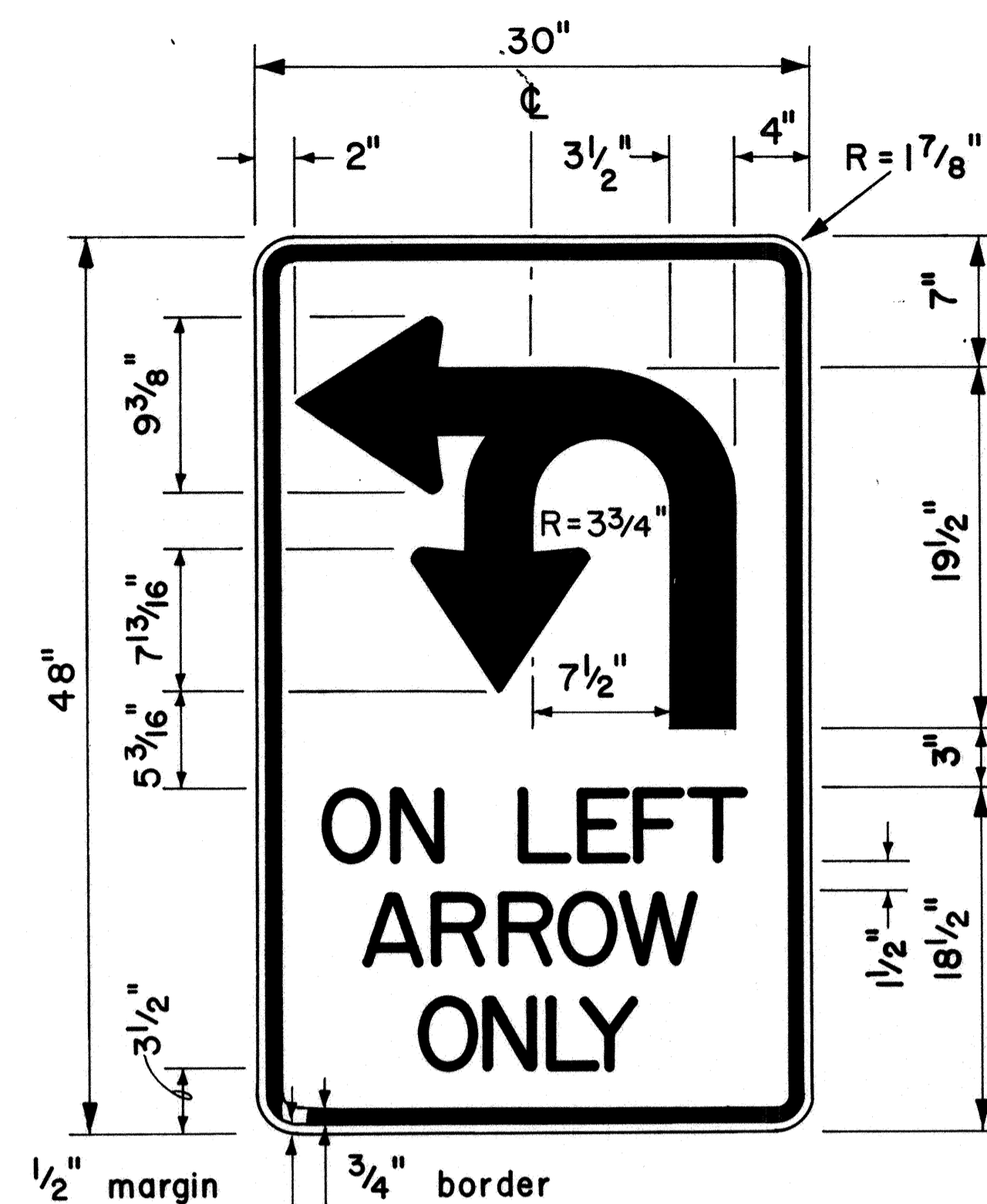
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
TYPE II OBJECT MARKERS

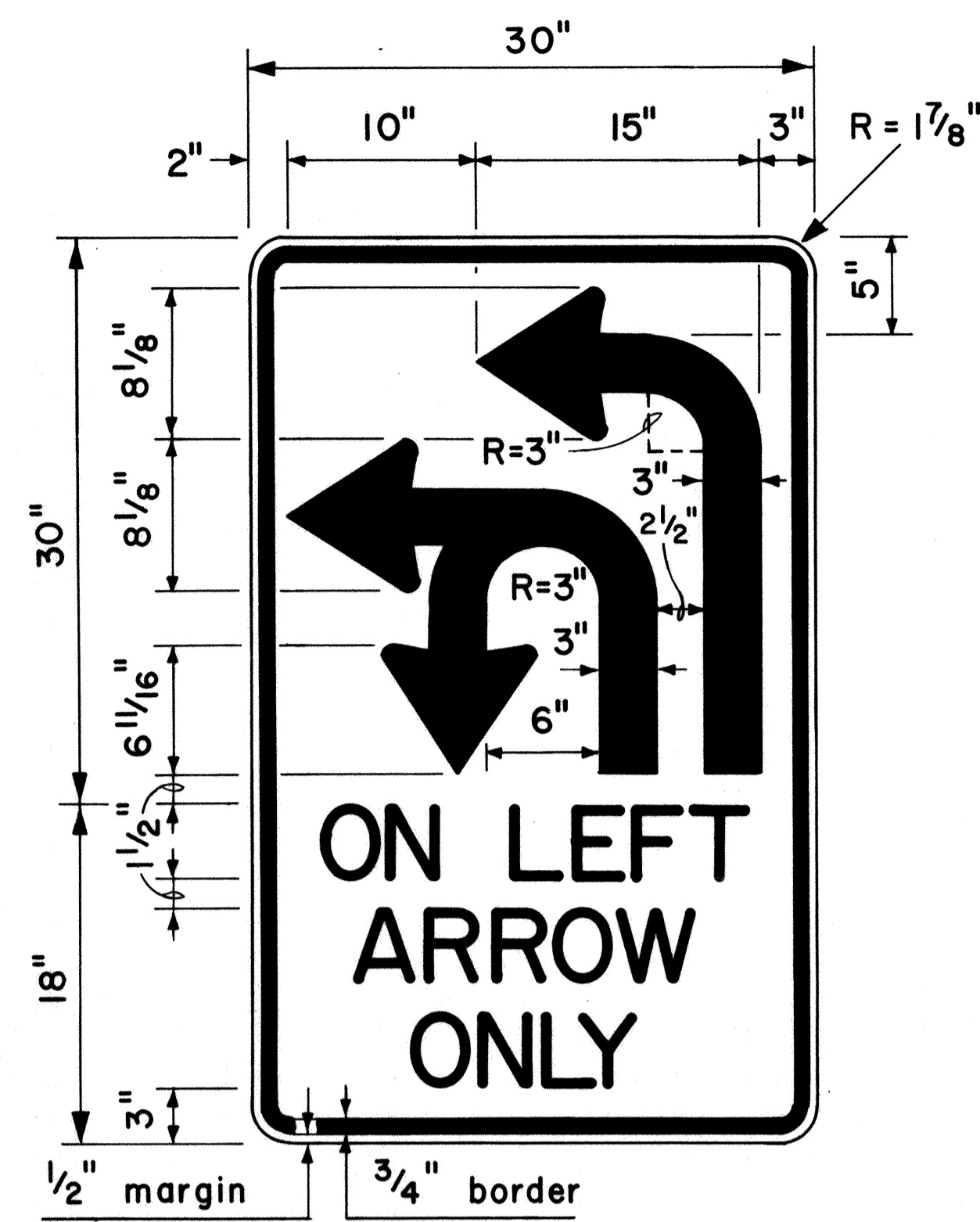
Scale: Not to scale Date: March 1983
SHEET NO. OF SHEETS DT III

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

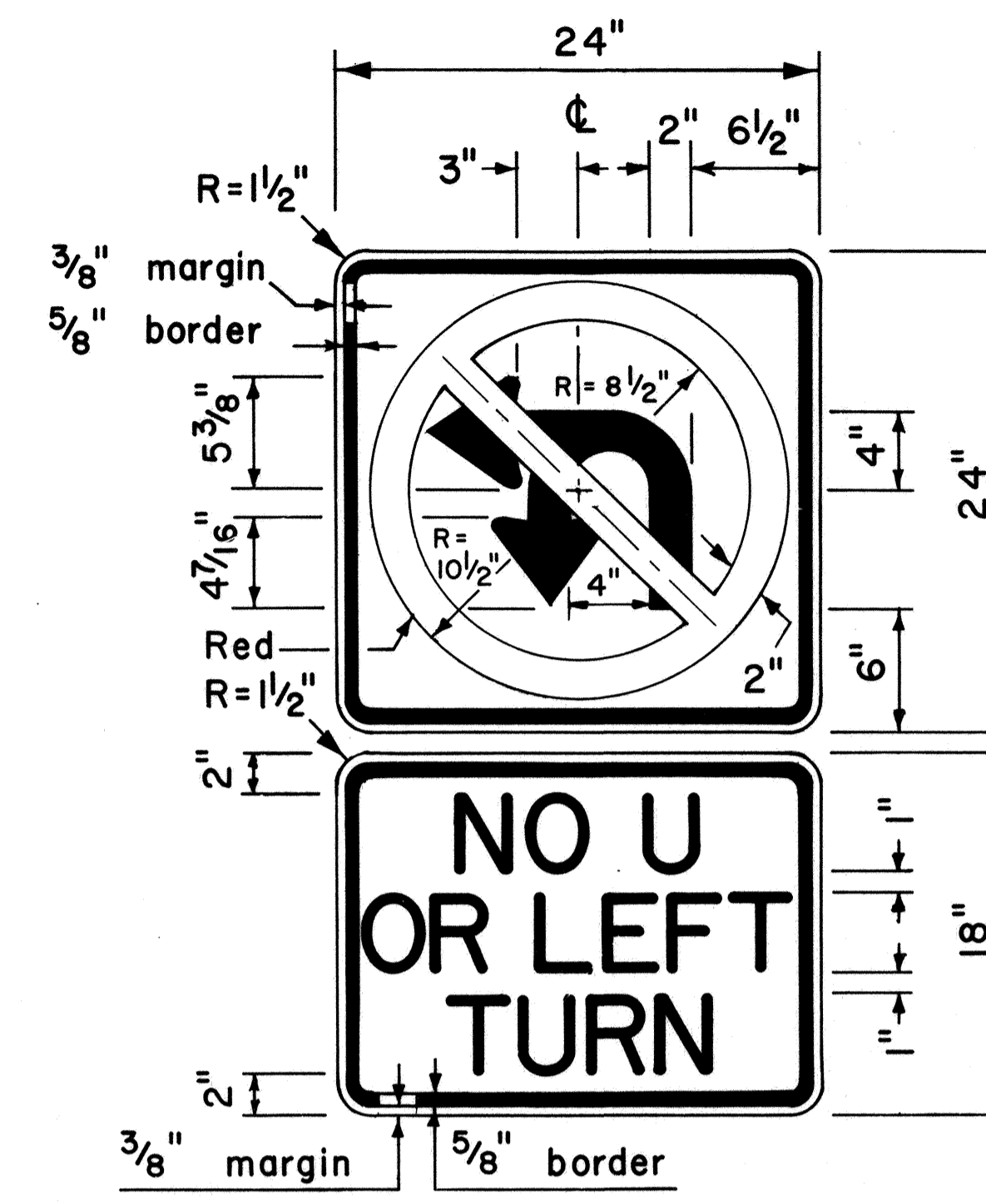
| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | F-011-2(17) | 1986 | 77 | 142 |



4" Series D Letters
R17-1



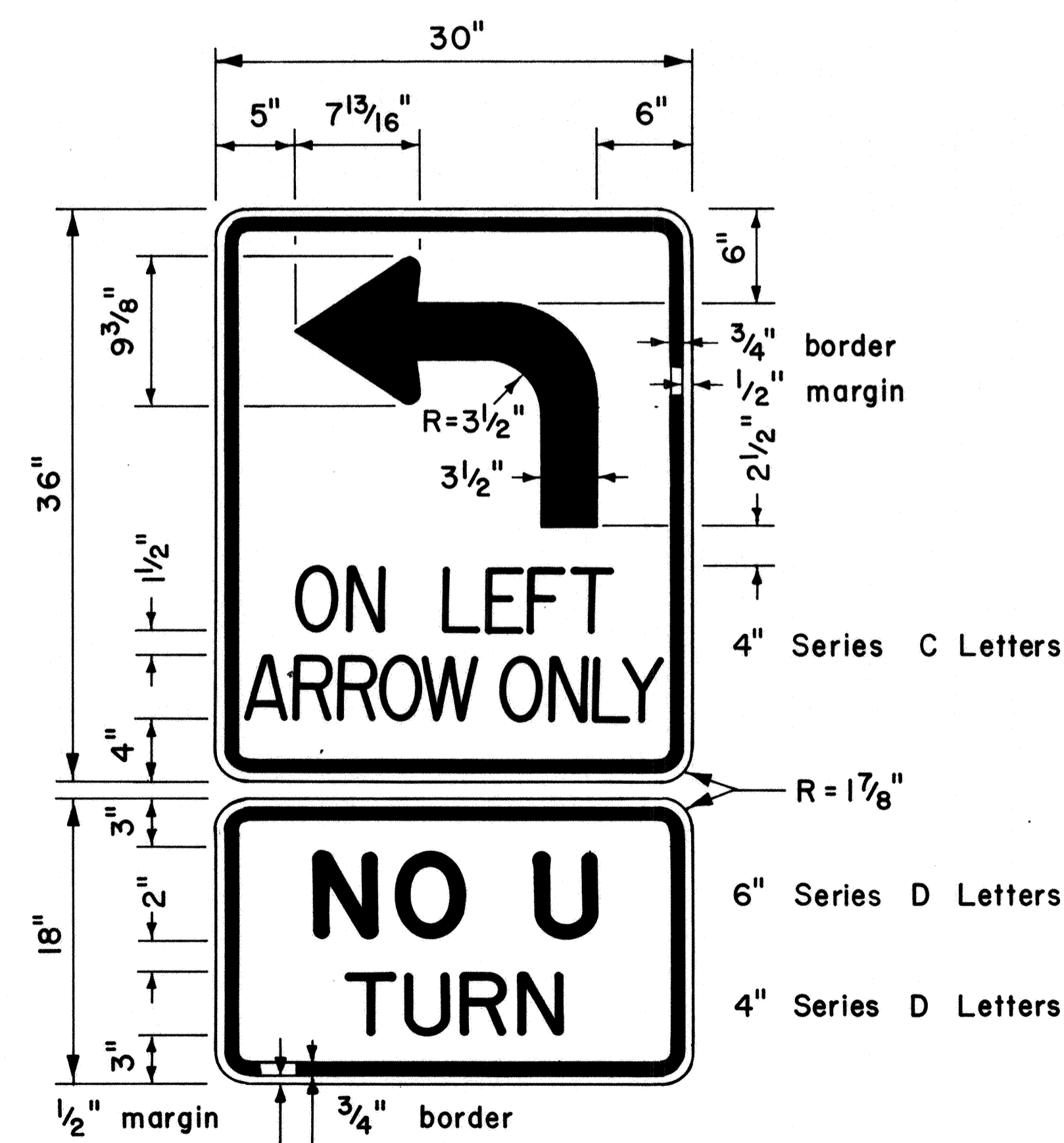
4" Series D Letters
R17-2



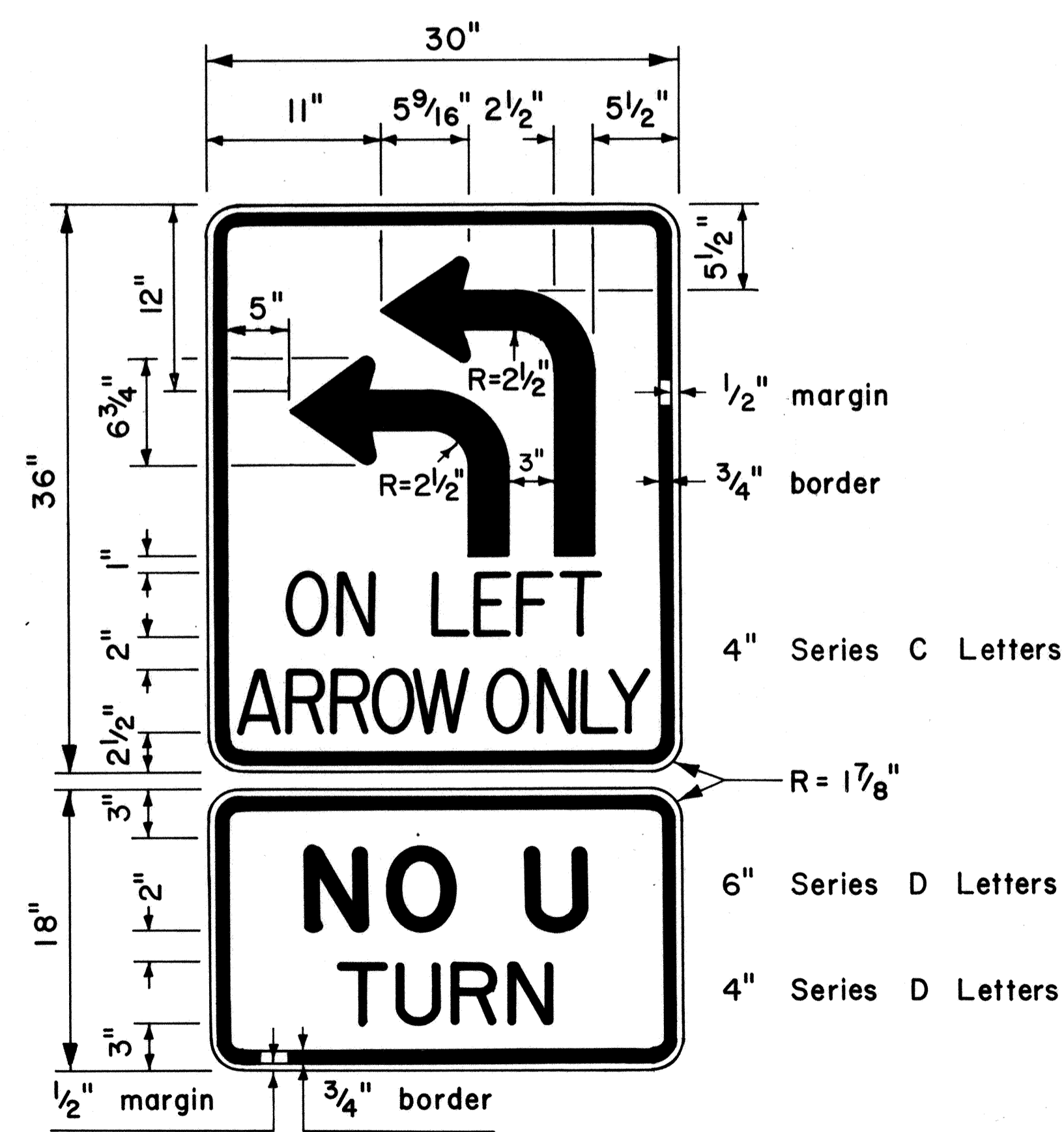
4" Series D Letters
R3-4b

GENERAL NOTES

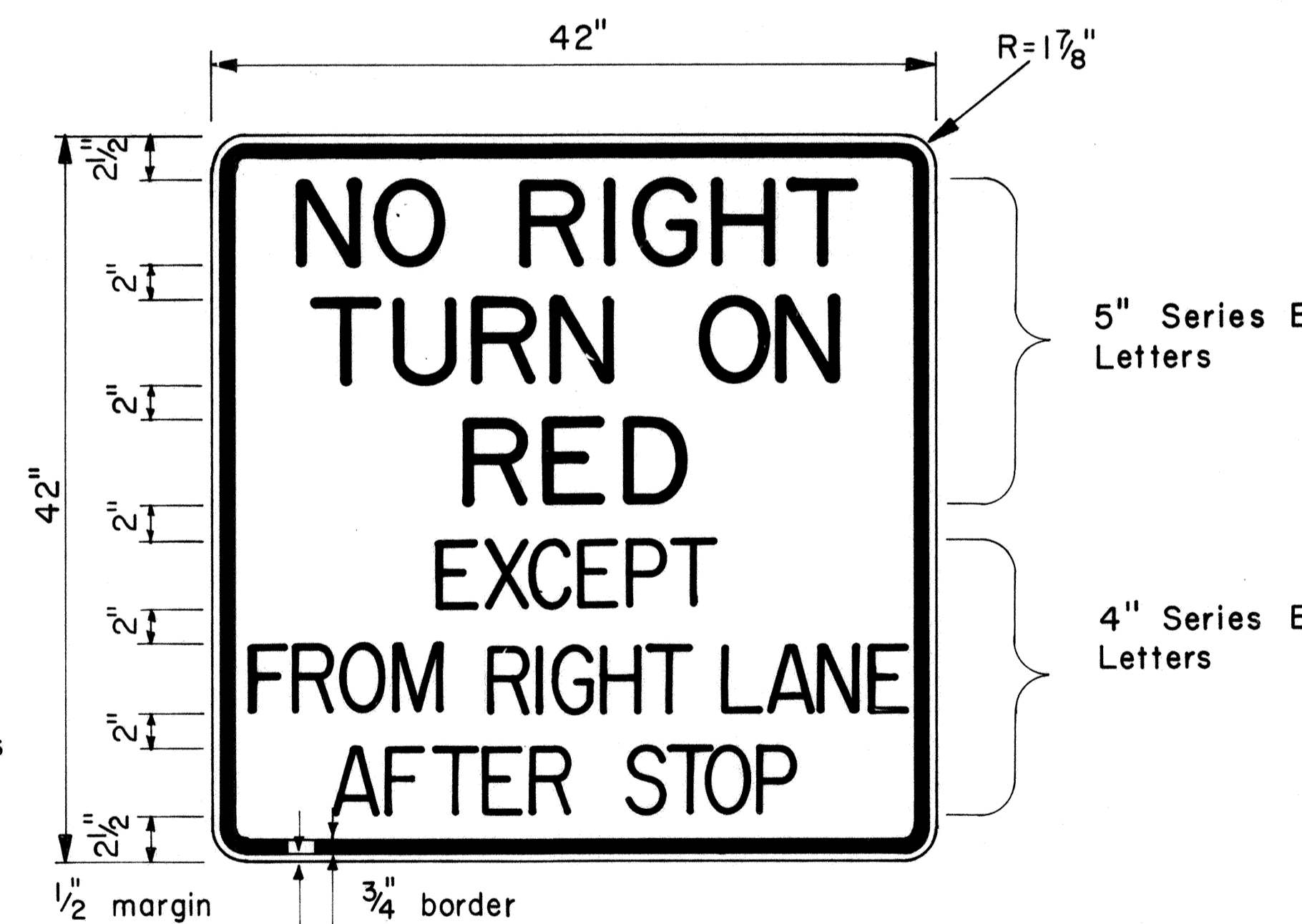
1. Sign details shall conform to the latest editions of the following FHWA publications: "Manual on Uniform Traffic Control Devices for Streets and Highways," and "Standard Highway Signs," and as amended.
2. All regulatory signs shall be reflectorized unless otherwise specified.
3. All regulatory signs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



R17-3



R17-4



R10-11d

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

APPROVED:
Herbert Sakaiishi 8/16/77
ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS
MISCELLANEOUS
INTERSECTION SIGNS

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

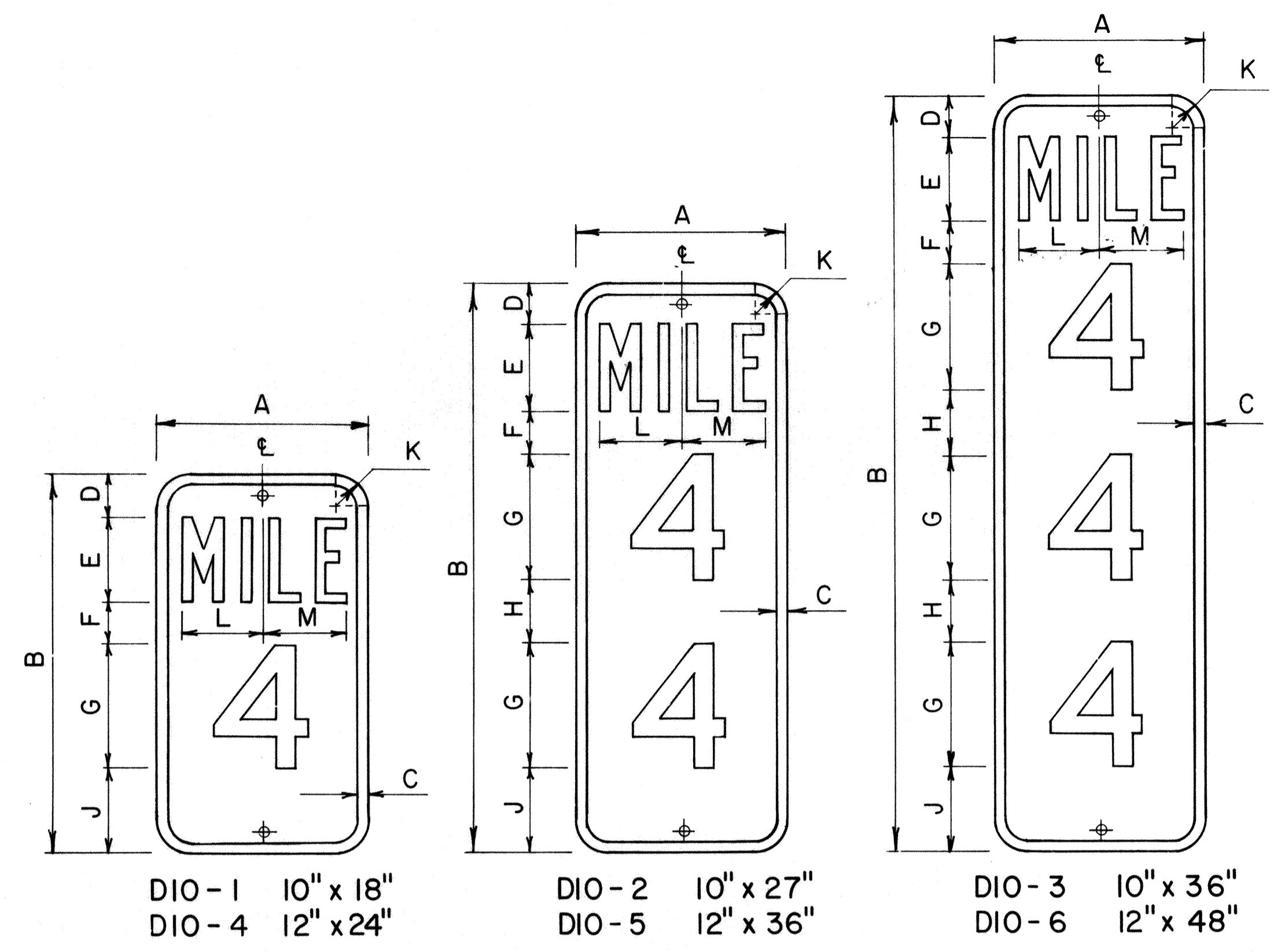
SHEET NO. OF SHEETS DT 112

DATE: _____
DESIGNED BY: _____
CHECKED BY: _____
QUANTITIES BY: _____
NOTE BOOK NO. _____

| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | F-011-2(17) | 1980 | 80 | 142 |

GENERAL NOTES:

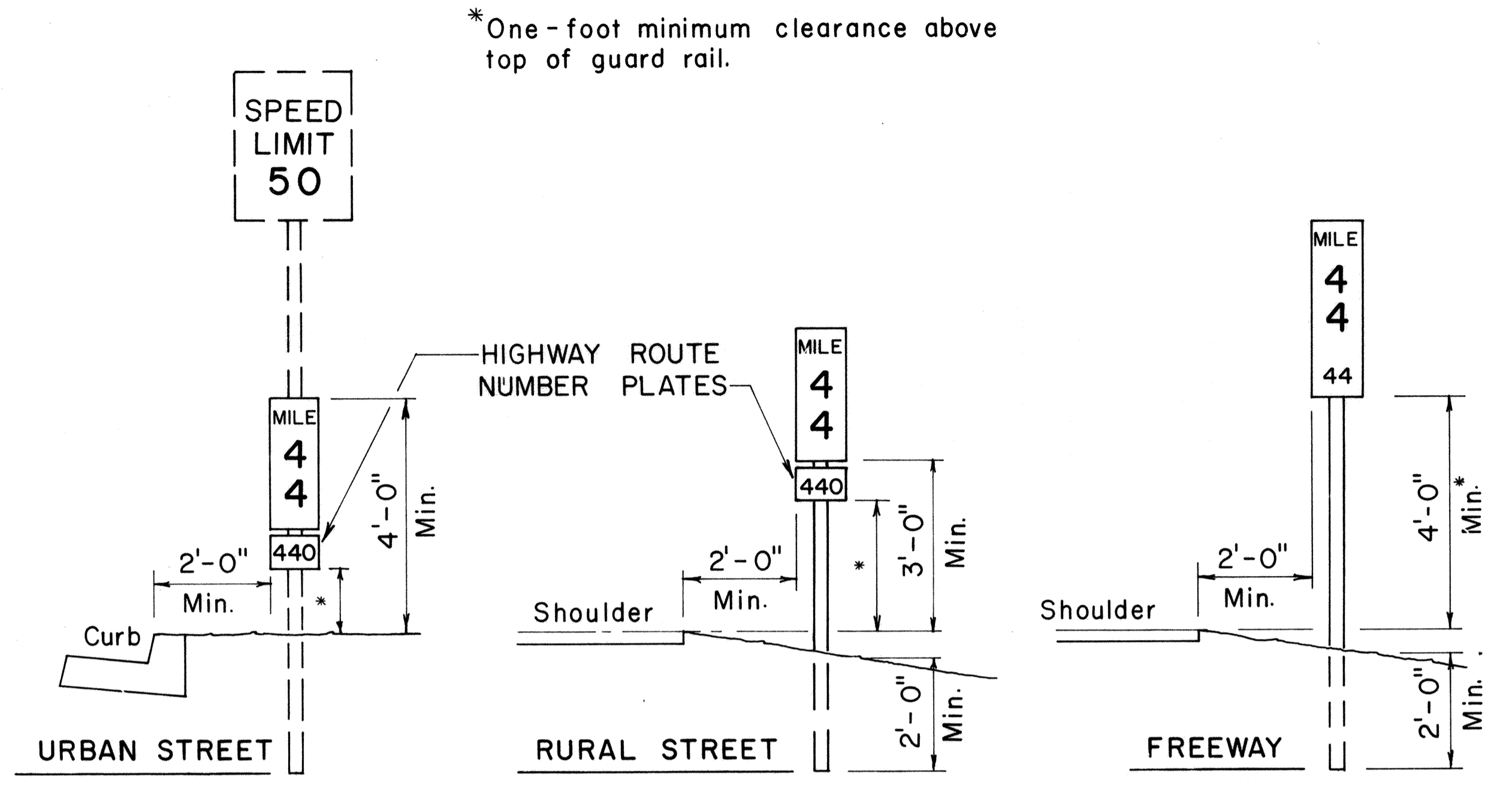
- Milepost marker and highway route number plates shall conform to the latest editions of the following FHWA publications:
 - "Standard Alphabets for Highway Signs," and as amended.
 - "Standard Highway Signs," and as amended.
 - "Manual on Uniform Traffic Control Devices for Streets and Highways," and 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.
 - 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.)



MILEPOST MARKER PLATE DETAILS

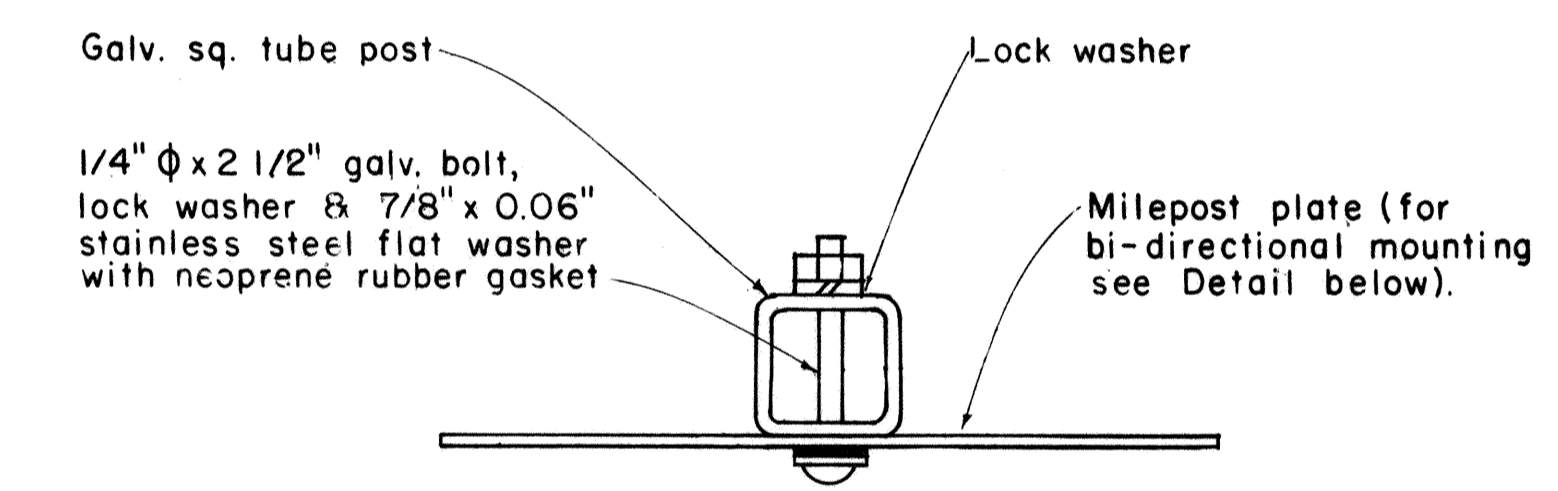
Scale: 3/16" = 1"

| 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 5/8 | 3 7/8 | B | C |
| DIO-4 | 12 x 24 | 12 | 24 | 1/2 | 3 | 4 | 3 | 10 | | 4 | 1 1/2 | 4 5/8 | 4 7/8 | C | C |
| DIO-2 | 10 x 27 | 10 | 27 | 1/2 | 2 | 4 | 2 | 6 | 3 | 4 | 1 1/2 | 3 5/8 | 3 7/8 | B | C |
| DIO-5 | 12 x 36 | 12 | 36 | 1/2 | 3 | 4 | 3 | 10 | 3 | 3 | 1 1/2 | 4 5/8 | 4 7/8 | C | C |
| DIO-3 | 10 x 36 | 10 | 36 | 1/2 | 2 | 4 | 2 | 6 | 3 | 4 | 1 1/2 | 3 5/8 | 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 5/8 | 4 7/8 | C | C |

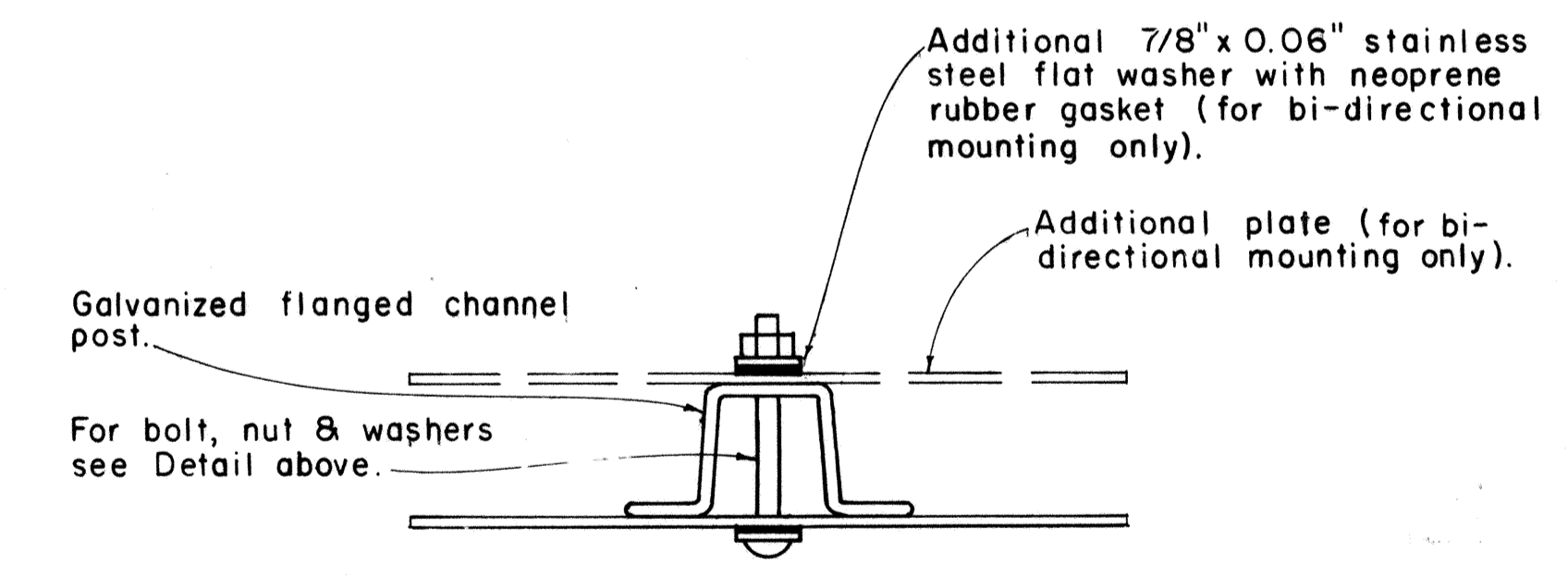


TYPICAL ROADSIDE INSTALLATION

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



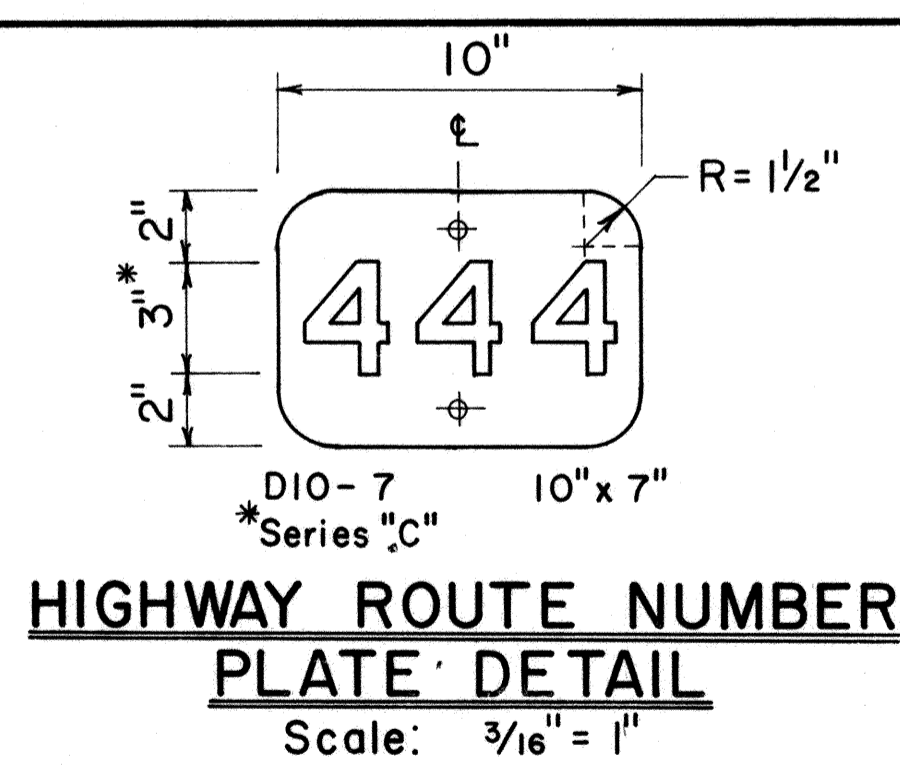
GALVANIZED SQUARE TUBE POST



GALVANIZED FLANGED CHANNEL POST

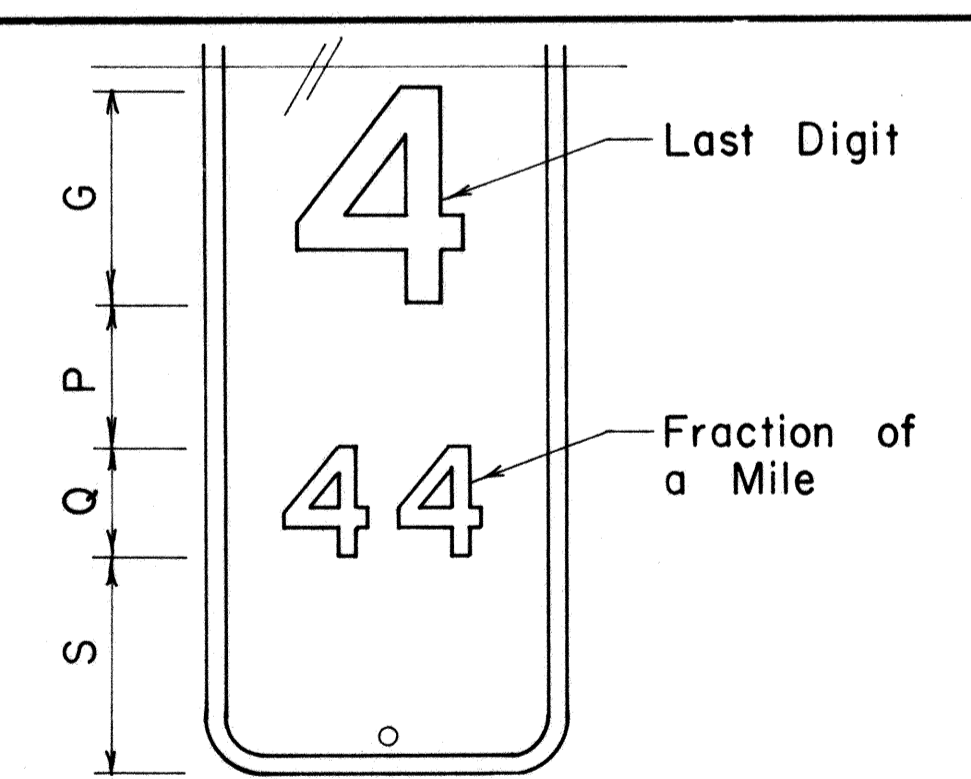
TYPICAL MOUNTING DETAILS

Scale: 1/2" = 1"



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 |
| D10-1a | 10" x 27" | 6" | 4" | 3" | 6" | C |
| D10-4a | 12" x 36" | 10" | 4" | 5" | 7" | C |
| D10-2a | 10" x 36" | 6" | 4" | 3" | 6" | C |
| D10-5a | 12" x 48" | 10" | 4" | 5" | 6" | C |
| D10-3a | 10" x 45" | 6" | 4" | 3" | 6" | C |
| D10-6a | 12" x 60" | 10" | 4" | 5" | 6" | C |

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

APPROVAL RECOMMENDED:
Eichi Tanaka 4/17/78
 TRAFFIC ENGINEER DATE

APPROVED:
Robert S. Sakai 4/12/78
 ASSISTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 LAND TRANSPORTATION FACILITIES DIVISION

STANDARD DETAILS

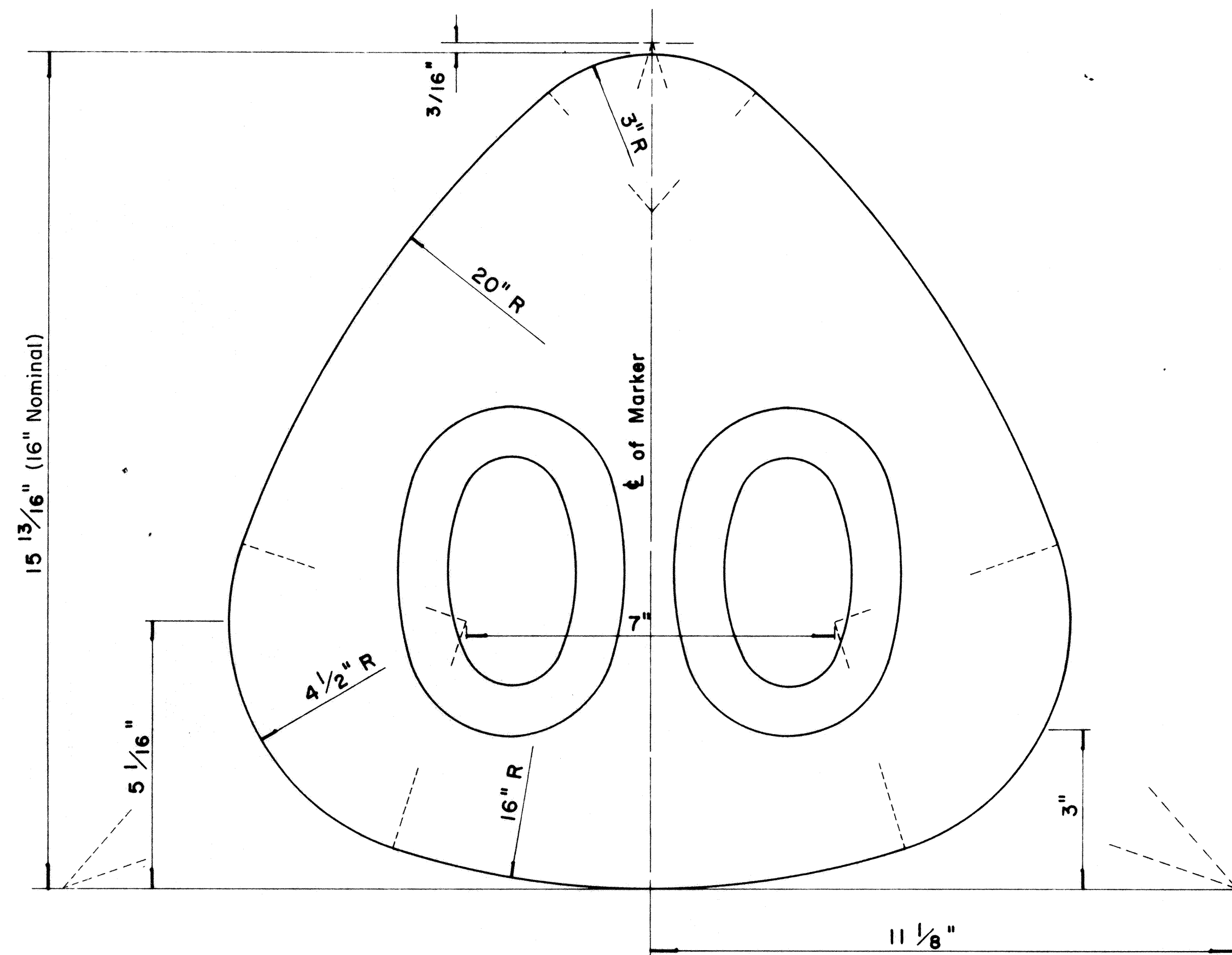
MILEPOSTS

SCALE: As Shown DATE: December, 1977
 SHEET No. OF SHEETS DT 116

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2(17) | 1986 | 81 | 142 |

| MARKER SIZE | MULTIPLY DIMENSIONS BY | NUMERAL SIZE |
|-------------|------------------------|--------------|
| 21" | 1.3 | 8" |
| 32" | 2.0 | 12" |
| 42" | 2.63 | 16" |



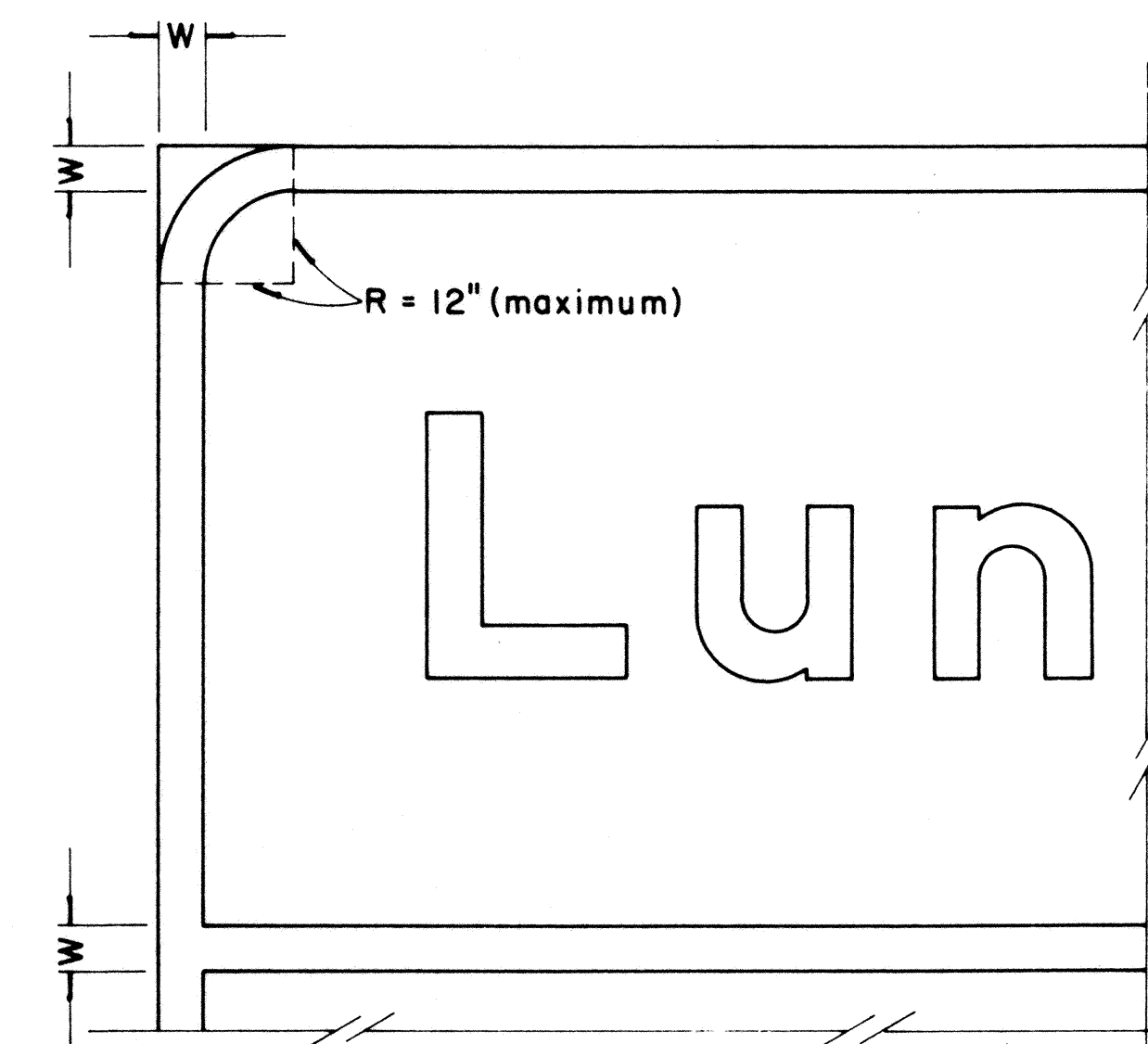
**STATE ROUTE MARKER
FOR GUIDE SIGNS**

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.

| RADII FOR SIGNS | | |
|-------------------------|----|-----|
| Least Dimension of Sign | W | R |
| 2' - 0" to 4' - 6" | 2" | 3" |
| 4' - 9" to 5' - 6" | 2" | 6" |
| 5' - 9" to 7' - 6" | 2" | 9" |
| 7' - 9" and greater | 2" | 12" |



**BORDER DETAIL
FOR GUIDE SIGNS**

Not to Scale

NOTE :

1. Area outside corner radius need not be trimmed.
2. All borders shall be white reflectorized cut-outs.
3. All Guide signs shall have borders.

APPROVAL RECOMMENDED:

Etsuki Tanaka 4/11/72
TRAFFIC ENGINEER DATE

APPROVED:

Shelby S. Sakai 4/12/72
ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|--|-------------|---------|
| 1 | Supersedes Sht. DT 209 Approved 12-30-69 | H.T. | 4/12/72 |
| 2 | Revised Notes and Schedules | H.T. | 9-14-70 |

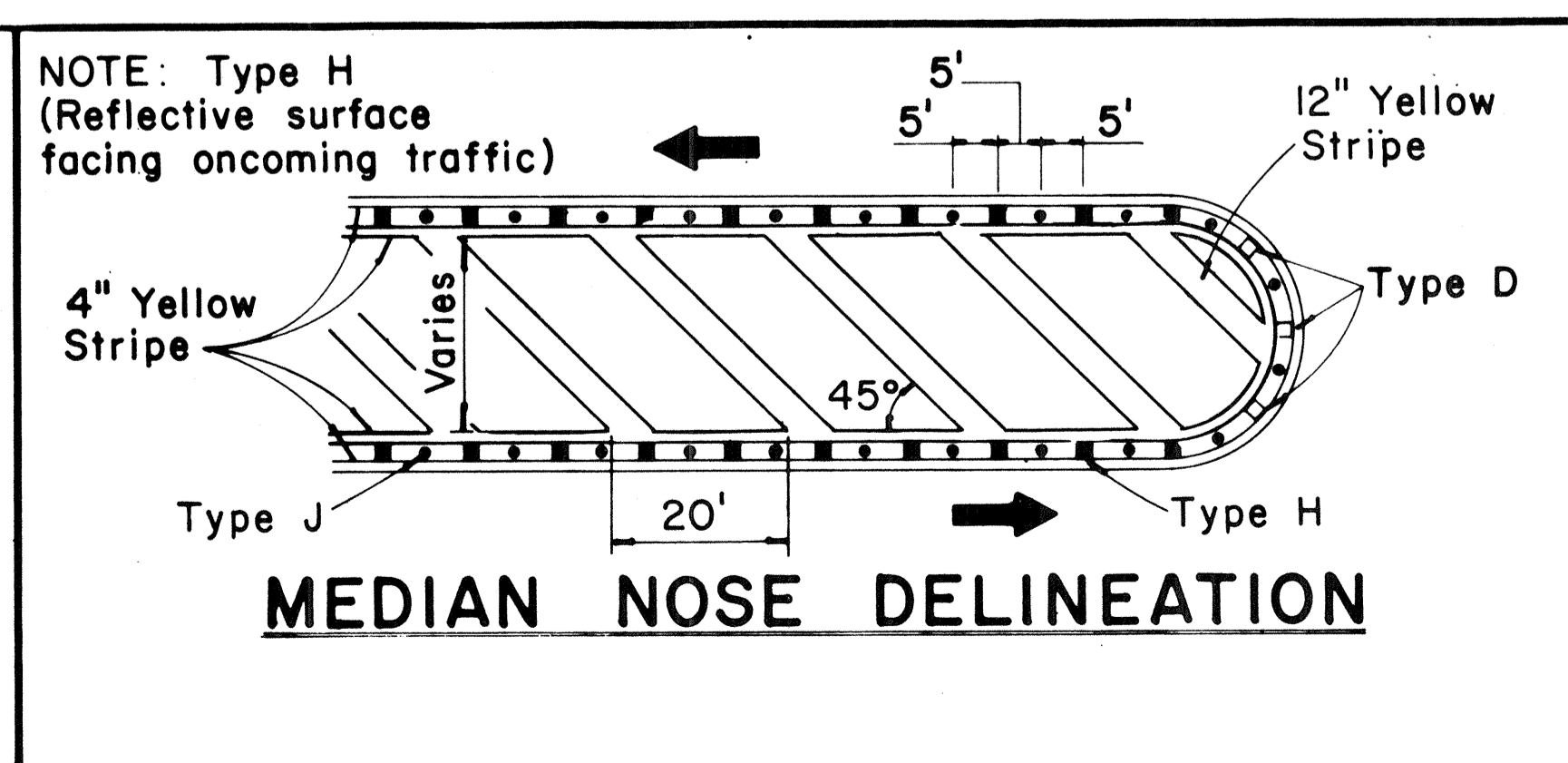
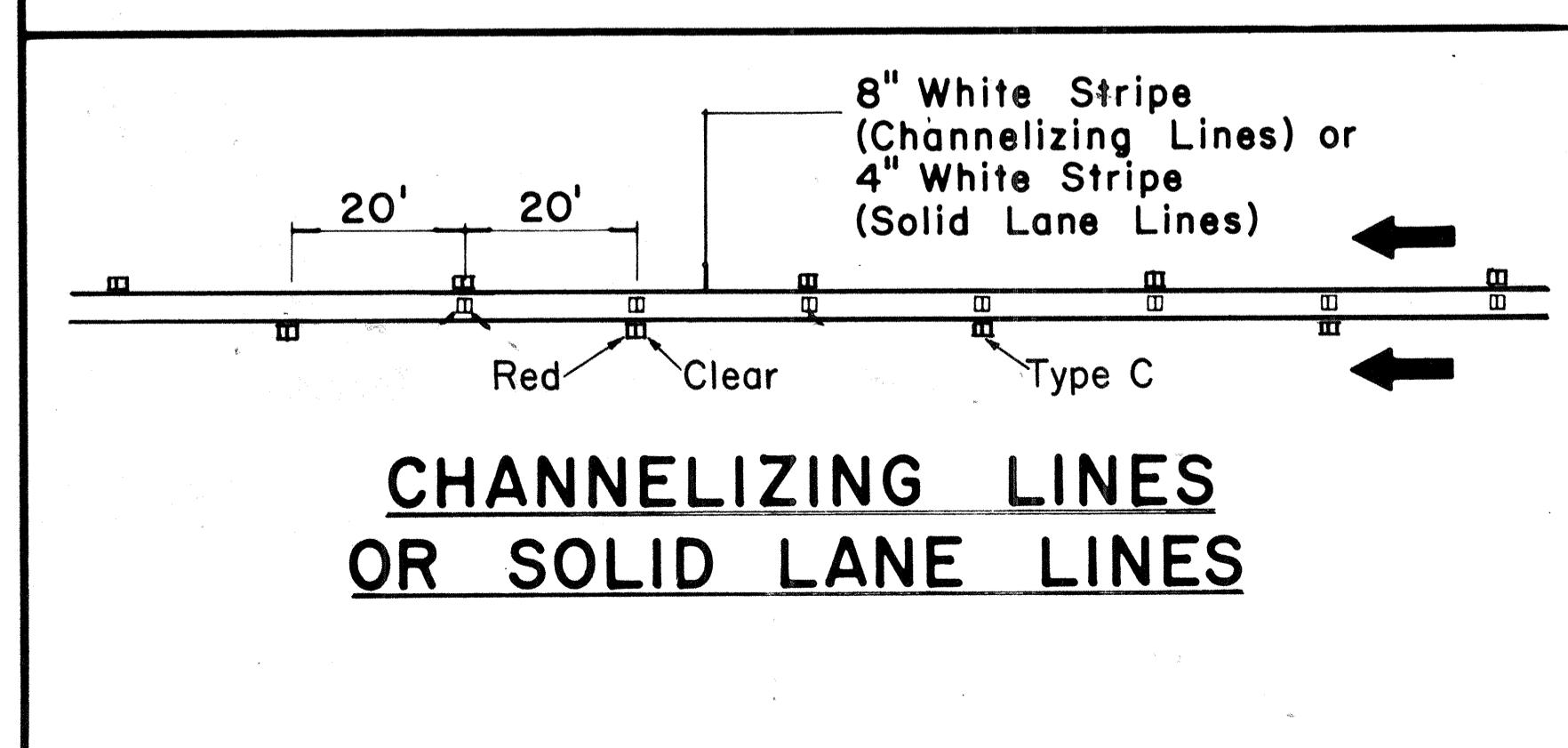
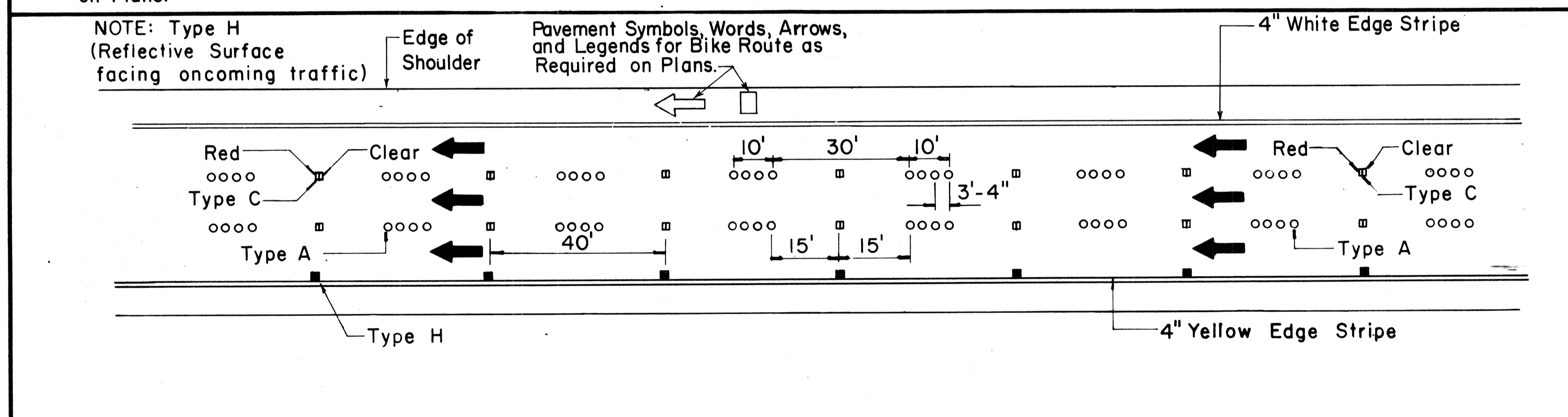
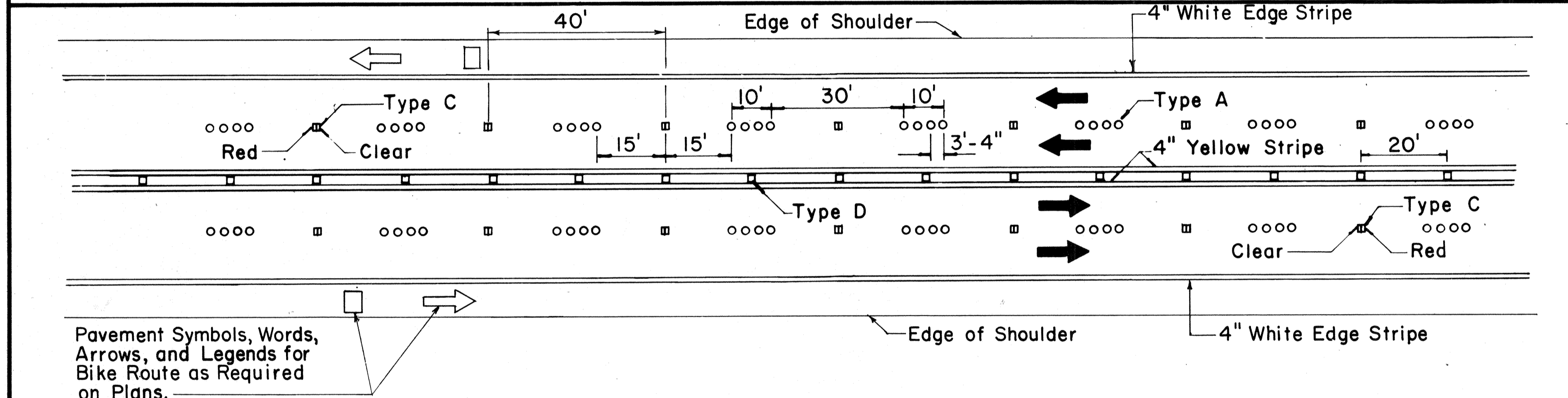
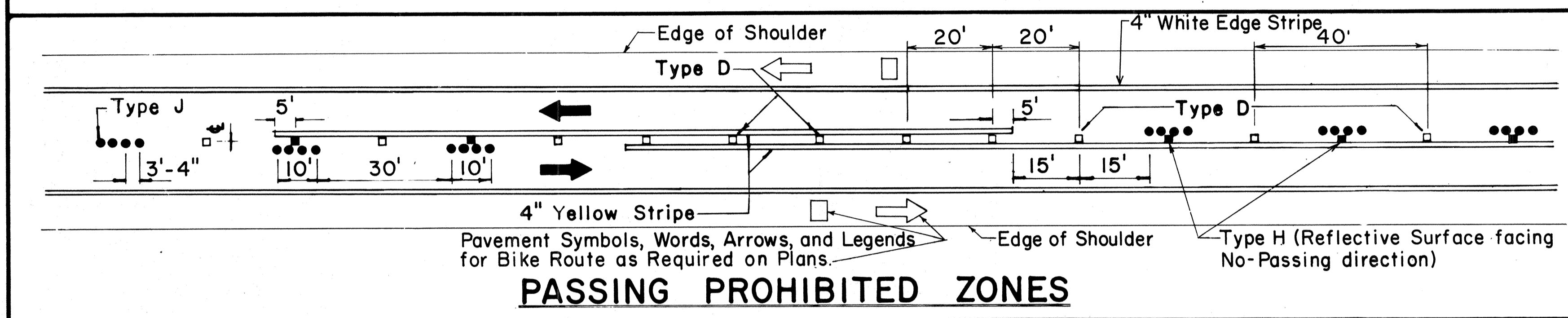
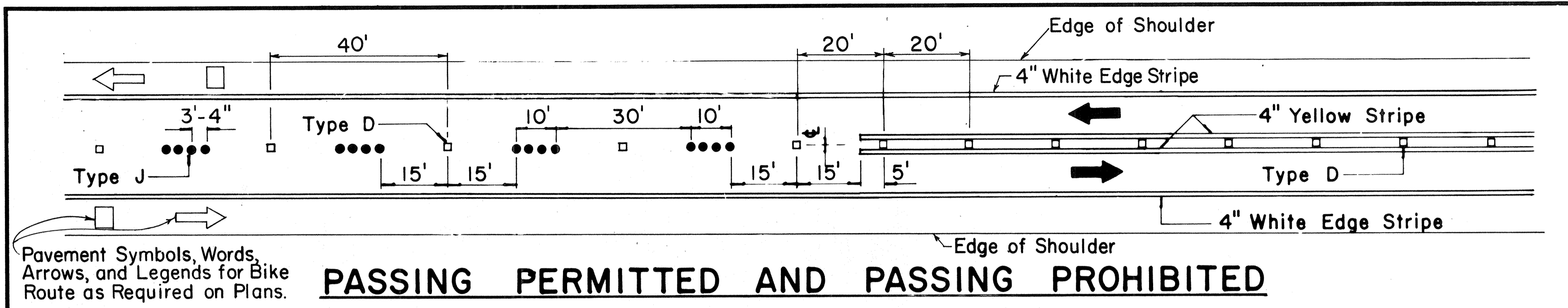
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
STANDARD DETAILS
**STATE ROUTE MARKER
AND BORDER DETAIL
FOR GUIDE SIGNS**

Scale: As Shown

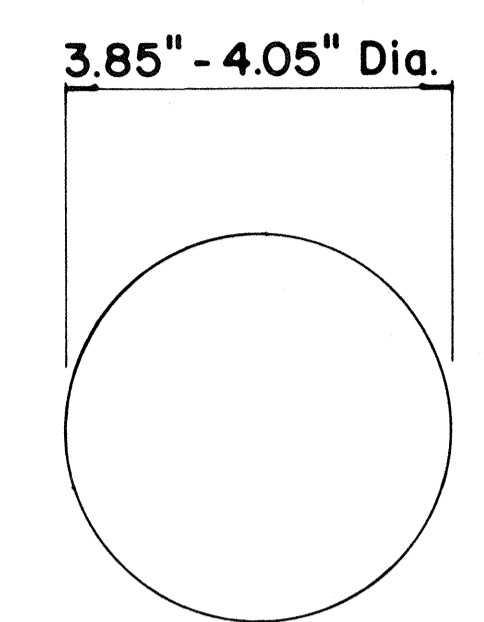
SHEET No. OF SHEETS DT 209

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

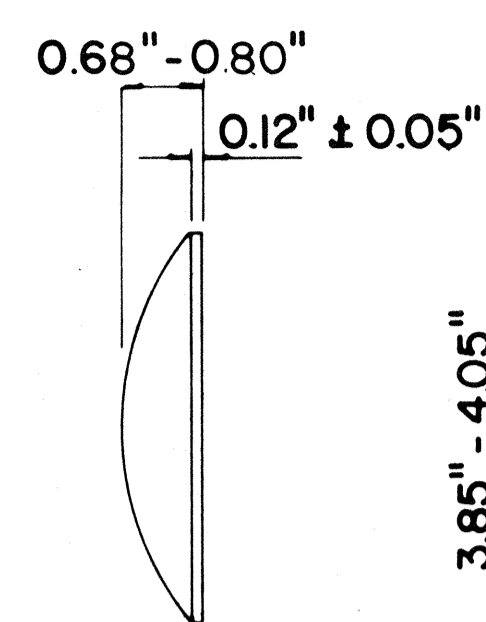
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F011-2(17) | 1986 | 82 | 142 |



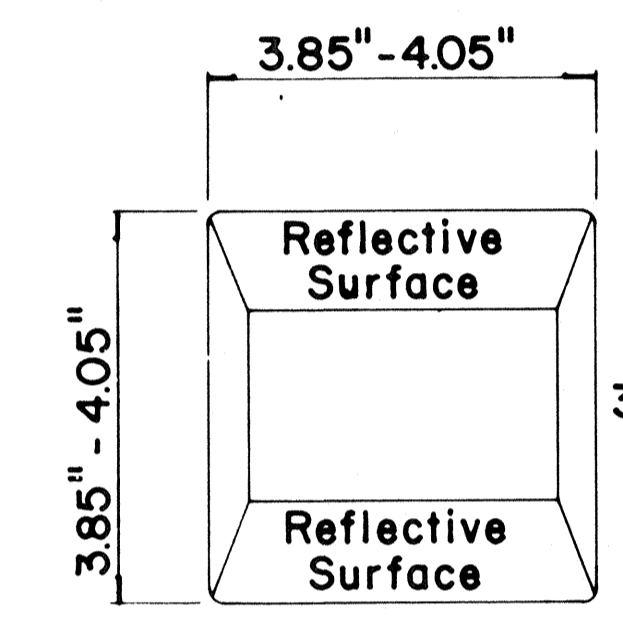
TWO - LANE
MULTI - LANE
DIVIDED HIGHWAY AND FREEWAY
MISCELLANEOUS



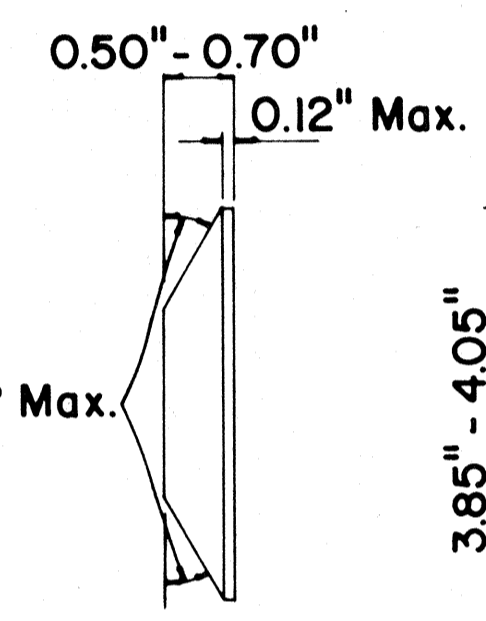
TYPE A
NON-REFLECTIVE WHITE MARKER
TYPE J
NON-REFLECTIVE YELLOW MARKER



TYPE C
RED-CLEAR REFLECTIVE MARKER



TYPE D
TWO-WAY YELLOW REFLECTIVE MARKER



TYPE H
ONE-WAY YELLOW REFLECTIVE MARKER

GENERAL NOTES

- Pavement marking and striping shall conform to the latest "Manual on Uniform Traffic Control Devices for Streets and Highways," and as amended.
- Layout and installation of pavement marking and striping shall be done by the Contractor. The Contractor shall check the layouts with the Engineer prior to performing work.
- Edge lines shall not be continued through intersections and shall not be broken for driveways unless otherwise shown or directed.

LEGEND

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

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

APPROVED:
Harbert J. Zekich 1/24/78
ASSISTANT CHIEF, ENGINEERING DATE

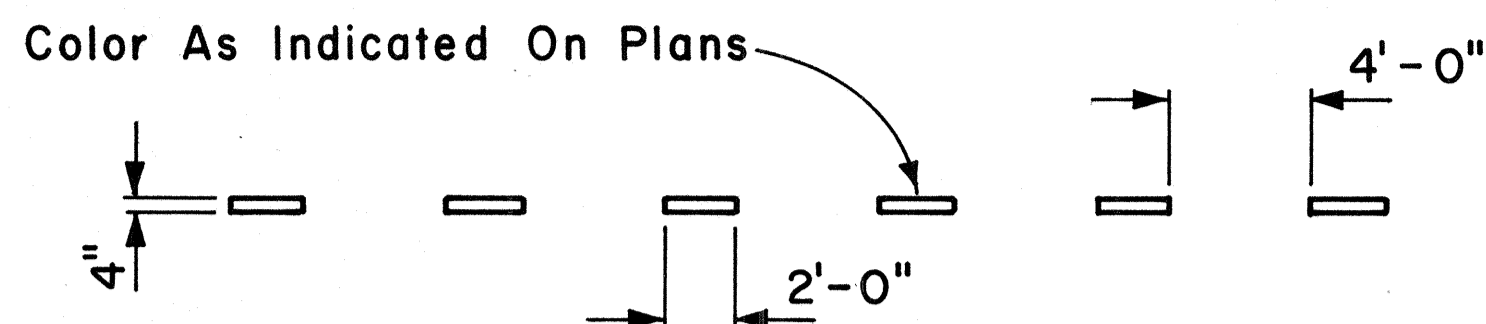
| No. | REVISION | APPROVED BY | DATE |
|-----|--|-------------|----------|
| 1 | Supersedes DT 300 approved 11/18/71. | H.T. | 1/24/78 |
| 2 | Delete Type A Markers from Bike Route Delineation. | H.T. | 10/15/79 |
| 3 | Added General Note 3. Revised left edge stripe. | H.T. | 9-28-83 |
| 4 | Revised Channelizing Lines or Solid Lane Lines. | E.T. | 9/18/85 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

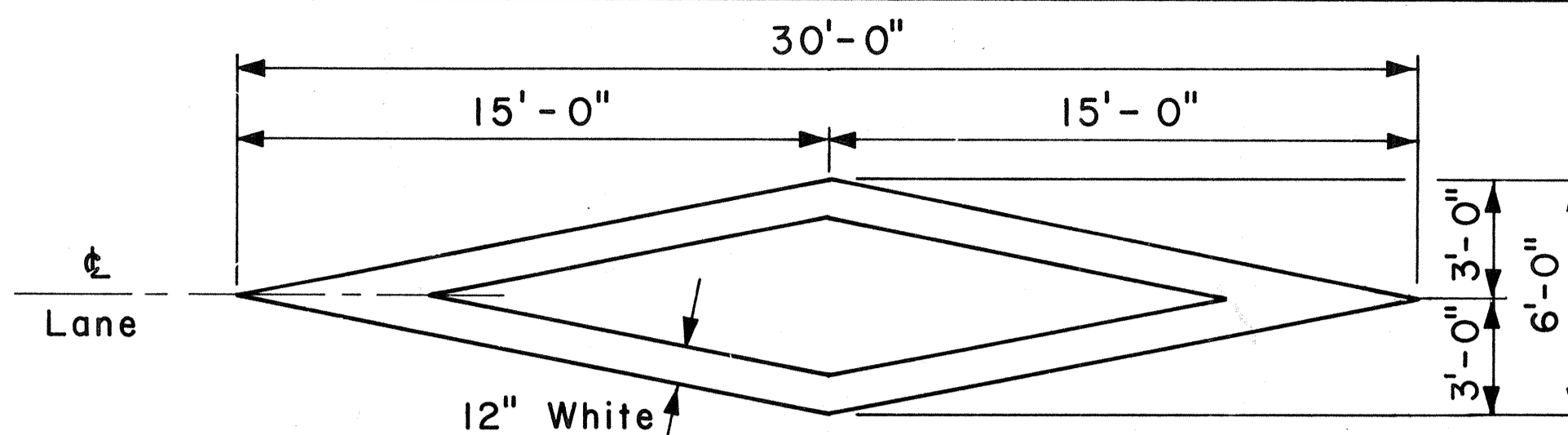
STANDARD DETAILS
RAISED PAVEMENT MARKERS
AND STRIPING

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

| | | | | | |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII | HAW. | F-011-2(17) | 1986 | 83 | 142 |



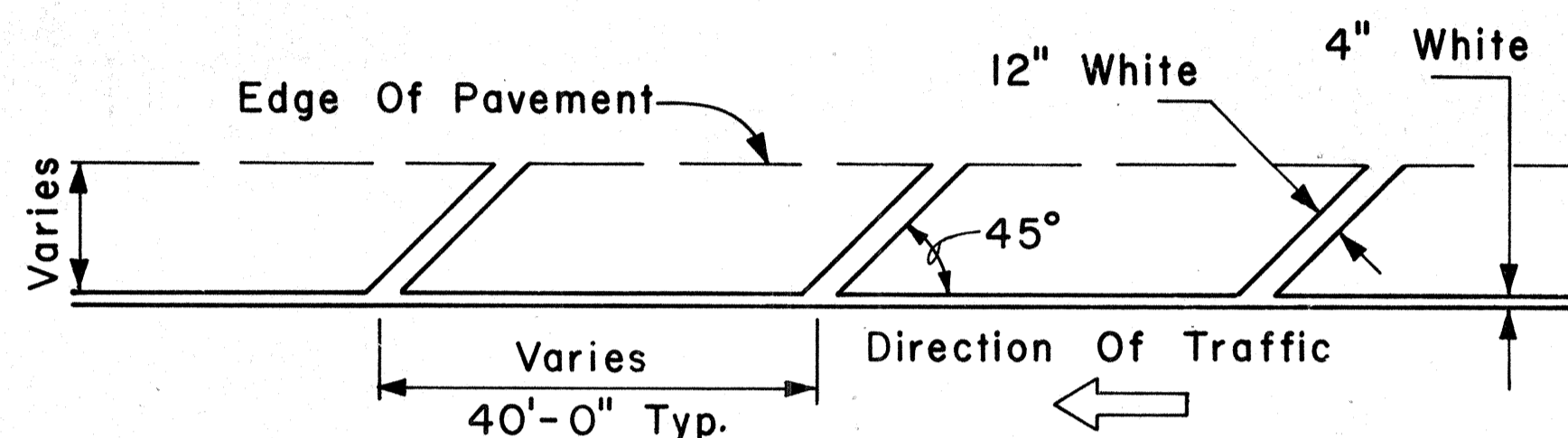
4" GUIDE LINE



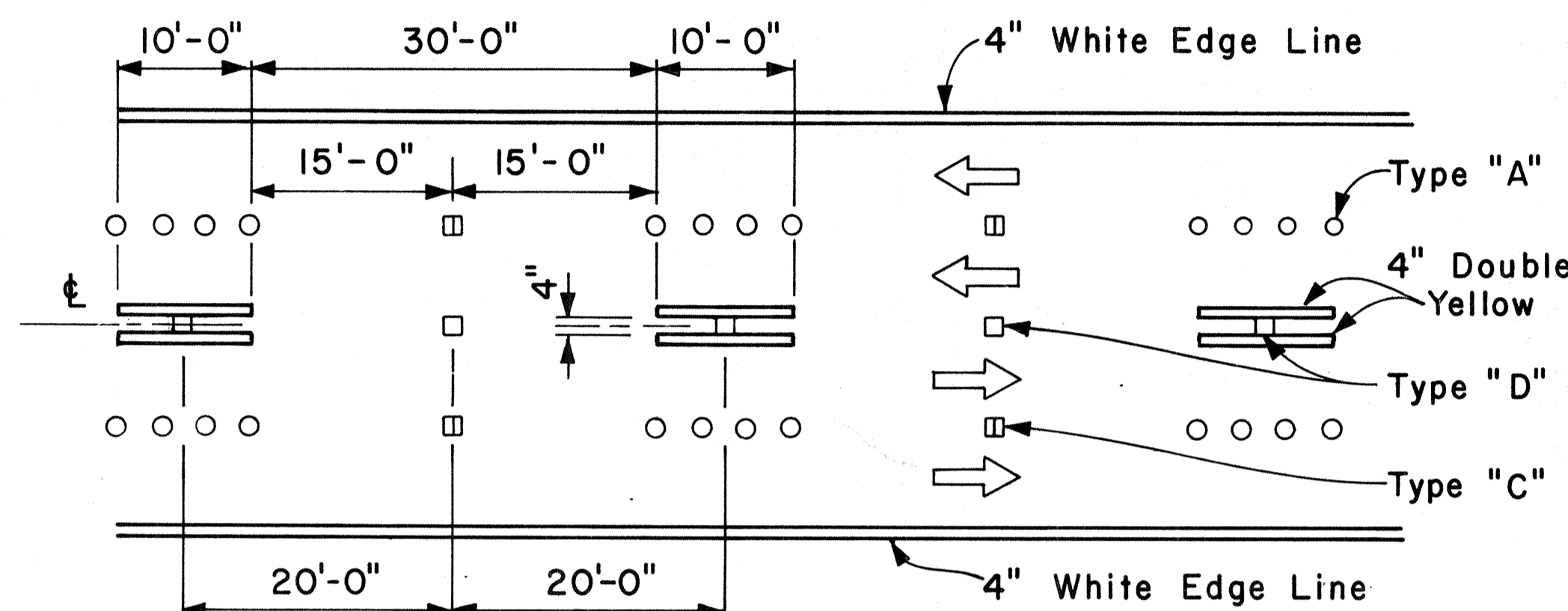
PAVEMENT DIAMOND

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.

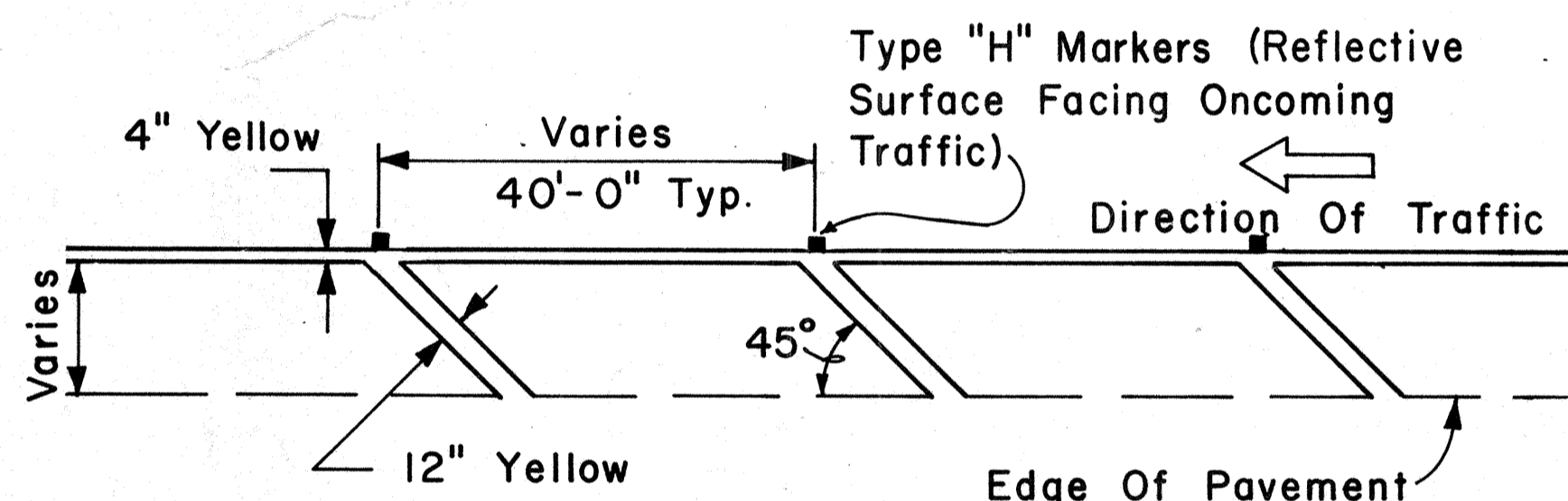


TRANSVERSE RIGHT SHOULDER MARKING

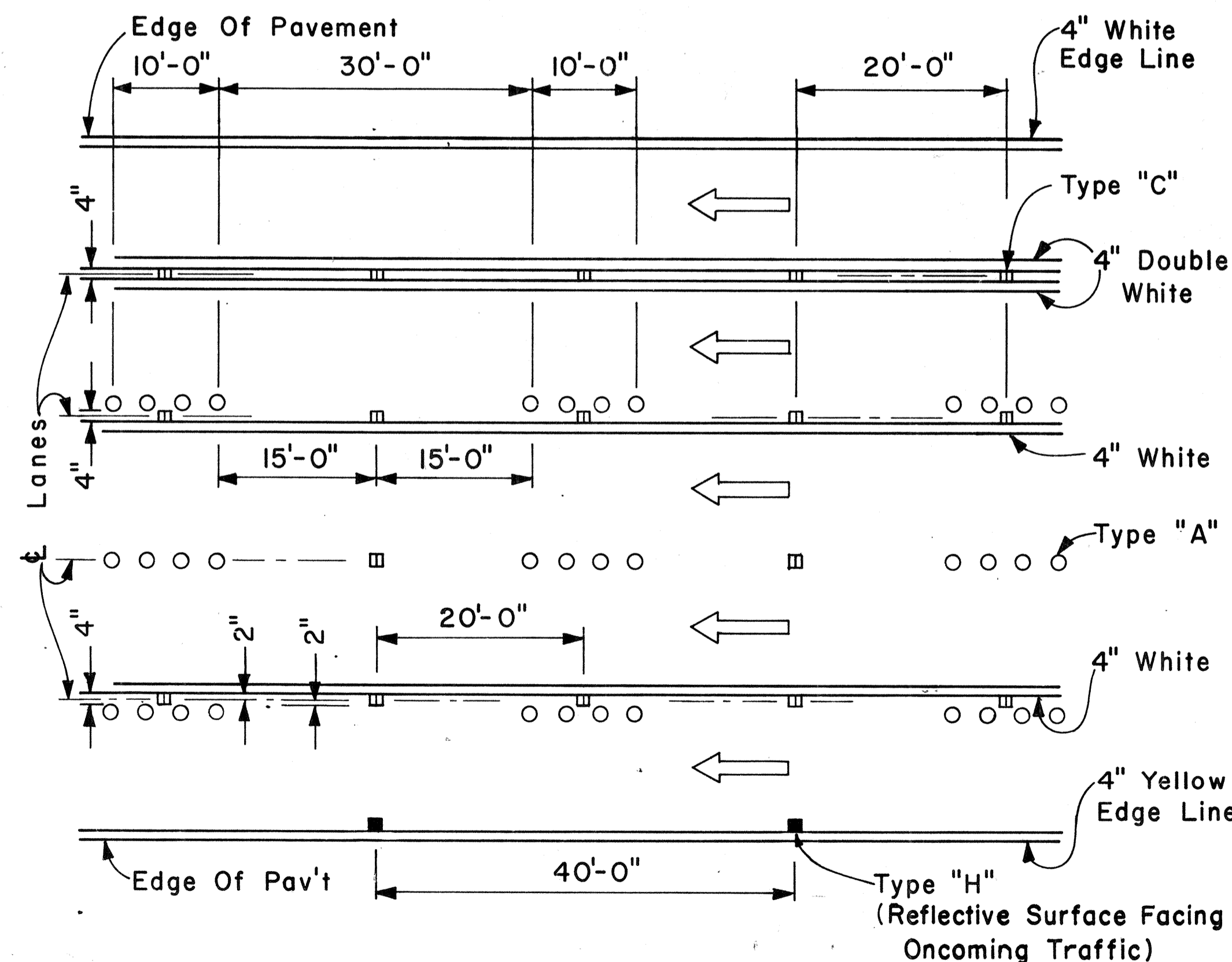


NOTE: Traffic Cone Usage Required.

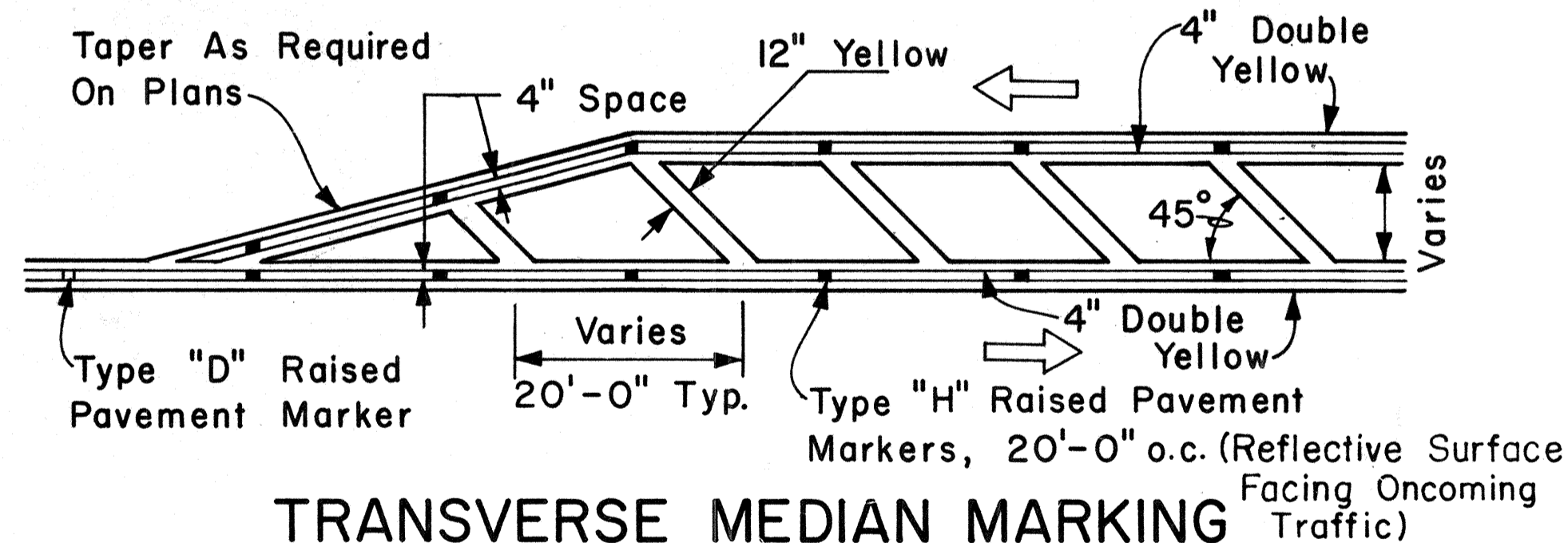
MULTI-LANE REVERSIBLE LANES



TRANSVERSE LEFT SHOULDER MARKING



MULTI-LANE LANE CHANGE RESTRICTION ZONES



TRANSVERSE MEDIAN MARKING

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

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

| NO. | REVISION | APPROVED BY | DATE |
|-----|--|-------------|---------|
| 1 | Revised Transverse left Shoulder Marking, Channelizing Island & Lane Change Restriction Zones. | <i>E.T.</i> | 7/10/85 |

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

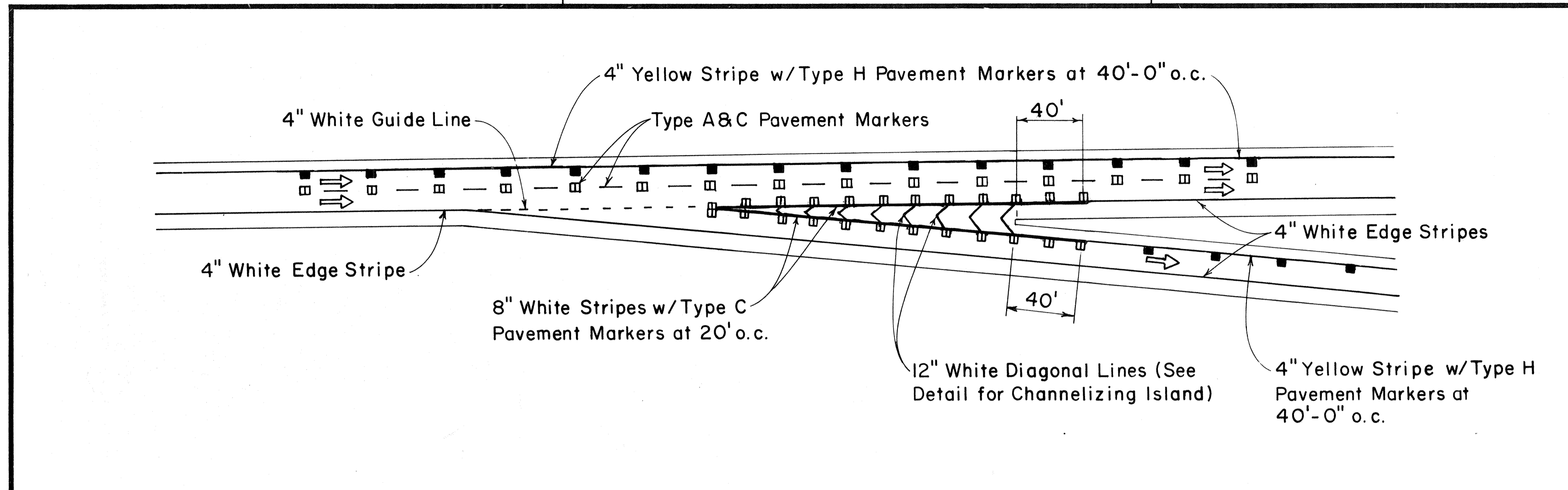
Scale: Not to Scale Date: April, 1978
 SHEET No. OF SHEETS DT 302

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

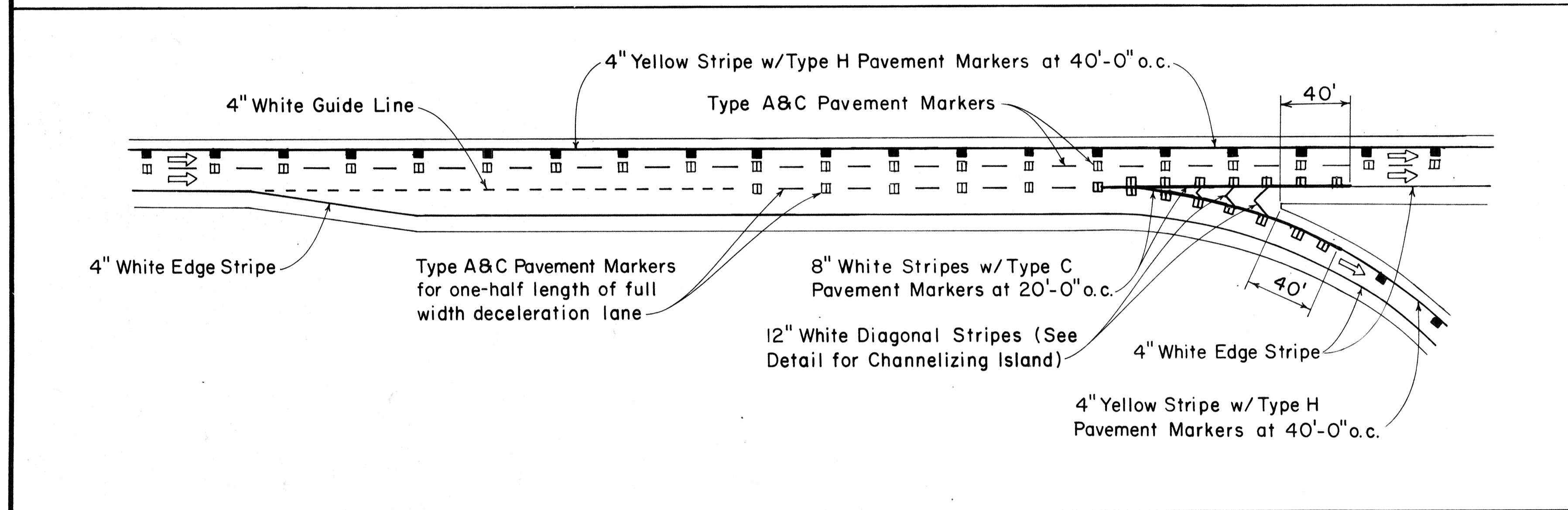
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2(17) | 1986 | 84 | 142 |

GENERAL NOTES:

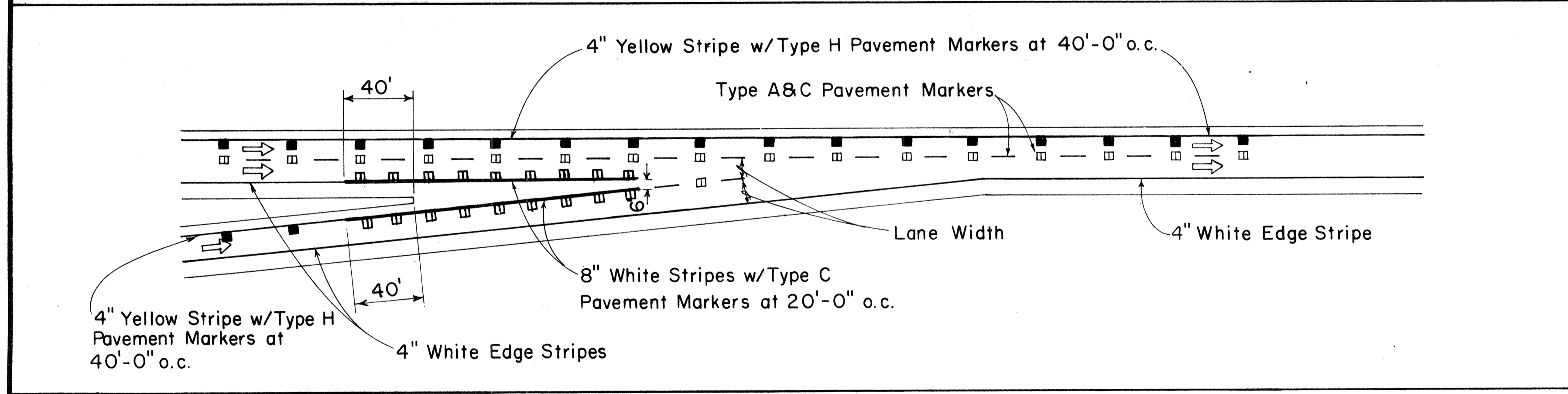
1. Pavement Markings and Striping shall conform to the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways," by the FHWA, and as amended.
2. Layout of Pavement Markings and Striping shall be done by the Contractor. The Contractor shall check layout of markings and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



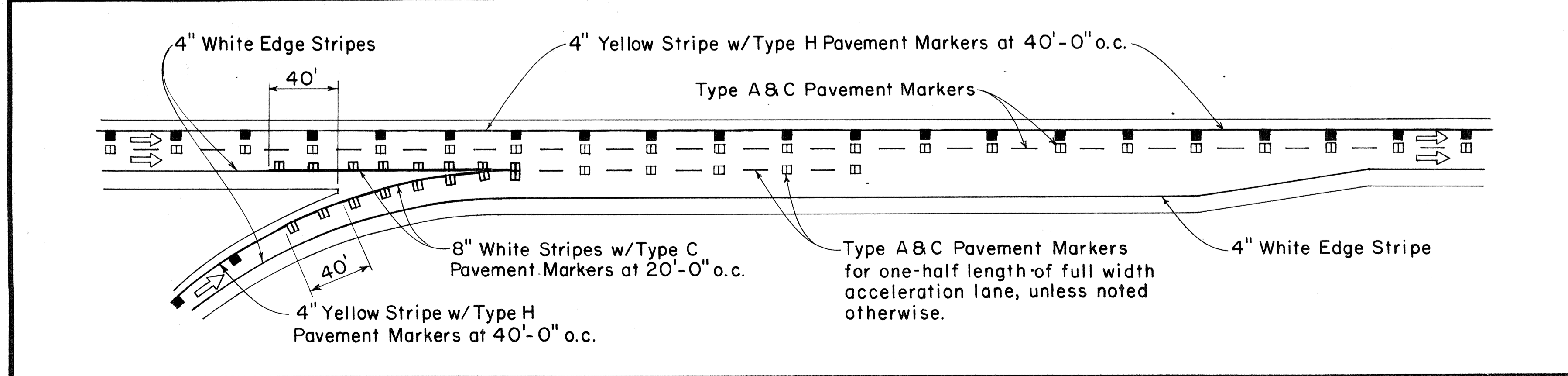
TAPERED DECELERATION LANE
TYPICAL ROADWAY EXIT MARKINGS



PARALLEL DECELERATION LANE
TYPICAL ROADWAY EXIT MARKINGS



TAPERED ACCELERATION LANE
TYPICAL ROADWAY ENTRANCE MARKINGS



PARALLEL ACCELERATION LANE
TYPICAL ROADWAY ENTRANCE MARKINGS

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

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

APPROVED:
Robert S. Zakeishi 7/24/78
 ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|--|-------------|---------|
| 1 | Revised Typical Roadway Entrance Markings and Typical Roadway Exit Markings. | E.T. | 9/18/85 |

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

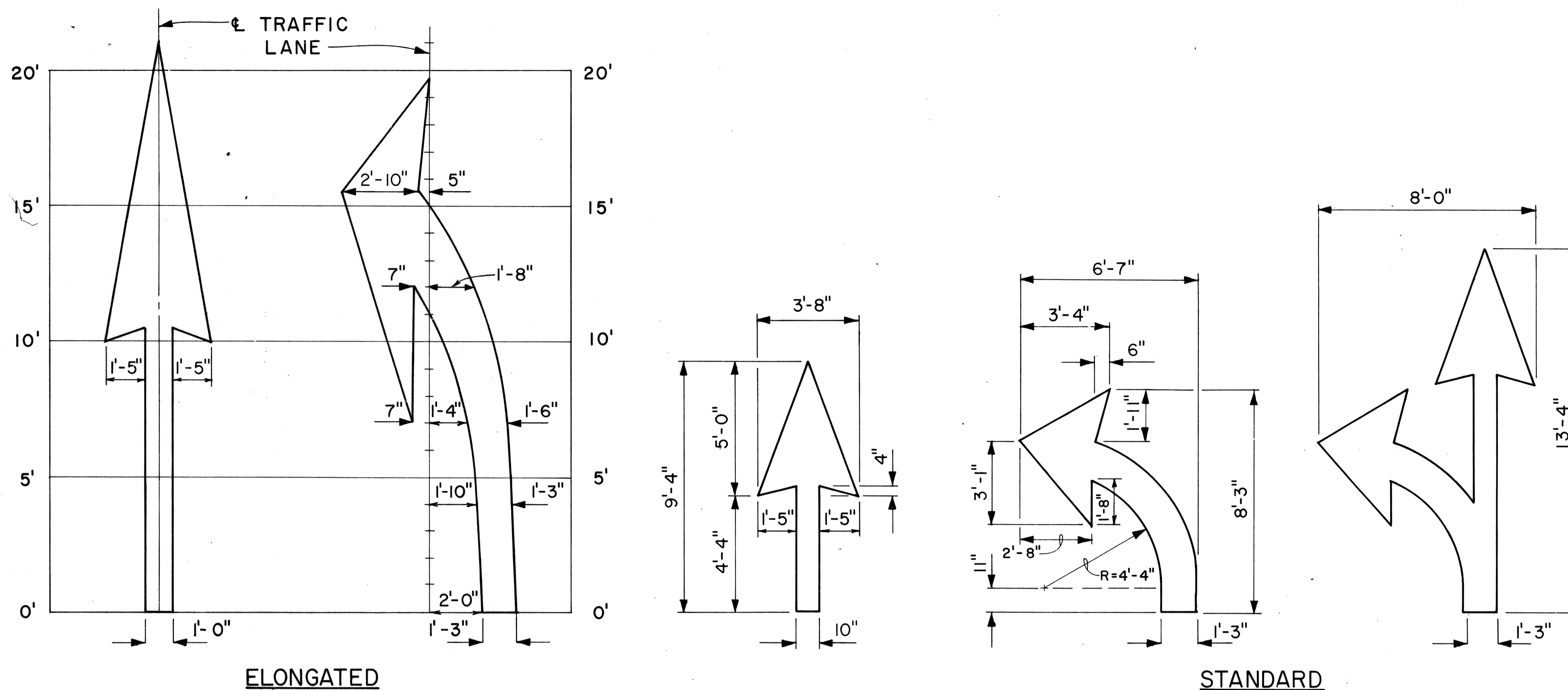
STANDARD DETAILS
MISCELLANEOUS
PAVEMENT MARKINGS

Not to Scale July 1978
 SHEET NO. OF SHEETS DT 304

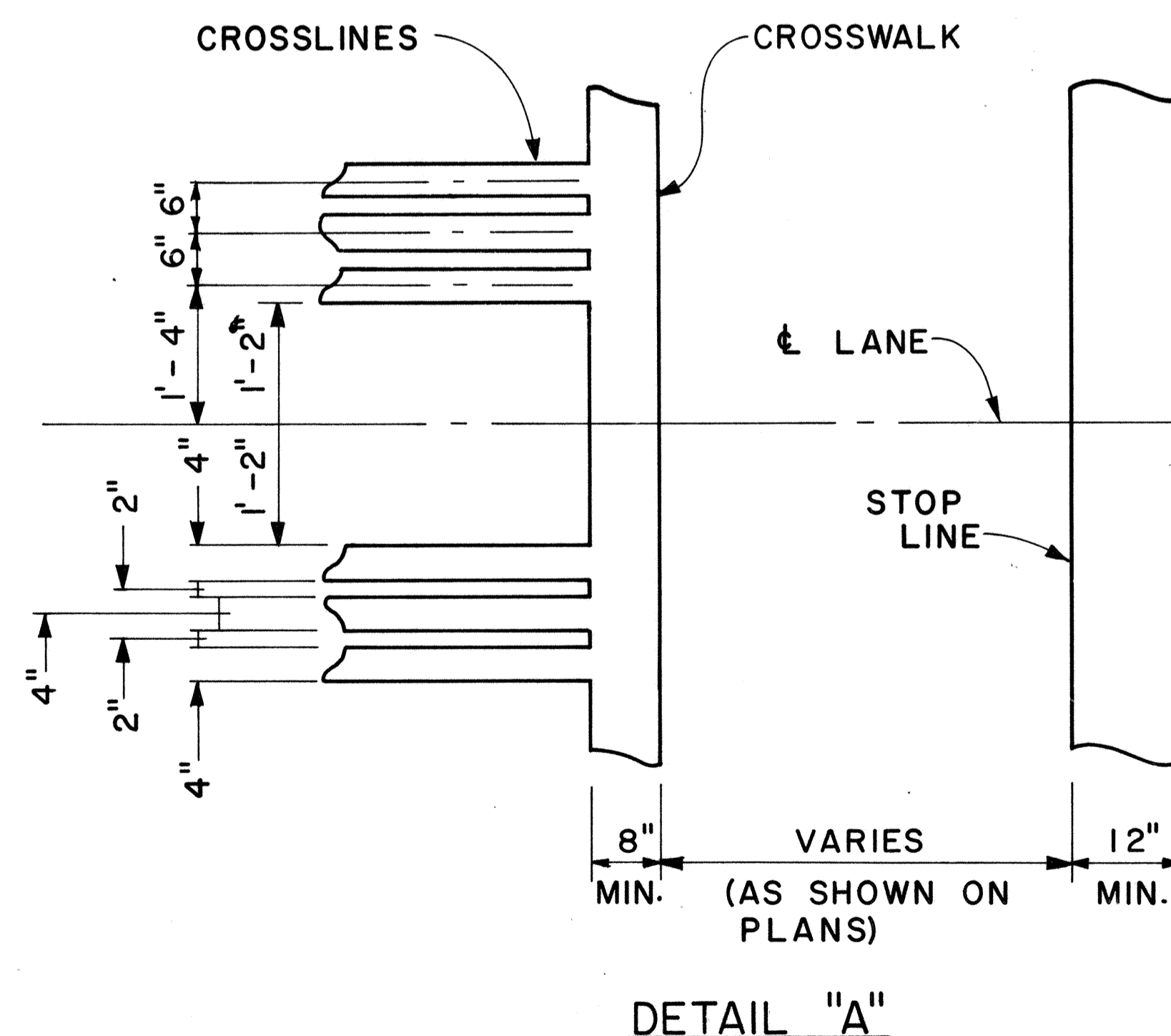
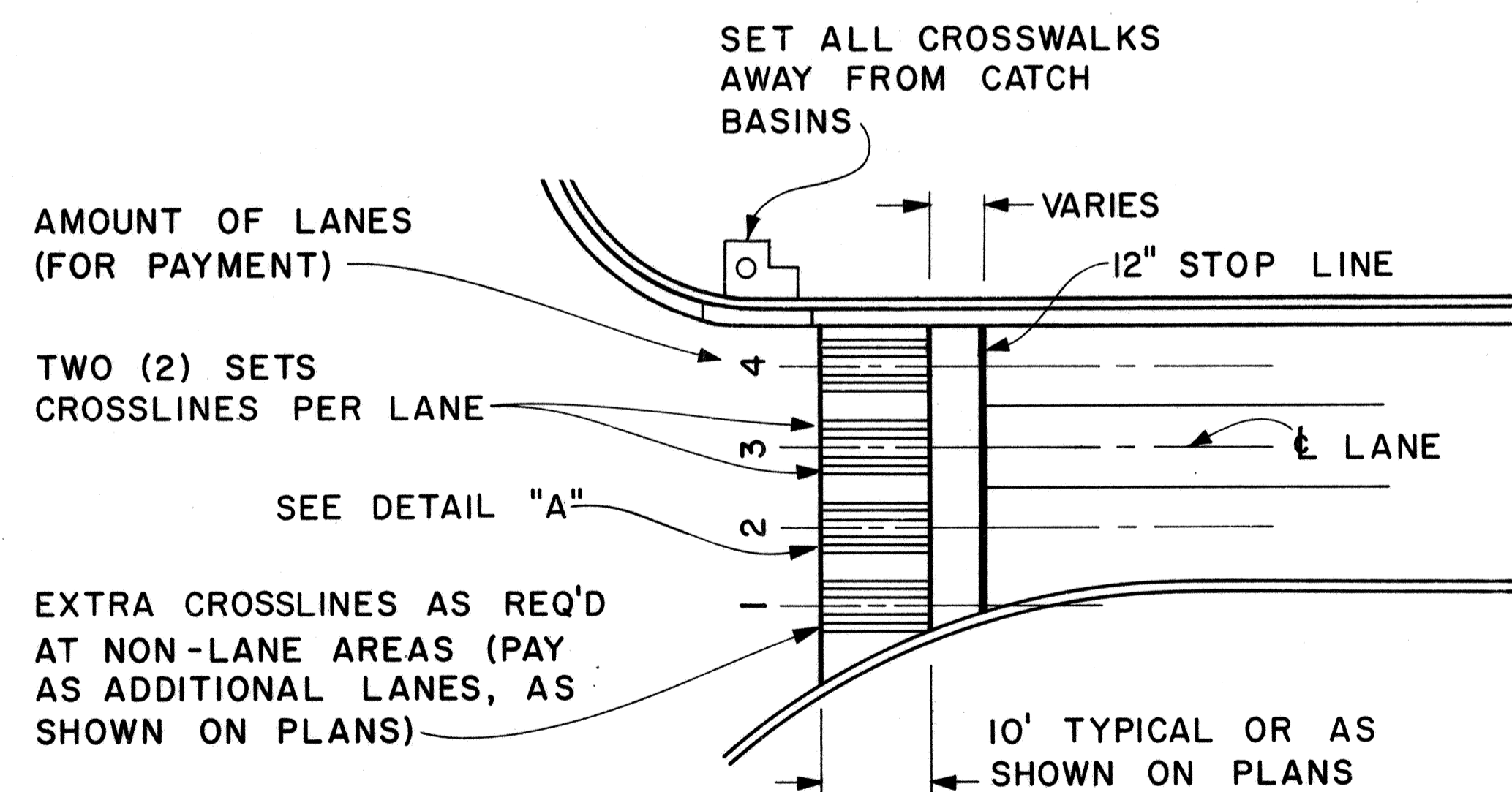
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|----------------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-01-2(17) R5G-0190(22) | 1980 | 85 | 142 |

GENERAL NOTES:

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



PAVEMENT ARROWS
Scale: 3/8" = 1'



CROSSWALK & STOP LINE
Scale: Not to Scale

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

APPROVED:
Harbert 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

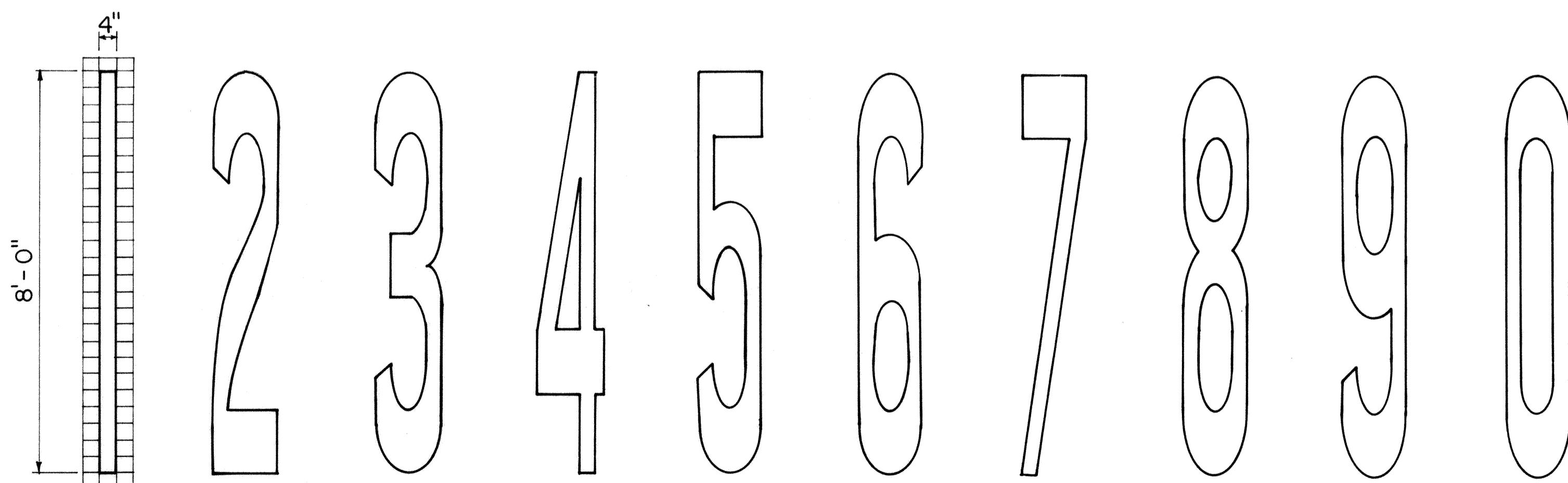
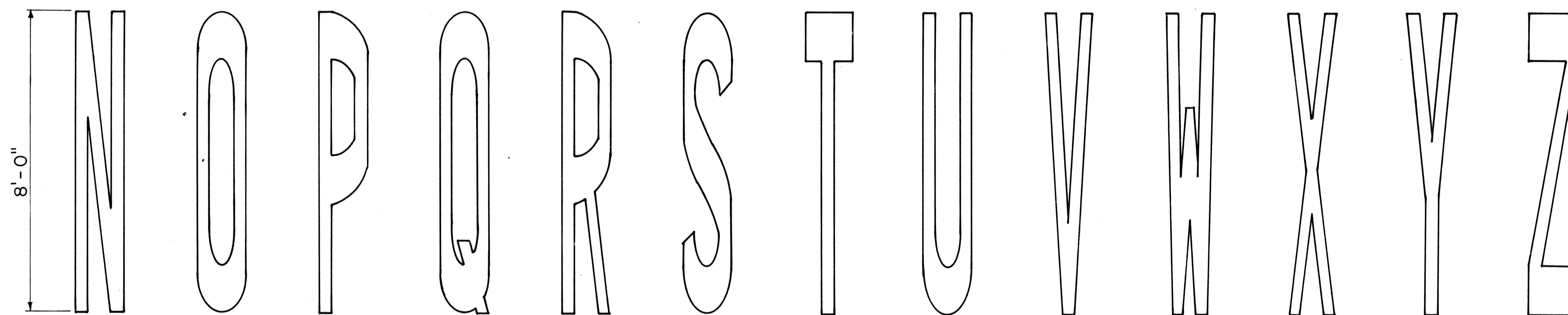
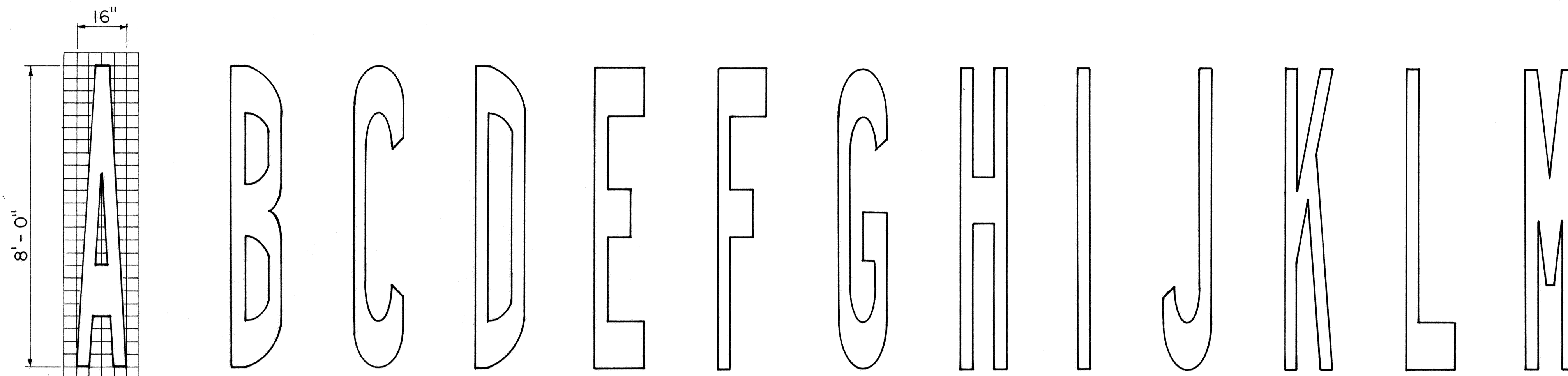
MISCELLANEOUS
PAVEMENT MARKINGS

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

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2 (17) | 1986 | 86 | 142 |

GENERAL NOTES

1. Pavement Alphabets, Numbers and Symbols shall conform to the latest edition of the FHWA publication, "Manual on Uniform Traffic Control Devices for Streets and Highways" and its amendments.
2. The characters are based on a 24x4 (height x width) grid system to facilitate enlarging. Horizontal strokes are 4 units high and vertical strokes are 1 unit wide.
3. Unless otherwise noted, the typical height and width of each character shall respectively be 8'-0" and 1'-4". The horizontal strokes shall be 16" high and the vertical strokes shall be 4" wide.
4. All pavement messages and symbols shall be laid out by the Contractor and approved by the Engineer prior to installation.



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

APPROVAL RECOMMENDED:

Eishi Tanaka 1/28/83
TRAFFIC ENGINEER DATE

APPROVED:

S. Fujiyama 1-31-83
ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

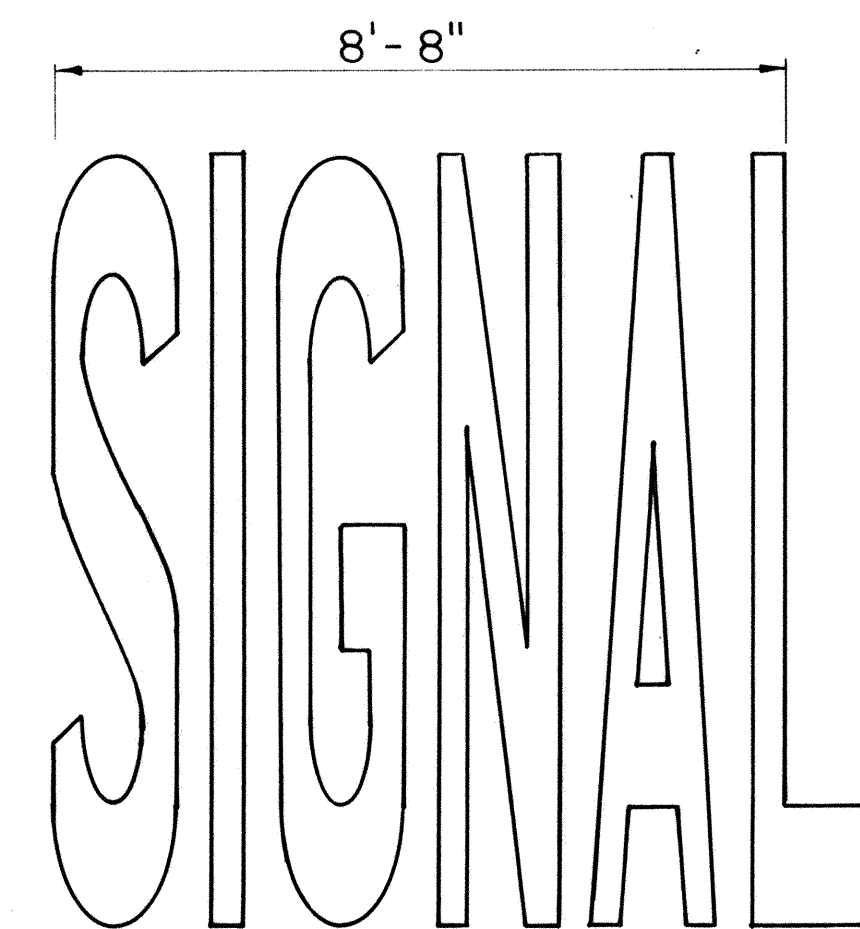
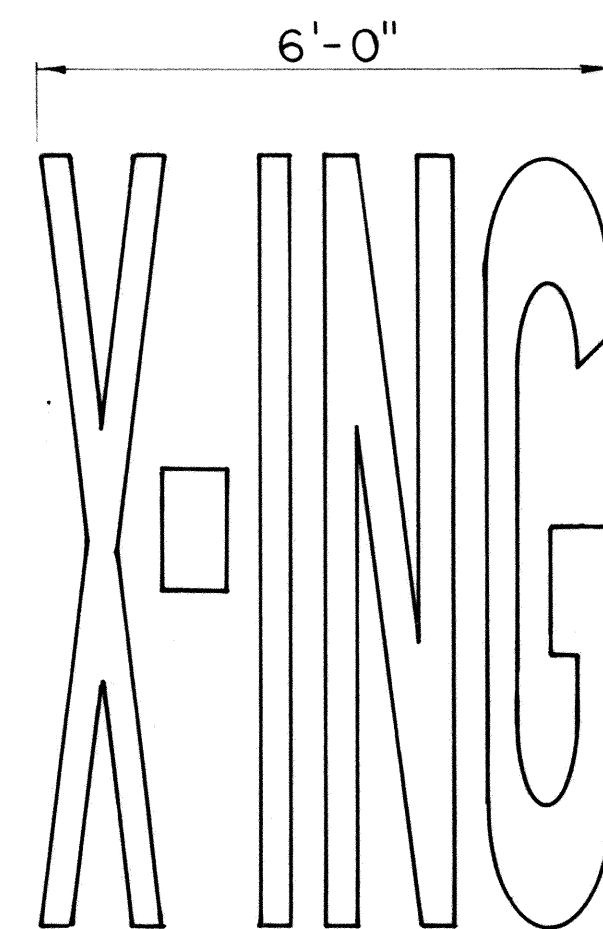
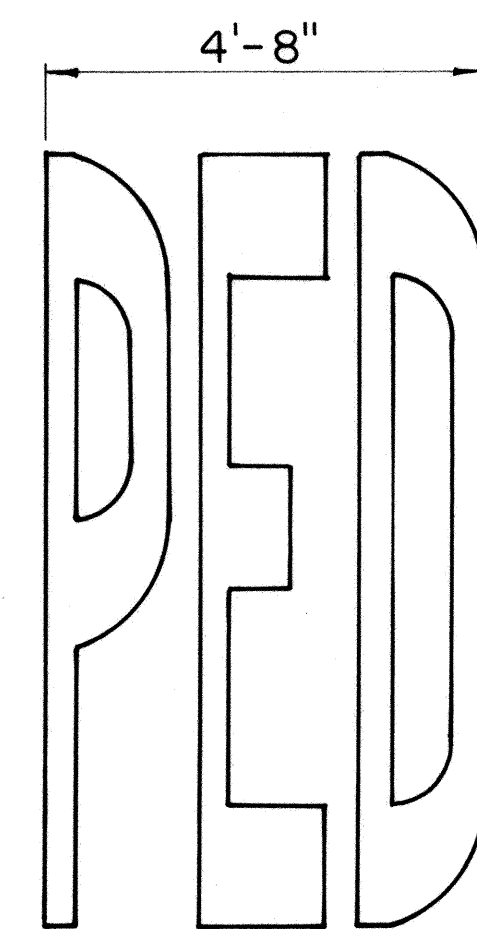
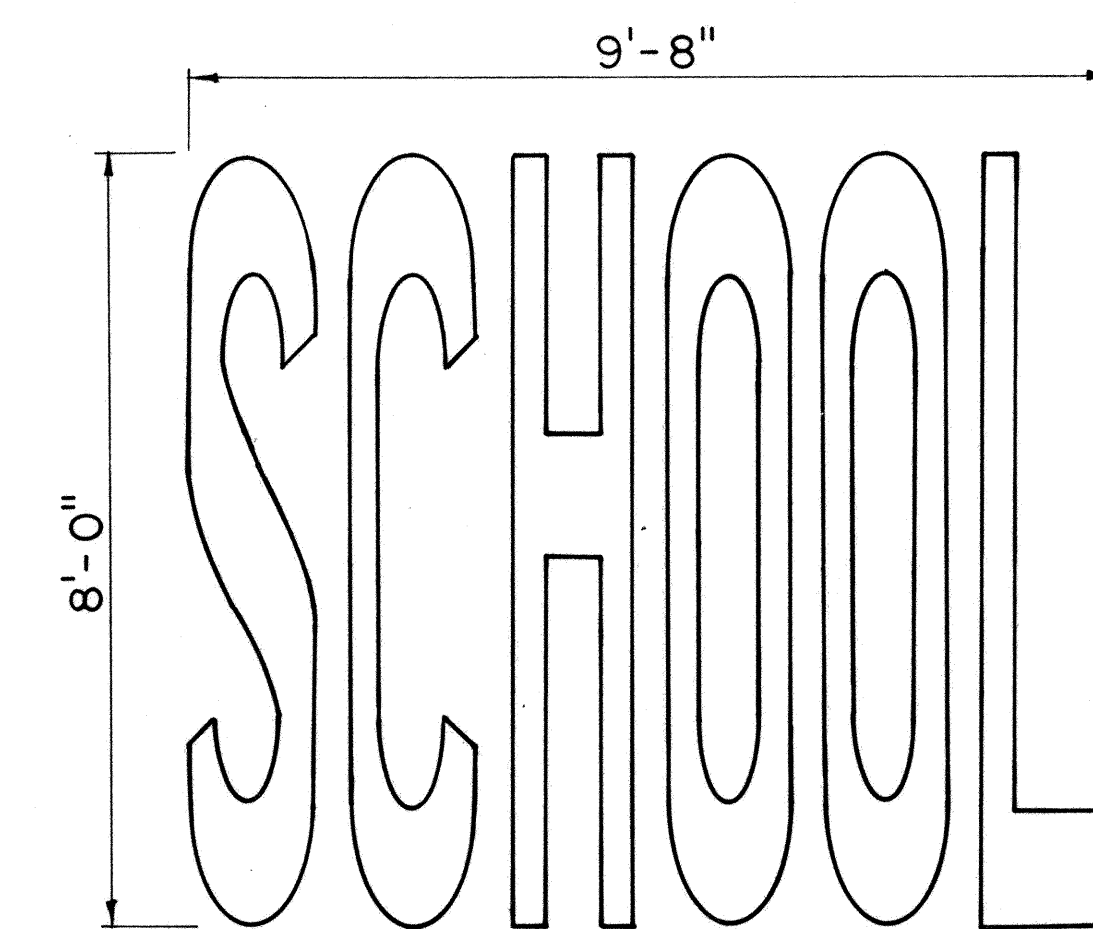
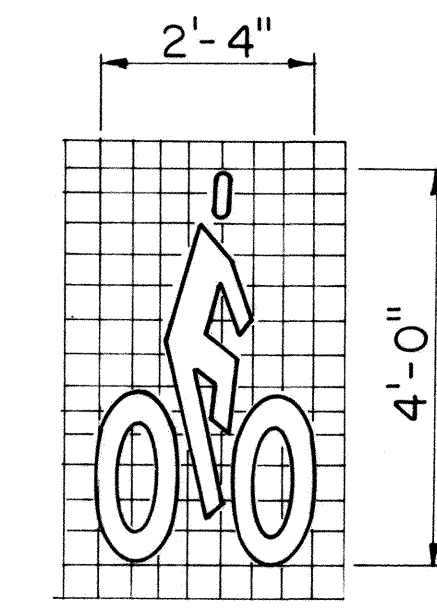
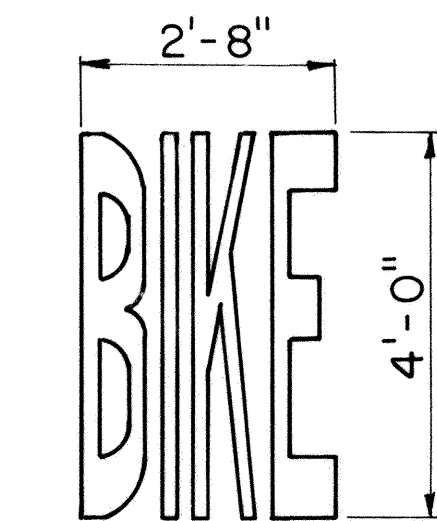
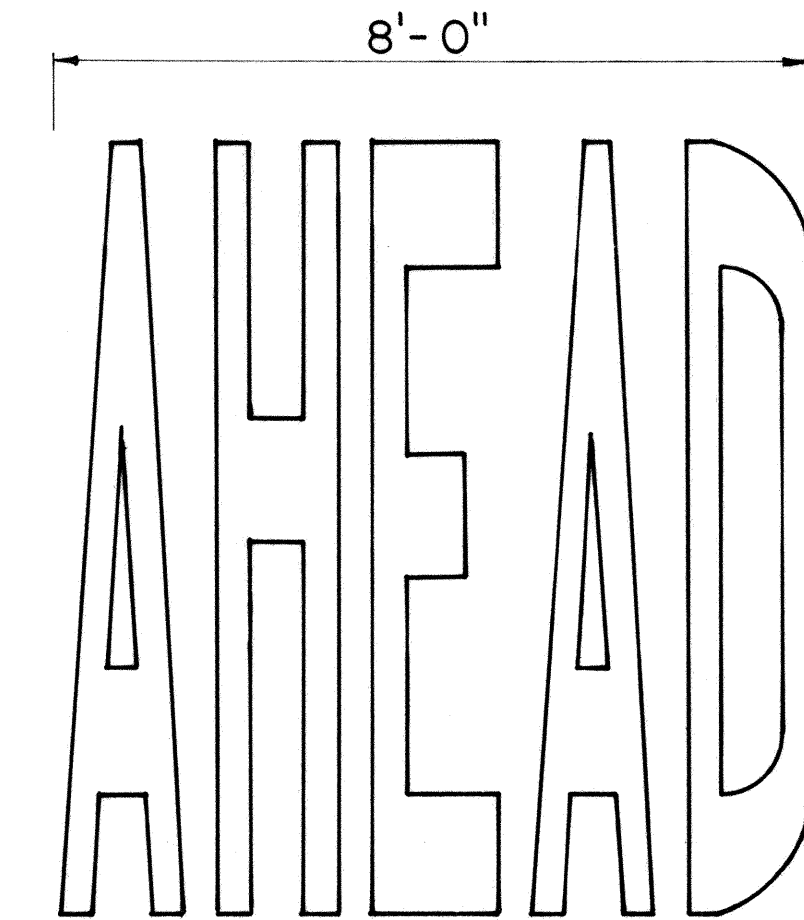
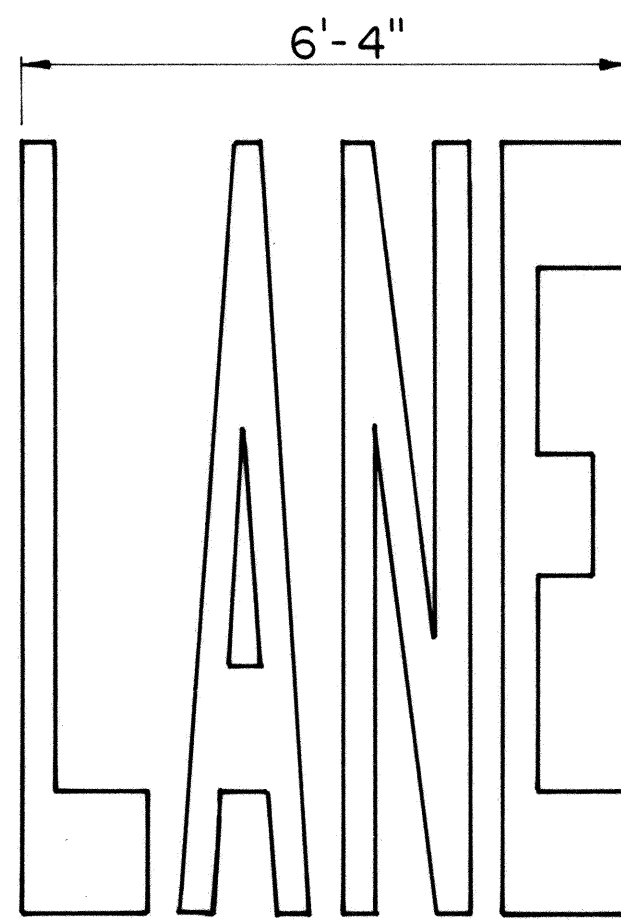
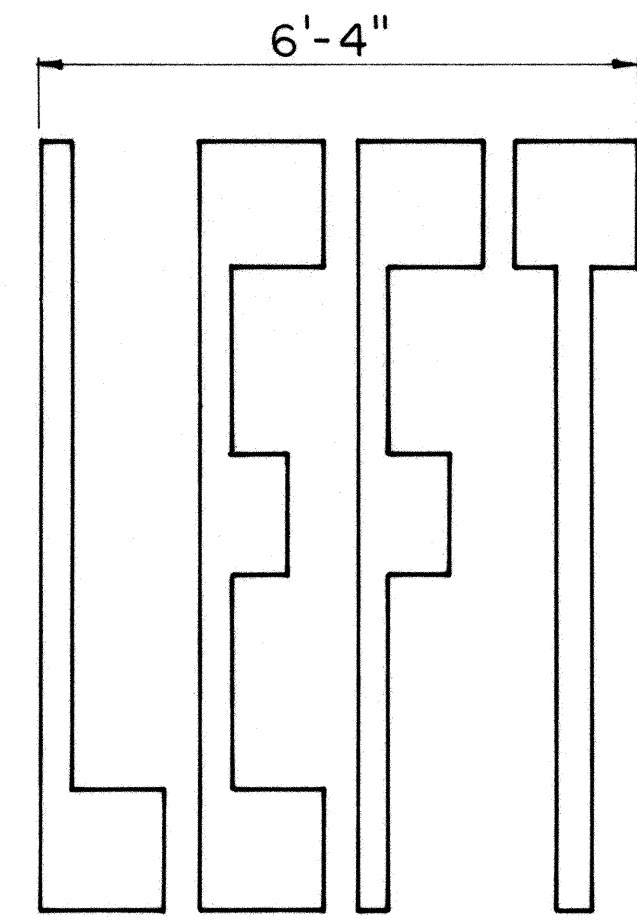
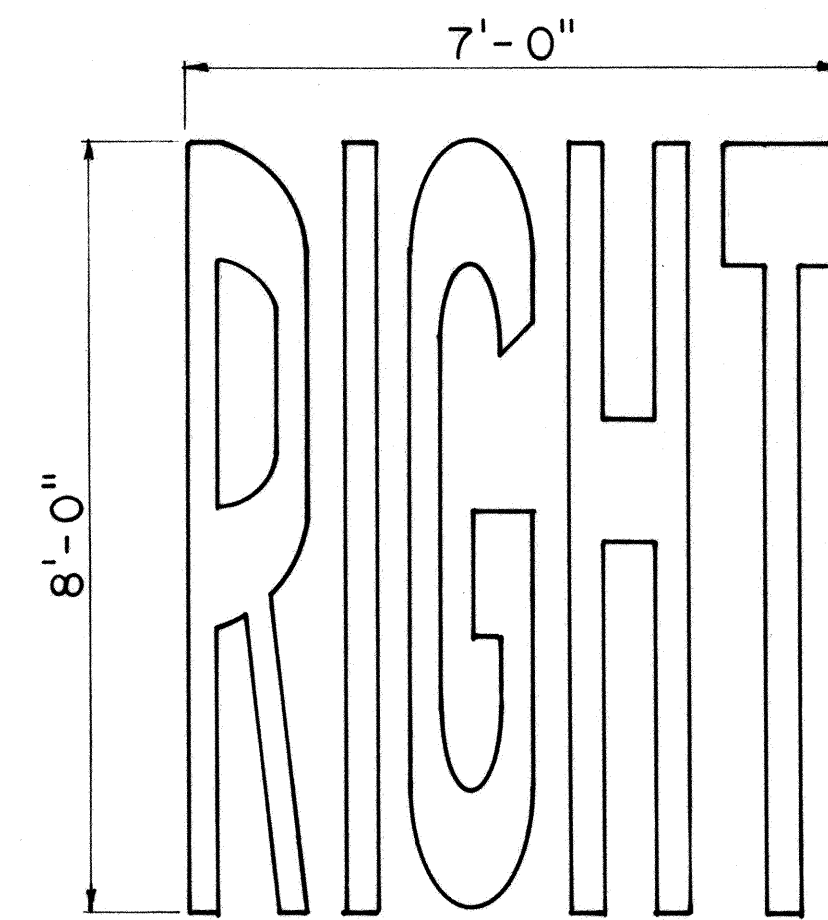
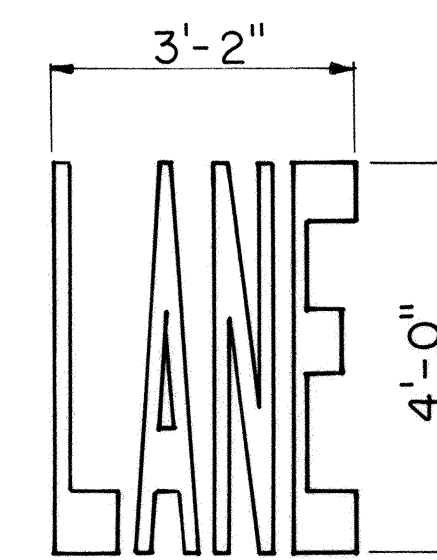
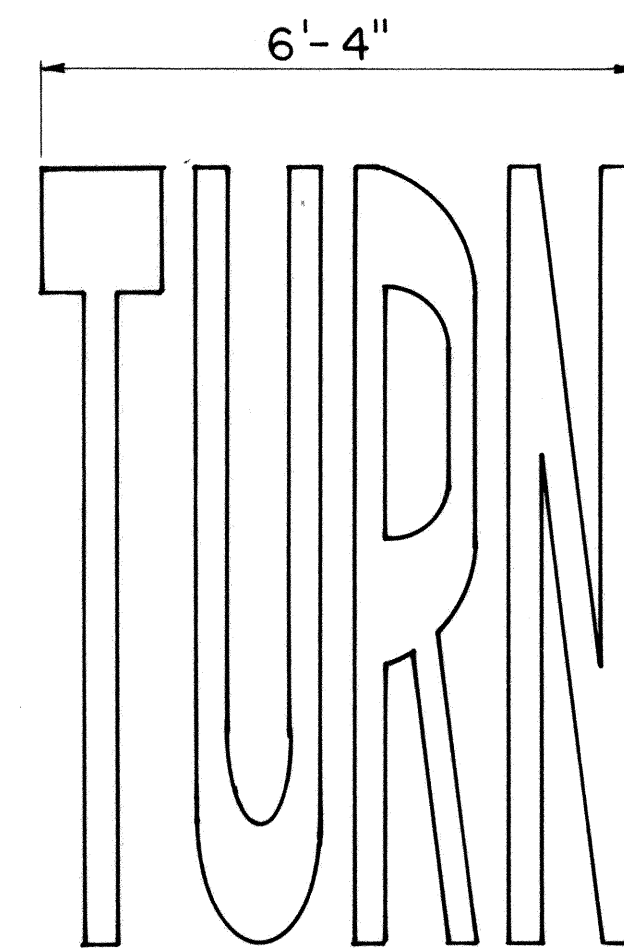
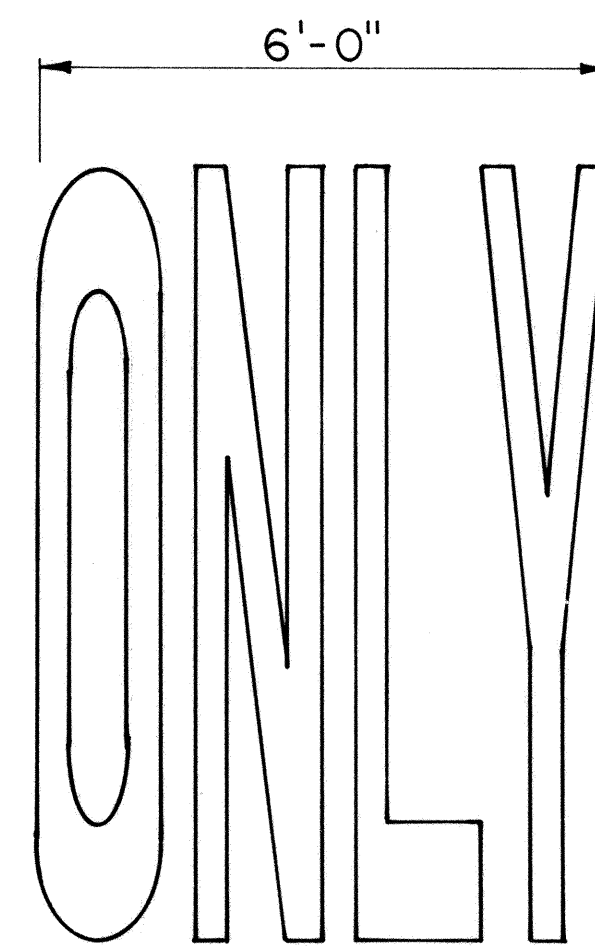
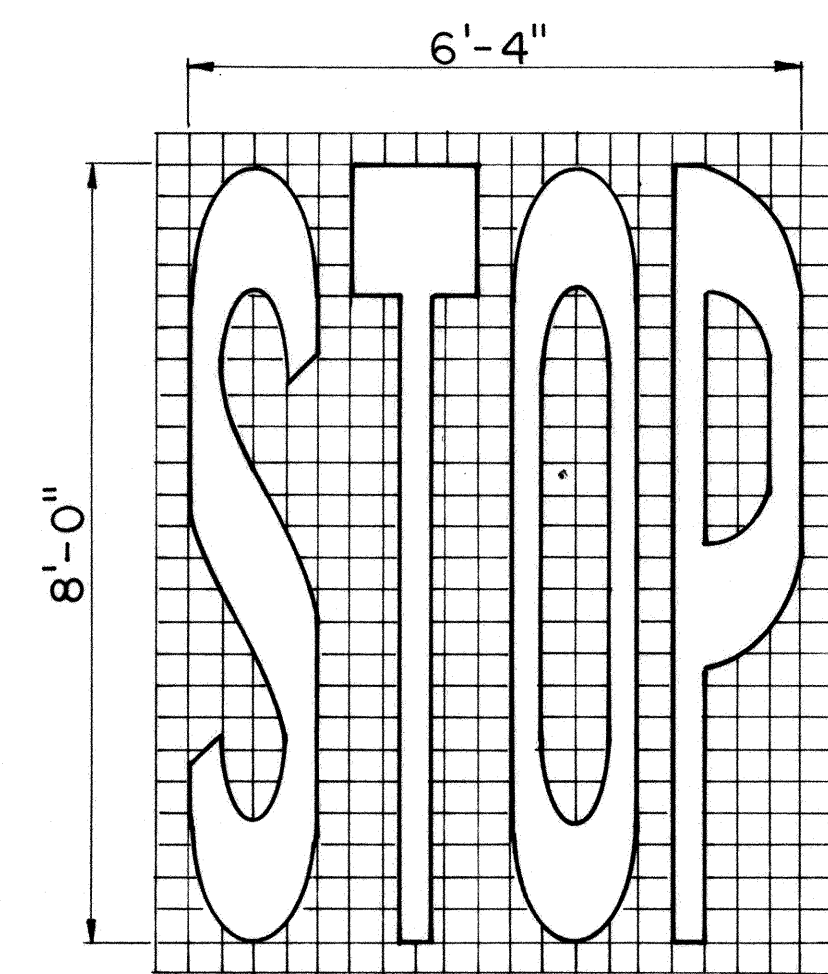
STANDARD DETAILS

**PAVEMENT ALPHABETS,
NUMBERS & SYMBOLS**

Not to Scale

SHEET No. 1 OF 2 SHEETS DT 307

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2(17) | 1986 | 87 | 142 |



GENERAL NOTES

1. All messages not shown must be approved by the Engineer prior to installation.
2. The space between characters in a message shall be 1 grid unit unless otherwise shown or directed.
3. All pavement messages shall be white in color.

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

APPROVAL RECOMMENDED:
Eichi Tanaka 1/28/83
 TRAFFIC ENGINEER DATE

APPROVED:
J. Fujiyama 1-31-83
 ASSISTANT CHIEF, ENGINEERING DATE

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

STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

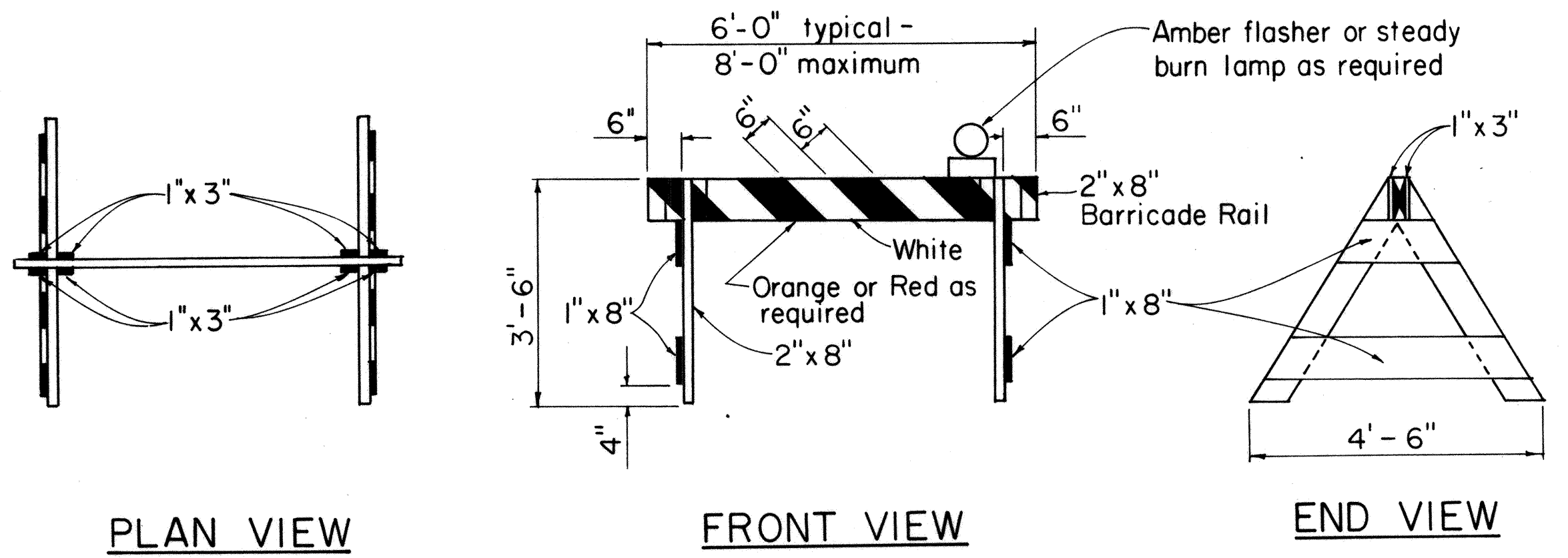
STANDARD DETAILS

**PAVEMENT ALPHABETS,
 NUMBERS & SYMBOLS**

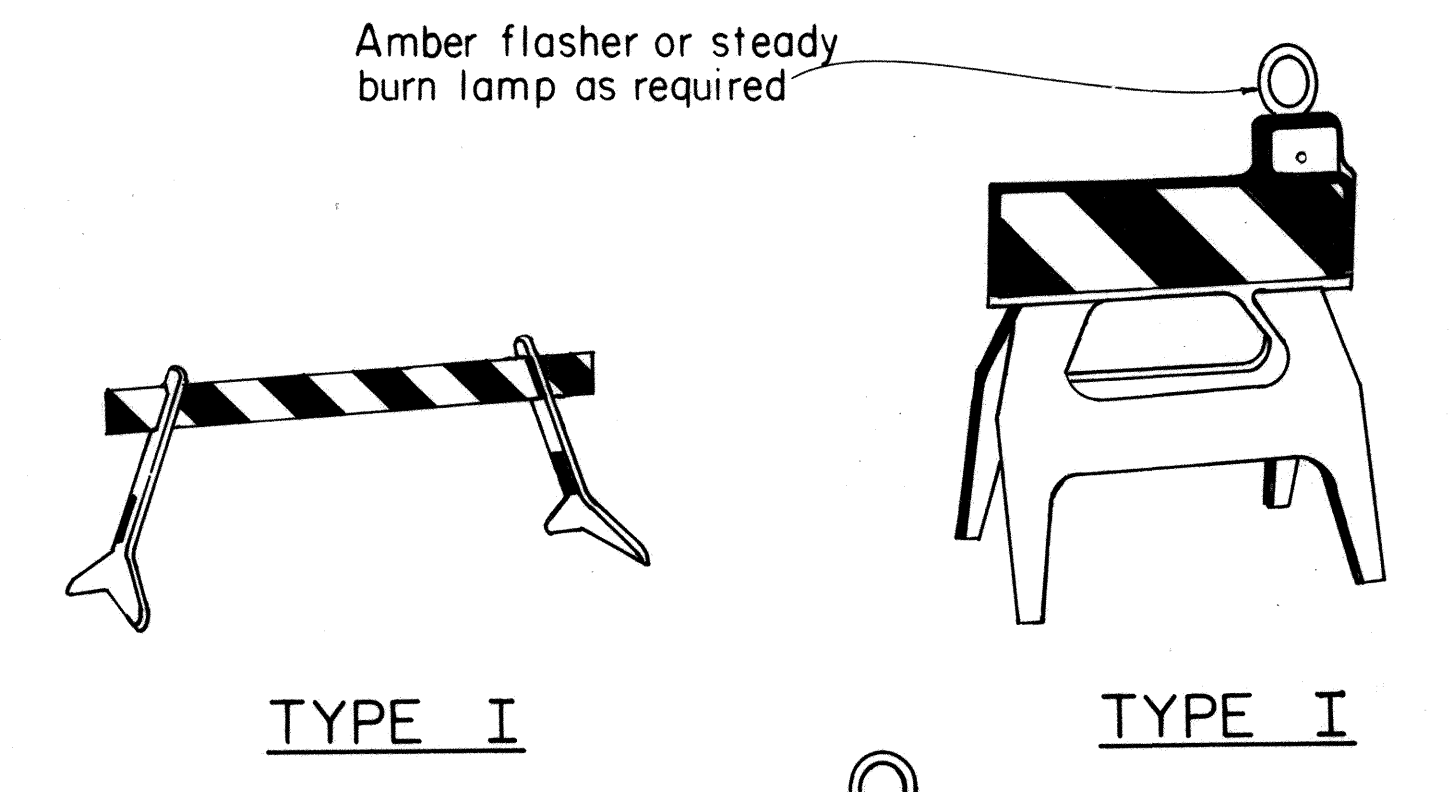
Not to Scale

SHEET No. 2 OF 2 SHEETS DT 308

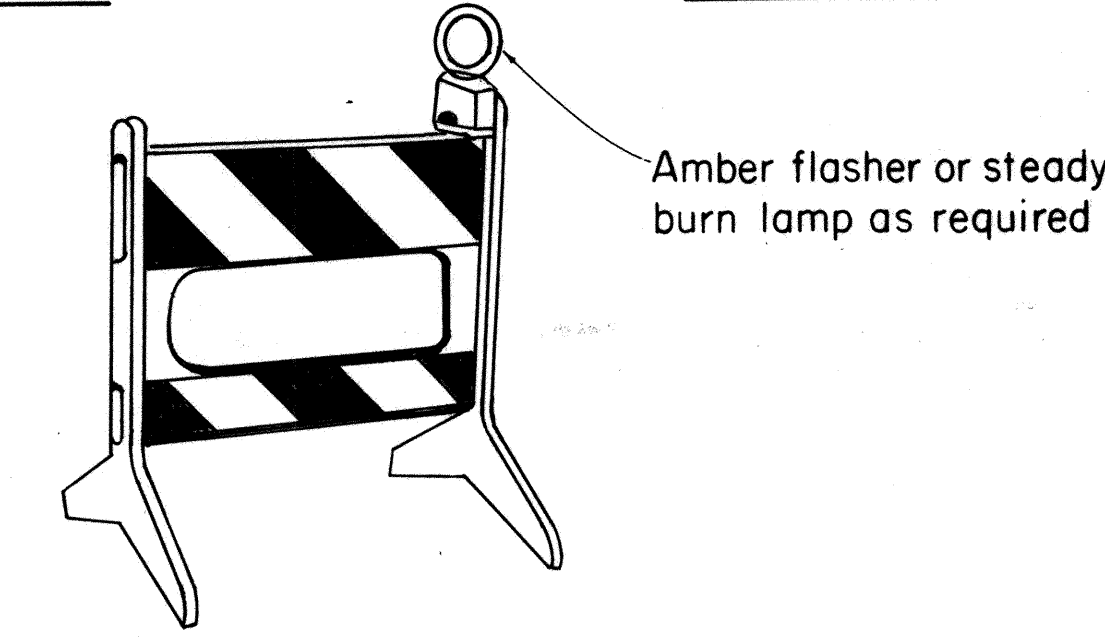
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII | HAW. | F-011-2(17) | 1986 | 88 | 142 |



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



TYPE I

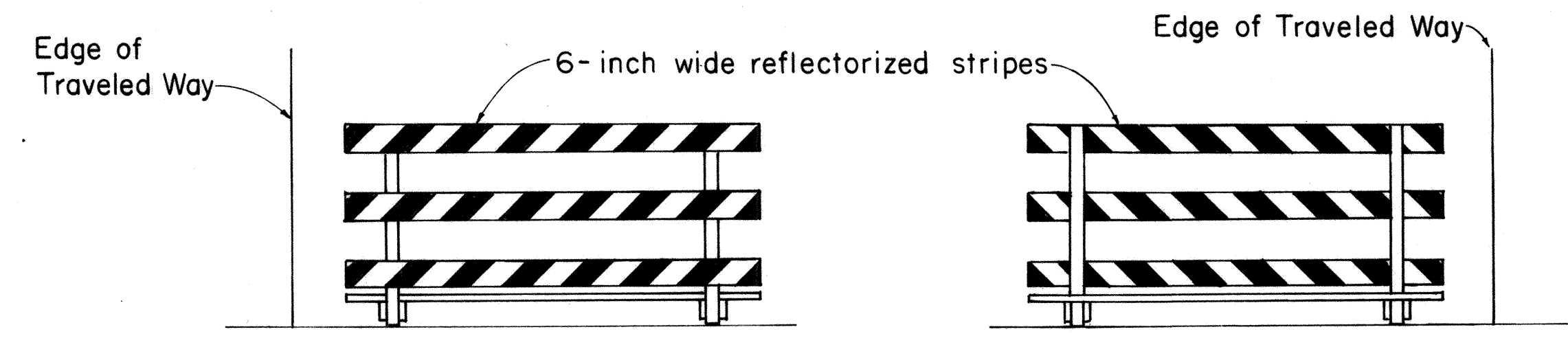


TYPE II

PLASTIC MOLDED BARRICADE OPTIONS*

Not to Scale

* Shop Drawings must be submitted for approval.

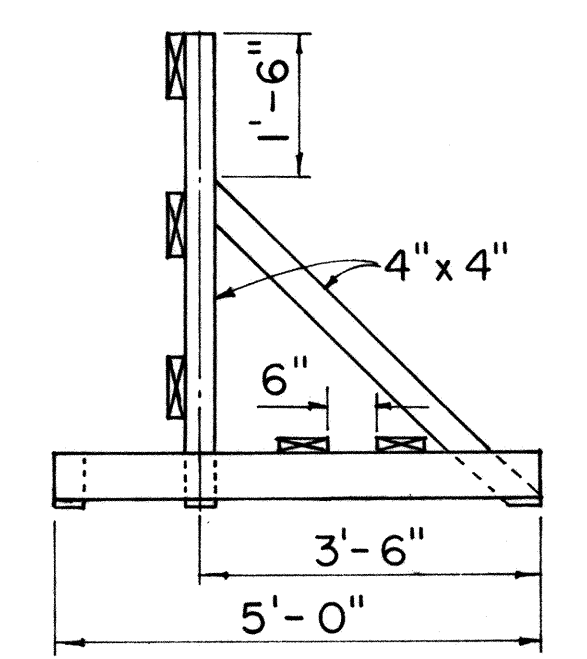


FRONT FACE **BACK FACE**

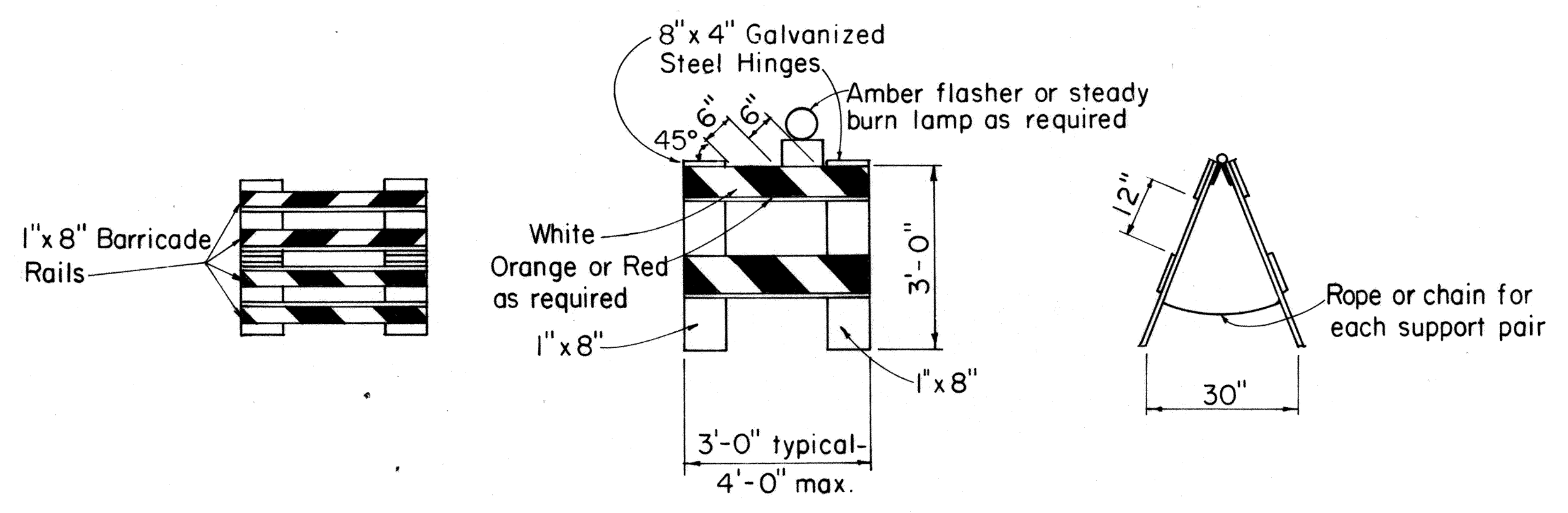
TYPICAL BARRICADE STRIPING DETAILS**

Not to Scale

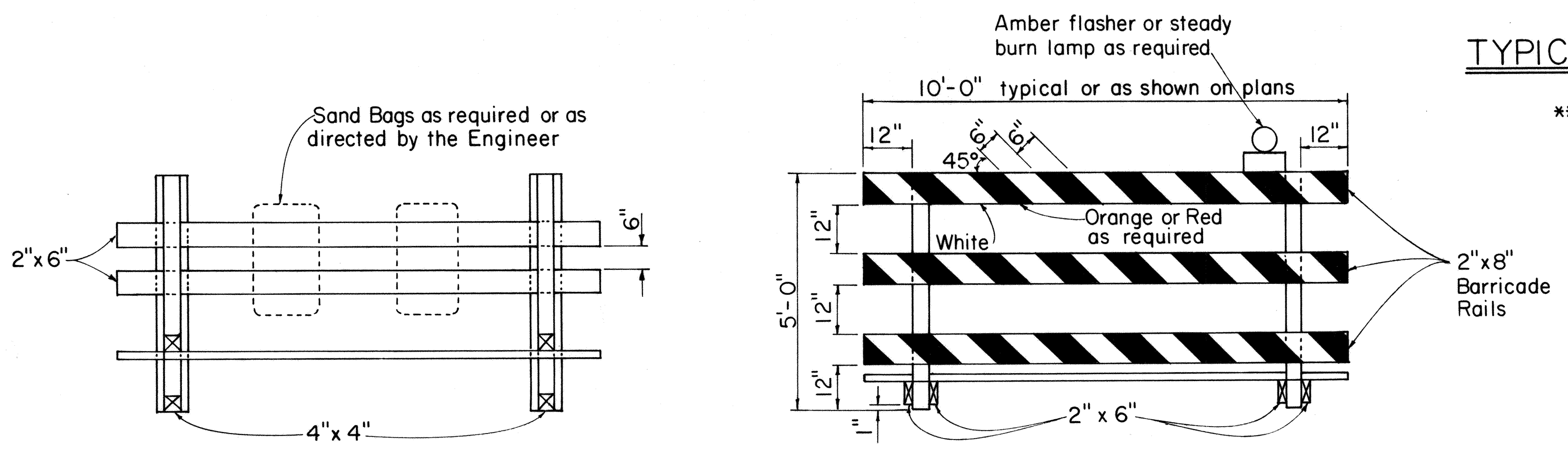
** Similar for Types I & II



END VIEW



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



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

GENERAL NOTES

1. The front and back faces of each barricade rail shall be reflectorized with stripes sloping downward toward the same side (traveled way) of each barricade.
2. Contractor may submit alternate barricade designs for approval.
3. Sandbags or other approved weights shall not be placed on top of any striped rail.
4. The Contractor is directed to Section 626.

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

APPROVAL RECOMMENDED:
Eishi Tanaka 10/21/81
TRAFFIC ENGINEER DATE

APPROVED:
Albert S. Scheish 10/23/81
ASSISTANT CHIEF, ENGINEERING DATE

| NO. | REVISION | APPROVED BY | DATE |
|-----|-------------------------------------|-------------|----------|
| 1 | Supersedes DT 800 Approved 12/30/69 | H.T. | 10/23/81 |

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS

BARRICADES

SCALE: As Shown

SHEET No. OF SHEETS DT 800